IBM

**Program Logic**

**Version 8.1**

## IBM System/360 Time Sharing System

## System Control Blocks

This publication documents all control blocks that
are a part of the IBM System/360 Time Sharing System
(TSS/360).  Each control block is described in four
parts: a text description, a diagram, cross reference
lists of fields, and a DSECT listing.
   This material is intended for persons involved in
program maintenance, and system programmers who are
altering program design.  Program Logic information
is not necessary for use and operation of the system.

## PREFACE

This publication describes the internal
structure of the IBM System/360 Time
Sharing System (TSS/360) control blocks.
Each control block, or group of closely
related control blocks, is assigned a
specific section within this manual,
indexed alphabetically.  Each control
block section contains a description of
the purpose and structure, a diagram,
cross reference lists of fields, and
a DSECT listing.
   This manual provides detailed
descriptions of control blocks to supplement
the information contained in individual PLMs.
It is intended to be used by system designers
and programmers, and IBM customer engineers
involved in program maintenance.

The description of each control block contains:

* A description of its use.
* A storage map.
* Cross reference lists of fields and their displacements.
* An assembler listing of its DSECT.

How to read the storage maps:

Decimal and hexadecimal addresses show the relative location of the leftmost field boundary.

Large fields are abbreviated with an equal sign (=) on each side of the field.

The label "UNNAMED" designates explicitly allocated storage fields having no field name.

The label "RESERVED" designates storage not specifically allocated (created when storage space is skipped to align the following field on a halfword, fullword, or doubleword boundary, or at the address specified in an ORG instruction).

When storage defined following an ORG instruction does not overlay already-defined storage, it is made a part of the main map. If such storage does overlay already-defined storage, however, it is shown as a separate map. You can compare ORG map fields to other fields occupying the same storage space by referring to the addresses shown at the left of both maps, or by finding, in the cross reference list of displacements, the names of fields with the same storage location.

How to use the cross reference lists:

Each control block storage map is followed by two lists of fields and their displacements.

The first list shows all fields in order of displacement. You can easily identify all fields occupying the same storage space, and recognize nearby fields, whether or not they directly precede or follow the central field in the source list. Fields equated to other fields or locations are marked "(EQU)".

The second list shows all fields in alphabetical order. You can use this list to quickly locate a field in the storage map or in the listing. Equates are marked "(EQU)".

How to use the assembler listing:

The assembler listing contains the source code for each control block, including comments giving the use of the control block and its fields. The relative locations of fields are shown under "LOCATION"; the location of fields equated to other fields, and the values of flag masks are shown under "INSTRUCTION". ORG instructions are boxed -- |ORG| -- to make them easier to find in long listings.

For some groups of control blocks, the DSECTs for all the control blocks in the group are nested in a single listing following the cross reference list for the first control block in the group.

## TABLEA (CHAAAA)

TABLEA (CHAAAA) is a command system table which the user can modify.  CHAAAA contains return information work areas for the prompter and dictionary handler. CHAAAA resides in virtual storage aligned on word boundaries.

### CHAAAA Storage map

```
DEC    HEX
  0      0|    AAAIPC      |     AAASW      |        AAALRS
  8      8|
         =                        AAARSP                                =
144     90|
         =                        AAADEN                                =
400    190|
         =                        AAACTT                                =
912    390|
         =                        AAAOCT                                =
1424   590|                              |          AAAMOD
1432   598|         AAAMOD  (CONT)        |
         =                        AAASAV                                =
1512   5E8|AAARET   |
```
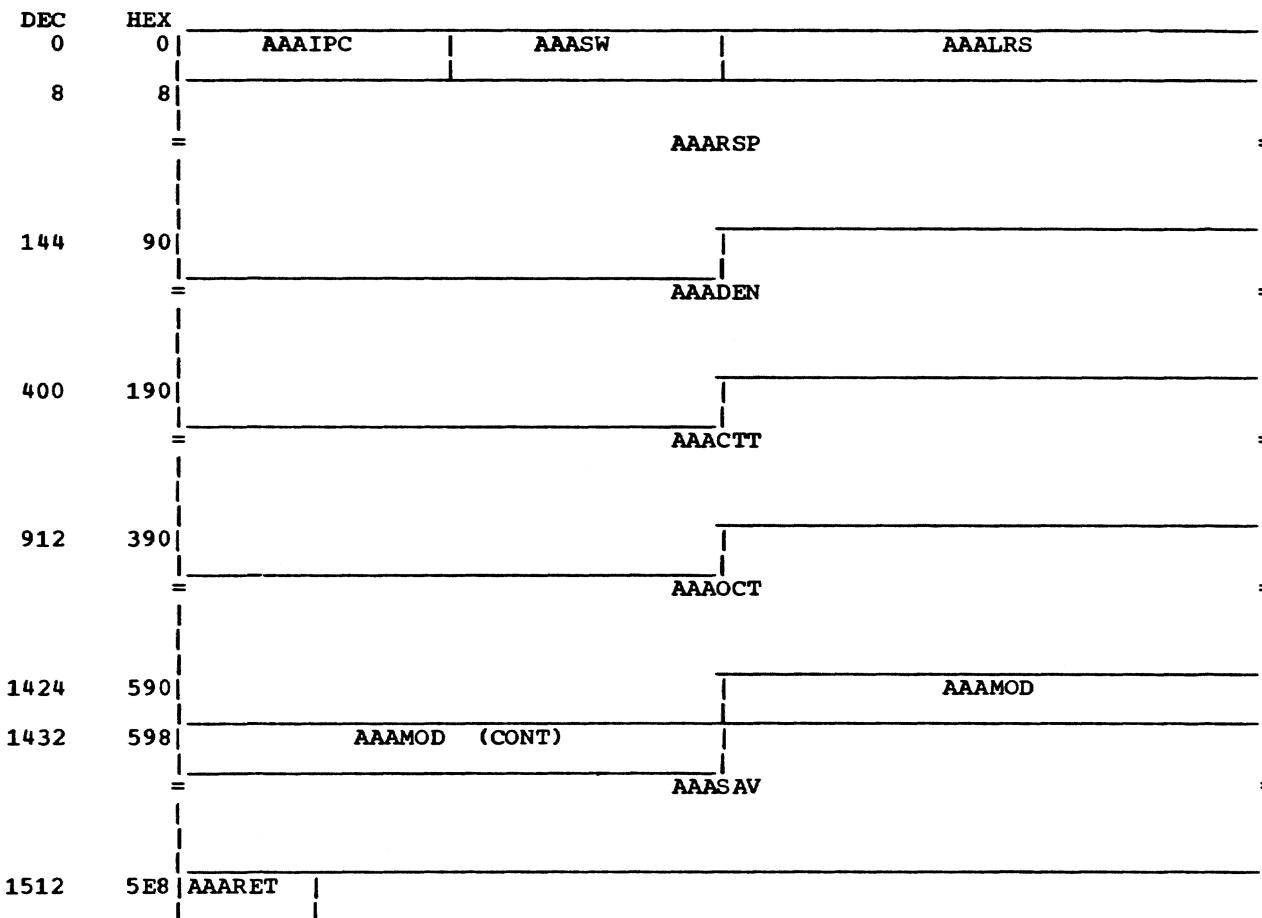
### Fields in CHAAAA -- by displacement

| DEC | HEX | FIELD | DEC | HEX | FIELD | DEC | HEX | FIELD |
|-----|-----|-------|-----|-----|-------|-----|-----|-------|
| 0000 | 0000 | AAAIPC | 0148 | 0094 | AAADEN | 1436 | 059C | AAASAV |
| 0002 | 0002 | AAASW | 0404 | 0194 | AAACTT | 1512 | 05E8 | AAARET |
| 0004 | 0004 | AAALRS | 0916 | 0394 | AAAOCT | | | |
| 0008 | 0008 | AAARSP | 1428 | 0594 | AAAMOD | | | |

### Alphabetical list of fields in CHAAAA

| FIELD | DEC | HEX | FIELD | DEC | HEX | FIELD | DEC | HEX |
|-------|-----|-----|-------|-----|-----|-------|-----|-----|
| AAACTT | 0404 | 0194 | AAAMOD | 1428 | 0594 | AAASAV | 1436 | 059C |
| AAADEN | 0148 | 0094 | AAAOCT | 0916 | 0394 | AAASW | 0002 | 0002 |
| AAAIPC | 0000 | 0000 | AAARET | 1512 | 05E8 | | | |
| AAALRS | 0004 | 0004 | AAARSP | 0008 | 0008 | | | |

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|----------|-------------|--------|------|------|---------|
| | 02 00000 | CHAAAA | DSECT | | |
| | | * TABLEA - A WORK AREA FOR THE COMMAND SYSTEM | | | |
| | | * THAT CAN BE | | | |
| | | * | | | REFERENCED BY USERS |
| 02 00000 | | | DS | 0F | |
| 02 00000 | | AAAIPC | DS | PL2 | INTERVENTION PREVENTION |
| | | * | | | SWITCH |
| 02 00002 | | AAASW | DS | H | ATTENTION SWITCH |
| | | * WORK AREAS FOR USER PROMPTER RETURN | | | |
| | | * INFORMATION. | | | |
| | | * THESE AREAS CONTAIN THE STRING RETURNED FROM A | | | |
| | | * PROMPTER | | | |
| | | * CALL REQUESTING AN UNPREDICTABLE RESPONSE. THEY | | | |
| | | * ARE AVAILABLE | | | |
| | | * TO THE NON-PRIVILEGED PROMPTER CALLER. | | | |
| 02 00004 | | AAALRS | DS | F | RESPONSE STRING LENGTH |
| 02 00008 | | AAARSP | DS | 140CL1 | RESPONSE STRING |
| | | * WORK AREAS FOR RETURN INFORMATION FROM THE | | | |
| | | * DICTIONARY | | | |
| | | * HANDLERS. THE DICTIONARY HANDLERS (CZASD) MOVE | | | |
| | | * THE ENTRY | | | |
| | | * LOCATED BY A REF ENTRY IN CHBAA SO THAT THEY | | | |
| | | * WILL BE AVAILABLE | | | |
| | | * TO A NON-PRIVILEGED CZASD CALLER. THE ENTIRE | | | |
| | | * ENTRY IS MOVED. | | | |
| | | * SPACE IS PROVIDED FOR A MAX LENGTH ENTRY OF 256 | | | |
| | | * BYTES. | | | |
| 02 00094 | | AAADEN | DS | 256CL1 | DICTIONARY ENTRY |
| 02 00194 | | AAACTT | DS | 512X | INPUT CHARACTER TRANSLATION |
| | | * | | | N464 |
| 02 00394 | | AAAOCT | DS | 512X | OUTPUT CHARACTER |
| | | * | | | TRANSLATION N464 |
| 02 00594 | | AAAMOD | DS | CL8 | |
| 02 0059C | | AAASAV | DS | 19A | SAVE AREA FOR NON-PRIV |
| | | * | | | DSPTCH N369.2 |
| 02 005E8 | | AAARET | DS | X | RETURN CODE FROM TRASCAN |
| | | * | | | N365 |

## Assign BULKIO Device DSECT (CHAABD)

CHAABD is the message format used by the BULKIO and Batch Monitor/Operator tasks to add to, or delete from those unit record devices assigned to the BULKIO task. The message contains one-word entries specifying the Symbolic Device Address of a unit record device, and flags indicating whether the device is to be added to or deleted from the task.
Each 4-byte CHAABD entry resides on word boundaries.

## CHAABD Storage map

```
DEC    HEX _____
 0       0| ABDFL1  | ABDFL2 |      ABDSDA          |
         |_____|_____|_____|
```

## Fields in CHAABD -- by displacement

| DEC | HEX | FIELD | | DEC | HEX | FIELD | | DEC | HEX | FIELD |
|------|------|--------|------|------|------|--------|------|------|------|--------|
| 0000 | 0000 | ABDADD | (EQU) | 0000 | 0000 | ABDDOR | (EQU) | 0000 | 0000 | ABDTOP |
| 0000 | 0000 | ABDDEL | (EQU) | 0000 | 0000 | ABDDYN | (EQU) | 0001 | 0001 | ABDFL2 |
| 0000 | 0000 | ABDEND | (EQU) | 0000 | 0000 | ABDLOK | (EQU) | 0002 | 0002 | ABDSDA |
| 0000 | 0000 | ABDDFL | (EQU) | 0000 | 0000 | ABDFL1 | | 0004 | 0004 | ABDBOT |

## Alphabetical list of fields in CHAABD

| FIELD | DEC | HEX | | FIELD | DEC | HEX | | FIELD | DEC | HEX | |
|--------|------|------|------|--------|------|------|------|--------|------|------|------|
| ABDADD | 0000 | 0000 | (EQU) | ABDDOR | 0000 | 0000 | (EQU) | ABDFL2 | 0001 | 0001 | |
| ABDBOT | 0004 | 0004 | | ABDDYN | 0000 | 0000 | (EQU) | ABDLOK | 0000 | 0000 | (EQU) |
| ABDDEL | 0000 | 0000 | (EQU) | ABDEND | 0000 | 0000 | (EQU) | ABDSDA | 0002 | 0002 | |
| ABDDFL | 0000 | 0000 | (EQU) | ABDFL1 | 0000 | 0000 | | ABDTOP | 0000 | 0000 | |

## Assembler listing of CHAABD

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|----------|-------------|--------|------|------|---------|
|          | 03 00000    | CHAABD | DSECT |      |         |
| 03 00000 |             | ABDTOP | DS   | 0F   |         |
| 03 00000 |             | ABDFL1 | DS   | X    | FIRST FLAG BYTE |
|          | 03 00000    | ABDLOK | EQU  | ABDFL1 | SDAT HAS BEEN LOCKED FOR THIS |
|          | 00000080    | ABDLOKM | EQU | X'80' | DEVICE |
|          | 03 00000    | ABDDYN | EQU  | ABDFL1 | CZAWS CALLED BY CZAWA TO |
|          | 00000020    | ABDDYNM | EQU | X'20' | DYNAMICALLY RE-ADD DEVICE |
|          | 03 00000    | ABDDOR | EQU  | ABDFL1 | THIS MESSAGE WAS USED BY BATCH |
|          | 00000010    | ABDDORM | EQU | X'10' | MONITOR TO AWAKEN BULKIO |
|          | 03 00000    | ABDDFL | EQU  | ABDFL1 | DEFAULT - GET ALL AVAILABLE UNIT |
|          | 00000008    | ABDDFLM | EQU | X'08' | RECORD DEVICES |
|          | 03 00000    | ABDEND | EQU  | ABDFL1 | END OF PARAMETER STRING |
|          | 00000004    | ABDENDM | EQU | X'04' |        |
|          | 03 00000    | ABDDEL | EQU  | ABDFL1 | DELETE A DEVICE |
|          | 00000002    | ABDDELM | EQU | X'02' |        |
|          | 03 00000    | ABDADD | EQU  | ABDFL1 | ADD A DEVICE |
|          | 00000001    | ABDADDM | EQU | X'01' |        |
| 03 00001 |             | ABDFL2 | DS   | X    | SECOND FLAG BYTE |
| 03 00002 |             | ABDSDA | DS   | H    | SDA OF DEVICE TO BE ADDED OR |
|          |             |        |      |      | DELETED |
| 03 00004 |             | ABDBOT | DS   | 0F   |         |
|          | 00000004    | ABDLEN | EQU  | ABDBOT-ABDTOP | LENGTH OF ENTRY |

## Task Accounting and Statistical Data DSECT (CHAACT)

CHAACT describes an area in the privileged PSECTs of both LOGOFF and ABEND. It provides addressability to the work area used for tabulating task accounting data by user-provided accounting routines. CHAACT occupies 104 bytes of storage.

### CHAACT Storage map

| DEC | HEX | | | |
|-----|-----|---|---|---|
| 0 | 0 | ACTUID | | |
| 8 | 8 | ACTCHG | | |
| 16 | 10 | ACTFLG | ACTRES1 | ACTTMP |
| 24 | 18 | ACTPP | | ACTDAD |
| 32 | 20 | ACTMTD | | ACTHSP |
| 40 | 28 | ACTRAP | | |
| | | ACTRES2 | | |
| 56 | 38 | ACTPTA | | ACTTWT |
| 64 | 40 | ACTAWT | | ACTTSE |
| 72 | 48 | ACTPIA | | ACTPIE |
| 80 | 50 | ACTPOA | | ACTPOE |
| 88 | 58 | ACTMPA | | ACTCPU |
| 96 | 60 | ACTCON | | ACTRES3 |

### Fields in CHAACT -- by displacement

| DEC | HEX | FIELD | | DEC | HEX | FIELD | DEC | HEX | FIELD |
|-----|-----|-------|---|-----|-----|-------|-----|-----|-------|
| 0000 | 0000 | ACTUID | | 0024 | 0018 | ACTPP | 0068 | 0044 | ACTTSE |
| 0008 | 0008 | ACTCHG | | 0028 | 001C | ACTDAD | 0072 | 0048 | ACTPIA |
| 0016 | 0010 | ACTBCK | (EQU) | 0032 | 0020 | ACTMTD | 0076 | 004C | ACTPIE |
| 0016 | 0010 | ACTABN | (EQU) | 0036 | 0024 | ACTHSP | 0080 | 0050 | ACTPOA |
| 0016 | 0010 | ACTNCV | (EQU) | 0040 | 0028 | ACTRAP | 0084 | 0054 | ACTPOE |
| 0016 | 0010 | ACTEXB | (EQU) | 0044 | 002C | ACTRES2 | 0088 | 0058 | ACTMPA |
| 0016 | 0010 | ACTFLG | | 0056 | 0038 | ACTPTA | 0092 | 005C | ACTCPU |
| 0017 | 0011 | ACTRES1 | | 0060 | 003C | ACTTWT | 0096 | 0060 | ACTCON |
| 0020 | 0014 | ACTTMP | | 0064 | 0040 | ACTAWT | 0100 | 0064 | ACTRES3 |

### Alphabetical list of fields in CHAACT

| FIELD | DEC | HEX | | FIELD | DEC | HEX | | FIELD | DEC | HEX |
|-------|-----|-----|---|-------|-----|-----|---|-------|-----|-----|
| ACTABN | 0016 | 0010 | (EQU) | ACTHSP | 0036 | 0024 | | ACTPTA | 0056 | 0038 |
| ACTAWT | 0064 | 0040 | | ACTMPA | 0088 | 0058 | | ACTRAP | 0040 | 0028 |
| ACTBCK | 0016 | 0010 | (EQU) | ACTMTD | 0032 | 0020 | | ACTRES1 | 0017 | 0011 |
| ACTCHG | 0008 | 0008 | | ACTNCV | 0016 | 0010 | (EQU) | ACTRES2 | 0044 | 002C |
| ACTCON | 0096 | 0060 | | ACTPIA | 0072 | 0048 | | ACTRES3 | 0100 | 0064 |
| ACTCPU | 0092 | 005C | | ACTPIE | 0076 | 004C | | ACTTMP | 0020 | 0014 |
| ACTDAD | 0028 | 001C | | ACTPOA | 0080 | 0050 | | ACTTSE | 0068 | 0044 |
| ACTEXB | 0016 | 0010 | (EQU) | ACTPOE | 0084 | 0054 | | ACTTWT | 0060 | 003C |
| ACTFLG | 0016 | 0010 | | ACTPP | 0024 | 0018 | | ACTUID | 0000 | 0000 |

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|---|---|---|---|---|---|
| | 04 00000 | CHAACT | DSECT | | |
| 04 00000 | | | DS | 0D | |
| 04 00000 | | ACTUID | DS | 2F | CURRENT USERID |
| 04 00008 | | ACTCHG | DS | 2F | CURRENT CHARGE NUMBER |
| 04 00010 | | ACTFLG | DS | CL1 | ACCTING TABLE-TASK TYPE |
| | | * | | | FLAG |
| | 04 00010 | ACTEXB | EQU | ACTFLG | EXPRESS BATCH FLAG |
| | 00000001 | ACTEXBM | EQU | X'01' | EXPRESS BATCH MASK |
| | 04 00010 | ACTNCV | EQU | ACTFLG | NON-CONVERSATIONAL TASK |
| | 00000002 | ACTNCVM | EQU | X'02' | NON-CONVERSATIONAL TASK |
| | | * | | | MASK |
| | 04 00010 | ACTABN | EQU | ACTFLG | CALLED FROM ABEND FLAG |
| | 00000004 | ACTABNM | EQU | X'04' | ABEND CALL MASK |
| | 04 00010 | ACTBCK | EQU | ACTFLG | BACK TASK FLAG |
| | | * | | | I05594 |
| | 00000008 | ACTBCKM | EQU | X'08' | BACK TASK MASK |
| | | * | | | I05594 |
| 04 00011 | | ACTRES1 | DS | CL3 | RESERVED |
| 04 00014 | | ACTTMP | DS | F | DEVICE-SECOND PRODUCTS: |
| | | * | | | TEMPORARY PAGES |
| 04 00018 | | ACTPP | DS | F | PERMANENT PAGES |
| 04 0001C | | ACTDAD | DS | F | PRIVATE DISK |
| 04 00020 | | ACTMTD | DS | F | PRIVATE TAPE |
| 04 00024 | | ACTHSP | DS | F | PRIVATE PRINTER |
| 04 00028 | | ACTRAP | DS | F | PRIVATE RDR/PUNCH |
| 04 0002C | | ACTRES2 | DS | 3F | RESERVED |
| 04 00038 | | ACTPTA | DS | F | TOTAL NO. AUX. |
| | | * | | | PAGES(DRUM+DISK) SNAP |
| 04 0003C | | ACTTWT | DS | F | TOTAL NO. OF TWAITS |
| 04 00040 | | ACTAWT | DS | F | TOTAL NO. OF AWAITS |
| 04 00044 | | ACTTSE | DS | F | TOTAL NO. OF TIME SLICE |
| | | * | | | ENDS |
| 04 00048 | | ACTPIA | DS | F | TOTAL PAGE-INS FROM |
| | | * | | | AUX(DRUM+DISK) |
| 04 0004C | | ACTPIE | DS | F | TOTAL PAGE-INS FROM EXT. |
| | | * | | | STORAGE |
| 04 00050 | | ACTPOA | DS | F | TOTAL PAGE-OUTS TO AUX |
| 04 00054 | | ACTPOE | DS | F | TOTAL PAGE-OUTS TO EXT. |
| | | * | | | STORAGE |
| 04 00058 | | ACTMPA | DS | F | MAXIMUM PAGES HELD ON AUX |
| | | * | | | DISK |
| 04 0005C | | ACTCPU | DS | F | CPU TIME |
| 04 00060 | | ACTCON | DS | F | TERMINAL CONNECT TIME |
| 04 00064 | | ACTRES3 | DS | F | RESERVED |
| | 00000068 | ACTLEN | EQU | *-ACTUID | TABLE LENGTH |

## ABEND Interlock Release Table (CHAAIR)

The ABEND Interlock Release Table (AIR) provides information required to reset interlocked shared tables to their pre-locked state.  The table also contains internal control data for ABEND.

The AIR table is open-ended, with no practical limit on the number of entry chains it can contain.  The entries in AIR are chained together by forward and backward links.

Each entry chain in the AIR table occupies 4096 bytes of virtual storage, aligned on doubleword boundaries.

### CHAAIR Storage map

| DEC | HEX | | | | | |
|---|---|---|---|---|---|---|
| 0 | 0 | AIRAAP | | | AIRMSG | |
| 8 | 8 | AIRFG | AIRCNT | AIRRS1 | AIRRS2 | |
| 16 | 10 | AIRDS1 | | | AIRDS2 | |
| 24 | 18 | AIRBWL | | | AIRPTR | |
| 32 | 20 | | | AIRINR | | |

### Fields in CHAAIR -- by displacement

| DEC | HEX | FIELD | | DEC | HEX | FIELD | | DEC | HEX | FIELD | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0000 | 0000 | AIRAAP | | 0008 | 0008 | AIRF1 | (EQU) | 0024 | 0018 | AIRBWL | |
| 0004 | 0004 | AIRMSG | | 0008 | 0008 | AIRFO | (EQU) | 0028 | 001C | AIRPTR | |
| 0008 | 0008 | AIRF7 | (EQU) | 0008 | 0008 | AIRFG | | 0032 | 0020 | AIRVCN | (EQU) |
| 0008 | 0008 | AIRF6 | (EQU) | 0009 | 0009 | AIRCNT | | 0032 | 0020 | AIRINR | |
| 0008 | 0008 | AIRF5 | (EQU) | 0010 | 000A | AIRRS1 | | 0036 | 0024 | AIRRCN | (EQU) |
| 0008 | 0008 | AIRF4 | (EQU) | 0012 | 000C | AIRRS2 | | 0040 | 0028 | AIRINF | (EQU) |
| 0008 | 0008 | AIRF3 | (EQU) | 0016 | 0010 | AIRDS1 | | | | | |
| 0008 | 0008 | AIRF2 | (EQU) | 0020 | 0014 | AIRDS2 | | | | | |

### Alphabetical list of fields in CHAAIR

| FIELD | DEC | HEX | | FIELD | DEC | HEX | | FIELD | DEC | HEX | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| AIRAAP | 0000 | 0000 | | AIRF2 | 0008 | 0008 | (EQU) | AIRMSG | 0004 | 0004 | |
| AIRBWL | 0024 | 0018 | | AIRF3 | 0008 | 0008 | (EQU) | AIRPTR | 0028 | 001C | |
| AIRCNT | 0009 | 0009 | | AIRF4 | 0008 | 0008 | (EQU) | AIRRCN | 0036 | 0024 | (EQU) |
| AIRDS1 | 0016 | 0010 | | AIRF5 | 0008 | 0008 | (EQU) | AIRRS1 | 0010 | 000A | |
| AIRDS2 | 0020 | 0014 | | AIRF6 | 0008 | 0008 | (EQU) | AIRRS2 | 0012 | 000C | |
| AIRFG | 0008 | 0008 | | AIRF7 | 0008 | 0008 | (EQU) | AIRVCN | 0032 | 0020 | (EQU) |
| AIRFO | 0008 | 0008 | (EQU) | AIRINF | 0040 | 0028 | (EQU) | | | | |
| AIRF1 | 0008 | 0008 | (EQU) | AIRINR | 0032 | 0020 | | | | | |

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|---|---|---|---|---|---|
| | 05 00000 | CHAAIR | DSECT | | |
| 05 00000 | | | DS | 0D | |
| 05 00000 | | AIRAAP | DS | 1F | RECOVERY ADDR FOR RECURSIVE |
| | | * | | | ABEND |
| 05 00004 | | AIRMSG | DS | 1F | POINTER TO ABEND ERROR |
| | | * | | | MESSAGES |
| 05 00008 | | AIRFG | DS | XL1 | ABEND FLAGS |
| | 05 00008 | AIRF0 | EQU | AIRFG | NOT USED |
| | 00000080 | AIRF0M | EQU | X'80' | NOT USED |
| | 05 00008 | AIRF1 | EQU | AIRFG | NOT USED |
| | 00000040 | AIRF1M | EQU | X'40' | NOT USED |
| | 05 00008 | AIRF2 | EQU | AIRFG | NOT USED |
| | 00000020 | AIRF2M | EQU | X'20' | NOT USED |
| | 05 00008 | AIRF3 | EQU | AIRFG | TASK TO BE DELETED |
| | 00000010 | AIRF3M | EQU | X'10' | TASK TO BE DELETED MASK |
| | 05 00008 | AIRF4 | EQU | AIRFG | SYSOUT CLOSED |
| | 00000008 | AIRF4M | EQU | X'08' | |
| | 05 00008 | AIRF5 | EQU | AIRFG | SYSOUT NOT EXIST (NON-CONV) |
| | 00000004 | AIRF5M | EQU | X'04' | |
| | 05 00008 | AIRF6 | EQU | AIRFG | PRE-LOGON FLAG |
| | 00000002 | AIRF6M | EQU | X'02' | |
| | 05 00008 | AIRF7 | EQU | AIRFG | NOT USED |
| | 00000001 | AIRF7M | EQU | X'01' | NOT USED |
| 05 00009 | | AIRCNT | DS | X | NO OF INTRLK REL ROUTINE |
| | | * | | | ENTRIES |
| 05 0000A | | AIRRS1 | DS | H | NO OF MSGS ALREADY STACKED |
| 05 0000C | | AIRRS2 | DS | 1F | 1ST AVAIABLE BYTE IN MSG |
| | | * | | | STRING |
| | | * | | | (TO BE USED WITH AIRMSG) |
| 05 00010 | | AIRDS1 | DS | 1F | 2ND LEVEL RECURSION ADDRESS |
| 05 00014 | | AIRDS2 | DS | 1F | NOT USED |
| 05 00018 | | AIRBWL | DS | 1F | BACKWARD LINK |
| 05 0001C | | AIRPTR | DS | 1F | POINTER TO NEXT AIR TABLE |
| 05 00020 | | AIRINR | DS | 254XL16 | AREA FOR INTRLK REL RTN |
| | | * | | | ENTRIES |
| | 05 00020 | AIRVCN | EQU | AIRINR | VCON ADDR |
| | 05 00024 | AIRRCN | EQU | AIRINR+4 | RCON ADDR |
| | 05 00028 | AIRINF | EQU | AIRINR+8 | INFORMATION AREA |

## Auxiliary Storage Allocation Table (CHAASA), and (CHAASB)

   The Auxiliary Storage Allocation Table (ASAT) describes the availability status of
all auxiliary storage devices.
   ASAT functions as a resident bookkeeper and is maintained by the Auxiliary Storage
Allocation Queue Processor and the Auxiliary Storage Release subroutine.  Startup
will initialize ASAT according to the current auxiliary storage configuration.
   A core storage entry of 176 bytes is allocated to ASAT; the first 16 of these
bytes contain an overall auxiliary storage device status description, while the next
160 bytes comprise a drum directory.  All other drum and disk directories are chained
to ASAT, keeping its size fixed.

### CHAASA Storage map

```
DEC     HEX
  0       0 | ASANAM  | ASALOCK |     ASATMA     |      ASAPCT      |     ASAFSC      |
            |         |         |                |                 |                 |
  8       8 | ASANAK  |       UNNAMED            |            ASATKA                  |
            |         |                          |                                   |
 16      10 |           ASAPDK                   |            ASAPDM                  |
            |                                    |                                   |
 24      18 | ASAFL1  | ASANSP  |    ASANA1      |     ASANBP      |     ASASDA      |
            |         |         |                |                 |                 |
 32      20 |          ASANXM                    |                                   |
            |          _____  |                                   |
            |                          ASADS1                                        |
            |        _____|
 48      30 |        | ASABS1  | ASAMS1 | ASAPS1  |                                   |
            | _____|_____|_____|_____|                                   |
          =                          ASADS2                                          =
            |                                                                         |
            |                                                                         |
            |                         _____|
176      B0 |                         |
            |_____|
```

### Fields in CHAASA -- by displacement

| DEC  | HEX  | FIELD  |       | DEC  | HEX  | FIELD  |       | DEC  | HEX  | FIELD  |
|------|------|--------|-------|------|------|--------|-------|------|------|--------|
| 0000 | 0000 | ASANAM |       | 0016 | 0010 | ASAPDK |       | 0030 | 001E | ASASDA |
| 0001 | 0001 | ASALOCK|       | 0020 | 0014 | ASAPDM |       | 0032 | 0020 | ASANXM |
| 0002 | 0002 | ASATMA |       | 0024 | 0018 | ASASP  | (EQU) | 0036 | 0024 | ASADS1 |
| 0004 | 0004 | ASAPCT |       | 0024 | 0018 | ASAFL1 |       | 0049 | 0031 | ASABS1 |
| 0006 | 0006 | ASAFSC |       | 0025 | 0019 | ASANSP |       | 0050 | 0032 | ASAMS1 |
| 0008 | 0008 | ASANAK |       | 0026 | 001A | ASANA1 |       | 0051 | 0033 | ASAPS1 |
| 0012 | 000C | ASATKA |       | 0028 | 001C | ASANBP |       | 0052 | 0034 | ASADS2 |

### Alphabetical list of fields in CHAASA

| FIELD  | DEC  | HEX  | | FIELD  | DEC  | HEX  | | FIELD  | DEC  | HEX  |       |
|--------|------|------|-|--------|------|------|-|--------|------|------|-------|
| ASABS1 | 0049 | 0031 | | ASANAK | 0008 | 0008 | | ASAPDK | 0016 | 0010 |       |
| ASADS1 | 0036 | 0024 | | ASANAM | 0000 | 0000 | | ASAPDM | 0020 | 0014 |       |
| ASADS2 | 0052 | 0034 | | ASANA1 | 0026 | 001A | | ASAPS1 | 0051 | 0033 |       |
| ASAFL1 | 0024 | 0018 | | ASANBP | 0028 | 001C | | ASASDA | 0030 | 001E |       |
| ASAFSC | 0006 | 0006 | | ASANSP | 0025 | 0019 | | ASASP  | 0024 | 0018 | (EQU) |
| ASALOCK| 0001 | 0001 | | ASANXM | 0032 | 0020 | | ASATKA | 0012 | 000C |       |
| ASAMS1 | 0050 | 0032 | | ASAPCT | 0004 | 0004 | | ASATMA | 0002 | 0002 |       |

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|---|---|---|---|---|---|
| | 06 00000 | CHAASA | DSECT | | AUXILIARY STORAGE ALLOCATION TABLE - ASAT |
| | | * | | | |
| 06 00000 | | ASANAM | DS | XL1 | NUMBER OF AUXILARY DRUMS |
| 06 00001 | | ASALOCK | DS | XL1 | TEST AND SET LOCK BYTE FOR ASAT |
| | | * | | | |
| 06 00002 | | ASATMA | DS | H | TOTAL AUXILIARY DRUM PAGES AVAILABLE |
| | | * | | | |
| 06 00004 | | ASAPCT | DS | H | LOW DRUM AVAILABILITY THRESHOLD |
| | | * | | | |
| 06 00006 | | ASAFSC | DS | H | INITIAL DRUM PAGES AVAILABLE |
| | | * | | | |
| 06 00008 | | ASANAK | DS | XL1 | NUMBER OF AUXILIARY DISKS |
| 06 00009 | | | DS | XL3 | RESERVED |
| 06 0000C | | ASATKA | DS | F | TOTAL AUXILIARY DISK PAGES AVAILABLE |
| | | * | | | |
| 06 00010 | | ASAPDK | DS | F | POINTER TO DISK FROM WHICH TO ASSIGN PAGES |
| | | * | | | |
| 06 00014 | | ASAPDM | DS | F | POINTER TO DRUM FROM WHICH TO ASSIGN PAGES |
| | | * | | | |
| 06 00018 | | ASAFL1 | DS | XL1 | FLAG BYTE 1 |
| | 06 00018 | ASASP | EQU | ASAFL1 | SUPPRESS ALLOCATION ON THIS DEVICE |
| | | * | | | |
| | 00000080 | ASASPM | EQU | X'80' | 1 - SUPPRESS |
| 06 00019 | | ASANSP | DS | CL1 | NEXT SLOT POINTER |
| 06 0001A | | ASANA1 | DS | H | NUMBER OF PAGES AVAILABLE ON THIS DRUM |
| | | * | | | |
| 06 0001C | | ASANBP | DS | H | NUMBER OF BAD PAGES ON THIS DEVICE |
| | | * | | | |
| 06 0001E | | ASASDA | DS | H | SYMBOLIC DEVICE ADDRESS OF THIS DRUM |
| | | * | | | |
| 06 00020 | | ASANXM | DS | F | POINTER TO NEXT DRUM IN CHAIN |
| | | * | | | |
| 06 00024 | | ASADS1 | DS | XL13 | BIT DIRECTORY - SLOT 1 |
| 06 00031 | | ASABS1 | DS | XL1 | BYTE NO. FROM WHICH TO ASSIGN PAGES IN SLOT |
| | | * | | | |
| 06 00032 | | ASAMS1 | DS | XL1 | MASK -BIT NO- FROM WHICH TO LOOK FOR AVAIL PGS |
| | | * | | | |
| 06 00033 | | ASAPS1 | DS | XL1 | NUMBER OF PAGES AVAILABLE WITHIN SLOT |
| | | * | | | |
| 06 00034 | | ASADS2 | DS | 8XL16 | BIT DIRECTORY - SLOTS 2-9 |

CHAASB Storage map

```
 DEC   HEX
   0     0 |    ASBNBP       |ASBFL1 |ASBBIP |      ASBBYP        |       ASBAVP       |
          |                 |       |       |                    |                    |
   8     8 |    ASBNBD       |      ASBDEV   |            ASBCHA                       |
          |                 |               |                                         |
  16    10 |                                                                          |
          =                               ASBCNT                                      =
          |                                                                          |
          |                                                                          |
 208    D0 |                                                       |_____|
          |                                                       |                  |
          =                               ASBBIT                                     =
          |                                                                          |
          |                                    |_____|                 |
 408   198 |                                    |                                    
          |_____|
```
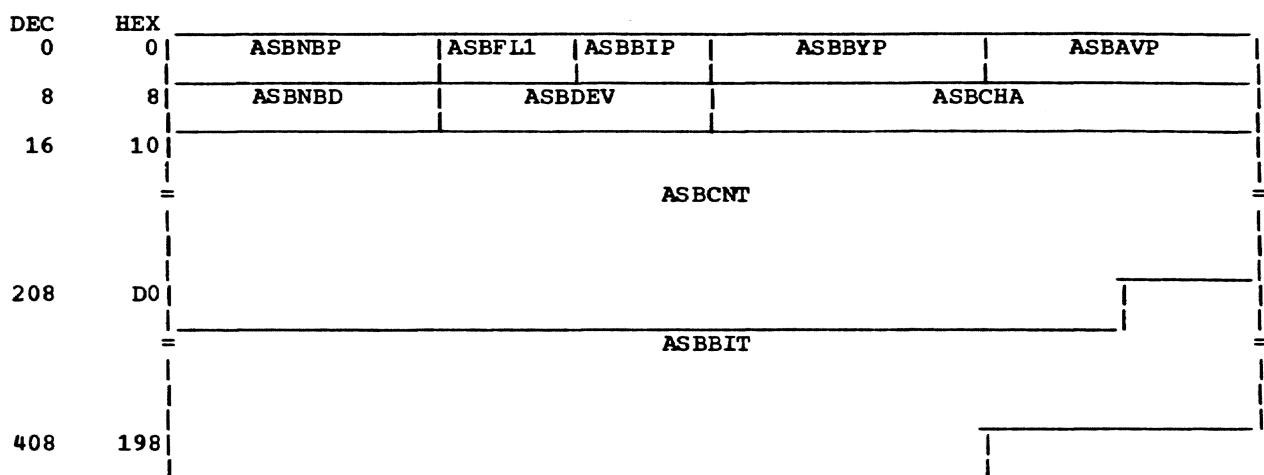
Fields in CHAASB -- by displacement

| DEC | HEX | FIELD | | DEC | HEX | FIELD | | DEC | HEX | FIELD |
|------|------|-------|---|------|------|-------|---|------|------|-------|
| 0000 | 0000 | ASBNBP | | 0004 | 0004 | ASBBYP | | 0012 | 000C | ASBCHA |
| 0002 | 0002 | ASBSP (EQU) | | 0006 | 0006 | ASBAVP | | 0016 | 0010 | ASBCNT |
| 0002 | 0002 | ASBFL1 | | 0008 | 0008 | ASBNBD | | 0215 | 00D7 | ASBBIT |
| 0003 | 0003 | ASBBIP | | 0010 | 000A | ASBDEV | | | | |

Alphabetical list of fields in CHAASB

| FIELD | DEC | HEX | | FIELD | DEC | HEX | | FIELD | DEC | HEX |
|-------|------|------|---|-------|------|------|---|-------|------|------|
| ASBAVP | 0006 | 0006 | | ASBCHA | 0012 | 000C | | ASBNBD | 0008 | 0008 |
| ASBBIP | 0003 | 0003 | | ASBCNT | 0016 | 0010 | | ASBNBP | 0000 | 0000 |
| ASBBIT | 0215 | 00D7 | | ASBDEV | 0010 | 000A | | ASBSP | 0002 | 0002 (EQU) |
| ASBBYP | 0004 | 0004 | | ASBFL1 | 0002 | 0002 | | | | |

Assembler listing of CHAASB

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|----------|-------------|--------|------|------|---------|
| | 07 00000 | CHAASB | DSECT | | BIT DIRECTORY FOR AUXILIARY |
| | | * | | | 2311 DISK |
| | | * DEFINITION FOR 2311 BIT DIRECTORY FOR AUXILIARY | | | |
| | | * STORAGE ALLOCATION | | | |
| 07 00000 | | ASBNBP | DS | H | NUMBER OF BAD PAGES ON THIS |
| | | * | | | DEVICE |
| 07 00002 | | ASBFL1 | DS | XL1 | FLAG BYTE 1 |
| | 07 00002 | ASBSP | EQU | ASBFL1 | SUPPRESS ALLOCATION ON THIS |
| | | * | | | DEVICE |
| | 00000080 | ASBSPM | EQU | X'80' | 1 - SUPPRESS |
| 07 00003 | | ASBBIP | DS | XL1 | BIT POINTER FROM WHICH TO |
| | | * | | | LOOK FOR AVAIL PAGE |
| 07 00004 | | ASBBYP | DS | H | BYTE NUMBER FROM WHICH TO |
| | | * | | | LOOK FOR AVAIL PAGE |
| 07 00006 | | ASBAVP | DS | H | BINARY NUMBER OF PAGES |
| | | * | | | AVAILABLE ON THIS DISK |
| 07 00008 | | ASBNBD | DS | H | BINARY NUMBER OF BYTES IN |
| | | * | | | DIRECTORY - X'00C7' |
| 07 0000A | | ASBDEV | DS | H | SYMBOLIC DEVICE ADDRESS OF |
| | | * | | | THIS DISK |
| 07 0000C | | ASBCHA | DS | F | POINTER TO NEXT DISK BIT |
| | | * | | | DIRECTORY |
| 07 00010 | | ASBCNT | DS | XL199 | CYLINDER COUNT OF PAGES |
| | | * | | | AVAILABLE |
| 07 000D7 | | ASBBIT | DS | XL199 | AVAILABILITY BITS - ONE BIT |
| | | * | | | FOR EACH PAGE NO. |

## Auxiliary Segment Table (CHAAST) and Segment Table (CHASGT)

The Auxiliary Segment Table (AST) contains information concerning segment entries assigned to a task's virtual storage area. The AST is directly preceded by the SGT, aligned on full word boundaries in core storage (128-32,768 bytes).

The Segment Table (SGT) entry maintains the length, origin, and availability of a page table. The Segment Table is a contiguous list of SGT entry groups. Each group contains sixteen 4-byte entries. A maximum of 4096 entries is allowed the user. The SGT (64- 16,384 bytes) resides in core storage in a task's External Task Status Index (XTSI). The SGT is aligned on fullword boundaries.

### CHAAST Storage map

```
DEC    HEX  _____
 0      0|                                   |ASTN  |ASTU  |ASTM  |ASTF     |
         |                ASTDA               |      |      |      |         |
         |_____|
```

### Fields in CHAAST -- by displacement

| DEC | HEX | FIELD | | DEC | HEX | FIELD | | DEC | HEX | FIELD | |
|------|------|--------|------|------|------|--------|------|------|------|--------|------|
| 0000 | 0000 | ASTDA | | 0006 | 0006 | ASTDKP | (EQU) | 0007 | 0007 | ASTS | (EQU) |
| 0004 | 0004 | ASTSPT | (EQU) | 0006 | 0006 | ASTM | | 0007 | 0007 | ASTP | (EQU) |
| 0004 | 0004 | ASTN | | 0007 | 0007 | ASTA | (EQU) | 0007 | 0007 | ASTV | (EQU) |
| 0005 | 0005 | ASTU | | 0007 | 0007 | ASTSE | (EQU) | 0007 | 0007 | ASTF | |
| 0006 | 0006 | ASTPPS | (EQU) | 0007 | 0007 | ASTTA | (EQU) | | | | |

### Alphabetical list of fields in CHAAST

| FIELD | DEC | HEX | | FIELD | DEC | HEX | | FIELD | DEC | HEX | |
|--------|------|------|------|--------|------|------|------|--------|------|------|------|
| ASTA | 0007 | 0007 | (EQU) | ASTN | 0004 | 0004 | | ASTSPT | 0004 | 0004 | (EQU) |
| ASTDA | 0000 | 0000 | | ASTP | 0007 | 0007 | (EQU) | ASTTA | 0007 | 0007 | (EQU) |
| ASTDKP | 0006 | 0006 | (EQU) | ASTPPS | 0006 | 0006 | (EQU) | ASTU | 0005 | 0005 | |
| ASTF | 0007 | 0007 | | ASTS | 0007 | 0007 | (EQU) | ASTV | 0007 | 0007 | (EQU) |
| ASTM | 0006 | 0006 | | ASTSE | 0007 | 0007 | (EQU) | | | | |

### Assembler listing of CHAAST

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|----------|-------------|--------|------|------|---------|
| | 08 00000 | CHAAST | DSECT | | AUXILIARY SEGMENT TABLE |
| 08 00000 | | | DS | 0F | |
| 08 00000 | | ASTDA | DS | F | PAGE TABLE EXTERNAL |
| | | * | | | LOCATION |
| | | * IF THE SEGMENT IS NOT THE FIRST ON A PTP(ASTSEM | | | |
| | | * OFF), ASTDA | | | |
| | | * CONTAINS THE SEGMENT NUMBER OF THE SEGMENT THAT | | | |
| | | * IS THE FIRST | | | |
| | | * | | | ON THE PAGE TABLE PAGE |
| 08 00004 | | ASTN | DS | XL1 | IN-USE PAGE COUNT |
| | 08 00004 | ASTSPT | EQU | ASTN | IF SHARED SEGMT,BYTES 4-5 |
| | | * | | | SPT NUMBER |
| 08 00005 | | ASTU | DS | XL1 | UNUSED PAGE COUNT |
| 08 00006 | | ASTM | DS | X | FLAG BYTE |
| | | * | | | N470 |
| | 08 00006 | ASTDKP | EQU | ASTM | DISK PREFERENCE FLAG |
| | | * | | | N470 |
| | 00000080 | ASTDKPM | EQU | X'80' | DISK PREFERENCE MASK |
| | | * | | | N470 |
| | 08 00006 | ASTPPS | EQU | ASTM | PRE-PAGE SET PTP FLAG |
| | | * | | | N470 |
| | 00000040 | ASTPPSM | EQU | X'40' | PRE-PAGE SET PTP MASK |

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|----------|-------------|--------|------|------|---------|
|          |             |        |      |      | N470 |
| 08 00007 |             | ASTF   | DS   | XL1  | FLAG BYTE |
|          | 08 00007    | ASTV   | EQU  | ASTF | VARIABLE LENGTH SEGMENT |
|          |             | *      |      |      | FLAG   1=ON |
|          | 00000080    | ASTVM  | EQU  | X'80' | |
|          | 08 00007    | ASTP   | EQU  | ASTF | PAGE TABLE IN ANOTHER XTSI |
|          |             | *      |      |      | PG. 1=ON |
|          | 00000040    | ASTPM  | EQU  | X'40' | |
|          | 08 00007    | ASTS   | EQU  | ASTF | SHARED SEGMENT |
|          |             | *      |      |      | 1=SHARED |
|          | 00000010    | ASTSM  | EQU  | X'10' | |
|          | 08 00007    | ASTTA  | EQU  | ASTF | TEMPORARY AUXILIARY STORAGE |
|          | 00000008    | ASTTAM | EQU  | X'08' | 1=AUXILIARY 0=EXTERNAL FOR |
|          |             | *      |      |      | SHARED PAGES ONLY N470 |
|          | 08 00007    | ASTSE  | EQU  | ASTF | FIRST PT IN A PT PAGE |
|          |             | *      |      |      | N470 |
|          | 00000002    | ASTSEM | EQU  | X'02' | |
|          | 08 00007    | ASTA   | EQU  | ASTF | SEGMENT ASSIGNED 1=ASSIGNED |
|          | 00000001    | ASTAM  | EQU  | X'01' | |

## CHASGT Storage map

```
DEC   HEX  _____
 0     0 | SGTPTL  |          SGTPTO            |
         |         |_____|
         |_____|
```

## Fields in CHASGT -- by displacement

| DEC | HEX | FIELD | DEC | HEX | FIELD | DEC | HEX | FIELD | |
|------|------|--------|------|------|--------|------|------|--------|------|
| 0000 | 0000 | SGTPTL | 0000 | 0000 | SGTSTE | 0001 | 0001 | SGTPTO | |
| | | | | | | 0003 | 0003 | SGTPA | (EQU) |

## Alphabetical list of fields in CHASGT

| FIELD | DEC | HEX | | FIELD | DEC | HEX | | FIELD | DEC | HEX |
|--------|------|------|-------|--------|------|------|--|--------|------|------|
| SGTPA | 0003 | 0003 | (EQU) | SGTPTL | 0000 | 0000 | | SGTPTO | 0001 | 0001 |
| | | | | | | | | SGTSTE | 0000 | 0000 |

## Assembler listing of CHASGT

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|----------|-------------|--------|------|------|---------|
| | 89 00000 | CHASGT | DSECT | | SEGMENT TABLE ENTRY |
| 89 00000 | | SGTSTE | DS | 0F | SEGMENT TABLE ENTRY |
| 89 00000 | | SGTPTL | DS | C | PAGE TABLE LENGTH |
| 89 00001 | | SGTPTO | DS | CL3 | |

```
*BITS 8-19 - CONTAINS THE CORE BLOCK ADDRESS OF THE
*PAGE IN WHICH
*              THE PAGE TABLE FOR THE SEGMENT RESIDES
*              IF THE TASK IS
*              IN THE WALL AND NOT IN TIME SLICE END.
*              OTHERWISE IT
*              CONTAINS THE IDENTIFICATION OF THE
*              PAGE TABLE PAGE IN
*              WHICH THE PAGE TABLE RESIDES
*BITS 20-30- ALWAYS CONTAINS THE OFFSET OF THE
*PARTICULAR PAGE
*              TABLE IN THE PAGE TABLE PAGE. NOTE-THE
*              ENTRIES ARE
*              ON HALF WORD BOUNDARIES.
*BIT 31     - DENOTES PAGE TABLE AVAILABILITY
```

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|----------|-------------|--------|------|------|---------|
| | 89 00003 | SGTPA | EQU | SGTPTO+2 | PAGE TABLE AVAILABILITY |
| | | * | | | FLAG |
| | 00000001 | SGTPAM | EQU | 1 | PAGE TABLE AVAILABLE MASK |

## Active User Table Entry (CHAAUL)

The Active User Table contains one entry (CHAAUL) for each active user ID in the system.  CHAAUL entries are built by the RCR OPEN macro.

The 112-byte CHAAUL entries reside in virtual storage aligned on doubleword boundaries.

### CHAAUL Storage map

```
DEC   HEX
  0    0 |AULLCK  |AULF1   |AULF2   |AULF3   |     AULTID        |     AULTMID     |
         |        |        |        |        |                  |                 |
  8    8 |                          AULUID                                        |
         |                                                                        |
 16   10 |                          AULCHG                                        |
         |                                                                        |
 24   18 |           AULUTB                |           AULTLC                     |
         |                                                                        |
 32   20 |        AULTLC   (CONT)          |           AULP01                     |
         |                                                                        |
 40   28 |           AULP02               |           AULP03                      |
         |                                                                        |
 48   30 |           AULP04               |           AULP05                      |
         |                                                                        |
 56   38 |           AULP06               |           AUL05                       |
         |                                                                        |
 64   40 |           AUL06                |           AUL07                       |
         |                                                                        |
 72   48 |           AUL08                |           AUL09                       |
         |                                                                        |
 80   50 |           AUL10               |                                        |
         |                               |                                        |
         |                          AULINS                                        |
         |                               |_____|
 96   60 |                               |           AULBCK                       |
         |                               |                                        |
104   68 |                          AULON                                         |
         |_____|
```

### Fields in CHAAUL -- by displacement

| DEC | HEX | FIELD | | DEC | HEX | FIELD | | DEC | HEX | FIELD |
|---|---|---|---|---|---|---|---|---|---|---|
| 0000 | 0000 | AULLCK | | 0008 | 0008 | AULUID | | 0060 | 003C | AUL05 |
| 0001 | 0001 | AULMEF | (EQU) | 0016 | 0010 | AULMEPTR | (EQU) | 0064 | 0040 | AUL06 |
| 0001 | 0001 | AULNCV | (EQU) | 0016 | 0010 | AULCHG | | 0068 | 0044 | AUL07 |
| 0001 | 0001 | AULCP | (EQU) | 0024 | 0018 | AULUTB | | 0072 | 0048 | AUL08 |
| 0001 | 0001 | AULCV | (EQU) | 0028 | 001C | AULTLC | | 0076 | 004C | AUL09 |
| 0001 | 0001 | AULPRM | (EQU) | 0036 | 0024 | AULP01 | | 0080 | 0050 | AUL10 |
| 0001 | 0001 | AULF1 | | 0040 | 0028 | AULP02 | | 0084 | 0054 | AULINS |
| 0002 | 0002 | AULF2 | | 0044 | 002C | AULP03 | | 0100 | 0064 | AULBCK |
| 0003 | 0003 | AULF3 | | 0048 | 0030 | AULP04 | | 0104 | 0068 | AULON |
| 0004 | 0004 | AULTID | | 0052 | 0034 | AULP05 | | | | |
| 0006 | 0006 | AULTMID | | 0056 | 0038 | AULP06 | | | | |

### Alphabetical list of fields in CHAAUL

| FIELD | DEC | HEX | | FIELD | DEC | HEX | | FIELD | DEC | HEX |
|---|---|---|---|---|---|---|---|---|---|---|
| AULBCK | 0100 | 0064 | | AULNCV | 0001 | 0001 | (EQU) | AULTMID | 0006 | 0006 |
| AULCHG | 0016 | 0010 | | AULON | 0104 | 0068 | | AULUID | 0008 | 0008 |
| AULCP | 0001 | 0001 | (EQU) | AULPRM | 0001 | 0001 | (EQU) | AULUTB | 0024 | 0018 |
| AULCV | 0001 | 0001 | (EQU) | AULP01 | 0036 | 0024 | | AUL05 | 0060 | 003C |
| AULF1 | 0001 | 0001 | | AULP02 | 0040 | 0028 | | AUL06 | 0064 | 0040 |
| AULF2 | 0002 | 0002 | | AULP03 | 0044 | 002C | | AUL07 | 0068 | 0044 |
| AULF3 | 0003 | 0003 | | AULP04 | 0048 | 0030 | | AUL08 | 0072 | 0048 |
| AULINS | 0084 | 0054 | | AULP05 | 0052 | 0034 | | AUL09 | 0076 | 004C |
| AULLCK | 0000 | 0000 | | AULP06 | 0056 | 0038 | | AUL10 | 0080 | 0050 |
| AULMEF | 0001 | 0001 | (EQU) | AULTID | 0004 | 0004 | | | | |
| AULMEPTR | 0016 | 0010 | (EQU) | AULTLC | 0028 | 001C | | | | |

```
LOCATION  INSTRUCTION  SOURCE    INST  OPER        COMMENT
          09 00000     CHAAUL    DSECT
************************************************************************
*                           ACTIVE USER TABLE                         *
*        THIS DSECT DESCRIBES THE ENTRIES OF THE ACTIVE USER TABLE.   *
*  THESE ENTRIES WILL BE LOCATED IN SHARED VIRTUAL MEMORY.  THERE WILL*
*  BE ONE ENTRY FOR EACH ACTIVE USER ID IN THE SYSTEM.   THE ENTRIES  *
*  ARE BUILT BY THE RCR OPEN MACRO.   EACH ENTRY IS A FIXED LENGTH OF  *
*  64 BYTES.                                                          *
09 00000                         DS    0D
          00000124     AULMNE    EQU   8*4096/112  MAXIMUM NUMBER OF ENTRIES
09 00000               AULLCK    DS    XL1         LOCK AND ACTIVE BYTE
09 00001               AULF1     DS    XL1         FLAG BYTE
          09 00001     AULPRM    EQU   AULF1       PRIMARY ENTRY/CREATED BY
                       *                           CZAFM
          00000080     AULPRMM   EQU   X'80'       PRIMARY ENTRY MASK
          09 00001     AULCV     EQU   AULF1       CONVERSATIONAL TASK ENTRY
                       *                           FLAG
          00000008     AULCVM    EQU   X'08'       CONVERSATIONAL TASK ENTRY
                       *                           MASK
          09 00001     AULCP     EQU   AULF1       CONVERSATIONAL PRIMARY
                       *                           ENTRY/CREATED
          00000088     AULCPM    EQU   X'88'       ENTRY IS CONVERSATIONAL
                       *                           /BY CZAFM
          09 00001     AULNCV    EQU   AULF1       NON-CONVERSATIONAL TASK
                       *                           FLAG
          00000004     AULNCVM   EQU   X'04'       NON-CONVERSATIONAL TASK
                       *                           MASK
          09 00001     AULMEF    EQU   AULF1       FLAG INDICATES NEW SDST
                       *                           MEMBR NTRY CREATED I03941
          0000005C     AULMEFM   EQU   X'5C'       BY SRCHSDST AND SUBSEQUENT
                       *                           VMA FAILURE        I03941
09 00002               AULF2     DS    XL1         FLAG BYTE
09 00003               AULF3     DS    XL1         FLAG BYTE
09 00004               AULTID    DS    H           TASK ID
09 00006               AULTMID   DS    H           TERMINAL ID OR ZEROES
09 00008               AULUID    DS    CL8         USERID
09 00010               AULCHG    DS    CL8         CHARGE NUMBER
          09 00010     AULMEPTR  EQU   AULCHG      OVERLAY FOR SDST MEMBR NTRY
                       *                           ADDR IN CASE       I03941
                       *                           OF GETSMAIN-VMA FAILURE
                       *                           RECOVERY           I03941
09 00018               AULUTB    DS    F           POINTER TO USER ENTRY
09 0001C               AULTLC    DS    2F          TIME LAST CHANGED
                       *                                       155.7N
09 00024               AULP01    DS    F           TASK TEMPORARY PAGE PRODUCT
                       *                                       155.7N
09 00028               AULP02    DS    F           PERMANENT PAGE PRODUCT (FOR
                       *                           EASE OF
                       *                           IMPLEMENTATION ONLY)
                       *                                       155.7N
09 0002C               AULP03    DS    F           TASK DIRECT ACCESS PRODUCT
                       *                                       155.7N
09 00030               AULP04    DS    F           TASK MAG. TAPE PRODUCT
                       *                                       155.7N
09 00034               AULP05    DS    F           TASK PRINTER PRODUCT
                       *                                       155.7N
09 00038               AULP06    DS    F           TASK RDR/PU PRODUCT
                       *                                       155.7N
09 0003C               AUL05     DS    F           TASK TEMPORARY PAGE ACCUM.
```

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|----------|-------------|--------|------|------|---------|
| | | * | | | 155.7N |
| 09 00040 | | AUL06 | DS | F | TASK PERM. PAGE ACCUM. (FOR |
| | | * | | | EASE OF |
| | | * | | | IMPLEMENTATION ONLY) |
| | | * | | | 155.7N |
| 09 00044 | | AUL07 | DS | F | DIRECT ACCESS DRIVES-THIS |
| | | * | | | TASK      155.7N |
| 09 00048 | | AUL08 | DS | F | MAGNETIC TAPE DRIVES -THIS |
| | | * | | | TASK |
| 09 0004C | | AUL09 | DS | F | HIGH SPEED PRINTERS   -THIS |
| | | * | | | TASK |
| 09 00050 | | AUL10 | DS | F | READER/PUNCH          -THIS |
| | | * | | | TASK |
| 09 00054 | | AULINS | DS | CL16 | INSTALLATION DATA |
| 09 00064 | | AULBCK | DS | F | BACKED TASK'S CONNECT TIME |
| | | * | | | I05594 |
| 09 00068 | | AULON | DS | CL8 | TIME TASK LOGGED ON |
| | 00000070 | AULLEN | EQU | *-CHAAUL | LENGTH OF ENTRY |

BULKIO Table (CHABCT and CHASET)


The BULKIO Table, used by Batch Monitor to schedule BULKIO requests, contains a header (CHABCT), and one or more S-entries (CHASET).

BULKOMM table (CHABCT), the BULKIO table header, contains header fields, S-entry allocation length, the total length of the BULKIO table, and information used for public VAM BULKIO functions.

A maximum of nine S-entries (CHASET) can follow the common header. Each S-entry describes a device/job entry residing in the BULKOMM csect (CHBBCT). The first entry immediately follows the header. Subsequent entries are contiguous. CHASET contains control information for a system defined unit record device, as well as information for a BULKIO job performed on that device.

The 8192-byte CHABCT resides on word boundaries. Each 800-byte CHASET resides on doubleword boundaries within CHABCT.

CHABCT Storage map

```
DEC     HEX
  0       0 | BCTCNT    |    BCTFUL     |    BCTNSR     |    BCTLPS     |
  8       8 |       BCTSET          |    BCTTIM     |    BCTDEF     |
 16      10 | BCTSOI    |    BCTUN1     | BCTFL1  | BCTFL2 |    BCTNTA    |
 24      18 | BCTNOT    |    BCTFLT     |
           |                        BCTUN2
 56      38 |                 |
           |_____|
           |                   BCTLRT
 88      58 |                 |
           |_____|
           |                   BCTLET
120      78 |                 | BCTUN3    |    BCTRUS     |    BCTEUS    |
128      80 | BCTBIO | BCTAKT | BCTALM | BCTARK |        BCTPCT         |
136      88 |       BCTPRT         |          BCTCONT            |
144      90 |                      BCTCALL                       |
152      98 |
           =                       BCTARE                        =
216      D8 | BCTILK     | BCTLOK | BCTBSNL |        BCTBSN       |
```

```
DEC   HEX  _____
224   E0|                                                               |
      |  =                           BCTAKD                           =  |
      |                                                               |
      |                                                               |
      |  _____  |
424  1A8| BCTFL3 |                                                     |
      |  |_____|                                                    |
      |                              BCTRSV                            |
      |  _____  |
440  1B8|            UNNAMED            |            BCTALL            |
      |_____|_____|
```

ORG   BCTLRT

```
          _____
58   3A  |            | BCTL1R       | BCTL2R       | BCTL3R            |
         |_____|_____|_____|_____|
64   40| BCTL4R       | BCTL5R       | BCTL6R       | BCTL7R            |
       |_____|_____|_____|_____|
72   48| BCTL8R       | BCTL9R       | BCTLAR       | BCTLBR            |
       |_____|_____|_____|_____|
80   50| BCTLCR       | BCTLDR       | BCTLER       | BCTLFR            |
       |_____|_____|_____|_____|
88   58| BCTLGR       |
       |_____|
```

ORG   BCTLET

```
          _____
90   5A  |            | BCTL1E       | BCTL2E       | BCTL3E            |
         |_____|_____|_____|_____|
96   60| BCTL4E       | BCTL5E       | BCTL6E       | BCTL7E            |
       |_____|_____|_____|_____|
104  68| BCTL8E       | BCTL9E       | BCTLAE       | BCTLBE            |
       |_____|_____|_____|_____|
112  70| BCTLCE       | BCTLDE       | BCTLEE       | BCTLFE            |
       |_____|_____|_____|_____|
120  78| BCTLGE       |
       |_____|
```

## Fields in CHABCT -- by displacement

| DEC | HEX | FIELD | | | DEC | HEX | FIELD | DEC | HEX | FIELD |
|-----|-----|-------|---|---|-----|-----|-------|-----|-----|-------|
| 0000 | 0000 | BCTCNT | | | 0028 | 001C | BCTUN2 | 0104 | 0068 | BCTL8E |
| 0000 | 0000 | BCTHED | | | 0058 | 003A | BCTL1R | 0106 | 006A | BCTL9E |
| 0002 | 0002 | BCTFUL | | | 0058 | 003A | BCTLRT | 0108 | 006C | BCTLAE |
| 0004 | 0004 | BCTNSR | | | 0060 | 003C | BCTL2R | 0110 | 006E | BCTLBE |
| 0006 | 0006 | BCTLPS | | | 0062 | 003E | BCTL3R | 0112 | 0070 | BCTLCE |
| 0008 | 0008 | BCTSET | | | 0064 | 0040 | BCTL4R | 0114 | 0072 | BCTLDE |
| 0012 | 000C | BCTTIM | | | 0066 | 0042 | BCTL5R | 0116 | 0074 | BCTLEE |
| 0014 | 000E | BCTDEF | | | 0068 | 0044 | BCTL6R | 0118 | 0076 | BCTLFE |
| 0016 | 0010 | BCTSOI | | | 0070 | 0046 | BCTL7R | 0120 | 0078 | BCTLGE |
| 0018 | 0012 | BCTUN1 | | | 0072 | 0048 | BCTL8R | 0122 | 007A | BCTUN3 |
| 0020 | 0014 | BCTABN | (EQU) | | 0074 | 004A | BCTL9R | 0124 | 007C | BCTRUS |
| 0020 | 0014 | BCTIIP | (EQU) | | 0076 | 004C | BCTLAR | 0126 | 007E | BCTEUS |
| 0020 | 0014 | BCTBHS | (EQU) | | 0078 | 004E | BCTLBR | 0128 | 0080 | BCTBIO |
| 0020 | 0014 | BCTINP | (EQU) | | 0080 | 0050 | BCTLCR | 0129 | 0081 | BCTAKT |
| 0020 | 0014 | BCTBTO | (EQU) | | 0082 | 0052 | BCTLDR | 0130 | 0082 | BCTALM |
| 0020 | 0014 | BCTOTB | (EQU) | | 0084 | 0054 | BCTLER | 0131 | 0083 | BCTARK |
| 0020 | 0014 | BCTDOR | (EQU) | | 0086 | 0056 | BCTLFR | 0132 | 0084 | BCTPCT |
| 0020 | 0014 | BCTINI | (EQU) | | 0088 | 0058 | BCTLGR | 0136 | 0088 | BCTPRT |
| 0020 | 0014 | BCTFL1 | | | 0090 | 005A | BCTL1E | 0140 | 008C | BCTCONT |
| 0021 | 0015 | BCTWRK | (EQU) | | 0090 | 005A | BCTLET | 0144 | 0090 | BCTCALL |
| 0021 | 0015 | BCTICO | (EQU) | | 0092 | 005C | BCTL2E | 0152 | 0098 | BCTARE |
| 0021 | 0015 | BCTASY | (EQU) | | 0094 | 005E | BCTL3E | 0216 | 00D8 | BCTILK |
| 0021 | 0015 | BCTFL2 | | | 0096 | 0060 | BCTL4E | 0218 | 00DA | BCTLOK |
| 0022 | 0016 | BCTNTA | | | 0098 | 0062 | BCTL5E | 0219 | 00DB | BCTBSNL |
| 0024 | 0018 | BCTNOT | | | 0100 | 0064 | BCTL6E | 0220 | 00DC | BCTBSN |
| 0026 | 001A | BCTFLT | | | 0102 | 0066 | BCTL7E | 0224 | 00E0 | BCTAKD |

| DEC | HEX | FIELD | | DEC | HEX | FIELD | | DEC | HEX | FIELD |
|------|------|--------|------|------|------|--------|------|------|------|--------|
| 0424 | 01A8 | BCTWIE | (EQU) | 0425 | 01A9 | BCTRSV | | 0448 | 01C0 | BCTENT |
| 0424 | 01A8 | BCTFL3 | | 0444 | 01BC | BCTALL | | 0448 | 01C0 | BCTLST |

## Alphabetical list of fields in CHABCT

| FIELD | DEC | HEX | | FIELD | DEC | HEX | | FIELD | DEC | HEX | |
|--------|------|------|------|--------|------|------|------|--------|------|------|------|
| BCTABN | 0020 | 0014 | (EQU) | BCTILK | 0216 | 00D8 | | BCTI4E | 0096 | 0060 | |
| BCTAKD | 0224 | 00E0 | | BCTINI | 0020 | 0014 | (EQU) | BCTL4R | 0064 | 0040 | |
| BCTAKT | 0129 | 0081 | | BCTINP | 0020 | 0014 | (EQU) | BCTL5E | 0098 | 0062 | |
| BCTALL | 0444 | 01BC | | BCTLAE | 0108 | 006C | | BCTL5R | 0066 | 0042 | |
| BCTALM | 0130 | 0082 | | BCTLAR | 0076 | 004C | | BCTL6E | 0100 | 0064 | |
| BCTARE | 0152 | 0098 | | BCTLBE | 0110 | 006E | | BCTL6R | 0068 | 0044 | |
| BCTARK | 0131 | 0083 | | BCTLBR | 0078 | 004E | | BCTL7E | 0102 | 0066 | |
| BCTASY | 0021 | 0015 | (EQU) | BCTLCE | 0112 | 0070 | | BCTL7R | 0070 | 0046 | |
| BCTBHS | 0020 | 0014 | (EQU) | BCTLCR | 0080 | 0050 | | BCTL8E | 0104 | 0068 | |
| BCTBIO | 0128 | 0080 | | BCTLDE | 0114 | 0072 | | BCTL8R | 0072 | 0048 | |
| BCTBSN | 0220 | 00DC | | BCTLDR | 0082 | 0052 | | BCTL9E | 0106 | 006A | |
| BCTBSNL | 0219 | 00DB | | BCTLEE | 0116 | 0074 | | BCTL9R | 0074 | 004A | |
| BCTBTO | 0020 | 0014 | (EQU) | BCTLER | 0084 | 0054 | | BCTNOT | 0024 | 0018 | |
| BCTCALL | 0144 | 0090 | | BCTLET | 0090 | 005A | | BCTNSR | 0004 | 0004 | |
| BCTCNT | 0000 | 0000 | | BCTLFE | 0118 | 0076 | | BCTNTA | 0022 | 0016 | |
| BCTCONT | 0140 | 008C | | BCTLFR | 0086 | 0056 | | BCTOTB | 0020 | 0014 | (EQU) |
| BCTDEF | 0014 | 000E | | BCTLGE | 0120 | 0078 | | BCTPCT | 0132 | 0084 | |
| BCTDOR | 0020 | 0014 | (EQU) | BCTLGR | 0088 | 0058 | | BCTPRT | 0136 | 0088 | |
| BCTENT | 0448 | 01C0 | | BCTLOK | 0218 | 00DA | | BCTRSV | 0425 | 01A9 | |
| BCTEUS | 0126 | 007E | | BCTLPS | 0006 | 0006 | | BCTRUS | 0124 | 007C | |
| BCTFLT | 0026 | 001A | | BCTLRT | 0058 | 003A | | BCTSET | 0008 | 0008 | |
| BCTFL1 | 0020 | 0014 | | BCTLST | 0448 | 01C0 | | BCTSOI | 0016 | 0010 | |
| BCTFL2 | 0021 | 0015 | | BCTL1E | 0090 | 005A | | BCTTIM | 0012 | 000C | |
| BCTFL3 | 0424 | 01A8 | | BCTL1R | 0058 | 003A | | BCTUN1 | 0018 | 0012 | |
| BCTFUL | 0002 | 0002 | | BCTL2E | 0092 | 005C | | BCTUN2 | 0028 | 001C | |
| BCTHED | 0000 | 0000 | | BCTL2R | 0060 | 003C | | BCTUN3 | 0122 | 007A | |
| BCTICO | 0021 | 0015 | (EQU) | BCTL3E | 0094 | 005E | | BCTWIE | 0424 | 01A8 | (EQU) |
| BCTIIP | 0020 | 0014 | (EQU) | BCTL3R | 0062 | 003E | | BCTWRK | 0021 | 0015 | (EQU) |

## Assembler listing of CHABCT

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|----------|-------------|--------|------|------|---------|
| | 0A 00000 | CHABCT | DSECT | | |
| * | | ****************************************************************** |
| * | | * | | | * |
| * | | * CHABCT,THE DSECT OF THE BULKCOMM TABLE CSECT CHBBCT | | | * |
| * | | * | | | * |
| * | | ****************************************************************** |
| | | * | | | ENTRY CHBBIO |
| 0A 00000 | | BCTHED | DS | 0D | START OF BULKCOMM TABLE |
| | | * | | | M03481 |
| 0A 00000 | | BCTCNT | DS | H | NUMBER OF FULL |
| | | * | | | S-ENTRIES/NOT DELETED |
| 0A 00002 | | BCTFUL | DS | H | NUMBER OF FULL OUTPUT |
| | | * | | | S-ENTRIES |
| 0A 00004 | | BCTNSR | DS | H | NUMBER OF ACTIVE S ENTRIES |
| | | * | | | (I.E., |
| | | * | | | ASSIGNED AND NOT HALTED). |
| 0A 00006 | | BCTLPS | DS | H | LAST-USED SEQUENCE NUMBER |
| | | * | | | NNNN FOR |
| | | * | | | SYSINNNN USER SYSIN |
| | | * | | | DATASET NAME. |
| 0A 00008 | | BCTSET | DS | A | ADDRESS OF LAST S-ENTRY IN |
| | | * | | | CONTROL |
| 0A 0000C | | BCTTIM | DS | H | BIO BASE(CYCLE) TIME(CSECS) |
| | | * | | | N319.37 |
| 0A 0000E | | BCTDEF | DS | H | DEFAULT BASE TIME(CSECS) |
| | | * | | | N319.37 |
| | | * | | | MILLISECONDS. |
| 0A 00010 | | BCTSOI | DS | H | OPERATOR INTERVENTION TIME |
| | | * | | | N319.37 |
| 0A 00012 | | BCTUN1 | DS | H | UNUSED |

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|----------|-------------|--------|------|------|---------|
|          |             | *      |      |      | N319.37 |
|          |             | *      |      |      | MILLISECONDS. |
| 0A 00014 |             | BCTFL1 | DS   | XL1  | 1ST TABLE FLAG |
|          |             | *      |      |      | BYTE,INITIALIZED OFF. |
|          | 0A 00014    | BCTINI | EQU  | BCTFL1 | BULKIO TASK IS INITIALIZED. |
|          | 00000080    | BCTINIM | EQU | X'80' |  |
|          | 0A 00014    | BCTDOR | EQU  | BCTFL1 | ON=BULKIO TASK IS |
|          |             | *      |      |      | DORMANT,NOT AWAKE. |
|          | 00000040    | BCTDORM | EQU | X'40' |  |
|          | 0A 00014    | BCTOTB | EQU  | BCTFL1 | OPERATOR-TO-BULKIO-TASK |
|          |             | *      |      |      | MASTER ALERT |
|          | 00000020    | BCTOTBM | EQU | X'20' |  |
|          | 0A 00014    | BCTBTO | EQU  | BCTFL1 | BULKIO-TASK-TO-OPERATOR |
|          |             | *      |      |      | MASTER ALERT |
|          | 00000010    | BCTBTOM | EQU | X'10' | (NOT PRESENTLY USED) |
|          | 0A 00014    | BCTINP | EQU  | BCTFL1 | IF ON TASKID 2 INIT. IN |
|          |             | *      |      |      | PROGRESS |
|          | 00000008    | BCTINPM | EQU | X'08' | TASKID 2 INIT. IN PROGRESS |
|          |             | *      |      |      | MASK |
|          | 0A 00014    | BCTBHS | EQU  | BCTFL1 | BULKIO TASK IS NOW BEHIND |
|          |             | *      |      |      | SCHEDULE. |
|          | 00000004    | BCTBHSM | EQU | X'04' |  |
|          | 0A 00014    | BCTIIP | EQU  | BCTFL1 | 1=CZAWA,ABEND RTN,CALLED |
|          |             | *      |      |      | CZAWS,INITIALIZATIO |
|          |             |        |      | N    | RTN,0=OPTASK CALLED IT |
|          | 00000002    | BCTIIPM | EQU | X'02' |  |
|          | 0A 00014    | BCTABN | EQU  | BCTFL1 | ABEND OF BULKIO-2 TASK IN |
|          |             | *      |      |      | PROGRESS, |
|          | 00000001    | BCTABNM | EQU | X'01' | SET BY CZAWA,BIO-2 ABEND |
|          |             | *      |      |      | PROCESSOR |
| 0A 00015 |             | BCTFL2 | DS   | XL1  | 2ND TABLE FLAG |
|          |             | *      |      |      | BYTE,INITIALIZED OFF. |
|          | 0A 00015    | BCTASY | EQU  | BCTFL2 | ABEND RECOVERY ROUTINE |
|          |             | *      |      |      | RETURNS |
|          | 00000080    | BCTASYM | EQU | X'80' | CONTROL TO TASK MONITOR |
|          | 0A 00015    | BCTICO | EQU  | BCTFL2 | SET TO 1 WHEN CZAWV,INPUT |
|          |             | *      |      |      | CLOSEOUT, |
|          | 00000040    | BCTICOM | EQU | X'40' | IS CALLED BY |
|          |             | *      |      |      | CZAWS,INITIALIZATION |
|          | 0A 00015    | BCTWRK | EQU  | BCTFL2 | USEFUL WORK FLAG |
|          |             | *      |      |      | N319.37 |
|          | 00000020    | BCTWRKM | EQU | X'20' | USEFUL WORK MASK |
|          |             | *      |      |      | N319.37 |
| 0A 00016 |             | BCTNTA | DS   | H    | NUMBER TIMES BULKIO TASK |
|          |             | *      |      |      | ACTIVATED. |
| 0A 00018 |             | BCTNOT | DS   | H    | NUMBER OF TIMES BULKIO TASK |
|          |             | *      |      |      | HAS BEEN |
|          |             | *      |      |      | FOUND BEHIND SCHEDULE VIA |
|          |             | *      |      |      | BCTBHS. |
| 0A 0001A |             | BCTFLT | DS   | H    | FLUTTER COUNT(NONPRODUCTIVE |
|          |             | *      |      |      | N319.37 |
|          |             | *      |      |      | WORK CYCLE COUNT) |
|          |             | *      |      |      | N319.37 |
| 0A 0001C |             | BCTUN2 | DS   | 15H  | RESERVED |
|          |             | *      |      |      | N319.37 |
| 0A 0003A |             | BCTLRT | DS   | 16H  | NUMBER OF TIMES REAL TIME |
|          |             | *      |      |      | IS LESS |
|          |             | *      |      |      | THAN X BCTRUS UNITS, WHERE |
|          |             | *      |      |      | X=__. |
|          | 0A 0003A    |        | \|ORG\| | BCTLRT |  |
| 0A 0003A |             | BCTL1R | DS   | H    | 1 |
| 0A 0003C |             | BCTL2R | DS   | H    | 2 |
| 0A 0003E |             | BCTL3R | DS   | H    | 3 |
| 0A 00040 |             | BCTL4R | DS   | H    | 4 |
| 0A 00042 |             | BCTL5R | DS   | H    | 5 |
| 0A 00044 |             | BCTL6R | DS   | H    | 6 |
| 0A 00046 |             | BCTL7R | DS   | H    | 7 |
| 0A 00048 |             | BCTL8R | DS   | H    | 8 |

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|---|---|---|---|---|---|
| 0A 0004A | | BCTL9R | DS | H | 9 |
| 0A 0004C | | BCTLAR | DS | H | 10 |
| 0A 0004E | | BCTLBR | DS | H | 11 |
| 0A 00050 | | BCTLCR | DS | H | 12 |
| 0A 00052 | | BCTLDR | DS | H | 13 |
| 0A 00054 | | BCTLER | DS | H | 14 |
| 0A 00056 | | BCTLFR | DS | H | 15 |
| 0A 00058 | | BCTLGR | DS | H | NO. TIMES REAL TIME >15 |
| | | * | | | BCTRUS UNITS |
| 0A 0005A | | BCTLET | DS | 16H | NUMBER X OF BCTEUS TIME |
| | | * | | | UNITS SPENT |
| | | * | | | IN MASTER SERVICE |
| | | * | | | LOOP,WHERE X=__. |
| | 0A 0005A | | \|ORG\| | BCTLET | |
| 0A 0005A | | BCTL1E | DS | H | 1 |
| 0A 0005C | | BCTL2E | DS | H | 2 |
| 0A 0005E | | BCTL3E | DS | H | 3 |
| 0A 00060 | | BCTL4E | DS | H | 4 |
| 0A 00062 | | BCTL5E | DS | H | 5 |
| 0A 00064 | | BCTL6E | DS | H | 6 |
| 0A 00066 | | BCTL7E | DS | H | 7 |
| 0A 00068 | | BCTL8E | DS | H | 8 |
| 0A 0006A | | BCTL9E | DS | H | 9 |
| 0A 0006C | | BCTLAE | DS | H | 10 |
| 0A 0006E | | BCTLBE | DS | H | 11 |
| 0A 00070 | | BCTLCE | DS | H | 12 |
| 0A 00072 | | BCTLDE | DS | H | 13 |
| 0A 00074 | | BCTLEE | DS | H | 14 |
| 0A 00076 | | BCTLFE | DS | H | 15 |
| 0A 00078 | | BCTLGE | DS | H | >15. |
| 0A 0007A | | BCTUN3 | DS | H | RESERVED |
| | | * | | | N319.37 |
| 0A 0007C | | BCTRUS | DS | H | REAL TIME MEASURING |
| | | * | | | UNIT,MILLISECNDS |
| 0A 0007E | | BCTEUS | DS | H | MASTER SERVICING TIME |
| | | * | | | UNIT,MILLISECS |
| 0A 00080 | | BCTBIO | DS | C | LAST BULKIO-2 SECTION IN |
| | | * | | | CONTROL |
| 0A 00081 | | BCTAKT | DS | HL1 | COUNT OF BKIO-2 ABENDS |
| | | * | | | SINCE STARTUP |
| 0A 00082 | | BCTALM | DS | HL1'50' | BULKIO-2 ABEND LIMIT |
| 0A 00083 | | BCTARK | DS | HL1 | RECURSIVE ABEND COUNTER |
| 0A 00084 | | BCTPCT | DS | F | PREVIOUS COMPUT TIME |
| | | * | | | VALUE,MILLISECS |
| 0A 00088 | | BCTPRT | DS | F | PREVIOUS REAL TIME |
| | | * | | | VALUE,MILLISECNDS |
| 0A 0008C | | BCTCONT | DS | A | CONTINUATION ADDRESS |
| 0A 00090 | | BCTCALL | DS | CL8 | NAME OF LAST MODULE CALLED |
| | | * | | | BY BULKIO |
| 0A 00098 | | BCTARE | DS | 16F | STM0,15 SETS RECURSIV |
| | | * | | | ADDRESSABILITY |
| 0A 000D8 | | BCTILK | DS | CL2 | SIGNATURE OF RTN WHO LOCKED |
| | | * | | | BULKCOMM |
| 0A 000DA | | BCTLOK | DS | X | HEADER LOCK |
| | | * | | | BYTE,INITIALIZED UNLOCKD |
| 0A 000DB | | BCTBSNL | DS | X | BATCH SEQUENCE NUMBER LOCK |
| | | * | | | BYTE, |
| 0A 000DC | | BCTBSN | DS | PL4 | PACKED DECIMAL BATCH |
| | | * | | | SEQUENCE NUMBER |
| 0A 000E0 | | BCTAKD | DS | CL200 | ACKNOWLEDGEMENT DATASET DCB |
| 0A 001A8 | | BCTFL3 | DS | X | CORRESPONDS TO CHBBIO IN |
| | | * | | | M03481 |
| | | * | | | CHBBCT |
| | | * | | | M03481 |
| | 0A 001A8 | BCTWIE | EQU | BCTFL3 | OFF=BIO TO RUN TIMER DRIVEN |
| | | * | | | M03481 |
| | 00000008 | BCTWIEM | EQU | X'08' | ON=BIO TO RUN INTRPT DRIVEN |
| | | * | | | M03481 |

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|----------|-------------|--------|------|------|---------|
| OA 001A9 | | BCTRSV | DS | XL15 | RESERVED |
| OA 001B8 | | | DS | F | RESERVED |
| | | * | | | M03481 |
| OA 001BC | | BCTALL | DS | F | TOTAL S-ENTRY |
| | | * | | | ALLOCATION,I.E.,M03481 |
| | | * | | | LEN FROM BCTENT TO END OF |
| | | * | | | BCT M03481 |
| OA 001C0 | | BCTLST | DS | 0X | DEFINE END OF BCT HEADER |
| | | * | | | M03481 |
| | 000001C0 | BCTLEN | EQU | BCTLST-CHABCT | LENGTH OF BCT HEADER |
| | | * | | | M03481 |
| | | * | | | M03481 |
| OA 001C0 | | BCTENT | DS | 0D | ALIGN FIRST S-ENTRY |
| | | * | | | M03481 |

CHASET Storage map

```
DEC    HEX
  0     0 | SETSID | SETAORD |   SETNBR    |              SETUID              |
  8     8 |        SETUID    (CONT)        |                                 |
          |                        SETDSN                                    |
 40    28 |                                                       | SETBSN   |
 48    30 |   SETBSN   (CONT)     | SETLOK | SETHEY | RESERVED |   SETBUF     |
 56    38 |                        SETETL                                    |
 64    40 |                                            |                     |
          |                        SETBGN                                    |
 80    50 |                                     |         RESERVED           |
 88    58 |        SETTOT        |              SETNOW                        |
 96    60 |        SETSUM        |              SETMOV                        |
104    68 |        SETPSDA       |      SETSDA       |     SETTYP             |
112    70 |                        SETSTA                                    |
120    78 |        SETRCH        |     SETDUC        |     SETTIM             |
128    80 |   SETPTI   |       SETRS4       |        SETCALL                  |
136    88 |       SETCALL   (CONT)          |        RESERVED                 |
144    90 |        SETRCR        |     SETRCRC       |     SETRCRO            |
152    98 |                                                                  |
          =                        SETDVC                                    =
          |                                                                  |
352   160 |                                                                  |
          =                        SETDDC                                    =
          |                                                                  |
552   228 | SETFL1 | SETFL2 | SETFL3 | SETFL4 | SETPF1 | SETPF2 | SETPF3 | SETPF4 |
560   230 | SETFL5 | SETFL6 |               SETEE                            |
568   238 |                                                                  |
          =                        SETWORK                                   =
          |                                                                  |
824   338 |                                                                  |
          |                        ORG OVERLAP                               |
```

```
DEC    HEX

ORG   SETWORK

568   238| SETFL7  | SETFL8  | SETFL9  | RESERVED |            SETINB              |
576   240|            SETGC4            |      SETFC4      |        SETFC8          |
584   248|      SETISZ      |        SETKER        |            SETIKE             |
592   250| SETIKE  | SETBTE  | SETBBE  | RESERVED |                               |
         =                             SETICB                                     =
         |                                                                        |
640   280|                                                                        |
         |                             SETCMN                                      |
656   290| SETFFS  |                                                              |
         =                             SETFSV                                     =
         |                                                                        |
744   2E8|                                        | SETCMI  |     RESERVED        |
752   2F0|            SETZRC            |                                          |

ORG   SETWORK

568   238|SETYFLJ1|SETYFLJ2|SETYFLJ3| SETPRS  | SETYPAG | SETYHDG |    RESERVED    |
576   240|            SETYRC           |              SETYRS1                      |
584   248|           SETYRS2           |                                          |
         =                             SETYHDR                                    =
         |                                                                        |
720   2D0|              SETYPGE                  |          RESERVED              |
728   2D8|              SETYOUTP                  |          SETYINP               |
736   2E0|              SETBIG                    |          SETEND                |
744   2E8|     SETYLNS     |    SETYUPL           |    SETYLINE      |  RESERVED   |
752   2F0|            SETYLRE          |              SETYMSKA                     |

ORG   SETYMSKA+3

759   2F7|                                                            | SETYMASK |
760   2F8| SETYCC  |SETYCODE|SETYJCD | RESERVED |            SETYCONT            |
768   300|              SETYNOWS                  |          SETYXPUT              |
776   308|              SETYXTRL                  |    SETYTRCT      |  SETYSHRT   |
```

```
DEC   HEX
784   310 |      SETYBADC      | SETYFLGD |              SETFRM              |
792   318 |                               | RESERVED |        SETCMB         |
800   320 | SETYSKP1 | SETYSPC1 | SETYSPC3 | SETFLA |  SETFLB |    SETOUI     |
808   328 |            SETOUI    (CONT)             |        SETOBS          |
816   330 | SETOBS  | SETOCT  |                                              |
          |                            SETRSV                               |
```

## Fields in CHASET -- by displacement

| DEC | HEX | FIELD | | DEC | HEX | FIELD | | DEC | HEX | FIELD | |
|-----|-----|-------|---|-----|-----|-------|---|-----|-----|-------|---|
| 0000 | 0000 | SETSID | | 0555 | 022B | SETFL4 | | 0569 | 0239 | SETCNM | (EQU) |
| 0000 | 0000 | SETORG | | 0556 | 022C | SETPF1 | | 0569 | 0239 | SETEXC | (EQU) |
| 0001 | 0001 | SETAORD | | 0557 | 022D | SETPF2 | | 0569 | 0239 | SETFN1 | (EQU) |
| 0002 | 0002 | SETNBR | | 0558 | 022E | SETPF3 | | 0569 | 0239 | SETINES | (EQU) |
| 0004 | 0004 | SETUID | | 0559 | 022F | SETPF4 | | 0569 | 0239 | SETINEA | (EQU) |
| 0012 | 000C | SETDSN | | 0560 | 0230 | SETDEL | (EQU) | 0569 | 0239 | SETINEE | (EQU) |
| 0047 | 002F | SETBSN | | 0560 | 0230 | SETVIS | (EQU) | 0569 | 0239 | SETFMT | (EQU) |
| 0051 | 0033 | SETLOK | | 0560 | 0230 | SETSER | (EQU) | 0570 | 023A | SETYFLJ3 | |
| 0052 | 0034 | SETBTO | (EQU) | 0560 | 0230 | SETXAS | (EQU) | 0570 | 023A | SETFL9 | |
| 0052 | 0034 | SETOTB | (EQU) | 0560 | 0230 | SETCUR | (EQU) | 0570 | 023A | SETSPLT | (EQU) |
| 0052 | 0034 | SETHEY | | 0560 | 0230 | SETDED | (EQU) | 0570 | 023A | SETNSTW | (EQU) |
| 0054 | 0036 | SETBUF | | 0560 | 0230 | SETXSU | (EQU) | 0570 | 023A | SETNLK | (EQU) |
| 0056 | 0038 | SETETL | | 0560 | 0230 | SETIOI | (EQU) | 0570 | 023A | SETSCF | (EQU) |
| 0071 | 0047 | SETBGN | | 0560 | 0230 | SETFL5 | | 0570 | 023A | SETTOP | (EQU) |
| 0088 | 0058 | SETTOT | | 0561 | 0231 | SETBRK | (EQU) | 0570 | 023A | SETRLC | (EQU) |
| 0092 | 005C | SETNOW | | 0561 | 0231 | SETGSW | (EQU) | 0570 | 023A | SETDDL | (EQU) |
| 0096 | 0060 | SETSUM | | 0561 | 0231 | SETCRCR | (EQU) | 0570 | 023A | SETABN | (EQU) |
| 0100 | 0064 | SETMOV | | 0561 | 0231 | SETRRCR | (EQU) | 0570 | 023A | SETRJL | (EQU) |
| 0104 | 0068 | SETPSDA | | 0561 | 0231 | SETVABN | (EQU) | 0570 | 023A | SETIID | (EQU) |
| 0108 | 006C | SETSDA | | 0561 | 0231 | SETPER | (EQU) | 0570 | 023A | SETDID | (EQU) |
| 0110 | 006E | SETTYP | | 0561 | 0231 | SETFL6 | | 0570 | 023A | SETDUF | (EQU) |
| 0112 | 0070 | SETSTA | | 0562 | 0232 | SETEE | | 0571 | 023B | SETPRS | |
| 0120 | 0078 | SETRCH | | 0568 | 0238 | SETYFLJ1 | | 0572 | 023C | SETYPAG | |
| 0124 | 007C | SETDUC | | 0568 | 0238 | SETCZAWY | | 0572 | 023C | SETINB | |
| 0126 | 007E | SETTIM | | 0568 | 0238 | SETFL7 | | 0573 | 023D | SETYHDG | |
| 0128 | 0080 | SETPTI | | 0568 | 0238 | SETCZAWZ | | 0576 | 0240 | SETYRC | |
| 0130 | 0082 | SETRS4 | | 0568 | 0238 | SETYAOM | (EQU) | 0576 | 0240 | SETGC4 | |
| 0133 | 0085 | SETCALL | | 0568 | 0238 | SETYREC | (EQU) | 0580 | 0244 | SETYRS1 | |
| 0144 | 0090 | SETRCR | | 0568 | 0238 | SETYLIN | (EQU) | 0580 | 0244 | SETFC4 | |
| 0148 | 0094 | SETRCRC | | 0568 | 0238 | SETYDSO | (EQU) | 0582 | 0246 | SETFC8 | |
| 0150 | 0096 | SETRCRO | | 0568 | 0238 | SETYNPG | (EQU) | 0584 | 0248 | SETYRS2 | |
| 0152 | 0098 | SETDVC | | 0568 | 0238 | SETYFST | (EQU) | 0584 | 0248 | SETISZ | |
| 0352 | 0160 | SETDDC | | 0568 | 0238 | SETYFIN | (EQU) | 0586 | 024A | SETKER | |
| 0552 | 0228 | SETXPS | (EQU) | 0568 | 0238 | SETYPUT | (EQU) | 0588 | 024C | SETYHDR | |
| 0552 | 0228 | SETPUN | (EQU) | 0568 | 0238 | SETYTOP | (EQU) | 0588 | 024C | SETIKE | |
| 0552 | 0228 | SETAMT | (EQU) | 0568 | 0238 | SETOPN | (EQU) | 0593 | 0251 | SETBTE | |
| 0552 | 0228 | SETPNT | (EQU) | 0568 | 0238 | SETFST | (EQU) | 0594 | 0252 | SETBBE | |
| 0552 | 0228 | SETRES | (EQU) | 0568 | 0238 | SETPAS | (EQU) | 0596 | 0254 | SETICB | |
| 0552 | 0228 | SETASS | (EQU) | 0568 | 0238 | SETEMF | (EQU) | 0640 | 0280 | SETCMN | |
| 0552 | 0228 | SETFL1 | | 0568 | 0238 | SETTRO | | 0656 | 0290 | SETFFS | |
| 0553 | 0229 | SETFN2 | (EQU) | 0568 | 0238 | SETEMG | (EQU) | 0656 | 0290 | SETEDS | (EQU) |
| 0553 | 0229 | SETCBU | (EQU) | 0568 | 0238 | SETSIN | (EQU) | 0656 | 0290 | SETFRD | (EQU) |
| 0553 | 0229 | SETSUR | (EQU) | 0568 | 0238 | SETWORK | | 0656 | 0290 | SETFTN | (EQU) |
| 0553 | 0229 | SETINH | (EQU) | 0569 | 0239 | SETYFLJ2 | | 0657 | 0291 | SETFSV | |
| 0553 | 0229 | SETFL2 | | 0569 | 0239 | SETFL8 | | 0720 | 02D0 | SETYPGE | |
| 0554 | 022A | SETRPU | (EQU) | 0569 | 0239 | SETYINI | (EQU) | 0724 | 02D4 | SETYPGEB | (EQU) |
| 0554 | 022A | SETERR | (EQU) | 0569 | 0239 | SETYXPS | (EQU) | 0728 | 02D8 | SETYOUTP | |
| 0554 | 022A | SETAKP | (EQU) | 0569 | 0239 | SETEOD | (EQU) | 0732 | 02DC | SETYINP | |
| 0554 | 022A | SETAKQ | (EQU) | 0569 | 0239 | SETSYN | (EQU) | 0736 | 02E0 | SETBIG | |
| 0554 | 022A | SETIRQ | (EQU) | 0569 | 0239 | SETYBAD | (EQU) | 0740 | 02E4 | SETEND | |
| 0554 | 022A | SETCCF | (EQU) | 0569 | 0239 | SETYFCC | (EQU) | 0744 | 02E8 | SETYLNS | |
| 0554 | 022A | SETACT | (EQU) | 0569 | 0239 | SETYHOL | (EQU) | 0746 | 02EA | SETYUPL | |
| 0554 | 022A | SETRJE | (EQU) | 0569 | 0239 | SETCOM | (EQU) | 0748 | 02EC | SETYLINE | |
| 0554 | 022A | SETFL3 | | 0569 | 0239 | SETCNM1 | (EQU) | 0749 | 02ED | SETCMI | |

| DEC | HEX | FIELD | | DEC | HEX | FIELD | | DEC | HEX | FIELD | |
|-----|-----|-------|---|-----|-----|-------|---|-----|-----|-------|---|
| 0749 | 02ED | SETCMP | (EQU) | 0780 | 030C | SETYTRCT | | 0803 | 0323 | SETFLA | |
| 0752 | 02F0 | SETYLRE | | 0782 | 030E | SETYSHRT | | 0803 | 0323 | SETHLD | (EQU) |
| 0752 | 02F0 | SETZRC | | 0784 | 0310 | SETYBADC | | 0804 | 0324 | SETFLB | |
| 0756 | 02F4 | SETYMSKA | | 0786 | 0312 | SETYFLGD | | 0804 | 0324 | SETPU | (EQU) |
| 0759 | 02F7 | SETYMASK | | 0786 | 0312 | SETYPOP | (EQU) | 0804 | 0324 | SETPR | (EQU) |
| 0760 | 02F8 | SETYCC | | 0786 | 0312 | SETYBOT | (EQU) | 0804 | 0324 | SETOID | (EQU) |
| 0761 | 02F9 | SETYCODE | | 0787 | 0313 | SETFRM | | 0804 | 0324 | SETJOB | (EQU) |
| 0762 | 02FA | SETYJCD | | 0798 | 031E | SETCMB | | 0805 | 0325 | SETOUI | |
| 0764 | 02FC | SETYCONT | | 0800 | 0320 | SETYSKP1 | | 0813 | 032D | SETOBS | |
| 0768 | 0300 | SETYNOWS | | 0800 | 0320 | SETYTRCC | | 0817 | 0331 | SETOCT | |
| 0772 | 0304 | SETYXPUT | | 0801 | 0321 | SETYSPC1 | | 0818 | 0332 | SETRSV | |
| 0776 | 0308 | SETYXTRL | | 0802 | 0322 | SETYSPC3 | | 0832 | 0340 | SETLST | |

## Alphabetical list of fields in CHASET

| FIELD | DEC | HEX | | FIELD | DEC | HEX | | FIELD | DEC | HEX | |
|-------|-----|-----|---|-------|-----|-----|---|-------|-----|-----|---|
| SETABN | 0570 | 023A | (EQU) | SETFL2 | 0553 | 0229 | | SETPNT | 0552 | 0228 | (EQU) |
| SETACT | 0554 | 022A | (EQU) | SETFL3 | 0554 | 022A | | SETPR | 0804 | 0324 | (EQU) |
| SETAKP | 0554 | 022A | (EQU) | SETFL4 | 0555 | 022B | | SETPRS | 0571 | 023B | |
| SETAKQ | 0554 | 022A | (EQU) | SETFL5 | 0560 | 0230 | | SETPSDA | 0104 | 0068 | |
| SETAMT | 0552 | 0228 | (EQU) | SETFL6 | 0561 | 0231 | | SETPTI | 0128 | 0080 | |
| SETAORD | 0001 | 0001 | | SETFL7 | 0568 | 0238 | | SETPU | 0804 | 0324 | (EQU) |
| SETASS | 0552 | 0228 | (EQU) | SETFL8 | 0569 | 0239 | | SETPUN | 0552 | 0228 | (EQU) |
| SETBBE | 0594 | 0252 | | SETFL9 | 0570 | 023A | | SETRCH | 0120 | 0078 | |
| SETBGN | 0071 | 0047 | | SETFMT | 0569 | 0239 | (EQU) | SETRCR | 0144 | 0090 | |
| SETBIG | 0736 | 02E0 | | SETFN1 | 0569 | 0239 | (EQU) | SETRCRC | 0148 | 0094 | |
| SETBRK | 0561 | 0231 | (EQU) | SETFN2 | 0553 | 0229 | (EQU) | SETRCRO | 0150 | 0096 | |
| SETBSN | 0047 | 002F | | SETFRD | 0656 | 0290 | (EQU) | SETRES | 0552 | 0228 | (EQU) |
| SETBTE | 0593 | 0251 | | SETFRM | 0787 | 0313 | | SETRJE | 0554 | 022A | (EQU) |
| SETBTO | 0052 | 0034 | (EQU) | SETFST | 0568 | 0238 | (EQU) | SETRJL | 0570 | 023A | (EQU) |
| SETBUF | 0054 | 0036 | | SETFSV | 0657 | 0291 | | SETRLC | 0554 | 022A | (EQU) |
| SETCALL | 0133 | 0085 | | SETFTN | 0656 | 0290 | (EQU) | SETRPU | 0554 | 022A | (EQU) |
| SETCBU | 0553 | 0229 | (EQU) | SETGC4 | 0576 | 0240 | | SETRRCR | 0561 | 0231 | (EQU) |
| SETCCF | 0554 | 022A | (EQU) | SETGSW | 0561 | 0231 | (EQU) | SETRSV | 0818 | 0332 | |
| SETCMB | 0798 | 031E | | SETHEY | 0052 | 0034 | | SETRS4 | 0130 | 0082 | |
| SETCMI | 0749 | 02ED | | SETHLD | 0803 | 0323 | (EQU) | SETSCF | 0570 | 023A- | (EQU) |
| SETCMN | 0640 | 0280 | | SETICB | 0596 | 0254 | | SETSDA | 0108 | 006C | |
| SETCMP | 0749 | 02ED | (EQU) | SETIID | 0570 | 023A | (EQU) | SETSER | 0560 | 0230 | (EQU) |
| SETCNM | 0569 | 0239 | (EQU) | SETIKE | 0588 | 024C | | SETSID | 0000 | 0000 | |
| SETCNM1 | 0569 | 0239 | (EQU) | SETINB | 0572 | 023C | | SETSIN | 0568 | 0238 | (EQU) |
| SETCOM | 0569 | 0239 | (EQU) | SETINEA | 0569 | 0239 | (EQU) | SETSPLT | 0570 | 023A | (EQU) |
| SETCRCR | 0561 | 0231 | (EQU) | SETINEE | 0569 | 0239 | (EQU) | SETSTA | 0112 | 0070 | |
| SETCUR | 0560 | 0230 | (EQU) | SETINES | 0569 | 0239 | (EQU) | SETSUM | 0096 | 0060 | |
| SETCZAWY | 0568 | 0238 | | SETINH | 0553 | 0229 | (EQU) | SETSUR | 0553 | 0229 | (EQU) |
| SETCZAWZ | 0568 | 0238 | | SETIOI | 0560 | 0230 | (EQU) | SETSYN | 0569 | 0239 | (EQU) |
| SETDDC | 0352 | 0160 | | SETIRQ | 0554 | 022A | (EQU) | SETTIM | 0126 | 007E | |
| SETDDL | 0570 | 023A | (EQU) | SETISZ | 0584 | 0248 | | SETTOP | 0570 | 023A | (EQU) |
| SETDED | 0560 | 0230 | (EQU) | SETJOB | 0804 | 0324 | (EQU) | SETTOT | 0088 | 0058 | |
| SETDEL | 0560 | 0230 | (EQU) | SETKER | 0586 | 024A | | SETTRO | 0568 | 0238 | (EQU) |
| SETDID | 0570 | 023A | (EQU) | SETLOK | 0051 | 0033 | | SETTYP | 0110 | 006E | |
| SETDSN | 0012 | 000C | | SETLST | 0832 | 0340 | | SETUID | 0004 | 0004 | |
| SETDUC | 0124 | 007C | | SETMOV | 0100 | 0064 | | SETVABN | 0561 | 0231 | (EQU) |
| SETDUF | 0570 | 023A | (EQU) | SETNBR | 0002 | 0002 | | SETVIS | 0560 | 0230 | (EQU) |
| SETDVC | 0152 | 0098 | | SETNLK | 0570 | 023A | (EQU) | SETWORK | 0568 | 0238 | |
| SETEDS | 0656 | 0290 | (EQU) | SETNOW | 0092 | 005C | | SETXAS | 0560 | 0230 | (EQU) |
| SETEE | 0562 | 0232 | | SETNSTW | 0570 | 023A | (EQU) | SETXPS | 0552 | 0228 | (EQU) |
| SETEMF | 0568 | 0238 | (EQU) | SETOBS | 0813 | 032D | | SETXSU | 0560 | 0230 | (EQU) |
| SETEMG | 0568 | 0238 | (EQU) | SETOCT | 0817 | 0331 | | SETYAOM | 0568 | 0238 | (EQU) |
| SETEND | 0740 | 02E4 | | SETOID | 0804 | 0324 | (EQU) | SETYBAD | 0569 | 0239 | (EQU) |
| SETEOD | 0569 | 0239 | (EQU) | SETOPN | 0568 | 0238 | (EQU) | SETYBADC | 0784 | 0310 | |
| SETERR | 0554 | 022A | (EQU) | SETORG | 0000 | 0000 | | SETYBOT | 0786 | 0312 | (EQU) |
| SETETL | 0056 | 0038 | | SETOTB | 0052 | 0034 | (EQU) | SETYCC | 0760 | 02F8 | |
| SETEXC | 0569 | 0239 | (EQU) | SETOUI | 0805 | 0325 | | SETYCODE | 0761 | 02F9 | |
| SETFC4 | 0580 | 0244 | | SETPAS | 0568 | 0238 | (EQU) | SETYCONT | 0764 | 02FC | |
| SETFC8 | 0582 | 0246 | | SETPER | 0561 | 0231 | (EQU) | SETYDSO | 0568 | 0238 | (EQU) |
| SETFFS | 0656 | 0290 | | SETPF1 | 0556 | 022C | | SETYFCC | 0569 | 0239 | (EQU) |
| SETFLA | 0803 | 0323 | | SETPF2 | 0557 | 022D | | SETYFIN | 0568 | 0238 | (EQU) |
| SETFLB | 0804 | 0324 | | SETPF3 | 0558 | 022E | | SETYFLGD | 0786 | 0312 | |
| SETFL1 | 0552 | 0228 | | SETPF4 | 0559 | 022F | | SETYFLJ1 | 0568 | 0238 | |

| FIELD | DEC | HEX | | FIELD | DEC | HEX | | FIELD | DEC | HEX | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| SETYFLJ2 | 0569 | 0239 | | SETYMASK | 0759 | 02F7 | | SETYRS2 | 0584 | 0248 | |
| SETYFLJ3 | 0570 | 023A | | SETYMSKA | 0756 | 02F4 | | SETYSHRT | 0782 | 030E | |
| SETYFST | 0568 | 0238 | (EQU) | SETYNOWS | 0768 | 0300 | | SETYSKP1 | 0800 | 0320 | |
| SETYHDG | 0573 | 023D | | SETYNPG | 0568 | 0238 | (EQU) | SETYSPC1 | 0801 | 0321 | |
| SETYHDR | 0588 | 024C | | SETYOUTP | 0728 | 02D8 | | SETYSPC3 | 0802 | 0322 | |
| SETYHOL | 0569 | 0239 | (EQU) | SETYPAG | 0572 | 023C | | SETYTOP | 0568 | 0238 | (EQU) |
| SETYINI | 0569 | 0239 | (EQU) | SETYPGE | 0720 | 02D0 | | SETYTRCC | 0800 | 0320 | |
| SETYINP | 0732 | 02DC | | SETYPGEB | 0724 | 02D4 | (EQU) | SETYTRCT | 0780 | 030C | |
| SETYJCD | 0762 | 02FA | | SETYPOP | 0786 | 0312 | (EQU) | SETYUPL | 0746 | 02EA | |
| SETYLIN | 0568 | 0238 | (EQU) | SETYPUT | 0568 | 0238 | (EQU) | SETYXPS | 0569 | 0239 | (EQU) |
| SETYLINE | 0748 | 02EC | | SETYRC | 0576 | 0240 | | SETYXPUT | 0772 | 0304 | |
| SETYLNS | 0744 | 02E8 | | SETYREC | 0568 | 0238 | (EQU) | SETYXTRL | 0776 | 0308 | |
| SETYLRE | 0752 | 02F0 | | SETYRS1 | 0580 | 0244 | | SETZRC | 0752 | 02F0 | |

## Assembler listing of CHASET

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|---|---|---|---|---|---|
| | 88 00000 | CHASET | DSECT | | |
| 88 00000 | | SETORG | DS | 0D | ALIGN S ENTRY ON DOUBLEWORD BOUNDARY |
| 88 00000 | | SETSID | DS | C | S-ENTRY IDENTIFIER 'BB' |
| | 000000BB | SETSIDM | EQU | X'BB' | |
| 88 00001 | | SETAORD | DS | X | DEVICE FOR THIS S-ENTRY IS ASSIGNED |
| | | * | | | X'AA',OR WAS DELETED |
| | | * | | | X'DD',ASNBD. |
| | 000000AA | SETAA | EQU | X'AA' | IN SETAORD IF A DEVICE IS ASSIGNED |
| | 000000DD | SETDD | EQU | X'DD' | IN SETAORD IF THE DEVICE WAS DELETED |
| | 0000004C | SETDDMSG | EQU | 76 | DISPL TO MSGID IN DDEFS PSECT,CZAEAR |
| 88 00002 | | SETNBR | DS | CL2 | NUMBER OF THIS S-ENTRY,INTEGER 01-99 |
| 88 00004 | | SETUID | DS | CL8 | USERID, FOR OUTPUT AND INPUT JOBS. |
| 88 0000C | | SETDSN | DS | CL35 | USER'S DATA SET NAME IF OUTPUT JOB, SYSINNNN SYSIN NAME IF INPUT JOB. |
| 88 0002F | | SETBSN | DS | CL4 | BATCH SEQUENCE NUMBR,OUTPUT JOB ONLY |
| 88 00033 | | SETLOK | DS | X | S ENTRY LOCK BYTE,INITIALIZD UNLOCKD |
| 88 00034 | | SETHEY | DS | X | S ENTRY ALERT BYTE, INITIALIZED OFF. |
| | 88 00034 | SETOTB | EQU | SETHEY | OPERATOR-TO-BULKIO-TASK ALERT FLAG. |
| | 00000080 | SETOTBM | EQU | X'80' | |
| | 88 00034 | SETBTO | EQU | SETHEY | BULKIO-TO-OPERATOR-TASK ALERT FLAG. |
| | 00000040 | SETBTOM | EQU | X'40' | (NOT PRESENTLY USED) |
| 88 00036 | | SETBUF | DS | H | NUMBER OF BUFFERS FOR MSAM DEVICE, CONTAINS NEW NO.IF SETCBU FLAG ON |
| 88 00038 | | SETETL | DS | CL15 | KEY OF USER RECORD TO'SETL'TO BEFORE NEXT OUTPUT SERVICE CYCLE. USED WITH SETPNT FLAG FOR OPERATOR USE ONLY, NOT NEW JOB.IGNORED IF ALL ZEROS.FOR VISAM OUTPUT JOBS ONLY. |
| 88 00047 | | SETBGN | DS | CL15 | BEGINNING OUTPUT DS LINE#/VISAM KEY, |

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|----------|-------------|--------|------|------|---------|
| | | * | | | USED WITH SETVIS |
| | | * | | | LINE/NON-LINE FLAG |
| 88 00058 | | SETTOT | DS | F | TOTAL RECORDS THRU THIS |
| | | * | | | DEVICE SINCE |
| | | * | | | BULKIO STARTED UP. |
| 88 0005C | | SETNOW | DS | F | POSITION OF CURRENT OUTPUT |
| | | * | | | RECORD, |
| | | * | | | RELATIVE TO START OF USER |
| | | * | | | DATASET |
| 88 00060 | | SETSUM | DS | F | NO.RECORDS READ OR WRITTEN |
| | | * | | | THIS JOB, |
| | | * | | | FOR WHICH USER WILL BE |
| | | * | | | CHARGED. |
| 88 00064 | | SETMOV | DS | F | NO. RECORDS TO |
| | | * | | | FORWARD/BACKSPACE IN |
| | | * | | | USER DATA SET BEFORE NEXT |
| | | * | | | OUTPUT |
| | | * | | | SERVICE CYCLE. USED WITH |
| | | * | | | SETAMT |
| | | * | | | FLAG FOR OPERATOR USE |
| | | * | | | ONLY, NOT |
| | | * | | | NEW JOB.FOR VS/VISAM |
| | | * | | | OUTPUT JOBS. |
| 88 00068 | | SETPSDA | DS | CL4 | PRINTABLE EBCDIC FORM OF |
| | | * | | | SDA |
| 88 0006C | | SETSDA | DS | H | SYMBOLIC DEVICE ADDRESS, |
| | | * | | | THIS ENTRY |
| 88 0006E | | SETTYP | DS | XL2 | DEVICE TYPE CODE ON THIS S |
| | | * | | | ENTRY, |
| | 00000801 | SETURCR | EQU | X'0801' | 2540 CARD READER |
| | | * | | | I5651 |
| | 00000802 | SETURCP | EQU | X'0802' | 2540 CARD PUNCH |
| | | * | | | I5651 |
| | 00000808 | SETURPT | EQU | X'0808' | 1403 PRINTER |
| | | * | | | I5651 |
| | 00004001 | SETRJECR | EQU | X'4001' | 2780 CARD READER |
| | | * | | | I5651 |
| | 00004008 | SETRJEPT | EQU | X'4008' | 2780 PRINTER |
| | | * | | | I5651 |
| 88 00070 | | SETSTA | DS | CL8 | RJE STATION ID |
| 88 00078 | | SETRCH | DS | AL4 | CHAIN POINTER TO OTHER |
| | | * | | | S-ENTRY |
| 88 0007C | | SETDUC | DS | H | DIAL UP COUNT INITIALIZED |
| | | * | | | TO 0 |
| 88 0007E | | SETTIM | DS | H | DEVICE CYCLE TIME(CSECS) |
| | | * | | | N319.37 |
| 88 00080 | | SETPTI | DS | H | RJE PUNCH CYCLE TIME(CSECS) |
| | | * | | | N319.37 |
| 88 00082 | | SETRS4 | DS | XL3 | RESERVED |
| | | * | | | N319.37 |
| 88 00085 | | SETCALL | DS | CL8 | LAST MODULE CALLED FOR THIS |
| | | * | | | S |
| | | * | | | ENTRY |
| 88 00090 | | SETRCR | DS | F | * PTR TO USER |
| | | * | | | TABLE,RETURNED BY RCR |
| 88 00094 | | SETRCRC | DS | H | WORK AREA FOR RCR CLOSE |
| 88 00096 | | SETRCRO | DS | H | WORK AREA FOR RCR OPEN |
| | 000000C8 | SETDCBL | EQU | 200 | LENGTH OF A DCB |
| 88 00098 | | | DS | 0D | ALIGN DCB |
| 88 00098 | | SETDVC | DS | CL(SETDCBL) | DCB REPRESENTING DEVICE |
| | | * | | | AS A DATASET |
| 88 00160 | | | DS | 0D | ALIGN DCB |
| 88 00160 | | SETDDC | DS | CL(SETDCBL) | DCB FOR VSAM OR VISAM |
| | | * | | | DATA SET |
| 88 00228 | | | DS | 0F | |
| 88 00228 | | SETFL1 | DS | X | FIRST FLAG BYTE |
| | 88 00228 | SETASS | EQU | SETFL1 | S ENTRY CURRENTLY ASSIGNED |
| | | * | | | TO A JOB. |

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|---|---|---|---|---|---|
| | 00000080 | SETASSM | EQU | X'80' | |
| | 88 00228 | SETRES | EQU | SETFL1 | RESTART OUTPUT OF USER VSAM |
| | | * | | | DATASET |
| | 00000040 | SETRESM | EQU | X'40' | BY SETL TYPE B TO |
| | | * | | | BEGINNING. |
| | 88 00228 | SETPNT | EQU | SETFL1 | SETL TYPE K TO USER'S |
| | | * | | | OUTPUT VISAM |
| | 00000010 | SETPNTM | EQU | X'10' | RECORD SPECIFIED IN SETETL |
| | | * | | | FIELD. |
| | 88 00228 | SETAMT | EQU | SETFL1 | |
| | | * | | | GET-FORWARD/SETL-TYPE-P-BACKWARD IN |
| | 00000008 | SETAMTM | EQU | X'08' | VSAM OUT DATASET BY SETMOV |
| | | * | | | AMOUNT |
| | 88 00228 | SETPUN | EQU | SETFL1 | 1=COMBINE/0=DECOMBINE IF |
| | | * | | | COMBIND,THE |
| | 00000004 | SETPUNM | EQU | X'04' | CARD RDR IN SETSDA WITH |
| | | * | | | THIS PUNCH |
| | 88 00228 | SETXPS | EQU | SETFL1 | CHANGE PRINTER SPACING TO |
| | | * | | | VALUE PUT |
| | 00000001 | SETXPSM | EQU | X'01' | INTO SETPRS BY SYSTEM |
| | | * | | | OPERATOR. |
| 88 00229 | | SETFL2 | DS | X | SECOND FLAG BYTE |
| | 88 00229 | SETINH | EQU | SETFL2 | 1=SET/0=RESET IF WAS SET, |
| | | * | | | THE OPTION |
| | 00000080 | SETINHM | EQU | X'80' | TO INHIBIT MSAM MSG TO |
| | | * | | | OPERATOR. |
| | 88 00229 | SETSUR | EQU | SETFL2 | SETUR MACRO MUST BE |
| | | * | | | REISSUED TO MSAM |
| | 00000020 | SETSURM | EQU | X'20' | OUTPUT DEVICE BY ATTEND |
| | | * | | | ALERT RTN |
| | 88 00229 | SETCBU | EQU | SETFL2 | CHANGE NUMBER BUFFERS FOR |
| | | * | | | THIS MSAM |
| | 00000010 | SETCBUM | EQU | X'10' | OUTPUT DEVICE TO AMOUNT IN |
| | | * | | | SETBUF |
| | 88 00229 | SETFN2 | EQU | SETFL2 | FINISH MACRO MUST BE |
| | | * | | | REISSUD TO MSAM |
| | 00000008 | SETFN2M | EQU | X'08' | OUTPUT DEVICE BY ATTEND |
| | | * | | | ALERT RTN |
| 88 0022A | | SETFL3 | DS | X | THIRD FLAG BYTE |
| | 88 0022A | SETRJE | EQU | SETFL3 | RJE DEVICE FLAG |
| | 00000080 | SETRJEM | EQU | X'80' | RJE DIVICE MASK |
| | 88 0022A | SETACT | EQU | SETFL3 | THIS JOB AND ITS DEVICE ARE |
| | | * | | | HALTED |
| | 00000040 | SETACTM | EQU | X'40' | THIS JOB AND DEVICE HALTED |
| | | * | | | MASK |
| | 88 0022A | SETCCF | EQU | SETFL3 | CONTINUE CARD RECEIVED |
| | 00000020 | SETCCFM | EQU | X'20' | CONTINUE CARD RECEIVED MASK |
| | 88 0022A | SETIRQ | EQU | SETFL3 | INTERVENTION REQUIRED FLAG |
| | 00000010 | SETIRQM | EQU | X'10' | INTERVENTION REQUIRED MASK |
| | 88 0022A | SETAKQ | EQU | SETFL3 | ACKNOWLEDGEMENTS PENDING |
| | | * | | | FLAG |
| | 00000008 | SETAKQM | EQU | X'08' | ACKNOWLEDGEMENTS PENDING |
| | | * | | | MASK |
| | 88 0022A | SETAKP | EQU | SETFL3 | PRINTING ACKNOWLEDGEMENTS |
| | | * | | | FLAG |
| | 00000004 | SETAKPM | EQU | X'04' | PRINTING ACKNOWLEDGEMENTS |
| | | * | | | MASK |
| | 88 0022A | SETERR | EQU | SETFL3 | 1=ERROR PROCESSING ACKS |
| | 00000002 | SETERRM | EQU | X'02' | 0=ACKS PROCESSED WITHOUT |
| | | * | | | ERROR |
| | 88 0022A | SETRPU | EQU | SETFL3 | REMOTE PUNCH AVAILABLE |
| | | * | | | N412.2 |
| | 00000001 | SETRPUM | EQU | X'01' | N412.2 |
| 88 0022B | | SETFL4 | DS | X | FOURTH FLAG BYTE |
| 88 0022C | | | DS | 0F | |
| 88 0022C | | SETPF1 | DS | X | PREVIOUS SETFL1 FROM LAST |
| | | * | | | CYCLE |
| 88 0022D | | SETPF2 | DS | X | PREVIOUS SETFL2 FROM LAST |

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|----------|-------------|--------|------|------|---------|
|          |             | *      |      |      | CYCLE |
| 88 0022E |             | SETPF3 | DS   | X    | PREVIOUS SETFL3 FROM LAST |
|          |             | *      |      |      | CYCLE |
| 88 0022F |             | SETPF4 | DS   | X    | PREVIOUS SETFL4 FROM LAST |
|          |             | *      |      |      | CYCLE |
|          | 00000002    | SETFLAL | EQU | SETFL3-SETFL1 | NUMBER OF FLAGS SAVED |
|          |             | *      |      |      | BY CZAWU |
| 88 00230 |             | SETFL5 | DS   | X    | FIFTH FLAG BYTE |
|          | 88 00230    | SETIOI | EQU  | SETFL5 | 1=THIS IS AN INPUT DEVICE, |
|          |             | *      |      |      | 0=OUTPUT. |
|          | 00000080    | SETIOIM | EQU | X'80' |  |
|          | 88 00230    | SETXSU | EQU  | SETFL5 | UNBREAKABLE SETUP. DON'T |
|          |             | *      |      |      | CHANGE THE |
|          | 00000040    | SETXSUM | EQU | X'40' | FORM ON THIS MSAM OUTPUT |
|          |             | *      |      |      | DEVICE. |
|          | 88 00230    | SETDED | EQU  | SETFL5 | DEDICATED DEVICE. ALL JOBS |
|          |             | *      |      |      | REQUIRING |
|          | 00000020    | SETDEDM | EQU | X'20' | THIS FORM MUST GO TO THIS |
|          |             | *      |      |      | DEVICE. |
|          | 88 00230    | SETCUR | EQU  | SETFL5 | THIS ENTRY CURRENTLY BEING |
|          |             | *      |      |      | SERVICED. |
|          | 00000010    | SETCURM | EQU | X'10' |  |
|          | 88 00230    | SETXAS | EQU  | SETFL5 | S ENTRY NOT TO BE ASSIGNED |
|          |             | *      |      |      | TO A JOB. |
|          | 00000008    | SETXASM | EQU | X'08' |  |
|          | 88 00230    | SETSER | EQU  | SETFL5 | THIS ENTRY WAS SERVICED |
|          |             | *      |      |      | DURING |
|          | 00000004    | SETSERM | EQU | X'04' | THE CURRENT MASTER SERVICE |
|          |             | *      |      |      | CYCLE. |
|          | 88 00230    | SETVIS | EQU  | SETFL5 | 1=LINE, 0=NON-LINE VISAM |
|          |             | *      |      |      | USER DATA |
|          | 00000002    | SETVISM | EQU | X'02' | SET TO BE OUTPUT. |
|          | 88 00230    | SETDEL | EQU  | SETFL5 | 1=DELETE THIS RDR, PUNCH, |
|          |             | *      |      |      | OR PRINTER |
|          | 00000001    | SETDELM | EQU | X'01' |  |
| 88 00231 |             | SETFL6 | DS   | X    | SIXTH FLAG BYTE |
|          | 88 00231    | SETPER | EQU  | SETFL6 | PERMANENT MSAM I/O ERROR |
|          |             | *      |      |      | RC=8 FROM |
|          | 00000080    | SETPERM | EQU | X'80' | CZAWU SETUR/FINISH, SET FOR |
|          |             | *      |      |      | CZAWY |
|          | 88 00231    | SETVABN | EQU | SETFL6 | SET TO 1 WHEN CZAWA,ABEND |
|          |             | *      |      |      | ROUTINE, |
|          | 00000040    | SETVABNM | EQU | X'40' | CALLS CZAWY,OUTPUT SERV |
|          |             | *      |      |      | EODAD RTN |
|          | 88 00231    | SETRRCR | EQU | SETFL6 | 1=CZAWV,Y,OR A MUST DO RCR |
|          |             | *      |      |      | RATION |
|          | 00000020    | SETRRCRM | EQU | X'20' | 0=RCR RATION DONE BY CZAWV |
|          |             | *      |      |      | OR Y. |
|          | 88 00231    | SETCRCR | EQU | SETFL6 | 1=CZAWV,Y,OR A MUST DO RCR |
|          |             | *      |      |      | CLOSE |
|          | 00000010    | SETCRCRM | EQU | X'10' | 0=RCR CLOSE DONE BY CZAWV |
|          |             | *      |      |      | OR Y . |
|          | 88 00231    | SETGSW | EQU  | SETFL6 |  |
|          | 00000008    | SETGSWM | EQU | X'08' | PRINT 2ND SET OF BREAK |
|          |             | *      |      |      | CHARS |
|          | 88 00231    | SETBRK | EQU  | SETFL6 | 1=NO BREAK LINES AFTER |
|          |             | *      |      |      | PRINTOUTS |
|          | 00000004    | SETBRKM | EQU | X'04' | NO BREAK LINES AFTER |
|          |             | *      |      |      | PRINTOUTS MASK |
| 88 00232 |             | SETEE  | DS   | XL6'EEEEEEEEEEEE' | DEBUGGING DUMP |
|          |             | *      |      |      | DELIMITER,SEEN AS E'S |
| 88 00238 |             |        | DS   | 0D   |  |
| 88 00238 |             | SETWORK | DS  | CL256 |  |
|          | 88 00238    |        | \|ORG\| | SETWORK |  |
| 88 00238 |             | SETCZAWZ | DS | 0D   | WORK AREAS USED BY INPUT |
|          |             | *      |      |      | SERVICE |
|          |             | *      |      |      | (CZAWZ) |
| 88 00238 |             | SETFL7 | DS   | X    | SEVENTH FLAG BYTE |

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|---|---|---|---|---|---|
| | 88 00238 | SETSIN * | EQU | SETFL7 | 1=SYSIN DATASET,0=SYSOUT DATASET. |
| | 00000080 | SETSINM | EQU | X'80' | |
| | 88 00238 | SETEMG * | EQU | SETFL7 | MSAM GET UNRECOVERABLE CARD READER |
| | 00000040 | SETEMGM * | EQU | X'40' | I/O ERROR FOUND BY INPUT SERVICE. |
| | 88 00238 | SETTRO * | EQU | SETFL7 | THROW AWAY REST OF CARD RDR INPUT TO |
| | 00000020 | SETTROM * | EQU | X'20' | VAM DS AFTER ONE MSAM READ ERROR. |
| | 88 00238 | SETEMF * | EQU | SETFL7 | MSAM FINISH UNRECOVERABLE I/O ERROR |
| | 00000008 | SETEMFM | EQU | X'08' | FOUND BY INPUT SERVICE. |
| | 88 00238 | SETPAS | EQU | SETFL7 | 1=CARD INPUT JOB IN PROGRESS. |
| | 00000004 | SETPASM | EQU | X'04' | |
| | 88 00238 | SETFST * | EQU | SETFL7 | 1=FIRST INPUT CARD HAS BEEN READ. |
| | 00000002 | SETFSTM | EQU | X'02' | |
| | 88 00238 | SETOPN * | EQU | SETFL7 | 1=MUST REMOVE CARD INPUT DATASET. |
| | 00000001 | SETOPNM | EQU | X'01' | |
| 88 00239 | | SETFL8 | DS | X | EIGHTH FLAG BYTE |
| | 88 00239 | SETFMT * | EQU | SETFL8 | 1=EBDCIC,0=BCD INPUT CARD FORMAT. |
| | 00000080 | SETFMTM | EQU | X'80' | |
| | 88 00239 | SETINEE * | EQU | SETFL8 | 1=END INPUT JOB ON MSAM ERROR |
| | 00000040 | SETINEEM | EQU | X'40' | |
| | 88 00239 | SETINEA * | EQU | SETFL8 | 1=ACCEPT INPUT CARD RECORD ON MSAM |
| | 00000020 | SETINEAM | EQU | X'20' | |
| | 88 00239 | SETINES * | EQU | SETFL8 | 1=SKIP INPUT CARD RECORD ON MSAM |
| | 00000010 | SETINESM | EQU | X'10' | GET ERROR. |
| | 88 00239 | SETFN1 * | EQU | SETFL8 | FINISH MACRO MUST BE REISSUD TO MSAM |
| | 00000008 | SETFN1M * | EQU | X'08' | DEVICE BY INPUT SERVICE RTN |
| | 88 00239 | SETEXC | EQU | SETFL8 | 1=WRAP UP EXPRESS |
| | 00000004 | SETEXCM | EQU | X'04' | BATCH SYSIN |
| | 88 00239 | SETCNM | EQU | SETFL8 | 1=EXPRESS MODE |
| | 00000002 | SETCNMM | EQU | X'02' | 0=NOT EXPRESS MODE |
| | 88 00239 | SETCNM1 | EQU | SETFL8 | 1=EXP MODE 1ST RECORD |
| | 00000001 | SETCNM1M | EQU | X'01' | 0=EXP MODE NOT 1ST RECORD |
| 88 0023A | | SETFL9 | DS | X | NINTH FLAG BYTE FOR RJE |
| | 88 0023A | SETDUF * | EQU | SETFL9 | DIAL-UP FLAG INITIALIZED OFF |
| | 00000080 | SETDUFM * | EQU | X'80' | DIAL-UP FLAG INITIALIZED OFF MASK |
| | 88 0023A | SETDID | EQU | SETFL9 | DUPLICATE STATION ID |
| | 00000040 | SETDIDM | EQU | X'40' | DUPLICATE STATION ID MASK |
| | 88 0023A | SETIID | EQU | SETFL9 | INVALID STATION ID |
| | 00000020 | SETIIDM | EQU | X'20' | INVALID STATION ID MASK |
| | 88 0023A | SETRJL | EQU | SETFL9 | RJEND CARD RECEIVED |
| | 00000010 | SETRJLM | EQU | X'10' | RJEND CARD RECEIVED MASK |
| | 88 0023A | SETABN * | EQU | SETFL9 | ASSIGN BSN FLAG FOR INPUT CLOSEOUT |
| | 00000008 | SETABNM | EQU | X'08' | ASSIGN BSN MASK |
| | 88 0023A | SETDDL | EQU | SETFL9 | DEDICATED LINE FLAG |
| | 00000004 | SETDDLM | EQU | X'04' | DEDICATED LINE MASK |
| | 88 0023A | SETRLC * | EQU | SETFL9 | SIGNAL CZAWW TO ENABLE RJE LN |
| | 00000002 | SETRLCM * | EQU | X'02' | SIGNAL CZAWW TO ENABLE RJE LN MASK |
| 88 0023C | | SETINB * | DS | F | ADDRESS OF 1ST INPUT RECORD BYTE IN |

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|---|---|---|---|---|---|
| | | * | | | MSAM BUFFER, FROM MSAM GET. |
| 88 00240 | | SETGC4 | DS | F | COUNT OF 'GET' RETRIES |
| | | * | | | AFTER RC=4. |
| 88 00244 | | SETFC4 | DS | H | COUNT OF 'FINISH' RETRIES |
| | | * | | | AFTER RC=4 |
| 88 00246 | | SETFC8 | DS | H | COUNT OF 'FINISH' RETRIES |
| | | * | | | AFTER RC=8 |
| 88 00248 | | SETISZ | DS | H | LOGICAL RECORD LENGTH. |
| 88 0024A | | SETKER | DS | H | # CARDS SKIPPED OR ACCEPTED |
| | | * | | | W/ERRORS |
| 88 0024C | | SETIKE | DS | CL5 | SEQUENCE NUMBER |
| 88 00251 | | SETBTE | DS | XL1 | RELATIVE START BYTE,INPUT |
| | | * | | | JOBS ONLY. |
| 88 00252 | | SETBBE | DS | XL1 | RELATIVE END BYTE,INPUT |
| | | * | | | JOBS ONLY. |
| 88 00254 | | | DS | 0F | ALIGN ICB |
| | 0000002C | SETICBL | EQU | 44 | LENGTH OF AN ICB |
| 88 00254 | | SETICB | DS | XL(SETICBL) | ASYNCHRONOUS INTERRUPT |
| | | * | | | ICB FOR CARD |
| | | * | | | READER S ENTRY ONLY. |
| 88 00280 | | | DS | 0F | ALIGN COMMUNICATIONS AREA |
| | 00000010 | SETCMNL | EQU | 16 | LENGTH OF AN ICB |
| | | * | | | COMMUNICATIONS AREA |
| 88 00280 | | SETCMN | DS | XL(SETCMNL) | COMMUNICATIONS AREA FOR |
| | | * | | | SETICB |
| 88 00290 | | SETFFS | DS | CL1 | THIS FIELD DEFINES THOSE |
| | | * | | | FLAGS |
| | | * | | | REQUIRED FOR FTN OPTION |
| | 88 00290 | SETFTN | EQU | SETFFS | FTN OPTION BEING PROCESSED |
| | | * | | | FLAG |
| | 00000080 | SETFTNM | EQU | X'80' | FTN OPTION BEING PROCESSED |
| | | * | | | MASK |
| | 88 00290 | SETFRD | EQU | SETFFS | FIRST FTN SOURCE RECORD |
| | | * | | | BEING PROCESSED |
| | 00000040 | SETFRDM | EQU | X'40' | FST SOURCE RECORD BEING |
| | | * | | | PRO. MASK |
| | 88 00290 | SETEDS | EQU | SETFFS | LAST RECORD OF FTN SOURCE |
| | | * | | | BEING PROCESSED |
| | 00000020 | SETEDSM | EQU | X'20' | LAST RECORD OF SOURCE BEING |
| | | * | | | PRO. MASK |
| 88 00291 | | SETFSV | DS | CL92 | BUFFER SAVE AREA FOR FTN |
| | | * | | | CONVERSION |
| | | * | | | 92 BYTES REPRESENT ONE |
| | | * | | | RECORD OF A |
| | | * | | | LINE DATASET |
| 88 002ED | | SETCMI | DS | CL1 | DATA COMPRESSION INDS. |
| | 88 002ED | SETCMP | EQU | SETCMI | SET ON INDICATE D.S. |
| | 00000080 | SETCMPM | EQU | X'80' | COMPRESSION REQUIRED |
| 88 002F0 | | SETZRC | DS | A | LAST RETURN CODE FROM MSAM |
| | | * | | | N412.2 |
| | 88 00238 | | \|ORG\| | SETWORK | |
| 88 00238 | | SETCZAWY | DS | 0D | WORK AREAS USED BY OUTPUT |
| | | * | | | SER- |
| | | * | | | VICE (CZAWY) |
| | 88 00238 | SETYTOP | EQU | * | ** TOP OF JOB DEPENDENT |
| | | * | | | AREA |
| 88 00238 | | SETYFLJ1 | DS | X | ** JOB FLAG 1 |
| | 88 00238 | SETYPUT | EQU | SETYFLJ1 | ** REISSUE MSAM PUT |
| | 00000080 | SETYPUTM | EQU | X'80' | ** |
| | 88 00238 | SETYFIN | EQU | SETYFLJ1 | ** REISSUE MSAM FINISH |
| | 00000040 | SETYFINM | EQU | X'40' | ** |
| | 88 00238 | SETYFST | EQU | SETYFLJ1 | ** FIRST PASS ON THIS JOB |
| | 00000020 | SETYFSTM | EQU | X'20' | ** |
| | 88 00238 | SETYNPG | EQU | SETYFLJ1 | ** NEW PAGE REQUIRED |
| | 00000010 | SETYNPGM | EQU | X'10' | ** |
| | 88 00238 | SETYDSO | EQU | SETYFLJ1 | ** INPUT DSORG - 1=VISAM, |
| | | * | | | 0=VSAM |
| | 00000008 | SETYDSOM | EQU | X'08' | ** |

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|---|---|---|---|---|---|
| | 88 00238 | SETYLIN | EQU | SETYFLJ1 | ** LINE DATA SET - DSORG=VI, RKP=4, |
| | 00000004 | SETYLINM | EQU | X'04' | ** RECFM=V, KEYLEN=7 |
| | 88 00238 | SETYREC | EQU | SETYFLJ1 | ** RECORD FORMAT - 0=FIXED |
| | 00000002 | SETYRECM | EQU | X'02' | ** 1=VARIABLE |
| | 88 00238 | SETYAOM | EQU | SETYFLJ1 | ** TYPE OF EDIT - 0=MACHINE |
| | 00000001 | SETYAOMM | EQU | X'01' | ** 1=ASA |
| 88 00239 | | SETYFLJ2 | DS | X | ** JOB FLAG2 |
| | 88 00239 | SETCOM | EQU | SETYFLJ2 | ** THIS OUTPUT JOB IS COMPLETED. |
| | 00000080 | SETCOMM | EQU | X'80' | ** |
| | 88 00239 | SETYHOL | EQU | SETYFLJ2 | ** LOCATION FOUND BY MSAM PUT HAS |
| | 00000040 | SETYHOLM | EQU | X'40' | ** NOT BEEN FILLED. |
| | 88 00239 | SETYFCC | EQU | SETYFLJ2 | ** ON IF WYINIT2 IS DETERMINING |
| | 00000020 | SETYFCCM | EQU | X'20' | ** TYPE OF EDIT. |
| | 88 00239 | SETYBAD | EQU | SETYFLJ2 | ** ERROR RECORD WAS FOUND (SHORTER |
| | 00000010 | SETYBADM | EQU | X'10' | ** THAN START BYTE, OR BAD CC) |
| | 88 00239 | SETSYN | EQU | SETYFLJ2 | ** VISAM SYNAD ENTRY OCCURRED. |
| | 00000008 | SETSYNM | EQU | X'08' | ** |
| | 88 00239 | SETEOD | EQU | SETYFLJ2 | ** VSAM/VISAM EODAD ENTRY OCCURRED. |
| | 00000004 | SETEODM | EQU | X'04' | ** |
| | 88 00239 | SETYXPS | EQU | SETYFLJ2 | ** RELAY OF CHANGE-PRINTSPACE REQUEST |
| | 00000002 | SETYXPSM | EQU | X'02' | ** BY OPERATOR FROM CZAWU/ATT ALERT |
| | 88 00239 | SETYINI | EQU | SETYFLJ2 | ** CZAWY HAS PERFORMED FIRST-PASS |
| | 00000001 | SETYINIM | EQU | X'01' | ** INITIALIZATION FOR THIS JOB. |
| 88 0023A | | SETYFLJ3 | DS | X | ** OUTPUT JOB FLAG BYTE 3 |
| | 88 0023A | SETTOP | EQU | SETYFLJ3 | ** JOB TO BE STOPPED BY SETL TYPE E |
| | 00000080 | SETTOPM | EQU | X'80' | ** TO END OF OUTPUT DATA SET. |
| | 88 0023A | SETSCF | EQU | SETYFLJ3 | SOFT CANCEL OPTION |
| | 00000040 | SETSCFM | EQU | X'40' | SOFT CANCEL OPTION MASK |
| | 88 0023A | SETNLK | EQU | SETYFLJ3 | 1=CZAWN ADDED 1 TO BCTNSR |
| | 00000020 | SETNLKM | EQU | X'20' | 0=CZAWN DID NOT ADD 1 TO BCTNSR |
| | 88 0023A | SETNSTW | EQU | SETYFLJ3 | 1=FINISH WITH NO STOW |
| | 00000010 | SETNSTWM | EQU | X'10' | 0=ISSUE FINISH AND A STOW |
| | 88 0023A | SETSPLT | EQU | SETYFLJ3 | FLAG WHICH INDICATES THAT AN |
| | 00000008 | SETSPLTM | EQU | X'08' | ACK IS GREATER THAN 137 BYTES |
| 88 0023B | | SETPRS | DS | C | ** PRINTER SPACE OPTION |
| | 000000C5 | SETYEDIT | EQU | C'E' | ** EDIT REQUESTED |
| 88 0023C | | SETYPAG | DS | C | ** P FOR PAGE NUMBERING REQUIRED |
| | 000000D7 | SETYPAGM | EQU | C'P' | ** |
| 88 0023D | | SETYHDG | DS | C | ** H FOR PAGE HEADINGS REQUIRED |
| | 000000C8 | SETYHDGM | EQU | C'H' | ** |
| 88 00240 | | SETYRC | DS | A | ** LAST RETURN CODE RECEIVED |
| 88 00244 | | SETYRS1 | DS | F | ** RESERVED AREA |
| 88 00248 | | SETYRS2 | DS | F | ** RESERVED AREA |
| 88 0024C | | SETYHDR | DS | CL132 | ** USER'S PAGE HEADING LINE |

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|---|---|---|---|---|---|
| 88 002D0 | | SETYPGE | DS | PL5 | ** CURRENT PAGE NUMBER |
| | 88 002D4 | SETYPGEB | EQU | SETYPGE+L'SETYPGE-1 ** LAST BYTE |
| | | * | | | OF SETYPGE |
| 88 002D8 | | SETYOUTP | DS | A | ** POINTER TO OUTPUT |
| | | * | | | RECORD |
| 88 002DC | | SETYINP | DS | A | ** POINTER TO INPUT |
| | | * | | | RECORD |
| 88 002E0 | | SETBIG | DS | F | ** RELATIVE START BYTE |
| 88 002E4 | | SETEND | DS | F | ** RELATIVE END BYTE |
| 88 002E8 | | SETYLNS | DS | H | ** MAXIMUM LINES PER PAGE |
| 88 002EA | | SETYUPL | DS | H | ** STANDARD NUMBER OF |
| | | * | | | LINES BUMPED |
| | | * | | | ** AFTER ONE PRINT |
| 88 002EC | | SETYLINE | DS | H | ** CURRENT LINE NUMBER ON |
| | | * | | | PAGE |
| 88 002F0 | | SETYLRE | DS | F | ** LOGICAL RECORD LENGTH |
| | | * | | | FOR FIXED |
| | | * | | | ** LENGTH RECORDS |
| 88 002F4 | | SETYMSKA | DS | A | ** |
| | 88 002F7 | | \|ORG\| | SETYMSKA+3 ** SERVES TO ALIGN |
| | | * | | | SETYMASK |
| 88 002F7 | | SETYMASK | DS | X | ** MASK FOR PR/PU |
| | | * | | | ASA/MACHINE EDIT |
| | 00000008 | SETYPRMC | EQU | X'08' | ** PRINT WITH MACHINE |
| | | * | | | EDIT |
| | 00000004 | SETYPRAS | EQU | X'04' | ** PRINT WITH ASA EDIT |
| | 00000002 | SETYPUMC | EQU | X'02' | ** PUNCH WITH MACHINE |
| | | * | | | EDIT |
| | 00000001 | SETYPUAS | EQU | X'01' | ** PUNCH WITH ASA EDIT |
| 88 002F8 | | SETYCC | DS | X | ** STANDARD CONTROL |
| | | * | | | CHARACTER |
| 88 002F9 | | SETYCODE | DS | X | ** JOB COMPLETION CODE |
| | 00000000 | SETYCODN | EQU | X'00' | ** NORMAL JOB COMPLETION |
| | 00000002 | SETYCODA | EQU | X'02' | ** ABNORMAL JOB |
| | | * | | | TERMINATION |
| | 00000004 | SETYCODS | EQU | X'04' | SOFT CANCEL CODE FOR VSEND |
| | | * | | | TO BM |
| 88 002FA | | SETYJCD | DS | X | ** COMPLETION CODE FOR |
| | | * | | | EOJ MESSAGE |
| 88 002FC | | SETYCONT | DS | A | ** CONTINUATION ADDRESS |
| | | * | | | FROM ERROR |
| 88 00300 | | SETYNOWS | DS | F | ** SETNOW AT TIME OF |
| | | * | | | ERROR |
| 88 00304 | | SETYXPUT | DS | A | ** RETURN ADDRESS FROM |
| | | * | | | WYXPUT |
| 88 00308 | | SETYXTRL | DS | A | ** RETURN ADDR FROM |
| | | * | | | WYTRAILR |
| 88 0030C | | SETYTRCT | DS | H | ** COUNT OF TRIPLE SPACES |
| | | * | | | OR BREAK |
| | | * | | | ** LINES REMAINING |
| 88 0030E | | SETYSHRT | DS | H | ** COUNT OF SHORT RECORDS |
| 88 00310 | | SETYBADC | DS | H | ** COUNT OF RECORDS WITH |
| | | * | | | BAD CC'S |
| | 88 00312 | SETYBOT | EQU | * | ** BOTTOM OF JOB |
| | | * | | | DEPENDENT AREA |
| | 000000DA | SETYLENG | EQU | SETYBOT-SETYTOP ** LENGTH OF JOB |
| | | * | | | DEPENDENT AREA |
| 88 00312 | | SETYFLGD | DS | X | DEVICE FLAG |
| | 88 00312 | SETYPOP | EQU | SETYFLGD | TYPE OF DEVICE - 0=PUNCH |
| | 00000080 | SETYPOPM | EQU | X'80' | 1=PRINTER |
| 88 00313 | | SETFRM | DS | CL10 | CARD PUNCH OR PRINTER FORM |
| | | * | | | NUMBER |
| | | * | | | USED BY MSAM SETUR MACRO. |
| 88 0031E | | SETCMB | DS | H | SDA OF CARD READER THAT CAN |
| | | * | | | BE COM- |
| | | * | | | BINED BY MSAM WITH THIS |
| | | * | | | CARD PUNCH |
| 88 00320 | | SETYTRCC | DS | 0XL3 | * TRAILER CONTROL |

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|----------|-------------|--------|------|------|---------|
| | | * | | | CHARACTERS |
| 88 00320 | | SETYSKP1 | DS | X | * SKIP TO CHANNEL 1 |
| 88 00321 | | SETYSPC1 | DS | X | * SINGLE SPACE |
| 88 00322 | | SETYSPC3 | DS | X | * TRIPLE SPACE |
| 88 00323 | | SETFLA | DS | XL1 | FLAG BYTE TEN |
| | | * | | | N412.2 |
| | 88 00323 | SETHLD | EQU | SETFLA | HOLD OUTPUT REQUEST |
| | | * | | | N412.2 |
| | 00000080 | SETHLDM | EQU | X'80' | N412.2 |
| 88 00324 | | SETFLB | DS | XL1 | FLAG BYTE ELEVEN |
| | | * | | | N412.2 |
| | 88 00324 | SETJOB | EQU | SETFLB | BSN OUTPUT REQUEST |
| | | * | | | N412.2 |
| | 00000080 | SETJOBM | EQU | X'80' | N412.2 |
| | 88 00324 | SETOID | EQU | SETFLB | USERID OUTPUT REQUEST |
| | | * | | | N412.2 |
| | 00000040 | SETOIDM | EQU | X'40' | N412.2 |
| | 88 00324 | SETPR | EQU | SETFLB | REQUEST FOR PRINTER OUTPUT |
| | | * | | | N412.2 |
| | 00000008 | SETPRM | EQU | X'08' | N412.2 |
| | 88 00324 | SETPU | EQU | SETFLB | REQUEST FOR PUNCH OUTPUT |
| | | * | | | N412.2 |
| | 00000004 | SETPUM | EQU | X'04' | N412.2 |
| 88 00325 | | SETOUI | DS | CL8 | USERID REQUESTED FOR OUTPUT |
| | | * | | | N412. |
| | | | | 2 | |
| 88 0032D | | SETOBS | DS | CL4 | BSN REQUESTED FOR OUTPUT |
| | | * | | | N412.2 |
| 88 00331 | | SETOCT | DS | XL1 | OUTPUT REQ BWQ SEARCH COUNT |
| | | * | | | N412.2 |
| 88 00332 | | SETRSV | DS | XL14 | RESERVED |
| | | * | | | N412.2 |
| | 0000001D | SETOUTL | EQU | *-SETFLA | LENGTH OF OUTPUT PARAMS |
| | | * | | | N412.2 |
| 88 00340 | | SETLST | DS | 0X | END OF S-ENTRY |
| | | * | | | M03481 |
| | 00000340 | SETLEN | EQU | SETLST-CHASET | LENGTH OF AN S-ENTRY |
| | | * | | | M03481 |
| | 88 00340 | | |ORG| | |

## Buffer Page (CHABFP)

The Buffer Page defines one page of virtual storage containing buffer slots for the RTAM program. CHABFP is pointed to by the CHAMTS control block; it is initially located in segment one of real core.

### CHABFP Storage map

```
DEC     HEX
  0       0 |_____BFPCON_____|_____|
            |                                                                             |
            =                              BFPARA                                         =
            |                                                                             |
            |_____|_____|
4080      FF0 |_____BFPFWD_____|_____BFPREV_____|
            |                                     |                                       |
4088      FF8 |_____BFPACS_____|_BFPLCK__|UNNAMED_|_____UNNAMED_____|
```
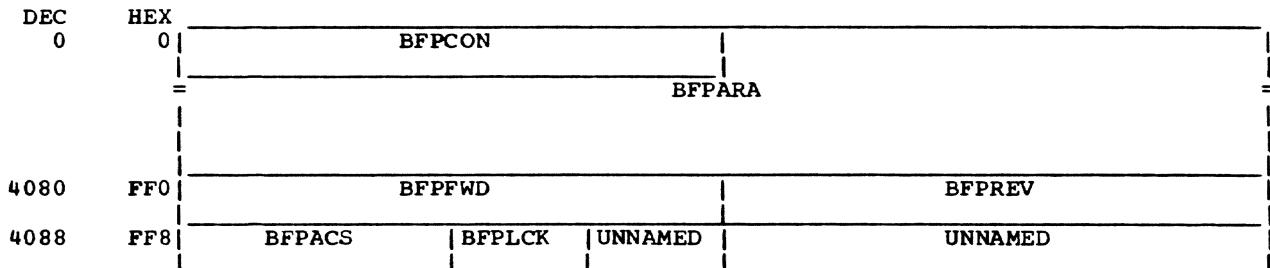
ORG   BFPCON

```
  0       0 |BFPCN1__|BFPCN2__|BFPCN3__|BFPCN4__|
```

### Fields in CHABFP -- by displacement

| DEC  | HEX  | FIELD  | DEC  | HEX  | FIELD  | DEC  | HEX  | FIELD  |
|------|------|--------|------|------|--------|------|------|--------|
| 0000 | 0000 | BFPCN1 | 0003 | 0003 | BFPCN4 | 4088 | 0FF8 | BFPACS |
| 0000 | 0000 | BFPCON | 0004 | 0004 | BFPARA | 4090 | 0FFA | BFPLCK |
| 0001 | 0001 | BFPCN2 | 4080 | 0FF0 | BFPFWD |      |      |        |
| 0002 | 0002 | BFPCN3 | 4084 | 0FF4 | BFPREV |      |      |        |

### Alphabetical list of fields in CHABFP

| FIELD  | DEC  | HEX  | FIELD  | DEC  | HEX  | FIELD  | DEC  | HEX  |
|--------|------|------|--------|------|------|--------|------|------|
| BFPACS | 4088 | 0FF8 | BFPCN3 | 0002 | 0002 | BFPLCK | 4090 | 0FFA |
| BFPARA | 0004 | 0004 | BFPCN4 | 0003 | 0003 | BFPREV | 4084 | 0FF4 |
| BFPCN1 | 0000 | 0000 | BFPCON | 0000 | 0000 |        |      |      |
| BFPCN2 | 0001 | 0001 | BFPFWD | 4080 | 0FF0 |        |      |      |

### Assembler listing of CHABFP

| LOCATION  | INSTRUCTION | SOURCE | INST  | OPER     | COMMENT               |
|-----------|-------------|--------|-------|----------|-----------------------|
| 0B 00000  |             | CHABFP | DSECT |          |                       |
| 0B 00000  |             | BFPCON | DS    | F        | CONTROL INFORMATION   |
| 0B 00000  |             |        | |ORG| | BFPCON   |                       |
| 0B 00000  |             | BFPCN1 | DS    | X        | CONTROL BYTE 1        |
|           | 00000080    | BFPACT | EQU   | X'80'    | ACTIVE BIT            |
| 0B 00001  |             | BFPCN2 | DS    | X        | CONTROL BYTE 2        |
| 0B 00002  |             | BFPCN3 | DS    | X        | CONTROL BYTE 3        |
| 0B 00003  |             | BFPCN4 | DS    | X        | CONTROL BYTE 4        |
|           | 00000004    | BFPCNL | EQU   | 4        | LENGTH OF CONTROL AREA|
| 0B 00004  |             | BFPARA | DS    | 1019F    | MAX BUFFER SIZE       |
|           | 00000FF0    | BFPLGH | EQU   | *-BFPCON | BUFFER AREA           |
| 0B 00FF0  |             | BFPFWD | DS    | F        | FORWARD POINTER       |
| 0B 00FF4  |             | BFPREV | DS    | F        | REVERSE POINTER       |
| 0B 00FF8  |             | BFPACS | DS    | H        | NUMBER OF ACTIVE SLOTS |
| 0B 00FFA  |             | BFPLCK | DS    | X        | LOCK BYTE             |
| 0B 00FFB  |             |        | DS    | X        | NOT USED              |
| 0B 00FFC  |             |        | DS    | F        | NOT USED              |

## Builtin Procedure Key (CHABPK)

The Builtin Procedure Key (CHABPK) is a communication area for parameters passed from the command controller to a builtin procedure. The BUILTIN command, defining the builtin procedure, specifies the origin of CHABPK.
CHABPK resides in virtual storage aligned on word boundaries.

### CHABPK Storage map

```
DEC   HEX  _____
  0     0 |                 BPKENT                |            BPKPS         |
          |---------------------------------------|-------------------------|
  8     8 |                 BPKNO                  |            BPKPAR        |
          |---------------------------------------|-------------------------|
 16    10 |                 BPKSNO                 |
          |_____|
```

### Fields in CHABPK -- by displacement

| DEC | HEX | FIELD | | DEC | HEX | FIELD | | DEC | HEX | FIELD | |
|-----|-----|-------|---|-----|-----|-------|---|-----|-----|-------|---|
| 0000 | 0000 | BPKENT | | 0008 | 0008 | BPKNO | | 0016 | 0010 | BPKSNO | |
| 0004 | 0004 | BPKPS | | 0012 | 000C | BPKSPTR | (EQU) | 0020 | 0014 | BPKSPAR | |
| 0008 | 0008 | BPKID | (EQU) | 0012 | 000C | BPKPAR | | | | | |

### Alphabetical list of fields in CHABPK

| FIELD | DEC | HEX | | FIELD | DEC | HEX | | FIELD | DEC | HEX | |
|-------|-----|-----|---|-------|-----|-----|---|-------|-----|-----|---|
| BPKENT | 0000 | 0000 | | BPKPAR | 0012 | 000C | | BPKSPAR | 0020 | 0014 | |
| BPKID | 0008 | 0008 | (EQU) | BPKPS | 0004 | 0004 | | BPKSPTR | 0012 | 000C | (EQU) |
| BPKNO | 0008 | 0008 | | BPKSNO | 0016 | 0010 | | | | | |

### Assembler listing of CHABPK

```
   LOCATION INSTRUCTION SOURCE    INST  OPER      COMMENT
   ***********************************************************************
   *                              NSRB 441                              *
   * THIS DSECT IS USED TO COVER THE EXPANSION OF THE BPKD MACRO        *
   ***********************************************************************
            0C 00000      CHABPK   DSECT
   0C 00000               BPKENT   DS    A         ENTRY POINT OF MODULE TO BE
                          *                        CALLED
   0C 00004               BPKPS    DS    A         PSECT ADDR OF MODULE TO BE
                          *                        CALLED
   0C 00008               BPKNO    DS    F         NO OF PARAMETERS FOR MODULE
                          *                        WITH ORIGINAL BPK
            0C 00008      BPKID    EQU   BPKNO     ID FOR BPK WITH
                          *                        SUBPARAMETERS
   0C 0000C               BPKPAR   DS    A         PLIST FOR ORIGINAL BPK
            0C 0000C      BPKSPTR  EQU   BPKPAR    POINTER TO EXTENDED ELIST
   0C 00010               BPKSNO   DS    F         NUMBER OF PARAMETERS FOR
                          *                        MODULE WITH EXTENDED BPK
   0C 00014               BPKSPAR  DS    0F        PLIST FOR EXTENDED BPK
```

## Buffer Page List (CHABPL)

The Buffer Page List (BPL) describes the location and status of all buffers in a buffer pool.  The BPL is located at the beginning of the buffer pool and is created by the GETBUF routine the first time a buffer is requested from the pool.

The BPL contains a doubleword header and a double word entry for each buffer in the pool, and occupies 16 bytes of virtual storage, aligned on doubleword boundaries.

### CHABPL Storage map

| DEC | HEX | | | | |
|-----|-----|---|---|---|---|
| 0 | 0 | BPLRS1 | BPLNPG | BPLRS2 | BPLNBF |
| 8 | 8 | BPLADD | BPLUSE | | |

### Fields in CHABPL -- by displacement

| DEC | HEX | FIELD | DEC | HEX | FIELD | DEC | HEX | FIELD |
|-----|-----|-------|-----|-----|-------|-----|-----|-------|
| 0000 | 0000 | BPLRS1 | 0006 | 0006 | BPLRS2 | 0008 | 0008 | BPLADD |
| 0004 | 0004 | BPLNPG | 0007 | 0007 | BPLNBF | 0012 | 000C | BPLUSE |

### Alphabetical list of fields in CHABPL

| FIELD | DEC | HEX | FIELD | DEC | HEX | FIELD | DEC | HEX |
|-------|-----|-----|-------|-----|-----|-------|-----|-----|
| BPLADD | 0008 | 0008 | BPLNPG | 0004 | 0004 | BPLRS2 | 0006 | 0006 |
| BPLNBF | 0007 | 0007 | BPLRS1 | 0000 | 0000 | BPLUSE | 0012 | 000C |

### Assembler listing of CHABPL

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|----------|-------------|--------|------|------|---------|
| | 0D 00000 | CHABPL | DSECT | | |
| 0D 00000 | | | DS | 0D | |
| 0D 00000 | | BPLRS1 | DS | F | RESERVED |
| 0D 00004 | | BPLNPG | DS | H | NUMBER OF PAGES IN POOL |
| 0D 00006 | | BPLRS2 | DS | X | RESERVED |
| 0D 00007 | | BPLNBF | DS | X | NUMBER OF UNUSED BUFFERS IN |
| | | * | | | TBL |
| 0D 00008 | | BPLADD | DS | F | BUFFER ADDR |
| 0D 0000C | | BPLUSE | DS | XL4 | BUFFER IN USE FLAG |
| | 000000FF | BPLUSM | EQU | X'FF' | MASK FOR IN USE FLAG |

## BULKIO Performance Table (CHABPT)

CHABPT is a table of entries for each type of device which may be assigned to BULKIO. Values in each entry represent the approximate time it takes to fill or empty the specified number of buffers for the device being described.

For each device assigned to BULKIO, this table will be used to select the appropriate base time value. Base time values will then be used by BULKIO in order to ensure that BULKIO will never cycle faster than the base time of the fastest active device assigned to it.

### CHABPT Storage map

```
DEC   HEX _____
 0     0 |         BPTCNT      |       BPTTYP       |       BPTSIN       |       BPTDOU       |
         |_____|_____|_____|_____|
 8     8 |         BPTTRI      |       BPTQUA       |       BPTQUI       |
         |_____|_____|_____|
```

### Fields in CHABPT -- by displacement

| DEC | HEX | FIELD | DEC | HEX | FIELD | DEC | HEX | FIELD |
|-----|-----|-------|-----|-----|-------|-----|-----|-------|
| 0000 | 0000 | BPTCNT | 0006 | 0006 | BPTDOU | 0012 | 000C | BPTQUI |
| 0002 | 0002 | BPTTYP | 0008 | 0008 | BPTTRI | | | |
| 0004 | 0004 | BPTSIN | 0010 | 000A | BPTQUA | | | |

### Alphabetical list of fields in CHABPT

| FIELD | DEC | HEX | FIELD | DEC | HEX | FIELD | DEC | HEX |
|-------|-----|-----|-------|-----|-----|-------|-----|-----|
| BPTCNT | 0000 | 0000 | BPTQUI | 0012 | 000C | BPTTYP | 0002 | 0002 |
| BPTDOU | 0006 | 0006 | BPTSIN | 0004 | 0004 | | | |
| BPTQUA | 0010 | 000A | BPTTRI | 0008 | 0008 | | | |

### Assembler listing of CHABPT

```
LOCATION  INSTRUCTION  SOURCE    INST   OPER      COMMENT
          0E 00000     CHABPT    DSECT            BULKIO PERFORMANCE TABLE
                       *                          N319.37
*******************************************************************************
* CODE BELOW FOR BIO DYNAMIC BASE TIME INTERVAL - NSRB 319.37              *
*   CHABPT--DSECT FOR CHBBP: BULKIO PERFORMANCE TABLE                      *
*   A TABLE OF ENTRIES FOR EACH TYPE OF DEVICE WHICH MAY BE ASSIGNED TO*
*   BULKIO.  VALUES IN EACH ENTRY REPRESENT THE APPROXIMATE TIME IT        *
*   TAKES TO FILL OR EMPTY THE SPECIFIED NUMBER OF BUFFERS FOR THE         *
*   DEVICE IN QUESTION.  FOR EACH DEVICE ASSIGNED TO BULKIO, THIS TABLE*
*   WILL BE USED TO SELECT THE APPROPRIATE BASE TIME VALUE.  BASE TIME *
*   VALUES WILL THEN BE USED BY BULKIO IN ORDER TO INSURE THAT BULKIO  *
*   WILL NEVER CYCLE FASTER THAN THE BASE TIME OF THE FASTEST ACTIVE   *
*   DEVICE ASSIGNED TO IT.                                            *
*******************************************************************************
0E 00000                BPTCNT    DS     H         DEVICE ENTRY COUNT
0E 00002                BPTTYP    DS     XL2       DEVICE CODE(LAST 2 BYTES OF
                        *                          SDADEV)
0E 00004                BPTSIN    DS     H         BASE TIME-SINGLE BUFFERED
0E 00006                BPTDOU    DS     H         BASE TIME-DOUBLE BUFFERED
0E 00008                BPTTRI    DS     H         BASE TIME-TRIPLE BUFFERED
0E 0000A                BPTQUA    DS     H         BASE TIME-QUADRUPLE
                        *                          BUFFERED
0E 0000C                BPTQUI    DS     H         BASE TIME-QUINTUPLE
                        *                          BUFFERED
        0000000C        BPTLEN    EQU    *-BPTTYP  LENGTH OF DEVICE ENTRY
        00000005        BPTHI     EQU    5         NUMBER OF BUFFER TIME
                        *                          ENTRIES
                        *                          PER DEVICE ENTRY
```

## BULKIO Message DSECT (CHABWM)

CHABWM maintains a standard for all messages output by the BULKIO message modules:
CZAWM and CZAWN. CZAWN uses MSAM PUT to write the messages to an RJE station, and so
must limit the message length to 132 bytes. If the specified message is greater than
132 bytes, CZAWN references CHABWM at two points, for separate 132-byte message
pieces, and uses MSAM PUT twice to write the total message in two parts.
CHABWM is 256 bytes in length.

### CHABWM Storage map

```
DEC    HEX  _____
  0      0 |                                                                      |
          |                                                                       |
          =                              BWMLEN                                   =
          |                                                                       |
          |                                                                       |
          |_____|


ORG   BWMLEN


  0      0 |_____|                     _____|
          |             BWMOUTL                    |                     |         |
  8      8 |_____|_____|
          |                    BWMHEADE                          |
          |_____|


ORG   BWMHEADE+8


 12      C                                           _____
                                                    |                    |
                                                    |      BWMKEY        |
                                                    |_____|
```
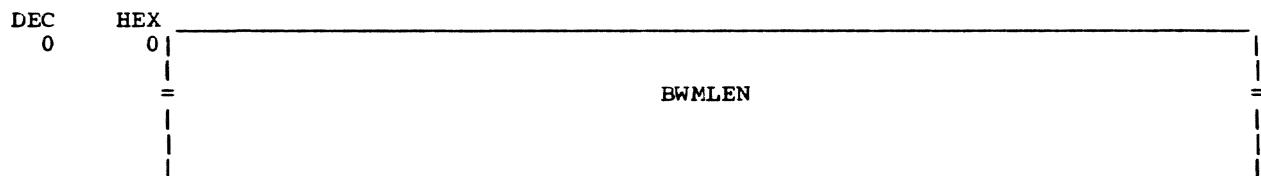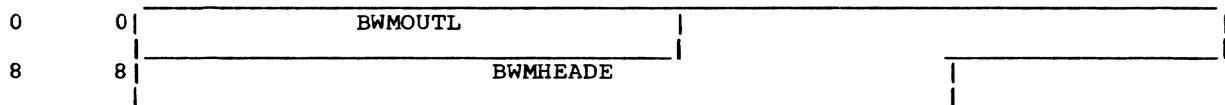
### Fields in CHABWM -- by displacement

| DEC | HEX | FIELD | DEC | HEX | FIELD | | DEC | HEX | FIELD | |
|------|------|---------|------|------|----------|------|------|------|----------|------|
| 0000 | 0000 | BWMOUTL | 0009 | 0009 | BWMBIOID | (EQU) | 0136 | 0088 | BWMSPLIT | (EQU) |
| 0000 | 0000 | BWMLEN | 0012 | 000C | BWMKEY | | | | | |
| 0004 | 0004 | BWMHEADE | 0014 | 000E | BWMOUT | (EQU) | | | | |

### Alphabetical list of fields in CHABWM

| FIELD | DEC | HEX | | FIELD | DEC | HEX | | FIELD | DEC | HEX | |
|----------|------|------|-------|--------|------|------|-------|----------|------|------|-------|
| BWMBIOID | 0009 | 0009 | (EQU) | BWMLEN | 0000 | 0000 | | BWMSPLIT | 0136 | 0088 | (EQU) |
| BWMHEADE | 0004 | 0004 | | BWMOUT | 0014 | 000E | (EQU) | | | | |
| BWMKEY | 0012 | 000C | | BWMOUTL | 0000 | 0000 | | | | | |

### Assembler listing of CHABWM

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|----------|-------------|--------|------|------|---------|
| | 0F 00000 | CHABWM | DSECT | | BULKIO MESSAGE DSECT |
| 0F 00000 | | BWMLEN | DS | CL256 | MAXIMUM SIZE FOR WRITE |
| | 0F 00000 | | |ORG| | BWMLEN |
| 0F 00000 | | BWMOUTL | DS | A | LENGTH OF MESSAGE |
| 0F 00004 | | BWMHEADE | DS | CL10 | NON DATA PORTION OF MASSAGE |
| | 0F 0000C | | |ORG| | BWMHEADE+8 |
| 0F 0000C | | BWMKEY | DS | H | MESSAGE KEY |
| | 0F 0000E | BWMOUT | EQU | * | |
| | 0F 00088 | | |ORG| | BWMHEADE+132 |
| | 0F 00088 | BWMSPLIT | EQU | * | |
| | 0F 00100 | | |ORG| | |
| | 0F 00009 | BWMBIOID | EQU | | BWMHEADE+5  BULKIO MODULE ID |
| | 00000002 | BWMKEYL | EQU | | L'BWMKEY  KEYLENGTH |
| | 0000000C | BWMKEYP | EQU | | (BWMKEY-BWMOUTL)  KEY POSITION |
| | 00000100 | BWMLRECL | EQU | | L'BWMLEN  LOGICAL RECORD LENGTH |
| | 0000000A | BWMHEDLE | EQU | | L'BWMHEADE  HEADER LENGTH |

## Batch Work Queue (CHABWQ)

The Batch Work Queue (BWQ) stores requests for nonconversational tasks until they can be initiated.  The BWQ also maintains a record of active nonconversational tasks. BWQ occupies 200 bytes of virtual storage, aligned on doubleword boundaries.

CHABWQ Storage map

```
DEC    HEX
  0      0|   BWQTID      | BWQAC  | BWQST  |                              |
         |_____|_____|_____|_____                        |
         |                                    BWQSYS                      |
         |                                                                |
         |                                                                |
         |                                                                |
 32     20|                                                    | RESERVED|
         |_____       |
 40     28|                          BWQUID                               |
         |_____       |
 48     30|          BWQBSN              |         BWQPWD                  |
 56     38|       BWQPWD   (CONT)        |         BWQCHG                  |
 64     40|       BWQCHG   (CONT)        |         BWQSTA                  |
 72     48|       BWQSTA   (CONT)        |         BWQDV1                  |
 80     50|          BWQDV2             | BWQPFL  |                        |
         =|_____|_____|                       =
         |                        BWQPAR                                  |
         |                                                                |
         |_____       |

ORG  *-4

 76     4C                           | BWQDEA | BWQDEB | BWQDEC | BWQDED  |
                                     |_____|_____|_____|_____|

ORG  BWQPAR

 85     55                                  |_____
         |_____|                              |
         |                                                                 |
         |                          BWQDSN                                 |
         |                                                                 |
         |                                                                 |
         |                                                                 |
120     78|          BWQBYT             |           BWQBBT                 |
128     80|          BWQSPC            | BWQH    |    BWQLNS                |
136     88|BWQLNS  | BWQP  |            BWQERS             | BWQERR         |
144     90|       BWQERR   (CONT)              |       BWQFRM              |
152     98|    BWQFRM   (CONT)    | BWQTPT  |                              |
```

```
DEC    HEX
                                                    |
                                             |      |
        =  |                                  BWQBLK                              |  =
           |                                                                      |
           |                                                                      |
           |                                                                      |

ORG  BWQPAR

 85    55                                           |
           |                                         |
           |                                         |
           |                              BWQNME
           |
           |
120    78|                   BWQBTE            |           BWQBBE
128    80|                   BWQSEL            |           BWQRSE
136    88|BWQRSE |                       BWQBIN              |BWQFOR
144    90|              BWQFOR  (CONT)             |
        = |                            BWQBLN                     |  =
           |                                                          |
           |                                                          |

ORG  BWQPAR

 85    55                                           |
           |                                         |
           |                                         |
           |                              BWQNAM
           |
           |
           |
120    78|
           |                              BWQNNM
           |
           |
           |
152    98|                         |               BWQVID
160    A0|BWQVID |    BWQFAC     |            BWQBYE              |BWQBBY
168    A8|      BWQBBY  (CONT)   |            BWQSPA              |BWQHH
176    B0|              BWQLNE        |BWQPP  |       BWQASE
184    B8| BWQASE   (CONT) |
           |_____|          BWQBNK
           |
```

DEC     HEX

ORG     BWQPAR

```
 85    55                                                        |          BWQVOL           |
 88    58|          BWQVOL   (CONT)          |        BWQTRK         |       |
         |                                                                  |
         |                              BWQTDS                              |
         |                                                                  |
128    80|          |                   BWQRID                              |
136    88|BWQRID    |                                                       |
         |          |                   BWQIDS                              |
         |                                                                  |
168    A8|                              |            BWQLN                  |
176    B0|              BWQRRR           |                                  |
         |                         BWQBLA                                   |
         |                                                                  |
```
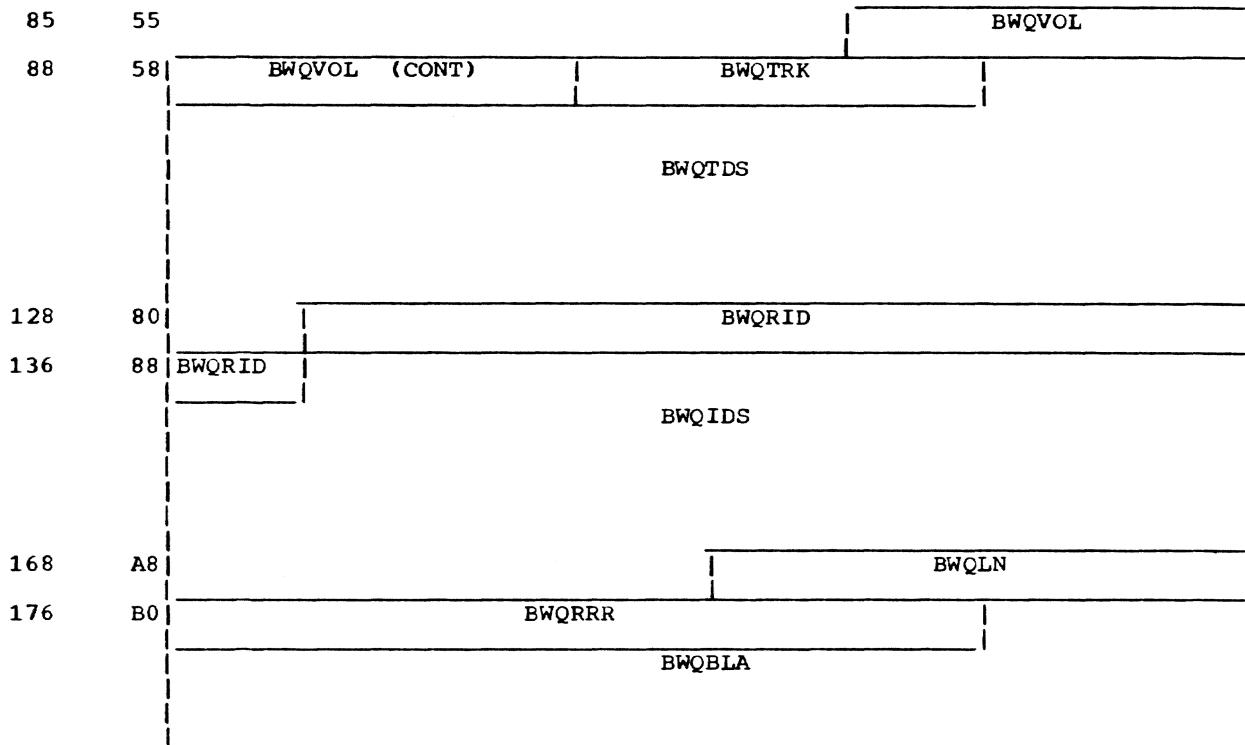
## Fields in CHABWQ -- by displacement

| DEC  | HEX  | FIELD  | DEC  | HEX  | FIELD  | DEC  | HEX  | FIELD  |
|------|------|--------|------|------|--------|------|------|--------|
| 0000 | 0000 | BWQTID | 0085 | 0055 | BWQDSN | 0143 | 008F | BWQFOR |
| 0002 | 0002 | BWQAC  | 0085 | 0055 | BWQPAR | 0143 | 008F | BWQERR |
| 0003 | 0003 | BWQST  | 0091 | 005B | BWQTRK | 0149 | 0095 | BWQBLN |
| 0004 | 0004 | BWQSYS | 0094 | 005E | BWQTDS | 0149 | 0095 | BWQFRM |
| 0040 | 0028 | BWQUID | 0120 | 0078 | BWQNNM | 0155 | 009B | BWQVID |
| 0048 | 0030 | BWQBSN | 0120 | 0078 | BWQBTE | 0155 | 009B | BWQTPT |
| 0052 | 0034 | BWQPWD | 0120 | 0078 | BWQBYT | 0156 | 009C | BWQBLK |
| 0060 | 003C | BWQCHG | 0124 | 007C | BWQBBE | 0161 | 00A1 | BWQFAC |
| 0068 | 0044 | BWQSTA | 0124 | 007C | BWQBBT | 0163 | 00A3 | BWQBYE |
| 0076 | 004C | BWQDEA | 0128 | 0080 | BWQSEL | 0167 | 00A7 | BWQBBY |
| 0076 | 004C | BWQDV1 | 0128 | 0080 | BWQSPC | 0171 | 00AB | BWQSPA |
| 0077 | 004D | BWQDEB | 0129 | 0081 | BWQRID | 0172 | 00AC | BWQLN  |
| 0078 | 004E | BWQDEC | 0132 | 0084 | BWQRSE | 0175 | 00AF | BWQHH  |
| 0079 | 004F | BWQDED | 0132 | 0084 | BWQH   | 0176 | 00B0 | BWQRRR |
| 0080 | 0050 | BWQDV2 | 0133 | 0085 | BWQLNS | 0176 | 00B0 | BWQLNE |
| 0084 | 0054 | BWQPFL | 0137 | 0089 | BWQIDS | 0180 | 00B4 | BWQPP  |
| 0085 | 0055 | BWQVOL | 0137 | 0089 | BWQBIN | 0181 | 00B5 | BWQASE |
| 0085 | 0055 | BWQNAM | 0137 | 0089 | BWQP   | 0182 | 00B6 | BWQBLA |
| 0085 | 0055 | BWQNME | 0138 | 008A | BWQERS | 0186 | 00BA | BWQBNK |

## Alphabetical list of fields in CHABWQ

| FIELD  | DEC  | HEX  | FIELD  | DEC  | HEX  | FIELD  | DEC  | HEX  |
|--------|------|------|--------|------|------|--------|------|------|
| BWQAC  | 0002 | 0002 | BWQBNK | 0186 | 00BA | BWQDED | 0079 | 004F |
| BWQASE | 0181 | 00B5 | BWQBSN | 0048 | 0030 | BWQDSN | 0085 | 0055 |
| BWQBBE | 0124 | 007C | BWQBTE | 0120 | 0078 | BWQDV1 | 0076 | 004C |
| BWQBBT | 0124 | 007C | BWQBYE | 0163 | 00A3 | BWQDV2 | 0080 | 0050 |
| BWQBBY | 0167 | 00A7 | BWQBYT | 0120 | 0078 | BWQERR | 0143 | 008F |
| BWQBIN | 0137 | 0089 | BWQCHG | 0060 | 003C | BWQERS | 0138 | 008A |
| BWQBLA | 0182 | 00B6 | BWQDEA | 0076 | 004C | BWQFAC | 0161 | 00A1 |
| BWQBLK | 0156 | 009C | BWQDEB | 0077 | 004D | BWQFOR | 0143 | 008F |
| BWQBLN | 0149 | 0095 | BWQDEC | 0078 | 004E | BWQFRM | 0149 | 0095 |

| FIELD | DEC | HEX | FIELD | DEC | HEX | FIELD | DEC | HEX |
|-------|-----|-----|-------|-----|-----|-------|-----|-----|
| BWQH | 0132 | 0084 | BWQPAR | 0085 | 0055 | BWQST | 0003 | 0003 |
| BWQHH | 0175 | 00AF | BWQPFL | 0084 | 0054 | BWQSTA | 0068 | 0044 |
| BWQIDS | 0137 | 0089 | BWQPP | 0180 | 00B4 | BWQSYS | 0004 | 0004 |
| BWQLN | 0172 | 00AC | BWQPWD | 0052 | 0034 | BWQTDS | 0094 | 005E |
| BWQLNE | 0176 | 00B0 | BWQRID | 0129 | 0081 | BWQTID | 0000 | 0000 |
| BWQLNS | 0133 | 0085 | BWQRRR | 0176 | 00B0 | BWQTPT | 0155 | 009B |
| BWQNAM | 0085 | 0055 | BWQRSE | 0132 | 0084 | BWQTRK | 0091 | 005B |
| BWQNME | 0085 | 0055 | BWQSEL | 0128 | 0080 | BWQUID | 0040 | 0028 |
| BWQNNM | 0120 | 0078 | BWQSPA | 0171 | 00AB | BWQVID | 0155 | 009B |
| BWQP | 0137 | 0089 | BWQSPC | 0128 | 0080 | BWQVOL | 0085 | 0055 |

## Assembler listing of CHABWQ

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|----------|-------------|--------|------|------|---------|
| | 10 00000 | CHABWQ | DSECT | | BATCH WORK QUEUE |
| 10 00000 | | | DS | 0D | ALIGN TO DOUBLE WORD |
| | | * | | | BOUNDARY |
| 10 00000 | | BWQTID | DS | XL2 | TASK ID (BINARY) |
| 10 00002 | | BWQAC | DS | XL1 | ACTIVITY FLAG (BINARY) |
| | 00000080 | BWQAC1 | EQU | X'80' | EXECUTE TASK |
| | 00000040 | BWQAC2 | EQU | X'40' | LIST TASK |
| | 00000020 | BWQAC3 | EQU | X'20' | BATCH TASK |
| | 00000010 | BWQAC4 | EQU | X'10' | CARD TASK |
| | 00000008 | BWQAC5 | EQU | X'08' | RTAPE TASK |
| | 00000004 | BWQAC6 | EQU | X'04' | TAPE TASK |
| | 00000002 | BWQAC7 | EQU | X'02' | TASK INITIATION |
| | | * | | | REQUEST FROM BATCH |
| 10 00003 | | BWQST | DS | XL1 | STATUS FLAG (BINARY) |
| | 00000080 | BWQST1 | EQU | X'80' | IN-SERVICE FLAG |
| | 00000040 | BWQST2 | EQU | X'40' | CANCELLED FLAG |
| | 00000020 | BWQST3 | EQU | X'20' | CANCELLED DUE TO SHUT- |
| | | * | | | DOWN |
| | 00000010 | BWQST4 | EQU | X'10' | ERASE REQUESTED |
| 10 00004 | | BWQSYS | DS | CL35 | SYSIN DATA SET NAME |
| | | * | | | (EBCDIC) |
| 10 00028 | | | DS | 0F | ALIGN TO FULL WORD |
| | | * | | | BOUNDARY |
| 10 00028 | | BWQUID | DS | CL8 | USER ID (EBCDIC) |
| 10 00030 | | BWQBSN | DS | CL4 | BATCH SEQUENCE NUMBER |
| | | * | | | (EBCDIC) (USED AS DATA |
| | | * | | | KEY) |
| 10 00034 | | BWQPWD | DS | CL8 | PASSWORD (EBCDIC) |
| 10 0003C | | BWQCHG | DS | CL8 | CHARGE NUMBER (EBCDIC) |
| 10 00044 | | BWQSTA | DS | CL8 | RJE STATION ID |
| 10 0004C | | BWQDV1 | DS | XL4 | DEVICE CODE FIELD FOR FIRST |
| | | * | | | UNIT RECORD DEVICE OR |
| | | * | | | PRIVATE VOLUME FOR |
| | | * | | | BULKIO TASK (BINARY). |
| | | * | | | (SEE SDADEV IN 2.4.38.) |
| | 10 0004C | | ⌐ORG⌐ | *-4 | SUBFIELD ALIGNMENT |
| 10 0004C | | BWQDEA | DS | XL1 | MODEL CODE |
| | 00000001 | BWQMCA | EQU | X'01' | 1050 TERMINAL SYSTEM |
| | | * | | | MASK-TAM |
| | 00000002 | BWQMCB | EQU | X'02' | 2741 TERMINAL MASK-TAM |
| | 00000003 | BWQMCC | EQU | X'03' | MOD 35 TTY MASK-TAM |
| | 00000004 | BWQMCD | EQU | X'04' | 1052-MOD 7 TERMINAL |
| | | * | | | MASK-TAM |
| | 00000000 | BWQANT | EQU | X'00' | MODEL NOT A TERMINAL |
| 10 0004D | | BWQDEB | DS | XL1 | DEVICE CLASS |
| | 00000001 | BWQDCA | EQU | X'01' | DIAL LINE MASK-TAM |
| | 00000002 | BWQDCB | EQU | X'02' | DEDICATED LINE MASK-TAM |
| | 00000004 | BWQDCD | EQU | X'04' | AUTOMATIC CALL FEATURE-TAM |
| | 00000008 | BWQBUR | EQU | X'08' | DEVICE CLASS UNIT RECORD |
| | 00000020 | BWQBDA | EQU | X'20' | DEVICE CLASS DIRECT ACCESS |
| | 00000080 | BWQBMT | EQU | X'80' | DEVICE CLASS MAGNETIC TAPE |
| 10 0004E | | BWQDEC | DS | XL1 | UNIT TYPE |
| | 00000010 | BWQUT1 | EQU | X'10' | IBM TERMINAL CONTROL TYPE 1 |
| | 00000020 | BWQUT2 | EQU | X'20' | IBM TERMINAL CONTROL TYPE 2 |

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|---|---|---|---|---|---|
| | 00000030 | BWQUT3 | EQU | X'30' | TELEGRAPH CONTROL TYPE 1 |
| | 00000040 | BWQUT4 | EQU | X'40' | TELEGRAPH CONTROL TYPE 2 |
| | 00000080 | BWQUT5 | EQU | X'80' | WORLD TRADE TERMINAL |
| | | * | | | CONTROL |
| | 00000001 | BWQUTA | EQU | X'01' | 2702 TRANSMISSION |
| | | * | | | CONTROL-TAM |
| | 00000002 | BWQUTB | EQU | X'02' | 2701 ON MULTIPLEXOR |
| | | * | | | CHANNEL-TAM |
| | 00000003 | BWQUTC | EQU | X'03' | MULTIPLEXOR |
| | | * | | | CHANNEL-TAM(1052-7) |
| | 00000004 | BWQUTD | EQU | X'04' | SELECTOR CHANNEL MASK(TAM |
| | | * | | | 1052-7) |
| | 00000005 | BWQUTE | EQU | X'05' | 2701 ON SELECTOR CHANNEL |
| | 00000001 | BWQCRD | EQU | X'01' | 2540 CARD READER |
| | 00000002 | BWQCPN | EQU | X'02' | 2540 CARD PUNCH |
| | 00000008 | BWQCPT | EQU | X'08' | 1403 PRINTER |
| | 00000010 | BWQPPT | EQU | X'10' | 2671 PPT READER |
| | 00000001 | BWQDA11 | EQU | X'01' | 2311 D/A |
| | 00000002 | BWQDA01 | EQU | X'02' | 2301 D/A |
| | 00000003 | BWQDA21 | EQU | X'03' | 2321 D/A |
| | 00000008 | BWQDA14 | EQU | X'08' | 2314 D/A |
| | 00000001 | BWQTAPE | EQU | X'01' | 2400 SERIES |
| 10 0004F | | BWQDED | DS | XL1 | OPTIONAL FEATURES |
| | 00000010 | BWQOFA | EQU | X'10' | IBM LINE ADAPTER TYPE 1-TAM |
| | 00000020 | BWQOFB | EQU | X'20' | IBM LINE ADAPTER TYPE 2-TAM |
| | 00000030 | BWQOFC | EQU | X'30' | DATA SET LINE ADAPTER-TAM |
| | 00000040 | BWQOFD | EQU | X'40' | AUTOMATIC CALL ADAPTER-TAM |
| | 00000050 | BWQOFE | EQU | X'50' | TELEGRAPH LINE ADAPTER-TAM |
| | 00000000 | BWQOF1 | EQU | X'00' | SAD ZERO MASK-TAM |
| | 00000001 | BWQOF2 | EQU | X'01' | SAD ONE MASK-TAM |
| | 00000002 | BWQOF3 | EQU | X'02' | SAD TWO MASK-TAM |
| | 00000003 | BWQOF4 | EQU | X'03' | SAD THREE MASK-TAM |
| | 00000040 | BWQPFR | EQU | X'40' | PUNCH FEED READ |
| | 00000080 | BWQOCI | EQU | X'80' | CARD IMAGE |
| | 00000080 | BWQDUC | EQU | X'80' | UNIVERSAL CHAR SET(PTR) |
| | 00000080 | BWQSCN | EQU | X'80' | SCAN-D/A |
| | 00000040 | BWQTRV | EQU | X'40' | TRACK OVERFLOW-D/A |
| | 000000B0 | BWQSTO | EQU | X'B0' | SCAN AND TRACK OVERFLOW-D/A |
| | 000000E0 | BWQTPW | EQU | X'E0' | 7 TRACK WITH DATA |
| | | * | | | CONVERSION |
| | 000000A0 | BWQTPN | EQU | X'A0' | 7 TRACK WITHOUT DATA |
| | | * | | | CONVERSION |
| | 000000C0 | BWQTR9 | EQU | X'C0' | 9 TRACK TAPE |
| | 00000080 | BWQTP9 | EQU | X'80' | 9 TRACK TAPE |
| 10 00050 | | BWQDV2 | DS | XL4 | DEVICE CODE FIELD FOR |
| | | * | | | SECOND UNIT RECORD DEVICE |
| | | * | | | OR PRIVATE VOLUME FOR |
| | | * | | | BULKIO TASK (BINARY - ZERO |
| | | * | | | IF NOT REQUIRED). |
| | | * | | | (SEE SDADEV IN 2.4.38.) |
| 10 00054 | | BWQPFL | DS | XL1 | FLAG INDICATING WHICH |
| | | * | | | DEVICES |
| | | * | | | ARE USED BY THIS TASK. |
| 10 00055 | | BWQPAR | DS | CL115 | BULKIO PARAMETER LIST |
| | | * | | | M3431 |
| | | * | | THE FOLLOWING ENTRIES ARE INCLUDED ONLY | |
| | | * | | FOR A LIST TASK. | |
| | 10 00055 | | \|ORG\| | BWQPAR | |
| 10 00055 | | BWQDSN | DS | CL35 | DSNAME OF DATA SET TO BE |
| | | * | | | PRINTED (EBCDIC) |
| 10 00078 | | BWQBYT | DS | XL4 | STARTING BYTE NUMBER |
| | | * | | | (BINARY) |
| 10 0007C | | BWQBBT | DS | XL4 | ENDING BYTE NUMBER |
| | | * | | | (BINARY) |
| 10 00080 | | BWQSPC | DS | CL4 | PRINT SPACING PARAMETER |
| | | * | | | (EBCDIC) |
| 10 00084 | | BWQH | DS | CL1 | HEADER PARAMETER |
| | | * | | | (EBCDIC) |

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|----------|-------------|--------|------|------|---------|
| 10 00085 | | BWQLNS | DS | XL4 | NUMBER OF LINES ON A PAGE |
| | | * | | | (BINARY) |
| 10 00089 | | BWQP | DS | CL1 | PAGINATION PARAMETER |
| | | * | | | (EBCDIC) |
| 10 0008A | | BWQERS | DS | CL5 | ERASE PARAMETER (EBCDIC) |
| 10 0008F | | BWQERR | DS | CL6 | ERROR OPTION (EBCDIC) |
| 10 00095 | | BWQFRM | DS | CL6 | PRINTER FORM (EBCDIC) |
| 10 0009B | | BWQTPT | DS | XL1 | TAPE TYPE PRINT OPTION |
| | 00000001 | BWQAAC | EQU | X'01' | ASCII CHARACTOR OPTION |
| | 00000002 | BWQAAD | EQU | X'02' | ASCII DUMP OPTION |
| | 00000004 | BWQAAE | EQU | X'04' | ASCII EDIT OPTION |
| | 00000008 | BWQADE | EQU | X'08' | EBCDIC DUMP OPTION |
| | 00000000 | BWQAEC | EQU | X'00' | DEFAULT-STANDARD TAPE |
| | | * | | | PROCESSING |
| 10 0009C | | BWQBLK | DS | XL44 | RESERVED |
| | | * | | | M3431 |
| | | * | | | THE FOLLOWING ENTRIES ARE INCLUDED ONLY |
| | | * | | | FOR A CARD TASK. |
| | 10 00055 | | |ORG| | BWQPAR |
| 10 00055 | | BWQNME | DS | CL35 | DSNAME OF DATA SET TO BE |
| | | * | | | PUNCHED (EBCDIC) |
| 10 00078 | | BWQBTE | DS | XL4 | STARTING BYTE NUMBER |
| | | * | | | (BINARY) |
| 10 0007C | | BWQBBE | DS | XL4 | ENDING BYTE NUMBER |
| | | * | | | (BINARY) |
| 10 00080 | | BWQSEL | DS | CL4 | POCKET SELECT PARAMETER |
| | | * | | | (EBCDIC) |
| 10 00084 | | BWQRSE | DS | CL5 | ERASE PARAMETER (EBCDIC) |
| 10 00089 | | BWQBIN | DS | CL6 | PUNCH FORMAT (EBCDIC) |
| 10 0008F | | BWQFOR | DS | CL6 | CARD FORM (EBCDIC) |
| 10 00095 | | BWQBLN | DS | XL51 | RESERVED |
| | | * | | | M3431 |
| | | * | | | THE FOLLOWING ENTRIES ARE INCLUDED ONLY |
| | | * | | | FOR TAPE TASK. |
| | 10 00055 | | |ORG| | BWQPAR |
| 10 00055 | | BWQNAM | DS | CL35 | DSNAME OF DATA SET TO BE |
| | | * | | | WRITTEN ONTO TAPE (EBCDIC) |
| 10 00078 | | BWQNNM | DS | CL35 | TAPE DATA SET NAME |
| | | * | | | (EBCDIC) |
| 10 0009B | | BWQVID | DS | CL6 | TAPE VOLUME ID (EBCDIC) |
| 10 000A1 | | BWQFAC | DS | XL2 | BLOCKING FACTOR (BINARY) |
| 10 000A3 | | BWQBYE | DS | XL4 | STARTING BYTE NUMBER |
| | | * | | | (BINARY) |
| 10 000A7 | | BWQBBY | DS | XL4 | ENDING BYTE NUMBER |
| | | * | | | (BINARY) |
| 10 000AB | | BWQSPA | DS | CL4 | SPACING PARAMETER |
| | | * | | | (EBCDIC) |
| 10 000AF | | BWQHH | DS | CL1 | HEADER OPTION (EBCDIC) |
| 10 000B0 | | BWQLNE | DS | XL4 | NUMBER OF LINES ON A PAGE |
| | | * | | | (BINARY) |
| 10 000B4 | | BWQPP | DS | CL1 | PAGINATION OPTION (EBCDIC) |
| 10 000B5 | | BWQASE | DS | CL5 | ERASE PARAMETER (EBCDIC) |
| 10 000BA | | BWQBNK | DS | XL14 | RESERVED |
| | | * | | | M3431 |
| | | * | | | THE FOLLOWING ENTRIES ARE INCLUDED ONLY |
| | | * | | | FOR A RTAPE TASK. |
| | 10 00055 | | |ORG| | BWQPAR |
| 10 00055 | | BWQVOL | DS | CL6 | TAPE VOLUME ID (EBCDIC) |
| 10 0005B | | BWQTRK | DS | CL3 | TRACK PARAMETER |

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|----------|-------------|--------|------|------|---------|
| | | * | | | (EBCDIC) |
| 10 0005E | | BWQTDS | DS | CL35 | TAPE DATA SET NAME |
| | | * | | | (EBCDIC) |
| 10 00081 | | BWQRID | DS | CL8 | USER I.D. OF OWNER OF |
| 10 00089 | | BWQIDS | DS | CL35 | NEW DATA SET NAME |
| | | * | | | TAPE AND NEW DATA SET |
| | | * | | | (EBCDIC) |
| 10 000AC | | BWQLN | DS | CL4 | LINE NUMBER OPTION |
| | | * | | | (EBCDIC) |
| 10 000B0 | | BWQRRR | DS | CL6 | ERROR OPTION (EBCDIC) |
| 10 000B6 | | BWQBLA | DS | XL18 | RESERVED |
| | | * | | | M3431 |

## Core Block Table (CHACBT) and Core Block Table Header (CHACBH)

The Core Block Table (CBT) contains information required for the allocation or release of core storage blocks. The CBT contains one entry for each core storage block (4096 bytes) in the system. Each entry describes the current status of the core storage block it represents (all entries are contiguous).

The Core Block Table Header (CBH) contains the parameters for addressing the Core Block Table. The Core Block Table Header entries immediately precede the CBT entries in storage.

The CBT and CBH are resident and are maintained by the User Core Allocation Queue Processor and User Core Release.

The CBT occupies 20 bytes of core storage per entry while the CBH consists of 25 bytes of core storage, both aligned on word boundaries.

### CHACBT Storage map

```
DEC   HEX  _____
  0    0 |                CBTFLK              |              CBTTPT              |
         | _____|_____|
  8    8 |                CBTVMA              |CBTFLG  |CBTFLG2 |CBTFLG3 |CBTFLG4 |
         | _____|_____|_____|_____|_____|
 16   10 |                CBTRLK              |
         | _____|
```

### Fields in CHACBT -- by displacement

| DEC | HEX | FIELD | | DEC | HEX | FIELD | | DEC | HEX | FIELD | |
|------|------|--------|------|------|------|--------|------|------|------|--------|------|
| 0000 | 0000 | CBTFLK | | 0012 | 000C | CBTPA | (EQU) | 0013 | 000D | CBTRF | (EQU) |
| 0004 | 0004 | CBTTPT | | 0012 | 000C | CBTOP | (EQU) | 0013 | 000D | CBTSF | (EQU) |
| 0008 | 0008 | CBTVMA | | 0012 | 000C | CBTRS | (EQU) | 0013 | 000D | CBTFLG2 | |
| 0012 | 000C | CBTXP3 | (EQU) | 0012 | 000C | CBTUS | (EQU) | 0014 | 000E | CBTFLG3 | |
| 0012 | 000C | CBTXP2 | (EQU) | 0012 | 000C | CBTAV | (EQU) | 0015 | 000F | CBTFLG4 | |
| 0012 | 000C | CBTXP1 | (EQU) | 0012 | 000C | CBTFLG | | 0016 | 0010 | CBTRLK | |
| 0012 | 000C | CBTFLG1 | (EQU) | 0013 | 000D | CBTPST | (EQU) | 0020 | 0014 | CBTEND | |
| 0012 | 000C | CBTRE | (EQU) | 0013 | 000D | CBTAF | (EQU) | | | | |

### Alphabetical list of fields in CHACBT

| FIELD | DEC | HEX | | FIELD | DEC | HEX | | FIELD | DEC | HEX | |
|--------|------|------|------|--------|------|------|------|--------|------|------|------|
| CBTAF | 0013 | 000D | (EQU) | CBTFLK | 0000 | 0000 | | CBTSF | 0013 | 000D | (EQU) |
| CBTAV | 0012 | 000C | (EQU) | CBTOP | 0012 | 000C | (EQU) | CBTTPT | 0004 | 0004 | |
| CBTEND | 0020 | 0014 | | CBTPA | 0012 | 000C | (EQU) | CBTUS | 0012 | 000C | (EQU) |
| CBTFLG | 0012 | 000C | | CBTPST | 0013 | 000D | (EQU) | CBTVMA | 0008 | 0008 | |
| CBTFLG1 | 0012 | 000C | (EQU) | CBTRE | 0012 | 000C | (EQU) | CBTXP1 | 0012 | 000C | (EQU) |
| CBTFLG2 | 0013 | 000D | | CBTRF | 0013 | 000D | (EQU) | CBTXP2 | 0012 | 000C | (EQU) |
| CBTFLG3 | 0014 | 000E | | CBTRLK | 0016 | 0010 | | CBTXP3 | 0012 | 000C | (EQU) |
| CBTFLG4 | 0015 | 000F | | CBTRS | 0012 | 000C | (EQU) | | | | |

### Assembler listing of CHACBT

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|----------|-------------|--------|------|------|---------|
| | 12 00000 | CHACBT | DSECT | | |
| 12 00000 | | | DS | 0F | |
| 12 00000 | | CBTFLK | DS | F | ENTRY - FORWARD LINK |
| 12 00004 | | CBTTPT | DS | A | CONTAINS TSI POINTER IF |
| | | * | | | PAGE IS PRIVATE        I6698 |
| | | * | | | CONTAINS SPT # AND REL PAGE # |
| | | * | | | IF SHARED PAGE  I6698 |
| 12 00008 | | CBTVMA | DS | F | VIRTUAL MEMORY ADDRESS |
| 12 0000C | | CBTFLG | DS | XL1 | FLAGS |
| | 12 0000C | CBTAV | EQU | CBTFLG | AVAILABILITY FLAG |
| | 00000080 | CBTAVM | EQU | X'80' | AVAILABILITY MASK 1=NOT |
| | | * | | | AVAILABLE |
| | 12 0000C | CBTUS | EQU | CBTFLG | USER/SUPERVISOR OWNED FLAG |
| | 00000040 | CBTUSM | EQU | X'40' | USER/SUPERVISOR OWNED MASK |
| | 12 0000C | CBTRS | EQU | CBTFLG | ASSIGNED TO RESIDENT |
| | | * | | | SUPERVISOR FLAG |
| | 00000020 | CBTRSM | EQU | X'20' | ASSIGNED TO RESIDENT |
| | | * | | | SUPERVISOR MASK 1=NOT ASSIGNE |

| LOCATION | INSTRUCTION | SOURCE | INST | OPER D | COMMENT |
|----------|-------------|--------|------|--------|---------|
|          | 12 0000C    | CBTOP  | EQU  | CBTFLG | OPERATIONAL FLAG |
|          | 00000010    | CBTOPM | EQU  | X'10'  | OPERATIONAL MASK |
|          | 12 0000C    | CBTPA  | EQU  | CBTFLG | PARTITIONED FLAG |
|          | 00000008    | CBTPAM | EQU  | X'08'  | PARTITIONED MASK |
|          | 12 0000C    | CBTRE  | EQU  | CBTFLG | RESERVED, DON'T REASSIGN FLAG |
|          | 00000004    | CBTREM | EQU  | X'04'  | RESERVED, DON'T REASSIGN MASK |
|          | 12 0000C    | CBTFLG1| EQU  | CBTFLG |        |
|          | 12 0000C    | CBTXP1 | EQU  | CBTFLG1| PAGE IS A PAGE TABLE PAGE |
|          | 00000001    | CBTXP1M| EQU  | X'01'  | .MASK (BIT 6 OFF, BIT 7 ON) |
|          | 12 0000C    | CBTXP2 | EQU  | CBTFLG1| PAGE IS AN AUX SEGMENT TABLE PAGE |
|          | 00000002    | CBTXP2M| EQU  | X'02'  | .MASK (BIT 6 ON, BIT 7 OFF) |
|          | 12 0000C    | CBTXP3 | EQU  | CBTFLG1| XTSI OR SEG. TABLE PAGE |
|          | 00000003    | CBTXP3M| EQU  | X'03'  |        |
| 12 0000D |             | CBTFLG2| DS   | XL1    | MT/T FLAG BYTE |
|          | 12 0000D    | CBTSF  | EQU  | CBTFLG2| STEAL (IN TRANSIT OUT) FLAG |
|          | 00000080    | CBTSFM | EQU  | X'80'  | STEAL (IN TRANSIT OUT) MASK |
|          | 12 0000D    | CBTRF  | EQU  | CBTFLG2| RECLAIMING FLAG |
|          | 00000040    | CBTRFM | EQU  | X'40'  | RECLAIMING MASK |
|          | 12 0000D    | CBTAF  | EQU  | CBTFLG2| ACTIVATE   FLAG |
|          | 00000020    | CBTAFM | EQU  | X'20'  | ACTIVATE   MASK |
|          | 12 0000D    | CBTPST | EQU  | CBTFLG2| PAGE STEALING NOT DONE FLAG M3655 |
|          | 00000010    | CBTPSTM| EQU  | X'10'  | PAGE STEALING NOT DONE MASK M3655 |
| 12 0000E |             | CBTFLG3| DS   | XL1    | UNUSED |
| 12 0000F |             | CBTFLG4| DS   | XL1    | UNUSED |
| 12 00010 |             | CBTRLK | DS   | F      | REVERSE LINK |
| 12 00014 |             | CBTEND | DS   | 0X     | END OF CORE BLOCK TABLE I5943 |
|          | 00000014    | CBTESZ | EQU  | CBTEND-CBTFLK | CORE BLOCK TABLE SIZE I5943 |

CHACBH Storage map

```
DEC   HEX
  0     0 |_____CBHUNA_____|_____CBHPNX_____|
          |                      |                      |
  8     8 |_____CBHPXP_____|_____CBHAVC_____|
          |                      |                      |
 16    10 |CBHLOCK |RESERVED|  CBHICBA   |____CBHBSE____|
          |        |        |            |              |
 24    18 |_____CBHSZE_____|_____CBHLOCG_____|
          |_____|_____|
```

Fields in CHACBH -- by displacement

| DEC | HEX | FIELD | DEC | HEX | FIELD | DEC | HEX | FIELD |
|-----|-----|-------|-----|-----|-------|-----|-----|-------|
| 0000 | 0000 | CBHUNA | 0016 | 0010 | CBHLOCK | 0028 | 001C | CBHLOCG |
| 0004 | 0004 | CBHPNX | 0018 | 0012 | CBHICBA | 0032 | 0020 | CBHBDY |
| 0008 | 0008 | CBHPXP | 0020 | 0014 | CBHBSE | 0032 | 0020 | CBHBEG |
| 0012 | 000C | CBHAVC | 0024 | 0018 | CBHSZE | | | |

Alphabetical list of fields in CHACBH

| FIELD | DEC | HEX | FIELD | DEC | HEX | FIELD | DEC | HEX |
|-------|-----|-----|-------|-----|-----|-------|-----|-----|
| CBHAVC | 0012 | 000C | CBHICBA | 0018 | 0012 | CBHPXP | 0008 | 0008 |
| CBHBDY | 0032 | 0020 | CBHLOCG | 0028 | 001C | CBHSZE | 0024 | 0018 |
| CBHBEG | 0032 | 0020 | CBHLOCK | 0016 | 0010 | CBHUNA | 0000 | 0000 |
| CBHBSE | 0020 | 0014 | CBHPNX | 0004 | 0004 | | | |

Assembler listing of CHACBH

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|----------|-------------|--------|------|------|---------|
| | 11 00000 | CHACBH | DSECT | | CORE BLOCK TABLE HEADER |
| 11 00000 | | CBHUNA * | DS | F | POINTER TO BEGINNING OF AVAILABLE LIST |
| 11 00004 | | CBHPNX * | DS | F | POINTER TO END OF AVAILABLE LIST |
| 11 00008 | | CBHPXP * | DS | F | SHARED PAGE CHAIN ANCHOR - N476 |
| 11 0000C | | CBHAVC | DS | F | COUNT OF AVAILABLE BLOCKS |
| 11 00010 | | CBHLOCK | DS | XL1 | LOCK BYTE FOR CBT |
| 11 00012 | | CBHICBA * | DS | H | NUMBER OF CORE BLOCKS AVAILABLE |
| 11 00014 | | CBHBSE * | DS | F | BASE ADDRESS FOR START OF MEMORY |
| 11 00018 | | CBHSZE * | DS | F | NUMBER OF CORE BLOCKS IN MEMORY |
| 11 0001C | | CBHLOCG * | DS | F | ROUTINE TO LAST ACCESS CBHLOCK |
| 11 00020 | | CBHBEG | DS | 0F | START OF CORE BLOCK TABLE |
| 11 00020 | | CBHBDY * | DS | 0X | END OF CORE BLOCK TABLE HEADER I5943 |
| | 00000020 | CBHDSZ * | EQU | CBHBDY-CBHUNA | CORE BLOCK TABLE HEADER SIZE I5943 |

## Configuration Control Block (CHACCB)

The Configuration Control Block (CCB) is a distinct data set residing on the IPL volume under the name TSS*****.SYSCCB. Created at SYSGEN time, it contains configuration-dependent information necessary for STARTUP to perform its functions. Within the CCB are the following subtables: CCB header, CPU Status Table, Drum Path Table, 2702 Path Table, Channel Controller Table, Correspondence List, and Printer Path Table.

### CHACCB Storage map

| DEC | HEX | | | | | | | |
|-----|-----|---|---|---|---|---|---|---|
| 0 | 0 | CCBNDM | | CCBDPP | | CCBTPP | | CCBNCC |
| 8 | 8 | CCBCPT | | CCBPCL | | CCBNPR | | CCBPPT |
| 16 | 10 | CCBLSD | | CCBLDA | | CCBCON | | CCBMTT |
| 24 | 18 | CCBBAT | | CCBBAK | | CCBTER | | CCBBUF |
| 32 | 20 | CCBVMB | UNNAMED | | | | | |
| = | | | | CCBCST | | | | = |
| 88 | 58 | | | | | CCBNPD | | CCBPTD |
| 96 | 60 | CCBADD | | UNNAMED | | CCBDTC | CCBDCL | CCBUNT | CCBOPF |
| 104 | 68 | CCBNCH | | CCBCAD | | CCBNPT | | CCBPCM |
| 112 | 70 | CCBNPP | | CCBPTP | | | | |

### Fields in CHACCB -- by displacement

| DEC | HEX | FIELD | | DEC | HEX | FIELD | | DEC | HEX | FIELD | |
|-----|-----|-------|---|-----|-----|-------|---|-----|-----|-------|---|
| 0000 | 0000 | CCBNDM | | 0094 | 005E | CCBPTD | | 0102 | 0066 | CCBUNT | |
| 0000 | 0000 | CCBHDR | | 0096 | 0060 | CCBADD | | 0103 | 0067 | CCBOT | (EQU) |
| 0002 | 0002 | CCBDPP | | 0096 | 0060 | CCBTPT | | 0103 | 0067 | CCBOS | (EQU) |
| 0004 | 0004 | CCBTPP | | 0100 | 0064 | CCBDW | (EQU) | 0103 | 0067 | CCBOR | (EQU) |
| 0006 | 0006 | CCBNCC | | 0100 | 0064 | CCBDV | (EQU) | 0103 | 0067 | CCBOQ | (EQU) |
| 0008 | 0008 | CCBCPT | | 0100 | 0064 | CCBDU | (EQU) | 0103 | 0067 | CCBOJ | (EQU) |
| 0010 | 000A | CCBPCL | | 0100 | 0064 | CCBDT | (EQU) | 0103 | 0067 | CCBOI | (EQU) |
| 0012 | 000C | CCBNPR | | 0100 | 0064 | CCBDTC | | 0103 | 0067 | CCBOH | (EQU) |
| 0014 | 000E | CCBPPT | | 0101 | 0065 | CCBCN | (EQU) | 0103 | 0067 | CCBOG | (EQU) |
| 0016 | 0010 | CCBLSD | | 0101 | 0065 | CCBCM | (EQU) | 0103 | 0067 | CCBOF | (EQU) |
| 0018 | 0012 | CCBLDA | | 0101 | 0065 | CCBCL | (EQU) | 0103 | 0067 | CCBOPF | |
| 0020 | 0014 | CCBCON | | 0101 | 0065 | CCBDCL | | 0104 | 0068 | CCBNCH | |
| 0022 | 0016 | CCBMTT | | 0102 | 0066 | CCBUZ | (EQU) | 0104 | 0068 | CCBCCT | |
| 0024 | 0018 | CCBBAT | | 0102 | 0066 | CCBUY | (EQU) | 0106 | 006A | CCBCAD | |
| 0026 | 001A | CCBBAK | | 0102 | 0066 | CCBUX | (EQU) | 0108 | 006C | CCBNPT | |
| 0028 | 001C | CCBTER | | 0102 | 0066 | CCBUW | (EQU) | 0108 | 006C | CCBCLT | |
| 0030 | 001E | CCBBUF | | 0102 | 0066 | CCBUE | (EQU) | 0110 | 006E | CCBPCM | |
| 0032 | 0020 | CCBVMB | | 0102 | 0066 | CCBUD | (EQU) | 0112 | 0070 | CCBNPP | |
| 0036 | 0024 | CCBCST | | 0102 | 0066 | CCBUC | (EQU) | 0112 | 0070 | CCBPRT | |
| 0092 | 005C | CCBNPD | | 0102 | 0066 | CCBUB | (EQU) | 0114 | 0072 | CCBPTP | |
| 0092 | 005C | CCBDPT | | 0102 | 0066 | CCBUA | (EQU) | | | | |

## Alphabetical list of fields in CHACCB

| FIELD | DEC | HEX | | FIELD | DEC | HEX | | FIELD | DEC | HEX | |
|-------|-----|-----|---|-------|-----|-----|---|-------|-----|-----|---|
| CCBADD | 0096 | 0060 | | CCBHDR | 0000 | 0000 | | CCBPCL | 0010 | 000A | |
| CCBBAK | 0026 | 001A | | CCBLDA | 0018 | 0012 | | CCBPCM | 0110 | 006E | |
| CCBBAT | 0024 | 0018 | | CCBLSD | 0016 | 0010 | | CCBPPT | 0014 | 000E | |
| CCBBUF | 0030 | 001E | | CCBMTT | 0022 | 0016 | | CCBPRT | 0112 | 0070 | |
| CCBCAD | 0106 | 006A | | CCBNCC | 0006 | 0006 | | CCBPTD | 0094 | 005E | |
| CCBCCT | 0104 | 0068 | | CCBNCH | 0104 | 0068 | | CCBPTP | 0114 | 0072 | |
| CCBCL | 0101 | 0065 | (EQU) | CCBNDM | 0000 | 0000 | | CCBTER | 0028 | 001C | |
| CCBCLT | 0108 | 006C | | CCBNPD | 0092 | 005C | | CCBTPP | 0004 | 0004 | |
| CCBCM | 0101 | 0065 | (EQU) | CCBNPP | 0112 | 0070 | | CCBTPT | 0096 | 0060 | |
| CCBCN | 0101 | 0065 | (EQU) | CCBNPR | 0012 | 000C | | CCBUA | 0102 | 0066 | (EQU) |
| CCBCON | 0020 | 0014 | | CCBNPT | 0108 | 006C | | CCBUB | 0102 | 0066 | (EQU) |
| CCBCPT | 0008 | 0008 | | CCBOF | 0103 | 0067 | (EQU) | CCBUC | 0102 | 0066 | (EQU) |
| CCBCST | 0036 | 0024 | | CCBOG | 0103 | 0067 | (EQU) | CCBUD | 0102 | 0066 | (EQU) |
| CCBDCL | 0101 | 0065 | | CCBOH | 0103 | 0067 | (EQU) | CCBUE | 0102 | 0066 | (EQU) |
| CCBDPP | 0002 | 0002 | | CCBOI | 0103 | 0067 | (EQU) | CCBUNT | 0102 | 0066 | |
| CCBDPT | 0092 | 005C | | CCBOJ | 0103 | 0067 | (EQU) | CCBUW | 0102 | 0066 | (EQU) |
| CCBDT | 0100 | 0064 | (EQU) | CCBOPF | 0103 | 0067 | | CCBUX | 0102 | 0066 | (EQU) |
| CCBDTC | 0100 | 0064 | | CCBOQ | 0103 | 0067 | (EQU) | CCBUY | 0102 | 0066 | (EQU) |
| CCBDU | 0100 | 0064 | (EQU) | CCBOR | 0103 | 0067 | (EQU) | CCBUZ | 0102 | 0066 | (EQU) |
| CCBDV | 0100 | 0064 | (EQU) | CCBOS | 0103 | 0067 | (EQU) | CCBVMB | 0032 | 0020 | |
| CCBDW | 0100 | 0064 | (EQU) | CCBOT | 0103 | 0067 | (EQU) | | | | |

## Assembler listing of CHACCB

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|----------|-------------|--------|------|------|---------|
| | 13 00000 | CHACCB | DSECT | | ***CONFIGURATION CONTROL BLOCK*** |
| | | * | | | THIS DSECT REPRESENTS THE DATA SET |
| | | * | | | TSS*****.SYSCCB, |
| | | * | | | WHICH RESIDES ON THE IPL VOLUME.  THIS |
| | | * | | | TABLE IS USED TO |
| | | * | | | COMMUNICATE CONFIGURATION INFORMATION TO |
| | | * | | | THE STARTUP PROGRAM. |
| | | * CONFIGURATION CONTROL BLOCK HEADER | | | |
| 13 00000 | | CCBHDR | DS | 0F | CCB HEADER |
| | | * | | | N349.10 |
| 13 00000 | | CCBNDM | DS | H | NUMBER OF DRUMS AT |
| | | * | | | INSTALLATION |
| 13 00002 | | CCBDPP | DS | H | RELATIVE POINTER TO DRUM |
| | | * | | | PATH TABLE |
| 13 00004 | | CCBTPP | DS | H | RELATIVE POINTER TO |
| | | * | | | TRANSMISSION |
| | | * | | | CONTROL PATH TABLE |
| 13 00006 | | CCBNCC | DS | H | NUMBER OF CHANNEL |
| | | * | | | CONTROLLERS AT INSTALLATION |
| 13 00008 | | CCBCPT | DS | H | RELATIVE POINTER TO CHANNEL |
| | | * | | | CONTROLLER TABLE |
| 13 0000A | | CCBPCL | DS | H | RELATIVE POINTER TO |
| | | * | | | CORRESPONDENCE LIST |
| 13 0000C | | CCBNPR | DS | H | NUMBER OF PRINTERS AT |
| | | * | | | INSTALLATION |
| 13 0000E | | CCBPPT | DS | H | RELATIVE POINTER TO PRINTER |
| | | * | | | PATH TABLE |
| 13 00010 | | CCBLSD | DS | H | LENGTH OF SHARED DATA SET |
| | | * | | | TABLE |
| 13 00012 | | CCBLDA | DS | H | LOW DRUM AVAILABILITY |
| | | * | | | CONSTANT |
| 13 00014 | | CCBCON | DS | H | MAX NUMBER OF CONV. TASKS |
| | | * | | | N |
| | | | | 386** | |
| 13 00016 | | CCBMTT | DS | H | MAX NUMBER OF MTT ADMIN. |
| | | * | | | TASK          N |
| | | | | 386** | |
| 13 00018 | | CCBBAT | DS | H | MAX NUMBER OF BATCH TASK |
| | | * | | | N |
| | | | | 386** | |

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|---|---|---|---|---|---|
| 13 0001A | | CCBBAK * | DS | H 386** | MAX NUMBER OF BACKGROUND TASK                    N |
| 13 0001C | | CCBTER * | DS | H | MAXIMUM NUMBER OF TERMINALS N349.10 |
| 13 0001E | | CCBBUF * | DS | H | MAXIMUM INPUT BUFFER SIZE N349.10 |
| 13 00020 | | CCBVMB * | DS | X | VARIABLE VMA REQUEST INCREMENT I5257 |
| 13 00021 | | * | DS | XL3 | RESERVED I5257 |
| | 00000024 | CCBHSZ | EQU | *-CCBHDR | LENGTH OF CCB HEADER |
| | | * CPU STATUS TABLE IS A SEPARATE DSECT. | | | |
| 13 00024 | | CCBCST | DS | 14F | SPACE FOR CPU STATUS TABLE. |
| | | * DRUM PATH TABLE **** | | | ONE SET OF ENTRIES FOR |
| | | * EACH DRUM | | | |
| 13 0005C | | CCBDPT | DS | 0H | |
| 13 0005C | | CCBNPD * | DS | H | NUMBER OF PATHS TO THIS DRUM |
| 13 0005E | | CCBPTD * | DS | H | PATH TO DRUM ****   ONE ENTRY FOR EACH PATH |
| | | * TRANSMISSION CONTROL UNIT PATH TABLE | | | |
| | | * | | | **** ONE SET OF ENTRIES FOR EACH |
| | | * | | | PATH TO A LINE |
| | | * | | | **** THE TABLE ENDS WITH A FULL WORD |
| | | * | | | OF ZEROS |
| 13 00060 | | CCBTPT | DS | 0F | |
| 13 00060 | | CCBADD * | DS | H | PATH TO TRANSMISSION CONTROL LINE |
| 13 00062 | | | DS | H | NOT USED |
| 13 00064 | | CCBDTC | DS | XL1 | DEVICE TYPE CODE |
| | 13 00064 | CCBDT | EQU | CCBDTC | 1050 TERMINAL SYSTEM FLAG |
| | 00000001 | CCBDTM | EQU | X'01' | 1050 TERMINAL SYSTEM MASK |
| | 13 00064 | CCBDU | EQU | CCBDTC | 2741 TERMINAL FLAG |
| | 00000002 | CCBDUM | EQU | X'02' | 2741 TERMINAL MASK |
| | 13 00064 | CCBDV | EQU | CCBDTC | TTY 35 TERMINAL FLAG |
| | 00000003 | CCBDVM | EQU | X'03' | TTY 35 TERMINAL MASK |
| | 13 00064 | CCBDW | EQU | CCBDTC | 1052-7 TERMINAL FLAG |
| | 00000004 | CCBDWM | EQU | X'04' | 1052-7 TERMINAL MASK |
| 13 00065 | | CCBDCL | DS | XL1 | DEVICE CLASS |
| | 13 00065 | CCBCL | EQU | CCBDCL | DIAL LINE FLAG |
| | 00000001 | CCBCLM | EQU | X'01' | DIAL LINE MASK |
| | 13 00065 | CCBCM | EQU | CCBDCL | DEDICATED LINE FLAG |
| | 00000002 | CCBCMM | EQU | X'02' | DEDICATED LINE MASK |
| | 13 00065 | CCBCN | EQU | CCBDCL | AUTOMATIC CALL FEATURE FLAG |
| | 00000004 | CCBCNM | EQU | X'04' | AUTOMATIC CALL FEATURE MASK |
| 13 00066 | | CCBUNT | DS | XL1 | UNIT TYPE |
| | 13 00066 | CCBUA * | EQU | CCBUNT | IBM TERMINAL CONTROL TYPE 1 FLAG |
| | 00000010 | CCBUAM * | EQU | X'10' | IBM TERMINAL CONTROL TYPE 1 MASK |
| | 13 00066 | CCBUB * | EQU | CCBUNT | IBM TERMINAL CONTROL TYPE 2 FLAG |
| | 00000020 | CCBUBM * | EQU | X'20' | IBM TERMINAL CONTROL TYPE 2 FLAG |
| | 13 00066 | CCBUC * | EQU | CCBUNT | TELEGRAPH CONTROL TYPE 1 FLAG |
| | 00000030 | CCBUCM * | EQU | X'30' | TELEGRAPH CONTROL TYPE 1 MASK |
| | 13 00066 | CCBUD * | EQU | CCBUNT | TELEGRAPH CONTROL TYPE 2 FLAG |
| | 00000040 | CCBUDM * | EQU | X'40' | TELEGRAPH CONTROL TYPE 2 MASK |
| | 13 00066 | CCBUE * | EQU | CCBUNT | WORLD TRADE TERMINAL CONTROL FLAG |
| | 00000080 | CCBUEM * | EQU | X'80' | WORLD TRADE TERMINAL CONTROL MASK |
| | 13 00066 | CCBUW | EQU | CCBUNT | 2702 TRANSMISSION CONTROL |

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|---|---|---|---|---|---|
| | | * | | | FLAG |
| | 00000001 | CCBUWM | EQU | X'01' | 2702 TRANSMISSION CONTROL |
| | | * | | | MASK |
| | 13 00066 | CCBUX | EQU | CCBUNT | 2701 DATA ADAPTER UNIT FLAG |
| | 00000002 | CCBUXM | EQU | X'02' | 2701 DATA ADAPTER UNIT MASK |
| | 13 00066 | CCBUY | EQU | CCBUNT | MULTIPLEXOR CHANNEL FLAG |
| | 00000003 | CCBUYM | EQU | X'03' | MULTIPLEXOR CHANNEL MASK |
| | 13 00066 | CCBUZ | EQU | CCBUNT | SELECTOR CHANNEL FLAG |
| | 00000004 | CCBUZM | EQU | X'04' | SELECTOR CHANNEL MASK |
| 13 00067 | | CCBOPF | DS | XL1 | OPTIONAL FEATURES |
| | 13 00067 | CCBOF | EQU | CCBOPF | IBM LINE ADAPTER TYPE 1 |
| | | * | | | FLAG |
| | 00000010 | CCBOFM | EQU | X'10' | IBM LINE ADAPTER TYPE 1 |
| | | * | | | MASK |
| | 13 00067 | CCBOG | EQU | CCBOPF | IBM LINE ADAPTER TYPE 2 |
| | | * | | | FLAG |
| | 00000020 | CCBOGM | EQU | X'20' | IBM LINE ADAPTER TYPE 2 |
| | | * | | | MASK |
| | 13 00067 | CCBOH | EQU | CCBOPF | DATA SET LINE ADAPTER FLAG |
| | 00000030 | CCBOHM | EQU | X'30' | DATA SET LINE ADAPTER MASK |
| | 13 00067 | CCBOI | EQU | CCBOPF | AUTOMATIC CALL ADAPTER FLAG |
| | 00000040 | CCBOIM | EQU | X'40' | AUTOMATIC CALL ADAPTER MASK |
| | 13 00067 | CCBOJ | EQU | CCBOPF | TELEGRAPH LINE ADAPTER FLAG |
| | 00000050 | CCBOJM | EQU | X'50' | TELEGRAPH LINE ADAPTER MASK |
| | 13 00067 | CCBOQ | EQU | CCBOPF | SAD ZERO FLAG |
| | 00000000 | CCBOQM | EQU | X'00' | SAD ZERO MASK |
| | 13 00067 | CCBOR | EQU | CCBOPF | SAD ONE FLAG |
| | 00000001 | CCBORM | EQU | X'01' | SAD ONE MASK |
| | 13 00067 | CCBOS | EQU | CCBOPF | SAD TWO FLAG |
| | 00000002 | CCBOSM | EQU | X'02' | SAD TWO MASK |
| | 13 00067 | CCBOT | EQU | CCBOPF | SAD THREE FLAG |
| | 00000003 | CCBOTM | EQU | X'03' | SAD THREE MASK |
| | 00000008 | CCBTSZ | EQU | *-CCBTPT | LENGTH OF A SINGLE ENTRY |

```
                                  * CHANNEL CONTROL UNIT TABLE  ****   ONE SET OF
                                  * ENTRIES FOR EACH CHANNEL
                                  *                        CONTROL UNIT AT INSTALLATION
13 00068          CCBCCT  DS   0H
13 00068          CCBNCH  DS   H         NUMBER OF CHANNELS
                                  *                  CONNECTED TO CHANNEL CONTROLLER
13 0006A          CCBCAD  DS   H         CHANNEL ADDRESS  ****   ONE
                                  *                  ENTRY FOR EACH CHANNEL
                                  *                  *NOTE* THE HIGH ORDER BIT OF
                                  *                  EACH MUST BE ON.
                                  * CORRESPONDENCE LIST  ****   ONE ENTRY FOR EACH BIT
                                  * IN EXTENDED CONTROL
                                  *  REGISTERS 12 AND 13, EACH SET OF TWO CONSECUTIVE
                                  *  BITS CORRESPONDING
                                  *  TO A DISTINCT CONTROL UNIT.  THE SETTING OF
                                  *  THESE BITS IS
                                  *  DETERMINED BY THE SETTING OF THE SWITCHES ON THE
                                  *  CONFIGURATION
                                  *  CONSOLE.  AN ENTRY CONSISTS OF ONE HALF WORD
                                  *  CONTAINING THE
                                  *  NUMBER OF PATHS TO THE CONTROL UNIT ON THE
                                  *  DESIGNATED CHANNEL
                                  *  CONTROLLER FOLLOWED BY A VARIABLE NUMBER OF HALF
                                  *  WORDS, EACH
                                  *  CONTAINING A PATH TO THE CONTROL UNIT.  AN ENTRY
                                  *  OF F'S INDICATES
                                  *  THAT THERE IS NO CONTROL UNIT WHOSE PARTITIONING
                                  *  IS CONTROLLED BY
                                  *  THE CORRESPONDING SWITCH ON THE CONFIGURATION
                                  *  CONSOLE.
                                  *            NOTE THAT THIS LIST DOES NOT EXIST
                                  *            ON A SIMPLEX
                                  *       MACHINE.  THE SIMPLEX DOES NOT HAVE
                                  *       PARTITION SENSING.
13 0006C          CCBCLT  DS   0H        *** NOTE ***  SIZE OF
```

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|----------|-------------|--------|------|------|---------|
| | | * | | | CORRESPONDENCE LIST |
| | | * | | | IS VARIABLE. |
| 13 0006C | | CCBNPT | DS | H | NUMBER OF PATHS TO CONTROL |
| | | * | | | UNIT |
| 13 0006E | | CCBPCM | DS | H | PATH TO CONTROL UNIT |
| | | * | | | *** NOTE *** THE 1 BIT IN |
| | | * | | | EACH PATH HALFWORD |
| | | * | | | (BITS 0-15) MUST BE ON. |
| | | * PRINTER PATH TABLE | | **** | ONE SET OF ENTRIES FOR |
| | | * EACH PRINTER AT | | | |
| | | * | | | INSTALLATION |
| 13 00070 | | CCBPRT | DS | 0H | |
| 13 00070 | | CCBNPP | DS | H | NUMBER OF PATHS TO THIS |
| | | * | | | PRINTER |
| 13 00072 | | CCBPTP | DS | H | PATH TO PRINTER **** ONE |
| | | * | | | ENTRY FOR EACH PATH |

## Catalog SBLOCK (CHACCC)

The Catalog SBLOCK (CCC) is the basic unit of storage within the catalog data set.
SBLOCKS are chained together to form indexes, generation indexes, data set descriptors, sharing descriptors, or sharer lists.  Data is retrieved from the catalog, via catalog services, in the form of SBLOCKS.
CCC occupies 64 bytes of virtual storage, aligned on word boundaries.

### CHACCC Storage map

```
DEC    HEX
  0     0|        CCCFWD        |CCCCT1 |        CCCBWD          |CCCCT2 |
        |----------------------------------------------------------------|
  8     8|                      CCCNME                                   |
        |----------------------------------------------------------------|
 16    10|CCCFL1 |      CCCPTL          |CCCFL2 |CCCFL3 |CCCFL4 |CCCLAB |
        |----------------------------------------------------------------|
 24    18|CCCORG |                                                       |
        |_____|              CCCUSE                                    |
        |                                                                |
        |                                                                |
        |                                                                |
 48    30|                          |                                    |
        |_____|                                    |
        |                      CCCVDA                                    |
        |_____|
```
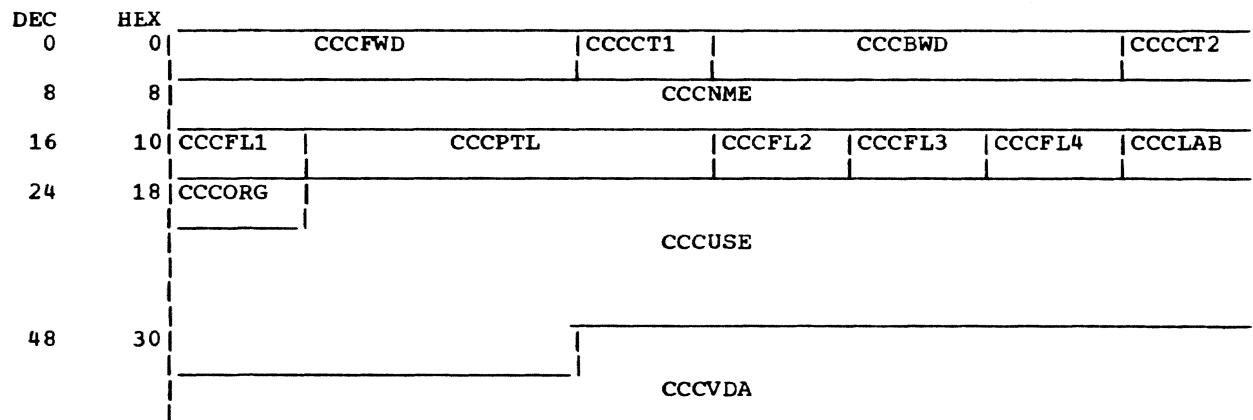
### ORG  CCCUSE

```
 25    19          |                  UNNAMED                            |
        |----------------------------------------------------------------|
 32    20|UNNAMED |UNNAMED |CCCB10  |CCCEAB  |CCCTPD  |
        |_____|_____|_____|_____|_____|
```

### ORG  CCCTPD

```
 36    24                            |CCCDEN |CCCTRT |    CCCBSZ         |
        |----------------------------------------------------------------|
 40    28|            CCCDPT                 |
        |_____|
```

### ORG  CCCDPT

```
 40    28|     CCCRVN      |    CCCPNO      |          CCCLRL            |
        |----------------------------------------------------------------|
 48    30|CCCRFM |    UNNAMED      |
        |_____|_____|
```

### ORG  CCCVDA

```
 51    33                    |CCCCT3 |         CCCDVC                   |
        |----------------------------------------------------------------|
 56    38|            CCCVSN            |         CCCFSQ                 |
        |_____|
```

### ORG  CCCNME

```
  8     8|                      CCCVL2                                   |
        |----------------------------------------------------------------|
 16    10|                                  |
        |_____|
```

DEC    HEX

ORG   CCCFL4

```
 22    16  |                                                |CCCCT4                  |
                                                             |                        |
 24    18| CCCCT9          |CCCFL5  |CCCILK  |      CCCNM1                             |
         |                 |        |        |                                        |
 32    20| CCCNM1     (CONT)          |CCCFL6  |        CCCPT1                         |
         |                                                                            |
```

ORG   CCCNME

```
  8     8|                           CCCPT2                                           |
         |                                                                            |
 16    10|                                        |                                   |
         |                                        |                                   |
```

ORG   CCCPTL

```
 17    11        |                                                                    |
         =       |                  CCCNMO                                           =
         |       |                                                                    |
         |                                                 |UNNAMED |CCCSBC |UNNAMED  |
 56    38|                                                 |        |       |         |
```

ORG   CCCNME

```
  8     8| CCCCT5          |              UNNAMED                                     |
         |                 |                                                          |
 16    10|UNNAMED |                      CCCNM2                                       |
         |        |                                                                   |
 24    18|CCCNM2  |CCCFL8  |
         |        |        |
```
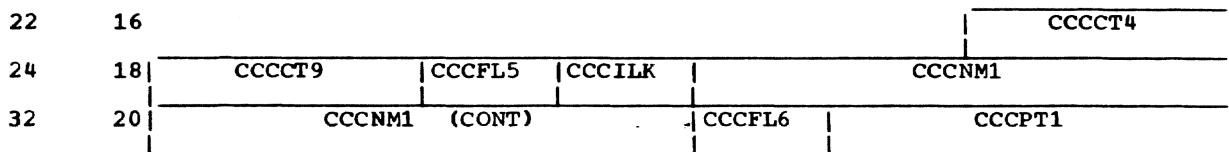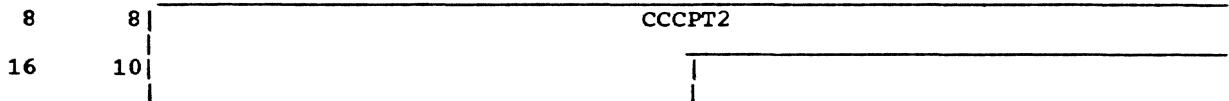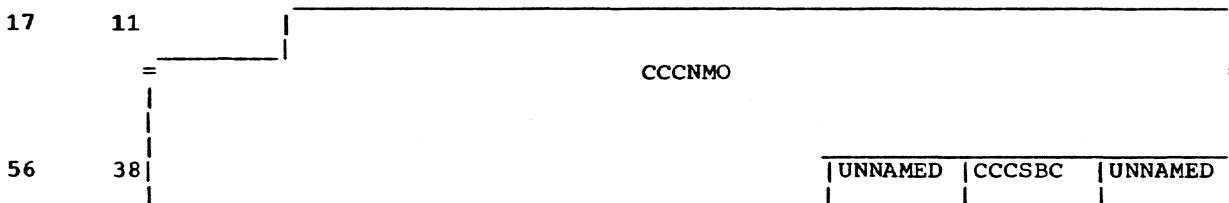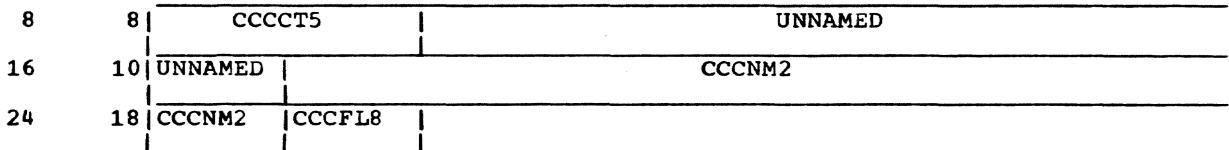
## Fields in CHACCC -- by displacement

| DEC | HEX | FIELD | | DEC | HEX | FIELD | | DEC | HEX | FIELD | |
|-----|-----|-------|---|-----|-----|-------|---|-----|-----|-------|---|
| 0000 | 0000 | CCCFWD | | 0021 | 0015 | CCC09 | (EQU) | 0025 | 0019 | CCC21 | (EQU) |
| 0003 | 0003 | CCCCT1 | | 0021 | 0015 | CCCFL3 | | 0025 | 0019 | CCCUSE | |
| 0004 | 0004 | CCCBWD | | 0022 | 0016 | CCCCT4 | | 0026 | 001A | CCCFL5 | |
| 0007 | 0007 | CCCCT2 | | 0022 | 0016 | CCC65 | (EQU) | 0026 | 001A | CCCED2 | (EQU) |
| 0008 | 0008 | CCCCT5 | | 0022 | 0016 | CCC63 | (EQU) | 0026 | 001A | CCC17 | (EQU) |
| 0008 | 0008 | CCCPT2 | | 0022 | 0016 | CCC62 | (EQU) | 0026 | 001A | CCC16 | (EQU) |
| 0008 | 0008 | CCCVL2 | | 0022 | 0016 | CCC61 | (EQU) | 0026 | 001A | CCC15 | (EQU) |
| 0008 | 0008 | CCCID1 | (EQU) | 0022 | 0016 | CCC60 | (EQU) | 0026 | 001A | CCC14 | (EQU) |
| 0008 | 0008 | CCCNME | | 0022 | 0016 | CCC13 | (EQU) | 0027 | 001B | CCCILK | |
| 0016 | 0010 | CCCFL7 | (EQU) | 0022 | 0016 | CCC12 | (EQU) | 0028 | 001C | CCCNM1 | |
| 0016 | 0010 | CCC69 | (EQU) | 0022 | 0016 | CCCFL4 | | 0034 | 0022 | CCCB10 | |
| 0016 | 0010 | CCC05 | (EQU) | 0023 | 0017 | CCC68 | (EQU) | 0034 | 0022 | CCCBIO | (EQU) |
| 0016 | 0010 | CCC04 | (EQU) | 0023 | 0017 | CCC67 | (EQU) | 0035 | 0023 | CCCEAB | |
| 0016 | 0010 | CCC03 | (EQU) | 0023 | 0017 | CCC66 | (EQU) | 0036 | 0024 | CCCFL6 | |
| 0016 | 0010 | CCC02 | (EQU) | 0023 | 0017 | CCCLAB | | 0036 | 0024 | CCCDEN | |
| 0016 | 0010 | CCC01 | (EQU) | 0024 | 0018 | CCCCT9 | | 0036 | 0024 | CCCTPD | |
| 0016 | 0010 | CCCFL1 | | 0024 | 0018 | CCC85 | (EQU) | 0036 | 0024 | CCC70 | (EQU) |
| 0017 | 0011 | CCCNM2 | | 0024 | 0018 | CCC84 | (EQU) | 0036 | 0024 | CCC20 | (EQU) |
| 0017 | 0011 | CCCNMO | | 0024 | 0018 | CCC83 | (EQU) | 0036 | 0024 | CCC19 | (EQU) |
| 0017 | 0011 | CCCPTL | | 0024 | 0018 | CCC82 | (EQU) | 0036 | 0024 | CCC18A | (EQU) |
| 0020 | 0014 | CCC08 | (EQU) | 0024 | 0018 | CCC81 | (EQU) | 0036 | 0024 | CCC18 | (EQU) |
| 0020 | 0014 | CCC07 | (EQU) | 0024 | 0018 | CCC80 | (EQU) | 0037 | 0025 | CCCPT1 | |
| 0020 | 0014 | CCC06 | (EQU) | 0024 | 0018 | CCCORG | | 0037 | 0025 | CCCTRT | |
| 0020 | 0014 | CCCFL2 | | 0025 | 0019 | CCCFL8 | | 0037 | 0025 | CCCTPP | (EQU) |
| 0021 | 0015 | CCC11 | (EQU) | 0025 | 0019 | CCC23 | (EQU) | 0038 | 0026 | CCCBSZ | |
| 0021 | 0015 | CCC10 | (EQU) | 0025 | 0019 | CCC22 | (EQU) | 0040 | 0028 | CCCRVN | |

| DEC | HEX | FIELD | | DEC | HEX | FIELD | | DEC | HEX | FIELD | |
|------|------|--------|-----|------|------|--------|---|------|------|--------|-----|
| 0040 | 0028 | CCCDPT | | 0048 | 0030 | CCCRFM | | 0056 | 0038 | CCCVSN | |
| 0040 | 0028 | CCCED1 | (EQU) | 0051 | 0033 | CCCCT3 | | 0062 | 003E | CCCSBC | |
| 0042 | 002A | CCCPNO | | 0051 | 0033 | CCCVDA | | 0062 | 003E | CCCFSQ | |
| 0044 | 002C | CCCLRL | | 0052 | 0034 | CCCDVC | | 0064 | 0040 | CCCEND | (EQU) |

## Alphabetical list of fields in CHACCC

| FIELD | DEC | HEX | | FIELD | DEC | HEX | | FIELD | DEC | HEX | |
|--------|------|------|-----|--------|------|------|-----|--------|------|------|-----|
| CCCBIO | 0034 | 0022 | (EQU) | CCCLRL | 0044 | 002C | | CCC11 | 0021 | 0015 | (EQU) |
| CCCBSZ | 0038 | 0026 | | CCCNME | 0008 | 0008 | | CCC12 | 0022 | 0016 | (EQU) |
| CCCBWD | 0004 | 0004 | | CCCNMO | 0017 | 0011 | | CCC13 | 0022 | 0016 | (EQU) |
| CCCB10 | 0034 | 0022 | | CCCNM1 | 0028 | 001C | | CCC14 | 0026 | 001A | (EQU) |
| CCCCT1 | 0003 | 0003 | | CCCNM2 | 0017 | 0011 | | CCC15 | 0026 | 001A | (EQU) |
| CCCCT2 | 0007 | 0007 | | CCCORG | 0024 | 0018 | | CCC16 | 0026 | 001A | (EQU) |
| CCCCT3 | 0051 | 0033 | | CCCPNO | 0042 | 002A | | CCC17 | 0026 | 001A | (EQU) |
| CCCCT4 | 0022 | 0016 | | CCCPTL | 0017 | 0011 | | CCC18 | 0036 | 0024 | (EQU) |
| CCCCT5 | 0008 | 0008 | | CCCPT1 | 0037 | 0025 | | CCC18A | 0036 | 0024 | (EQU) |
| CCCCT9 | 0024 | 0018 | | CCCPT2 | 0008 | 0008 | | CCC19 | 0036 | 0024 | (EQU) |
| CCCDEN | 0036 | 0024 | | CCCRFM | 0048 | 0030 | | CCC20 | 0036 | 0024 | (EQU) |
| CCCDPT | 0040 | 0028 | | CCCRVN | 0040 | 0028 | | CCC21 | 0025 | 0019 | (EQU) |
| CCCDVC | 0052 | 0034 | | CCCSBC | 0062 | 003E | | CCC22 | 0025 | 0019 | (EQU) |
| CCCEAB | 0035 | 0023 | | CCCTPD | 0036 | 0024 | | CCC23 | 0025 | 0019 | (EQU) |
| CCCED1 | 0040 | 0028 | (EQU) | CCCTPP | 0037 | 0025 | (EQU) | CCC60 | 0022 | 0016 | (EQU) |
| CCCED2 | 0026 | 001A | (EQU) | CCCTRT | 0037 | 0025 | | CCC61 | 0022 | 0016 | (EQU) |
| CCCEND | 0064 | 0040 | (EQU) | CCCUSE | 0025 | 0019 | | CCC62 | 0022 | 0016 | (EQU) |
| CCCFL1 | 0016 | 0010 | | CCCVDA | 0051 | 0033 | | CCC63 | 0022 | 0016 | (EQU) |
| CCCFL2 | 0020 | 0014 | | CCCVL2 | 0008 | 0008 | | CCC65 | 0022 | 0016 | (EQU) |
| CCCFL3 | 0021 | 0015 | | CCCVSN | 0056 | 0038 | | CCC66 | 0023 | 0017 | (EQU) |
| CCCFL4 | 0022 | 0016 | | CCC01 | 0016 | 0010 | (EQU) | CCC67 | 0023 | 0017 | (EQU) |
| CCCFL5 | 0026 | 001A | | CCC02 | 0016 | 0010 | (EQU) | CCC68 | 0023 | 0017 | (EQU) |
| CCCFL6 | 0036 | 0024 | | CCC03 | 0016 | 0010 | (EQU) | CCC69 | 0016 | 0010 | (EQU) |
| CCCFL7 | 0016 | 0010 | (EQU) | CCC04 | 0016 | 0010 | (EQU) | CCC70 | 0036 | 0024 | (EQU) |
| CCCFL8 | 0025 | 0019 | | CCC05 | 0016 | 0010 | (EQU) | CCC80 | 0024 | 0018 | (EQU) |
| CCCFSQ | 0062 | 003E | | CCC06 | 0020 | 0014 | (EQU) | CCC81 | 0024 | 0018 | (EQU) |
| CCCFWD | 0000 | 0000 | | CCC07 | 0020 | 0014 | (EQU) | CCC82 | 0024 | 0018 | (EQU) |
| CCCID1 | 0008 | 0008 | (EQU) | CCC08 | 0020 | 0014 | (EQU) | CCC83 | 0024 | 0018 | (EQU) |
| CCCILK | 0027 | 001B | | CCC09 | 0021 | 0015 | (EQU) | CCC84 | 0024 | 0018 | (EQU) |
| CCCLAB | 0023 | 0017 | | CCC10 | 0021 | 0015 | (EQU) | CCC85 | 0024 | 0018 | (EQU) |

## Assembler listing of CHACCC

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|----------|-------------|--------|------|------|---------|
| | 14 00000 | CHACCC | DSECT | | CATALOG S BLOCK ENTRIES |
| | | * | | | COMMON CONTROL FIELDS |
| 14 00000 | | CCCFWD | DS | XL3 | FORWARD POINTER - IN FORM |
| | | * | | | PBB WHERE P IS |
| | | * | | | LOGICAL PAGE NUMBER WITHIN |
| | | * | | | THE MEMBER AND |
| | | * | | | BB IS THE RELATIVE BYTE |
| | | * | | | WITHIN THE PAGE |
| 14 00003 | | CCCCT1 | DS | XL1 | COUNT OF BLOCKS ALLOCATED |
| | | * | | | FROM |
| | | * | | | PAGE-USED IN FIRST PAGE ONLY |
| 14 00004 | | CCCBWD | DS | XL3 | BACKWARD POINTER - IN PBB |
| | | * | | | FORM |
| | | * | | | IF CONTINUATION, TO |
| | | * | | | POINTER IN HIGHER |
| | | * | | | LEVEL IF DSD,SD,GI,INDEX |
| 14 00007 | | CCCCT2 | DS | XL1 | COUNT OF BYTES ALLOCATED |
| | | * | | | FIELDS COMMON TO FIRST |
| | | * | | | SBLOCK |
| | | * | | | OF A DSD,INDEX OR DS |
| 14 00008 | | CCCNME | DS | CL8 | NAME OF SBLOCK |
| 14 00010 | | CCCFL1 | DS | XL1 | IDENTIFICATION FLAGS |
| | 14 00010 | CCC01 | EQU | CCCFL1 | INDEX |
| | 14 00010 | CCC02 | EQU | CCCFL1 | GENERATION INDEX |
| | 14 00010 | CCC03 | EQU | CCCFL1 | DATASET DESCRIPTOR- DATASET |
| | | * | | | ON PRIV. PACK |

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|---|---|---|---|---|---|
| | 14 00010 | CCC04 | EQU | CCCFL1 | SHARING DESCRIPTOR (SD) |
| | 14 00010 | CCC05 | EQU | CCCFL1 | SHARER LIST (SL) |
| | 14 00010 | CCC69 | EQU | CCCFL1 | DATASET DESCRIPTOR- DATASET |
| | | * | | | ON PUB. PACK |
| | 00000001 | CCC01M | EQU | X'01' | INDEX MASK |
| | 00000002 | CCC02M | EQU | X'02' | GENERATION INDEX MASK |
| | 00000003 | CCC03M | EQU | X'03' | DSD MASK-PRIVATE |
| | 00000004 | CCC04M | EQU | X'04' | SD MASK |
| | 00000005 | CCC05M | EQU | X'05' | SL MASK |
| | 00000006 | CCC69M | EQU | X'06' | DSD MASK-PUBLIC |
| | | * | | | FIELDS COMMON TO FIRST |
| | | * | | | SBLOCK |
| | | * | | | OF INDEX OR DSD |
| 14 00011 | | CCCPTL | DS | XL3 | POINTER TO SHARER LIST - IN |
| | | * | | | PBB FORM |
| 14 00014 | | CCCFL2 | DS | XL1 | SHARING FLAG |
| | 14 00014 | CCC06 | EQU | CCCFL2 | PRIVATE (BINARY ZERO) |
| | 14 00014 | CCC07 | EQU | CCCFL2 | SHARED UNIVERSALLY |
| | 14 00014 | CCC08 | EQU | CCCFL2 | SHARED BY LISTED SHARERS |
| | 00000000 | CCC06M | EQU | X'00' | UNLIMITED MASK |
| | 00000001 | CCC07M | EQU | X'01' | UNIVERSAL SHARE MASK |
| | 00000002 | CCC08M | EQU | X'02' | LIST SHARE MASK |
| 14 00015 | | CCCFL3 | DS | XL1 | SHARE PRIVILEGES |
| | 14 00015 | CCC09 | EQU | CCCFL3 | UNLIMITED (BINARY ZERO) |
| | 14 00015 | CCC10 | EQU | CCCFL3 | R/W |
| | 14 00015 | CCC11 | EQU | CCCFL3 | R/O |
| | 00000000 | CCC09M | EQU | X'00' | UNLIMITED MASK |
| | 00000001 | CCC10M | EQU | X'01' | R/W MASK |
| | 00000002 | CCC11M | EQU | X'02' | R/O MASK |
| | | * | | | FIELDS UNIQUE TO DSD |
| 14 00016 | | CCCFL4 | DS | CL1 | DS RET AND ACCESS |
| | | * | | | PRIVILEGES |
| | 14 00016 | CCC12 | EQU | CCCFL4 | R/W |
| | 14 00016 | CCC13 | EQU | CCCFL4 | R/O |
| | 14 00016 | CCC60 | EQU | CCCFL4 | NO DATASET DELETION |
| | 14 00016 | CCC61 | EQU | CCCFL4 | DS DELETION AT CLOSE |
| | 14 00016 | CCC62 | EQU | CCCFL4 | DS DELETION AT LOGOFF |
| | 14 00016 | CCC63 | EQU | CCCFL4 | PERMANENT DS |
| | 14 00016 | CCC65 | EQU | CCCFL4 | |
| | | * | ***BITS 6 AND 7*** | | * |
| | 00000001 | CCC12M | EQU | X'01' | R/W MASK |
| | 00000002 | CCC13M | EQU | X'02' | R/O MASK |
| | | * | ***BITS 2,3,4 AND 5*** | | * |
| | 00000000 | CCC60M | EQU | X'00' | NO DELETION MASK |
| | 00000008 | CCC61M | EQU | X'08' | CLOSE DELETION MASK |
| | 00000004 | CCC62M | EQU | X'04' | LOGOFF DELETION MASK |
| | | * | ***BITS 0 AND 1*** | | * |
| | 00000000 | CCC63M | EQU | X'00' | PERMANENT MASK |
| | 00000080 | CCC65M | EQU | X'80' | TEMPORARY MASK |
| 14 00017 | | CCCLAB | DS | CL1 | LABEL DATA |
| | 14 00017 | CCC66 | EQU | CCCLAB | NO TAPE LABELS(NL) |
| | 14 00017 | CCC67 | EQU | CCCLAB | STANDARD LABELS(SL) |
| | 14 00017 | CCC68 | EQU | CCCLAB | STANDARD AND USER |
| | | * | | | LABELS(SUL) |
| | 00000001 | CCC66M | EQU | X'01' | NL MASK |
| | 00000002 | CCC67M | EQU | X'02' | SL MASK |
| | 00000004 | CCC68M | EQU | X'04' | SUL MASK |
| 14 00018 | | CCCORG | DS | CL1 | DATA SET ORGANIZATION |
| | 14 00018 | CCC80 | EQU | CCCORG | SAM ORGANIZATION |
| | 14 00018 | CCC81 | EQU | CCCORG | TAM ORGANIZATION |
| | 14 00018 | CCC82 | EQU | CCCORG | VAM INDEX SEQUENTIAL |
| | 14 00018 | CCC83 | EQU | CCCORG | VAM SEQUENTIAL |
| | 14 00018 | CCC84 | EQU | CCCORG | VAM PARTITIONED |
| | 14 00018 | CCC85 | EQU | CCCORG | IOREQ |
| | 00000001 | CCC80M | EQU | X'01' | SAM MASK |
| | 00000002 | CCC81M | EQU | X'02' | TAM MASK |
| | 00000004 | CCC82M | EQU | X'04' | VISAM MASK |
| | 00000005 | CCC83M | EQU | X'05' | VSAM MASK |

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|----------|-------------|--------|------|------|---------|
| | 00000006 | CCC84M | EQU | X'06' | VPAM MASK |
| | 00000007 | CCC85M | EQU | X'07' | RX(IOREQE) MASK |
| 14 00019 | | CCCUSE | DS | CL26 | USER FIELD |
| | 14 00019 | | \|ORG\| | CCCUSE | |
| 14 00019 | | | DS | CL8 | UNUSED |
| 14 00021 | | | DS | XL1 | UNUSED |
| 14 00022 | | CCCB10 | DS | XL1 | COUNT OF BULKIO TASKS |
| | * | | | | PENDING - BINARY |
| | 14 00022 | CCCBIO | EQU | CCCB10 | VAM 2 COMPATIBILITY |
| 14 00023 | | CCCEAB | DS | XL1 | ERASE AFTER BULKIO FLAG 1 |
| | * | | | | = YES |
| 14 00024 | | CCCTPD | DS | CL1 | TAPE DENSITY INDICATOR |
| | 14 00024 | | \|ORG\| | CCCTPD | |
| 14 00024 | | CCCDEN | DS | XL1 | TAPE DENSITY |
| | 00000003 | CCCPD0 | EQU | X'03' | 200 BPI |
| | 00000043 | CCCPD1 | EQU | X'43' | 556 BPI |
| | 00000083 | CCCPD2 | EQU | X'83' | 800 BPI |
| 14 00025 | | CCCTRT | DS | XL1 | TAPE RECORDING TECHNIQUE |
| | * | | | | TRTCH |
| | 00000028 | CCCTEM | EQU | X'28' | TRTCH TRANS EVEN PARITY |
| | 00000033 | CCCODM | EQU | X'33' | ODD PARITY NO TRANSLATE |
| | 00000013 | CCCTM | EQU | X'13' | TRANSLATE |
| | 00000038 | CCCEVN | EQU | X'38' | EVEN PARITY NO TRANSLATE |
| | 00000023 | CCCEVM | EQU | X'23' | CONVERTER AVAILABLE |
| | 14 00025 | CCCTPP | EQU | CCCTRT | |
| 14 00026 | | CCCBSZ | DS | XL2 | NL/TAPE BLOCK SIZE |
| 14 00028 | | CCCDPT | DS | CL4 | TYPE E DSCB POINTER |
| | 14 00028 | | \|ORG\| | CCCDPT | |
| 14 00028 | | CCCRVN | DS | CL2 | RELATIVE VOLUME |
| 14 0002A | | CCCPNO | DS | CL2 | EXTERNAL PAGE NUMBER |
| 14 0002C | | CCCLRL | DS | XL4 | NL/TAPE LRECL |
| 14 00030 | | CCCRFM | DS | XL1 | NL/TAPE RECFM |
| 14 00031 | | | DS | CL2 | SPARE |
| 14 00033 | | CCCVDA | DS | CL13 | VOLUME DATA |
| | 14 00033 | | \|ORG\| | CCCVDA | |
| 14 00033 | | CCCCT3 | DS | XL1 | BINARY COUNT OF VOLUMES-SAM |
| | * | | | | ONLY |
| 14 00034 | | CCCDVC | DS | XL4 | DEVICE CODE |
| 14 00038 | | CCCVSN | DS | XL6 | VOLUME SERIAL |
| | * | | | | NUMBERS-VAM-SAM-PRIV. ONLY |
| 14 0003E | | CCCFSQ | DS | XL2 | FILE SEQUENCE NUMBER-SAM |
| | * | | | | ONLY |
| | 14 00040 | CCCEND | EQU | * | END OF SBLOCK |
| | 0000000C | CCCSZ1 | EQU | CCCEND-CCCDVC | SIZE OF VOLUME FIELD |
| | * | | | THE FOLLOWING FIELDS ARE UNIQUE TO | |
| | * | | | CONTINUATION | |
| | * | | | DATASET DESCRIPTORS-SAM DATASETS ONLY | |
| | 14 00008 | | \|ORG\| | CCCNME | |
| 14 00008 | | CCCVL2 | DS | CL12 | FIRST VOL FIELD IN CHAINED |
| | * | | | | SBLOCK |
| | * | | | THE FOLLOWING FIELDS ARE UNIQUE TO INDEXES | |
| | * | | | | AND GENERATION INDEXES |
| | 14 00016 | | \|ORG\| | CCCFL4 | |
| 14 00016 | | CCCCT4 | DS | HL2 | COUNT OF POINTERS IN A |
| | * | | | | N466 |
| | * | | . | | GENERATION INDEX |
| | * | | | | N466 |
| 14 00018 | | CCCCT9 | DS | XL2 | BINARY COUNT OF MAXIMUM |
| | * | | | | GENERATIONS |
| 14 0001A | | CCCFL5 | DS | XL1 | GENERATION FLAGS |
| | 14 0001A | CCC14 | EQU | CCCFL5 | DELETE OLDEST AT LIMIT |
| | 14 0001A | CCC15 | EQU | CCCFL5 | DELETE ALL GENERATION AT |
| | * | | | | LIMIT |
| | 00000001 | CCC14M | EQU | X'01' | DELETE OLDEST MASK |
| | 00000002 | CCC15M | EQU | X'02' | DELETE ALL MASK |
| | 14 0001A | CCC16 | EQU | CCCFL5 | SAVE DELETED GENERATIONS |
| | 14 0001A | CCC17 | EQU | CCCFL5 | SCRATCH DELETED GENERATIONS |
| | 00000010 | CCC16M | EQU | X'10' | SAVE MASK |

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|----------|-------------|--------|------|------|---------|
|          | 00000020    | CCC17M | EQU  | X'20' | SCRATCH MASK |
| 14 0001B |             | CCCILK | DS   | XL1  | INTERLOCK BYTE |
|          |             | *      |      |      | POINTER ENTRIES FOLLOW |
| 14 0001C |             | CCCNM1 | DS   | CL8  | NAME OF ENTITY POINTED AT |
| 14 00024 |             | CCCFL6 | DS   | XL1  | IDENTIFICATION FLAG |
|          | 14 00024    | CCC18  | EQU  | CCCFL6 | LOWER INDEX |
|          | 14 00024    | CCC18A | EQU  | CCCFL6 | GENERATION INDEX |
|          | 14 00024    | CCC19  | EQU  | CCCFL6 | DSD |
|          | 14 00024    | CCC20  | EQU  | CCCFL6 | SD |
|          | 14 00024    | CCC70  | EQU  | CCCFL6 | PUBLIC(VAM) DSD |
|          | 00000001    | CCC18M | EQU  | X'01' | LOWER INDEX MASK |
|          | 00000002    | CCC18N | EQU  | X'02' | GENERATION INDEX MASK |
|          | 00000003    | CCC19M | EQU  | X'03' | DSD MASK |
|          | 00000004    | CCC20M | EQU  | X'04' | SD MASK |
|          | 00000006    | CCC70M | EQU  | X'06' | PUBLIC(VAM) MASK |
| 14 00025 |             | CCCPT1 | DS   | XL3  | POINT ADDRESS |
|          | 14 00028    | CCCED1 | EQU  | *    |      |
|          | 0000000C    | CCCSZ2 | EQU  | CCCED1-CCCNM1 | SIZE OF POINTER ENTRY |
|          |             | *      |      |      | THE FOLLOWING FIELDS ARE UNIQUE TO |
|          |             | *      |      |      | CONTINUATION INDEXES AND GI'S |
|          | 14 00008    |        | \|ORG\| | CCCNME | |
| 14 00008 |             | CCCPT2 | DS   | XL12 | FIRST POINTER FIELD IN |
|          |             | *      |      |      | CHAINED SBLOCK |
|          |             | *      |      | THE  | FOLLOWING FIELDS ARE UNIQUE TO SD |
|          | 14 00011    |        | \|ORG\| | CCCPTL | FORMAT OF SHARING |
|          |             | *      |      |      | DESCRIPTOR |
| 14 00011 |             | CCCNMO | DS   | CL44 | OWNER'S NAME FOR SHARED |
|          |             | *      |      |      | LEVEL |
| 14 0003D |             |        | DS   | X    | RESERVED |
|          |             | *      |      |      | N466 |
| 14 0003E |             | CCCSBC | DS   | HL1  | COUNT OF NUMBER OF PENDING |
|          |             | *      |      |      | N466 |
|          |             | *      |      |      | BULKIO JOBS ON DATA SET IN |
|          |             | *      |      |      | AN N466 |
|          |             | *      |      |      | OWNERS CATALOG POINTED TO |
|          |             | *      |      |      | BY N466 |
|          |             | *      |      |      | THIS SHARING DISCRIPTOR |
|          |             | *      |      |      | N466 |
| 14 0003F |             |        | DS   | X    | RESERVED |
|          |             | *      |      |      | N466 |
|          |             | *      |      | THE  | FOLLOWING FIELDS ARE UNIQUE TO FIRST |
|          |             | *      |      | SHARER | LIST |
|          | 14 00008    |        | \|ORG\| | CCCNME | FORMAT OF SHARERS LIST |
| 14 00008 |             | CCCCT5 | DS   | 2X   | RESERVED |
|          |             | *      |      |      | N466 |
| 14 0000A |             |        | DS   | CL6  | UNUSED |
|          | 14 00010    | CCCFL7 | EQU  | CCCFL1 | |
| 14 00010 |             |        | DS   | CL1  | |
|          |             | *      |      |      | SERIES OF ENTRIES FOLLOW |
|          |             | *      |      |      | WHICH |
|          |             | *      |      |      | INCLUDE SHARER ID AND |
|          |             | *      |      |      | PRIVILEGES |
| 14 00011 |             | CCCNM2 | DS   | CL8  | SHARER ID |
| 14 00019 |             | CCCFL8 | DS   | XL1  | SHARE PRIVILEGES |
|          | 14 00019    | CCC21  | EQU  | CCCFL8 | UNLIMITED |
|          | 14 00019    | CCC22  | EQU  | CCCFL8 | R/W |
|          | 14 00019    | CCC23  | EQU  | CCCFL8 | R/O |
|          |             | *      |      |      | USE SAME MASKS GIVEN |
|          |             | *      |      |      | PREVIOUSLY FOR CCCFL3 |

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|---|---|---|---|---|---|
| | 14 0001A | CCCED2 | EQU | * | |
| | 00000009 | CCCSZ3 | EQU | CCCED2-CCCNM2 | SIZE OF ID AND PRIVATE ENTRY |
| | | * | | | THE FOLLOWING FIELDS ARE UNIQUE TO |
| | | * | | | CONTINUATION SHARER LIST |
| | 14 00008 | CCCID1 | EQU | CCCNME | FIRST ID AND PRIVATE ENTRY IN |
| | | * | | | CHAINED BLOCKS |
| | 00000040 | CCCSZ4 | EQU | CCCEND-CCCFWD | SIZE OF SBLOCK |
| | 00000038 | CCCSZ5 | EQU | CCCEND-CCCNME | SIZE OF ALLOCATABLE AREA |

Catalog Common DSECT (CHACDS)


The Catalog Common DSECT (CDS) contains various parameters which are used, in common, by all catalog service routines. This area resides in the Locate routine's PSECT.
The CDS occupies 104 bytes of virtual storage, aligned on word boundaries.

CHACDS Storage map

```
DEC   HEX  _____
  0     0|            CDSLBD            |            CDSCLS                |
         |_____|_____|
  8     8|            CDSCLC            |            CDSNPT                |
         |_____|_____|
 16    10|            CDSCLB            |            CDSLCP                |
         |_____|_____|
 24    18|CDSLOC  |CDSUNC  |CDSFLG  |CDSFLD |            CDSPTR            |
         |_____|_____|_____|_____|_____|
 32    20|                        CDSUID                                  |
         |_____|
 40    28|            CDSBUF            |CDSBSZ  |CDSMSZ  |                |
         |_____|_____|_____|               |
         |                        UNNAMED                                 |
         |_____|
```

Fields in CHACDS -- by displacement

| DEC | HEX | FIELD | DEC | HEX | FIELD | | DEC | HEX | FIELD | |
|---|---|---|---|---|---|---|---|---|---|---|
| 0000 | 0000 | CDSLBD | 0025 | 0019 | CDSUNC | | 0032 | 0020 | CDSUID | |
| 0004 | 0004 | CDSCLS | 0026 | 001A | CDSRBD | (EQU) | 0040 | 0028 | CDSBUF | |
| 0008 | 0008 | CDSCLC | 0026 | 001A | CDSPUTX | (EQU) | 0044 | 002C | CDSBSZ | |
| 0012 | 000C | CDSNPT | 0026 | 001A | CDSPUT | (EQU) | 0045 | 002D | CDSMSZ | |
| 0016 | 0010 | CDSCLB | 0026 | 001A | CDSFLG | | 0056 | 0038 | CDSEND | (EQU) |
| 0020 | 0014 | CDSLCP | 0027 | 001B | CDSFLD | | | | | |
| 0024 | 0018 | CDSLOC | 0028 | 001C | CDSPTR | | | | | |

Alphabetical list of fields in CHACDS

| FIELD | DEC | HEX | | FIELD | DEC | HEX | | FIELD | DEC | HEX | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| CDSBSZ | 0044 | 002C | | CDSFLG | 0026 | 001A | | CDSPUT | 0026 | 001A | (EQU) |
| CDSBUF | 0040 | 0028 | | CDSLBD | 0000 | 0000 | | CDSPUTX | 0026 | 001A | (EQU) |
| CDSCLB | 0016 | 0010 | | CDSLCP | 0020 | 0014 | | CDSRBD | 0026 | 001A | (EQU) |
| CDSCLC | 0008 | 0008 | | CDSLOC | 0024 | 0018 | | CDSUID | 0032 | 0020 | |
| CDSCLS | 0004 | 0004 | | CDSMSZ | 0045 | 002D | | CDSUNC | 0025 | 0019 | |
| CDSEND | 0056 | 0038 | (EQU) | CDSNPT | 0012 | 000C | | | | | |
| CDSFLD | 0027 | 001B | | CDSPTR | 0028 | 001C | | | | | |

Assembler listing of CHACDS

```
LOCATION   INSTRUCTION   SOURCE    INST   OPER      COMMENT
           15 00000      CHACDS    DSECT            CATALOG COMMON
***************************************************************************
*               THIS DSECT WAS REWRITTEN FOR NSRB 437                     *
* THIS DSECT IS USED FOR THE INTERCHANGE OF INFORMATION ABOUT THE         *
* CURRENT CATALOG MEMBER AMOUNG CATALOG SERVICE ROUTINES. THE BASE        *
* FOR CHACDS IS AN IVM PSECT REPRESENTED BY THE VCON OF CHBCDS.           *
***************************************************************************
15 00000               CDSLBD    DS     A         RELATIVE PAGE ADDR (0P00)
15 00004               CDSCLS    DS     A         RELATIVE SBLOCK ADDR (0PBB)
15 00008               CDSCLC    DS     F         COUNT OF QUALIFIERS LOCATED
15 0000C               CDSNPT    DS     A         ADDR OF NEXT FQN
                         *                        QUALIFIER.(IF
                         *                        OWNER-ENTERED IS
                         *                        INDICATED, ADDR
                         *                        RELATES TO OWNER FQN)
15 00010               CDSCLB    DS     A         VMA OF CURRENT BUFFER PAGE
15 00014               CDSLCP    DS     A         PSECT ADDR OF SETTER OF
                         *                        CDSLOC
15 00018               CDSLOC    DS     X         SET TO X'01' IF MODULE HAS
```

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|----------|-------------|--------|------|------|---------|
| | | * | | | LOCKED A |
| | | * | | | MEMBER AND WILL NOT WANT |
| | | * | | | SUBSEQUENTLY CALLED |
| | | * | | | MODULES(LOCATE |
| | | * | | | INCLUDED) TO UNLOCK BEFORE |
| | | * | | | END OF |
| | | * | | | UPDATE. NOTE THAT (1) FLAG |
| | | * | | | IS TO BE |
| | | * | | | RESET BY SETTER, (2) OWNER |
| | | * | | | FQN MUST |
| | | * | | | BE USED FOR ALL LOCATES |
| | | * | | | AND (3) |
| | | * | | | MULTIPLE SETTING/RESETTING |
| | | * | | | MUST BE |
| | | * | | | AVOIDED. |
| | 00000001 | CDSLOCM | EQU | X'01' | CDSLOC MASK |
| 15 00019 | | CDSUNC | DS | X | SET IF MODULE DOES NOT WANT |
| | | * | | | LOCATE |
| | | * | | | TO CROSS CATALOGS. |
| | 00000001 | CDSUNCM | EQU | X'01' | CDSUNC MASK |
| 15 0001A | | CDSFLG | DS | X | FLAG BYTE |
| | 15 0001A | CDSPUT | EQU | CDSFLG | PUT FLAG |
| | 00000080 | CDSPUTM | EQU | X'80' | PUT MASK |
| | 15 0001A | CDSPUTX | EQU | CDSFLG | PUTX FLAG |
| | 00000040 | CDSPUTXM | EQU | X'40' | PUTX MASK |
| | 15 0001A | CDSRBD | EQU | CDSFLG | CATALOG BEING REBUILT FLAG |
| | 00000020 | CDSRBDM | EQU | X'20' | CATALOG BEING REBUILT MASK |
| 15 0001B | | CDSFLD | DS | X | RESERVED |
| 15 0001C | | CDSPTR | DS | A | ADDR OF CURRENT CATALOG DCB |
| 15 00020 | | CDSUID | DS | CL8 | USERID OF CURRENT MEMBER |
| 15 00028 | | CDSBUF | DS | A | CURRENT CATALOG BUFFER |
| | | * | | | ORIGIN ADDR |
| 15 0002C | | CDSBSZ | DS | HL1 | CURRENT CATALOG BUFFER SIZE |
| | | * | | | IN PAGES |
| 15 0002D | | CDSMSZ | DS | HL1 | CURRENT CATALOG MEMBER SIZE |
| | | * | | | IN PAGES |
| 15 0002E | | | DS | 10X | RESERVED |
| | 15 00038 | CDSEND | EQU | * | END OF CDS |
| | 00000038 | CDSSZ1 | EQU | CDSEND-CDSLBD | SIZE OF CDS |

Catalog Error Processor Parameter List (CHACEP)

CHACEP contains parameters used by Catalog Service Routines when calling
CZCFE (Catalog Error Processor).

CHACEP occupies 40 bytes and is located in IVM.

## CHACEP Storage map

| DEC | HEX | | | | | | |
|---|---|---|---|---|---|---|---|
| 0 | 0 | CEPMOD | | | | | |
| 8 | 8 | CEPERR | CEPOPT | CEPFLG | CEPFLD | CEPFQN | |
| 16 | 10 | CEPQFR | | | | CEPSYR | |
| 24 | 18 | CEPABN | | | | CEPVMA1 | |
| 32 | 20 | CEPVMA2 | | | CEPCNT | | UNNAMED |

## Fields in CHACEP -- by displacement

| DEC | HEX | FIELD | DEC | HEX | FIELD | DEC | HEX | FIELD | |
|---|---|---|---|---|---|---|---|---|---|
| 0000 | 0000 | CEPMOD | 0012 | 000C | CEPFQN | 0032 | 0020 | CEPVMA2 | |
| 0008 | 0008 | CEPERR | 0016 | 0010 | CEPQFR | 0036 | 0024 | CEPCNT | |
| 0009 | 0009 | CEPOPT | 0020 | 0014 | CEPSYR | 0040 | 0028 | CEPEND | (EQU) |
| 0010 | 000A | CEPFLG | 0024 | 0018 | CEPABN | | | | |
| 0011 | 000B | CEPFLD | 0028 | 001C | CEPVMA1 | | | | |

## Alphabetical list of fields in CHACEP

| FIELD | DEC | HEX | | FIELD | DEC | HEX | FIELD | DEC | HEX |
|---|---|---|---|---|---|---|---|---|---|
| CEPABN | 0024 | 0018 | | CEPFLG | 0010 | 000A | CEPSYR | 0020 | 0014 |
| CEPCNT | 0036 | 0024 | | CEPFQN | 0012 | 000C | CEPVMA1 | 0028 | 001C |
| CEPEND | 0040 | 0028 | (EQU) | CEPMOD | 0000 | 0000 | CEPVMA2 | 0032 | 0020 |
| CEPERR | 0008 | 0008 | | CEPOPT | 0009 | 0009 | | | |
| CEPFLD | 0011 | 000B | | CEPQFR | 0016 | 0010 | | | |

## Assembler listing of CHACEP

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|---|---|---|---|---|---|
| | 16 00000 | CHACEP | DSECT | | CATALOG ERROR PROCESSOR |
| | | * | | | PLIST |

```
************************************************************************
*                          NSRB 437                                   *
* THIS DSECT DEFINES THE PARAMETER LIST OF THE CATALOG ERROR PROCESSOR*
* (CZCFE) AND IS USED BY ALL CALLERS WHICH ARE CATALOG SERVICES       *
* ROUTINES. UPON DETECTION OF AN ERROR CONDITION, THE CALLER WILL USE *
* THIS DSECT TO SET UP THE DIAGNOSTIC INFORMATION, BEFORE CALLING     *
* CZCPE. THE BASE FOR THIS DSECT IS THE VCON OF CHBCEP, AN IVM PSECT. *
************************************************************************
```

| | | | | | |
|---|---|---|---|---|---|
| | | * THE FOLLOWING FIELDS ARE TO BE SET UP BY CZCFE'S | | | |
| | | * CALLER | | | |
| 16 00000 | | CEPMOD | DS | CL8 | MODULE NAME OF CALLER |
| 16 00008 | | CEPERR | DS | X | ERROR CODE |
| 16 00009 | | CEPOPT | DS | X | EXIT OPTION CODE |
| | 00000001 | CEPOPT1 | EQU | X'01' | COMP CODE 1 ABEND EXIT |
| | | * | | | REQUESTED |
| | 00000002 | CEPOPT2 | EQU | X'02' | RETURN REQUESTED |
| | 00000003 | CEPOPT3 | EQU | X'03' | CATALOG UNUSABLE - |
| | | * | | | RECONSTRUCT |
| | | * | | | CATALOG THEN CC 1 ABEND |
| 16 0000A | | CEPFLG | DS | X | RESERVED |
| 16 0000B | | CEPFLD | DS | X | RESERVED |
| 16 0000C | | CEPFQN | DS | A | ADDR OF 44 BYTE FQN DSNAME |
| 16 00010 | | CEPQFR | DS | A | ADDR OF QUALIFIER AT WHICH |
| | | * | | | LEVEL |

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|----------|-------------|--------|------|------|---------|
| | | * | | | ERROR OCCURS |
| | | * THE FOLLOWING ARE SET UP BY CAILER WHO CLAIMS HIS | | | |
| | | * OWN SYSER/ABEND | | | |
| 16 00014 | | CEPSYR | DS | A | ADDR OF CALLER'S MINOR |
| | | * | | | SYSER |
| 16 00018 | | CEPABN | DS | A | ADDR OF CALLER'S ABEND |
| | | * | | | MESSAGE |
| | | * THE FOLLOWING ARE VARIABLE INPUT SET UP BY CALLER | | | |
| | | * DEPENDING ON THE | | | |
| | | * | | | ERROR CODE. |
| 16 0001C | | CEPVMA1 | DS | A | PRIMARY ADDR OF ERROR |
| 16 00020 | | CEPVMA2 | DS | A | SECONDARY ADDR OF ERROR |
| 16 00024 | | CEPCNT | DS | H | ACTUAL COUNT OF MEMBER |
| | | * | | | ENTRIES |
| 16 00026 | | | DS | 2X | RESERVED |
| | 16 00028 | CEPEND | EQU | * | END OF ERROR PROCESSOR |
| | | * | | | PLIST |
| | 00000028 | CEPSZ1 | EQU | CEPEND-CEPMOD | SIZE OF ERROR |
| | | * | | | PROCESSOR PLIST |

## Channel Table (CHACHL)

The Channel Table (CHACHL), contains status flags on all channels and specifies whether or not a particular channel can be used in the path to a device.  CHACHL occupies 456 bytes of core storage, aligned on a doubleword boundary.

### CHACHL Storage map

```
DEC   HEX
  0    0 | CHLLOCK  |        UNNAMED       |              CHLCUT              |
         |_____|_____|_____|
  8    8 |                                                                    |
         =                            CHLPTR                                  =
         |                                                                    |
         |_____|
136   88 | CHLCS   | CHLFLG |                                                 |
         |_____|_____|                                                 |
         =                            CHLRST                                  =
         |                                                                    |
         |_____|
200   C8 | CHLDIG1 | CHLDIG2 | CHLDIG3 | CHLDIG4 | CHLDIG5 | CHLDIG6 | CHLDIG7 | CHLDIG8 |
         |_____|_____|_____|_____|_____|_____|_____|_____|
208   D0 |                                                                    |
         =                            CHLDIGS                                 =
         |                                                                    |
         |_____|
```
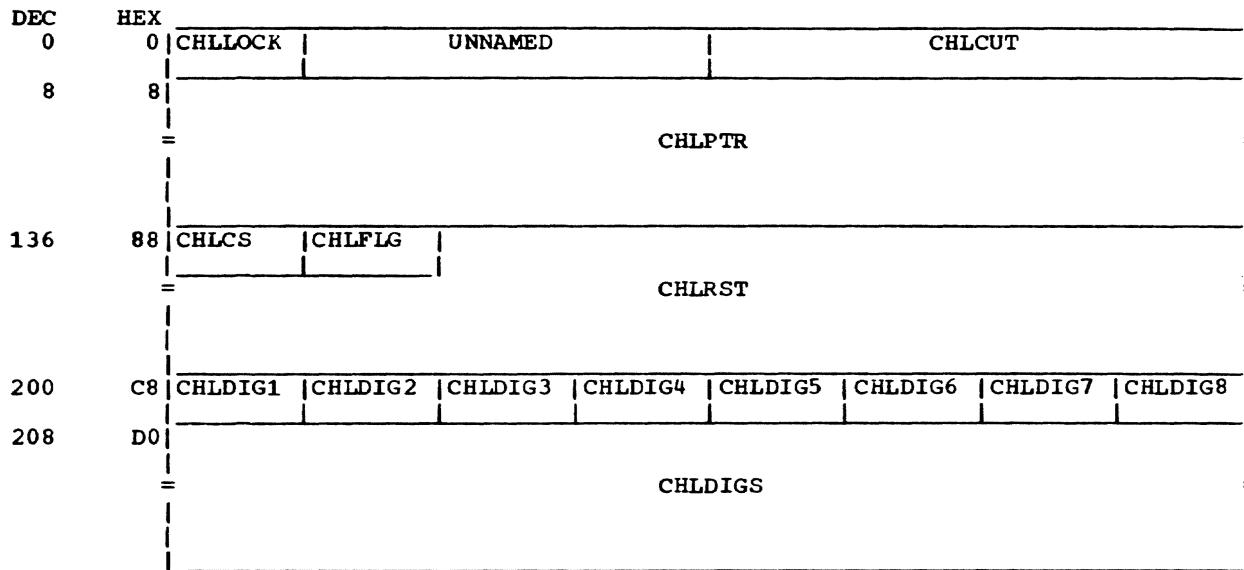
### Fields in CHACHL -- by displacement

| DEC | HEX | FIELD | | | DEC | HEX | FIELD | | | DEC | HEX | FIELD |
|-----|-----|-------|---|---|-----|-----|-------|---|---|-----|-----|-------|
| 0000 | 0000 | CHLLOCK | | | 0137 | 0089 | CHLS | (EQU) | | 0203 | 00CB | CHLDIG4 |
| 0000 | 0000 | CHLBEG | | | 0137 | 0089 | CHLM | (EQU) | | 0204 | 00CC | CHLDIG5 |
| 0004 | 0004 | CHLCUT | | | 0137 | 0089 | CHLP | (EQU) | | 0205 | 00CD | CHLDIG6 |
| 0008 | 0008 | CHLPTR | | | 0137 | 0089 | CHLA | (EQU) | | 0206 | 00CE | CHLDIG7 |
| 0136 | 0088 | CHLCS | | | 0137 | 0089 | CHLFLG | | | 0207 | 00CF | CHLDIG8 |
| 0137 | 0089 | CHLT | (EQU) | | 0138 | 008A | CHLRST | | | 0208 | 00D0 | CHLDIGS |
| 0137 | 0089 | CHLE | (EQU) | | 0200 | 00C8 | CHLDIG1 | | | 0456 | 01C8 | CHLBDY |
| 0137 | 0089 | CHLSB | (EQU) | | 0201 | 00C9 | CHLDIG2 | | | | | |
| 0137 | 0089 | CHLR | (EQU) | | 0202 | 00CA | CHLDIG3 | | | | | |

### Alphabetical list of fields in CHACHL

| FIELD | DEC | HEX | | FIELD | DEC | HEX | | FIELD | DEC | HEX | |
|-------|-----|-----|---|-------|-----|-----|---|-------|-----|-----|---|
| CHLA | 0137 | 0089 | (EQU) | CHLDIG4 | 0203 | 00CB | | CHLP | 0137 | 0089 | (EQU) |
| CHLBDY | 0456 | 01C8 | | CHLDIG5 | 0204 | 00CC | | CHLPTR | 0008 | 0008 | |
| CHLBEG | 0000 | 0000 | | CHLDIG6 | 0205 | 00CD | | CHLR | 0137 | 0089 | (EQU) |
| CHLCS | 0136 | 0088 | | CHLDIG7 | 0206 | 00CE | | CHLRST | 0138 | 008A | |
| CHLCUT | 0004 | 0004 | | CHLDIG8 | 0207 | 00CF | | CHLS | 0137 | 0089 | (EQU) |
| CHLDIGS | 0208 | 00D0 | | CHLE | 0137 | 0089 | (EQU) | CHLSB | 0137 | 0089 | (EQU) |
| CHLDIG1 | 0200 | 00C8 | | CHLFLG | 0137 | 0089 | | CHLT | 0137 | 0089 | (EQU) |
| CHLDIG2 | 0201 | 00C9 | | CHLLOCK | 0000 | 0000 | | | | | |
| CHLDIG3 | 0202 | 00CA | | CHLM | 0137 | 0089 | (EQU) | | | | |

### Assembler listing of CHACHL

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|----------|-------------|--------|------|------|---------|
| | 17 00000 | CHACHL | DSECT | | CHANNEL TABLE |
| 17 00000 | | CHLBEG | DS | 0D | ALIGN TABLE ON DOUBLE WORD |
| | | * | | | BOUNDARY |
| 17 00000 | | CHLLOCK | DS | XL1 | LOCK BYTE |
| 17 00001 | | | DS | 3C | NOT USED |
| 17 00004 | | CHLCUT | DS | F | CONTROL UNIT TABLE POINTER |
| 17 00008 | | CHLPTR | DS | 32F | MULTIPLEXOR/SELECTOR |
| | | * | | | CHANNEL TBL POINTERS |

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|---|---|---|---|---|---|
| 17 00088 | | CHLCS | DS | XL1 | CONTROL UNITS ASSIGNED |
| | | * | | | TABLE SIZE |
| | 0000000F | CHLCSM | EQU | X'0F' | CONTROL UNITS ASSIGNED |
| | | * | | | TABLE SIZE MASK |
| 17 00089 | | CHLFLG | DS | XL1 | FLAGS FOR EACH CHANNEL |
| | 17 00089 | CHLA | EQU | CHLFLG | AVAILABILITY FLAG |
| | 00000080 | CHLAMK | EQU | X'80' | AVAILABILITY FLAG MASK |
| | 17 00089 | CHLP | EQU | CHLFLG | PARTITIONED FLAG |
| | 00000040 | CHLPMK | EQU | X'40' | PARTITIONED FLAG MASK |
| | 17 00089 | CHLM | EQU | CHLFLG | UNIT DOWN FLAG |
| | 00000020 | CHLMM | EQU | X'20' | UNIT DOWN FLAG MASK |
| | 17 00089 | CHLS | EQU | CHLFLG | SENSE HOLD FLAG |
| | 00000010 | CHLSM | EQU | X'10' | SENSE HOLD MASK |
| | 17 00089 | CHLR | EQU | CHLFLG | RESERVED FLAG |
| | 00000008 | CHLRM | EQU | X'08' | RESERVED MASK |
| | 00000078 | CHLAM | EQU | X'78' | INDS RSTRICTING AVAIL OF |
| | | * | | | CHANNEL |
| | 17 00089 | CHLSB | EQU | CHLFLG | SUBCHANNEL BUSY FLAG |
| | 00000004 | CHLSBM | EQU | X'04' | SUBCHANNEL BUSY MASK |
| | 17 00089 | CHLE | EQU | CHLFLG | NONEXISTENT FLAG |
| | 00000002 | CHLEM | EQU | X'02' | NON-EXISTENT MASK |
| | 17 00089 | CHLT | EQU | CHLFLG | CHANNEL TYPE FLAG |
| | 00000001 | CHLTM | EQU | X'01' | CHANNEL TYPE FLAG MASK |
| 17 0008A | | CHLRST | DS | 31H | REMAINING CHANNEL TABLE |
| | | * | | | SIZES AND FLAGS |
| 17 000C8 | | CHLDIG1 | DS | XL1 | FIRST DEVICE INTERACTION |
| | | * | | | GROUP ASSOCIATED |
| | | * | | | WITH THE CHANNEL. ZERO IS AN ILLEGAL |
| | | * | | | DIG NO. |
| 17 000C9 | | CHLDIG2 | DS | XL1 | SECOND DIG |
| 17 000CA | | CHLDIG3 | DS | XL1 | THIRD DIG |
| 17 000CB | | CHLDIG4 | DS | XL1 | FOURTH DIG |
| 17 000CC | | CHLDIG5 | DS | XL1 | FIFTH DIG |
| 17 000CD | | CHLDIG6 | DS | XL1 | SIXTH DIG |
| 17 000CE | | CHLDIG7 | DS | XL1 | SEVENTH DIG |
| 17 000CF | | CHLDIG8 | DS | XL1 | EIGHTH DIG |
| 17 000D0 | | CHLDIGS | DS | 31D | DIGS FOR REMAINING CHANNELS |
| 17 001C8 | | CHLBDY | DS | 0X | END OF CHANNEL TABLE |
| | | * | | | I5943 |
| | 000001C8 | CHLSZE | EQU | CHLBDY-CHLBEG | CHANNEL TABLE SIZE |
| | | * | | | I5943 |

## Task or Real Clock Table (CHACLK) and Clock List Header (CHACLH)

The Task Monitor PSECT maintains 16 real-time clocks and 16 task-time clocks in timer tables.  Each timer table is headed by a CHACLH header pointing to the active clock (CHACLK) having the least amount of time requested.

```
+-------------------------------------------------+
|              Real Clock Header                  |
+-------------------------------------------------+
|              Real Clock 0         .             |         Real Timer Table
|                     .                           |
|                     .                           |
|                     .                           |
|              Real Clock 15                      |
+-------------------------------------------------+
|              Task Clock Header                  |
+-------------------------------------------------+
|              Task Clock 0          .            |         Task Timer Table
|                     .                           |
|                     .                           |
|                     .                           |
|              Task Clock 15                      |
+-------------------------------------------------+
```
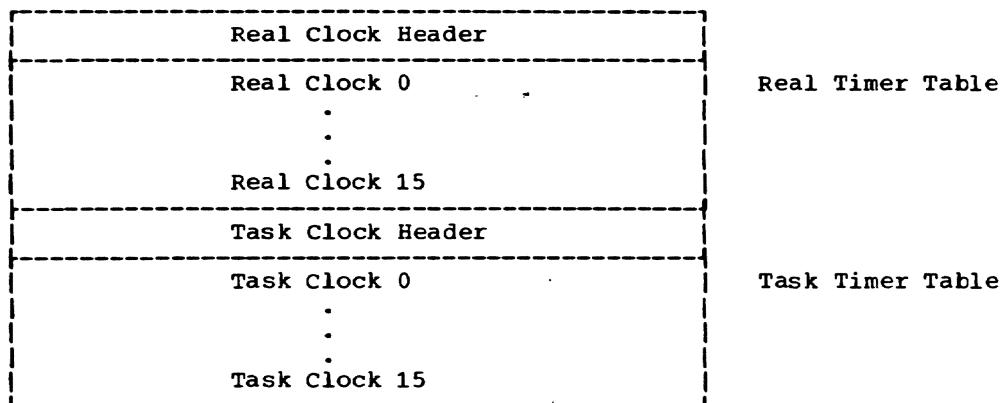
The Timer Tables

CHACLH occupies 16 bytes of virtual storage aligned on word boundaries.  CHACLK occupies 24 bytes of virtual storage aligned on word boundaries.

### CHACLK Storage map

| DEC | HEX | | | | |
|-----|-----|---|---|---|---|
| 0 | 0 | CLKNO | CLKAC | UNNAMED | UNNAMED |
| 8 | 8 | CLKTT | | | CLKTA |
| 16 | 10 | CLKBP | | | CLKFP |

### Fields in CHACLK -- by displacement

| DEC | HEX | FIELD | DEC | HEX | FIELD | DEC | HEX | FIELD |
|------|------|-------|------|------|-------|------|------|-------|
| 0000 | 0000 | CLKNO | 0008 | 0008 | CLKRT | 0020 | 0014 | CLKFP |
| 0002 | 0002 | CLKAC | 0012 | 000C | CLKTA | | | |
| 0008 | 0008 | CLKTT | 0016 | 0010 | CLKBP | | | |

### Alphabetical list of fields in CHACLK

| FIELD | DEC | HEX | FIELD | DEC | HEX | FIELD | DEC | HEX |
|-------|------|------|-------|------|------|-------|------|------|
| CLKAC | 0002 | 0002 | CLKNO | 0000 | 0000 | CLKTT | 0008 | 0008 |
| CLKBP | 0016 | 0010 | CLKRT | 0008 | 0008 | | | |
| CLKFP | 0020 | 0014 | CLKTA | 0012 | 000C | | | |

### Assembler listing of CHACLK

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|----------|-------------|--------|------|------|---------|
| | 19 00000 | CHACLK | DSECT | | TASK OR REAL CLOCK |
| 19 00000 | | | DS | 0F | |
| 19 00000 | | CLKNO | DS | H | CLOCK NUMBER |
| 19 00002 | | CLKAC | DS | CL1 | ACTIVITY INDICATOR |
| | 000000FF | CLKACM | EQU | X'FF' | ACTIVE CLOCK INDICATOR |
| | 00000000 | CLKACC | EQU | X'00' | INACTIVE CLOCK INDICATOR |
| 19 00003 | | | DS | CL1 | NOT USED |
| 19 00004 | | | DS | F | NOT USED |
| 19 00008 | | CLKRT | DS | 0CL8 | REAL TIME VALUE IN |
| | | * | | | MICROSECS. |
| 19 00008 | | CLKTT | DS | F | ACCUM.TASK TIME PLUS VALUE |
| | | * | | | BELOW |
| 19 0000C | | CLKTA | DS | F | ACTUAL TIME ASKED FOR |
| 19 00010 | | CLKBP | DS | F | BACKWARD POINTER |
| 19 00014 | | CLKFP | DS | F | FORWARD POINTER TO NEXT |
| | | * | | | CLOCK |

CHACLH Storage map

```
  DEC    HEX  _____
    0      0 |              CLHTT                |              CLHTA             |
           |  |_____|_____|
    8      8 |              CLHFP                |              CLHII             |
           |  |_____|_____|
```

Fields in CHACLH -- by displacement

| DEC | HEX | FIELD | DEC | HEX | FIELD | DEC | HEX | FIELD |
|------|------|-------|------|------|-------|------|------|-------|
| 0000 | 0000 | CLHTT | 0004 | 0004 | CLHTA | 0012 | 000C | CLHII |
| 0000 | 0000 | CLHRT | 0008 | 0008 | CLHFP |      |      |       |

Alphabetical list of fields in CHACLH

| FIELD | DEC | HEX | FIELD | DEC | HEX | FIELD | DEC | HEX |
|-------|------|------|-------|------|------|-------|------|------|
| CLHFP | 0008 | 0008 | CLHRT | 0000 | 0000 | CLHTT | 0000 | 0000 |
| CLHII | 0012 | 000C | CLHTA | 0004 | 0004 |       |      |      |

Assembler listing of CHACLH

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|----------|-------------|--------|------|------|---------|
|          | 18 00000    | CHACLH | DSECT |     | CLOCK LIST HEADER |
| 18 00000 |             |        | DS   | 0F   |         |
| 18 00000 |             | CLHRT  | DS   | 0CL8 | TIME VALUE SET VIA SETTR |
| 18 00000 |             | CLHTT  | DS   | F    | ACCUM.TIME REQUESTED TIME |
| 18 00004 |             | CLHTA  | DS   | F    | VALUE USED IN SETTU REQUEST |
| 18 00008 |             | CLHFP  | DS   | F    | PTR TO FIRST CLOCK IN CHAIN |
| 18 0000C |             | CLHII  | DS   | F    | IGNORE INDICATOR |

STARTUP Communications Region (CHACMR)

CHACMR is a copy of the communications region of STARTUP, including the link-edited IVM, RESSUP, and RSS to be used for restarts.  CHACMR is used by the QUICKSTART dataset creator in STARTUP.

CHACMR Storage map

| DEC | HEX | | | | | |
|-----|-----|---|---|---|---|---|
| 0 | 0 | CMREIAA | | RESERVED | | |
| 8 | 8 | CMRESTR | | | | |
| 16 | 10 | CMRDAM | | | | |
| 24 | 18 | CMRCRG8 | | CMRCRG9 | | |
| 32 | 20 | CMRCRG10 | | CMRCRG11 | | |
| 40 | 28 | CMRCRG12 | | CMRCRG13 | | |
| 48 | 30 | CMRCRG14 | | CMRIDS | | |
| 56 | 38 | CMRIDS (CONT) | | CMRSETO | CMRSENM | CMRCPUS |
| 64 | 40 | CMROTHC | CMRIPLC | CMRCCUS | | |
| 72 | 48 | CMRPART | | CMRCCBLN | CMRSULN | |
| 80 | 50 | CMRTERM | RESERVED | CMRVOLIP | | |
| 88 | 58 | CMRPRTAD | | CMRIPLID | | |
| 96 | 60 | CMRDSCBI | | CMRPATI | | |
| 104 | 68 | CMRSPLOC | | CMRCCBLC | | |
| 112 | 70 | CMRPFX | | | | |
| | | UNNAMED | | | | |
| 128 | 80 | CMRMCH | CMR32MSK | RESERVED | CMRTERSY | |
| 136 | 88 | CMRIPLSY | | CMRPGUSE | | |
| 144 | 90 | UNNAMED | | CMRSPDSY | | |
| 152 | 98 | CMRPPDSY | | | | |
| | | CMRDMLST | | | | |
| 168 | A8 | | | | | |
| | | CMRSERR | | | | |
| 184 | B8 | | | CMRPAGAD | | |
| 192 | C0 | CMRSPGAD | | CMRPMDOR | | |
| 200 | C8 | CMRDRUMS | RESERVED | CMRASD | | |
| 208 | D0 | CMRASDDR | | CMRDEV | CMRIMC01 | CMRWRDCT |
| 216 | D8 | CMRPAT | RESERVED | CMRTMTCT | CMRTMBFP | CMRTMTTP |
| 224 | E0 | CMRTMBSL | CMRTMBUF | CMRTMTER | RESERVED | |

| DEC | HEX | | | | | | | |
|-----|-----|---|---|---|---|---|---|---|
| 232 | E8 | CMRTCTVM | | | CMRBFPVM | | | |
| 240 | F0 | CMRMEMAD | | | CMRSPTAD | | | |
| 248 | F8 | CMRXTSI | | | CMROUP | | | |
| 256 | 100 | CMRINP | | | CMRPSABF | | | |
| 264 | 108 | CMRWORK | | | CMREXTAB | | | |
| 272 | 110 | CMRNPAT | | | CMRLDTBL | | | |
| 280 | 118 | CMRLDRSS | | | CMRTDYAD | | | |
| 288 | 120 | CMRTDYLN | | CMRTDYOV | | CMRLDTLN | | CMRRSSLN | |
| 296 | 128 | CMRMAPAD | | | CMROPOD | | | |
| 304 | 130 | CMRLLAD | | | CMRTAD | | | |
| 312 | 138 | CMRTAD2 | | | CMRSYMAD | | | |
| 320 | 140 | CMRSSCOM | | | CMRSSPT2 | | | |
| 328 | 148 | CMRSSPT3 | | | CMRSSXP4 | | | |
| 336 | 150 | CMRSSPGS | | CMRSYMPG | | CMRECAD | | | |
| 344 | 158 | CMRSERAD | | | CMRSSRO | | | |
| 352 | 160 | CMRSSADD | | | CMRADEND | | | |
| 360 | 168 | CMRSYMVM | | | CMRTDYVM | | | |
| 368 | 170 | CMRSDSVM | | | CMRVMAOR | | | |
| 376 | 178 | CMRSDAVM | | | CMRVSSVM | | | |
| 384 | 180 | CMRPVTVM | | | CMRISAVM | | | |
| 392 | 188 | CMRTDTVM | | | CMRSCMVM | | | |
| 400 | 190 | CMRVMDYL | | | CMRDLEP | | | |
| 408 | 198 | CMRVMTCM | | | CMRSARVM | | | |
| 416 | 1A0 | CMRSDALC | | | CMRSDAPG | | | |
| 424 | 1A8 | CMRVSSLC | | | CMRVSSPG | | | |
| 432 | 1B0 | CMRPVTLC | | | CMRPVTPG | | | |
| 440 | 1B8 | CMRISALC | | | CMRISAPG | | | |
| 448 | 1C0 | CMRTDTLC | | | CMRTDTPG | | | |
| 456 | 1C8 | CMRSCMLC | | | CMRSCMPG | | | |
| 464 | 1D0 | CMRVMDLL | | | CMRVMDLP | | | |
| 472 | 1D8 | UNNAMED | | | | | | |
| 480 | 1E0 | CMRTCML | | | CMRTCMP | | | |
| 488 | 1E8 | CMRSARLC | | | CMRSARPG | | | |

| DEC | HEX | | |
|-----|-----|---|---|
| 496 | 1F0 | CMRSSDAL | CMRSSDAP |
| 504 | 1F8 | CMRSCBT | CMRNMDEV |
| 512 | 200 | CMRINMTS | CMRNMTDE |
| 520 | 208 | CMRSSYS | CMRSASAT |
| 528 | 210 | CMRSSCN | CMRSPATH |
| 536 | 218 | CMRSPATP | CMRSPATR |
| 544 | 220 | CMRINTCM | CMRSTSKI |
| 552 | 228 | CMRSQGQE | CMRSSTE |
| 560 | 230 | CMRSDISP | CMRSQSCN |
| 568 | 238 | CMRSSCA | CMRSSCR |
| 576 | 240 | CMRSRSV | CMRSSTA |
| 584 | 248 | CMRSPSA | CMRNSVC |
| 592 | 250 | CMRSVCTB | CMRRSDAT |
| 600 | 258 | CMRSSDAT | CMRSIPE |
| 608 | 260 | CMRAEBRS | CMRASY |
| 616 | 268 | CMRPAPTR | CMRCOMAD |
| 624 | 270 | CMRLOWAD | CMRCATCT |
| 632 | 278 | CMRCABFP | CMRINAD |
| 640 | 280 | CMROUTAD | CMRSTART |
| 648 | 288 | CMRSXPT | CMRP1002 |
| 656 | 290 | CMRUSER \| RESERVED | |
| | = | CMRHSHDL | = |
| 704 | 2C0 | CMRCXDCN | CMRLLAST |
| 712 | 2C8 | CMRLLEND | CMRSG0LN |
| 720 | 2D0 | CMRSG1LN | CMRSG2LN |
| 728 | 2D8 | CMRSG3LN | CMRSG4LN |
| 736 | 2E0 | CMRSG5LN | CMRSG6LN |
| 744 | 2E8 | CMRSG7LN | CMRSG8LN |
| 752 | 2F0 | CMRSG9LN | CMRSGALN |
| 760 | 2F8 | CMRSGBLN | CMRSGCLN |
| 768 | 300 | CMRSGDLN | CMRSGELN |
| 776 | 308 | CMRSGFLN | CMRSG0AD |

| DEC | HEX | | |
|-----|-----|---|---|
| 784 | 310 | CMRSG1AD | CMRSG2AD |
| 792 | 318 | CMRSG3AD | CMRSG4AD |
| 800 | 320 | CMRSG5AD | CMRSG6AD |
| 808 | 328 | CMRSG7AD | CMRSG8AD |
| 816 | 330 | CMRSG9AD | CMRSGAAD |
| 824 | 338 | CMRSGBAD | CMRSGCAD |
| 832 | 340 | CMRSGDAD | CMRSGEAD |
| 840 | 348 | CMRSGFAD | CMRSGMT0 |
| 848 | 350 | CMRSGMT1 | CMRSGMT2 |
| 856 | 358 | CMRSGMT3 | CMRSGMT4 |
| 864 | 360 | CMRSGMT5 | CMRSGMT6 |
| 872 | 368 | CMRSGMT7 | CMRSGMT8 |
| 880 | 370 | CMRSGMT9 | CMRSGMTA |
| 888 | 378 | CMRSGMTB | CMRSGMTC |
| 896 | 380 | CMRSGMTD | CMRSGMTE |
| 904 | 388 | CMRSGMTF | CMRPAG0 |
| 912 | 390 | CMRPAG1 | CMRPAG2 |
| 920 | 398 | CMRPAG3 | CMRPAG4 |
| 928 | 3A0 | CMRPAG5 | CMRPAG6 |
| 936 | 3A8 | CMRPAG7 | CMRPAG8 |
| 944 | 3B0 | CMRPAG9 | CMRPAGA |
| 952 | 3B8 | CMRPAGB | CMRPAGC |
| 960 | 3C0 | CMRPAGD | CMRPAGE |
| 968 | 3C8 | CMRPAGF | CMRNASVM |
| 976 | 3D0 | CMRNASNM | CMRPVSEG |
| 1008 | 3F0 | | CMRPBSEG |
| 1040 | 410 | RESERVED | CMRCRG0 |

```
       DEC    HEX
      1048    418 |              CMRCRG1                 |              CMRCRG2              |
                  |                                      |                                   |
      1056    420 |              CMRCRG3                 |              CMRCRG4              |
                  |                                      |                                   |
      1064    428 |              CMRCRG5                 |              CMRCRG6              |
                  |                                      |                                   |
      1072    430 |              CMRCRG7                 | CMRGTDR | CMRGTFL | CMRGTNC | RESERVED |
                  |                                      |                                   |
      1080    438 |     CMRGTNUM    |    RESERVED        |              CMRRETAD             |
                  |                                      |                                   |
      1088    440 | CMRSSFL |       RESERVED             |                                   |
                  |=                          CMRSAVE                                        =|
                  |                                                                          |
                  |                                                                          |
      1152    480 |                                                                          |
                  |=                          CMRDSCB                                        =|
                  |                                                                          |
                  |                                                                          |
      1408    580 |                                                                          |
                  |=                          CMRDSTBL                                       =|
                  |                                                                          |
                  |                                                                          |
      1608    648 |                                                                          |
                  |=                          CMRPCU                                         =|
                  |                                                                          |
                  |                                                                          |
      1728    6C0 |                                                                          |
                  |=                          CMRDSTR                                        =|
                  |                                                                          |
                  |                                                                          |
      1808    710 |              CMRDSNAD               |     CMRHRCHY     |     CMRDSCNT    |
                  |                                      |                  |                |
      1816    718 |    CMRDDSC0    |    CMRCSNTR         |     CMRPDCNT     |     RESERVED    |
                  |                                      |                  |                |
      1824    720 |              CMRDSINP               |              CMRDSLST             |
                  |                                      |                                   |
      1832    728 |              CMRDVOL                |    CMREXDIS     |    CMRDSDIS     |
                  |                                      |                  |                |
      1840    730 |                          CMRNMTCT                                        |
                  |                                                                          |
      1848    738 |                          CMRNMBFP                                        |
                  |                                                                          |
      1856    740 |              CMRCRVOL               |              CMRQUAL              |
                  |                                      |                                   |
      1864    748 |              CMRQUAL1               |              CMRQUALS             |
                  |                                      |                                   |
      1872    750 |              CMRQUALR               |              CMRALLDS             |
                  |                                      |                                   |
      1880    758 |                                                                          |
                  |=                          CMRTDYTB                                       =|
                  |                                                                          |
                  |                                                                          |
```

```
DEC    HEX
2136   858 |                                                                    |
           =                          CMRINPUT                                   =
           |                                                                    |
2216   8A8 |                                                                    |
           |                                                                    |
           |                                                                    |
           |                          CMRPATCH                                  |
           |                                                                    |
           |                                                                    |
2256   8D0 |           CMRSOAI          |              CMRSOAN                   |
2264   8D8 |           CMRPGSVE         |              CMRMPBG                   |
2272   8E0 |           CMRYMCUR         |              RESERVED                  |
2280   8E8 |                         CMRTRMNT                                   |
2288   8F0 |                                                                    |
           |                          CMRTRTB                                   |
2304   900 |      CMRCEND        | RESERVED |                                   |
           |                            CMRENDMK                                |
2320   910 |                          CMRZEROS                                  |
2328   918 |          CMRSEGMK          |              CMRONE                    |
2336   920 |          CMR256            |              CMRLIDMS                  |
2344   928 |          CMRLIDMP          |              CMRMMSK                   |
2352   930 | UNNAMED   |    CMRPGLTH    |    CMRDEFCT   |    CMRLXPT             |
2360   938 | CMRLXPST  |    CMRTWO      |    CMRFOUR    |                       |
2368   940 |                  CMRDSNAM              |           |CMRDSQAL|      |
2376   948 |      CMRDSQAL(CONT)            |           RESERVED                |
2384   950 |                          CMRNAME                                   |
2392   958 | UNNAMED   |    CMRCZ       |        CMRCHB       |CMRTDYNM|         |
2400   960 |                  CMRTDYNM(CONT)        |CMRMAPNM|                   |
2408   968 |                  CMRMAPNM(CONT)        |CMREXTNM|                   |
2416   970 |                  CMREXTNM(CONT)        |CMRPGWRT|                   |
2424   978 |CMRMAP |  CMRVAM2   |RESERVED|          UNNAMED                      |
2432   980 |          CMRTRANV          |              CMRRDPDV                  |
2440   988 |          CMRSRCHV          |              CMRLOCXV                  |
2448   990 |          CMRHASHV          |              CMRSAVEV                  |
```

| DEC | HEX | | | | | | | |
|-----|-----|---|---|---|---|---|---|---|

```
 DEC    HEX
2456    998|        CMRGTXSV              |             CMRBS13
2464    9A0|        CMRHSHSV              |             CMRMODSV
2472    9A8|        CMRRDNSV              |   CMRSTLEN     |      RESERVED
2480    9B0|        CMRSARSV              |   CMREADER     |   CMRMODNM
2488    9B8|            CMRMODNM(CONT)                    |   CMREXTNO
2496    9C0| CMRPARTM   | CMRTEMP | CMROVFG | CMRCSW1 | CMRCSW2 | CMRDLBT | RESERVED
2504    9C8|        CMRIOAD              |   CMRIOLEN     | CMRIOFG | RESERVED
2512    9D0|        CMRGRP1              |             CMRGRP2
2520    9D8|        CMRGRPS1             |             CMRGRPS2
2528    9E0|        CMREQAD1             |             CMREQAD2
2536    9E8|        CMRETAD1             |             CMRETAD2
2544    9F0|        CMRBUFF1             |             CMRBUFF2
2552    9F8|        CMRBLDF              |             CMRBLDX
2560    A00|        CMRMAXTD             |   CMRBFLN     |      RESERVED
2568    A08|        CMRSCED              |             RESERVED
2576    A10|                    CMRCCW05
2584    A18|                    CMRCCW06
2592    A20|                    CMRIVM
2600    A28|
           |                    CMRSUP
2616    A38|
           |                    CMRRSS
2632    A48|                              |      RESERVED
2640    A50|        CMRFSTSU             |             CMRSPSV
2648    A58| CMRQKTYP  |    CMRQKVOL    |    CMRQKPAT   |    CMRQKCPU
2656    A60| CMRQKPVT  |    CMRRPNE     |    CMRSLTE    |    CMRSRQKF
2664    A68| CMRSRQKL  |    CMRSRCNT   | CMRQKFG |      CMRQKID
2672    A70|    CMRQKID (CONT)        | RESERVED |
           =                    CMRQKMAP                              =
           |
2744    AB8|                              |         UNNAMED
2752    AC0|                    CMRVMLL
2760    AC8| UNNAMED  |                 CMRRCLL
```

| DEC | HEX | | | | |
|---|---|---|---|---|---|
| 2768 | AD0 | CMRRCLL | UNNAMED | CMRRSLL | |
| 2776 | AD8 | CMRRSLL (CONT) | UNNAMED | CMRPGIND | CMRMSK1B |
| 2784 | AE0 | CMRMSK2 | | CMRMSK3 | |
| 2792 | AE8 | CMRMSKE | | CMRMSK7 | |
| 2800 | AF0 | CMRMSK8 | | CMRMSK9 | |
| 2808 | AF8 | CMRMSK11 | | CMRMUTCT | CMRSPTNO |
| 2816 | B00 | CMRLSPT | CMRSSVE | CMRBLANK | |
| 2824 | B08 | CMRBLANK (CONT) | | CMRMXHDI | |
| 2832 | B10 | CMRMXHDR | | CMRAEAR | |
| 2840 | B18 | CMRPAGEV | | CMRFXBTL | |
| 2848 | B20 | CMRFXBS | | CMRPGTAD | |
| 2856 | B28 | CMRINADV | | CMRVIRT | |
| 2864 | B30 | CMRTEXTN | | CMRNOBT | |
| 2872 | B38 | CMRERLD | | CMRERND | |
| 2880 | B40 | CMRIRLD | | CMRIRND | |
| 2888 | B48 | CMRVMPT | | CMRSEPCS | |
| 2896 | B50 | CMRMODCO | CMRINPSZ | CMROUTSZ | CMRSEGSW |
| 2904 | B58 | CMRSSSW | CMRMVESW CMRNLLSW | CMRCDFSW CMRSERSW | CMRUTI |
| 2912 | B60 | CMRUTI (CONT) | CMRIPLY CMRSLSW | CMRNMPTH | |
| 2920 | B68 | CMRSDAC | | CMRCORE | |
| 2928 | B70 | CMRPTMP | | CMTRTPG | |
| 2936 | B78 | CMRBFGT | | CMRTDE | |
| 2944 | B80 | CMRMODFY | | CMREIAA2 | |
| 2952 | B88 | CMROPER | | CMRPRINT | |
| 2960 | B90 | CMRMSGTB | | CMRPPCCW | |
| 2968 | B98 | CMRADTRN | | CMRATRAN | |
| 2976 | BA0 | CMRBTRAN | | CMRCTRAN | |
| 2984 | BA8 | CMRLOCX | | CMREXTNT | |
| 2992 | BB0 | CMRHASH | | CMRORGIN | |
| 3000 | BB8 | CMRWRTDY | | CMRXTSRT | |
| 3008 | BC0 | CMRSHPT | | CMRRSPI | |
| 3016 | BC8 | CMRFORM | | CMRSETPT | |
| 3024 | BD0 | CMRNAMLC | | CMRRDPOD | |

| DEC | HEX | | |
|---|---|---|---|
| 3032 | BD8 | CMRMAPGN | CMRCOMTB |
| 3040 | BE0 | CMRWRSYM | CMRADDPG |
| 3048 | BE8 | CMRBSDST | CMRESRVP |
| 3056 | BF0 | CMRGTFLD | CMRWTMD |
| 3064 | BF8 | CMRWRXTS | CMRSOAPG |
| 3072 | C00 | CMRHOLTB | CMRENDTB |
| 3080 | C08 | CMRHOLVL | CMRQRDR |
| 3088 | C10 | CMRBGNTD | CMRLLLNK |
| 3096 | C18 | CMRLLSCN | CMRSRCN |
| 3104 | C20 | CMRLDPMD | CMRSDAT |
| 3112 | C28 | CMRDATA | CMRCYLHD |
| 3120 | C30 | CMRSMFSA | CMRSORD |
| 3128 | C38 | CMROTHER | CMRGTPAT |
| 3136 | C40 | CMRRDSCB | CMRTDTCT |
| 3144 | C48 | CMRREAD | CMROPRT |
| 3152 | C50 | CMRDELDS | CMRDLTBL |
| 3160 | C58 | CMRDLBTB | CMRELTDY |
| 3168 | C60 | CMRALLER | CMRSLOAD |
| 3176 | C68 | CMRSRCH | CMRNMTAB |
| 3184 | C70 | CMRSERR1 | CMRSTERM |
| 3192 | C78 | CMRLOADL | CMRHSHSR |
| 3200 | C80 | CMREADIN | CMRSEEK |
| 3208 | C88 | CMREROUT | CMRBLDTB |
| 3216 | C90 | CMRPGTDY | CMRJSHB2 |
| 3224 | C98 | CMRJSHBA | CMRADTIT |
| 3232 | CA0 | CMRSTRAN | CMRRTRAN |
| 3240 | CA8 | CMRPGXTS | CMRASAT |
| 3248 | CB0 | CMRDIRSZ | CMRQKRD |
| 3256 | CB8 | CMRQKSTA | CMRENAB |

ORG   CMRESTR

| 8 | 8 | UNNAMED | UNNAMED | CMRIXPG | UNNAMED |
|---|---|---|---|---|---|

Fields in CHACMR -- by displacement

| DEC | HEX | FIELD | | DEC | HEX | FIELD | | DEC | HEX | FIELD |
|-----|-----|-------|---|-----|-----|-------|---|-----|-----|-------|
| 0000 | 0000 | CMREIAA | | 0248 | 00F8 | CMRXTSI | | 0488 | 01E8 | CMRSARLC |
| 0008 | 0008 | CMRESTR | | 0252 | 00FC | CMROUP | | 0492 | 01EC | CMRSARPG |
| 0008 | 0008 | CMRPREL | | 0252 | 00FC | CMRBUFFA | | 0496 | 01F0 | CMRSSDAL |
| 0010 | 000A | CMRIXPG | | 0256 | 0100 | CMRINP | | 0496 | 01F0 | CMRSSCSL |
| 0016 | 0010 | CMRDAM | | 0260 | 0104 | CMRPSABF | | 0500 | 01F4 | CMRSSDAP |
| 0024 | 0018 | CMRCRG8 | | 0264 | 0108 | CMRWORK | | 0504 | 01F8 | CMRSCBT |
| 0028 | 001C | CMRCRG9 | | 0268 | 010C | CMREXTAB | | 0508 | 01FC | CMRNMDEV |
| 0032 | 0020 | CMRCRG10 | | 0268 | 010C | CMRRDWR | | 0512 | 0200 | CMRINMTS |
| 0036 | 0024 | CMRCRG11 | | 0272 | 0110 | CMRNPAT | | 0516 | 0204 | CMRNMTDE |
| 0040 | 0028 | CMRCRG12 | | 0276 | 0114 | CMRLDTBL | | 0520 | 0208 | CMRSSYS |
| 0044 | 002C | CMRCRG13 | | 0276 | 0114 | CMRQKDS | | 0524 | 020C | CMRSASAT |
| 0048 | 0030 | CMRCRG14 | | 0280 | 0118 | CMRLDRSS | | 0528 | 0210 | CMRSSCN |
| 0052 | 0034 | CMRIDS | | 0280 | 0118 | CMRQKREC | | 0532 | 0214 | CMRSPATH |
| 0060 | 003C | CMRSETO | | 0284 | 011C | CMRTDYAD | | 0536 | 0218 | CMRSPATP |
| 0061 | 003D | CMRSENM | | 0288 | 0120 | CMRTDYLN | | 0540 | 021C | CMRSPATR |
| 0062 | 003E | CMRCPUS | | 0290 | 0122 | CMRTDYOV | | 0544 | 0220 | CMRINTCM |
| 0064 | 0040 | CMROTHC | | 0292 | 0124 | CMRLDTLN | | 0548 | 0224 | CMRSTSKI |
| 0067 | 0043 | CMRIPLC | | 0294 | 0126 | CMRRSSLN | | 0552 | 0228 | CMRSQGQE |
| 0068 | 0044 | CMRSIMP (EQU) | | 0296 | 0128 | CMRMAPAD | | 0556 | 022C | CMRSSTE |
| 0068 | 0044 | CMRCCUS | | 0300 | 012C | CMROPOD | | 0560 | 0230 | CMRSDISP |
| 0072 | 0048 | CMRPART | | 0304 | 0130 | CMRLLAD | | 0564 | 0234 | CMRSQSCN |
| 0076 | 004C | CMRCCBLN | | 0308 | 0134 | CMRTAD | | 0568 | 0238 | CMRSSCA |
| 0078 | 004E | CMRSULN | | 0312 | 0138 | CMRTAD2 | | 0572 | 023C | CMRSSCR |
| 0080 | 0050 | CMRTERM | | 0316 | 013C | CMRSYMAD | | 0576 | 0240 | CMRSRSV |
| 0084 | 0054 | CMRVOLTC (EQU) | | 0320 | 0140 | CMRSSCOM | | 0580 | 0244 | CMRSSTA |
| 0084 | 0054 | CMRVOLIP | | 0324 | 0144 | CMRSSPT2 | | 0584 | 0248 | CMRSPSA |
| 0086 | 0056 | CMRVOLAD (EQU) | | 0328 | 0148 | CMRSSPT3 | | 0588 | 024C | CMRNSVC |
| 0088 | 0058 | CMRPRTAD | | 0332 | 014C | CMRSSXP4 | | 0592 | 0250 | CMRSVCTB |
| 0090 | 005A | CMRIPLID | | 0336 | 0150 | CMRSSPGS | | 0596 | 0254 | CMRRSDAT |
| 0096 | 0060 | CMRDSCBI | | 0338 | 0152 | CMRSYMPG | | 0600 | 0258 | CMRSSDAT |
| 0100 | 0064 | CMRPATI | | 0340 | 0154 | CMRECAD | | 0600 | 0258 | CMRSSCSN |
| 0104 | 0068 | CMRSPLOC | | 0344 | 0158 | CMRSERAD | | 0604 | 025C | CMRSIPE |
| 0108 | 006C | CMRCCBAD (EQU) | | 0348 | 015C | CMRSSRO | | 0608 | 0260 | CMRAEBRS |
| 0108 | 006C | CMRCCBLC | | 0352 | 0160 | CMRSSADD | | 0612 | 0264 | CMRASY |
| 0112 | 0070 | CMRPSAS (EQU) | | 0356 | 0164 | CMRADEND | | 0616 | 0268 | CMRPAPTR |
| 0112 | 0070 | CMRPFX | | 0360 | 0168 | CMRSYMVM | | 0620 | 026C | CMRCOMAD |
| 0128 | 0080 | CMRMCH | | 0364 | 016C | CMRTDYVM | | 0624 | 0270 | CMRLOWAD |
| 0129 | 0081 | CMR32MSK | | 0368 | 0170 | CMRSDSVM | | 0628 | 0274 | CMRCATCT |
| 0132 | 0084 | CMRTERSY | | 0372 | 0174 | CMRVMAOR | | 0632 | 0278 | CMRCABFP |
| 0136 | 0088 | CMRIPLSY | | 0376 | 0178 | CMRSDAVM | | 0636 | 027C | CMRINAD |
| 0140 | 008C | CMRPGUSE | | 0376 | 0178 | CMRIVMCN | | 0640 | 0280 | CMROUTAD |
| 0148 | 0094 | CMRSPDSY | | 0380 | 017C | CMRVSSVM | | 0644 | 0284 | CMRSTART |
| 0152 | 0098 | CMRPPDSY | | 0384 | 0180 | CMRPVTVM | | 0648 | 0288 | CMRSXPT |
| 0156 | 009C | CMRDMLST | | 0388 | 0184 | CMRISAVM | | 0652 | 028C | CMRP1002 |
| 0172 | 00AC | CMRSERR | | 0392 | 0188 | CMRTDTVM | | 0656 | 0290 | CMRUSER |
| 0188 | 00BC | CMRPAGAD | | 0396 | 018C | CMRSCMVM | | 0660 | 0294 | CMRHSHDL |
| 0192 | 00C0 | CMRSPGAD | | 0400 | 0190 | CMRVMDYL | | 0704 | 02C0 | CMRCXDCN |
| 0196 | 00C4 | CMRPMDOR | | 0404 | 0194 | CMRDLEP | | 0708 | 02C4 | CMRLLAST |
| 0200 | 00C8 | CMRDRUMS | | 0408 | 0198 | CMRVMTCM | | 0712 | 02C8 | CMRLLEND |
| 0204 | 00CC | CMRASD | | 0412 | 019C | CMRSARVM | | 0716 | 02CC | CMRSG0LN |
| 0208 | 00D0 | CMRASDDR | | 0416 | 01A0 | CMRSDALC | | 0716 | 02CC | CMRSGLN |
| 0212 | 00D4 | CMRDEV | | 0416 | 01A0 | CMRIVMCS | | 0720 | 02D0 | CMRSG1LN |
| 0214 | 00D6 | CMRIMC01 | | 0420 | 01A4 | CMRSDAPG | | 0724 | 02D4 | CMRSG2LN |
| 0214 | 00D6 | CMRINT | | 0424 | 01A8 | CMRVSSLC | | 0728 | 02D8 | CMRSG3LN |
| 0215 | 00D7 | CMRWRDCT | | 0428 | 01AC | CMRVSSPG | | 0732 | 02DC | CMRSG4LN |
| 0216 | 00D8 | CMRPAT | | 0432 | 01B0 | CMRPVTLC | | 0736 | 02E0 | CMRSG5LN |
| 0218 | 00DA | CMRTMTCT | | 0436 | 01B4 | CMRPVTPG | | 0740 | 02E4 | CMRSG6LN |
| 0220 | 00DC | CMRTMBFP | | 0440 | 01B8 | CMRISALC | | 0744 | 02E8 | CMRSG7LN |
| 0222 | 00DE | CMRTMTTP | | 0444 | 01BC | CMRISAPG | | 0748 | 02EC | CMRSG8LN |
| 0224 | 00E0 | CMRTMBSL | | 0448 | 01C0 | CMRTDTLC | | 0752 | 02F0 | CMRSG9LN |
| 0226 | 00E2 | CMRTMBUF | | 0452 | 01C4 | CMRTDTPG | | 0756 | 02F4 | CMRSGALN |
| 0228 | 00E4 | CMRTMTER | | 0456 | 01C8 | CMRSCMLC | | 0760 | 02F8 | CMRSGBLN |
| 0232 | 00E8 | CMRTCTVM | | 0460 | 01CC | CMRSCMPG | | 0764 | 02FC | CMRSGCLN |
| 0236 | 00EC | CMRBFPVM | | 0464 | 01D0 | CMRVMDLL | | 0768 | 0300 | CMRSGDLN |
| 0240 | 00F0 | CMRMEMAD | | 0468 | 01D4 | CMRVMDLP | | 0772 | 0304 | CMRSGELN |
| 0244 | 00F4 | CMRSPTAD | | 0480 | 01E0 | CMRTCML | | 0776 | 0308 | CMRSGFLN |
| 0244 | 00F4 | CMRBUFFS | | 0484 | 01E4 | CMRTCMP | | 0780 | 030C | CMRSG0AD |

| DEC | HEX | FIELD | | DEC | HEX | FIELD | | DEC | HEX | FIELD | |
|-----|-----|-------|--|-----|-----|-------|--|-----|-----|-------|--|
| 0780 | 030C | CMRSGAD | | 1084 | 043C | CMRRETAD | | 2436 | 0984 | CMRRDPDV | |
| 0784 | 0310 | CMRSG1AD | | 1088 | 0440 | CMRSSFL | | 2440 | 0988 | CMRSRCHV | |
| 0788 | 0314 | CMRSG2AD | | 1092 | 0444 | CMRSAVE | | 2444 | 098C | CMRLOCXV | |
| 0792 | 0318 | CMRSG3AD | | 1152 | 0480 | CMRDSCB | | 2448 | 0990 | CMRHASHV | |
| 0796 | 031C | CMRSG4AD | | 1408 | 0580 | CMRSDTB | (EQU) | 2452 | 0994 | CMRSAVEV | |
| 0800 | 0320 | CMRSG5AD | | 1408 | 0580 | CMRDSTBL | | 2456 | 0998 | CMRGTXSV | |
| 0804 | 0324 | CMRSG6AD | | 1608 | 0648 | CMRPCU | | 2460 | 099C | CMRBS13 | |
| 0808 | 0328 | CMRSG7AD | | 1728 | 06C0 | CMRDSTR | | 2464 | 09A0 | CMRHSHSV | |
| 0812 | 032C | CMRSG8AD | | 1808 | 0710 | CMRDSNAD | | 2468 | 09A4 | CMRMODSV | |
| 0816 | 0330 | CMRSG9AD | | 1812 | 0714 | CMRHRCHY | | 2472 | 09A8 | CMRRDNSV | |
| 0820 | 0334 | CMRSGAAD | | 1814 | 0716 | CMRDSCNT | | 2476 | 09AC | CMRSTLEN | |
| 0824 | 0338 | CMRSGBAD | | 1816 | 0718 | CMRDDSC0 | | 2480 | 09B0 | CMRSARSV | |
| 0828 | 033C | CMRSGCAD | | 1818 | 071A | CMRCSNTR | | 2484 | 09B4 | CMREADER | |
| 0832 | 0340 | CMRSGDAD | | 1820 | 071C | CMRPDCNT | | 2486 | 09B6 | CMRMODNM | |
| 0836 | 0344 | CMRSGEAD | | 1824 | 0720 | CMRDSINP | | 2494 | 09BE | CMREXTNO | |
| 0840 | 0348 | CMRSGFAD | | 1828 | 0724 | CMRDSLST | | 2496 | 09C0 | CMRPARTM | |
| 0844 | 034C | CMRS0PG1 | (EQU) | 1832 | 0728 | CMRDVOLT | (EQU) | 2498 | 09C2 | CMRTEMP | |
| 0844 | 034C | CMRSGMT0 | | 1832 | 0728 | CMRDVOL | | 2499 | 09C3 | CMROVFG | |
| 0844 | 034C | CMRSGMT | | 1834 | 072A | CMRDVOLA | (EQU) | 2500 | 09C4 | CMRCSW1 | |
| 0848 | 0350 | CMRSGMT1 | | 1836 | 072C | CMREXDIS | | 2501 | 09C5 | CMRCSW2 | |
| 0852 | 0354 | CMRSSOR | (EQU) | 1838 | 072E | CMRDSDIS | | 2502 | 09C6 | CMRDLBT | |
| 0852 | 0354 | CMRSGMT2 | | 1840 | 0730 | CMRNMTCT | | 2504 | 09C8 | CMRIOAD | |
| 0856 | 0358 | CMRSGMT3 | | 1848 | 0738 | CMRNMBFP | | 2508 | 09CC | CMRIOLEN | |
| 0860 | 035C | CMRSGMT4 | | 1856 | 0740 | CMRCRVOL | | 2510 | 09CE | CMRIOFG | |
| 0864 | 0360 | CMRSGMT5 | | 1860 | 0744 | CMRQUAL | | 2512 | 09D0 | CMRGRP1 | |
| 0868 | 0364 | CMRSGMT6 | | 1864 | 0748 | CMRQUAL1 | | 2516 | 09D4 | CMRGRP2 | |
| 0872 | 0368 | CMRSGMT7 | | 1868 | 074C | CMRQUALS | | 2520 | 09D8 | CMRGRPS1 | |
| 0876 | 036C | CMRSGMT8 | | 1872 | 0750 | CMRQUALR | | 2524 | 09DC | CMRGRPS2 | |
| 0880 | 0370 | CMRSGMT9 | | 1876 | 0754 | CMRALLDS | | 2528 | 09E0 | CMREQAD1 | |
| 0884 | 0374 | CMRSGMTA | | 1880 | 0758 | CMRTDYTB | | 2532 | 09E4 | CMREQAD2 | |
| 0888 | 0378 | CMRSGMTB | | 2136 | 0858 | CMRINPUT | | 2536 | 09E8 | CMRETAD1 | |
| 0892 | 037C | CMRSGMTC | | 2216 | 08A8 | CMRPATCH | | 2540 | 09EC | CMRETAD2 | |
| 0896 | 0380 | CMRSGMTD | | 2256 | 08D0 | CMRSOAI | | 2544 | 09F0 | CMRBUFF1 | |
| 0900 | 0384 | CMRSGMTE | | 2260 | 08D4 | CMRSOAN | | 2548 | 09F4 | CMRBUFF2 | |
| 0904 | 0388 | CMRSGMTF | | 2264 | 08D8 | CMRPGSVE | | 2552 | 09F8 | CMRBLDF | |
| 0908 | 038C | CMRPAG0 | | 2268 | 08DC | CMRMPBG | | 2556 | 09FC | CMRBLDX | |
| 0908 | 038C | CMRPAG | | 2272 | 08E0 | CMRYMCUR | | 2560 | 0A00 | CMRMAXTD | |
| 0912 | 0390 | CMRPAG1 | | 2280 | 08E8 | CMRTRMNT | | 2564 | 0A04 | CMRBFLN | |
| 0916 | 0394 | CMRPAG2 | | 2288 | 08F0 | CMRTRTB | | 2568 | 0A08 | CMRSCED | |
| 0920 | 0398 | CMRPAG3 | | 2304 | 0900 | CMRCEND | | 2576 | 0A10 | CMRCCW05 | |
| 0924 | 039C | CMRPAG4 | | 2308 | 0904 | CMRENDMK | | 2584 | 0A18 | CMRCCW06 | |
| 0928 | 03A0 | CMRPAG5 | | 2320 | 0910 | CMRZEROS | | 2590 | 0A1E | CMRCCW6B | (EQU) |
| 0932 | 03A4 | CMRPAG6 | | 2328 | 0918 | CMRSEGMK | | 2592 | 0A20 | CMRIVM | |
| 0936 | 03A8 | CMRPAG7 | | 2332 | 091C | CMRONE | | 2607 | 0A2F | CMRSUP | |
| 0940 | 03AC | CMRPAG8 | | 2334 | 091E | CMRONE1 | (EQU) | 2622 | 0A3E | CMRRSS | |
| 0944 | 03B0 | CMRPAG9 | | 2336 | 0920 | CMR256 | | 2640 | 0A50 | CMRFSTSU | |
| 0948 | 03B4 | CMRPAGA | | 2340 | 0924 | CMRLIDMS | | 2644 | 0A54 | CMRSPSV | |
| 0952 | 03B8 | CMRPAGB | | 2344 | 0928 | CMRLIDMP | | 2648 | 0A58 | CMRQKTYP | |
| 0956 | 03BC | CMRPAGC | | 2348 | 092C | CMRMMSK | | 2650 | 0A5A | CMRQKVOL | |
| 0960 | 03C0 | CMRPAGD | | 2354 | 0932 | CMRPGLTH | | 2652 | 0A5C | CMRQKPAT | |
| 0964 | 03C4 | CMRPAGE | | 2356 | 0934 | CMRDEFCT | | 2654 | 0A5E | CMRQKCPU | |
| 0968 | 03C8 | CMRPAGF | | 2358 | 0936 | CMRLXPT | | 2656 | 0A60 | CMRQKPVT | |
| 0972 | 03CC | CMRNASVM | | 2360 | 0938 | CMRLXPST | | 2658 | 0A62 | CMRRPNE | |
| 0976 | 03D0 | CMRNASNM | | 2362 | 093A | CMRTWO | | 2660 | 0A64 | CMRSLTE | |
| 0978 | 03D2 | CMRPVSEG | | 2364 | 093C | CMRFOUR | | 2662 | 0A66 | CMRSRQKF | |
| 1010 | 03F2 | CMRPBSEG | | 2366 | 093E | CMRDSNAM | | 2664 | 0A68 | CMRSRQKL | |
| 1044 | 0414 | CMRCRG0 | | 2375 | 0947 | CMRDSQAL | | 2666 | 0A6A | CMRSRCNT | |
| 1048 | 0418 | CMRCRG1 | | 2384 | 0950 | CMRNAME | | 2668 | 0A6C | CMRQKFG | |
| 1052 | 041C | CMRCRG2 | | 2394 | 095A | CMRCZ | | 2669 | 0A6D | CMRQKID | |
| 1056 | 0420 | CMRCRG3 | | 2396 | 095C | CMRCHB | | 2676 | 0A74 | CMRQKMAP | |
| 1060 | 0424 | CMRCRG4 | | 2399 | 095F | CMRTDYNM | | 2752 | 0AC0 | CMRVMLL | |
| 1064 | 0428 | CMRCRG5 | | 2407 | 0967 | CMRMAPNM | | 2761 | 0AC9 | CMRRCLL | |
| 1068 | 042C | CMRCRG6 | | 2415 | 096F | CMREXTNM | | 2770 | 0AD2 | CMRRSLL | |
| 1072 | 0430 | CMRCRG7 | | 2423 | 0977 | CMRPGWRT | | 2779 | 0ADB | CMRPGIND | |
| 1076 | 0434 | CMRGTDR | | 2424 | 0978 | CMRMAP | | 2780 | 0ADC | CMRMSK1B | |
| 1077 | 0435 | CMRGTFL | | 2425 | 0979 | CMRVAM2 | | 2784 | 0AE0 | CMRMSK2 | |
| 1078 | 0436 | CMRGTNC | | 2428 | 097C | CMRMINUS | | 2788 | 0AE4 | CMRMSK3 | |
| 1080 | 0438 | CMRGTNUM | | 2432 | 0980 | CMRTRANV | | 2792 | 0AE8 | CMRMSKE | |

| DEC | HEX | FIELD | | DEC | HEX | FIELD | | DEC | HEX | FIELD |
|---|---|---|---|---|---|---|---|---|---|---|
| 2796 | 0AEC | CMRMSK7 | | 2928 | 0B70 | CMRPTMP | | 3100 | 0C1C | CMRSRCN |
| 2800 | 0AF0 | CMRMFFF | (EQU) | 2932 | 0B74 | CMTRTPG | | 3104 | 0C20 | CMRLDPMD |
| 2800 | 0AF0 | CMRMSK8 | | 2936 | 0B78 | CMRBFGT | | 3108 | 0C24 | CMRSDAT |
| 2802 | 0AF2 | CMRUSECT | (EQU) | 2940 | 0B7C | CMRTDE | | 3112 | 0C28 | CMRDATA |
| 2804 | 0AF4 | CMRMSK9 | | 2944 | 0B80 | CMRMODFY | | 3116 | 0C2C | CMRCYLHD |
| 2808 | 0AF8 | CMRMSK11 | | 2948 | 0B84 | CMREIAA2 | | 3120 | 0C30 | CMRSMFSA |
| 2812 | 0AFC | CMRMUTCT | | 2952 | 0B88 | CMROPER | | 3124 | 0C34 | CMRSORD |
| 2814 | 0AFE | CMRSPTNO | | 2956 | 0B8C | CMRWT (EQU) | | 3128 | 0C38 | CMROTHER |
| 2816 | 0B00 | CMRLSPT | | 2956 | 0B8C | CMRPRINT | | 3132 | 0C3C | CMRGTPAT |
| 2818 | 0B02 | CMRSSVE | | 2960 | 0B90 | CMRMSGTB | | 3136 | 0C40 | CMRRDSCB |
| 2820 | 0B04 | CMRBLANK | | 2964 | 0B94 | CMRPPCCW | | 3140 | 0C44 | CMRTDTCT |
| 2828 | 0B0C | CMRMXHDI | | 2968 | 0B98 | CMRADTRN | | 3144 | 0C48 | CMRREAD |
| 2832 | 0B10 | CMRMXHDR | | 2972 | 0B9C | CMRATRAN | | 3148 | 0C4C | CMROPRT |
| 2836 | 0B14 | CMRAEAR | | 2976 | 0BA0 | CMRBTRAN | | 3152 | 0C50 | CMRDELDS |
| 2840 | 0B18 | CMRPAGEV | | 2980 | 0BA4 | CMRCTRAN | | 3156 | 0C54 | CMRDLTBL |
| 2844 | 0B1C | CMRFXBTL | | 2984 | 0BA8 | CMRLOCX | | 3160 | 0C58 | CMRDLBTB |
| 2848 | 0B20 | CMRFXBS | | 2988 | 0BAC | CMREXTNT | | 3164 | 0C5C | CMRELTDY |
| 2852 | 0B24 | CMRPGTAD | | 2992 | 0BB0 | CMRHASH | | 3168 | 0C60 | CMRALLER |
| 2856 | 0B28 | CMRINADV | | 2996 | 0BB4 | CMRORGIN | | 3172 | 0C64 | CMRSLOAD |
| 2860 | 0B2C | CMRVIRT | | 3000 | 0BB8 | CMRWRTDY | | 3176 | 0C68 | CMRSRCH |
| 2864 | 0B30 | CMRTEXTN | | 3004 | 0BBC | CMRXTSRT | | 3180 | 0C6C | CMRNMTAB |
| 2868 | 0B34 | CMRNOBT | | 3008 | 0BC0 | CMRSHPT | | 3184 | 0C70 | CMRSERR1 |
| 2872 | 0B38 | CMRERLD | | 3012 | 0BC4 | CMRRSPI | | 3188 | 0C74 | CMRSTERM |
| 2876 | 0B3C | CMRERND | | 3016 | 0BC8 | CMRFORM | | 3192 | 0C78 | CMRLOADL |
| 2880 | 0B40 | CMRIRLD | | 3020 | 0BCC | CMRSETPT | | 3196 | 0C7C | CMRHSHSR |
| 2884 | 0B44 | CMRIRND | | 3024 | 0BD0 | CMRNAMLC | | 3200 | 0C80 | CMREADIN |
| 2888 | 0B48 | CMRVMPT | | 3028 | 0BD4 | CMRRDPOD | | 3204 | 0C84 | CMRSEEK |
| 2892 | 0B4C | CMRSEPCS | | 3032 | 0BD8 | CMRMAPGN | | 3208 | 0C88 | CMREROUT |
| 2896 | 0B50 | CMRMODCO | | 3036 | 0BDC | CMRCOMTB | | 3212 | 0C8C | CMRBLDTB |
| 2898 | 0B52 | CMRINPSZ | | 3040 | 0BE0 | CMRWRSYM | | 3216 | 0C90 | CMRPGTDY |
| 2900 | 0B54 | CMROUTSZ | | 3044 | 0BE4 | CMRADDPG | | 3220 | 0C94 | CMRJSHB2 |
| 2902 | 0B56 | CMRSEGSW | | 3048 | 0BE8 | CMRBSDST | | 3224 | 0C98 | CMRJSHBA |
| 2904 | 0B58 | CMRSSSW | | 3052 | 0BEC | CMRESRVP | | 3228 | 0C9C | CMRADTIT |
| 2906 | 0B5A | CMRMVESW | | 3056 | 0BF0 | CMRGTFLD | | 3232 | 0CA0 | CMRSTRAN |
| 2907 | 0B5B | CMRNLLSW | | 3060 | 0BF4 | CMRWTMD | | 3236 | 0CA4 | CMRRTRAN |
| 2908 | 0B5C | CMRCDFSW | | 3064 | 0BF8 | CMRWRXTS | | 3240 | 0CA8 | CMRPGXTS |
| 2909 | 0B5D | CMRSERSW | | 3068 | 0BFC | CMRSOAPG | | 3244 | 0CAC | CMRASAT |
| 2910 | 0B5E | CMRUTI | | 3072 | 0C00 | CMRHOLTB | | 3248 | 0CB0 | CMRDIRSZ |
| 2914 | 0B62 | CMRIPLY | | 3076 | 0C04 | CMRENDTB | | 3252 | 0CB4 | CMRQKRD |
| 2915 | 0B63 | CMRSLSW | | 3080 | 0C08 | CMRHOLVL | | 3256 | 0CB8 | CMRQKSTA |
| 2916 | 0B64 | CMRNMPTH | | 3084 | 0C0C | CMRQRDR | | 3260 | 0CBC | CMRENAB |
| 2920 | 0B68 | CMRSDAC | | 3088 | 0C10 | CMRBGNTD | | 3264 | 0CC0 | CMRLSTAD |
| 2920 | 0B68 | CMRFSTAC | | 3092 | 0C14 | CMRLLLNK | | | | |
| 2924 | 0B6C | CMRCORE | | 3096 | 0C18 | CMRLLSCN | | | | |

## Alphabetical list of fields in CHACMR

| FIELD | DEC | HEX | | FIELD | DEC | HEX | | FIELD | DEC | HEX |
|---|---|---|---|---|---|---|---|---|---|---|
| CMRADDPG | 3044 | 0BE4 | | CMRBSDST | 3048 | 0BE8 | | CMRCORE | 2924 | 0B6C |
| CMRADEND | 0356 | 0164 | | CMRBS13 | 2460 | 099C | | CMRCPUS | 0062 | 003E |
| CMRADTIT | 3228 | 0C9C | | CMRBTRAN | 2976 | 0BA0 | | CMRCRG0 | 1044 | 0414 |
| CMRADTRN | 2968 | 0B98 | | CMRBUFFA | 0252 | 00FC | | CMRCRG1 | 1048 | 0418 |
| CMRAEAR | 2836 | 0B14 | | CMRBUFFS | 0244 | 00F4 | | CMRCRG10 | 0032 | 0020 |
| CMRAEBRS | 0608 | 0260 | | CMRBUFF1 | 2544 | 09F0 | | CMRCRG11 | 0036 | 0024 |
| CMRALLDS | 1876 | 0754 | | CMRBUFF2 | 2548 | 09F4 | | CMRCRG12 | 0040 | 0028 |
| CMRALLER | 3168 | 0C60 | | CMRCABFP | 0632 | 0278 | | CMRCRG13 | 0044 | 002C |
| CMRASAT | 3244 | 0CAC | | CMRCATCT | 0628 | 0274 | | CMRCRG14 | 0048 | 0030 |
| CMRASD | 0204 | 00CC | | CMRCCBAD | 0108 | 006C (EQU) | | CMRCRG2 | 1052 | 041C |
| CMRASDDR | 0208 | 00D0 | | CMRCCBLC | 0108 | 006C | | CMRCRG3 | 1056 | 0420 |
| CMRASY | 0612 | 0264 | | CMRCCBLN | 0076 | 004C | | CMRCRG4 | 1060 | 0424 |
| CMRATRAN | 2972 | 0B9C | | CMRCCUS | 0068 | 0044 | | CMRCRG5 | 1064 | 0428 |
| CMRBFGT | 2936 | 0B78 | | CMRCCW05 | 2576 | 0A10 | | CMRCRG6 | 1068 | 042C |
| CMRBFLN | 2564 | 0A04 | | CMRCCW06 | 2584 | 0A18 | | CMRCRG7 | 1072 | 0430 |
| CMRBFPVM | 0236 | 00EC | | CMRCCW6B | 2590 | 0A1E (EQU) | | CMRCRG8 | 0024 | 0018 |
| CMRBGNTD | 3088 | 0C10 | | CMRCDFSW | 2908 | 0B5C | | CMRCRG9 | 0028 | 001C |
| CMRBLANK | 2820 | 0B04 | | CMRCEND | 2304 | 0900 | | CMRCRVOL | 1856 | 0740 |
| CMRBLDF | 2552 | 09F8 | | CMRCHB | 2396 | 095C | | CMRCSNTR | 1818 | 071A |
| CMRBLDTB | 3212 | 0C8C | | CMRCOMAD | 0620 | 026C | | CMRCSW1 | 2500 | 09C4 |
| CMRBLDX | 2556 | 09FC | | CMRCOMTB | 3036 | 0BDC | | CMRCSW2 | 2501 | 09C5 |

| FIELD | DEC | HEX | | FIELD | DEC | HEX | | FIELD | DEC | HEX | |
|-------|-----|-----|--|-------|-----|-----|--|-------|-----|-----|--|
| CMRCTRAN | 2980 | 0BA4 | | CMRGTNUM | 1080 | 0438 | | CMRMODCO | 2896 | 0B50 | |
| CMRCXDCN | 0704 | 02C0 | | CMRGTPAT | 3132 | 0C3C | | CMRMODFY | 2944 | 0B80 | |
| CMRCYLHD | 3116 | 0C2C | | CMRGTXSV | 2456 | 0998 | | CMRMODNM | 2486 | 09B6 | |
| CMRCZ | 2394 | 095A | | CMRHASH | 2992 | 0BB0 | | CMRMODSV | 2468 | 09A4 | |
| CMRDAM | 0016 | 0010 | | CMRHASHV | 2448 | 0990 | | CMRMPBG | 2268 | 08DC | |
| CMRDATA | 3112 | 0C28 | | CMRHOLTB | 3072 | 0C00 | | CMRMSGTB | 2960 | 0B90 | |
| CMRDDSC0 | 1816 | 0718 | | CMRHOLVL | 3080 | 0C08 | | CMRMSKE | 2792 | 0AE8 | |
| CMRDEFCT | 2356 | 0934 | | CMRHRCHY | 1812 | 0714 | | CMRMSK1B | 2780 | 0ADC | |
| CMRDELDS | 3152 | 0C50 | | CMRHSHDL | 0660 | 0294 | | CMRMSK11 | 2808 | 0AF8 | |
| CMRDEV | 0212 | 00D4 | | CMRHSHSR | 3196 | 0C7C | | CMRMSK2 | 2784 | 0AE0 | |
| CMRDIRSZ | 3248 | 0CB0 | | CMRHSHSV | 2464 | 09A0 | | CMRMSK3 | 2788 | 0AE4 | |
| CMRDLBT | 2502 | 09C6 | | CMRIDS | 0052 | 0034 | | CMRMSK7 | 2796 | 0AEC | |
| CMRDLBTB | 3160 | 0C58 | | CMRIMC01 | 0214 | 00D6 | | CMRMSK8 | 2800 | 0AF0 | |
| CMRDLEP | 0404 | 0194 | | CMRINAD | 0636 | 027C | | CMRMSK9 | 2804 | 0AF4 | |
| CMRDLTBL | 3156 | 0C54 | | CMRINADV | 2856 | 0B28 | | CMRMUTCT | 2812 | 0AFC | |
| CMRDMLST | 0156 | 009C | | CMRINMTS | 0512 | 0200 | | CMRMVESW | 2906 | 0B5A | |
| CMRDRUMS | 0200 | 00C8 | | CMRINP | 0256 | 0100 | | CMRMXHDI | 2828 | 0B0C | |
| CMRDSCB | 1152 | 0480 | | CMRINPSZ | 2898 | 0B52 | | CMRMXHDR | 2832 | 0B10 | |
| CMRDSCBI | 0096 | 0060 | | CMRINPUT | 2136 | 0858 | | CMRNAME | 2384 | 0950 | |
| CMRDSCNT | 1814 | 0716 | | CMRINT | 0214 | 00D6 | | CMRNAMLC | 3024 | 0BD0 | |
| CMRDSDIS | 1838 | 072E | | CMRINTCM | 0544 | 0220 | | CMRNASNM | 0976 | 03D0 | |
| CMRDSINP | 1824 | 0720 | | CMRIOAD | 2504 | 09C8 | | CMRNASVM | 0972 | 03CC | |
| CMRDSLST | 1828 | 0724 | | CMRIOFG | 2510 | 09CE | | CMRNLLSW | 2907 | 0B5B | |
| CMRDSNAD | 1808 | 0710 | | CMRIOLEN | 2508 | 09CC | | CMRNMBFP | 1848 | 0738 | |
| CMRDSNAM | 2366 | 093E | | CMRIPLC | 0067 | 0043 | | CMRNMDEV | 0508 | 01FC | |
| CMRDSQAL | 2375 | 0947 | | CMRIPLID | 0090 | 005A | | CMRNMPTH | 2916 | 0B64 | |
| CMRDSTBL | 1408 | 0580 | | CMRIPLSY | 0136 | 0088 | | CMRNMTAB | 3180 | 0C6C | |
| CMRDSTR | 1728 | 06C0 | | CMRIPLY | 2914 | 0B62 | | CMRNMTCT | 1840 | 0730 | |
| CMRDVOL | 1832 | 0728 | | CMRIRLD | 2880 | 0B40 | | CMRNMTDE | 0516 | 0204 | |
| CMRDVOLA | 1834 | 072A | (EQU) | CMRIRND | 2884 | 0B44 | | CMRNOBT | 2868 | 0B34 | |
| CMRDVOLT | 1832 | 0728 | (EQU) | CMRISALC | 0440 | 01B8 | | CMRNPAT | 0272 | 0110 | |
| CMREADER | 2484 | 09B4 | | CMRISAPG | 0444 | 01BC | | CMRNSVC | 0588 | 024C | |
| CMREADIN | 3200 | 0C80 | | CMRISAVM | 0388 | 0184 | | CMRONE | 2332 | 091C | |
| CMRECAD | 0340 | 0154 | | CMRIVM | 2592 | 0A20 | | CMRONE1 | 2334 | 091E | (EQU) |
| CMREIAA | 0000 | 0000 | | CMRIVMCN | 0376 | 0178 | | CMROPER | 2952 | 0B88 | |
| CMREIAA2 | 2948 | 0B84 | | CMRIVMCS | 0416 | 01A0 | | CMROPOD | 0300 | 012C | |
| CMRELTDY | 3164 | 0C5C | | CMRIXPG | 0010 | 000A | | CMROPRT | 3148 | 0C4C | |
| CMRENAB | 3260 | 0CBC | | CMRJSHBA | 3224 | 0C98 | | CMRORGIN | 2996 | 0BB4 | |
| CMRENDMK | 2308 | 0904 | | CMRJSHB2 | 3220 | 0C94 | | CMROTHC | 0064 | 0040 | |
| CMRENDTB | 3076 | 0C04 | | CMRLDPMD | 3104 | 0C20 | | CMROTHER | 3128 | 0C38 | |
| CMREQAD1 | 2528 | 09E0 | | CMRLDRSS | 0280 | 0118 | | CMROUP | 0252 | 00FC | |
| CMREQAD2 | 2532 | 09E4 | | CMRLDTBL | 0276 | 0114 | | CMROUTAD | 0640 | 0280 | |
| CMRERLD | 2872 | 0B38 | | CMRLDTLN | 0292 | 0124 | | CMROUTSZ | 2900 | 0B54 | |
| CMRERND | 2876 | 0B3C | | CMRLIDMP | 2344 | 0928 | | CMROVFG | 2499 | 09C3 | |
| CMREROUT | 3208 | 0C88 | | CMRLIDMS | 2340 | 0924 | | CMRPAG | 0908 | 038C | |
| CMRESRVP | 3052 | 0BEC | | CMRLLAD | 0304 | 0130 | | CMRPAGA | 0948 | 03B4 | |
| CMRESTR | 0008 | 0008 | | CMRLLAST | 0708 | 02C4 | | CMRPAGAD | 0188 | 00BC | |
| CMRETAD1 | 2536 | 09E8 | | CMRLLEND | 0712 | 02C8 | | CMRPAGB | 0952 | 03B8 | |
| CMRETAD2 | 2540 | 09EC | | CMRLLLNK | 3092 | 0C14 | | CMRPAGC | 0956 | 03BC | |
| CMREXDIS | 1836 | 072C | | CMRLLSCN | 3096 | 0C18 | | CMRPAGD | 0960 | 03C0 | |
| CMREXTAB | 0268 | 010C | | CMRLOADL | 3192 | 0C78 | | CMRPAGE | 0964 | 03C4 | |
| CMREXTNM | 2415 | 096F | | CMRLOCX | 2984 | 0BA8 | | CMRPAGEV | 2840 | 0B18 | |
| CMREXTNO | 2494 | 09BE | | CMRLOCXV | 2444 | 098C | | CMRPAGF | 0968 | 03C8 | |
| CMREXTNT | 2988 | 0BAC | | CMRLOWAD | 0624 | 0270 | | CMRPAG0 | 0908 | 038C | |
| CMRFORM | 3016 | 0BC8 | | CMRLSPT | 2816 | 0B00 | | CMRPAG1 | 0912 | 0390 | |
| CMRFOUR | 2364 | 093C | | CMRLSTAD | 3264 | 0CC0 | | CMRPAG2 | 0916 | 0394 | |
| CMRFSTAC | 2920 | 0B68 | | CMRLXPST | 2360 | 0938 | | CMRPAG3 | 0920 | 0398 | |
| CMRFSTSU | 2640 | 0A50 | | CMRLXPT | 2358 | 0936 | | CMRPAG4 | 0924 | 039C | |
| CMRFXBS | 2848 | 0B20 | | CMRMAP | 2424 | 0978 | | CMRPAG5 | 0928 | 03A0 | |
| CMRFXBTL | 2844 | 0B1C | | CMRMAPAD | 0296 | 0128 | | CMRPAG6 | 0932 | 03A4 | |
| CMRGRPS1 | 2520 | 09D8 | | CMRMAPGN | 3032 | 0BD8 | | CMRPAG7 | 0936 | 03A8 | |
| CMRGRPS2 | 2524 | 09DC | | CMRMAPNM | 2407 | 0967 | | CMRPAG8 | 0940 | 03AC | |
| CMRGRP1 | 2512 | 09D0 | | CMRMAXTD | 2560 | 0A00 | | CMRPAG9 | 0944 | 03B0 | |
| CMRGRP2 | 2516 | 09D4 | | CMRMCH | 0128 | 0080 | | CMRPAPTR | 0616 | 0268 | |
| CMRGTDR | 1076 | 0434 | | CMRMEMAD | 0240 | 00F0 | | CMRPART | 0072 | 0048 | |
| CMRGTFL | 1077 | 0435 | | CMRMFFF | 2800 | 0AF0 | (EQU) | CMRPARTM | 2496 | 09C0 | |
| CMRGTFLD | 3056 | 0BF0 | | CMRMINUS | 2428 | 097C | | CMRPAT | 0216 | 00D8 | |
| CMRGTNC | 1078 | 0436 | | CMRMMSK | 2348 | 092C | | CMRPATCH | 2216 | 08A8 | |

| FIELD | DEC | HEX | | FIELD | DEC | HEX | | FIELD | DEC | HEX | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| CMRPATI | 0100 | 0064 | | CMRSCMLC | 0456 | 01C8 | | CMRSG7LN | 0744 | 02E8 | |
| CMRPBSEG | 1010 | 03F2 | | CMRSCMPG | 0460 | 01CC | | CMRSG8AD | 0812 | 032C | |
| CMRPCU | 1608 | 0648 | | CMRSCMVM | 0396 | 018C | | CMRSG8LN | 0748 | 02EC | |
| CMRPDCNT | 1820 | 071C | | CMRSDAC | 2920 | 0B68 | | CMRSG9AD | 0816 | 0330 | |
| CMRPFX | 0112 | 0070 | | CMRSDALC | 0416 | 01A0 | | CMRSG9LN | 0752 | 02F0 | |
| CMRPGIND | 2779 | 0ADB | | CMRSDAPG | 0420 | 01A4 | | CMRSHPT | 3008 | 0BC0 | |
| CMRPGLTH | 2354 | 0932 | | CMRSDAT | 3108 | 0C24 | | CMRSIMP | 0068 | 0044 | (EQU) |
| CMRPGSVE | 2264 | 08D8 | | CMRSDAVM | 0376 | 0178 | | CMRSIPE | 0604 | 025C | |
| CMRPGTAD | 2852 | 0B24 | | CMRSDISP | 0560 | 0230 | | CMRSLOAD | 3172 | 0C64 | |
| CMRPGTDY | 3216 | 0C90 | | CMRSDSVM | 0368 | 0170 | | CMRSLSW | 2915 | 0B63 | |
| CMRPGUSE | 0140 | 008C | | CMRSDTB | 1408 | 0580 | (EQU) | CMRSLTE | 2660 | 0A64 | |
| CMRPGWRT | 2423 | 0977 | | CMRSEEK | 3204 | 0C84 | | CMRSMFSA | 3120 | 0C30 | |
| CMRPGXTS | 3240 | 0CA8 | | CMRSEGMK | 2328 | 0918 | | CMRSOAI | 2256 | 08D0 | |
| CMRPMDOR | 0196 | 00C4 | | CMRSEGSW | 2902 | 0B56 | | CMRSOAN | 2260 | 08D4 | |
| CMRPPCCW | 2964 | 0B94 | | CMRSENM | 0061 | 003D | | CMRSOAPG | 3068 | 0BFC | |
| CMRPPDSY | 0152 | 0098 | | CMRSEPCS | 2892 | 0B4C | | CMRSORD | 3124 | 0C34 | |
| CMRPREL | 0008 | 0008 | | CMRSERAD | 0344 | 0158 | | CMRSPATH | 0532 | 0214 | |
| CMRPRINT | 2956 | 0B8C | | CMRSERR | 0172 | 00AC | | CMRSPATP | 0536 | 0218 | |
| CMRPRTAD | 0088 | 0058 | | CMRSERR1 | 3184 | 0C70 | | CMRSPATR | 0540 | 021C | |
| CMRPSABF | 0260 | 0104 | | CMRSERSW | 2909 | 0B5D | | CMRSPDSY | 0148 | 0094 | |
| CMRPSAS | 0112 | 0070 | (EQU) | CMRSETO | 0060 | 003C | | CMRSPGAD | 0192 | 00C0 | |
| CMRPTMP | 2928 | 0B70 | | CMRSETPT | 3020 | 0BCC | | CMRSPLOC | 0104 | 0068 | |
| CMRPVSEG | 0978 | 03D2 | | CMRSGAAD | 0820 | 0334 | | CMRSPSA | 0584 | 0248 | |
| CMRPVTLC | 0432 | 01B0 | | CMRSGAD | 0780 | 030C | | CMRSPSV | 2644 | 0A54 | |
| CMRPVTPG | 0436 | 01B4 | | CMRSGALN | 0756 | 02F4 | | CMRSPTAD | 0244 | 00F4 | |
| CMRPVTVM | 0384 | 0180 | | CMRSGBAD | 0824 | 0338 | | CMRSPTNO | 2814 | 0AFE | |
| CMRP1002 | 0652 | 028C | | CMRSGBLN | 0760 | 02F8 | | CMRSQGQE | 0552 | 0228 | |
| CMRQKCPU | 2654 | 0A5E | | CMRSGCAD | 0828 | 033C | | CMRSQSCN | 0564 | 0234 | |
| CMRQKDS | 0276 | 0114 | | CMRSGCLN | 0764 | 02FC | | CMRSRCH | 3176 | 0C68 | |
| CMRQKFG | 2668 | 0A6C | | CMRSGDAD | 0832 | 0340 | | CMRSRCHV | 2440 | 0988 | |
| CMRQKID | 2669 | 0A6D | | CMRSGDLN | 0768 | 0300 | | CMRSRCN | 3100 | 0C1C | |
| CMRQKMAP | 2676 | 0A74 | | CMRSGEAD | 0836 | 0344 | | CMRSRCNT | 2666 | 0A6A | |
| CMRQKPAT | 2652 | 0A5C | | CMRSGELN | 0772 | 0304 | | CMRSRQKF | 2662 | 0A66 | |
| CMRQKPVT | 2656 | 0A60 | | CMRSGFAD | 0840 | 0348 | | CMRSRQKL | 2664 | 0A68 | |
| CMRQKRD | 3252 | 0CB4 | | CMRSGFLN | 0776 | 0308 | | CMRSRSV | 0576 | 0240 | |
| CMRQKREC | 0280 | 0118 | | CMRSGLN | 0716 | 02CC | | CMRSSADD | 0352 | 0160 | |
| CMRQKSTA | 3256 | 0CB8 | | CMRSGMT | 0844 | 034C | | CMRSSCA | 0568 | 0238 | |
| CMRQKTYP | 2648 | 0A58 | | CMRSGMTA | 0884 | 0374 | | CMRSSCN | 0528 | 0210 | |
| CMRQKVOL | 2650 | 0A5A | | CMRSGMTB | 0888 | 0378 | | CMRSSCOM | 0320 | 0140 | |
| CMRQRDR | 3084 | 0C0C | | CMRSGMTC | 0892 | 037C | | CMRSSCR | 0572 | 023C | |
| CMRQUAL | 1860 | 0744 | | CMRSGMTD | 0896 | 0380 | | CMRSSCSL | 0496 | 01F0 | |
| CMRQUALR | 1872 | 0750 | | CMRSGMTE | 0900 | 0384 | | CMRSSCSN | 0600 | 0258 | |
| CMRQUALS | 1868 | 074C | | CMRSGMTF | 0904 | 0388 | | CMRSSDAL | 0496 | 01F0 | |
| CMRQUAL1 | 1864 | 0748 | | CMRSGMT0 | 0844 | 034C | | CMRSSDAP | 0500 | 01F4 | |
| CMRRCLL | 2761 | 0AC9 | | CMRSGMT1 | 0848 | 0350 | | CMRSSDAT | 0600 | 0258 | |
| CMRRDNSV | 2472 | 09A8 | | CMRSGMT2 | 0852 | 0354 | | CMRSSFL | 1088 | 0440 | |
| CMRRDPDV | 2436 | 0984 | | CMRSGMT3 | 0856 | 0358 | | CMRSSOR | 0852 | 0354 | (EQU) |
| CMRRDPOD | 3028 | 0BD4 | | CMRSGMT4 | 0860 | 035C | | CMRSSPGS | 0336 | 0150 | |
| CMRRDSCB | 3136 | 0C40 | | CMRSGMT5 | 0864 | 0360 | | CMRSSPT2 | 0324 | 0144 | |
| CMRRDWR | 0268 | 010C | | CMRSGMT6 | 0868 | 0364 | | CMRSSPT3 | 0328 | 0148 | |
| CMRREAD | 3144 | 0C48 | | CMRSGMT7 | 0872 | 0368 | | CMRSSRO | 0348 | 015C | |
| CMRRETAD | 1084 | 043C | | CMRSGMT8 | 0876 | 036C | | CMRSSSW | 2904 | 0B58 | |
| CMRRPNE | 2658 | 0A62 | | CMRSGMT9 | 0880 | 0370 | | CMRSSTA | 0580 | 0244 | |
| CMRRSDAT | 0596 | 0254 | | CMRSG0AD | 0780 | 030C | | CMRSSTE | 0556 | 022C | |
| CMRRSLL | 2770 | 0AD2 | | CMRSG0LN | 0716 | 02CC | | CMRSSVE | 2818 | 0B02 | |
| CMRRSPI | 3012 | 0BC4 | | CMRSG1AD | 0784 | 0310 | | CMRSSXP4 | 0332 | 014C | |
| CMRRSS | 2622 | 0A3E | | CMRSG1LN | 0720 | 02D0 | | CMRSSYS | 0520 | 0208 | |
| CMRRSSLN | 0294 | 0126 | | CMRSG2AD | 0788 | 0314 | | CMRSTART | 0644 | 0284 | |
| CMRRTRAN | 3236 | 0CA4 | | CMRSG2LN | 0724 | 02D4 | | CMRSTERM | 3188 | 0C74 | |
| CMRSARLC | 0488 | 01E8 | | CMRSG3AD | 0792 | 0318 | | CMRSTLEN | 2476 | 09AC | |
| CMRSARPG | 0492 | 01EC | | CMRSG3LN | 0728 | 02D8 | | CMRSTRAN | 3232 | 0CA0 | |
| CMRSARSV | 2480 | 09B0 | | CMRSG4AD | 0796 | 031C | | CMRSTSKI | 0548 | 0224 | |
| CMRSARVM | 0412 | 019C | | CMRSG4LN | 0732 | 02DC | | CMRSULN | 0078 | 004E | |
| CMRSASAT | 0524 | 020C | | CMRSG5AD | 0800 | 0320 | | CMRSUP | 2607 | 0A2F | |
| CMRSAVE | 1092 | 0444 | | CMRSG5LN | 0736 | 02E0 | | CMRSVCTB | 0592 | 0250 | |
| CMRSAVEV | 2452 | 0994 | | CMRSG6AD | 0804 | 0324 | | CMRSXPT | 0648 | 0288 | |
| CMRSCBT | 0504 | 01F8 | | CMRSG6LN | 0740 | 02E4 | | CMRSYMAD | 0316 | 013C | |
| CMRSCED | 2568 | 0A08 | | CMRSG7AD | 0808 | 0328 | | CMRSYMPG | 0338 | 0152 | |

| FIELD | DEC | HEX | | FIELD | DEC | HEX | | FIELD | DEC | HEX | |
|-------|-----|-----|---|-------|-----|-----|---|-------|-----|-----|---|
| CMRSYMVM | 0360 | 0168 | | CMRTMBFP | 0220 | 00DC | | CMRVOLAD | 0086 | 0056 | (EQU) |
| CMRS0PG1 | 0844 | 034C | (EQU) | CMRTMBSL | 0224 | 00E0 | | CMRVOLIP | 0084 | 0054 | |
| CMRTAD | 0308 | 0134 | | CMRTMBUF | 0226 | 00E2 | | CMRVOLTC | 0084 | 0054 | (EQU) |
| CMRTAD2 | 0312 | 0138 | | CMRTMTCT | 0218 | 00DA | | CMRVSSLC | 0424 | 01A8 | |
| CMRTCML | 0480 | 01E0 | | CMRTMTER | 0228 | 00E4 | | CMRVSSPG | 0428 | 01AC | |
| CMRTCMP | 0484 | 01E4 | | CMRTMTTP | 0222 | 00DE | | CMRVSSVM | 0380 | 017C | |
| CMRTCTVM | 0232 | 00E8 | | CMRTRANV | 2432 | 0980 | | CMRWORK | 0264 | 0108 | |
| CMRTDE | 2940 | 0B7C | | CMRTRMNT | 2280 | 08E8 | | CMRWRDCT | 0215 | 00D7 | |
| CMRTDTCT | 3140 | 0C44 | | CMRTRTB | 2288 | 08F0 | | CMRWRSYM | 3040 | 0BE0 | |
| CMRTDTLC | 0448 | 01C0 | | CMRTWO | 2362 | 093A | | CMRWRTDY | 3000 | 0BB8 | |
| CMRTDTPG | 0452 | 01C4 | | CMRUSECT | 2802 | 0AF2 | (EQU) | CMRWRXTS | 3064 | 0BF8 | |
| CMRTDTVM | 0392 | 0188 | | CMRUSER | 0656 | 0290 | | CMRWT | 2956 | 0B8C | (EQU) |
| CMRTDYAD | 0284 | 011C | | CMRUTI | 2910 | 0B5E | | CMRWTMD | 3060 | 0BF4 | |
| CMRTDYLN | 0288 | 0120 | | CMRVAM2 | 2425 | 0979 | | CMRXTSI | 0248 | 00F8 | |
| CMRTDYNM | 2399 | 095F | | CMRVIRT | 2860 | 0B2C | | CMRXTSRT | 3004 | 0BBC | |
| CMRTDYOV | 0290 | 0122 | | CMRVMAOR | 0372 | 0174 | | CMRYMCUR | 2272 | 08E0 | |
| CMRTDYTB | 1880 | 0758 | | CMRVMDLL | 0464 | 01D0 | | CMRZEROS | 2320 | 0910 | |
| CMRTDYVM | 0364 | 016C | | CMRVMDLP | 0468 | 01D4 | | CMR256 | 2336 | 0920 | |
| CMRTEMP | 2498 | 09C2 | | CMRVMDYL | 0400 | 0190 | | CMR32MSK | 0129 | 0081 | |
| CMRTERM | 0080 | 0050 | | CMRVMLL | 2752 | 0AC0 | | CMTRTPG | 2932 | 0B74 | |
| CMRTERSY | 0132 | 0084 | | CMRVMPT | 2888 | 0B48 | | | | | |
| CMRTEXTN | 2864 | 0B30 | | CMRVMTCM | 0408 | 0198 | | | | | |

## Assembler listing of CHACMR

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|----------|-------------|--------|------|------|---------|
| | 1B 00000 | CHACMR | DSECT | | |
| | | * THIS DSECT IS A COPY OF THE COMMUNICATION REGION | | | |
| | | * OF | | | |
| | | * | | | STARTUP PROPER |
| | | * THIS DSECT WAS CREATED FOR NSRB #316 - - | | | |
| | | * QUICKSTART | | | |
| 1B 00000 | | CMREIAA | DS | F | BR INSTRUC USED BY STARTUP |
| | | | | | |
| | | * COMMUNICATION AREA - REFERENCED BY MAIN SECTION | | | |
| | | * OF STARTUP PROPER | | | |
| | | * | | | AND QUICK START DATA SET |
| | | * | | | CREATOR |
| | | | | | |
| 1B 00008 | | | DS | 0D | ALIGIN TO A DOUBLE WORD |
| | | * | | | BOUNDARY |
| 1B 00008 | | CMRPREL | DS | 0CL108 | PRELUDE DATA |
| | | * THE FOLLOWING IS DATA LEFT IN A DROP AREA BY | | | |
| | | * PRELUDE | | | |
| | | * STARTUP MOVES INFORMATION INTO HERE BEFORE | | | |
| | | * ACCESSING | | | |
| 1B 00008 | | CMRESTR | DS | D | RESTART INDICATOR |
| | 1B 00008 | | \|ORG\| | CMRESTR | |
| 1B 00008 | | | DS | CL1 | BLANK FOR IPL |
| 1B 00009 | | | DS | CL1 | UNUSED |
| 1B 0000A | | CMRIXPG | DS | H | XPGNO OF IPL DSCB PAGE |
| 1B 0000C | | | DS | F | UNUSED |
| 1B 00010 | | CMRDAM | DS | 2F | |
| 1B 00018 | | CMRCRG8 | DS | F | CONTROL REGISTER 8 |
| 1B 0001C | | CMRCRG9 | DS | F | CONTROL REGISTER 9 |
| 1B 00020 | | CMRCRG10 | DS | F | CONTROL REGISTER 10 |
| 1B 00024 | | CMRCRG11 | DS | F | CONTROL REGISTER 11 |
| 1B 00028 | | CMRCRG12 | DS | F | CONTROL REGISTER 12 |
| 1B 0002C | | CMRCRG13 | DS | F | CONTROL REGISTER 13 |
| 1B 00030 | | CMRCRG14 | DS | F | CONTROL REGISTER 14 |
| 1B 00034 | | CMRIDS | DS | 2F | ID'S OF BYTE MAP |
| 1B 0003C | | CMRSETO | DS | X | NUM OF SE'S AT INSTALLATION |
| 1B 0003D | | CMRSENM | DS | X | NUM OF SE'S IN TSS |
| 1B 0003E | | CMRCPUS | DS | H | NUM OF CPU'S IN TSS |
| 1B 00040 | | CMROTHC | DS | XL3 | ID'S OF NON-IPL'D CPUS IN |
| | | * | | | TSS |
| 1B 00043 | | CMRIPLC | DS | X | ID OF IPLED CPU |
| 1B 00044 | | CMRCCUS | DS | F | BYTE MAP OF CCU'S IN TSS |

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|----------|-------------|--------|------|------|---------|
| 1B 00048 | | CMRPART | DS | F | BYTE MAP OF PARTITIONED |
| | | * | | | CCU'S |
| 1B 0004C | | CMRCCBLN | DS | H | LEN OF CCB |
| 1B 0004E | | CMRSULN | DS | H | LEN OF STARTUP PROPER |
| 1B 00050 | | CMRTERM | DS | H | ID OF OPERATORS TERMINAL |
| 1B 00054 | | CMRVOLIP | DS | F | DEVICE TYPE/ADDR IPL VOL |
| | 1B 00054 | CMRVOLTC | EQU | CMRVOLIP | FIRST BYTE = DEVICE CODE |
| | | * | | | 00=2301, 01=2311, 04=2314 |
| | 1B 00056 | CMRVOLAD | EQU | CMRVOLIP+2 | 2ND HLFWD = PHYSICAL ADDR |
| 1B 00058 | | CMRPRTAD | DS | H | ADDR OF PRINTER |
| | 1B 00044 | CMRSIMP | EQU | CMRCCUS | SIMPLEX = 55, ELSE DUPLEX |
| 1B 0005A | | CMRIPLID | DS | XL6 | VOL SERIAL NUM OF IPL PACK |
| 1B 00060 | | CMRDSCBI | DS | F | ADDR OF PRESENT IPL |
| | | * | | | DSCB PAGE |
| 1B 00064 | | CMRPATI | DS | F | ADDR OF IPL PAT PAGES |
| 1B 00068 | | CMRSPLOC | DS | F | STARTING ADDR OF STARTUP |
| | | * | | | PROPER |
| 1B 0006C | | CMRCCBLC | DS | F | LOCATION OF CCB FROM |
| | | * | | | PRELUDE |
| 1B 00070 | | CMRPFX | DS | F | ACTIVE PSA OF IPL'D CPU |
| | | * THE FOLLOWING IS A ALIST OF ACTIVE PSA'S IN TSS | | | |
| | | * THE FIRST ENTRY IS THE PSA OF THE IPL'D CPU | | | |
| | | * THE NEXT 3 ENTRIES CONTAIN THE PSA'S OF THE | | | |
| | | * OTHER CPU'S IN TSS | | | |
| | | * THE ENTRIES ARE ARRANGED IN ASCENDING ORDER | | | |
| | | * ACCORDING TO THE CPU IDS | | | |
| | | * A ZERO ENTRY INDICATES THE CORRESPONDING CPU IS | | | |
| | | * PARTITIONED OR IN | | | |
| | | * A SPECIAL CASE THE SE'S CONTAINING A CPU'S | | | |
| | | * PREFIXES ARE PARTITIONED | | | |
| | 1B 00070 | CMRPSAS | EQU | CMRPFX | |
| 1B 00074 | | | DS | 3F | |
| | | * | | | END OF DATA FROM PRELUDE |

* * * * * * * * * * * * * ** * ** * * * * * * * **
* THE FOLLOWING IS DATA THAT IS EITHER CONSTANT OR
* FILLED IN BY
* STARTUP PROPER

| | | | | | |
|----------|-------------|--------|------|------|---------|
| 1B 00080 | | CMRMCH | DS | X | SWITCH FOR 24 OR 32 BIT |
| | | * | | | ADDRESS |
| 1B 00081 | | CMR32MSK | DS | X | 32 BIT SYSTEM MASK = X'08' |
| | | * | | | I/O TABLES |
| 1B 00084 | | CMRTERSY | DS | F | SYM DEV ADDR/DEV |
| | | * | | | TYPE CODE OF OP'S TERM |
| 1B 00088 | | CMRIPLSY | DS | F | SYM DEV ADDR AND DEV |
| | | * | | | TYPE CODE OF IPL VOLUME |
| 1B 0008C | | CMRPGUSE | DS | F | BEG AND END ADDR OF IVM ON |
| | | * | | | PRI PAGING DEV BY EXTN |
| 1B 00090 | | | DS | F | PGS - EXTENT IN EXT PG |
| | | * | | | NUMBERS OF PRIVATE IVM |
| | | * | | | CSECTS |
| | | * | | | ON PAGING DISK |
| 1B 00094 | | CMRSPDSY | DS | F | DEVICE TYPE CODE AND |
| | | * | | | SYMBOLIC |
| | | * | | | DEVIDE ADDR OF AUX PAGING |
| | | * | | | DISK |
| 1B 00098 | | CMRPPDSY | DS | F | SYMBOLIC DEV ADDR AND |
| | | * | | | DEVICE |
| | | * | | | TYPE CODE OF PRIMARY PG DEV |
| 1B 0009C | | CMRDMLST | DS | 4F | DRUM LIST AND SDA'S |
| | | * | | | OF DRUMS IN TSS |
| | | * ACTUAL PATH OF DRUM IS CHANGED TO SDA OF DRUM IN | | | |
| | | * SPECIAL ROUT | | | |
| 1B 000AC | | CMRSERR | DS | 4F | SERR/RECONFIG. EXTENTS |

* * * * * * * * * * ** * * * * * *
* CMRSERR TABLE MUST FOLLOW CMRDMLST TABLE FOR USE

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|---|---|---|---|---|---|
| | | * BY SDAT | | | |
| | | * | | | PROCESSING ROUTINE |
| 1B 000BC | | CMRPAGAD DS | | F | HARDWARE ADDR OF PPV |
| 1B 000C0 | | CMRSPGAD DS | | F | HARDWARE ADDR OF SPV |
| 1B 000C4 | | CMRPMDOR DS | | F | PMD ORIGIN |
| 1B 000C8 | | CMRDRUMS DS | | X | NUMBER OF DRUMS IN SYSTEM |
| 1B 000CC | | CMRASD   DS | | F | PTR TO AUX STORAGE DEVICE |
| | | * | | | LIST |
| 1B 000D0 | | CMRASDDR DS | | F | PTR TO AUX STORAGE DEVICE |
| | | * | | | LIST |
| | | * | | | ENTRY FOR PAGING DRUM |
| 1B 000D4 | | CMRDEV   DS | | H | TOTAL NUM OF AUX DEVS IN |
| | | * | | | SYS |
| 1B 000D6 | | CMRINT   DS | | 0H | * INPUT FOR INTER-COM * |
| | | * | | | N349.10 |
| 1B 000D6 | | CMRIMC01 DS | | X | * EXTERNAL START--INTER-COM |
| 1B 000D7 | | CMRWRDCT DS | | X | *  OTHER CPU ID - INTER-COM |
| 1B 000D8 | | CMRPAT   DS | | X | PAT SWITH FOR SDAT ROUTINE |
| | 00000080 | CMRPATM  EQU | | X'80' | PAT PAGE MASK |
| | | * * * * * * * * * * * * ** * *** | | | |
| | | * | | | STARTUP BUFFERS |
| | 1B 0006C | CMRCCBAD EQU | | CMRCCBLC | ADDR OF CCB BUFFER |
| 1B 000DA | | CMRTMTCT DS | | H | NO OF VM SYSTEM TCT PAGES |
| | | * | | | N349.10 |
| 1B 000DC | | CMRTMBFP DS | | H | NO OF VM SYS BUFF PAGES |
| | | * | | | N349.10 |
| 1B 000DE | | CMRTMTTP DS | | H | TOT PGS TCT AND BUFF |
| | | * | | | N349.10 |
| 1B 000E0 | | CMRTMBSL DS | | H | NO OF BUFF SLOTS/BUFF PG |
| | | * | | | N349.10 |
| 1B 000E2 | | CMRTMBUF DS | | H | MAXIMUM NO OF BUFFERS |
| | | * | | | N349.10 |
| 1B 000E4 | | CMRTMTER DS | | H | MAXIMUM NO OF TERMINALS |
| | | * | | | N349.10 |
| 1B 000E8 | | CMRTCTVM DS | | A | VMA OF CFBTCT |
| | | * | | | N349.10 |
| 1B 000EC | | CMRBFPVM DS | | A | VMA OF CFBBFP |
| | | * | | | N349.10 |
| 1B 000F0 | | CMRMEMAD DS | | F | ADDR OF MEMORY BYTE MAP |
| | | * | | | X'400' INITIALLY |
| | | * | | | REALLOCATED AT STARTUP TIME |
| 1B 000F4 | | CMRBUFFS DS | | 0F | |
| 1B 000F4 | | CMRSPTAD DS | | F | ADDR OF SHARED PAGE TBL |
| | | * | | | BUFF |
| 1B 000F8 | | CMRXTSI  DS | | F | ADDR OF XTSI BUFFER |
| | 00000002 | CMRBFCNT EQU | | (*-CMRBUFFS)/4 | NUM OF BUFFS |
| 1B 000FC | | CMRBUFFA DS | | 0F | |
| 1B 000FC | | CMROUP   DS | | F | ADDR OF OUTPUT BUFFER |
| | | * | | | FOR MVTEXT |
| 1B 00100 | | CMRINP   DS | | F | ADDR OF INPUT BUFFER |
| 1B 00104 | | CMRPSABF DS | | F | ADDR OF PSA BUFFER |
| 1B 00108 | | CMRWORK  DS | | F | ADDR OF WORK BUFFER |
| | 00000004 | CMRBFCTA EQU | | (*-CMRBUFFA)/4 | NUM OF BUFFS |
| 1B 0010C | | CMRRDWR  DS | | 0F | QK START READ/WRITE BUFFER |
| 1B 0010C | | CMREXTAB DS | | F | ADDR OF EXTENT TABLE |
| 1B 00110 | | CMRNPAT  DS | | F | NON-IPL PAT BUFFER |
| 1B 00114 | | CMRQKDS  DS | | 0F | QUCK START DSCB BUFFER |
| 1B 00114 | | CMRLDTBL DS | | F | ADDR OF LOAD LIST BUFF |
| 1B 00118 | | CMRQKREC DS | | 0F | QUICK START RECORDING BUFF |
| 1B 00118 | | CMRLDRSS DS | | F | ORIGIN OF RSSSUP LOADIST |
| | | * | | | TDY INFORMATION |
| 1B 0011C | | CMRTDYAD DS | | F | ADDRESS OF TDY |
| 1B 00120 | | CMRTDYLN DS | | H | NUM OF TDY BUFFER PAGES |
| 1B 00122 | | CMRTDYOV DS | | H | NUM OF TDY OVERFLOW PGS |
| 1B 00124 | | CMRLDTLN DS | | H | NUM OF IOAD LIST BUFF PGS |
| 1B 00126 | | CMRRSSLN DS | | H | NUM OF RSSSUP LL BUFF PGS |
| 1B 00128 | | CMRMAPAD DS | | F | ADDR OF IVM MEM MAP TABLE |
| 1B 0012C | | CMROPOD  DS | | F | ADDR OF OLD POD BUFFER |

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|----------|-------------|--------|------|------|---------|
| 1B 00130 | | CMRLLAD | DS | F | ADDR OF LOAD LIST ENTRY |
| 1B 00134 | | CMRTAD | DS | F | ADDR OF NEXT AVAIL LOC IN |
| | | * | | | TDYTAB |
| 1B 00138 | | CMRTAD2 | DS | F | ADDR OF ENTRY REQ |
| | | * | | | RELOCATION |
| 1B 0013C | | CMRSYMAD | DS | F | LOWEST ASSIGNABLE SYMB TBL |
| | | * | | | ADDR |
| | | * RSS COMMUNICATION TABLE INFORMATION | | | |
| 1B 00140 | | CMRSSCOM | DS | F | ADDR OF RSS COMMUN TABLE |
| 1B 00144 | | CMRSSPT2 | DS | F | ADDR OF RSS SEG 2 PG TBL |
| 1B 00148 | | CMRSSPT3 | DS | F | ADDR OF RSS SEG 3 PG TBL |
| 1B 0014C | | CMRSSXP4 | DS | F | ADDR OF XPT4 IN RSS COM TBL |
| 1B 00150 | | CMRSSPGS | DS | H | NUMBER OF RSSSUP PAGES |
| 1B 00152 | | CMRSYMPG | DS | H | NUM OF SYMBOL TBL PAGES |
| 1B 00154 | | CMRECAD | DS | XL4 | DUMMY ADDR FOR RECON |
| 1B 00158 | | CMRSERAD | DS | XL4 | FIGURATION AND SERR CSECTS |
| 1B 0015C | | CMRSSRO | DS | F | START ADDR OF READ |
| | | * | | | ONLY PAGE |
| 1B 00160 | | CMRSSADD | DS | F | RSS ACCUMULATIVE LENGTH |
| 1B 00164 | | CMRADEND | DS | F | RESSUP ACCUM LENGTH |
| | | * * * * * * * * * * * * * | | | |
| | | * | | | VIRTUAL MEMORY ADDRESSES |
| 1B 00168 | | CMRSYMVM | DS | F | VMA RESSUP-RSS SYM TBL |
| 1B 0016C | | CMRTDYVM | DS | F | VMA OF TDY (PRIVATE SEG) |
| 1B 00170 | | CMRSDSVM | DS | F | VMA OF SDST (PUBLIC |
| | | * | | | SEGMENT) |
| 1B 00174 | | CMRVMAOR | DS | F | VMA PACKING ORIGIN |
| | | * | | | (PRIVATE) |
| * * | | ************************************************ | | | |
| | | * VMA'S, XPT OR OSPT ENTRY LOCATIONS, AND NUM OF | | | |
| | | * PAGES IN CSECT | | | |
| 1B 00178 | | CMRIVMCN | DS | 0F | BEGINNING OF LIST |
| 1B 00178 | | CMRSDAVM | DS | F | VMA OF SDAT |
| 1B 0017C | | CMRVSSVM | DS | F | VMA OF SSDAT |
| 1B 00180 | | CMRPVTVM | DS | F | VMA OF PVT |
| 1B 00184 | | CMRISAVM | DS | F | VMA OF ISA |
| 1B 00188 | | CMRTDTVM | DS | A | VMA OF TDT |
| | | * | | | N349.10 |
| 1B 0018C | | CMRSCMVM | DS | F | VMA OF SYSTEM COMMON |
| 1B 00190 | | CMRVMDYL | DS | F | VMA OF DYNAMIC LDR |
| | | * | | | N483 |
| 1B 00194 | | CMRDLEP | DS | F | VMA OF DY LDR EP |
| | | * | | | N483 |
| 1B 00198 | | CMRVMTCM | DS | F | VMA OF TASK COMMON |
| | | * | | | N483 |
| 1B 0019C | | CMRSARVM | DS | A | VMA OF SAR |
| | | * | | | N386** |
| | 0000000A | CMRIVMCO | EQU | (*-CMRIVMCN)/4 | NUM OF CSECTS IN LIST |
| | | * THE FOLLOWONG LIST CONSISTS OF 2 FULL WORD | | | |
| | | * ENTRIES PER CSECT | | | |
| | | * THE FIRST CONTAINS THE LOCATION OF THE XPT(XSPT) | | | |
| | | * FOR THE CSECT | | | |
| | | * THE SECOND CONTAINS THE NUMBER OF PAGES IN THE | | | |
| | | * CSECT | | | |
| | | * THERE IS ONE ENTRY FOR EACH CSECT NAMED IN THE | | | |
| | | * ABOVE LIST | | | |
| | | * THE RELEATIVE POSITIONS WITHIN THE LIST ARE THE | | | |
| | | * SAME | | | |
| 1B 001A0 | | CMRIVMCS | DS | 0F | BEGINNING OF LIST |
| 1B 001A0 | | CMRSDALC | DS | F | LOC OF XSPT ENTRY FOR SDAT |
| 1B 001A4 | | CMRSDAPG | DS | F | NO. OF EXTERNAL SDAT PAGES |
| 1B 001A8 | | CMRVSSLC | DS | F | LOC OF XSPT ENTRY FOR SSDAT |
| 1B 001AC | | CMRVSSPG | DS | F | NUM OF EXTERNAL SSDAT PGS |
| 1B 001B0 | | CMRPVTLC | DS | F | LOCATION OF XPT ENTRY FOR |
| | | * | | | PVT |
| 1B 001B4 | | CMRPVTPG | DS | F | NUM OF EXTERNAL PVT PAGES |
| 1B 001B8 | | CMRISALC | DS | F | LOCATION OF XPT ENTRY FOR |
| | | * | | | ISA |

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|----------|-------------|--------|------|------|---------|
| 1B 001BC | | CMRISAPG DS | | F | NUM OF EXTERNAL ISA PAGES |
| 1B 001C0 | | CMRTDTLC DS | | A | LOC OF XPT FOR TDT |
| | | * | | | N423** |
| 1B 001C4 | | CMRTDTPG DS | | F | NUM OF TDT PAGES |
| | | * | | | N423** |
| 1B 001C8 | | CMRSCMLC DS | | F | LOC OF XPT ENTRY FOR SYS |
| | | * | | | COM |
| 1B 001CC | | CMRSCMPG DS | | F | NUM OF EXTERNAL SYS COMM |
| | | * | | | PGS |
| 1B 001D0 | | CMRVMDLL DS | | F | LOC OF XPT FOR DYNAM LDR |
| | | * | | | N483 |
| 1B 001D4 | | CMRVMDLP DS | | F | NUM OF DY LDR PGS |
| | | * | | | N483 |
| 1B 001D8 | | DS | | 2F | DUMMY ENTRY FOR DY LDR |
| | | * | | | EPN483 |
| 1B 001E0 | | CMRTCML DS | | F | LOC OF TASK COMMON |
| | | * | | | N483 |
| 1B 001E4 | | CMRTCMP DS | | F | NUM OF TCM PAGES |
| 1B 001E8 | | CMRSARLC DS | | A | LOC OF XPT FOR SAR |
| | | * | | | N386** |
| 1B 001EC | | CMRSARPG DS | | F | NUM OF SAR PAGES |
| | | * | | | N386** |
| 1B 001F0 | | CMRSSCSL DS | | 0F | RSS LIST |
| 1B 001F0 | | CMRSSDAL DS | | F | LOCATION OF SSDAT ENTRY IN |
| | | * | | | XPT2 |
| 1B 001F4 | | CMRSSDAP DS | | F | NUM OF EXT SSDAT PAGES IN |
| | | * | | | RSS |
| | | * REAL CORE ADDRESSES - - FILLED IN BY NAMLOC | | | |
| | | * ROUTINE | | | |
| | | * | | | DURING RESSUP PROCESSING |
| 1B 001F8 | | CMRSCBT DS | | F | CORE BLOCK TABLE |
| 1B 001FC | | CMRNMDEV DS | | A | RC ADDR OF CHBDEV |
| | | * | | | N349.10 |
| 1B 00200 | | CMRINMTS DS | | A | RC ADDR OF CHBMTS |
| | | * | | | N349.10 |
| 1B 00204 | | CMRNMTDE DS | | A | RC ADDR OF CHBTDE |
| | | * | | | N349.10 |
| 1B 00208 | | CMRSSYS DS | | F | SYSTEM TABLE |
| 1B 0020C | | CMRSASAT DS | | F | AUX STOR ALLOC TABLE |
| 1B 00210 | | CMRSSCN DS | | F | SCAN TABLE MASTER CONTROL |
| 1B 00214 | | CMRSPATH DS | | F | SET PATH |
| 1B 00218 | | CMRSPATP DS | | F | PATHFINDING |
| 1B 0021C | | CMRSPATR DS | | F | REVERSE PATHFINDING |
| 1B 00220 | | CMRINTCM DS | | F | INTER-COM |
| 1B 00224 | | CMRSTSKI DS | | F | TASK INITIATION |
| 1B 00228 | | CMRSQGQE DS | | F | QUEUE GQE ON TSI |
| 1B 0022C | | CMRSSTE DS | | F | SCHEDULE TABLE |
| 1B 00230 | | CMRSDISP DS | | F | DISPATCHER |
| 1B 00234 | | CMRSQSCN DS | | F | QUEUE SCANNER |
| 1B 00238 | | CMRSSCA DS | | F | PTR TO SUPERVISOR CORE |
| | | * | | | ALLOC |
| 1B 0023C | | CMRSSCR DS | | F | SUPERVISOR CORE RELEASE |
| 1B 00240 | | CMRSRSV DS | | F | RESERVE PAGE LIST IN SUP |
| | | * | | | CORE |
| 1B 00244 | | CMRSSTA DS | | F | SYMBOLIC TO ACTUAL TABLE |
| 1B 00248 | | CMRSPSA DS | | F | PSA |
| 1B 0024C | | CMRNSVC DS | | F | INVALID SVE PROCESSOR |
| 1B 00250 | | CMRSVCTB DS | | F | POINTER TO SVC TABLE |
| 1B 00254 | | CMRRSDAT DS | | F | SSDAT HEADER (IN RESSUP) |
| 1B 00258 | | CMRSSCSN DS | | 0F | BEGINNING OF TABLE |
| 1B 00258 | | CMRSSDAT DS | | F | SSDAT BODY ( IN RESSUP) |
| 1B 0025C | | CMRSIPE DS | | F | SIPE |
| 1B 00260 | | CMRAEBRS DS | | F | RSS TABLE FOR R/O |
| | 0000000C | CMRSSCNT EQU | | (*-CMRSSCSN) | COUNT OF RESSUP CSECTS |
| 1B 00264 | | CMRASY DS | | F | PTR TO ASYNCH LIST ENTRY |
| | | * | | | FOR |

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|---|---|---|---|---|---|
| | | * | | | OPERATORS TERMINAL IN DEV |
| | | * | | | GRP TBL |
| 1B 00268 | | CMRPAPTR DS | | F | NEXT AVAILABLE READ CORE |
| | | * | | | ADDR |
| 1B 00270 | | CMRLOWAD DS | | F | LOWEST RESSUP LOCATION |
| 1B 00274 | | CMRCATCT DS | | A | RC ADDRESS OF CHBTCT |
| | | * | | | N349.10 |
| 1B 00278 | | CMRCABFP DS | | A | RC ADDRESS OF CHBBFP |
| | | * | | | N349.10 |
| 1B 0027C | | CMRINAD DS | | F | LOCATION OF OUTPUT BUFFER |
| 1B 00280 | | CMROUTAD DS | | F | LOCATION OF OUTPUT BUFFER |
| 1B 00284 | | CMRSTART DS | | F | CURRENT VMA |
| 1B 00288 | | CMRSXPT DS | | F | LOC OF LST XPT/XSPT ENTRY |
| 1B 0028C | | CMRP1002 DS | | F | SAVE AREA FOR P100X |
| | | * CONSTANTS IN COMMUN REGION FOR Q-CONS | | | |
| | | * | | N483 | |
| | | * FLAGS NEEDED FOR Q-CONS | | | |
| | | * | | N483 | |
| 1B 00290 | | CMRUSER DS | | X | USER FLAG |
| | 00000080 | CMRUSER0 EQU | | X'80' | USER MODULES EXIST FLAG |
| | | * | | | N483 |
| | 00000040 | CMRUSERD EQU | | X'40' | PROC USER MOD FLAG |
| | | * | | | N483 |
| 1B 00294 | | CMRHSHDL DS | | 11F | DYN LDR QREF CHAIN |
| | | * | | | N483 |
| 1B 002C0 | | CMRCXDCN DS | | F | CURRENT CXD VALUE |
| | | * | | | N483 |
| | | * | | | N483 |
| 1B 002C4 | | CMRLLAST DS | | F | LOC OF END OF LL ENTRIES |
| | | * | | | N483 |
| 1B 002C8 | | CMRLLEND DS | | F | ADDR OF END OF LL PAGE |
| | | * | | | N483 |

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| | | | | | |
|---|---|---|---|---|---|
| | | * THE FOLLOWING TABLES ARE INDEXED INTO DURING | | | |
| | | * STARTUP | | | |
| | | * TO CONTROL INFORMATION FOR THE BUILDING OF THE | | | |
| | | * XTSI | | | |
| | | * | | | AND PAGE TABLE PAGES |
| | | * | | | TABLE OF SEGMENT LENGTHS |
| 1B 002CC | | CMRSGLN DS | | 0F | |
| 1B 002CC | | CMRSG0LN DS | | F | LENGTH OF SEGMENT 0 IN |
| | | * | | | PAGES |
| 1B 002D0 | | CMRSG1LN DS | | F | LENGTH OF SEGMENT 1 IN |
| | | * | | | PAGES |
| 1B 002D4 | | CMRSG2LN DS | | F | LENGTH OF SEGMENT 2 IN |
| | | * | | | PAGES |
| 1B 002D8 | | CMRSG3LN DS | | F | LENGTH OF SEGMENT 3 IN |
| | | * | | | PAGES |
| 1B 002DC | | CMRSG4LN DS | | F | LENGTH OF SEGMENT 4 IN |
| | | * | | | PAGES |
| 1B 002E0 | | CMRSG5LN DS | | F | LENGTH OF SEGMENT 5 IN |
| | | * | | | PAGES |
| 1B 002E4 | | CMRSG6LN DS | | F | LENGTH OF SEGMENT 6 IN |
| | | * | | | PAGES |
| 1B 002E8 | | CMRSG7LN DS | | F | LENGTH OF SEGMENT 7 IN |
| | | * | | | PAGES |
| 1B 002EC | | CMRSG8LN DS | | F | LENGTH OF SEGMENT 8 IN |
| | | * | | | PAGES |
| 1B 002F0 | | CMRSG9LN DS | | F | LENGTH OF SEGMENT 9 IN |
| | | * | | | PAGES |
| 1B 002F4 | | CMRSGALN DS | | F | LENGTH OF SEGMENT 10 IN |
| | | * | | | PAGES |
| 1B 002F8 | | CMRSGBLN DS | | F | LENGTH OF SEGMENT 11 IN |
| | | * | | | PAGES |
| 1B 002FC | | CMRSGCLN DS | | F | LENGTH OF SEGMENT 12 IN |
| | | * | | | PAGES |
| 1B 00300 | | CMRSGDLN DS | | F | LENGTH OF SEGMENT 13 IN |

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|---|---|---|---|---|---|
| | | * | | | PAGES |
| 1B 00304 | | CMRSGELN | DS | F | LENGTH OF SEGMENT 14 IN |
| | | * | | | PAGES |
| 1B 00308 | | CMRSGFLN | DS | F | LENGTH OF SEGMENT 15 IN |
| | | * | | | PAGES |
| | | | | | |
| | | * | | | TABLE OF SEGMENT ADDENDS |
| 1B 0030C | | CMRSGAD | DS | 0F | |
| 1B 0030C | | CMRSG0AD | DS | F | SEGMENT 0 ADDEND |
| 1B 00310 | | CMRSG1AD | DS | F | SEGMENT 1 ADDEND |
| 1B 00314 | | CMRSG2AD | DS | F | SEGMENT 2 ADDEND |
| 1B 00318 | | CMRSG3AD | DS | F | SEGMENT 3 ADDEND |
| 1B 0031C | | CMRSG4AD | DS | F | SEGMENT 4 ADDEND |
| 1B 00320 | | CMRSG5AD | DS | F | SEGMENT 5 ADDEND |
| 1B 00324 | | CMRSG6AD | DS | F | SEGMENT 6 ADDEND |
| 1B 00328 | | CMRSG7AD | DS | F | SEGMENT 7 ADDEND |
| 1B 0032C | | CMRSG8AD | DS | F | SEGMENT 8 ADDEND |
| 1B 00330 | | CMRSG9AD | DS | F | SEGMENT 9 ADDEND |
| 1B 00334 | | CMRSGAAD | DS | F | SEGMENT 10 ADDEND |
| 1B 00338 | | CMRSGBAD | DS | F | SEGMENT 11 ADDEND |
| 1B 0033C | | CMRSGCAD | DS | F | SEGMENT 12 ADDEND |
| 1B 00340 | | CMRSGDAD | DS | F | SEGMENT 13 ADDEND |
| 1B 00344 | | CMRSGEAD | DS | F | SEGMENT 14 ADDEND |
| 1B 00348 | | CMRSGFAD | DS | F | SEGMENT 15 ADDEND |
| | | | | | |
| | | * TABLE OF BEGINNING ADDRESSES OF EACH SEGMENT | | | |
| 1B 0034C | | CMRSGMT | DS | 0F | |
| 1B 0034C | | CMRSGMT0 | DS | F | ADDRESS OF SEG 0, PG 1 |
| 1B 00350 | | CMRSGMT1 | DS | F | ADDRESS OF SEG1, PG 0 |
| 1B 00354 | | CMRSGMT2 | DS | F | ADDRESS OF SEG 2, PG 0 |
| 1B 00358 | | CMRSGMT3 | DS | F | ADDRESS OF SEG 3, PG 0 |
| 1B 0035C | | CMRSGMT4 | DS | F | ADDRESS OF SEG 4, PG 0 |
| 1B 00360 | | CMRSGMT5 | DS | F | ADDRESS OF SEG 5, PG 0 |
| 1B 00364 | | CMRSGMT6 | DS | F | ADDRESS OF SEG 6, PG 0 |
| 1B 00368 | | CMRSGMT7 | DS | F | ADDRESS OF SEG 7, PG 0 |
| 1B 0036C | | CMRSGMT8 | DS | F | ADDRESS OF SEG8, PG 0 |
| 1B 00370 | | CMRSGMT9 | DS | F | ADDRESS OF SEG 9, PG 0 |
| 1B 00374 | | CMRSGMTA | DS | F | ADDRESS OF SEG 10, PG 0 |
| 1B 00378 | | CMRSGMTB | DS | F | ADDRESS OF SEG 11, PG 0 |
| 1B 0037C | | CMRSGMTC | DS | F | ADDRESS OF SEG 12, PG 0 |
| 1B 00380 | | CMRSGMTD | DS | F | ADDRESS OF SEG13, PG 0 |
| 1B 00384 | | CMRSGMTE | DS | F | ADDRESS OF SEG 14, PG 0 |
| 1B 00388 | | CMRSGMTF | DS | F | ADDRESS OF SEG 15, PG 0 |
| | | | | | |
| | | * TABLE OF PAGE TABLE PAGE POINTERS | | | |
| 1B 0038C | | CMRPAG | DS | 0F | |
| 1B 0038C | | CMRPAG0 | DS | F | PAGE TABLE - SEGMENT 0 |
| 1B 00390 | | CMRPAG1 | DS | F | PAGE TABLE - SEGMENT 1 |
| 1B 00394 | | CMRPAG2 | DS | F | PAGE TABLE - SEGMENT 2 |
| 1B 00398 | | CMRPAG3 | DS | F | PAGE TABLE - SEGMENT 3 |
| 1B 0039C | | CMRPAG4 | DS | F | PAGE TABLE - SEGMENT 4 |
| 1B 003A0 | | CMRPAG5 | DS | F | PAGE TABLE - SEGMENT 5 |
| 1B 003A4 | | CMRPAG6 | DS | F | PAGE TABLE - SEGMENT 6 |
| 1B 003A8 | | CMRPAG7 | DS | F | PAGE TABLE - SEGMENT 7 |
| 1B 003AC | | CMRPAG8 | DS | F | PAGE TABLE - SEGMENT 8 |
| 1B 003B0 | | CMRPAG9 | DS | F | PAGE TABLE - SEGEMNT 9 |
| 1B 003B4 | | CMRPAGA | DS | F | PAGE TABLE - SEGMENT 10 |
| 1B 003B8 | | CMRPAGB | DS | F | PAGE TABLE - SEGMENT 11 |
| 1B 003BC | | CMRPAGC | DS | F | PAGE TABLE - SEGMENT 12 |
| 1B 003C0 | | CMRPAGD | DS | F | PAGE TABLE - SEGMENT 13 |
| 1B 003C4 | | CMRPAGE | DS | F | PAGE TABLE - SEGMENT 14 |
| 1B 003C8 | | CMRPAGF | DS | F | PAGE TABLE - SEGMENT 15 |
| | | | | | |
| 1B 003CC | | CMRNASVM | DS | F | VMA OF NEXT AVAILABLE |
| | | * | | | SEGMENT |
| | | * | | | INITIALLY SET TO X'200000' |
| 1B 003D0 | | CMRNASNM | DS | H | NEXT AVAILABLE SEGMENT |
| | | * | | | NUMBER |

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|---|---|---|---|---|---|
| | | * | | | INITIALLY SET TO 2 |
| 1B 003D2 | | CMRPVSEG | DS | 16XL2 | TABLE OF PRIVATE SEGMENT |
| | | * | | | NUMS |
| | | * | | | HLFWDS-INIT SET TO X'FFFF' |
| 1B 003F2 | | CMRPBSEG | DS | 16XL2 | TABLE OF PUBLIC SEGMENT |
| | | * | | | NUMS |
| | | * | | | HLFWDS-INIT SET TO X'FFFF' |
| | 0000000F | CMRSEGMX | EQU | 15 | HIGHEST USABLE SEG NUM |
| | | * | | | ALLOWED BY STARTUP |
| | 1B 00354 | CMRSSOR | EQU | CMRSGMT2 | BASE ADDRESS FOR RSSSUP |
| | | * | | | INITIALLY AT SEGMENT 2 |
| | 00000002 | CMRPGTSZ | EQU | 2 | PAGE TABLE ENTRY SIZE |
| | 00000008 | CMRASTSZ | EQU | 8 | AUX SEG TBL ENTRY SIZE |
| | 00000010 | CMRPPHSZ | EQU | 16 | PAGE TABLE PAGE HEADER SIZE |
| | 00000010 | CMRPTHSZ | EQU | 16 | PTP ENTRY HEADER SIZE |
| | 00000010 | CMRRSPSZ | EQU | 16 | RSPI ENTRY SIZE |
| | | * | | | CONTROL REGISTERS 0 THRU 7 |
| 1B 00414 | | CMRCRG0 | DS | F | CONTROL REGISTER 0 |
| | | * | | | INITIALLY PTR TO SEG TBL |
| | | * | | | ORIGIN |
| | | * | | | IN XTSI |
| 1B 00418 | | CMRCRG1 | DS | F | CONTROL REGISTER 1 |
| 1B 0041C | | CMRCRG2 | DS | F | CONTROL REGISTER 2 |
| 1B 00420 | | CMRCRG3 | DS | F | CONTROL REGISTER 3 |
| 1B 00424 | | CMRCRG4 | DS | F | CONTROL REGISTER 4 |
| 1B 00428 | | CMRCRG5 | DS | F | CONTROL REGISTER 5 |
| 1B 0042C | | CMRCRG6 | DS | F | CONTROL REGISTER 6 |
| | | * | | | INITIALLY = X'008000FE' |
| 1B 00430 | | CMRCRG7 | DS | F | CONTROL REGISTER 7 |
| | | * PARAMETERS FOR GETMEM ROUTINE | | | |
| | | * | | | INPUT PARAMETERS |
| 1B 00434 | | CMRGTDR | DS | X | DIRECTION TO ASSIGN NEXT |
| | | * | | | PAGE |
| 1B 00435 | | CMRGTFL | DS | CL1 | CORE BLOCK TABLE FLAG |
| | 0000003C | CMRGTFLN | EQU | X'3C' | SET NO FLAG IN PAGE MAP |
| | 00000000 | CMRGTFLY | EQU | X'00' | STARTUP OR STARTUP BUFFER |
| | | * | | | PAGE |
| 1B 00436 | | CMRGTNC | DS | X | TEST BYTE FOR NO CORE |
| | 00000000 | CMRGTNCT | EQU | X'00' | TERMINATE IF NO CORE AVAIL |
| | 000000FF | CMRGTNCR | EQU | X'FF' | RETURN IF NO CORE AVAIL |
| | 00000001 | CMRGTNCF | EQU | X'01' | RETURN IF FIRST BLOCK |
| | | * | | | UNAVAIL |
| 1B 00438 | | CMRGTNUM | DS | H | NUM OF CONTIGUOUS PGS |
| | | * | | | REQUIRED |
| | | * | | | OUTPUT PARAMETERS |
| 1B 0043C | | CMRRETAD | DS | F | ADDR OF ALLOCATED BLOCK |
| | | * | | | RETURNED |
| | 00000000 | CMRGTNCY | EQU | X'00' | INDICATES BLOCK HAS BEEN |
| | | * | | | ALLOCAT |
| | | * | | | ED |
| | | * | | | IN CMRGTNC |
| 1B 00440 | | CMRSSFL | DS | X | RSS SYMBOL TABLE FLAG |
| | 000000FF | CMRSSFLM | EQU | X'FF' | RSS SYMBOL TABLE MASK |
| | | * | | | STORAGE AREAS PRE-ASSEMBLED |
| | 00000000 | CMRGTDRU | EQU | X'00' | ASSIGN UPWARD |
| | 00000001 | CMRGTDRD | EQU | X'01' | ASSIGN DOWNWARD |
| 1B 00444 | | CMRSAVE | DS | 15F | SAVE AREA FOR LINK LOADER |
| 1B 00480 | | CMRDSCB | DS | 64F | DSCB READ IN AREA |
| | | * EACH ENTRY IN THE DATA SET TABLE IS COMPRISED | | | |
| | | * OF 1 HLFWD CONTAINING | | | |
| | | * AN EXTAB DISPLACEMENT AND 1 HLFWD CONTAINING | | | |
| | | * THE NUM OF POD PAGES | | | |
| 1B 00580 | | CMRDSTBL | DS | 50F | DELTA DATA SET TABLE |
| 1B 00648 | | CMRPCU | DS | 30F | PCU TABLE |

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|---|---|---|---|---|---|
|  | 1B 00580 | CMRSDTB | EQU | CMRDSTBL | SDAT DEVICE TABLE |
| 1B 006C0 |  | CMRDSTR | DS | 20F | RSSSUP DATA SET TABLE |
| 1B 00710 |  | CMRDSNAD | DS | F | POINTER TO DATA SET NAME |
| 1B 00714 |  | CMRHRCHY | DS | H | HEIRCHARY NUM FOR DELTAS |
| 1B 00716 |  | CMRDSCNT | DS | H | NUM OF DELTA DATA SETS |
| 1B 00718 |  | CMRDDSC0 | DS | H | TOTAL NUM OF DELTAS |
| 1B 0071A |  | CMRCSNTR | DS | H | NUM OF RSSSUP DELTA DATA |
|  |  | * |  |  | SETS |
| 1B 0071C |  | CMRPDCNT | DS . | H | NUM OF PODS |
| 1B 00720 |  | CMRDSINP | DS | F | OPER TERM INPUT AREA * |
|  |  | * |  |  | DELTA INFO |
|  |  | * |  |  | POINTER |
| 1B 00724 |  | CMRDSLST | DS | F | ADDR OF LIST OF DATA SET |
|  |  | * |  |  | NAMES |
| 1B 00728 |  | CMRDVOL | DS | F | DELTA PACK INFO |
|  | 1B 00728 | CMRDVOLT | EQU | CMRDVOL | 1ST BYTE = TYPE CODE |
|  | 1B 0072A | CMRDVOLA | EQU | CMRDVOL+2 | 2ND HLFWD = ADDRESS |
| 1B 0072C |  | CMREXDIS | DS | H | EXTENT LOC RELATIVE TO |
|  |  | * |  |  | BEGINNING OF EXTAB BUFFER |
|  |  | * |  |  | CMREXTAB |
| 1B 0072E |  | CMRDSDIS | DS | H . | CMRDSTBL OFF SET |
|  |  | * |  |  | DATA SET TABLE - INIT = 4 |
| 1B 00730 |  | CMRNMTCT | DS | CL8 | CSECT NAME OF CHBTCT |
|  |  | * |  |  | N349.10 |
| 1B 00738 |  | CMRNMBFP | DS | CL8 | CSECT NAME OF CHBBFP |
|  |  | * |  |  | N349.10 |
| 1B 00740 |  | CMRCRVOL | DS | F | VOL INFO FOR CURRENT VOLUME |
|  |  | * DELTA DATA SET NAME INFORMATION |  |  |  |
| 1B 00744 |  | CMRQUAL | DS | CL4 | SECOND ORDER QUALIFIER FOR |
|  |  | * |  |  | DELTA DATA SET NAMES |
| 1B 00748 |  | CMRQUAL1 | DS | CL4 | INIT = C'.IVM' |
| 1B 0074C |  | CMRQUALS | DS | CL4 | INIT = C'.SUP' |
| 1B 00750 |  | CMRQUALR | DS | CL4 | INIT = C'.RSS' |
| 1B 00754 |  | CMRALLDS | DS | CL4 | INIT = C'ALL ' |

```
           *   TDY TABLE IS A TABLE OF REAL CORE ADDRESSES
           *   OCCUPIED BY THE TDY FOR
           *   IVM.  IT CONSISTS OF ONE OR MORE 3-WORD GROUPS OR
           *   EXTENTS
           *   THE FIRST 2 WORDS CONTAIN THE LOWEST AND HIGHEST
           *   REAL CORE
           *   ADDRESSES WHICH ARE RELOCATED BY A COMMON
           *   RELOCATION FACTOR
           *   WHICH IS WORD 3 - THE LAST ENTRY IS A DOUBLE
           *   WORD OF ONES
```

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|---|---|---|---|---|---|
| 1B 00758 |  | CMRTDYTB | DS | 64F | TDY TABLE |
| 1B 00858 |  | CMRINPUT | DS | 80C | OP TERM/CARD RDR INPUT AREA |

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           ************************************************
           * THE FOLLOWING IS STARTUPS PATCH AREA
           * CMRPATDS GIVES THE DISPLACEMENT WITHIN THE
           * COMMUNICATION REGION
           *                              OF THE PATCH AREA
```

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|---|---|---|---|---|---|
|  | 000008A8 | CMRPATDS | EQU | *-CMREIAA | DISPLACEMENT OF PATCH AREA |
| 1B 008A8 |  | CMRPATCH | DS | 10F | N483 |
| 1B 008D0 |  | CMRSOAI | DS | F | SOA FOR IPL'D CPU |
| 1B 008D4 |  | CMRSOAN | DS | F | SOA FOR NON-IPL'D CPU |
|  |  | * |  |  | ASSORTED CONSTANTS |
| 1B 008D8 |  | CMRPGSVE | DS | F | SAVE OF ASDLST ENTRY |
|  |  | * |  |  | PRINT MAP CONSTANTS |
| 1B 008DC |  | CMRMPBG | DS | F | BEGINNING OF PRINT MAP |
| 1B 008E0 |  | CMRYMCUR | DS | F | CURRENT PAGE FOR SYMGEN |
| 1B 008E8 |  |  | DS | 0D | ALIGN TO DPUBLE WORD |
|  |  | * |  |  | BOUNDARY |
| 1B 008E8 |  | CMRTRMNT | DS | XL8 | WAIT STATE PSW = |
|  |  | * |  |  | X'0002000000000 |
|  |  | * |  |  | 000' |
| 1B 008F0 |  | CMRTRTB | DS | CL16 | TRANSLATE TABLE |

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|---|---|---|---|---|---|
| | | * | | | =C'0123456789ABC |
| | | * | | | DEF' |
| 1B 00900 | | CMRCEND | DS | CL3 | = C'END' |
| 1B 00904 | | | DS | 0F | ALIGN TO FULL WORD BOUNDARY |
| 1B 00904 | | CMRENDMK | DS | 12X | END MARK = 'FF' FOR 12 |
| | | * | | | BYTES |
| 1B 00910 | | CMRZEROS | DS | D | DOUBLE WORD = D'0' |
| 1B 00918 | | CMRSEGMK | DS | F | SEG BOUNDARY MASK = |
| | | * | | | X'000FFFFF' |
| 1B 0091C | | CMRONE | DS | F | FULL WORD = F'1' |
| | 1B 0091E | CMRONE1 | EQU | CMRONE+2 | HW OF ONE            N483 |
| 1B 00920 | | CMR256 | DS | F | FULL WORD = F'256' |
| | | | | | |
| | | * | THE FOLLOWING ARE MASKS - - ALL MUST BE ON FULL | | |
| | | * | WORD BOUNDARIES | | |
| 1B 00924 | | CMRLIDMS | DS | F | LEAVE INTERRUPTS DISABLED |
| | | * | | | AT SET |
| | | * | | | PATH EXIT = X'00040000' |
| 1B 00928 | | CMRLIDMP | DS | F | LEAVE INTS DISABLED AT |
| | | * | | | EXIT- |
| | | * | | | PATHFINDING/REV PATH. |
| | | * | | | INIT = X'00010000' |
| 1B 0092C | | CMRMMSK | DS | F | DEVICE MALFUNCTION FLAG |
| | | * | | | = X'40000000' |
| | | * | THE FOLLOWING THREE CARDS MUST STAY TOGETHER | | |
| 1B 00930 | | | DS | 0F | ALIGN TO A FULL WORD |
| | | * | | | BOUNDARY |
| 1B 00930 | | | DS | H | FIRST HALF WORD ZERO |
| 1B 00932 | | CMRPGLTH | DS | H | SEC HALF WORD = X'1000' |
| | | * | | | FULL WORD/HALF WORD FOR |
| | | * | | | PAGE LENGTH |
| | | | | | |
| 1B 00934 | | CMRDEFCT | DS | H | NUM OF DEFINITIONS-INIT = 1 |
| 1B 00936 | | CMRLXPT | DS | H | LEN OF XPT ENTRY INIT = 8 |
| 1B 00938 | | CMRLXPST | DS | H | LEN OF XSPT ENTRY INIT = 12 |
| 1B 0093A | | CMRTWO | DS | H | HALF WORD = 2 |
| 1B 0093C | | CMRFOUR | DS | H | HALF WORD = 4 |
| | | * | | | DATA SET NAME QUALIFIERS |
| 1B 0093E | | CMRDSNAM | DS | CL9 | INIT = C'TSS*****.' |
| 1B 00947 | | CMRDSQAL | DS | CL6 | MODIFIED DATA SET NAME |
| | | * | | | SYSIVM, RESSUP, RSSSUP |
| | 0000000F | CMRNLTH1 | EQU | *-CMRDSNAM | LEN OF WHOLE NAME |
| | 00000006 | CMRNLTH2 | EQU | *-CMRDSQAL | LEN OF QUALIFIER |
| 1B 00950 | | | DS | 0F | ALIGN TO FULL WORD BOUNDARY |
| 1B 00950 | | CMRNAME | DS | CL8 | INIT = ' ' - CSECT NAME |
| | | * | | | HOLD AREA |
| 1B 00958 | | | DS | 2X | INIT = X'0000' |
| 1B 0095A | | CMRCZ | DS | CL2 | INIT = C'CZ' |
| 1B 0095C | | CMRCHB | DS | CL3 | INIT = C'CHB' |
| 1B 0095F | | CMRTDYNM | DS | CL8 | INIT = C'TDY      ' |
| 1B 00967 | | CMRMAPNM | DS | CL8 | INIT = C'TDY MAP ' |
| 1B 0096F | | CMREXTNM | DS | CL8 | INIT = C'EXTAB   ' |
| 1B 00977 | | CMRPGWRT | DS | X | |
| 1B 00978 | | CMRMAP | DS | X | MAP OPTION SWITCH |
| | 00000001 | CMRMAPI | EQU | X'01' | IVM MAPS PRINT WANTED |
| | 00000002 | CMRMAPS | EQU | X'02' | RESSUP/RSSSUP MAPS WNATED |
| 1B 00979 | | CMRVAM2 | DS | CL2 | INIT = C'V2' - VAM 2 CODE |
| | | * | THE FOLLOWING CARDS MUST BE TOGETHER TO ENSURE | | |
| | | * | FULL WORD BOUNDARY | | |
| 1B 0097C | | CMRMINUS | DS | 0F | ALIGN TO FULL WORD BOUNDARY |
| 1B 0097C | | | DS | XL4 | = X'80000000' |
| | | | | | |
| | | * | SAVE AREA FOR REGISTER 13 BY VARIOUS ROUTINES | | |
| 1B 00980 | | CMRTRANV | DS | F | SAVE WORD FOR REG 13 |
| 1B 00984 | | CMRRDPDV | DS | F | SAVE WORD FOR REG 13 |
| 1B 00988 | | CMRSRCHV | DS | F | SAVE WORD FOR REG 13 |
| 1B 0098C | | CMRLOCXV | DS | F | SAVE WORD FOR REG 13 |
| 1B 00990 | | CMRHASHV | DS | F | SAVE WORD FOR REG 13 |

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|----------|-------------|--------|------|------|---------|
| 1B 00994 | | CMRSAVEV DS | F | | SAVE WORD FOR REG 13 |
| 1B 00998 | | CMRGTXSV DS | F | | SAVE WORD FOR GETEXT R13 |
| 1B 0099C | | CMRBS13 DS | F | | SAVE R13 AREA          N483 |
| 1B 009A0 | | CMRHSHSV DS * | F | | HASH SAVE AREA   REG 13 N349.10 |
| 1B 009A4 | | CMRMODSV DS * | F | | MODFY SAVE AREA FOR BASE N349.10 |
| 1B 009A8 | | CMRRDNSV DS * | F | | READIN BASE REG SAVE AREA N349.10 |
| 1B 009AC | | CMRSTLEN DS * | H | | STARTUP PAGES OR BUFFERS CURRENTLY ASSIGNED |
| 1B 009B0 | | CMRSARSV DS * | F | | REG 13 SAVE AREA N386** |
| 1B 009B4 | | CMREADER DS | H | | CARD READER INPUT INDICATOR |
| 1B 009B6 | | CMRMODNM DS | CL8 | | MODULE NAME |
| 1B 009BE | | CMREXTNO DS * | H | | NUM OF EXTAB (CMREXTAB) BUFFS |
| 1B 009C0 | | CMRPARTM DS | H | | NUM OF TEMP PART PAGES |
| 1B 009C2 | | CMRTEMP DS | X | | TEMPORARY STORAGE AREA |
| 1B 009C3 | | CMROVFG DS | X | | SEGMENT OVERFLOW FLAGS |
| | 00000001 | CMROVXTS EQU | | X'01' | XTSI OVERFLOWED |
| | 00000002 | CMROVPRI EQU | | X'02' | PRIVATE SEGMENT OVERFLOWED |
| | 00000004 | CMROVPUB EQU | | X'04' | PUBLIC SEGMENT OVERFLOWED |
| 1B 009C4 | | CMRCSW1 DS | X | | MAIN CPU FLAG BYTE |
| | 00000003 | CMRCSW1M EQU | | X'03' | ON = PROCESSING STARTUP |
| 1B 009C5 | | CMRCSW2 DS | X | | OTHER CPU FLAG BYTE |
| | 00000003 | CMRCSW2M EQU | | X'03' | ON = READY TO EXIT |
| | | * DELTA DATA SET VOLUME INFORMATION | | | |
| 1B 009C6 | | CMRDLBT DS | X | | FLAG BYTE |
| | 00000020 | CMRDLBTD EQU * | | X'20' | DELTA DATA SET VOL EXISTS MASK |
| | 00000010 | CMRDLBTE EQU | | X'10' | MINOR ERRORS MASK |
| | 00000008 | CMRDLBTP EQU * | | X'08' | PRIMARY DS ON DELTA DS VOL MASK |
| | 00000004 | CMRDLBTR EQU | | X'04' | MSG LIST RELOC FLAG |

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= ****************************************************
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```
* PARAMETERS FOR STARTUP READ - WRITE SUBROUTINE -
* - EIAA2
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| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|----------|-------------|--------|------|------|---------|
| 1B 009C8 | | CMRIOAD DS | F | | DATA BUFFER ADDRESS |
| 1B 009CC | | CMRIOLEN DS | H | | LEN FOR I/O OPERATION |
| 1B 009CE | | CMRIOFG DS * | X | | INPUT /OUTPUT FLAG INPUT BITS |
| | 00000080 | CMRIOFGW EQU | | X'80' | WRITE ( OFF FOR READ) |
| | 0000007F | CMRIOFGR EQU * | | X'FF'-CMRIOFGW | READ ( TURN OFF WRITE BIT) |
| | 00000040 | CMRIOFGL EQU | | X'40' | DON'T RELOCATE |
| | 00000020 | CMRIOFGO EQU * | | X'20' | OWN CCW ADDR IN REG 0 OUTPUT BITS |
| | 00000008 | CMRIOFGA EQU | | X'08' | ABNORMAL RETURN. OTHERS SET |
| | 00000004 | CMRIOFGC EQU | | X'04' | MALF CHANNEL |
| | 00000002 | CMRIOFGD EQU | | X'02' | MALF DEVICE OR CU BUSY |
| | 00000001 | CMRIOFGI EQU | | X'01' | INTERVENTION REQUIRED |

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* ********************************************
* PARAMETERS FOR PAGING OF THE TDY
```

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|----------|-------------|--------|------|------|---------|
| 1B 009D0 | | CMRGRP1 DS | F | | ADDR FOR MAJOR GROUP |
| 1B 009D4 | | CMRGRP2 DS | F | | ADDR FOR MINOR GROUP |
| 1B 009D8 | | CMRGRPS1 DS | F | | SIZE OF MAJOR GROUP BUFFER |
| 1B 009DC | | CMRGRPS2 DS | F | | SIZE OF MINOR GROUP BUFFER |
| 1B 009E0 | | CMREQAD1 DS | F | | REL TDY ADDR REQ IN BUFF1 |
| 1B 009E4 | | CMREQAD2 DS | F | | REL TDY ADDR REQ IN BUFF2 |
| 1B 009E8 | | CMRETAD1 DS | F | | POINTER RETURNED FROM BUFF1 |
| 1B 009EC | | CMRETAD2 DS | F | | POINTER RETURNED FROM BUFF2 |
| 1B 009F0 | | CMRBUFF1 DS | F | | ADDR OF MAJOR BUFFER |
| 1B 009F4 | | CMRBUFF2 DS | F | | ADDR OF MINOR BUFFER |
| 1B 009F8 | | CMRBLDF DS * | F | | BUFFER TO HOLD TDY PAGE TABLES |
| 1B 009FC | | CMRBLDX DS | F | | BUILD BUFFER INDEX |

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|----------|-------------|--------|------|------|---------|
| 1B 00A00 | | CMRMAXTD | DS | F | MAX SIZE OF TDY BEFORE |
| | | * | | | PAGING ST |
| | | * | | | ARTS |
| 1B 00A04 | | CMRBFLN | DS | H | LEN OF BUFF1/BUFF2 IN PGS |
| 1B 00A08 | | CMRSCED | DS | F | SCHEDULE TABLE ENTRY LEN |
| | | | | | |
| | | * ************************************************** | | | |
| | | * | | | COMMAND CCW LIST |
| | | * ADDRESSES FILLED IN DYNAMICALLY WHILE STARTING | | | |
| | | * UP | | | |
| 1B 00A10 | | CMRCCW05 | DS | D | INIT = 139,0,X'60',1 |
| 1B 00A18 | | CMRCCW06 | DS | D | INIT = 09,0,X'20',0 |
| | 1B 00A1E | CMRCCW6B | EQU | CMRCCW06+6 | |
| | | | | | |
| | | * ************************************************* * | | | |
| | | * | | | CONSTANTS AND STORAGE AREAS |
| | | * | | | DATA SET NAME CONSTANTS |
| 1B 00A20 | | CMRIVM | DS | CL15 | = C'TSS*****.SYSIVM' |
| 1B 00A2F | | CMRSUP | DS | CL15 | = C'TSS*****.RESSUP' |
| 1B 00A3E | | CMRRSS | DS | CL15 | = C'TSS*****.RSSSUP' |
| | | | | | |
| | | * = ************************************** | | | |
| | | * | | | PARAMETERS FOR QUICKSTART |
| 1B 00A50 | | CMRFSTSU | DS | F | LOC OF STARTUP ON COLD |
| | | * | | | START |
| 1B 00A54 | | CMRSPSV | DS | F | SAVE OF REG 13 BY SPECIAL |
| 1B 00A58 | | | DS | 0F | ALIGN TO FULL WORD BOUNDARY |
| 1B 00A58 | | CMRQKTYP | DS | H | DEV TYPE CODE FOR QK VOL |
| 1B 00A5A | | CMRQKVOL | DS | H | DEVICE ADDR-QUICK START VOL |
| 1B 00A5C | | CMRQKPAT | DS | H | RPN OF PAT FOR QUICK START |
| | | * | | | VOL |
| 1B 00A5E | | CMRQKCPU | DS | H | NUM OF CPUS AT COLD START |
| 1B 00A60 | | CMRQKPVT | DS | H | REL PUB VOL NUM OF QK VOL |
| 1B 00A62 | | CMRRPNE | DS | H | RPN OF QKSTART E DSCB |
| 1B 00A64 | | CMRSLTE | DS | H | SLOT NUM OF QKSTRT E DSCB |
| 1B 00A66 | | CMRSRQKF | DS | AL2 | FIRST SERR RPN |
| | | * | | | I5718 |
| 1B 00A68 | | CMRSRQKL | DS | AL2 | LAST SERR RPN |
| | | * | | | I5718 |
| 1B 00A6A | | CMRSRCNT | DS | H | COUNT OF BAD SERR PAGES |
| | | * | | | I5718 |
| | | * | | | INITIALLY = H'1' |
| | | * | | | I5718 |
| 1B 00A6C | | CMRQKFG | DS | X | QUICK START FLAG |
| | 00000080 | CMRQKFGY | EQU | X'80' | QUICK START MASK |
| | 00000040 | CMRQKFGI | EQU | X'40' | QUICK START VOL = IPL PACK |
| | 00000020 | CMRQKFGP | EQU | X'20' | QUICK START PACK PUBLIC |
| | 00000010 | CMRQKFGE | EQU | X'10' | QK DATA SET ALREADY EXISTS |
| | 00000001 | CMRQKFGM | EQU | X'01' | THIS IS A QUICK START MASK |
| | 00000002 | CMRQKFGL | EQU | X'02' | NEW QK START DS LARGER FLAG |
| 1B 00A6D | | CMRQKID | DS | CL6 | VOLID OF QUICK START VOLUME |
| 1B 00A74 | | CMRQKMAP | DS | 18F | BYTE MAP FOR BUFFER PAGES |
| | | * | | | INIT = X'FFFFFFFF' |
| | | | | | |
| 1B 00ABC | | | DS | F | |
| 1B 00AC0 | | CMRVMLL | DS | CL8 | INIT = C'CHBVM ' - |
| | | * | | | MODULE NAME OF VM LOAD LIST |
| 1B 00AC8 | | | DS | X | |
| 1B 00AC9 | | CMRRCLL | DS | CL8 | INIT = C'CHBRC' * MODULE |
| | | * | | | NAME |
| | | * | | | OF REAL CORE LOAD LIST |
| 1B 00AD1 | | | DS | X | |
| 1B 00AD2 | | CMRRSLL | DS | CL8 | INIT = C'CHBRS ' * |

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|----------|-------------|--------|------|------|---------|
| | | * | | | MODULE NA |
| | | * | | | ME OF RSSSUP LOAD LIST |
| 1B 00ADA | | | DS | X | INIT = X'00' |
| 1B 00ADB | | CMRPGIND | DS | X | PAGING INDICATOR |
| | | * * * * * * * * * * | | * * * * * * * * * ** | |
| | | * | | | ASSORTED MASKS |
| | | * ALIGNED TO FULL WORD BOUNDARY | | | |
| 1B 00ADC | | | DS | 0F | |
| 1B 00ADC | | CMRMSK1B | DS | XL4 | INIT = XL4'3F' |
| 1B 00AE0 | | CMRMSK2 | DS | XL4 | INIT = X'00FFFFF0' |
| 1B 00AE4 | | CMRMSK3 | DS | XL4 | INIT = X'00FFFFFF' |
| | | * | | | CCW COMMAND CODE MASK |
| 1B 00AE8 | | CMRMSKE | DS | XL4 | INIT='E0000000'    N483 |
| 1B 00AEC | | CMRMSK7 | DS | XL4 | INIT = X'FFFFFFF8' |
| | | * | | | - DOUBLE WORD BNDRY MASK |
| 1B 00AF0 | | CMRMSK8 | DS | XL4 | INIT = X'00000FFF' *   BYTE |
| | | * | | | PART |
| | | * | | | OF AN ADDRESS |
| 1B 00AF4 | | CMRMSK9 | DS | XL4 | INIT = X'FFFFFFC0' |
| | 1B 00AF0 | CMRMFFF | EQU | CMRMSK8 | N483 |
| | 1B 00AF2 | CMRUSECT | EQU | CMRMSK8+2 | N483 |
| | | * | | | - 64 BYTE BNDRY MASK |
| 1B 00AF8 | | CMRMSK11 | DS | XL4 | INIT = X'FFFFF000' |
| | | * | | | PAGE BOUNDARY MASK |
| 1B 00AFC | | CMRMUTCT | DS | H | INIT = H'32767' |
| | | * | | | - INITIAL MUT COUNT |
| 1B 00AFE | | CMRSPTNO | DS | H | INIT = H'1' |
| | | * | | | - INITIAL SPT NUMBER |
| 1B 00B00 | | CMRLSPT | DS | H | LAST ASSIGNED SPT NUMBER |
| 1B 00B02 | | CMRSSVE | DS | H | SAVE FOR RSS SYMBOL TABLE |
| 1B 00B04 | | CMRBLANK | DS | CL8 | INIT = C'        ' |
| | | * | | | ASSORTED CONSTANTS |
| 1B 00B0C | | | DS | 0F | N349.10 |
| 1B 00B0C | | CMRMXHDI | DS | XL4 | INIT = X'0000A000' |
| | | * | | | - MAX BYTES IN IVM TDY HDNG |
| 1B 00B10 | | CMRMXHDR | DS | XL4 | INIT = X'00004000' |
| | | * | | | MAX BYTES IN RES TDY HDNG |
| | 1B 0034C | CMRS0PG1 | EQU | CMRSGMT0 | STARTING ADDRESS FOR |
| | | * | | | SEGMENT 0, PAGE 1 |
| 1B 00B14 | | CMRAEAR | DS | F | BUILD CEHCHRSS HERE |
| 1B 00B18 | | CMRPAGEV | DS | F | SAVE AREA |
| | | * INFORMATION NEEDED AND | | | UPDATED BY LINDK LOADER |
| 1B 00B1C | | CMRFXBTL | DS | F | SAVE OF PMD LENGTH |
| 1B 00B20 | | CMRFXBS | DS | F | CSECT BASE ADDRESS |
| 1B 00B24 | | CMRPGTAD | DS | F | PAGE TABLE ORIGIN |
| 1B 00B28 | | CMRINADV | DS | F | SAVE OF INAD |
| 1B 00B2C | | CMRVIRT | DS | F | CURRENT VIRTUAL PAGE NUM |
| 1B 00B30 | | CMRTEXTN | DS | F | CURRENT TEXT PAGE NUMBER |
| 1B 00B34 | | CMRNOBT | DS | F | NUMBER OF BYTES IN CSECT |
| 1B 00B38 | | CMRERLD | DS | F | START OF EXT REF MODIFIER |
| | | * | | | PTRS |
| 1B 00B3C | | CMRERND | DS | F | END OF EXT REF MODIFIER |
| | | * | | | PTRS |
| 1B 00B40 | | CMRIRLD | DS | F | START OF IN REF MODIFIER |
| | | * | | | PTRS |
| 1B 00B44 | | CMRIRND | DS | F | END OF INT REF MODIFIER |
| | | * | | | PTRS |
| 1B 00B48 | | CMRVMPT | DS | F | LOC OF VIR MEM PAGE TABLE |
| 1B 00B4C | | CMRSEPCS | DS | F | POINTER TO SEP CSD |
| 1B 00B50 | | CMRMODCO | DS | H | NUM OF MODULES IN DATA SET |
| 1B 00B52 | | CMRINPSZ | DS | H | SIGNIFICANT BYTES IN INPUT |

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|----------|-------------|--------|------|------|---------|
| | | * | | | BUFF |
| 1B 00B54 | | CMROUTSZ | DS | H | BYTES AVAIL IN OUTPUF BUFF |
| 1B 00B56 | | CMRSEGSW | DS | H | DATA SET INDICATOR FOR |
| | | * | | | GETEXT * |
| | | * | | | 1=RESSUP, 0=SEG0, 1=SEG1 |
| 1B 00B58 | | CMRSSSW | DS | H | INIT = H'255' |
| | | * | | | - RSSSUP SWITCH FOR GETEXT |
| 1B 00B5A | | CMRMVESW | DS | C | 1=BYTES TO MOVE |
| 1B 00B5B | | CMRNLLSW | DS | C | 1=EMPTY PAGE |
| 1B 00B5C | | CMRCDFSW | DS | C | COMPLEX DEF SW ( 1 = ON) |
| 1B 00B5D | | CMRSERSW | DS | C | SER SWITCH |
| 1B 00B5E | | CMRUTI | DS | XL4 | INIT = X'07000000' |
| | | * | | | - USER TIMER INTERVAL |
| 1B 00B62 | | CMRIPLY | DS | X | IPL MOUNTED SWITCH -* |
| | | * | | | 00=YES, |
| | | * | | | 80=NO |
| 1B 00B63 | | CMRSLSW | DS | X | SELECTIVE LOAD SWITCH |
| | 00000080 | CMRSLSWM | EQU | X'80' | SORT LOAD LIST MASK |
| 1B 00B64 | | CMRNMPTH | DS | F | NUMBER OF PATHS |

```
* ********************************************************************
                        * THE FOLLOWING IS A LIST OF ADCONS USED TO
                        * REFERENCE LOCATIONS
                        *                       WITHIN STARTUP PROPER
                        *  ANY ADCONS TO BE USED SHOULD BE IN THIS LIST AS
                        *  THEY
                        *  MUST BE DYNAMICALLY RELOCATED BY STARTUP ITSELF
```

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|----------|-------------|--------|------|------|---------|
| 1B 00B68 | | CMRFSTAC | DS | 0F | START OF LIST |
| 1B 00B68 | | CMRSDAC | DS | A | A(ANZSDA) |
| | | * | | | M3132 |
| 1B 00B6C | | CMRCORE | DS | A | A(CORERTN) |
| | | * | | | M3132 |
| 1B 00B70 | | CMRPTMP | DS | A | A(PARTMP) |
| | | * | | | M3132 |
| 1B 00B74 | | CMTRTPG | DS | A | A(RTMPGS) |
| | | * | | | N349.10 |
| 1B 00B78 | | CMRBFGT | DS | A | A(BFRPGIT) |
| | | * | | | N349.10 |
| 1B 00B7C | | CMRTDE | DS | A | A(INTDE) |
| | | * | | | N349.10 |
| 1B 00B80 | | CMRMODFY | DS | A | A(MODFY) |
| | | * | | | N349.10 |
| 1B 00B84 | | CMREIAA2 | DS | F | A(EIAA2) |
| 1B 00B88 | | CMROPER | DS | F | A(OPER) |
| 1B 00B8C | | CMRPRINT | DS | F | A(PRINTER) |
| 1B 00B90 | | CMRMSGTB | DS | F | A(OPERMTBL) |
| 1B 00B94 | | CMRPPCCW | DS | F | A(PPVCCW) |
| 1B 00B98 | | CMRADTRN | DS | F | A(ADTRAN) |
| 1B 00B9C | | CMRATRAN | DS | F | A(ATRAN) |
| 1B 00BA0 | | CMRBTRAN | DS | F | A(BTRAN) |
| 1B 00BA4 | | CMRCTRAN | DS | F | A(CTRAN) |
| 1B 00BA8 | | CMRLOCX | DS | F | A(LOCXPT) |
| 1B 00BAC | | CMREXTNT | DS | F | A(EXTENT) |
| 1B 00BB0 | | CMRHASH | DS | F | A(HASH) |
| 1B 00BB4 | | CMRORGIN | DS | F | A(ORIGIN) |
| 1B 00BB8 | | CMRWRTDY | DS | F | A(WRTDY) |
| 1B 00BBC | | CMRXTSRT | DS | F | A(XTSIRT) |
| 1B 00BC0 | | CMRSHPT | DS | F | A(SHPTRT) |
| 1B 00BC4 | | CMRRSPI | DS | F | A(CRRSPI) |
| 1B 00BC8 | | CMRFORM | DS | F | A(FORMPT) |
| 1B 00BCC | | CMRSETPT | DS | F | A(SETPT) |
| 1B 00BD0 | | CMRNAMLC | DS | F | A(NAMLOC) |
| 1B 00BD4 | | CMRRDPOD | DS | F | A(RDPOD) |
| 1B 00BD8 | | CMRMAPGN | DS | F | A(MAPGEN) |
| 1B 00BDC | | CMRCOMTB | DS | F | A(RCOMTB) |
| 1B 00BE0 | | CMRWRSYM | DS | F | A(WRSYMTB) |
| 1B 00BE4 | | CMRADDPG | DS | F | A(ADDPGS) |

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|----------|-------------|--------|------|------|---------|
| 1B 00BE8 | | CMRBSDST DS | F | | A(BDSDST) |
| 1B 00BEC | | CMRESRVP DS | F | | A(RESRVP) |
| 1B 00BF0 | | CMRGTFLD DS | F | | A(GETFLD) |
| 1B 00BF4 | | CMRWTMD DS | F | | A(WTMDNM) |
| 1B 00BF8 | | CMRWRXTS DS | F | | A(WRXTSI) |
| 1B 00BFC | | CMRSOAPG DS | F | | A(SOAPGS) |
| | | * | | | N483 |
| | | * ADCONS ADDED FOR Q-CONS | | | |
| | | * | | N483 | |
| 1B 00C00 | | CMRHOLTB DS | A | | A(HOLETBL) |
| | | * | | | N483 |
| 1B 00C04 | | CMRENDTB DS | A | | A(END OF HOLETBL) |
| | | * | | | N483 |
| 1B 00C08 | | CMRHOLVL DS | A | | A(HOLETBL)-CURRENT HOLE |
| | | * | | | N483 |
| 1B 00C0C | | CMRQRDR DS | A | | A(QRDR) |
| | | * | | | N483 |
| 1B 00C10 | | CMRBGNTD DS | A | | A(BGNTDY) |
| | | * | | | N483 |
| 1B 00C14 | | CMRLLLNK DS | A | | A(LLLNK) |
| | | * | | | N483 |
| 1B 00C18 | | CMRLLSCN DS | A | | A(LLSCN) |
| | | * | | | N483 |
| 1B 00C1C | | CMRSRCN DS | A | | A(SERRTBL) |
| | | * | | | N483 |
| 1B 00C20 | | CMRLDPMD DS | A | | A(LDPMD) |
| | | * | | | N483 |
| 1B 00C24 | | CMRSDAT DS | F | | A(SDATRT) |
| | | * ADCONS FOR CCW LIST TO READ/WRITE | | | |
| 1B 00C28 | | CMRDATA DS | F | | A(RDDATA) |
| 1B 00C2C | | CMRCYLHD DS | F | | A(CYLHEAD) |
| 1B 00C30 | | CMRSMFSA DS | F | | A(SIMFSA) |
| 1B 00C34 | | CMRSORD DS | F | | A(SORDID) |
| 1B 00C38 | | CMROTHER DS | F | | A(OTHERCPU) |
| 1B 00C3C | | CMRGTPAT DS | F | | A(GETPAT) |
| 1B 00C40 | | CMRRDSCB DS | F | | A(RDSCB) |
| 1B 00C44 | | CMRTDTCT DS | A | | A(TDTCAT) |
| | | * | | | N423** |
| 1B 00C48 | | CMRREAD DS | F | | A(READCARD) |
| 1B 00C4C | | CMROPRT DS | F | | A(INPUT) ADDR OF OPER TERM |
| 1B 00C50 | | CMRDELDS DS | F | | A(DELDS) |
| 1B 00C54 | | CMRDLTBL DS | F | | A(DELTBL) |
| 1B 00C58 | | CMRDLBTB DS | F | | A(DELBTB) |
| 1B 00C5C | | CMRELTDY DS | F | | A(RELTDY) |
| 1B 00C60 | | CMRALLER DS | F | | A(ALLER1) |
| 1B 00C64 | | CMRSLOAD DS | F | | A(SELOAD) |
| 1B 00C68 | | CMRSRCH DS | F | | A(SRCHEX) |
| 1B 00C6C | | CMRNMTAB DS | F | | A(NAMTAB) |
| 1B 00C70 | | CMRSERR1 DS | F | | A(SERR100) |
| 1B 00C74 | | CMRSTERM DS | F | | A(STERM) |
| | | * ADCONS FOR PRINTING MAPS AND HEADERS | | | |
| 1B 00C78 | | CMRLOADL DS | F | | A(LOADL) |
| 1B 00C7C | | CMRHSHSR DS | F | | A(HSHSRH) |
| 1B 00C80 | | CMREADIN DS | F | | A(READIN) |
| 1B 00C84 | | CMRSEEK DS | F | | A(IOSEEK) |
| 1B 00C88 | | CMREROUT DS | F | | A(ERROUT) |
| 1B 00C8C | | CMRBLDTB DS | F | | A(BLDTBL) |
| 1B 00C90 | | CMRPGTDY DS | F | | A(PAGTDY) |
| 1B 00C94 | | CMRJSHB2 DS | F | | A(JSHDRB2) |

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT | |
|---|---|---|---|---|---|---|
| 1B 00C98 | | CMRJSHBA | DS | F | A(JSHDRB) | |
| 1B 00C9C | | CMRADTIT | DS | F | A(JSTITL) | |
| 1B 00CA0 | | CMRSTRAN | DS | F | A(STRAN) | |
| 1B 00CA4 | | CMRRTRAN | DS | F | A(RTRAN) | |
| 1B 00CA8 | | CMRPGXTS | DS | F | A(PGXTSI) | |
| 1B 00CAC | | CMRASAT | DS | F | A(ASATRT) | |
| 1B 00CB0 | | CMRDIRSZ | DS | F | A(DIRSIZ) | |
| 1B 00CB4 | | CMRQKRD | DS | F | A(QKREAD) | |
| 1B 00CB8 | | CMRQKSTA | DS | F | A(CEIEND) | |
| | 1B 00B8C | CMRWT | EQU | CMRPRINT | | |
| 1B 00CBC | | CMRENAB | DS | A | A(ENABLE) | I5628 |
| 1B 00CC0 | | CMRLSTAD | DS | 0F | LAST ADCON | |
| | 00000158 | CMRADLEN | EQU | CMRLSTAD-CMRFSTAC | | |

## Communications Area (CHACOM)

The Communications Area (COM) passes interruption information from Task Monitor Scanner-Dispatcher routines to requesting programs. This area must be defined by the requesting program.

The Scanner-Dispatcher, at dispatch time, moves the required interruption information from the Queue Entry (CHAIQE) into the COM. The requesting program can then analyze the interruption information.

The COM resides in virtual storage and is write-protected from the user. The COM is 16 bytes in length and is maintained on doubleword boundaries.

### CHACOM Storage map

| DEC | HEX | | | |
|-----|-----|--------|--------|--------|
| 0 | 0 | COMDET | COMOVY | |
| 8 | 8 | UNNAMED | | |

ORG   COMOVY

| 1 | 1 | UNNAMED | COMINT | COMPSW |
|---|---|---------|--------|--------|

ORG   COMOVY

| 1 | 1 | UNNAMED | COMSVC | UNNAMED |
|---|---|---------|--------|---------|

ORG   COMOVY

| 1 | 1 | COMXML | COMXMN | COMMSG |
|---|---|--------|--------|--------|

ORG   COMOVY

| 1 | 1 | UNNAMED | COMASI | COMSNS |
|---|---|---------|--------|--------|

ORG   COMOVY

| 1 | 1 | COMTIM | COMTNO | UNNAMED |
|---|---|--------|--------|---------|

ORG   COMOVY

| 1 | 1 | UNNAMED | COMSTA | UNNAMED |
|---|---|---------|--------|---------|

## Fields in CHACOM -- by displacement

| DEC | HEX | FIELD | DEC | HEX | FIELD | DEC | HEX | FIELD |
|------|------|--------|------|------|--------|------|------|--------|
| 0000 | 0000 | COMDET | 0002 | 0002 | COMTNO | 0004 | 0004 | COMSNS |
| 0001 | 0001 | COMTIM | 0002 | 0002 | COMXMN | 0004 | 0004 | COMMSG |
| 0001 | 0001 | COMXML | 0002 | 0002 | COMSVC | 0004 | 0004 | COMPSW |
| 0001 | 0001 | COMOVY | 0002 | 0002 | COMINT |      |      |        |
| 0002 | 0002 | COMSTA | 0003 | 0003 | COMASI |      |      |        |

## Alphabetical list of fields in CHACOM

| FIELD | DEC | HEX | FIELD | DEC | HEX | FIELD | DEC | HEX |
|--------|------|------|--------|------|------|--------|------|------|
| COMASI | 0003 | 0003 | COMPSW | 0004 | 0004 | COMTNO | 0002 | 0002 |
| COMDET | 0000 | 0000 | COMSNS | 0004 | 0004 | COMXML | 0001 | 0001 |
| COMINT | 0002 | 0002 | COMSTA | 0002 | 0002 | COMXMN | 0002 | 0002 |
| COMMSG | 0004 | 0004 | COMSVC | 0002 | 0002 |        |      |      |
| COMOVY | 0001 | 0001 | COMTIM | 0001 | 0001 |        |      |      |

## Assembler listing of CHACOM

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|----------|-------------|--------|------|------|---------|
|          | 1C 00000    | CHACOM | DSECT |     |         |
|          |             | *      |      |      | COMMUNICATION AREA |
| 1C 00000 |             |        | DS   | 0D   |         |
| 1C 00000 |             | COMDET | DS   | CL1  | DE TYPE CODE |
| 1C 00001 |             | COMOVY | DS   | CL7  | FIELD OVERLAID FOR VARIOUS |
|          |             | *      |      |      | INTERRUPTS |
| 1C 00008 |             |        | DS   | 2F   |         |
|          | 1C 00001    |        | |ORG| | COMOVY |         |
|          |             | * FIELDS USED FOR PROGRAM INTERRUPTS | | | |
| 1C 00001 |             |        | DS   | CL1  | UNUSED |
| 1C 00002 |             | COMINT | DS   | CL2  | INTERRUPT CODE |
| 1C 00004 |             | COMPSW | DS   | F    | ADDR IN VPSW AT INTERRUPT |
|          | 1C 00001    |        | |ORG| | COMOVY |         |
|          |             | * FIELDS USED FOR SVC INTERRUPTS | | | |
| 1C 00001 |             |        | DS   | CL1  | UNUSED |
| 1C 00002 |             | COMSVC | DS   | CL2  | SVC NUMBER FROM VPSW |
| 1C 00004 |             |        | DS   | F    | ADDR IN VPSW-USES COMPSW |
|          | 1C 00001    |        | |ORG| | COMOVY |         |
|          |             | * FIELDS USED FOR EXTERNAL INTERRUPTS | | | |
| 1C 00001 |             | COMXML | DS   | CL1  | MESSAGE LENGTH |
| 1C 00002 |             | COMXMN | DS   | CL2  | MESSAGE NUMBER |
| 1C 00004 |             | COMMSG | DS   | F    | PTR TO MESSAGE AREA |
|          | 1C 00001    |        | |ORG| | COMOVY |         |
|          |             | * FIELDS USED FOR ASYNCHRONOUS I/O INTERRUPTS | | | |
| 1C 00001 |             |        | DS   | CL2  | UNUSED |
| 1C 00003 |             | COMASI | DS   | CL1  | INT. TYPE FOR ASYNCHRONOUS |
| 1C 00004 |             | COMSNS | DS   | F    | SENSE INFORMATION |
|          | 1C 00001    |        | |ORG| | COMOVY |         |
|          |             | * FIELDS USED FOR TIMER INTERRUPTS | | | |
| 1C 00001 |             | COMTIM | DS   | CL1  | TIMER TYPE - TASK OR REAL |
| 1C 00002 |             | COMTNO | DS   | CL2  | TIMER NUMBER FROM VPSW |
| 1C 00004 |             |        | DS   | F    | ADDR IN VPSW -USES COMPSW |
|          | 1C 00001    |        | |ORG| | COMOVY |         |
|          |             | * FIELDS USED FOR SYNCHRONOUS I/O INTERRUPTS | | | |
| 1C 00001 |             |        | DS   | CL1  | UNUSED |
| 1C 00002 |             | COMSTA | DS   | CL2  | CSW STATUS INFO |
| 1C 00004 |             |        | DS   | F    | SENSE INFO - USES COMSNS |

## CPU Status Table (CHACST)

The CPU Status Table (CST) describes the operational status of each CPU and Storage Element (SE) in the installation, including availability to TSS.

The CST is set up by system generation, startup, and/or system inventory routines, depending on the particular installation. It furnishes data to the recovery nucleus, SERR, reconfiguration, and system inventory programs.

The prefixed storage area (core storage) contains the CST, aligned on a doubleword boundary. Each CPU in the installation has a CST in its own PSA.

The CST consists of the CST header, the CPU status section, and the SE status section.

### CHACST Storage map

| DEC | HEX | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 0 | 0 | CSTID0 | CSTMDL | CSTNOP | CSTNAP | | CSTSET | |
| 8 | 8 | CSTID1 | CSTID2 | CSTID3 | UNNAMED | | CSTCST | UNNAMED |
| 16 | 10 | CSTPF1 | | | | CSTPF2 | | |
| 24 | 18 | CSTSST | CSTFSA | | | | | |

### Fields in CHACST -- by displacement

| DEC | HEX | FIELD | | DEC | HEX | FIELD | | DEC | HEX | FIELD | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0000 | 0000 | CSTID0 | | 0009 | 0009 | CSTID2 | | 0024 | 0018 | CSTSOP | (EQU) |
| 0001 | 0001 | CSTMDL | | 0010 | 000A | CSTID3 | | 0024 | 0018 | CSTSPA | (EQU) |
| 0002 | 0002 | CSTSESZE | (EQU) | 0013 | 000D | CSTPA | (EQU) | 0024 | 0018 | CSTSSK | (EQU) |
| 0002 | 0002 | CSTNOP | | 0013 | 000D | CSTSK | (EQU) | 0024 | 0018 | CSTSAV | (EQU) |
| 0003 | 0003 | CSTNAP | | 0013 | 000D | CSTAV | (EQU) | 0024 | 0018 | CSTSST | |
| 0004 | 0004 | CSTSET | | 0013 | 000D | CSTCST | | 0024 | 0018 | CSTCEND | |
| 0008 | 0008 | CSTID1 | | 0016 | 0010 | CSTPF1 | | 0025 | 0019 | CSTFSA | |
| 0008 | 0008 | CSTHEND | | 0020 | 0014 | CSTPF2 | | 0026 | 001A | CSTSEND | |

### Alphabetical list of fields in CHACST

| FIELD | DEC | HEX | | FIELD | DEC | HEX | | FIELD | DEC | HEX | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| CSTAV | 0013 | 000D | (EQU) | CSTID3 | 0010 | 000A | | CSTSEND | 0026 | 001A | |
| CSTCEND | 0024 | 0018 | | CSTMDL | 0001 | 0001 | | CSTSESZE | 0002 | 0002 | (EQU) |
| CSTCST | 0013 | 000D | | CSTNAP | 0003 | 0003 | | CSTSET | 0004 | 0004 | |
| CSTFSA | 0025 | 0019 | | CSTNOP | 0002 | 0002 | | CSTSK | 0013 | 000D | (EQU) |
| CSTHEND | 0008 | 0008 | | CSTPA | 0013 | 000D | (EQU) | CSTSOP | 0024 | 0018 | (EQU) |
| CSTID0 | 0000 | 0000 | | CSTPF1 | 0016 | 0010 | | CSTSPA | 0024 | 0018 | (EQU) |
| CSTID1 | 0008 | 0008 | | CSTPF2 | 0020 | 0014 | | CSTSSK | 0024 | 0018 | (EQU) |
| CSTID2 | 0009 | 0009 | | CSTSAV | 0024 | 0018 | (EQU) | CSTSST | 0024 | 0018 | |

### Assembler listing of CHACST

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|---|---|---|---|---|---|
| | 1D 00000 | CHACST | DSECT | | |
| | | ****** | | CPU STATUS TABLE ****** | |
| | | * | | | HEADER |
| 1D 00000 | | | DS | 0D | |
| 1D 00000 | | CSTID0 | DS | XL1 | IDENTITY BYTE (I2 FIELD OF |
| | | * | | | WRD INSTRUCTION) |
| 1D 00001 | | CSTMDL | DS | XL1 | MODEL NO OF CPUS IN |
| | | * | | | INSTALLATION (1 OR 2) |
| 1D 00002 | | CSTNOP | DS | XL1 | NO OF CPUS IN INSTALLATION |
| | | * | | | (1 TO 4) |
| 1D 00003 | | CSTNAP | DS | XL1 | NO OF ACTIVE CPUS IN TSS |
| | | * | | | DOMAIN AFTER STARTUP |
| | | * AT SYSGEN TIME, CSTNAP CONTAINS THE NUMBER OF | | | |
| | | * STORAGE | | | |
| | | * | | | ELEMENTS IN THE SYSTEM |
| 1D 00004 | | CSTSET | DS | XL4 | POINTER TO SE STATUS TABLE |
| 1D 00008 | | CSTHEND | DS | 0X | END OF CPU STATUS TABLE |
| | | * | | | HEADER I5943 |

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|---|---|---|---|---|---|
| | 00000008 | CSTHDSZE | EQU | CSTHEND-CSTID0 | CPU STATUS TABLE |
| | | * | | | HEADER SIZE      I5943 |
| | | * | | CPU STATUS | ENTRY ( ONE ENTRY PER CPU) |
| 1D 00008 | | CSTID1 | DS | XL1 | I2 FIELD OF WRD FOR |
| | | * | | | EXTERNAL INTERRUPT |
| 1D 00009 | | CSTID2 | DS | XL1 | I2 FIELD OF WRD FOR |
| | | * | | | EXTERNAL START |
| 1D 0000A | | CSTID3 | DS | XL1 | INTERRUPTION CODE ON |
| | | * | | | MALFUNCTION ALERT |
| 1D 0000B | | | DS | CL2 | UNUSED |
| 1D 0000D | | CSTCST | DS | XL1 | CPU STATUS (BITS ZERO TO |
| | | * | | | TWO) |
| | 1D 0000D | CSTAV | EQU | CSTCST | CPU UNAVAILABILITY FLAG - 1 |
| | | * | | | = UNAVAILABLE |
| | 00000080 | CSTAVM | EQU | X'80' | CPU AVAILABILITY MASK |
| | 1D 0000D | CSTSK | EQU | CSTCST | CPU MALFUNCTIONING FLAG |
| | 00000040 | CSTSKM | EQU | X'40' | CPU MALFUNCTIONING MASK |
| | 1D 0000D | CSTPA | EQU | CSTCST | CPU PARTITION FLAG |
| | 00000020 | CSTPAM | EQU | X'20' | CPU PARTITION MASK |
| 1D 0000E | | | DS | CL2 | UNUSED |
| 1D 00010 | | CSTPF1 | DS | XL4 | PRIMARY PREFIX |
| 1D 00014 | | CSTPF2 | DS | XL4 | ALTERNATE PREFIX |
| 1D 00018 | | CSTCEND | DS | 0X | END OF CPU STATUS ENTRY |
| | | * | | | I5943 |
| | 00000010 | CSTCPSZE | EQU | CSTCEND-CSTID1 | CPU STATUS ENTRY SIZE |
| | | * | | | I5943 |
| | | * | | | SE STATUS ENTRY (ONE PER SE) |
| 1D 00018 | | CSTSST | DS | XL1 | SE STATUS (BITS 0 TO 4) |
| | 1D 00018 | CSTSAV | EQU | CSTSST | SE AVAILABILITY FLAG   1 = |
| | | * | | | UNAVAILABLE |
| | 00000080 | CSTSAM | EQU | X'80' | SE AVAILABILITY MASK |
| | 1D 00018 | CSTSSK | EQU | CSTSST | SE MALFUNCTIONING FLAG |
| | 00000040 | CSTSSM | EQU | X'40' | SE MALFUNCTIONING MASK |
| | 1D 00018 | CSTSPA | EQU | CSTSST | SE PARTITION FLAG |
| | 00000020 | CSTSPM | EQU | X'20' | SE PARTITION MASK |
| | 1D 00018 | CSTSOP | EQU | CSTSST | SE OPERATIONAL FLAG   1 = |
| | | * | | | NON-OPERATIONAL |
| | 00000010 | CSTSOM | EQU | X'10' | SE OPERATIONAL MASK |
| 1D 00019 | | CSTFSA | DS | XL1 | FLOATING STORAGE ADDRESS |
| | | * | | | (HI ORDER 8 BITS) |
| 1D 0001A | | CSTSEND | DS | 0X | END OF SE STATUS ENTRY |
| | | * | | | I5943 |
| | 1D 00002 | CSTSESZE | EQU | | |
| | | *CSTSEND-((CSTHEND-CSTID0)+(CSTCEND-CSTID1)) | | | |
| | | * | | | STATUS ENTRY SIZE |
| | | * | | | I5943 |
| | 00000018 | CSTSESZ | EQU | (CSTHEND-CSTID0)+(CSTCEND-CSTID1) | |
| | | * | | | CPU STATUS TABLE I5943 |
| | | * | | | SIZE |
| | | * | | | I5943 |

## Control Unit Table (CHACUT)

The Control Unit Table (CHACUT) contains status and location information on all control units in the configuration.  CHACUT is used and updated by the pathfinding subroutine.  CHACUT is aligned on a word boundary and contains a 12-byte header followed by a variable number of 12-byte entries.

### CHACUT Storage map

```
DEC    HEX _____
  0      0|       CUTMAX      |     UNNAMED     |            CUTFP          |
         |_____|_____|_____|
  8      8|            CUTDGP               |
         |_____|

ORG   CUTBEG

  0      0|CUTFLG  |UNNAMED |     CUTSDA     |CUTDIG1 |CUTDIG2 |CUTDIG3 |CUTDIG4 |
         |_____|_____|_____|_____|_____|_____|_____|
  8      8|CUTDIG5 |CUTDIG6 |CUTDIG7 |CUTDIG8 |
         |_____|_____|_____|_____|
```

### Fields in CHACUT -- by displacement

| DEC | HEX | FIELD | | DEC | HEX | FIELD | | DEC | HEX | FIELD |
|------|------|--------|------|------|------|--------|------|------|------|--------|
| 0000 | 0000 | CUTFLG | | 0000 | 0000 | CUTA | (EQU) | 0007 | 0007 | CUTDIG4 |
| 0000 | 0000 | CUTD | (EQU) | 0000 | 0000 | CUTMAX | | 0008 | 0008 | CUTDIG5 |
| 0000 | 0000 | CUTC | (EQU) | 0000 | 0000 | CUTBEG | | 0008 | 0008 | CUTDGP |
| 0000 | 0000 | CUTS | (EQU) | 0002 | 0002 | CUTSDA | | 0009 | 0009 | CUTDIG6 |
| 0000 | 0000 | CUTR | (EQU) | 0004 | 0004 | CUTDIG1 | | 0010 | 000A | CUTDIG7 |
| 0000 | 0000 | CUTN | (EQU) | 0004 | 0004 | CUTFP | | 0011 | 000B | CUTDIG8 |
| 0000 | 0000 | CUTM | (EQU) | 0005 | 0005 | CUTDIG2 | | | | |
| 0000 | 0000 | CUTP | (EQU) | 0006 | 0006 | CUTDIG3 | | | | |

### Alphabetical list of fields in CHACUT

| FIELD | DEC | HEX | | FIELD | DEC | HEX | | FIELD | DEC | HEX | |
|--------|------|------|------|--------|------|------|---|--------|------|------|------|
| CUTA | 0000 | 0000 | (EQU) | CUTDIG4 | 0007 | 0007 | | CUTMAX | 0000 | 0000 | |
| CUTBEG | 0000 | 0000 | | CUTDIG5 | 0008 | 0008 | | CUTN | 0000 | 0000 | (EQU) |
| CUTC | 0000 | 0000 | (EQU) | CUTDIG6 | 0009 | 0009 | | CUTP | 0000 | 0000 | (EQU) |
| CUTD | 0000 | 0000 | (EQU) | CUTDIG7 | 0010 | 000A | | CUTR | 0000 | 0000 | (EQU) |
| CUTDGP | 0008 | 0008 | | CUTDIG8 | 0011 | 000B | | CUTS | 0000 | 0000 | (EQU) |
| CUTDIG1 | 0004 | 0004 | | CUTFLG | 0000 | 0000 | | CUTSDA | 0002 | 0002 | |
| CUTDIG2 | 0005 | 0005 | | CUTFP | 0004 | 0004 | | | | | |
| CUTDIG3 | 0006 | 0006 | | CUTM | 0000 | 0000 | (EQU) | | | | |

### Assembler listing of CHACUT

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|----------|-------------|--------|------|------|---------|
| | 1F 00000 | CHACUT | DSECT | | CONTROL      UNIT TABLE |
| 1F 00000 | | CUTBEG | DS | 0F | ALIGN TABLE ON A WORD BOUNDARY |
| | | * | | | |
| 1F 00000 | | CUTMAX | DS | H | NUMBER OF CONTROL UNIT ENTRIES IN TABLE |
| | | * | | | |
| 1F 00002 | | | DS | H | NOT USED |
| 1F 00004 | | CUTFP | DS | F | CONTROL UNIT TABLE FLAG AREA POINTER |
| | | * | | | |
| 1F 00008 | | CUTDGP | DS | F | DEVICE GROUP TABLE POINTER FOR CTL UNIT N |
| | | * | | | |
| | 1F 00000 | | |ORG| | CUTBEG | |
| 1F 00000 | | CUTFLG | DS | C | FLAGS FOR CONTROL UNIT N |
| | 1F 00000 | CUTA | EQU | CUTFLG | AVAILABILITY FLAG |
| | 00000080 | CUTAMK | EQU | X'80' | AVAILABILITY MASK |
| | 1F 00000 | CUTP | EQU | CUTFLG | PARTITIONED FLAG |
| | 00000040 | CUTPM | EQU | X'40' | PARTITIONED MASK |
| | 1F 00000 | CUTM | EQU | CUTFLG | UNIT DOWN FLAG |
| | 00000020 | CUTMM | EQU | X'20' | UNIT DOWN MASK |
| | 1F 00000 | CUTN | EQU | CUTFLG | SENSE HOLD FLAG |

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|----------|-------------|--------|------|------|---------|
|  | 00000010 | CUTNM | EQU | X'10' | SENSE HOLD MASK |
|  | 1F 00000 | CUTR | EQU | CUTFLG | RESERVED FLAG |
|  | 00000008 | CUTRM | EQU | X'08' | RESERVED MASK |
|  | 00000078 | CUTAM | EQU | X'78' | STATUS INDS (EXCL BUSY,NE) |
|  |  | * |  |  | CTL U |
|  | 1F 00000 | CUTS | EQU | CUTFLG | SWITCH FLAG |
|  | 00000002 | CUTSM | EQU | X'02' | SWITCH MASK |
|  | 1F 00000 | CUTC | EQU | CUTFLG | ENTRY TYPE FLAG |
|  | 00000001 | CUTCM | EQU | X'01' | ENTRY TYPE MASK |
|  | 1F 00000 | CUTD | EQU | CUTFLG | DISPLACEMENT FOR PARENT |
|  |  | * |  |  | ENTRY |
|  | 000000FE | CUTDM | EQU | X'FE' | DISPLACEMENT FROM PARENT |
|  |  | * |  |  | ENTRY MASK |
| 1F 00001 |  |  | DS | C | NOT USED |
| 1F 00002 |  | CUTSDA | DS | H | SYMB DEV ADDR ASSIGNED THIS |
|  |  | * |  |  | C.U. |
| 1F 00004 |  | CUTDIG1 | DS | XL1 | FIRST DEVICE INTERACTION |
|  |  | * |  |  | GROUP ASSOCIATED WITH |
|  |  | * |  |  | CONTROL UNIT.  ZERO IS AN ILLEGAL |
|  |  | * |  |  | DIG NO. |
| 1F 00005 |  | CUTDIG2 | DS | XL1 | SECOND DIG |
| 1F 00006 |  | CUTDIG3 | DS | XL1 | THIRD DIG |
| 1F 00007 |  | CUTDIG4 | DS | XL1 | FOURTH DIG |
| 1F 00008 |  | CUTDIG5 | DS | XL1 | FIFTH DIG |
| 1F 00009 |  | CUTDIG6 | DS | XL1 | SIXTH DIG |
| 1F 0000A |  | CUTDIG7 | DS | XL1 | SEVENTH DIG |
| 1F 0000B |  | CUTDIG8 | DS | XL1 | EIGHTH DIG |

```
* NOTE 1- THE NUMBER OF DEVICE GROUP TABLE POINTER
* (CUTDGP) AND CONTROL
*            UNIT FLAG (CUTFLG) ENTRIES IS EQUIVALENT
*            TO THE NUMBER OF
*            CONTROL UNITS SPECIFIED AS PART OF THE
*            HARDWARE CONFIGURATION
```

Editable Data Set (CHACVF)

The Editable Data Set (CHACVF) defines those data sets which can be edited by the Text Editor.  Editable data sets are defined in IBM System/360 Time Sharing System: Command System User's Guide, GC28-2001.
CHACVF resides in virtual storage aligned on word boundaries.

CHACVF Storage map

```
DEC    HEX
  0     0 |_____
          |                     CVFLEN            |          CVFREG        |
          |                                       |                        |
  8     8 |_____CVFREG__(CONT)_|_____CVFLIN_____|
          |                                       |                        |
          |                                       |                        |
 16    10 |_____CVFLIN___(CONT)_____|CVFPAD__|
          |                              |        |
          |_____|_____|
```

Fields in CHACVF -- by displacement

| DEC | HEX | FIELD | DEC | HEX | FIELD | DEC | HEX | FIELD | |
|-----|-----|-------|-----|-----|-------|-----|-----|-------|---|
| 0000 | 0000 | CVFLEN | 0012 | 000C | CVFLIN | 0020 | 0014 | CVFTXT | (EQU) |
| 0004 | 0004 | CVFREG | 0019 | 0013 | CVFPAD | | | | |

Alphabetical list of fields in CHACVF

| FIELD | DEC | HEX | FIELD | DEC | HEX | FIELD | DEC | HEX | |
|-------|-----|-----|-------|-----|-----|-------|-----|-----|---|
| CVFLEN | 0000 | 0000 | CVFPAD | 0019 | 0013 | CVFTXT | 0020 | 0014 | (EQU) |
| CVFLIN | 0012 | 000C | CVFREG | 0004 | 0004 | | | | |

Assembler listing of CHACVF

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|----------|-------------|--------|------|------|---------|
| | 20 00000 | CHACVF | DSECT | | , COMMAND |
| | | * | | | SYSTEM VISAM REC FORMAT |
| 20 00000 | | CVFLEN | DS | F | VARIABLE RECORD LENGTH |
| 20 00004 | | CVFREG | DS | CL8 | REGION |
| 20 0000C | | CVFLIN | DS | CL7 | LINE NO |
| 20 00013 | | CVFPAD | DS | CL1 | PAD |
| | 20 00014 | CVFTXT | EQU | * | START OF RECORD TEXT |

## Direct Access Interface Block (CHADAI)

The Direct Access Interface block (DAI) contains the interface data required for passing pages to or from core storage, with accurate posting of these pages.

The DAI, a resident and private table, serves as the interface between the Page Direct Access Queue subroutine and the Page Direct Access Interrupt subroutine. The DAI table is constructed in supervisor core storage and exists only for the life of the paging operation. One DAI entry exists for each paging GQE.

The size of the DAI, for any given paging request, is calculated by the Page Direct Access Queue subroutine using the PCB count contained in the GQE as a factor. The Queue routine builds the DAI and places a DAI pointer in the device GQE.

The extent of the DAI is placed in the device GQE to allow the interrupt routine to release core storage when the paging operation is complete.

The DAI occupies from 156 to 4096 bytes of core storage, aligned on word boundaries.

DEVICE GQE

| | DAIB EXTENT | DAIB POINTER | | PCB POINTER | PCBE COUNT | |
|---|---|---|---|---|---|---|

GQEIOR   GQESAT               GQEPCB     GQECNT

DAIB

DAIB

| GQE POINTER (DAIGQE) |
|---|
| PCBE 1 POINTER (DAIPCB) |
| PCBE N POINTER (DAIPCN) |

PCB

| PCBE1 |
|---|
| PCBEN |
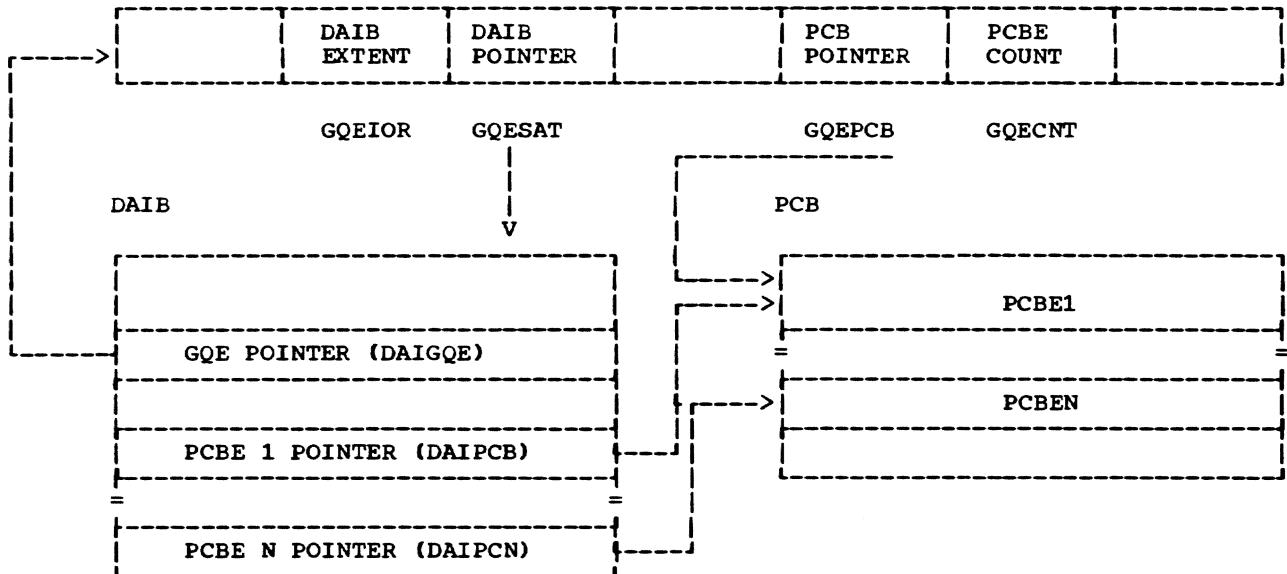
Table Relationships:  GQE, DAI, and PCB

## CHADAI Storage map

| DEC | HEX | | | | | | |
|---|---|---|---|---|---|---|---|
| 0 | 0 | DAIPEB | | DAIDIS | DAIPSN | DAITYP | DAICUB |
| 8 | 8 | DAICCW | | DAIENT | | | |
| 16 | 10 | DAISV | | | | | |
| 80 | 50 | DAIWK1 | | DAIWK2 | | | |
| 88 | 58 | DAISNS | | | | | |
| 96 | 60 | DAIST | | | | | |

ORG  DAIBEG

| | | | | | | |
|---|---|---|---|---|---|---|
| 0 | 0 | DAISA | DAISR | DAIHA | DAIID | DAIFG |

```
DEC    HEX

ORG  DAIBEG


   0      0| DAICC  |        DAIDA        | DAIFLG | DAIIGN |      DAICTN     |
          |_____|_____|_____|_____|_____|


ORG  DAIBEG


   0      0| _____
          |              DAIIN              | DAICNT | DAIFA4 | DAIF3 | UNNAMED |
          |_____|_____|_____|_____|_____|
   8      8| _____
          |              DAIGQE             |              DAICAW               |
          |_____|_____|
  16     10| _____
          |              DAIPCB             |
          |_____|


ORG  DAIBEG


   0      0| _____
          |              DAIPCN             |
          |_____|
```

Fields in CHADAI -- by displacement

| DEC | HEX | FIELD | | DEC | HEX | FIELD | | DEC | HEX | FIELD | |
|-----|-----|-------|---|-----|-----|-------|---|-----|-----|-------|---|
| 0000 | 0000 | DAIPCN | | 0004 | 0004 | DAIDIS | | 0007 | 0007 | DAIFG | |
| 0000 | 0000 | DAIIN | | 0004 | 0004 | DAISAT | | 0007 | 0007 | DAICUB | |
| 0000 | 0000 | DAICC | | 0005 | 0005 | DAIFA4 | | 0008 | 0008 | DAIGQE | |
| 0000 | 0000 | DAISA | | 0005 | 0005 | DAIIGN | | 0008 | 0008 | DAICCW | |
| 0000 | 0000 | DAIPEB | | 0005 | 0005 | DAIPSN | | 0012 | 000C | DAICAW | |
| 0000 | 0000 | DAIBEG | | 0006 | 0006 | DAIF3 | | 0012 | 000C | DAIENT | |
| 0001 | 0001 | DAIDA | | 0006 | 0006 | DAICTN | | 0016 | 0010 | DAIPCB | |
| 0002 | 0002 | DAISR | | 0006 | 0006 | DAIID | | 0016 | 0010 | DAIGRE | (EQU) |
| 0004 | 0004 | DAICNT | | 0006 | 0006 | DAICS | (EQU) | 0016 | 0010 | DAISV | |
| 0004 | 0004 | DAIFLG | | 0006 | 0006 | DAISS | (EQU) | 0068 | 0044 | DAIGRB | (EQU) |
| 0004 | 0004 | DAIHA | | 0006 | 0006 | DAICP | (EQU) | 0072 | 0048 | DAIGRC | (EQU) |
| 0004 | 0004 | DAIPI | (EQU) | 0006 | 0006 | DAIFC | (EQU) | 0076 | 004C | DAIGRD | (EQU) |
| 0004 | 0004 | DAISK | (EQU) | 0006 | 0006 | DAIPE | (EQU) | 0080 | 0050 | DAIWK1 | |
| 0004 | 0004 | DAISL | (EQU) | 0006 | 0006 | DAIWC | (EQU) | 0084 | 0054 | DAIWK2 | |
| 0004 | 0004 | DAICH | (EQU) | 0006 | 0006 | DAIFS | (EQU) | 0088 | 0058 | DAISNS | |
| 0004 | 0004 | DAIDC | (EQU) | 0006 | 0006 | DAITYP | | 0096 | 0060 | DAIST | |

Alphabetical list of fields in CHADAI

| FIELD | DEC | HEX | | FIELD | DEC | HEX | | FIELD | DEC | HEX | |
|-------|-----|-----|---|-------|-----|-----|---|-------|-----|-----|---|
| DAIBEG | 0000 | 0000 | | DAIFG | 0007 | 0007 | | DAIPEB | 0000 | 0000 | |
| DAICAW | 0012 | 000C | | DAIFLG | 0004 | 0004 | | DAIPI | 0004 | 0004 | (EQU) |
| DAICC | 0000 | 0000 | | DAIFS | 0006 | 0006 | (EQU) | DAIPSN | 0005 | 0005 | |
| DAICCW | 0008 | 0008 | | DAIF3 | 0006 | 0006 | | DAISA | 0000 | 0000 | |
| DAICH | 0004 | 0004 | (EQU) | DAIGQE | 0008 | 0008 | | DAISAT | 0004 | 0004 | |
| DAICNT | 0004 | 0004 | | DAIGRB | 0068 | 0044 | (EQU) | DAISK | 0004 | 0004 | (EQU) |
| DAICP | 0006 | 0006 | (EQU) | DAIGRC | 0072 | 0048 | (EQU) | DAISL | 0004 | 0004 | (EQU) |
| DAICS | 0006 | 0006 | (EQU) | DAIGRD | 0076 | 004C | (EQU) | DAISNS | 0088 | 0058 | |
| DAICTN | 0006 | 0006 | | DAIGRE | 0016 | 0010 | (EQU) | DAISR | 0002 | 0002 | |
| DAICUB | 0007 | 0007 | | DAIHA | 0004 | 0004 | | DAISS | 0006 | 0006 | (EQU) |
| DAIDA | 0001 | 0001 | | DAIID | 0006 | 0006 | | DAIST | 0096 | 0060 | |
| DAIDC | 0004 | 0004 | (EQU) | DAIIGN | 0005 | 0005 | | DAISV | 0016 | 0010 | |
| DAIDIS | 0004 | 0004 | | DAIIN | 0000 | 0000 | | DAITYP | 0006 | 0006 | |
| DAIENT | 0012 | 000C | | DAIPCB | 0016 | 0010 | | DAIWC | 0006 | 0006 | (EQU) |
| DAIFA4 | 0005 | 0005 | | DAIPCN | 0000 | 0000 | | DAIWK1 | 0080 | 0050 | |
| DAIFC | 0006 | 0006 | (EQU) | DAIPE | 0006 | 0006 | (EQU) | DAIWK2 | 0084 | 0054 | |

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|---|---|---|---|---|---|
| | 21 00000 | CHADAI | DSECT | | DIRECT ACCESS INTERFACE |
| | | * | | | CONTROL BLOCK |
| 21 00000 | | DAIBEG | DS | 0F | ALIGN TABLE ON WORD |
| | | * | | | BOUNDARY |
| 21 00000 | | DAIPEB | DS | F | POINTER TO PAGING ERROR |
| | | * | | | CONTROL BLOCK |
| 21 00004 | | DAISAT | DS | 0F | CONTROL INFORMATION FOR |
| | | * | | | CYLINDER SEGMENTATION OF |
| | | * | . | - | CHANNEL PROGRAM AND OTHER CODES |
| | | * | | | AND COUNTS. |
| 21 00004 | | DAIDIS | DS | XL1 | DISPLACEMENT TO NEXT SAT |
| | | * | | | ENTRY-MODULO 8- |
| 21 00005 | | DAIPSN | DS | XL1 | NEXT CHANNEL PROGRAM |
| | | * | | | SEGMENT NUMBER |
| 21 00006 | | DAITYP | DS | XL1 | DEVICE TYPE CODE |
| 21 00007 | | DAICUB | DS | XL1 | START I/O RETRY COUNT |
| 21 00008 | | DAICCW | DS | F | POINTER TO DAIB CHANNEL |
| | | * | | | PROGRAM - DAICC - |
| 21 0000C | | DAIENT | DS | F | POINTER TO DAIB ENTRY |
| | | * | | | HEADER - DAIIN - |
| 21 00010 | | DAISV | DS | 16F | GENERAL REGISTER SAVE AREA |
| | | * | | | FOR ROUTINES CALLED BY |
| | | * | | | THE DIRECT ACCESS PAGING |
| | | * | | | ROUTINES. |
| | 21 00010 | DAIGRE | EQU | DAISV | GPR-14 SAVE AREA WHEN |
| | | * | | | CALLING CEABQ |
| | 21 00044 | DAIGRB | EQU | DAISV+52 | CONTAINS LOCATION-ON-QUEUE |
| | | * | | | FOR CEABQ |
| | 21 00048 | DAIGRC | EQU | DAISV+56 | CONTAINS ADDRESS OF CSW FOR |
| | | * | | | CEABQ |
| | 21 0004C | DAIGRD | EQU | DAISV+60 | CONTAINS ADDRESS OF |
| | | * | | | INTERRUPT CODE FOR CEABQ |
| 21 00050 | | DAIWK1 | DS | F | USED TO SAVE SIO RETURN |
| | | * | | | PARAMETERS AND TO CONSTRUCT |
| | | * | | | A CSW COMMAND ADDRESS ON SIO |
| | | * | | | FAILURE. |
| 21 00054 | | DAIWK2 | DS | F | USED TO CONSTRUCT STATUS |
| | | * | | | FIELD ON SIO FAILURE |
| 21 00058 | | DAISNS | DS | D | SENSE OPERATION CHANNEL |
| | | * | | | PROGRAM AREA |
| | | ** | | | END OF FIXED LENGTH AREA - BEGINNING OF SEEK |
| | | *AND SEARCH | | | |
| | | ** | | | ARGUMENT TABLE - SAT TABLE - CONTAINS ONE 8 |
| | | *BYTE ENTRY FOR | | | |
| | | ** | | | EACH PAGING OPERATION TO BE PERFORMED. THIS |
| | | *SUBSECTION IS | | | |
| | | * | | | * VARIABLE IN LENGTH. |
| 21 00060 | | DAIST | DS | 2F | FIRST SAT ENTRY |
| | 21 00000 | | |ORG| | DAIBEG | ANY SAT ENTRY |
| 21 00000 | | DAISA | DS | 2C | HIGH ORDER SEEK ARGUMENT - |
| | | * | | | BIN/BIN - |
| 21 00002 | | DAISR | DS | 2C | HIGH ORDER SEARCH ARGUMENT |
| | | * | | | - CYLINDER/CYLINDER - |
| 21 00004 | | DAIHA | DS | 2C | HIGH ORDER HEAD ADDRESS - |
| | | * | | | HEAD/HEAD - |
| 21 00006 | | DAIID | DS | C | RECORD ID |
| 21 00007 | | DAIFG | DS | XL1 | CHANNEL PROGRAM SEGMENT |
| | | * | | | NUMBER |
| | | ** | | | END OF SAT TABLE AREA.- THIS SUBSECTION |
| | | *CONTAINS THE CHANNEL | | | |
| | | ** | | | PROGRAM, IS ALSO VARIABLE IN LENGTH AND CAN |
| | | *BE ADDRESSED BY | | | |
| | | ** | | | USING THE CONTENTS OF THE - DAICCW - FIELD AS |
| | | *A BASE ADDRESS. | | | |
| | 21 00000 | | |ORG| | DAIBEG | ANY CHANNEL COMMAND WORD |
| 21 00000 | | DAICC | DS | XL1 | COMMAND CODE |
| 21 00001 | | DAIDA | DS | XL3 | DATA ADDRESS |
| 21 00004 | | DAIFLG | DS | XL1 | FLAGS |

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|---|---|---|---|---|---|
| | 21 00004 | DAIDC | EQU | DAIFLG | DATA CHAIN |
| | 00000080 | DAIDCM | EQU | X'80' | |
| | 21 00004 | DAICH | EQU | DAIFLG | COMMAND CHAIN |
| | 00000040 | DAICHM | EQU | X'40' | |
| | 21 00004 | DAISL | EQU | DAIFLG | SUPPRESS INCORRECT LENGTH |
| | 00000020 | DAISLM | EQU | X'20' | |
| | 21 00004 | DAISK | EQU | DAIFLG | SKIP |
| | 00000010 | DAISKM | EQU | X'10' | |
| | 21 00004 | DAIPI | EQU | DAIFLG | PROGRAM CONTROL INTERRUPT |
| | 00000008 | DAIPIM | EQU | X'08' | |
| 21 00005 | | DAIIGN | DS | C | FIELD IS IGNORED |
| 21 00006 | | DAICTN | DS | XL2 | COUNT |

```
**     END OF CHANNEL PROGRAM SUBSECTION - THE
*FOLLOWING AREA OF THE
**     DAIB CONSISTS OF A ENTRY HEADER AND POINTERS
*TO EACH PCB ENTRY.
**     THE SUBSECTION IS VARIABLE IN LENGTH AND CAN
*BE ADDRESSED BY
**     USING THE CONTENTS OF THE - DAIENT - FIELD AS
*A BASE ADDRESS.
```

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|---|---|---|---|---|---|
| | 21 00000 | | \|ORG\| | DAIBEG | DAIB ENTRY HEADER |
| 21 00000 | | DAIIN | DS | F | POINTER TO NEXT PCB ENTRY |
| | | * | | | TO BE POSTED |
| 21 00004 | | DAICNT | DS | XL1 | NUMBER OF DAIB ENTRIES |
| 21 00005 | | DAIFA4 | DS | XL1 | NUMBER OF REMAINING ENTRIES |
| | | * | | | TO BE POSTED |
| 21 00006 | | DAIF3 | DS | XL1 | OTHER FLAGS |
| | 21 00006 | DAIFS | EQU | DAIF3 | FIRST SEEK FLAG |
| | 00000080 | DAIFSM | EQU | X'80' | |
| | 21 00006 | DAIWC | EQU | DAIF3 | WRITE CHECK OPTION SELECTED |
| | 00000040 | DAIWCM | EQU | X'40' | |
| | 21 00006 | DAIPE | EQU | DAIF3 | PAGING ERROR RECOVERY IN |
| | | * | | | PROGRESS |
| | 00000020 | DAIPEM | EQU | X'20' | |
| | 21 00006 | DAIFC | EQU | DAIF3 | FIRST CHANNEL PROGRAM |
| | | * | | | SEGMENT BUILT |
| | 00000010 | DAIFCM | EQU | X'10' | |
| | 21 00006 | DAICP | EQU | DAIF3 | CHANNEL PROGRAM IS BUILT |
| | 00000008 | DAICPM | EQU | X'08' | |
| | 21 00006 | DAISS | EQU | DAIF3 | SENSE SIO ATTEMPT/BUSY |
| | | * | | | RETURN |
| | 00000004 | DAISSM | EQU | X'04' | |
| | 21 00006 | DAICS | EQU | DAIF3 | CHAINING SIO ATTEMP/BUSY |
| | | * | | | RETURN |
| | 00000002 | DAICSM | EQU | X'02' | |
| 21 00007 | | | DS | C | NOT USED |
| 21 00008 | | DAIGQE | DS | F | POINTER TO GQE |
| 21 0000C | | DAICAW | DS | F | LAST ADDRESS USED AS CAW |
| 21 00010 | | DAIPCB | DS | F | FIRST PCB ENTRY POINTER |
| | 21 00000 | | \|ORG\| | DAIBEG | |
| 21 00000 | | DAIPCN | DS | F | ANY PCB POINTER |

## MSAM Work Page (CHADBP)

The MSAM Work Page (CHADBP) serves as the main work and communication area for the MSAM modules. It contains the Data Extent Block (CHADEB) built by MSAM OPEN, an Interrupt Control Block (CHAICB) and Communications Area for use in handling asynchronous interrupts, the fixed area of an Input/Output Request Control Block (CHAIOR) for use by MSAM POSTING, and Input/Output Request Control Block (CHAIOR) of maximum size, and an area into which the VISAM data sets SYSURS and SYSUCS may be read, plus other fields and flags for communication within and between the MSAM modules.

A full page of virtual storage is allocated by MSAM OPEN for the MSAM Work Page. The protection class of this page is either user read-only or user-inaccessible.

### CHADBP Storage map

```
DEC    HEX
  0      0 ┌──────────────────────────────────────────────────────────────────┐
           │                                                                  │
           =                          RESERVED                                =
           │                                                                  │
 80     50 │                           ┌──────────────────────────────────────┤
           │                           │            DBPRCB                     │
 88     58 ├───────────────────────────┴──────────────────────────────────────┤
           │                                                                  │
           =                          RESERVED                                =
           │                                                                  │
2008    7D8├──────────────────────────────DBPTIM──────────────────────────────┤
2016    7E0│         DBPABV            │            DBPABR                     │
2024    7E8│         DBPRWV            │            DBPRWR                     │
2032    7F0├──────────────────────────┴──────────────────────────────────────┤
           │                                                                  │
           =                          UNNAMED                                 =
           │                                                                  │
2104    838│         DBPFCCW           │            DBPDIS                     │
2112    840│         DBPSYME           │            DBPASYME                   │
2120    848│         DBPTIDE           │                                       │
           =──────────────────────────┴────────UNNAMED─────────────────────────=
           │                                                                  │
2200    898│   DBPASYM      │    DBPTID       │                               │
           ├────────────────┴─────────────────┘                              │
           =                          UNNAMED                                 =
           │                                                                  │
2296    8F8│DBPPRDC │DBPPRSTR│DBPPRTRY│DBPALTP │DBPOPC │DBPINSEL│DBPFLG1│DBPBUSY│
2304    900│              DBPRTO              │                               │
           =                          UNNAMED                                 =
           │                                                                  │
           └──────────────────────────────────────────────────────────────────┘
```

```
DEC    HEX
2392   958|----------------------------------------------------------------------|
           =                                                                      =
            |                          RESERVED                                   |
            |                                                   _____|
2432   980 |                                                  |                    |
           |_____|                   |
            |                          RESERVED                |                   |
2448   990 |                                                  |     DBPIOF         |
           |                                                  |_____|
2456   998 |_____|                   |
           =                                                                      =
            |                          RESERVED                                   |
            |                                                                      |
2536   9E8 |              DBPRKEY1                      |DBPRLIN1|UNNAMED          |
           |_____     |_____|_____|
2544   9F0 | UNNAMED (CONT)       |        DBPFORMN                                |
           |_____|_____                            |
2552   9F8 |                                          |          DBPCARRG         |
           |_____|_____|
2560   A00 |            DBPCHTRN                       |      UNNAMED    |DBPDEN    |
           |_____|_____|_____|
2568   A08 |      UNNAMED            |DBPFRMTP|        |     UNNAMED     |DBPFOLD   |
           |_____|_____|_____|_____|_____|
2576   A10 |    UNNAMED        |    DBPSTRK2  |                UNNAMED              |
           |_____|_____|_____|
2584   A18 | UNNAMED (CONT)    |            DBPUCSKY                                |
           |_____|_____|
2592   A20 |                          UNNAMED                                     |
           |_____                            |
2600   A28 |                                          |        DBPRKEY2           |
           |_____|_____|
2608   A30 | DBPRKEY2(CONT)    |DBPRLIN2|UNNAMED      |                            |
           |_____|_____|_____|                            |
           =                          DBPAL0                                      =
            |                                                                      |
2672   A70 |              DBPRKEY3                      |DBPRLIN3|UNNAMED          |
           |_____    |_____|_____|
2680   A78 |                                                                      |
           =                          DBPAL60                                     =
            |                                                                      |
2736   AB0 |                                          |         DBPRKEY4          |
           |_____|_____|
2744   AB8 | DBPRKEY4(CONT)    |DBPRLIN4|UNNAMED      |                            |
           |_____|_____|_____|                            |
           |                          DBPAL120                                    |
2760   AC8 |_____|
           =                          UNNAMED                                     =
            |                                                                      |
2808   AF8 |              DBPCKEY1                      |DBPCLIN1|UNNAMED          |
           |_____|_____|_____|
```
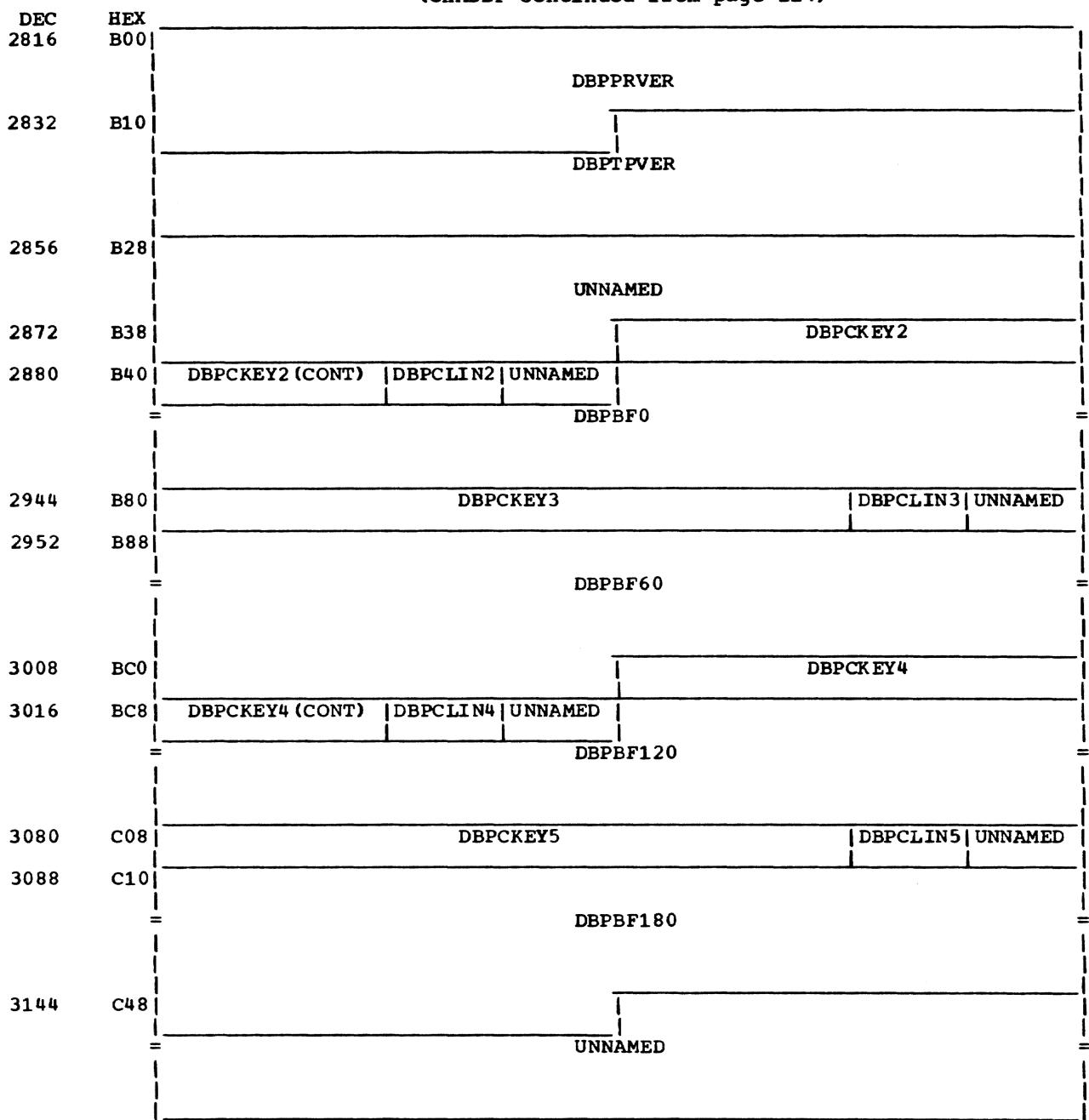
```
DEC    HEX
2816   B00|─────────────────────────────────────────────────────────────|
          |                                                             |
          |                        DBPPRVER                             |
          |                                                             |
2832   B10|─────────────────────────────────────────────│───────────────|
          |                                              |              |
          |─────────────────────────────────────────────┘              |
          |                        DBPTPVER                             |
          |                                                             |
          |                                                             |
2856   B28|─────────────────────────────────────────────────────────────|
          |                                                             |
          |                        UNNAMED                              |
          |                                              ┌──────────────|
2872   B38|─────────────────────────────────────────────┘  DBPCKEY2     |
          |                                              |              |
2880   B40| DBPCKEY2(CONT)  │ DBPCLIN2 │ UNNAMED │                       |
          |                                      └──────┐               |
          =                        DBPBF0       │       │               =
          |                                                             |
          |                                                             |
2944   B80|──────────────────────────────────────────│─────────│────────|
          |               DBPCKEY3                    │ DBPCLIN3│ UNNAMED|
2952   B88|─────────────────────────────────────────────────────────────|
          |                                                             |
          =                        DBPBF60                              =
          |                                                             |
          |                                              ┌──────────────|
3008   BC0|─────────────────────────────────────────────┘  DBPCKEY4     |
          |                                              |              |
3016   BC8| DBPCKEY4(CONT)  │ DBPCLIN4 │ UNNAMED │                       |
          |                                      └──────┐               |
          =                        DBPBF120     │       │               =
          |                                                             |
          |                                                             |
3080   C08|──────────────────────────────────────────│─────────│────────|
          |               DBPCKEY5                    │ DBPCLIN5│ UNNAMED|
3088   C10|─────────────────────────────────────────────────────────────|
          |                                                             |
          =                        DBPBF180                             =
          |                                                             |
          |                                                             |
          |                                              ┌──────────────|
3144   C48|─────────────────────────────────────────────┘              |
          |─────────────────────────────────────────────┐              |
          =                        UNNAMED               │              =
          |                                                             |
          |                                                             |
          |─────────────────────────────────────────────────────────────|

      ORG   DBPRT0

2304   900│ DBPCR0   │ DBPCR1   │ DBPPR2   │ DBPPR3   │
          │_____│_____│_____│_____│
```

## Fields in CHADBP -- by displacement

| DEC  | HEX  | FIELD    | DEC  | HEX  | FIELD   | DEC  | HEX  | FIELD  |       |
|------|------|----------|------|------|---------|------|------|--------|-------|
| 0000 | 0000 | DBPDEB   | 2108 | 083C | DBPDIS  | 2297 | 08F9 | DBPPRSTR |      |
| 0088 | 0058 | DBPRCB   | 2112 | 0840 | DBPSYME | 2298 | 08FA | DBPPRTRY |      |
| 2008 | 07D8 | DBPTIM   | 2116 | 0844 | DBPASYME| 2299 | 08FB | DBPALTP |       |
| 2016 | 07E0 | DBPABV   | 2120 | 0848 | DBPTIDE | 2300 | 08FC | DBPOPC  |       |
| 2020 | 07E4 | DBPABR   | 2200 | 0898 | DBPASYM | 2301 | 08FD | DBPINSEL |      |
| 2024 | 07E8 | DBPRWV   | 2202 | 089A | DBPTID  | 2302 | 08FE | DBPBLIP | (EQU) |
| 2028 | 07EC | DBPRWR   | 2296 | 08F8 | DBPPRDC | 2302 | 08FE | DBPCLIP | (EQU) |
| 2104 | 0838 | DBPFCCW  | 2296 | 08F8 | DBPCTRS | 2302 | 08FE | DBPFLG1 |       |

| DEC | HEX | FIELD | | DEC | HEX | FIELD | | DEC | HEX | FIELD |
|---|---|---|---|---|---|---|---|---|---|---|
| 2303 | 08FF | DBPBUSY | | 2560 | 0A00 | DBPCHTRN | | 2814 | 0AFE | DBPCLIN1 |
| 2304 | 0900 | DBPCR0 | | 2567 | 0A07 | DBPDEN | | 2816 | 0B00 | DBPPRVER |
| 2304 | 0900 | DBPPR0 | (EQU) | 2571 | 0A0B | DBPFRMTP | | 2836 | 0B14 | DBPTPVER |
| 2304 | 0900 | DBPRT0 | | 2575 | 0A0F | DBPFOLD | | 2876 | 0B3C | DBPCKEY2 |
| 2305 | 0901 | DBPCR1 | | 2578 | 0A12 | DBPSTRK2 | | 2882 | 0B42 | DBPCLIN2 |
| 2305 | 0901 | DBPPR1 | (EQU) | 2586 | 0A1A | DBPUCSKY | | 2884 | 0B44 | DBPBF0 |
| 2306 | 0902 | DBPPR2 | | 2604 | 0A2C | DBPRKEY2 | | 2944 | 0B80 | DBPCKEY3 |
| 2306 | 0902 | DBPCR2 | (EQU) | 2610 | 0A32 | DBPRLIN2 | | 2950 | 0B86 | DBPCLIN3 |
| 2307 | 0903 | DBPPR3 | | 2612 | 0A34 | DBPAL0 | | 2952 | 0B88 | DBPBF60 |
| 2392 | 0958 | DBPACB | | 2672 | 0A70 | DBPRKEY3 | | 3012 | 0BC4 | DBPCKEY4 |
| 2436 | 0984 | DBPACOM | | 2678 | 0A76 | DBPRLIN3 | | 3018 | 0BCA | DBPCLIN4 |
| 2456 | 0998 | DBPIOF | | 2680 | 0A78 | DBPAL60 | | 3020 | 0BCC | DBPBF120 |
| 2536 | 09E8 | DBPRKEY1 | | 2740 | 0AB4 | DBPRKEY4 | | 3080 | 0C08 | DBPCKEY5 |
| 2536 | 09E8 | DBPURS | | 2746 | 0ABA | DBPRLIN4 | | 3086 | 0C0E | DBPCLIN5 |
| 2542 | 09EE | DBPRLIN1 | | 2748 | 0ABC | DBPAL120 | | 3088 | 0C10 | DBPBF180 |
| 2546 | 09F2 | DBPFORMN | | 2808 | 0AF8 | DBPCKEY1 | | | | |
| 2556 | 09FC | DBPCARRG | | 2808 | 0AF8 | DBPUCS | | | | |

## Alphabetical list of fields in CHADBP

| FIELD | DEC | HEX | | FIELD | DEC | HEX | | FIELD | DEC | HEX | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| DBPABR | 2020 | 07E4 | | DBPCLIN3 | 2950 | 0B86 | | DBPPR2 | 2306 | 0902 | |
| DBPABV | 2016 | 07E0 | | DBPCLIN4 | 3018 | 0BCA | | DBPPR3 | 2307 | 0903 | |
| DBPACB | 2392 | 0958 | | DBPCLIN5 | 3086 | 0C0E | | DBPRCB | 0088 | 0058 | |
| DBPACOM | 2436 | 0984 | | DBPCLIP | 2302 | 08FE | (EQU) | DBPRKEY1 | 2536 | 09E8 | |
| DBPALTP | 2299 | 08FB | | DBPCR0 | 2304 | 0900 | | DBPRKEY2 | 2604 | 0A2C | |
| DBPAL0 | 2612 | 0A34 | | DBPCR1 | 2305 | 0901 | | DBPRKEY3 | 2672 | 0A70 | |
| DBPAL120 | 2748 | 0ABC | | DBPCR2 | 2306 | 0902 | (EQU) | DBPRKEY4 | 2740 | 0AB4 | |
| DBPAL60 | 2680 | 0A78 | | DBPCTRS | 2296 | 08F8 | | DBPRLIN1 | 2542 | 09EE | |
| DBPASYM | 2200 | 0898 | | DBPDEB | 0000 | 0000 | | DBPRLIN2 | 2610 | 0A32 | |
| DBPASYME | 2116 | 0844 | | DBPDEN | 2567 | 0A07 | | DBPRLIN3 | 2678 | 0A76 | |
| DBPBF0 | 2884 | 0B44 | | DBPDIS | 2108 | 083C | | DBPRLIN4 | 2746 | 0ABA | |
| DBPBF120 | 3020 | 0BCC | | DBPFCCW | 2104 | 0838 | | DBPRT0 | 2304 | 0900 | |
| DBPBF180 | 3088 | 0C10 | | DBPFLG1 | 2302 | 08FE | | DBPRWR | 2028 | 07EC | |
| DBPBF60 | 2952 | 0B88 | | DBPFOLD | 2575 | 0A0F | | DBPRWV | 2024 | 07E8 | |
| DBPBLIP | 2302 | 08FE | (EQU) | DBPFORMN | 2546 | 09F2 | | DBPSTRK2 | 2578 | 0A12 | |
| DBPBUSY | 2303 | 08FF | | DBPFRMTP | 2571 | 0A0B | | DBPSYME | 2112 | 0840 | |
| DBPCARRG | 2556 | 09FC | | DBPINSEL | 2301 | 08FD | | DBPTID | 2202 | 089A | |
| DBPCHTRN | 2560 | 0A00 | | DBPIOF | 2456 | 0998 | | DBPTIDE | 2120 | 0848 | |
| DBPCKEY1 | 2808 | 0AF8 | | DBPOPC | 2300 | 08FC | | DBPTIM | 2008 | 07D8 | |
| DBPCKEY2 | 2876 | 0B3C | | DBPPRDC | 2296 | 08F8 | | DBPTPVER | 2836 | 0B14 | |
| DBPCKEY3 | 2944 | 0B80 | | DBPPRSTR | 2297 | 08F9 | | DBPUCS | 2808 | 0AF8 | |
| DBPCKEY4 | 3012 | 0BC4 | | DBPPRTRY | 2298 | 08FA | | DBPUCSKY | 2586 | 0A1A | |
| DBPCKEY5 | 3080 | 0C08 | | DBPPRVER | 2816 | 0B00 | | DBPURS | 2536 | 09E8 | |
| DBPCLIN1 | 2814 | 0AFE | | DBPPR0 | 2304 | 0900 | (EQU) | | | | |
| DBPCLIN2 | 2882 | 0B42 | | DBPPR1 | 2305 | 0901 | (EQU) | | | | |

## Assembler listing of CHADBP

```
LOCATION  INSTRUCTION  SOURCE    INST  OPER      COMMENT
          23 00000      CHADBP    DSECT
* *** NOTE THAT THE FOLLOWING 5 EQUATES MAY CHANGE AS THE SIZES OF   ***
* ***    THEIR RESPECTIVE CONTROL BLOCKS CHANGE                      ***
          00000054      DBPDEBSZ  EQU   X'54'     SIZE OF DEB (DEBSZ1)
          0000002C      DBPICBSZ  EQU   44        SIZE OF ICB
          00000010      DBPCMASZ  EQU   16        SIZE OF COMMUNICATIONS AREA
          00000050      DBPIOFSZ  EQU   X'50'     SIZE OF FIXED AREA OF IORCB
                    *                             (IORFAS)
          00000780      DBPIORSZ  EQU   1920      MAXIMUM SIZE OF IORCB
23 00000              DBPDEB    DS    0D        DEB AREA,DBPDEBSZ BYTES IN
                    *                             LENGTH
          23 00054              |ORG|  *+DBPDEBSZ
23 00058              DBPRCB    DS    0D        IORCB AREA,DBPIORSZ BYTES
                    *                             IN LENGTH
          23 007D8              |ORG|  *+DBPIORSZ
23 007D8              DBPTIM    DS    D         TIME IN MICROSECONDS
                    *                             BETWEEN ALIGNMENT MESSAGES
23 007E0              DBPABV    DS    F         POINTER (ADCON) TO ABEND
```

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|---|---|---|---|---|---|
| | | * | | | ENTRY |
| 23 007E4 | | DBPABR | DS | F | POINTER (ADCON) TO ABEND |
| | | * | | | PSECT |
| 23 007E8 | | DBPRWV | DS | F | POINTER (ADCON) TO MSAM |
| | | * | | | READ/WRITE ENTRY |
| 23 007EC | | DBPRWR | DS | F | POINTER (ADCON) TO MSAM |
| | | * | | | READ/WRITE PSECT |
| 23 007F0 | | | DS | 9D | RESERVED FOR FUTURE USE |
| 23 00838 | | DBPFCCW | DS | F | VIRTUAL MEMORY ADDRESS OF |
| | | * | | | FAILING CCW |
| 23 0083C | | DBPDIS | DS | F | DISPLACEMENT(MOD 8) TO |
| | | * | | | FAILING CCW FROM START OF IORCB |
| 23 00840 | | DBPSYME | DS | CL4 | EBCDIC FORM OF SYMBOLIC |
| | | * | | | DEVICE ADDRESS |
| 23 00844 | | DBPASYME | DS | CL4 | EBCDIC FORM OF ASSOCIATED |
| | | * | | | CARD READER ON 2540 |
| 23 00848 | | DBPTIDE | DS | CL4 | EBCDIC FORM OF TASK ID |
| 23 0084C | | | DS | 19F | RESERVED FOR FUTURE USE |
| 23 00898 | | DBPASYM | DS | H | ASSOCIATED 2540 DEVICE |
| 23 0089A | | DBPTID | DS | H | TASK ID |
| 23 0089C | | | DS | 46H | RESERVED FOR FUTURE USE |
| 23 008F8 | | DBPCTRS | DS | 0F | |
| 23 008F8 | | DBPPRDC | DS | XL1 | PRINTER DATA CHECK COUNTER |
| 23 008F9 | | DBPPRSTR | DS | XL1 | PRINTER STRIKEOUT COUNTER |
| 23 008FA | | DBPPRTRY | DS | XL1 | PRINTER RETRY COUNTER |
| 23 008FB | | DBPALTP | DS | XL1 | ALTERNATE PATH RETRY |
| | | * | | | COUNTER |
| 23 008FC | | DBPOPC | DS | XL1 | OP CODE OF FAILING CCW |
| 23 008FD | | DBPINSEL | DS | CL1 | INITIAL SELECTION SENSE |
| | | * | | | BYTE |
| 23 008FE | | DBPFLG1 | DS | XL1 | FLAG BYTE |
| | 23 008FE | DBPCLIP | EQU | DBPFLG1 | CLOSE IN PROCESS FLAG |
| | 00000080 | DBPCLIPM | EQU | X'80' | CLOSE IN PROCESS MASK |
| | 23 008FE | DBPBLIP | EQU | DBPFLG1 | PUNCHING BLANK CARD IN |
| | | * | | | PROGRESS FLAG |
| | 00000040 | DBPBLIPM | EQU | X'40' | PUNCHING BLANK CARD IN |
| | | * | | | PROGRESS MASK |
| 23 008FF | | DBPBUSY | DS | CL1 | BUSY RETRY COUNT |
| 23 00900 | | DBPRT0 | DS | F | RETRY COUNTERS |
| | 23 00900 | | \|ORG\| | DBPRT0 | |
| 23 00900 | | DBPCR0 | DS | CL1 | CHANNEL RETRY COUNTER |
| | 23 00900 | DBPPR0 | EQU | DBPCR0 | PATH RETRY COUNTER |
| 23 00901 | | DBPCR1 | DS | CL1 | BUS OUT COUNTER |
| | 23 00901 | DBPPR1 | EQU | DBPCR1 | |
| 23 00902 | | DBPPR2 | DS | CL1 | |
| | 23 00902 | DBPCR2 | EQU | DBPPR2 | ERROR RETRY VALUE |
| 23 00903 | | DBPPR3 | DS | CL1 | UNUSED ERROR RETRY COUNTER |
| 23 00904 | | | DS | XL84 | RESERVED FOR FUTURE USE |
| 23 00958 | | DBPACB | DS | 0D | ICB AREA,DBPICBSZ BYTES IN |
| | | * | | | LENGTH |
| | 23 00984 | | \|ORG\| | *+DBPICBSZ | |
| 23 00984 | | DBPACOM | DS | 0F | COMMUNICATION AREA FOR |
| | | * | | | ICB,DBPCMASZ BYTES IN LENGTH |
| | 23 00994 | | \|ORG\| | *+DBPCMASZ | |
| 23 00998 | | DBPIOF | DS | 0D | FIXED AREA OF IORCB FOR |
| | | * | | | POSTING,DBPIOFSZ BYTES LONG |
| | 23 009E8 | | \|ORG\| | *+DBPIOFSZ | |
| 23 009E8 | | | DS | 0D | |
| 23 009E8 | | DBPURS | DS | 0D | ALIGN AND DEFINE START OF |
| | | * | | | URS AREA.   AREA SIZE--4X68 |
| 23 009E8 | | DBPRKEY1 | DS | CL6 | SYSURS KEY |
| 23 009EE | | DBPRLIN1 | DS | CL1 | SYSURS LINE NUMBER  '1' |
| 23 009EF | | | DS | CL3 | SYSURS RESERVED |
| 23 009F2 | | DBPFORMN | DS | CL10 | SYSURS FORM NUMBER |
| 23 009FC | | DBPCARRG | DS | CL4 | SYSURS CARRIAGE TAPE NUMBER |
| 23 00A00 | | DBPCHTRN | DS | CL4 | SYSURS CHAIN/TRAIN NUMBER |
| 23 00A04 | | | DS | CL3 | SYSURS RESERVED |
| 23 00A07 | | DBPDEN | DS | CL1 | SYSURS DENSITY |

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|---|---|---|---|---|---|
| | 000000F6 | DBPDEN6 | EQU | C'6' | SYSURS DENSITY 6 LINES PER |
| | | * | | | INCH |
| | 000000F8 | DBPDEN8 | EQU | C'8' | SYSURS DENSITY 8 LINES PER |
| | | * | | | INCH |
| 23 00A08 | | | DS | CL3 | SYSURS RESERVED |
| 23 00A0B | | DBPFRMTP | DS | CL1 | SYSURS FORM TYPE CODE |
| | 000000C4 | DBPFRMD | EQU | C'D' | SYSURS FORM TYPE DUMP MODE |
| | 000000C6 | DBPFRMF | EQU | C'F' | SYSURS FORM TYPE FORM |
| | | * | | | SENSITIVE |
| | 000000E2 | DBPFRMS | EQU | C'S' | SYSURS FORM TYPE SEQUENCE |
| | | * | | | SENSITIVE |
| 23 00A0C | | | DS | CL3 | SYSURS RESERVED |
| 23 00A0F | | DBPFOLD | DS | CL1 | SYSURS UCS FOLDING CODE |
| | 000000C6 | DBPFOLDF | EQU | C'F' | SYSURS FOLDED |
| | 000000E4 | DBPFOLDU | EQU | C'U' | SYSURS UNFOLDED |
| 23 00A10 | | | DS | CL2 | SYSURS RESERVED |
| 23 00A12 | | DBPSTRK2 | DS | CL2 | SYSURS UCS STRIKE OUT CODE |
| 23 00A14 | | | DS | CL6 | SYSURS RESERVED |
| 23 00A1A | | DBPUCSKY | DS | CL6 | SYSURS UCS BUFFER LOAD KEY |
| | | * | | | FOR READING SYSUCS |
| 23 00A20 | | | DS | CL12 | SYSURS RESERVED |
| 23 00A2C | | DBPRKEY2 | DS | CL6 | SYSURS KEY |
| 23 00A32 | | DBPRLIN2 | DS | CL1 | SYSURS LINE NUMBER '2' |
| 23 00A33 | | | DS | CL1 | SYSURS RESERVED |
| 23 00A34 | | DBPAL0 | DS | CL60 | SYSURS FIRST 60 BYTES OF |
| | | * | | | ALIGNMENT MESSAGE |
| 23 00A70 | | DBPRKEY3 | DS | CL6 | SYSURS KEY |
| 23 00A76 | | DBPRLIN3 | DS | CL1 | SYSURS LINE NUMBER '3' |
| 23 00A77 | | | DS | CL1 | SYSURS RESERVED |
| 23 00A78 | | DBPAL60 | DS | CL60 | SYSURS SECOND 60 BYTES OF |
| | | * | | | ALIGNMENT MESSAGE |
| 23 00AB4 | | DBPRKEY4 | DS | CL6 | SYSURS KEY |
| 23 00ABA | | DBPRLIN4 | DS | CL1 | SYSURS LINE NUMBER '4' |
| 23 00ABB | | | DS | CL1 | SYSURS RESERVED |
| 23 00ABC | | DBPAL120 | DS | CL12 | SYSURS LAST 12 BYTES OF |
| | | * | | | ALIGNMENT MESSAGE |
| 23 00AC8 | | | DS | CL48 | SYSURS RESERVED |
| 23 00AF8 | | | DS | 0D | |
| 23 00AF8 | | DBPUCS | DS | 0D | ALIGN AND DEFINE START OF |
| | | * | | | UCS AREA.  AREA SIZE 5X68 |
| 23 00AF8 | | DBPCKEY1 | DS | CL6 | SYSUCS KEY |
| 23 00AFE | | DBPCLIN1 | DS | CL1 | SYSUCS LINE NUMBER '1' |
| 23 00AFF | | | DS | CL1 | SYSUCS RESERVED |
| 23 00B00 | | DBPPRVER | DS | CL20 | SYSUCS VERIFICATION MESSAGE |
| | | * | | | FOR PRINTER |
| 23 00B14 | | DBPTPVER | DS | CL20 | SYSUCS VERIFICATION MESSAGE |
| | | * | | | FOR TYPEWRITER |
| 23 00B28 | | | DS | CL20 | SYSUCS RESERVED |
| 23 00B3C | | DBPCKEY2 | DS | CL6 | SYSUCS KEY |
| 23 00B42 | | DBPCLIN2 | DS | CL1 | SYSUCS LINE NUMBER '2' |
| 23 00B43 | | | DS | CL1 | SYSUCS RESERVED |
| 23 00B44 | | DBPBF0 | DS | CL60 | SYSUCS FIRST 60 BYTES OF |
| | | * | | | 240 BYTE BUFFER LOAD |
| 23 00B80 | | DBPCKEY3 | DS | CL6 | SYSUCS KEY |
| 23 00B86 | | DBPCLIN3 | DS | CL1 | SYSUCS LINE NUMBER '3' |
| 23 00B87 | | | DS | CL1 | SYSUCS RESERVED |
| 23 00B88 | | DBPBF60 | DS | CL60 | SYSUCS SECOND 60 BYTES OF |
| | | * | | | 240 BYTE BUFFER LOAD |
| 23 00BC4 | | DBPCKEY4 | DS | CL6 | SYSUCS KEY |

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|----------|-------------|--------|------|------|---------|
| 23 00BCA | | DBPCLIN4 | DS | CL1 | SYSUCS LINE NUMBER '4' |
| 23 00BCB | | | DS | CL1 | SYSUCS RESERVED |
| 23 00BCC | | DBPBF120 | DS | CL60 | SYSUCS THIRD 60 BYTES OF |
| | | * | | | 240 BYTE BUFFER LOAD |
| 23 00C08 | | DBPCKEY5 | DS | CL6 | SYSUCS KEY |
| 23 00C0E | | DBPCLIN5 | DS | CL1 | SYSUCS LINE NUMBER '5' |
| 23 00C0F | | | DS | CL1 | SYSUCS RESERVED |
| 23 00C10 | | DBPBF180 | DS | CL60 | SYSUCS LAST 60 BYTES OF 240 |
| | | * | | | BYTE BUFFER LOAD |
| 23 00C4C | | | DS | 237F | RESERVED FOR FUTURE USE |

## Data Control Block (CHADCB)

The Data Control Block Table (DCB) represents the basic reference block for all I/O operations and provides the principal means of achieving device independent coding. The DCB macro instruction, used as a basis for table construction, is common to all of the data management access methods supported by TSS. The DCB macro instruction is primarily used to reserve space for the DCB table.

The maximum DCB area is reserved in virtual storage without regard to specification of parameters in the DCB macro instruction. Since no parameters need be specified as operands in the DCB macro, the user can utilize any access method without modifying his object program. Once a parameter is specified in the DCB macro, however, the parameter cannot be altered except by the user's object program. Therefore, parameters which are likely to change should be omitted. These parameters should be provided through one of the first four of the following six sources of the DCB table.

1. User's problem program prior to execution of the OPEN macro
2. DDEF commands
3. Tables -- DSCBs or tape labels
4. DCB exit
5. DCB macro instruction
6. Service programs

The DCB table consists of seven sections:

1. DCB common section
2. DCB SAM section
3. DCB QSAM section
4. DCB VAM section
5. DCB IOREQ section
6. DCB MSAM section
7. DCB TAM section

The DCB table occupies up to 200 bytes of virtual storage, aligned on doubleword boundaries.

### CHADCB Storage map

| DEC | HEX | | | | | | |
|-----|-----|---|---|---|---|---|---|
| 0 | 0 | DCBDSO | DCBMAC | | DCBEXL | | |
| 8 | 8 | DCBDDN | | | | | |
| 16 | 10 | DCBSYV | | DCBSYR | | | |
| 24 | 18 | DCBEOV | | DCBEOR | | | |
| 32 | 20 | DCBBUF | DCBDEV | DCBBUN | DCBBCN | | |
| 40 | 28 | DCBBFT | DCBNCP | DCBREC | DCBOPT | DCBLRE | |
| 48 | 30 | DCBBLK | DCBDD1 | DCBDD2 | DCBERO | DCBPAD | DCBRKP |
| 56 | 38 | DCBLPA | | DCBEX1 | DCBEX2 | DCBOPI | DCBOFG |
| 64 | 40 | DCBMSK | | DCBID | | | |
| 72 | 48 | DCBCON | | DCBDEB | | | |
| 80 | 50 | DCBLEN | DCBIFL | DCBMCD | DCBIMK | | |
| 88 | 58 | DCBGTV | | DCBGTR | | | |
| 96 | 60 | DCBPTV | | DCBPTR | | | |
| 104 | 68 | DCBPXV | | DCBPXR | | | |
| 112 | 70 | DCBSLV | | DCBSLR | | | |
| 120 | 78 | DCBBKC | | DCBS0 | DCBS1 | DCBPR | DCBBOF |

| DEC | HEX | | | | | |
|-----|-----|---|---|---|---|---|
| 128 | 80 | DCBRDN | DCBRDM | DCBRDB | DCBRDC | DCBRDH |
| 136 | 88 | DCBCSW | | | | |
| 144 | 90 | DCBRCD | | | DCBEAD | |
| 152 | 98 | DCBLX | | | DCBLXN | DCBBSV |
| 160 | A0 | DCBLAD | | | DCBDE1 | |
| 168 | A8 | DCBDE2 | | | DCBDE3 | |
| 176 | B0 | DCBBF1 | | | DCBBF2 | |
| 184 | B8 | DCBBF3 | | | DCBLRS | DCBSVL |
| 192 | C0 | DCBQWK | | | DCBQF0 | DCBQF1 | DCBQF2 | DCBQF3 |

ORG    DCBMAC

| 2 | 2 | DCBA0 | DCBA8 |
|---|---|-------|-------|

ORG    DCBDD1

| 50 | 32 | DCBKEY |
|----|----|--------|

ORG    DCBDD1

| 50 | 32 | DCBPRT |
|----|----|--------|

ORG    DCBDD1

| 50 | 32 | DCBSTA |
|----|----|--------|

ORG    DCBDD1

| 50 | 32 | DCBCOD |
|----|----|--------|

```
DEC   HEX

ORG   DCBDD2

 51    33                              |‾DCBMOD‾|
                                       |_____|


ORG   DCBDD2

 51    33                              |‾DCBTRT‾|
                                       |_____|


ORG   DCBEX1

 60    3C                                   |‾‾‾‾‾‾‾DCBLPN‾‾‾‾‾‾‾|
                                            |_____|


ORG   DCBMSK

 64    40 |DCBMA  |DCBMI  |DCBMQ  |DCBMY   |
          |_____|_____|_____|_____|


ORG   DCBMCD

 82    52              |‾DCBMCD1‾|‾DCBUS‾|
                       |_____|_____|


ORG   DCBIMK

 84    54                                   |‾DCBIA  |‾DCBIJ  |‾DCBIR  |‾DCBIZ  |
                                            |_____|_____|_____|_____|


ORG   DCBRDH

134    86                                        |‾DCBRDR  |‾DCBRDZ  |
                                                 |_____|_____|


ORG   DCBBKC

120    78 |          DCBVMA          |     DCBDPN     |     DCBCBP     |
          |_____|_____|_____|
128    80 |    DCBN    |     DCBM     |     DCBOP      |
          |_____|_____|_____|


ORG   DCBOP

132    84                                  |‾DCBOPF  |‾DCBOPM  |‾DCBI   |‾DCBHV   |
                                           |_____|_____|_____|_____|
136    88 |    DCBNI    |‾DCBSHC  |‾DCBSWT |            DCBSP              |
          |_____|_____|_____|_____|
144    90 |          DCBSC         |               DCBHD                  |
          |_____|_____|
152    98 |   DCBNPO    |    DCBFPO    |    DCBBPU     |‾DCBHLB  |‾DCBLOF  |
          |_____|_____|_____|_____|_____|
160    A0 |          DCBPRL         |               DCBBP                  |
          |_____|_____|
```

DEC    HEX

ORG   DCBNPO

| DEC | HEX | | | | | | | |
|-----|-----|---|---|---|---|---|---|---|
| 152 | 98 | DCBPCC | | | DCBOPC | | | |
| 160 | A0 | DCBCL | | DCBCCL | DCBIOS | DCBPT | DCBCRL | |
| 168 | A8 | DCBCRS | DCBRES | DCBPLM | DCBPMM | DCBOLM | DCBASY | DCBFLAG | UNNAMED |
| 176 | B0 | DCBRK | | | DCBDMS | | | |

ORG   DCBBKC

| DEC | HEX | | | | | |
|-----|-----|---|---|---|---|---|
| 120 | 78 | DCBTMP | | DCBTCC | | |
| 128 | 80 | DCBLRL | | DCBHRL | | |
| 136 | 88 | DCBSCC | UNNAMED | DCBRBF | | |
| 144 | 90 | DCBWBF | | DCBCLE | | |
| 152 | 98 | DCBKNT | | DCBWCT | DCBNCN | |
| 160 | A0 | DCBDEC | | UNNAMED | DCBFLG | DCBNPL |

ORG   DCBBKC

| DEC | HEX | | | | | | | |
|-----|-----|---|---|---|---|---|---|---|
| 120 | 78 | DCBRETRY | DCBPOCKE | DCBINHMS | DCBCOMBI | DCBICB | | |
| 128 | 80 | DCBLRMAX | | UNNAMED | | | | |
| 144 | 90 | DCBLRC | | DCBEAP | | | | |
| 152 | 98 | DCBPPT | | DCBRCX | DCBCNT | | | |
| 160 | A0 | UNNAMED | | | | | | |
| 168 | A8 | DCBCDE | | DCBFDE | | | | |
| 176 | B0 | DCBLDE | | DCBTDE | | | | |
| 184 | B8 | DCBUDE | | DCBFRMTP | DCBSTRIK | UNNAMED | | |
| 192 | C0 | UNNAMED (CONT) | | DCBMSF1 | DCBMSF2 | DCBMSF3 | UNNAMED | |

ORG   DCBBKC

| DEC | HEX | |
|-----|-----|---|
| 120 | 78 | DCBSFS |
| 192 | C0 | |

```
DEC     HEX

ORG   IHADCB+20


20      14                                    |‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾DCBTRMAD‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾|
                                              |                                          |
24      18|‾‾‾‾‾‾‾DCBSOWA‾‾‾‾‾‾|_____|_____|
          |_____|


ORG   IHADCB+68


68      44                                    |‾‾‾‾‾‾‾‾‾‾‾DCBSMSI‾‾‾‾‾‾‾‾‾‾‾|
                                              |_____|


ORG   IHADCB+72


72      48|‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾DCBMSHI‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾|
          |_____|
```

Fields in CHADCB -- by displacement

| DEC | HEX | FIELD | | DEC | HEX | FIELD | | DEC | HEX | FIELD | |
|-----|-----|-------|--|-----|-----|-------|--|-----|-----|-------|--|
| 0000 | 0000 | IHADCB | (EQU) | 0042 | 002A | DCBRECFM | (EQU) | 0061 | 003D | DCBX2F | (EQU) |
| 0000 | 0000 | DCBDSORG | (EQU) | 0042 | 002A | DCBREC | | 0061 | 003D | DCBX2E | (EQU) |
| 0000 | 0000 | DCBDSO | | 0043 | 002B | DCBOPTCD | (EQU) | 0061 | 003D | DCBX2D | (EQU) |
| 0002 | 0002 | DCBA0 | | 0043 | 002B | DCBOPT | | 0061 | 003D | DCBX2C | (EQU) |
| 0002 | 0002 | DCBMACR | (EQU) | 0044 | 002C | DCBLRE | | 0061 | 003D | DCBX2B | (EQU) |
| 0002 | 0002 | DCBMACRF | (EQU) | 0046 | 002E | DCBLRECL | (EQU) | 0061 | 003D | DCBX2A | (EQU) |
| 0002 | 0002 | DCBA7 | (EQU) | 0048 | 0030 | DCBBLKSI | (EQU) | 0061 | 003D | DCBEX2 | |
| 0002 | 0002 | DCBA6 | (EQU) | 0048 | 0030 | DCBBLK | | 0062 | 003E | DCBOPI | |
| 0002 | 0002 | DCBA5 | (EQU) | 0050 | 0032 | DCBCOD | | 0063 | 003F | DCBOFLGS | (EQU) |
| 0002 | 0002 | DCBA4 | (EQU) | 0050 | 0032 | DCBSTA | | 0063 | 003F | DCBO7 | (EQU) |
| 0002 | 0002 | DCBA3 | (EQU) | 0050 | 0032 | DCBPRT | | 0063 | 003F | DCBO6 | (EQU) |
| 0002 | 0002 | DCBA2 | (EQU) | 0050 | 0032 | DCBKEY | | 0063 | 003F | DCBO5 | (EQU) |
| 0002 | 0002 | DCBA1 | (EQU) | 0050 | 0032 | DCBPTRSP | (EQU) | 0063 | 003F | DCBO4 | (EQU) |
| 0002 | 0002 | DCBMAC | | 0050 | 0032 | DCBCODE | (EQU) | 0063 | 003F | DCBO3 | (EQU) |
| 0003 | 0003 | DCBA8 | | 0050 | 0032 | DCBKEYLE | (EQU) | 0063 | 003F | DCBO2 | (EQU) |
| 0003 | 0003 | DCBAF | (EQU) | 0050 | 0032 | DCBSTACK | (EQU) | 0063 | 003F | DCBO1 | (EQU) |
| 0003 | 0003 | DCBAE | (EQU) | 0050 | 0032 | DCBDD1 | | 0063 | 003F | DCBO0 | (EQU) |
| 0003 | 0003 | DCBAD | (EQU) | 0051 | 0033 | DCBTRT | | 0063 | 003F | DCBOFG | |
| 0003 | 0003 | DCBAC | (EQU) | 0051 | 0033 | DCBMOD | | 0064 | 0040 | DCBMA | |
| 0003 | 0003 | DCBAB | (EQU) | 0051 | 0033 | DCBMODE | (EQU) | 0064 | 0040 | DCBMH | (EQU) |
| 0003 | 0003 | DCBAA | (EQU) | 0051 | 0033 | DCBTRTCH | (EQU) | 0064 | 0040 | DCBMG | (EQU) |
| 0003 | 0003 | DCBA9 | (EQU) | 0051 | 0033 | DCBDD2 | | 0064 | 0040 | DCBMF | (EQU) |
| 0004 | 0004 | DCBEXLST | (EQU) | 0052 | 0034 | DCBEROPT | (EQU) | 0064 | 0040 | DCBME | (EQU) |
| 0004 | 0004 | DCBEXL | | 0052 | 0034 | DCBER3 | (EQU) | 0064 | 0040 | DCBMD | (EQU) |
| 0008 | 0008 | DCBDDNAM | (EQU) | 0052 | 0034 | DCBER2 | (EQU) | 0064 | 0040 | DCBMC | (EQU) |
| 0008 | 0008 | DCBDDN | | 0052 | 0034 | DCBER1 | (EQU) | 0064 | 0040 | DCBMB | (EQU) |
| 0016 | 0010 | DCBSYNAD | (EQU) | 0052 | 0034 | DCBERO | | 0064 | 0040 | DCBMSK | |
| 0016 | 0010 | DCBSYV | | 0053 | 0035 | DCBPAD | | 0065 | 0041 | DCBMI | |
| 0020 | 0014 | DCBTRMAD | | 0054 | 0036 | DCBRKP | | 0065 | 0041 | DCBMP | (EQU) |
| 0020 | 0014 | DCBBUFRQ | | 0056 | 0038 | DCBLP | (EQU) | 0065 | 0041 | DCBMO | (EQU) |
| 0020 | 0014 | DCBSYR | | 0056 | 0038 | DCBLPA | | 0065 | 0041 | DCBMN | (EQU) |
| 0024 | 0018 | DCBSOWA | | 0060 | 003C | DCBLPN | | 0065 | 0041 | DCBMM | (EQU) |
| 0024 | 0018 | DCBEODAD | (EQU) | 0060 | 003C | DCBEXCD1 | (EQU) | 0065 | 0041 | DCBML | (EQU) |
| 0024 | 0018 | DCBEOV | | 0060 | 003C | DCBX6 | (EQU) | 0065 | 0041 | DCBMK | (EQU) |
| 0028 | 001C | DCBEOR | | 0060 | 003C | DCBX5 | (EQU) | 0065 | 0041 | DCBMJ | (EQU) |
| 0032 | 0020 | DCBBUFL | (EQU) | 0060 | 003C | DCBX4 | (EQU) | 0066 | 0042 | DCBMQ | |
| 0032 | 0020 | DCBBUF | | 0060 | 003C | DCBX3 | (EQU) | 0066 | 0042 | DCBMX | (EQU) |
| 0034 | 0022 | DCBDEVT | (EQU) | 0060 | 003C | DCBX2 | (EQU) | 0066 | 0042 | DCBMW | (EQU) |
| 0034 | 0022 | DCBDEV | | 0060 | 003C | DCBX1 | (EQU) | 0066 | 0042 | DCBMV | (EQU) |
| 0035 | 0023 | DCBBUFNO | (EQU) | 0060 | 003C | DCBEX1 | | 0066 | 0042 | DCBMU | (EQU) |
| 0035 | 0023 | DCBBUN | | 0061 | 003D | DCBEXCD2 | (EQU) | 0066 | 0042 | DCBMT | (EQU) |
| 0036 | 0024 | DCBBUFCB | (EQU) | 0061 | 003D | DCBX2K | (EQU) | 0066 | 0042 | DCBMS | (EQU) |
| 0036 | 0024 | DCBBCN | | 0061 | 003D | DCBX2J | (EQU) | 0066 | 0042 | DCBMR | (EQU) |
| 0040 | 0028 | DCBBFTEK | (EQU) | 0061 | 003D | DCBX2I | (EQU) | 0067 | 0043 | DCBMY | |
| 0040 | 0028 | DCBBFT | | 0061 | 003D | DCBX2H | (EQU) | 0067 | 0043 | DCBM5 | (EQU) |
| 0041 | 0029 | DCBNCP | | 0061 | 003D | DCBX2G | (EQU) | 0067 | 0043 | DCBM4 | (EQU) |

| DEC | HEX | FIELD | | DEC | HEX | FIELD | | DEC | HEX | FIELD | |
|-----|-----|-------|---|-----|-----|-------|---|-----|-----|-------|---|
| 0067 | 0043 | DCBM3 | (EQU) | 0122 | 007A | DCBINH | (EQU) | 0160 | 00A0 | DCBDEC | |
| 0067 | 0043 | DCBM2 | (EQU) | 0123 | 007B | DCBCOMBI | | 0160 | 00A0 | DCBCL | |
| 0067 | 0043 | DCBM1 | (EQU) | 0123 | 007B | DCBCMB | (EQU) | 0160 | 00A0 | DCBPRL | |
| 0067 | 0043 | DCBM0 | (EQU) | 0124 | 007C | DCBICB | | 0160 | 00A0 | DCBLAD | |
| 0067 | 0043 | DCBMZ | (EQU) | 0124 | 007C | DCBTCC | | 0162 | 00A2 | DCBCCL | |
| 0068 | 0044 | DCBSMSI | | 0124 | 007C | DCBDPN | | 0164 | 00A4 | DCBIOS | |
| 0068 | 0044 | DCBID | | 0124 | 007C | DCBCPB | | 0164 | 00A4 | DCBBP | |
| 0072 | 0048 | DCBMSHI | | 0124 | 007C | DCBS0 | | 0164 | 00A4 | DCBDE1 | |
| 0072 | 0048 | DCBCON | | 0125 | 007D | DCBS1 | | 0165 | 00A5 | DCBPT | |
| 0076 | 004C | DCBDEBAD | (EQU) | 0126 | 007E | DCBCBP | | 0166 | 00A6 | DCBFLG | |
| 0076 | 004C | DCBDEB | | 0126 | 007E | DCBQN | (EQU) | 0166 | 00A6 | DCBCRL | |
| 0080 | 0050 | DCBLEN | | 0126 | 007E | DCBQT | (EQU) | 0166 | 00A6 | DCBIOI | (EQU) |
| 0081 | 0051 | DCBIFLG | (EQU) | 0126 | 007E | DCBBN | (EQU) | 0166 | 00A6 | DCBNCH | (EQU) |
| 0081 | 0051 | DCBIFLGS | (EQU) | 0126 | 007E | DCBBT | (EQU) | 0167 | 00A7 | DCBNPL | |
| 0081 | 0051 | DCBIFL | | 0126 | 007E | DCBPR | | 0168 | 00A8 | DCBCDE | |
| 0082 | 0052 | DCBMCD1 | | 0127 | 007F | DCBBOF | | 0168 | 00A8 | DCBCRS | |
| 0082 | 0052 | DCBMCD | | 0128 | 0080 | DCBLRMAX | | 0168 | 00A8 | DCBDE2 | |
| 0083 | 0053 | DCBUS | | 0128 | 0080 | DCBLRL | | 0169 | 00A9 | DCBRES | |
| 0083 | 0053 | DCBCH | (EQU) | 0128 | 0080 | DCBN | | 0170 | 00AA | DCBPLM | |
| 0084 | 0054 | DCBIA | | 0128 | 0080 | DCBRDN | | 0171 | 00AB | DCBPMM | |
| 0084 | 0054 | DCBIMSK | (EQU) | 0128 | 0080 | DCBRD | | 0172 | 00AC | DCBFDE | |
| 0084 | 0054 | DCBII | (EQU) | 0129 | 0081 | DCBRDM | | 0172 | 00AC | DCBOLM | |
| 0084 | 0054 | DCBIH | (EQU) | 0130 | 0082 | DCBM | | 0172 | 00AC | DCBDE3 | |
| 0084 | 0054 | DCBIG | (EQU) | 0130 | 0082 | DCBRDB | | 0173 | 00AD | DCBASY | |
| 0084 | 0054 | DCBIF | (EQU) | 0132 | 0084 | DCBHRL | | 0174 | 00AE | DCBFLAG | |
| 0084 | 0054 | DCBIE | (EQU) | 0132 | 0084 | DCBOPF | | 0174 | 00AE | DCBFMP | (EQU) |
| 0084 | 0054 | DCBIC | (EQU) | 0132 | 0084 | DCBOP | | 0176 | 00B0 | DCBLDE | |
| 0084 | 0054 | DCBIB | (EQU) | 0132 | 0084 | DCBRDC | | 0176 | 00B0 | DCBRK | |
| 0084 | 0054 | DCBIMK | | 0132 | 0084 | DCBRDT | | 0176 | 00B0 | DCBBF1 | |
| 0085 | 0055 | DCBIJ | | 0133 | 0085 | DCBOPM | | 0180 | 00B4 | DCBTDE | |
| 0085 | 0055 | DCBIQ | (EQU) | 0134 | 0086 | DCBI | | 0180 | 00B4 | DCBDMS | |
| 0085 | 0055 | DCBIP | (EQU) | 0134 | 0086 | DCBRDR | | 0180 | 00B4 | DCBBF2 | |
| 0085 | 0055 | DCBIO | (EQU) | 0134 | 0086 | DCBRDH | | 0184 | 00B8 | DCBUDE | |
| 0085 | 0055 | DCBIN | (EQU) | 0135 | 0087 | DCBHV | | 0184 | 00B8 | DCBBF3 | |
| 0085 | 0055 | DCBIM | (EQU) | 0135 | 0087 | DCBRDZ | | 0188 | 00BC | DCBFRMTP | |
| 0085 | 0055 | DCBIL | (EQU) | 0136 | 0088 | DCBSCC | | 0188 | 00BC | DCBLRS | |
| 0085 | 0055 | DCBIK | (EQU) | 0136 | 0088 | DCBNI | | 0189 | 00BD | DCBSTRIK | |
| 0086 | 0056 | DCBIR | | 0136 | 0088 | DCBCSW | | 0190 | 00BE | DCBSVL | |
| 0086 | 0056 | DCBIY | (EQU) | 0138 | 008A | DCBSHC | | 0192 | 00C0 | DCBQWK | |
| 0086 | 0056 | DCBIX | (EQU) | 0139 | 008B | DCBSWT | | 0196 | 00C4 | DCBMSF1 | |
| 0086 | 0056 | DCBIW | (EQU) | 0140 | 008C | DCBRBF | | 0196 | 00C4 | DCBSWA | (EQU) |
| 0086 | 0056 | DCBIV | (EQU) | 0140 | 008C | DCBSP | | 0196 | 00C4 | DCBRJE | (EQU) |
| 0086 | 0056 | DCBIU | (EQU) | 0144 | 0090 | DCBLRC | | 0196 | 00C4 | DCBNLP | (EQU) |
| 0086 | 0056 | DCBIT | (EQU) | 0144 | 0090 | DCBWBF | | 0196 | 00C4 | DCBELP | (EQU) |
| 0086 | 0056 | DCBIS | (EQU) | 0144 | 0090 | DCBSC | | 0196 | 00C4 | DCBOVF | (EQU) |
| 0087 | 0057 | DCBIZ | | 0144 | 0090 | DCBRECAD | (EQU) | 0196 | 00C4 | DCBENT | (EQU) |
| 0087 | 0057 | DCBI6 | (EQU) | 0144 | 0090 | DCBRCD | | 0196 | 00C4 | DCBIOC | (EQU) |
| 0087 | 0057 | DCBI5 | (EQU) | 0148 | 0094 | DCBEAP | | 0196 | 00C4 | DCBEOP | (EQU) |
| 0087 | 0057 | DCBI4 | (EQU) | 0148 | 0094 | DCBCLE | | 0196 | 00C4 | DCBQF0 | |
| 0087 | 0057 | DCBI3 | (EQU) | 0148 | 0094 | DCBHD | | 0197 | 00C5 | DCBMSF2 | |
| 0087 | 0057 | DCBI2 | (EQU) | 0148 | 0094 | DCBEOBAD | (EQU) | 0197 | 00C5 | DCBBLA1 | (EQU) |
| 0087 | 0057 | DCBI1 | (EQU) | 0148 | 0094 | DCBEAD | | 0197 | 00C5 | DCBENOF | (EQU) |
| 0087 | 0057 | DCBI0 | (EQU) | 0152 | 0098 | DCBPPT | | 0197 | 00C5 | DCBFWT | (EQU) |
| 0088 | 0058 | DCBGTV | | 0152 | 0098 | DCBKNT | | 0197 | 00C5 | DCBFT | (EQU) |
| 0092 | 005C | DCBGTR | | 0152 | 0098 | DCBPCC | | 0197 | 00C5 | DCBFIP | (EQU) |
| 0096 | 0060 | DCBPTV | | 0152 | 0098 | DCBNPO | | 0197 | 00C5 | DCBFIN | (EQU) |
| 0100 | 0064 | DCBPTR | | 0152 | 0098 | DCBLX | | 0197 | 00C5 | DCBSUR | (EQU) |
| 0104 | 0068 | DCBPXV | | 0154 | 009A | DCBFPO | | 0197 | 00C5 | DCBPUR | (EQU) |
| 0108 | 006C | DCBPXR | | 0156 | 009C | DCBRCX | | 0197 | 00C5 | DCBQF1 | |
| 0112 | 0070 | DCBSLV | | 0156 | 009C | DCBWCT | | 0198 | 00C6 | DCBMSF3 | |
| 0116 | 0074 | DCBSLR | | 0156 | 009C | DCBOPC | | 0198 | 00C6 | DCBCAN | (EQU) |
| 0120 | 0078 | DCBSFS | | 0156 | 009C | DCBBPU | | 0198 | 00C6 | DCBMRF | (EQU) |
| 0120 | 0078 | DCBRETRY | | 0156 | 009C | DCBLXN | | 0198 | 00C6 | DCBTAB | (EQU) |
| 0120 | 0078 | DCBTMP | | 0158 | 009E | DCBCNT | | 0198 | 00C6 | DCBRJIN | (EQU) |
| 0120 | 0078 | DCBVMA | | 0158 | 009E | DCBNCN | | 0198 | 00C6 | DCBSAIN | (EQU) |
| 0120 | 0078 | DCBBKC | | 0158 | 009E | DCBHLB | | 0198 | 00C6 | DCBQF2 | |
| 0121 | 0079 | DCBPOCKE | | 0158 | 009E | DCBBSV | | 0199 | 00C7 | DCBQF3 | |
| 0122 | 007A | DCBINHMS | | 0159 | 009F | DCBLOF | | 0200 | 00C8 | DCBEND | |

| FIELD | DEC | HEX | | FIELD | DEC | HEX | | FIELD | DEC | HEX | |
|-------|-----|-----|---|-------|-----|-----|---|-------|-----|-----|---|
| DCBAA | 0003 | 0003 | (EQU) | DCBDE3 | 0172 | 00AC | | DCBIOC | 0196 | 00C4 | (EQU) |
| DCBAB | 0003 | 0003 | (EQU) | DCBDMS | 0180 | 00B4 | | DCBIOI | 0166 | 00A6 | (EQU) |
| DCBAC | 0003 | 0003 | (EQU) | DCBDPN | 0124 | 007C | | DCBIOS | 0164 | 00A4 | |
| DCBAD | 0003 | 0003 | (EQU) | DCBDSO | 0000 | 0000 | | DCBIP | 0085 | 0055 | (EQU) |
| DCBAE | 0003 | 0003 | (EQU) | DCBDSORG | 0000 | 0000 | (EQU) | DCBIQ | 0085 | 0055 | (EQU) |
| DCBAF | 0003 | 0003 | (EQU) | DCBEAD | 0148 | 0094 | | DCBIR | 0086 | 0056 | |
| DCBASY | 0173 | 00AD | | DCBEAP | 0148 | 0094 | | DCBIS | 0086 | 0056 | (EQU) |
| DCBA0 | 0002 | 0002 | | DCBELP | 0196 | 00C4 | (EQU) | DCBIT | 0086 | 0056 | (EQU) |
| DCBA1 | 0002 | 0002 | (EQU) | DCBEND | 0200 | 00C8 | | DCBIU | 0086 | 0056 | (EQU) |
| DCBA2 | 0002 | 0002 | (EQU) | DCBENOF | 0197 | 00C5 | (EQU) | DCBIV | 0086 | 0056 | (EQU) |
| DCBA3 | 0002 | 0002 | (EQU) | DCBENT | 0196 | 00C4 | (EQU) | DCBIW | 0086 | 0056 | (EQU) |
| DCBA4 | 0002 | 0002 | (EQU) | DCBEOBAD | 0148 | 0094 | (EQU) | DCBIX | 0086 | 0056 | (EQU) |
| DCBA5 | 0002 | 0002 | (EQU) | DCBEODAD | 0024 | 0018 | (EQU) | DCBIY | 0086 | 0056 | (EQU) |
| DCBA6 | 0002 | 0002 | (EQU) | DCBEOP | 0196 | 00C4 | (EQU) | DCBIZ | 0087 | 0057 | |
| DCBA7 | 0002 | 0002 | (EQU) | DCBEOR | 0028 | 001C | | DCBI0 | 0087 | 0057 | (EQU) |
| DCBA8 | 0003 | 0003 | | DCBEOV | 0024 | 0018 | | DCBI1 | 0087 | 0057 | (EQU) |
| DCBA9 | 0003 | 0003 | (EQU) | DCBERO | 0052 | 0034 | | DCBI2 | 0087 | 0057 | (EQU) |
| DCBBCN | 0036 | 0024 | | DCBEROPT | 0052 | 0034 | (EQU) | DCBI3 | 0087 | 0057 | (EQU) |
| DCBBFT | 0040 | 0028 | | DCBER1 | 0052 | 0034 | (EQU) | DCBI4 | 0087 | 0057 | (EQU) |
| DCBBFTEK | 0040 | 0028 | (EQU) | DCBER2 | 0052 | 0034 | (EQU) | DCBI5 | 0087 | 0057 | (EQU) |
| DCBBF1 | 0176 | 00B0 | | DCBER3 | 0052 | 0034 | (EQU) | DCBI6 | 0087 | 0057 | (EQU) |
| DCBBF2 | 0180 | 00B4 | | DCBEXCD1 | 0060 | 003C | (EQU) | DCBKEY | 0050 | 0032 | |
| DCBBF3 | 0184 | 00B8 | | DCBEXCD2 | 0061 | 003D | (EQU) | DCBKEYLE | 0050 | 0032 | (EQU) |
| DCBBKC | 0120 | 0078 | | DCBEXL | 0004 | 0004 | | DCBKNT | 0152 | 0098 | |
| DCBBLA1 | 0197 | 00C5 | (EQU) | DCBEXLST | 0004 | 0004 | (EQU) | DCBLAD | 0160 | 00A0 | |
| DCBBLK | 0048 | 0030 | | DCBEX1 | 0060 | 003C | | DCBLDE | 0176 | 00B0 | |
| DCBBLKSI | 0048 | 0030 | (EQU) | DCBEX2 | 0061 | 003D | | DCBLEN | 0080 | 0050 | |
| DCBBN | 0126 | 007E | (EQU) | DCBFDE | 0172 | 00AC | | DCBLOF | 0159 | 009F | |
| DCBBOF | 0127 | 007F | | DCBFIN | 0197 | 00C5 | (EQU) | DCBLP | 0056 | 0038 | (EQU) |
| DCBBP | 0164 | 00A4 | | DCBFIP | 0197 | 00C5 | (EQU) | DCBLPA | 0056 | 0038 | |
| DCBBPU | 0156 | 009C | | DCBFLAG | 0174 | 00AE | | DCBLPN | 0060 | 003C | |
| DCBBSV | 0158 | 009E | | DCBFLG | 0166 | 00A6 | | DCBLRC | 0144 | 0090 | |
| DCBBT | 0126 | 007E | (EQU) | DCBFMP | 0174 | 00AE | (EQU) | DCBLRE | 0044 | 002C | |
| DCBBUF | 0032 | 0020 | | DCBFPO | 0154 | 009A | | DCBLRECL | 0046 | 002E | (EQU) |
| DCBBUFCB | 0036 | 0024 | (EQU) | DCBFRMTP | 0188 | 00BC | | DCBLRL | 0128 | 0080 | |
| DCBBUFL | 0032 | 0020 | (EQU) | DCBFT | 0197 | 00C5 | (EQU) | DCBLRMAX | 0128 | 0080 | |
| DCBBUFNO | 0035 | 0023 | (EQU) | DCBFWT | 0197 | 00C5 | (EQU) | DCBLRS | 0188 | 00BC | |
| DCBBUFRQ | 0020 | 0014 | | DCBGTR | 0092 | 005C | | DCBLX | 0152 | 0098 | |
| DCBBUN | 0035 | 0023 | | DCBGTV | 0088 | 0058 | | DCBLXN | 0156 | 009C | |
| DCBCAN | 0198 | 00C6 | (EQU) | DCBHD | 0148 | 0094 | | DCBM | 0130 | 0082 | |
| DCBCBP | 0126 | 007E | | DCBHLB | 0158 | 009E | | DCBMA | 0064 | 0040 | |
| DCBCCL | 0162 | 00A2 | | DCBHRL | 0132 | 0084 | | DCBMAC | 0002 | 0002 | |
| DCBCDE | 0168 | 00A8 | | DCBHV | 0135 | 0087 | | DCBMACR | 0002 | 0002 | (EQU) |
| DCBCH | 0083 | 0053 | (EQU) | DCBI | 0134 | 0086 | | DCBMACRF | 0002 | 0002 | (EQU) |
| DCBCL | 0160 | 00A0 | | DCBIA | 0084 | 0054 | | DCBMB | 0064 | 0040 | (EQU) |
| DCBCLE | 0148 | 0094 | | DCBIB | 0084 | 0054 | (EQU) | DCBMC | 0064 | 0040 | (EQU) |
| DCBCMB | 0123 | 007B | (EQU) | DCBIC | 0084 | 0054 | (EQU) | DCBMCD | 0082 | 0052 | |
| DCBCNT | 0158 | 009E | | DCBICB | 0124 | 007C | | DCBMCD1 | 0082 | 0052 | |
| DCBCOD | 0050 | 0032 | | DCBID | 0068 | 0044 | | DCBMD | 0064 | 0040 | (EQU) |
| DCBCODE | 0050 | 0032 | (EQU) | DCBIE | 0084 | 0054 | (EQU) | DCBME | 0064 | 0040 | (EQU) |
| DCBCOMBI | 0123 | 007B | | DCBIF | 0084 | 0054 | (EQU) | DCBMF | 0064 | 0040 | (EQU) |
| DCBCON | 0072 | 0048 | | DCBIFL | 0081 | 0051 | | DCBMG | 0064 | 0040 | (EQU) |
| DCBCPB | 0124 | 007C | | DCBIFLG | 0081 | 0051 | (EQU) | DCBMH | 0064 | 0040 | (EQU) |
| DCBCRL | 0166 | 00A6 | | DCBIFLGS | 0081 | 0051 | (EQU) | DCBMI | 0065 | 0041 | |
| DCBCRS | 0168 | 00A8 | | DCBIG | 0084 | 0054 | (EQU) | DCBMJ | 0065 | 0041 | (EQU) |
| DCBCSW | 0136 | 0088 | | DCBIH | 0084 | 0054 | (EQU) | DCBMK | 0065 | 0041 | (EQU) |
| DCBDDN | 0008 | 0008 | | DCBII | 0084 | 0054 | (EQU) | DCBML | 0065 | 0041 | (EQU) |
| DCBDDNAM | 0008 | 0008 | (EQU) | DCBIJ | 0085 | 0055 | | DCBMM | 0065 | 0041 | (EQU) |
| DCBDD1 | 0050 | 0032 | | DCBIK | 0085 | 0055 | (EQU) | DCBMN | 0065 | 0041 | (EQU) |
| DCBDD2 | 0051 | 0033 | | DCBIL | 0085 | 0055 | (EQU) | DCBMO | 0065 | 0041 | (EQU) |
| DCBDEB | 0076 | 004C | | DCBIM | 0085 | 0055 | (EQU) | DCBMOD | 0051 | 0033 | |
| DCBDEBAD | 0076 | 004C | (EQU) | DCBIMK | 0084 | 0054 | | DCBMODE | 0051 | 0033 | (EQU) |
| DCBDEC | 0160 | 00A0 | | DCBIMSK | 0084 | 0054 | (EQU) | DCBMP | 0065 | 0041 | (EQU) |
| DCBDEV | 0034 | 0022 | | DCBIN | 0085 | 0055 | (EQU) | DCBMQ | 0066 | 0042 | |
| DCBDEVT | 0034 | 0022 | (EQU) | DCBINH | 0122 | 007A | (EQU) | DCBMR | 0066 | 0042 | (EQU) |
| DCBDE1 | 0164 | 00A4 | | DCBINHMS | 0122 | 007A | | DCBMRF | 0198 | 00C6 | (EQU) |
| DCBDE2 | 0168 | 00A8 | | DCBIO | 0085 | 0055 | (EQU) | DCBMS | 0066 | 0042 | (EQU) |

| FIELD | DEC | HEX | | FIELD | DEC | HEX | | FIELD | DEC | HEX | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| DCBMSF1 | 0196 | 00C4 | | DCBPMM | 0171 | 00AB | | DCBSLV | 0112 | 0070 | |
| DCBMSF2 | 0197 | 00C5 | | DCBPOCKE | 0121 | 0079 | | DCBSMSI | 0068 | 0044 | |
| DCBMSF3 | 0198 | 00C6 | | DCBPPT | 0152 | 0098 | | DCBSOWA | 0024 | 0018 | |
| DCBMSHI | 0072 | 0048 | | DCBPR | 0126 | 007E | | DCBSP | 0140 | 008C | |
| DCBMSK | 0064 | 0040 | | DCBPRL | 0160 | 00A0 | | DCBSTA | 0050 | 0032 | |
| DCBMT | 0066 | 0042 | (EQU) | DCBPRT | 0050 | 0032 | | DCBSTACK | 0050 | 0032 | (EQU) |
| DCBMU | 0066 | 0042 | (EQU) | DCBPT | 0165 | 00A5 | | DCBSTRIK | 0189 | 00BD | |
| DCBMV | 0066 | 0042 | (EQU) | DCBPTR | 0100 | 0064 | | DCBSUR | 0197 | 00C5 | (EQU) |
| DCBMW | 0066 | 0042 | (EQU) | DCBPTRSP | 0050 | 0032 | (EQU) | DCBSVL | 0190 | 00BE | |
| DCBMX | 0066 | 0042 | (EQU) | DCBPTV | 0096 | 0060 | | DCBSWA | 0196 | 00C4 | (EQU) |
| DCBMY | 0067 | 0043 | | DCBPUR | 0197 | 00C5 | (EQU) | DCBSWT | 0139 | 008B | |
| DCBMZ | 0067 | 0043 | (EQU) | DCBPXR | 0108 | 006C | | DCBSYNAD | 0016 | 0010 | (EQU) |
| DCBM0 | 0067 | 0043 | (EQU) | DCBPXV | 0104 | 0068 | | DCBSYR | 0020 | 0014 | |
| DCBM1 | 0067 | 0043 | (EQU) | DCBQF0 | 0196 | 00C4 | | DCBSYV | 0016 | 0010 | |
| DCBM2 | 0067 | 0043 | (EQU) | DCBQF1 | 0197 | 00C5 | | DCBS0 | 0124 | 007C | |
| DCBM3 | 0067 | 0043 | (EQU) | DCBQF2 | 0198 | 00C6 | | DCBS1 | 0125 | 007D | |
| DCBM4 | 0067 | 0043 | (EQU) | DCBQF3 | 0199 | 00C7 | | DCBTAB | 0198 | 00C6 | (EQU) |
| DCBM5 | 0067 | 0043 | (EQU) | DCBQN | 0126 | 007E | (EQU) | DCBTCC | 0124 | 007C | |
| DCBN | 0128 | 0080 | | DCBQT | 0126 | 007E | (EQU) | DCBTDE | 0180 | 00B4 | |
| DCBNCH | 0166 | 00A6 | (EQU) | DCBQWK | 0192 | 00C0 | | DCBTMP | 0120 | 0078 | |
| DCBNCN | 0158 | 009E | | DCBRBF | 0140 | 008C | | DCBTRMAD | 0020 | 0014 | |
| DCBNCP | 0041 | 0029 | | DCBRCD | 0144 | 0090 | | DCBTRT | 0051 | 0033 | |
| DCBNI | 0136 | 0088 | | DCBRCX | 0156 | 009C | | DCBTRTCH | 0051 | 0033 | (EQU) |
| DCBNLP | 0196 | 00C4 | (EQU) | DCBRD | 0128 | 0080 | | DCBUDE | 0184 | 00B8 | |
| DCBNPL | 0167 | 00A7 | | DCBRDB | 0130 | 0082 | | DCBUS | 0083 | 0053 | |
| DCBNPO | 0152 | 0098 | | DCBRDC | 0132 | 0084 | | DCBVMA | 0120 | 0078 | |
| DCBOFG | 0063 | 003F | | DCBRDH | 0134 | 0086 | | DCBWBF | 0144 | 0090 | |
| DCBOFLGS | 0063 | 003F | (EQU) | DCBRDM | 0129 | 0081 | | DCBWCT | 0156 | 009C | |
| DCBOLM | 0172 | 00AC | | DCBRDN | 0128 | 0080 | | DCBX1 | 0060 | 003C | (EQU) |
| DCBOP | 0132 | 0084 | | DCBRDR | 0134 | 0086 | | DCBX2 | 0060 | 003C | (EQU) |
| DCBOPC | 0156 | 009C | | DCBRDT | 0132 | 0084 | | DCBX2A | 0061 | 003D | (EQU) |
| DCBOPF | 0132 | 0084 | | DCBRDZ | 0135 | 0087 | | DCBX2B | 0061 | 003D | (EQU) |
| DCBOPI | 0062 | 003E | | DCBREC | 0042 | 002A | | DCBX2C | 0061 | 003D | (EQU) |
| DCBOPM | 0133 | 0085 | | DCBRECAD | 0144 | 0090 | (EQU) | DCBX2D | 0061 | 003D | (EQU) |
| DCBOPT | 0043 | 002B | | DCBRECFM | 0042 | 002A | (EQU) | DCBX2E | 0061 | 003D | (EQU) |
| DCBOPTCD | 0043 | 002B | (EQU) | DCBRES | 0169 | 00A9 | | DCBX2F | 0061 | 003D | (EQU) |
| DCBOVF | 0196 | 00C4 | (EQU) | DCBRETRY | 0120 | 0078 | | DCBX2G | 0061 | 003D | (EQU) |
| DCBO0 | 0063 | 003F | (EQU) | DCBRJE | 0196 | 00C4 | (EQU) | DCBX2H | 0061 | 003D | (EQU) |
| DCBO1 | 0063 | 003F | (EQU) | DCBRJIN | 0198 | 00C6 | (EQU) | DCBX2I | 0061 | 003D | (EQU) |
| DCBO2 | 0063 | 003F | (EQU) | DCBRK | 0176 | 00B0 | | DCBX2J | 0061 | 003D | (EQU) |
| DCBO3 | 0063 | 003F | (EQU) | DCBRKP | 0054 | 0036 | | DCBX2K | 0061 | 003D | (EQU) |
| DCBO4 | 0063 | 003F | (EQU) | DCBSAIN | 0198 | 00C6 | (EQU) | DCBX3 | 0060 | 003C | (EQU) |
| DCBO5 | 0063 | 003F | (EQU) | DCBSC | 0144 | 0090 | | DCBX4 | 0060 | 003C | (EQU) |
| DCBO7 | 0063 | 003F | (EQU) | DCBSCC | 0136 | 0088 | | DCBX5 | 0060 | 003C | (EQU) |
| DCBPAD | 0053 | 0035 | | DCBSFS | 0120 | 0078 | | DCBX6 | 0060 | 003C | (EQU) |
| DCBPCC | 0152 | 0098 | | DCBSHC | 0138 | 008A | | DCB06 | 0063 | 003F | (EQU) |
| DCBPLM | 0170 | 00AA | | DCBSLR | 0116 | 0074 | | IHADCB | 0000 | 0000 | (EQU) |

## Assembler listing of CHADCB

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|---|---|---|---|---|---|
| | 24 00000 | CHADCB | DSECT | | |
| 24 00000 | | | DS | 0D | |
| 24 00000 | | DCBDSO | DS | 1H | DSORG |
| | 00000040 | DCBDS0 | EQU | X'40' | SAM DSORG |
| | 00000041 | DCBDS1 | EQU | X'41' | SAM DSORG |
| | 00000010 | DCBDT0 | EQU | X'10' | TAM DSORG |
| | 00000011 | DCBDT1 | EQU | X'11' | TAM DSORG |
| | 00000071 | DCBDV1 | EQU | X'71' | VISAM DSORG |
| | 00000072 | DCBDV2 | EQU | X'72' | VSAM DSORG |
| | 00000073 | DCBDV3 | EQU | X'73' | VIPAM DSORG |
| | 00000074 | DCBDV4 | EQU | X'74' | VSPAM DSORG |
| | 00000075 | DCBDV5 | EQU | X'75' | VPAM DSORG |
| | 00000007 | DCBDR1 | EQU | X'07' | IOREQ SPECIFIED |
| | 00000008 | DCBDM1 | EQU | X'08' | MSAM DSORG |
| 24 00002 | | DCBMAC | DS | H | MACRF |
| | 24 00002 | | \|ORG\| | DCBMAC | |
| 24 00002 | | DCBA0 | DS | XL1 | |

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|----------|-------------|--------|------|------|---------|
|  | 00000080 | DCBA0M | EQU | X'80' |  |
|  | 24 00002 | DCBA1 | EQU | DCBA0 | GET FLAG |
|  | 00000040 | DCBA1M | EQU | X'40' | GET MASK |
|  | 24 00002 | DCBA2 | EQU | DCBA0 | READ FLAG |
|  | 00000020 | DCBA2M | EQU | X'20' | READ MASK |
|  | 24 00002 | DCBA3 | EQU | DCBA0 | GET-MOVE MODE FLAG |
|  | 00000010 | DCBA3M | EQU | X'10' | GET-MOVE MODE MASK |
|  | 24 00002 | DCBA4 * | EQU | DCBA0 | GET-LOCATE MODE/READ-LOAD FLAG |
|  | 00000008 | DCBA4M * | EQU | X'08' | GET-LOCATE MODE/READ-LOAD MASK |
|  | 24 00002 | DCBA5 * | EQU | DCBA0 | GET-SUBSTITUTE MODE/READ W/POINT FLAG |
|  | 00000004 | DCBA5M * | EQU | X'04' | GET-SUBSTITUTE MODE/READ W/POINT MASK |
|  | 24 00002 | DCBA6 * | EQU | DCBA0 | GET-W/CNTRL/READ W/CONTROL FLAG |
|  | 00000002 | DCBA6M * | EQU | X'02' | GET-W/CNTRL/READ W/CONTROL MASK |
|  | 24 00002 | DCBA7 | EQU | DCBA0 |  |
|  | 00000001 | DCBA7M | EQU | X'01' |  |
| 24 00003 |  | DCBA8 | DS | XL1 |  |
|  | 00000080 | DCBA8M | EQU | X'80' |  |
|  | 24 00003 | DCBA9 | EQU | DCBA8 | PUT FLAG |
|  | 00000040 | DCBA9M | EQU | X'40' | PUT MASK |
|  | 24 00003 | DCBAA | EQU | DCBA8 | WRITE FLAG |
|  | 00000020 | DCBAAM | EQU | X'20' | WRITE MASK |
|  | 24 00003 | DCBAB | EQU | DCBA8 | PUT-MOVE MODE FLAG |
|  | 00000010 | DCBABM | EQU | X'10' | PUT-MOVE MODE MASK |
|  | 24 00003 | DCBAC * | EQU | DCBA8 | PUT-LOCATE MODE/WRITE-LOAD FLAG |
|  | 00000008 | DCBACM * | EQU | X'08' | PUT-LOCATE MODE/WRITE-LOAD MASK |
|  | 24 00003 | DCBAD * | EQU | DCBA8 | PUT-SUBSTITUTE MODE/WRITE W/POINT FLAG |
|  | 00000004 | DCBADM * | EQU | X'04' | PUT-SUBSTITUTE MODE/WRITE W/POINT MASK |
|  | 24 00003 | DCBAE * | EQU | DCBA8 | PUT-W/CONTROL/WRITE-W/CONTROL FLAG |
|  | 00000002 | DCBAEM * | EQU | X'02' | PUT-W/CONTROL/WRITE-W/CONTROL MASK |
|  | 24 00003 | DCBAF | EQU | DCBA8 |  |
|  | 00000001 | DCBAFM | EQU | X'01' |  |
| 24 00004 |  | DCBEXL | DS | 1F | POINTER TO USERS EXIT LIST |
|  | 00000080 | DCBELT * | EQU | X'80' | END OF EXIT LIST MASK I6447 |
| 24 00008 |  | DCBDDN | DS | D | DDNAME |
| 24 00010 |  | DCBSYV | DS | 1F | SYNAD ADDR (VCON) |
| 24 00014 |  | DCBSYR | DS | 1F | SYNAD ADDR (RCON) |
| 24 00018 |  | DCBEOV | DS | 1F | EODAD ADDR (VCON) |
| 24 0001C |  | DCBEOR | DS | 1F | EODAD ADDR (RCON) |
| 24 00020 |  | DCBBUF | DS | 1H | BUFFER LENGTH      - BUFL |
| 24 00022 |  | DCBDEV | DS | CL1 | DEVICE TYPE        - DEVD |
|  | 000000E3 | DCBDTP * | EQU | C'T' | MAGNETIC TAPE I6447 |
|  | 000000C4 | DCBDDA * | EQU | C'D' | DIRECT ACCESS I6447 |
|  | 000000D9 | DCBDCR | EQU | C'R' | CARD READER |
|  | 000000D5 | DCBDCP | EQU | C'N' | PUNCH |
|  | 000000D7 | DCBDPR | EQU | C'P' | PRINTER |
|  | 000000D1 | DCBDCJ | EQU | C'J' | REMOTE READER |
|  | 000000D2 | DCBDCK | EQU | C'K' | REMOTE PUNCH |
|  | 000000D3 | DCBDCL | EQU | C'L' | REMOTE PRINTER |
| 24 00023 |  | DCBBUN | DS | CL1 | NUMBER OF BUFFERS - BUFNO |
| 24 00024 |  | DCBBCN | DS | 1F | BUFFER CONTROL    - BUFCB |
| 24 00028 |  | DCBBFT | DS | CL1 | BUFFER TECHNIQUE - BFTEK |
| 24 00029 |  | DCBNCP * | DS | CL1 | NUMBER OF CHANNEL PROGRAMS - NCP |

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|---|---|---|---|---|---|
| 24 0002A | | DCBREC | DS | CL1 | RECORD FORMAT - RECFM |
| | 000000C0 | DCBRCT | EQU | X'C0' | TYPE FIELD |
| | 00000080 | DCBRCF | EQU | X'80' | FIXED FORMAT |
| | 00000040 | DCBRCV | EQU | X'40' | VARIABLE FORMAT |
| | 000000C0 | DCBRCU | EQU | X'C0' | UNKNOWN FORMAT |
| | 00000020 | DCBRCO | EQU | X'20' | TRACK OVERFLOW |
| | 00000010 | DCBRCB | EQU | X'10' | BLOCK RECORDS |
| | 00000088 | DCBRCS | EQU | X'88' | STANDARD RECORDS |
| | 00000006 | DCBRCC | EQU | X'06' | PRINTER CONTROL CHARACTERS |
| | | * | | | MASK |
| | 00000004 | DCBRCA | EQU | X'04' | ASA CONTROL CHARACTER |
| | 00000002 | DCBRCM | EQU | X'02' | MACHINE CODE CONTROL |
| | | * | | | CHARACTER |
| | 00000001 | DCBRCK | EQU | X'01' | KEYLEN SPECIFIED IN DCB |
| | | * | | | MACRO AS ZERO |
| 24 0002B | | DCBOPT | DS | CL1 | OPTION CODE  - OPTCD |
| | 00000080 | DCBSU0 | EQU | X'80' | PERFORM A WRITE VALIDITY |
| | | * | | | CHECK |
| | 00000040 | DCBSU1 | EQU | X'40' | UNIVERSAL CHARATER SET |
| | 00000020 | DCBSU2 | EQU | X'20' | ASCII TAPE REQUEST |
| | 00000004 | DCBSU5 | EQU | X'04' | DCBIMK DEFAULTED |
| | 00000002 | DCBSU6 | EQU | X'02' | DCBPAD SPECIFIED AS ZERO |
| | 00000001 | DCBSU7 | EQU | X'01' | DCBRKP SPECIFIED AS ZERO |
| 24 0002C | | DCBLRE | DS | 1F | RECORD LENGTH - LRECL |
| 24 00030 | | DCBBLK | DS | 1H | BLOCK SIZE - BLKSIZE |
| 24 00032 | | DCBDD1 | DS | CL1 | DEVICE DEPENDENT PARAMETERS |
| | | * | | | 1 |
| | 24 00032 | | \|ORG\| | DCBDD1 | |
| 24 00032 | | DCBKEY | DS | CL1 | KEY LENGTH - KEYLEN |
| | 24 00032 | | \|ORG\| | DCBDD1 | |
| 24 00032 | | DCBPRT | DS | CL1 | PRINTER SPACE - PRTSP |
| | 00000001 | DCBPR0 | EQU | X'01' | NO SPACING |
| | 00000009 | DCBPR1 | EQU | X'09' | SPACE ONE LINE |
| | 00000011 | DCBPR2 | EQU | X'11' | SPACE TWO LINES |
| | 00000019 | DCBPR3 | EQU | X'19' | SPACE THREE LINES |
| | 24 00032 | | \|ORG\| | DCBDD1 | |
| 24 00032 | | DCBSTA | DS | CL1 | STACKER SELECT - STACK |
| | 00000001 | DCBST1 | EQU | X'01' | STACKER 1 |
| | 00000002 | DCBST2 | EQU | X'02' | STACKER 2 |
| | 00000003 | DCBST3 | EQU | X'03' | STACKER 3 |
| | 24 00032 | | \|ORG\| | DCBDD1 | |
| 24 00032 | | DCBCOD | DS | CL1 | PAPER TAPE - CODE |
| | 00000080 | DCBNCV | EQU | X'80' | NO CONVERSION |
| | 00000040 | DCBCOI | EQU | X'40' | IBM BCD |
| | 00000020 | DCBCOF | EQU | X'20' | FRIDEN |
| | 00000010 | DCBCOB | EQU | X'10' | BURROUGHS |
| | 00000008 | DCBCOC | EQU | X'08' | NCR |
| | 00000004 | DCBCOA | EQU | X'04' | ASCII |
| | 00000002 | DCBCOT | EQU | X'02' | TELETYPE |
| 24 00033 | | DCBDD2 | DS | CL1 | DEVICE DEPENDENT PARAMETERS |
| | | * | | | 2 |
| | 24 00033 | | \|ORG\| | DCBDD2 | |
| 24 00033 | | DCBMOD | DS | CL1 | CARD READER/PUNCH - MODE |
| | 00000080 | DCBMOC | EQU | X'80' | COLUMN BINARY |
| | 00000040 | DCBMOE | EQU | X'40' | EBCDIC |
| | 24 00033 | | \|ORG\| | DCBDD2 | |
| 24 00033 | | DCBTRT | DS | CL1 | TAPE RECORDING TECHNIQUE - |
| | | * | | | TRTCH |
| | 0000002B | DCBTEM | EQU | X'2B' | TRTCH TRANS EVEN PARITY |
| | 00000033 | DCBODM | EQU | X'33' | ODD PARITY NO TRANSLATE |
| | 00000013 | DCBTM | EQU | X'13' | TRANSLATE |
| | 0000003B | DCBEVN | EQU | X'3B' | EVEN PARITY NO TRANSLATE |
| | 00000023 | DCBEVM | EQU | X'23' | CONVERTER AVAILABLE MASK |
| 24 00034 | | DCBERO | DS | CL1 | ERROR OPTIONS - EROPT |
| | 24 00034 | DCBER1 | EQU | DCBERO | CODE=ACC  FLAG |
| | 00000080 | DCBER1M | EQU | X'80' | CODE=ACC  MASK |
| | 24 00034 | DCBER2 | EQU | DCBERO | CODE=SKP  FLAG |
| | 00000040 | DCBER2M | EQU | X'40' | CODE=SKP  MASK |

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|---|---|---|---|---|---|
| | 24 00034 | DCBER3 | EQU | DCBERO | CODE=ABE FLAG |
| | 00000020 | DCBER3M | EQU | X'20' | CODE=ABE MASK |
| 24 00035 | | DCBPAD | DS | CL1 | PADDING |
| 24 00036 | | DCBRKP | DS | 1H | RELATIVE KEY POSITION |
| 24 00038 | | DCBLPA | DS | 1F | VAM FIELD - |
| 24 0003C | | DCBEX1 | DS | CL1 | VAM PARAMETERS |
| | 24 0003C | DCBX1 | EQU | DCBEX1 | ERROR CAUSED BY GET |
| | 00000000 | DCBX1M | EQU | X'00' | ERROR CAUSED BY GET MASK |
| | 24 0003C | DCBX2 | EQU | DCBEX1 | ERROR CAUSED BY PUT |
| | 00000004 | DCBX2M | EQU | X'04' | ERROR CAUSED BY PUT MASK |
| | 24 0003C | DCBX3 | EQU | DCBEX1 | ERROR CAUSED BY SETL |
| | 00000008 | DCBX3M | EQU | X'08' | ERROR CAUSED BY SETL MASK |
| | 24 0003C | DCBX4 | EQU | DCBEX1 | ERROR CAUSED BY READ |
| | 0000000C | DCBX4M | EQU | X'0C' | ERROR CAUSED BY READ MASK |
| | 24 0003C | DCBX5 | EQU | DCBEX1 | ERROR CAUSED BY WRITE |
| | 0000000F | DCBX5M | EQU | X'0F' | ERROR CAUSED BY WRITE MASK |
| | 24 0003C | DCBX6 | EQU | DCBEX1 | ERROR CAUSED BY DELREC |
| | 00000014 | DCBX6M | EQU | X'14' | ERROR CAUSED BY DELREC MASK |
| 24 0003D | | DCBEX2 | DS | CL1 | VAM PARAMETERS |
| | 24 0003D | DCBX2A | EQU | DCBEX2 | KEYS EQUAL-SEQUENCE ERROR |
| | 00000004 | DCBX2AM | EQU | X'04' | MASK |
| | 24 0003D | DCBX2B | EQU | DCBEX2 | KEY NOT FOUND |
| | 00000008 | DCBX2BM | EQU | X'08' | MASK |
| | 24 0003D | DCBX2C | EQU | DCBEX2 | KEYS OUT OF SEQUENCE |
| | 0000000C | DCBX2CM | EQU | X'0C' | MASK |
| | 24 0003D | DCBX2D | EQU | DCBEX2 | KEYS DO NOT COINCIDE |
| | 0000000F | DCBX2DM | EQU | X'0F' | MASK |
| | 24 0003D | DCBX2E | EQU | DCBEX2 | KEYS COINCIDE |
| | 00000014 | DCBX2EM | EQU | X'14' | MASK |
| | 24 0003D | DCBX2F | EQU | DCBEX2 | INVALID RETRIEVAL ADDRESS |
| | 00000018 | DCBX2FM | EQU | X'18' | MASK |
| | 24 0003D | DCBX2G | EQU | DCBEX2 | INVALID RECORD LENGTH |
| | 0000001C | DCBX2GM | EQU | X'1C' | MASK |
| | 24 0003D | DCBX2H | EQU | DCBEX2 | POSITION PAST END OF DATA |
| | * | | | | SET |
| | 0000001F | DCBX2HM | EQU | X'1F' | MASK |
| | 24 0003D | DCBX2I | EQU | DCBEX2 | POSITION BEFORE BEGINNING |
| | * | | | | OF DATA SET |
| | 00000024 | DCBX2IM | EQU | X'24' | MASK |
| | 24 0003D | DCBX2J | EQU | DCBEX2 | EXCEED MAXIMUM NUMBER |
| | * | | | | OVERFLOW PAGES FLAG |
| | 00000028 | DCBX2JM | EQU | X'28' | EXCEED MAXIMUM NUMBER |
| | * | | | | OVERFLOW PAGES MASK |
| | 24 0003D | DCBX2K | EQU | DCBEX2 | EXCEED MAXIMUM SIZE SHARED |
| | * | | | | DATA SET FLAG |
| | 0000002C | DCBX2KM | EQU | X'2C' | EXCEED MAXIMUM SIZE SHARED |
| | * | | | | DATA SET MASK |
| | 24 0003C | | \|ORG\| | DCBEX1 | |
| 24 0003C | | DCBLPN | DS | CL2 | LOGICAL RECORD COUNT IN |
| | * | | | | BLOCK |
| 24 0003E | | DCBOPI | DS | CL1 | OPTIONS |
| | 0000003C | DCBOMI | EQU | X'3C' | AND MASK FOR OPEN OPTIONS 1 |
| | 000000C0 | DCBLVO | EQU | X'C0' | LEAVE -- OPEN |
| | 00000040 | DCBRDO | EQU | X'40' | REREAD -- OPEN |
| | 00000000 | DCBINP | EQU | X'00' | INPUT |
| | 0000003C | DCBOUT | EQU | X'3C' | OUTPUT |
| | 0000000C | DCBINO | EQU | X'0C' | INOUT |
| | 0000001C | DCBOIN | EQU | X'1C' | OUTIN |
| | 00000010 | DCBUPD | EQU | X'10' | UPDATE |
| | 00000004 | DCBRBK | EQU | X'04' | RDBACK |
| | 00000001 | DCBRRC | EQU | X'01' | REREAD -- CLOSE |
| | 00000003 | DCBLVC | EQU | X'03' | LEAVE -- CLOSE |
| 24 0003F | | DCBOFG | DS | CL1 | OPEN FLAGS OPFLG |
| | 24 0003F | DCBO0 | EQU | DCBOFG | |
| | 00000080 | DCBO0M | EQU | X'80' | B0 - FEOV FLAG |
| | 24 0003F | DCBO1 | EQU | DCBOFG | |
| | 00000040 | DCBO1M | EQU | X'40' | B1 - EODS FLAG |
| | 24 0003F | DCBO2 | EQU | DCBOFG | |

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|---|---|---|---|---|---|
| | 00000020 | DCBO2M | EQU | X'20' | B2 - PUTX FLAG |
| 24 0003F | | DCBO3 | EQU | DCBOFG | |
| | 00000010 | DCBO3M | EQU | X'10' | B3 - OPEN FLAG |
| 24 0003F | | DCBO4 | EQU | DCBOFG | |
| | 00000008 | DCBO4M | EQU | X'08' | B4 - CONCATENATION FLAG |
| 24 0003F | | DCBO5 | EQU | DCBOFG | |
| | 00000004 | DCBO5M | EQU | X'04' | B5 - CLOSE(T) FLAG |
| 24 0003F | | DCBO6 | EQU | DCBOFG | END OF TAPE FLAG |
| | 00000002 | DCBO6M | EQU | X'02' | END OF TAPE MASK |
| 24 0003F | | DCBO7 | EQU | DCBOFG | |
| | 00000001 | DCBO7M | EQU | X'01' | B7 - CONCATENATION FLAG (SYSTEM) |
| | | * | | | |
| 24 00040 | | DCBMSK | DS | 1F | DCB MASK FIELD |
| 24 00040 | | | \|ORG\| | DCBMSK | |
| 24 00040 | | DCBMA | DS | XL1 | |
| | 00000080 | DCBMAM | EQU | X'80' | DSORG BIT - BIT 0 |
| 24 00040 | | DCBMB | EQU | DCBMA | |
| | 00000040 | DCBMBM | EQU | X'40' | MACRF BIT - BIT 1 |
| 24 00040 | | DCBMC | EQU | DCBMA | |
| | 00000020 | DCBMCM | EQU | X'20' | EXLST BIT - BIT 2 |
| 24 00040 | | DCBMD | EQU | DCBMA | |
| | 00000010 | DCBMDM | EQU | X'10' | DDNAME BIT - BIT 3 |
| 24 00040 | | DCBME | EQU | DCBMA | |
| | 00000008 | DCBMEM | EQU | X'08' | SYNAD BIT - BIT 4 |
| 24 00040 | | DCBMF | EQU | DCBMA | |
| | 00000004 | DCBMFM | EQU | X'04' | EODAD BIT  - BIT 5 |
| 24 00040 | | DCBMG | EQU | DCBMA | |
| | 00000002 | DCBMGM | EQU | X'02' | BUFL BIT  - BIT 6 |
| 24 00040 | | DCBMH | EQU | DCBMA | |
| | 00000001 | DCBMHM | EQU | X'01' | DEVD BIT  - BIT 7 |
| 24 00041 | | DCBMI | DS | XL1 | |
| | 00000080 | DCBMIM | EQU | X'80' | BUFNO BIT - BIT 8 |
| 24 00041 | | DCBMJ | EQU | DCBMI | |
| | 00000040 | DCBMJM | EQU | X'40' | BUFCB BIT - BIT 9 |
| 24 00041 | | DCBMK | EQU | DCBMI | |
| | 00000020 | DCBMKM | EQU | X'20' | BFTEK BIT - BIT 10 |
| 24 00041 | | DCBML | EQU | DCBMI | |
| | 00000010 | DCBMLM | EQU | X'10' | NCP BIT   - BIT 11 |
| 24 00041 | | DCBMM | EQU | DCBMI | |
| | 00000008 | DCBMMM | EQU | X'08' | RECFM BIT - BIT 12 |
| 24 00041 | | DCBMN | EQU | DCBMI | |
| | 00000004 | DCBMNM | EQU | X'04' | OPTCD BIT - BIT 13 |
| 24 00041 | | DCBMO | EQU | DCBMI | |
| | 00000002 | DCBMOM | EQU | X'02' | LRECL BIT - BIT 14 |
| 24 00041 | | DCBMP | EQU | DCBMI | |
| | 00000001 | DCBMPM | EQU | X'01' | BLKSIZE BIT - BIT 15 |
| 24 00042 | | DCBMQ | DS | XL1 | |
| | 00000080 | DCBMQM | EQU | X'80' | DEVDEP BIT 1 - BIT 16 |
| 24 00042 | | DCBMR | EQU | DCBMQ | |
| | 00000040 | DCBMRM | EQU | X'40' | DEVDEP BIT 2 - BIT 17 |
| 24 00042 | | DCBMS | EQU | DCBMQ | |
| | 00000020 | DCBMSM | EQU | X'20' | EROPT BIT   - BIT 18 |
| 24 00042 | | DCBMT | EQU | DCBMQ | |
| | 00000010 | DCBMTM | EQU | X'10' | PAD BIT    - BIT 19 |
| 24 00042 | | DCBMU | EQU | DCBMQ | |
| | 00000008 | DCBMUM | EQU | X'08' | RKP BIT    - BIT 20 |
| 24 00042 | | DCBMV | EQU | DCBMQ | |
| | 00000004 | DCBMVM | EQU | X'04' | IMSK BIT    - BIT 21 |
| 24 00042 | | DCBMW | EQU | DCBMQ | |
| | 00000002 | DCBMWM | EQU | X'02' | NOT USED    - BIT 22 |
| 24 00042 | | DCBMX | EQU | DCBMQ | |
| | 00000001 | DCBMXM | EQU | X'01' | NOT USED    - BIT 23 |
| 24 00043 | | DCBMY | DS | XL1 | FIND/STOW DSORG BIT- BIT 24 |
| | 00000080 | DCBMYM | EQU | X'80' | FIND/STOW DSORG MASK |
| 24 00043 | | DCBMZ | EQU | DCBMY | |
| | 00000040 | DCBMZM | EQU | X'40' | NOT USED    - BIT 25 |
| 24 00043 | | DCBM0 | EQU | DCBMY | |
| | 00000020 | DCBM0M | EQU | X'20' | NOT USED    - BIT 26 |

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|---|---|---|---|---|---|
| | 24 00043 | DCBM1 | EQU | DCBMY | |
| | 00000010 | DCBM1M | EQU | X'10' | NOT USED    - BIT 27 |
| | 24 00043 | DCBM2 | EQU | DCBMY | |
| | 00000008 | DCBM2M | EQU | X'08' | NOT USE    - BIT 28 |
| | 24 00043 | DCBM3 | EQU | DCBMY | |
| | 00000004 | DCBM3M | EQU | X'04' | NOT USE    - BIT 29 |
| | 24 00043 | DCBM4 | EQU | DCBMY | |
| | 00000002 | DCBM4M | EQU | X'02' | NOT USE    - BIT 30 |
| | 24 00043 | DCBM5 | EQU | DCBMY | |
| | 00000001 | DCBM5M | EQU | X'01' | NOT USE    - BIT 31 |
| 24 00044 | | DCBID | DS | 1F | DCB IDENTIFIER  *%*% |
| 24 00048 | | DCBCON | DS | 1F | POINTER FOR SAM TO THE NEXT JFCB |
| | | ****** | | | IN A |
| | | *CONCATENATED DATA SET. FOR | | | |
| | | ****** | | | TAM TO A |
| | | *WORK AREA. | | | |
| 24 0004C | | DCBDEB | DS | 1F | POINTER TO THE SAM OR TAM DEB. |
| | | ****** | | | POINTER TO |
| | | *THE VAM RESTABL. | | | |
| 24 00050 | | DCBLEN | DS | CL1 | DCB LENGTH |
| 24 00051 | | DCBIFL | DS | CL1 | I/O FLAGS - IFLGS |
| | 00000080 | DCBIF0* | EQU | X'80' | PERMANENT ERROR CONDITION=X'C0' |
| | 00000040 | DCBIF1* | EQU | X'40' | ERROR CONDITION IN PROGRESS FLAG |
| | 00000020 | DCBIF2 | EQU | X'20' | DCBOVN-CHANNEL 9 INDICATOR |
| | 00000010 | DCBIF3 | EQU | X'10' | |
| | 00000008 | DCBIF4 | EQU | X'08' | |
| | 00000004 | DCBIF5 | EQU | X'04' | |
| | 00000002 | DCBIF6 | EQU | X'02' | |
| | 00000001 | DCBIF7 | EQU | X'01' | |
| 24 00052 | | DCBMCD | DS | CL2 | MACRO CODE |
| | 24 00052 | | |ORG| | DCBMCD | |
| 24 00052 | | DCBMCD1 | DS | CL1 | RESERVED |
| 24 00053 | | DCBUS | DS | CL1 | CODE PARAMETERS |
| | 00000004 | DCBUSE | EQU | X'04' | FOR |
| | 24 00053 | DCBCH | EQU | DCBUS | R-TYPE |
| | 00000001 | DCBCHN | EQU | X'01' | I/O MACRO |
| 24 00054 | | DCBIMK | DS | F | IM SK ERROR RETRY FLAGS |
| | 24 00054 | | |ORG| | DCBIMK | |
| 24 00054 | | DCBIA | DS | XL1 | ATTENTION        FLAG |
| | 00000080 | DCBIAM | EQU | X'80' | ATTENTION        MASK |
| | 24 00054 | DCBIB | EQU | DCBIA | STATUS MODIFIER  FLAG |
| | 00000040 | DCBIBM | EQU | X'40' | STATUS MODIFIER  MASK |
| | 24 00054 | DCBIC | EQU | DCBIA | CONTROL UNIT END FLAG |
| | 00000020 | DCBICM | EQU | X'20' | CONTROL UNIT END MASK |
| | 24 00054 | DCBIE | EQU | DCBIA | BUSY             FLAG |
| | 00000010 | DCBIEM | EQU | X'10' | BUSY             MASK |
| | 24 00054 | DCBIF | EQU | DCBIA | CHANNEL END      FLAG |
| | 00000008 | DCBIFM | EQU | X'08' | CHANNEL END      MASK |
| | 24 00054 | DCBIG | EQU | DCBIA | DEVICE END       FLAG |
| | 00000004 | DCBIGM | EQU | X'04' | DEVICE END       MASK |
| | 24 00054 | DCBIH* | EQU | DCBIA | =1,BSAM OR QSAM TO APPLY ERR |
| | 00000002 | DCBIHM | EQU | X'02' | RECOVERY ON UNIT CHECK |
| | 24 00054 | DCBII* | EQU | DCBIA | =1,BSAM OR QSAM TO APPLY ERR |
| | 00000001 | DCBIIM | EQU | X'01' | RECOVERY ON UNIT EXCEPTION |
| 24 00055 | | DCBIJ* | DS | XL1 | PROGRAM CONTROLLED INTERRUPT FLAG |
| | 00000080 | DCBIJM* | EQU | X'80' | PROGRAM CONTROLLED INTERRUPT MASK |
| | 24 00055 | DCBIK* | EQU | DCBIJ | =1,BSAM OR QSAM TO APPLY ERR |
| | 00000040 | DCBIKM* | EQU | X'40' | RECOVERY ON INCORRECT LENGTH |

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|---|---|---|---|---|---|
| | 24 00055 | DCBIL | EQU | DCBIJ | PROGRAM CHECK |
| | | * | | | FLAG |
| | 00000020 | DCBILM | EQU | X'20' | PROGRAM CHECK |
| | | * | | | MASK |
| | 24 00055 | DCBIM | EQU | DCBIJ | PROTECTION CHECK |
| | | * | | | FLAG |
| | 00000010 | DCBIMM | EQU | X'10' | PROTECTION CHECK |
| | | * | | | MASK |
| | 24 00055 | DCBIN | EQU | DCBIJ | CHANNEL DATA CHECK |
| | | * | | | FLAG |
| | 00000008 | DCBINM | EQU | X'08' | CHANNEL DATA CHECK |
| | | * | | | MASK |
| | 24 00055 | DCBIO | EQU | DCBIJ | CHANNEL CONTROL CHECK |
| | | * | | | FLAG |
| | 00000004 | DCBIOM | EQU | X'04' | CHANNEL CONTROL CHECK |
| | | * | | | MASK |
| | 24 00055 | DCBIP | EQU | DCBIJ | INTERFACE CONTROL CHECK |
| | | * | | | FLAG |
| | 00000002 | DCBIPM | EQU | X'02' | INTERFACE CONTROL CHECK |
| | | * | | | MASK |
| | 24 00055 | DCBIQ | EQU | DCBIJ | =1,BSAM OR QSAM TO APPLY |
| | | * | | | ERR |
| | 00000001 | DCBIQM | EQU | X'01' | RECOVERY ON CHAINING CHECK |
| 24 00056 | | DCBIR | DS | XL1 | FLAG BYTE FOR SENSE BYTE 0 |
| | | * | | | =1,BSAM/QSAM TO APPLY ERROR |
| | | * | | | RECOVERY ON BIT 0 |
| | | * | | | =0,IOREQ TO APPLY ERROR |
| | | * | | | RECORDING ON BIT 0 |
| | 00000080 | DCBIRM | EQU | X'80' | BIT 0 MASK |
| | 24 00056 | DCBIS | EQU | DCBIR | =1,BSAM/QSAM TO APPLY ERROR |
| | | * | | | RECOVERY ON BIT 1 |
| | | * | | | =0,IOREQ TO APPLY ERROR |
| | | * | | | RECORDING ON BIT 1 |
| | 00000040 | DCBISM | EQU | X'40' | BIT 1 MASK |
| | 24 00056 | DCBIT | EQU | DCBIR | =1,BSAM/QSAM TO APPLY ERROR |
| | | * | | | RECOVERY ON BIT 2 |
| | | * | | | =0,IOREQ TO APPLY ERROR |
| | | * | | | RECORDING ON BIT 2 |
| | 00000020 | DCBITM | EQU | X'20' | BIT 2 MASK |
| | 24 00056 | DCBIU | EQU | DCBIR | =1,BSAM/QSAM TO APPLY ERROR |
| | | * | | | RECOVERY ON BIT 3 |
| | | * | | | =0,IOREQ TO APPLY ERROR |
| | | * | | | RECORDING ON BIT 3 |
| | 00000010 | DCBIUM | EQU | X'10' | BIT 3 MASK |
| | 24 00056 | DCBIV | EQU | DCBIR | =1,BSAM/QSAM TO APPLY ERROR |
| | | * | | | RECOVERY ON BIT 4 |
| | | * | | | =0,IOREQ TO APPLY ERROR |
| | | * | | | RECORDING ON BIT 4 |
| | 00000008 | DCBIVM | EQU | X'08' | BIT 4 MASK |
| | 24 00056 | DCBIW | EQU | DCBIR | =1,BSAM/QSAM TO APPLY ERROR |
| | | * | | | RECOVERY ON BIT 5 |
| | | * | | | =0,IOREQ TO APPLY ERROR |
| | | * | | | RECORDING ON BIT 5 |
| | 00000004 | DCBIWM | EQU | X'04' | BIT 5 MASK |
| | 24 00056 | DCBIX | EQU | DCBIR | =1,BASM/QSAM TO APPLY ERROR |
| | | * | | | RECOVERY ON BIT 6 |
| | | * | | | =0,IOREQ TO APPLY ERROR |
| | | * | | | RECORDING ON BIT 6 |
| | 00000002 | DCBIXM | EQU | X'02' | BIT 6 MASK |
| | 24 00056 | DCBIY | EQU | DCBIR | =1,BSAM/QSAM TO APPLY ERROR |
| | | * | | | RECOVERY ON BIT 7 |
| | | * | | | =0,IOREQ TO APPLY ERROR |
| | | * | | | RECORDING ON BIT 7 |
| | 00000001 | DCBIYM | EQU | X'01' | BIT 7 MASK |
| 24 00057 | | DCBIZ | DS | XL1 | FLAG BYTE FOR SENSE BYTE 1 |
| | | * | | | =1,BSAM/QSAM TO APPLY ERROR |

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|---|---|---|---|---|---|
| | | * | | | RECOVERY ON BIT 0 |
| | | * | | | =0,IOREQ TO APPLY ERROR |
| | | * | | | RECORDING ON BIT 0 |
| | 00000080 | DCBIZM | EQU | X'80' | BIT 0 MASK |
| | 24 00057 | DCBI0 | EQU | DCBIZ | =1,BSAM/QSAM TO APPLY ERROR |
| | | * | | | RECOVERY ON BIT 1 |
| | | * | | | =0,IOREQ TO APPLY ERROR |
| | | * | | | RECORDING ON BIT 1 |
| | 00000040 | DCBIOM | EQU | X'40' | BIT 1 MASK |
| | 24 00057 | DCBI1 | EQU | DCBIZ | =1,BSAM/QSAM TO APPLY ERROR |
| | | * | | | RECOVERY ON BIT 2 |
| | | * | | | =0,IOREQ TO APPLY ERROR |
| | | * | | | RECORDING ON BIT 2 |
| | 00000020 | DCBI1M | EQU | X'20' | BIT 2 MASK |
| | 24 00057 | DCBI2 | EQU | DCBIZ | =1,BSAM/QSAM TO APPLY ERROR |
| | | * | | | RECOVERY ON BIT 3 |
| | | * | | | =0,IOREQ TO APPLY ERROR |
| | | * | | | RECORDING ON BIT 3 |
| | 00000010 | DCBI2M | EQU | X'10' | BIT 3 MASK |
| | 24 00057 | DCBI3 | EQU | DCBIZ | =1,BSAM/QSAM TO APPLY ERROR |
| | | * | | | RECOVERY  ON BIT 4 |
| | | * | | | =0,IOREQ TO APPLY ERROR |
| | | * | | | RECORDING ON BIT 4 |
| | 00000008 | DCBI3M | EQU | X'08' | BIT 4 MASK |
| | 24 00057 | DCBI4 | EQU | DCBIZ | =1,BSAM/QSAM TO APPLY ERROR |
| | | * | | | RECOVERY ON BIT 5 |
| | | * | | | =0,IOREQ TO APPLY ERROR |
| | | * | | | RECORDING ON BIT 5 |
| | 00000004 | DCBI4M | EQU | X'04' | BIT 5 MASK |
| | 24 00057 | DCBI5 | EQU | DCBIZ | =1,BSAM/QSAM TO APPLY ERROR |
| | | * | | | RECOVERY ON BIT 6 |
| | | * | | | =0,IOREQ TO APPLY ERROR |
| | | * | | | RECORDING ON BIT 6 |
| | 00000002 | DCBI5M | EQU | X'02' | BIT 6 MASK |
| | 24 00057 | DCBI6 | EQU | DCBIZ | =1,BSAM/QSAM TO APPLY ERROR |
| | | * | | | RECOVERY ON BIT 7 |
| | | * | | | =0,IOREQ TO APPLY ERROR |
| | | * | | | RECORDING ON BIT 7 |
| | 00000001 | DCBI6M | EQU | X'01' | BIT 7 MASK |
| 24 00058 | | DCBGTV | DS | 1F | GET (VCON) |
| 24 0005C | | DCBGTR | DS | 1F | GET (RCON) |
| 24 00060 | | DCBPTV | DS | 1F | PUT VCON |
| 24 00064 | | DCBPTR | DS | 1F | PUT (RCON) |
| 24 00068 | | DCBPXV | DS | 1F | PUTX (VCON) |
| 24 0006C | | DCBPXR | DS | 1F | PUTX (RCON) |
| 24 00070 | | DCBSLV | DS | 1F | SETL (VCON) |
| 24 00074 | | DCBSLR | DS | 1F | SETL (RCON) |
| 24 00078 | | DCBBKC | DS | 1F | BLOCK COUNT |
| 24 0007C | | DCBS0 | DS | CL1 | SENSE BYTE 1 FOR BSP |
| 24 0007D | | DCBS1 | DS | CL1 | SENSE BYTE 2 FOR BSP |
| 24 0007E | | DCBPR | DS | CL1 | PRINTER OVERFLOW FLAGS |
| | 24 0007E | DCBBT | EQU | DCBPR | TEST CHANNEL 12 OVERFLOW BY |
| | | * | | | WRITE FLAG |
| | 00000080 | DCBBTV | EQU | X'80' | TEST CHANNEL 12 OVERFLOW BY |
| | | * | | | WRITE MASK |
| | 24 0007E | DCBBN | EQU | DCBPR | TEST CHANNEL  9 OVERFLOW BY |
| | | * | | | WRITE FLAG |
| | 00000040 | DCBBNV | EQU | X'40' | TEST CHANNEL  9 OVERFLOW BY |
| | | * | | | WRITE MASK |
| | 24 0007E | DCBQT | EQU | DCBPR | TEST CHANNEL 12 OVERFLOW BY |
| | | * | | | DOQSAM(PUT)    FLAG |
| | 00000020 | DCBQTV | EQU | X'20' | TEST CHANNEL 12 OVERFLOW BY |
| | | * | | | DOQSAM(PUT)    MASK |
| | 24 0007E | DCBQN | EQU | DCBPR | TEST CHANNEL  9 OVERFLOW BY |
| | | * | | | DOQSAM(PUT)    FLAG |
| | 00000010 | DCBQNV | EQU | X'10' | TEST CHANNEL  9 OVERFLOW BY |
| | | * | | | DOQSAM(PUT)    MASK |
| 24 0007F | | DCBBOF | DS | XL1 | BUFFER OFFSET LENGTH (ASCII |

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|----------|-------------|--------|------|------|---------|
| | | | | | TAPE) |
| 24 00080 | | DCBRD | DS | 0D | ə FOR |
| | | * | | | FULREL,RELLFUL,NOTE,POINT |
| 24 00080 | | DCBRDN | DS | XL1 | NUMBER OF RECORDS ON TRACK |
| 24 00081 | | DCBRDM | DS | XL1 | EXTENT NUMBER OF TRACK |
| 24 00082 | | DCBRDB | DS | H | BB FIELD OF DIRECT ACCESS |
| | | * | | | DEVICE |
| 24 00084 | | DCBRDT | DS | 0F | TTRZ OR CCHH OF DIRECT |
| | | * | | | ACCESS DEVICE ə |
| 24 00084 | | DCBRDC | DS | H | CC OF DIRECT ACCESS DEVICE |
| | | * | | | ə |
| 24 00086 | | DCBRDH | DS | H | HH OF DIRECT ACCESS DEVICE |
| | | * | | | ə |
| | 24 00086 | | \|ORG\| | DCBRDH | |
| 24 00086 | | DCBRDR | DS | XL1 | RECORD COUNT OF TTRZ FOR |
| | | * | | | NOTE OR POINT |
| 24 00087 | | DCBRDZ | DS | XL1 | ZERO FOR POINT OR NOTE |
| 24 00088 | | DCBCSW | DS | D | CHANNEL STATUS WORD FOR BSP |
| 24 00090 | | DCBRCD | DS | 1F | ADDRESS CURRENT LOGICAL |
| | | * | | | RECORD IN BUFFER |
| 24 00094 | | DCBEAD | DS | 1F | ADDRESS END OF CURRENT |
| | | * | | | BUFFER |
| 24 00098 | | DCBLX | DS | 1F | RELATIVE ADDRESS USED BY |
| | | * | | | SETL |
| 24 0009C | | DCBLXN | DS | CL2 | LOGICAL RECORD COUNT USED |
| | | * | | | BY SETL |
| 24 0009E | | DCBBSV | DS | CL2 | SAVE AREA FOR BLOCK COUNT |
| 24 000A0 | | DCBLAD | DS | 1F | ADDRESS OF LAST LOGICAL |
| | | * | | | RECORD |
| 24 000A4 | | DCBDE1 | DS | 1F | ADDRESS OF QSAM DECB 1 |
| 24 000A8 | | DCBDE2 | DS | 1F | ADDRESS OF QSAM DECB 2 |
| 24 000AC | | DCBDE3 | DS | 1F | ADDRESS OF QSAM DECB 3 |
| 24 000B0 | | DCBBF1 | DS | 1F | ADDRESS OF QSAM BUFFER 1 |
| 24 000B4 | | DCBBF2 | DS | 1F | ADDRESS OF QSAM BUFFER 2 |
| 24 000B8 | | DCBBF3 | DS | 1F | ADDRESS OF QSAM BUFFER 3 |
| 24 000BC | | DCBLRS | DS | CL2 | SAVE AREA FOR LRECL |
| 24 000BE | | DCBSVL | DS | CL2 | SAVE AREA FOR LENGTH OF |
| | | * | | | NEXT LOGICAL RECORD |
| 24 000C0 | | DCBQWK | DS | 1F | POINTER QSAM WORK AREA |
| 24 000C4 | | DCBQF0 | DS | CL1 | RESERVED FOR QSAM |
| 24 000C5 | | DCBQF1 | DS | CL1 | QSAM FLAGS FIRST BYTE |
| | 00000080 | DCBWFL | EQU | X'80' | WRITE REQUEST IN TRUNC EOV |
| | | * | | | FLAG |
| | 00000040 | DCBEOB | EQU | X'40' | END OF BUFFER FLAG |
| | 00000020 | DCBPTX | EQU | X'20' | PUTX UPDATE FLAG |
| | 00000010 | DCBCPS | EQU | X'10' | SETL FLAG |
| | 00000008 | DCBSW1 | EQU | X'08' | BUFFER INITIALIZATION |
| | | * | | | SWITCH |
| | 00000004 | DCBLM | EQU | X'04' | LOCATE OR MOVE MODE FOR PUT |
| | | * | | | FLAG |
| | 00000002 | DCBSYN | EQU | X'02' | DCB EROPT SKP FLAG |
| | 00000001 | DCBACC | EQU | X'01' | DCB EROPT ACCEPT FLAG |
| 24 000C6 | | DCBQF2 | DS | CL1 | QSAM FLAGS BYTE 2 |
| | 00000080 | DCBLSW | EQU | X'80' | FIRST LOGICAL RECORD IN |
| | | * | | | BUFFER FLAG |
| | 00000040 | DCBSGB | EQU | X'40' | SINGLE BUFFER FLAG |
| | 00000020 | DCBDNN | EQU | X'20' | CHANNEL 9 OVERFLOW ON PUT |
| | | * | | | FLAG |
| | 00000010 | DCBDET | EQU | X'10' | CHANNEL 12 OVERFLOW ON PUT |
| | | * | | | FLAG |
| 24 000C7 | | DCBQF3 | DS | CL1 | SAVE AREA FOR DCBOPI |
| 24 000C8 | | DCBEND | DS | 0X | END OF DCB FOR QSAM |
| | | * | | | 16447 |
| | 000000C8 | DCBSZ | EQU | DCBEND-CHADCB | SIZE OF DCB FOR QSAM |
| | | * | | | 16447 |
| | 24 00078 | | \|ORG\| | DCBBKC | REORGIN FOR VAM |
| 24 00078 | | | DS | 0CL32 | ORGANIZATION INDEPENDENT |
| | | * | | | WORKING STORAGE |

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| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|----------|-------------|--------|------|------|---------|
| 24 00078 | | DCBVMA | DS | F | VMA OF NEXT LOGICAL RECORD |
| 24 0007C | | DCBCPB | DS | 0F | |
| 24 0007C | | DCBDPN | DS | H | CURRENT DATA PAGE NUMBER |
| 24 0007E | | DCBCBP | DS | H | CURRENT BYTE WITHIN CURRENT |
| | | * | | | PAGE |
| 24 00080 | | DCBN | DS | H | FIRST PAGE OF AN OPERATION |
| | | * | | | REQUEST |
| 24 00082 | | DCBM | DS | H | NUMBER OF PAGES INVOLVED IN |
| | | * | | | A REQUEST |
| 24 00084 | | DCBOP | DS | H | TYPE OF VAM OPERATION |
| | | * | | | REQUESTED |
| | 24 00084 | | \|ORG\| | DCBOP | |
| 24 00084 | | DCBOPF | DS | XL1 | REQUEST FLAGS |
| | 00000080 | DCBOP0 | EQU | X'80' | INPUT REQUEST |
| | 00000020 | DCBOP2 | EQU | X'20' | INPUT REQUEST WITH |
| | | * | | | EXCLUSIVE READ |
| | 00000010 | DCBOP3 | EQU | X'10' | OUTPUT REQUEST |
| | 00000008 | DCBOP4 | EQU | X'08' | INSERT PAGE REQUEST |
| | 00000004 | DCBOP5 | EQU | X'04' | DELETE PAGE REQUEST |
| | 00000002 | DCBOP6 | EQU | X'02' | RELEASE READ LOCK |
| | 00000001 | DCBOP7 | EQU | X'01' | RELEASE WRITE LOCK |
| 24 00085 | | DCBOPM | DS | XL1 | REQUEST FLAGS(CONT) |
| | 00000080 | DCBOP8 | EQU | X'80' | REPLACE BLANK PAGES ON AN |
| | | * | | | INSERT |
| 24 00086 | | DCBI | DS | CL1 | FLAGS |
| | 00000000 | DCBIM0 | EQU | X'00' | |
| | 00000001 | DCBIM1 | EQU | X'01' | |
| | 00000002 | DCBIM2 | EQU | X'02' | |
| | 00000004 | DCBIM4 | EQU | X'04' | MULTIPLE DCB FLAG |
| | | * | | | N419 |
| | 00000008 | DCBIM8 | EQU | X'08' | PUT INHIBIT FLAG |
| | | * | | | N419 |
| | 00000010 | DCBIM10 | EQU | X'10' | V-FORMAT TRAILER ISOLATED |
| | | * | | | ON FINAL PAGE  M4195 |
| 24 00087 | | DCBHV | DS | CL1 | HASHED VALUE |
| 24 00088 | | DCBNI | DS | H | FIRST PAGE RELATIVE TO THE |
| | | * | | | DATA SET |
| 24 0008A | | DCBSHC | DS | XL1 | TYPE OF SEARCH REQUEST-VPAM |
| | | * | | | DATA SETS |
| 24 0008B | | DCBSWT | DS | XL1 | VPAM INDICATOR,INTERNAL TO |
| | | * | | | VAM ONLY |
| 24 0008C | | DCBSP | DS | F | LOCATION OF PREVIOUS |
| | | * | | | DESCRIPTOR |
| 24 00090 | | DCBSC | DS | F | LOCATION OF CURRENT |
| | | * | | | DESCRIPTOR |
| 24 00094 | | DCBHD | DS | F | LOCATION OF DCB HEADER |
| 24 00098 | | DCBNPO | DS | H | NUMBER OF PAGES TO B5 |
| | | * | | | OUTPUT |
| 24 0009A | | DCBFPO | DS | H | NUMBER OF FIRST PAGE TO BE |
| | | * | | | OUTPUT |
| 24 0009C | | DCBBPU | DS | H | NUMBER OF BUFFER PAGES IN |
| | | * | | | USE |
| 24 0009E | | DCBHLB | DS | CL1 | HOLD LAST BUFFER FLAG |
| 24 0009F | | DCBLOF | DS | CL1 | LAST OPERATION FLAG |
| | 00000003 | DCBL01 | EQU | X'03' | SETL |
| | 0000000C | DCBL02 | EQU | X'0C' | PUTX |
| | 000000CC | DCBL03 | EQU | X'CC' | GET MOVE MODE |
| | 000000C3 | DCBL04 | EQU | X'C3' | GET LOCATE MODE |
| | 0000003C | DCBL05 | EQU | X'3C' | PUT MOVE MODE |
| | 00000033 | DCBL06 | EQU | X'33' | PUT LOCATE MODE |
| 24 000A0 | | DCBPRL | DS | F | PREVIOUS LOGICAL RECORD |
| | | * | | | LENGTH |
| 24 000A4 | | DCBBP | DS | F | CURRENT BUFFER POSITION |
| | 24 00098 | | \|ORG\| | DCBNPO | |
| 24 00098 | | DCBPCC | DS | F | DATA PAGE CALL COUNTER |
| 24 0009C | | DCBOPC | DS | F | OVERFLOW PAGE COUNTER |
| 24 000A0 | | DCBCL | DS | H | ADDRESS OF CURRENT LOCATOR |
| 24 000A2 | | DCBCCL | DS | H | CONTENTS OF CURRENT LOCATOR |

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|----------|-------------|--------|------|------|---------|
| 24 000A4 | | DCBIOS | DS | CL1 | I/O SWITCH |
| 24 000A5 | | DCBPT | DS | CL1 | PAGE TYPE |
| 24 000A6 | | DCBCRL | DS | H | CURRENT RECORD LENGTH |
| 24 000A8 | | DCBCRS | DS | CL1 | CURRENT RECORD SWITCH |
| 24 000A9 | | DCBRES | DS | CL1 | READ EXCLUSIVE SWITCH |
| 24 000AA | | DCBPLM | DS | CL1 | PUT LOCATE MODE ONLY |
| 24 000AB | | DCBPMM | DS | CL1 | PUT MOVE MODE ONLY |
| 24 000AC | | DCBOLM | DS | CL1 | OUTSTANDING LOCATE MODE GET |
| 24 000AD | | DCBASY | DS | CL1 | ASYNCHRONOUS SWITCH |
| 24 000AE | | DCBFLAG | DS | XL1 | FLAG BYTE |
| | 24 000AE | DCBFMP | EQU | DCBFLAG | CLOSEVAM/MVPG FLAG |
| | 0000000F | DCBFMPM | EQU | X'0F' | MVPG TO BYPASS GETNUMBER |
| | | * | | | CALL |
| 24 000AF | | | DS | XL1 | UNUSED |
| 24 000B0 | | DCBRK | DS | F | POINTER TO THE 256 BYTE |
| | | * | | | RECORD KEY AREA |
| 24 000B4 | | DCBDMS | DS | H | NO. OF DATA PAGES IN DS/MBR |
| | | * | | | (VAM) |
| | 24 00078 | | \|ORG\| | DCBBKC | REORGIN FOR IOREQ |
| 24 00078 | | | DS | 0CL48 | IOREQ INDEPENDENT WORKING |
| | | * | | | STORAGE |
| 24 00078 | | DCBTMP | DS | F | DECB POINTER USED BY IOREQ |
| 24 0007C | | DCBTCC | DS | F | POINTER TO A CCW IN VCCW |
| | | * | | | LIST |
| 24 00080 | | DCBLRL | DS | F | LOWEST READ LIMIT IN BUFFER |
| 24 00084 | | DCBHRL | DS | F | HIGHEST READ LIMIT IN |
| | | * | | | BUFFER |
| 24 00088 | | DCBSCC | DS | H | REL NO. OF VCCW IN THE VCCW |
| | | * | | | LIST |
| 24 0008A | | | DS | CL2 | RESERVED BYTES |
| 24 0008C | | DCBRBF | DS | F | READ AREA IN BUFFER OF |
| | | * | | | IORCB |
| 24 00090 | | DCBWBF | DS | F | WRITE AREA IN BUFFER OF |
| | | * | | | IORCB |
| 24 00094 | | DCBCLE | DS | F | CCW POINTER IN IORCB |
| 24 00098 | | DCBKNT | DS | F | PAGE LIST ENTRY IN IORCB |
| 24 0009C | | DCBWCT | DS | H | COUNT OF WRITE VCCWS |
| 24 0009E | | DCBNCN | DS | H | DISP IN CLE TO PAGE LIST |
| | | * | | | ENTRY |
| 24 000A0 | | DCBDEC | DS | F | POINTER TO DEBDEC |
| 24 000A4 | | | DS | CL2 | RESERVED BYTES |
| 24 000A6 | | DCBFLG | DS | CL1 | FLAGS FOR IOREQ |
| | 24 000A6 | DCBNCH | EQU | DCBFLG | NON-TIC WITH NO CC,CD,OR |
| | | * | | | SCC FLAGS |
| | 00000040 | DCBNC1 | EQU | X'40' | DCBNCH MASK |
| | 24 000A6 | DCBIOI | EQU | DCBFLG | ENTERED FROM CHECK FOR |
| | | * | | | INTERCEPT DECB |
| | 00000010 | DCBIOX | EQU | X'10' | DCBIOI MASK |
| 24 000A7 | | DCBNPL | DS | CL1 | NO. PGE LIST ENTRIES IN |
| | | * | | | IORCB |
| | 24 00078 | | \|ORG\| | DCBBKC | REORIGIN FOR MSAM |
| 24 00078 | | | DS | 0D | 80 BYTES FOR MSAM BEGINNING |
| | | * | | | ON A DW BOUNDARY |
| 24 00078 | | DCBRETRY | DS | CL1 | OPERATOR RETRY FOR READ |
| | | * | | | ERROR ON 2540 |
| | 000000D5 | DCBRETN | EQU | C'N' | NO RETRY |
| | 000000E4 | DCBRETU | EQU | C'U' | USE THRESHOLD RETRY VALUE |
| 24 00079 | | DCBPOCKE | DS | CL1 | STACKER FOR CARDS READ IN |
| | | * | | | ERROR ON 2540 |
| | 00000004 | DCBSTORG | EQU | X'04' | STACK AS IF NO ERROR |
| | | * | | | OCCURRED |
| | 00000001 | DCBPKT1 | EQU | DCBST1 | STACKER 1 |
| | 00000002 | DCBPKT2 | EQU | DCBST2 | STACKER 2 |
| 24 0007A | | DCBINHMS | DS | CL1 | |
| | 24 0007A | DCBINH | EQU | DCBINHMS | |
| | 00000080 | DCBINHM | EQU | X'80' | INHIBIT MESSAGE TO REMOVE |
| | | * | | | DATA SET FLAG |
| 24 0007B | | DCBCOMBI | DS | CL1 | |

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|----------|-------------|--------|------|------|---------|
| 24 0007B | | DCBCMB | EQU | DCBCOMBI | |
| | 00000001 | DCBCMBM | EQU | X'01' | COMBINE A RDR ON SAME 2540 |
| | | * | | | AS PUNCH FLAG |
| 24 0007C | | DCBICB | DS | F | ADDRESS OF ICB NAMED IN SIR |
| | | * | | | 0=NONE |
| 24 00080 | | DCBLRMAX | DS | H | MAXIMUM LOGICAL RECORD |
| | | * | | | LENGTH |
| 24 00082 | | | DS | CL14 | RESERVED FOR FUTURE USE |
| 24 00090 | | DCBLRC | DS | F | DCBRCD--ADDRESS CURRENT |
| | | * | | | LOGICAL RECORD IN BUFFER |
| 24 00094 | | DCBEAP | DS | F | DCBEAD--ADDRESS END OF |
| | | * | | | CURRENT BUFFER+1 |
| 24 00098 | | DCBPPT | DS | F | ADDRESS OF CURRENT BUFFER |
| | | * | | | PAGE |
| 24 0009C | | DCBRCX | DS | H | RETURN CODE |
| 24 0009E | | DCBCNT | DS | H | LOGICAL RECORD COUNT |
| 24 000A0 | | | DS | D | RESERVED FOR FUTURE USE |
| 24 000A8 | | DCBCDE | DS | F | ADDRESS OF CURRENT DECB |
| 24 000AC | | DCBFDE | DS | F | ADDRESS OF FIRST DECB |
| 24 000B0 | | DCBLDE | DS | F | ADDRESS OF LAST DECB |
| 24 000B4 | | DCBTDE | DS | F | ADDRESS OF DECB FOR PUT |
| | | * | | | COMPLETION TESTING |
| 24 000B8 | | DCBUDE | DS | F | ADDRESS OF ERROR DECB FOR |
| | | * | | | USER |
| 24 000BC | | DCBFRMTP | DS | CL1 | FORM TYPE FOR PRINTING |
| | 000000C4 | DCBFRMD | EQU | C'D' | DUMP MODE |
| | 000000C6 | DCBFRMF | EQU | C'F' | FORM SENSITIVE |
| | 000000E2 | DCBFRMS | EQU | C'S' | SEQUENCE SENSITIVE |
| 24 000BD | | DCBSTRIK | DS | XL1 | UCS STRIKE OUT CODE |
| 24 000BE | | | DS | CL6 | RESERVED |
| 24 000C4 | | DCBMSF1 | DS | CL1 | MSAM FLAGS FIRST BYTE |
| | 24 000C4 | DCBEOP | EQU | DCBMSF1 | |
| | 00000080 | DCBEOPM | EQU | X'80' | END OF BUFFER PROCESSING |
| | | * | | | NECESSARY FLAG |
| | 24 000C4 | DCBIOC | EQU | DCBMSF1 | |
| | 00000040 | DCBIOCM | EQU | X'40' | READ/WRITE INVOKED FOR END |
| | | * | | | OF BUFFER FLAG |
| | 24 000C4 | DCBENT | EQU | DCBMSF1 | |
| | 00000020 | DCBENTM | EQU | X'20' | BUFFER PRIMING REQUIRED |
| | | * | | | FLAG |
| | 24 000C4 | DCBOVF | EQU | DCBMSF1 | |
| | 00000010 | DCBOVFM | EQU | X'10' | FOR FORM TYPE F--NEW PRINT |
| | | * | | | PAGE FLAG |
| | 24 000C4 | DCBELP | EQU | DCBMSF1 | |
| | 00000008 | DCBELPM | EQU | X'08' | LAST PUT LOCATE FLAG |
| | 24 000C4 | DCBNLP | EQU | DCBMSF1 | |
| | 00000004 | DCBNLPM | EQU | X'04' | IN PROCESS,LAST PUT LOCATE |
| | | * | | | FLAG |
| | 24 000C4 | DCBRJE | EQU | DCBMSF1 | REMOTE JOB ENTRY FLAG |
| | 00000002 | DCBRJEM | EQU | X'02' | REMOTE JOB ENTRY MASK |
| | 24 000C4 | DCBSWA | EQU | DCBMSF1 | SWITCH ACKNOWLEDGEMENTS IN |
| | | * | | | GET IORCB |
| | 00000001 | DCBSWAM | EQU | X'01' | SWITCH AKNGMNTS. IN GET |
| | | * | | | IORCB MASK |
| 24 000C5 | | DCBMSF2 | DS | CL1 | MSAM FLAGS SECOND BYTE |
| | 24 000C5 | DCBPUR | EQU | DCBMSF2 | |
| | 00000040 | DCBPURM | EQU | X'40' | PURGE ALL I/O IN CLOSE FLAG |
| | 24 000C5 | DCBSUR | EQU | DCBMSF2 | |
| | 00000020 | DCBSURM | EQU | X'20' | SETUR IN PROCESS FLAG |
| | 24 000C5 | DCBFIN | EQU | DCBMSF2 | |
| | 00000010 | DCBFINM | EQU | X'10' | FINISH ISSUED FLAG |
| | 24 000C5 | DCBFIP | EQU | DCBMSF2 | |
| | 00000008 | DCBFIPM | EQU | X'08' | FINISH IN PROCESS FLAG |
| | 24 000C5 | DCBFT | EQU | DCBMSF2 | |
| | 00000004 | DCBFTM | EQU | X'04' | FIRST TIME AFTER OPEN OR |
| | | * | | | FINISH |
| | 24 000C5 | DCBFWT | EQU | DCBMSF2 | FIRST WRITE (ASA) WILL HAVE |
| | | * | | | NO DUMMY RECORD |

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|---|---|---|---|---|---|
| | 00000002 | DCBFWTM | EQU | X'02' | FIRST WRITE MASK |
| | 24 000C5 | DCBENOF | EQU | DCBMSF2 | RJE END OF FILE FLAG |
| | 00000001 | DCBENOFM | EQU | X'01' | RJE END OF FILE MASK |
| | 24 000C5 | DCBBLA1 | EQU | DCBMSF2 | LAST ACK OF PREVIOUS BUFFER |
| | | * | | | WAS ON ACK1. |
| | 00000080 | DCBBLA1M | EQU | X'80' | LAST ACK OF PREVIOUS BUFFER |
| | | * | | | MASK |
| 24 000C6 | | DCBMSF3 | DS | XL1 | MSAM FLAGS THIRD BYTE |
| | 24 000C6 | DCBSAIN | EQU | DCBMSF3 | NO IORCB TO BE REISSUED |
| | | * | | | FLAG |
| | 00000080 | DCBSAINM | EQU | X'80' | NO IORCB TO BE REISSUED |
| | | * | | | MASK |
| | 24 000C6 | DCBRJIN | EQU | DCBMSF3 | INTERNAL RJE DOMSAM FLAG |
| | | * | | | FOR NO |
| | 00000040 | DCBRJINM | EQU | X'40' | DUMMY |
| | 24 000C6 | DCBTAB | EQU | DCBMSF3 | TABBING PRESENT |
| | | * | | | N412.2 |
| | 00000010 | DCBTABM | EQU | X'10' | N412.2 |
| | 24 000C6 | DCBMRF | EQU | DCBMSF3 | MRF FORMAT WHEN ON |
| | 00000020 | DCBMRFM | EQU | X'20' | |
| | 24 000C6 | DCBCAN | EQU | DCBMSF3 | CANCEL OUTSTANDING IO FLAG |
| | | * | | | M3823 |
| | 00000001 | DCBCANM | EQU | X'01' | CANCEL OUTSTANDING IO MASK |
| | | * | | | M3823 |
| 24 000C7 | | | DS | XL1 | RESERVED |
| | 24 00078 | | \|ORG\| | DCBBKC | |
| 24 00078 | | DCBSFS | DS | 19F | TAM'S SAVE AREA FOR CALLING |
| | | * | | | FENCE SITTERS |
| | 24 00000 | DCBDSORG | EQU | DCBDSO | * |
| | 24 00002 | DCBMACRF | EQU | DCBMAC | * |
| | 24 00008 | DCBDDNAM | EQU | DCBDDN | * |
| | 24 0002E | DCBLRECL | EQU | DCBLRE+2 | |
| | 24 0002B | DCBOPTCD | EQU | DCBOPT | * |
| | 24 00032 | DCBSTACK | EQU | DCBSTA | * |
| | 24 00033 | DCBTRTCH | EQU | DCBTRT | * |
| | 24 00028 | DCBBFTEK | EQU | DCBBFT | * |
| | 24 00030 | DCBBLKSI | EQU | DCBBLK | * |
| | 24 00004 | DCBEXLST | EQU | DCBEXL | * |
| | 24 0003F | DCBOFLGS | EQU | DCBOFG | * |
| | 24 00023 | DCBBUFNO | EQU | DCBBUN | *   EQUATES GIVE USER |
| | | * | | | COMPATIBILITY |
| | 24 00020 | DCBBUFL | EQU | DCBBUF | *    OS/360 |
| | 24 00051 | DCBIFLGS | EQU | DCBIFL | * |
| | 24 0002A | DCBRECFM | EQU | DCBREC | |
| | 24 00034 | DCBEROPT | EQU | DCBERO | * |
| | 24 00032 | DCBKEYLE | EQU | DCBKEY | * |
| | 24 00032 | DCBCODE | EQU | DCBCOD | * |
| | 24 00033 | DCBMODE | EQU | DCBMOD | * |
| | 24 00032 | DCBPTRSP | EQU | DCBPRT | * |
| | 24 00024 | DCBBUFCB | EQU | DCBBCN | * |
| | 24 00022 | DCBDEVT | EQU | DCBDEV | |
| | 24 00002 | DCBMACR | EQU | DCBMAC | |
| | 24 0004C | DCBDEBAD | EQU | DCBDEB | |
| | 24 00010 | DCBSYNAD | EQU | DCBSYV | |
| | 24 00018 | DCBEODAD | EQU | DCBEOV | |
| | 24 0003C | DCBEXCD1 | EQU | DCBEX1 | |
| | 24 0003D | DCBEXCD2 | EQU | DCBEX2 | |
| | 24 00051 | DCBIFLG | EQU | DCBIFL | |
| | 24 00094 | DCBEOBAD | EQU | DCBEAP | |

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|----------|-------------|--------|------|------|---------|
|          | 24 00090    | DCBRECAD | EQU | DCBLRC |  |
|          | 00000020    | DCBOVT | EQU | DCBIF2 | EQUATES TO IFLAGS |
|          | 00000040    | DCBOVN | EQU | DCBIF1 | USED IN BSAM |
|          | 24 00038    | DCBLP | EQU | DCBLPA | EQU FOR QSAM |
|          | 24 00054    | DCBIMSK | EQU | DCBIMK |  |
|          | 24 00000    | IHADCB | EQU | CHADCB |  |
|          | 24 00014    |  | \|ORG\| | IHADCB+20 |  |
| 24 00014 |             | DCBBUFRQ | DS | 0BL1 |  |
| 24 00014 |             | DCBTRMAD | DS | A |  |
| 24 00018 |             | DCBSOWA | DS | H |  |
|          | 24 00020    |  | \|ORG\| | IHADCB+32 |  |
| 24 00020 |             | DCBBFALN | DS | 0BL1 |  |
|          | 24 00044    |  | \|ORG\| | IHADCB+68 |  |
| 24 00044 |             | DCBSMSI | DS | AL2 |  |
|          | 24 00048    |  | \|ORG\| | IHADCB+72 |  |
| 24 00048 |             | DCBMSHI | DS | A |  |

## Combined Dictionary (CHADCT,CHADEN)

The Combined Dictionary, used by the command system for resolution of verbs and parameters, contains three classes of entries:
1. Synonym and Default Entries
2. Procedure Definition Entries
3. Command Symbol Definition Entries

The dictionary consists of a header (CHADCT), and a variable number of entries (CHADEN). The full Combined Dictionary exists only in virtual storage: dictionaries containing synonym and default entries exist in the User Profile (CHAPFL); dictionaries containing procedure definition entries appear as procedure dictionaries.

### CHADCT Storage map

```
 DEC   HEX
   0     0 | DCTID   |        DCTBL        |        DCTDLB       |       DCTASP       |
           |         |                     |                    |                    |
   8     8 |_____|
           |                                                                         |
         = |                                 DCTHTB                                   =
           |                                                                         |
           |_____|
 264   108 |                                 DCTSEN                                   |
           |_____|
 272   110 | DCTSEC  | DCTSDL  |      DCTNXT       |
           |         |         |                   |
```
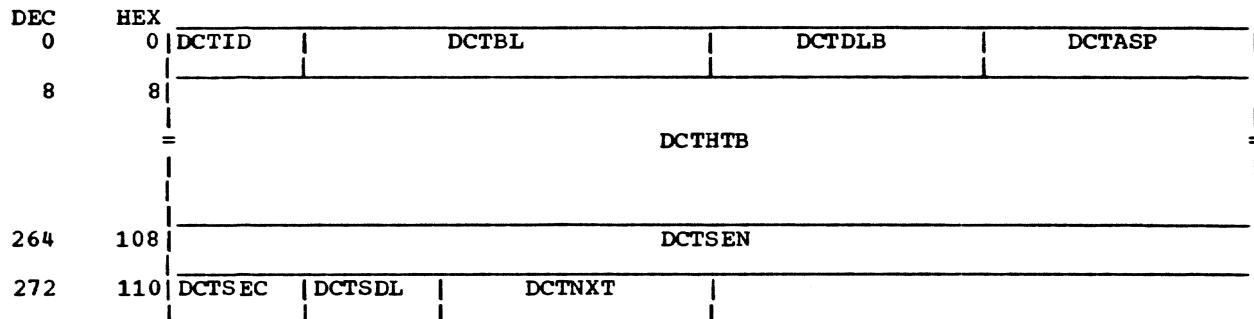
### Fields in CHADCT -- by displacement

| DEC | HEX | FIELD | DEC | HEX | FIELD | DEC | HEX | FIELD | |
|-----|-----|-------|-----|-----|-------|-----|-----|-------|---|
| 0000 | 0000 | DCTID | 0008 | 0008 | DCTHTB | 0274 | 0112 | DCTNXT | |
| 0001 | 0001 | DCTBL | 0264 | 0108 | DCTSEN | 0276 | 0114 | DCTDAT | (EQU) |
| 0004 | 0004 | DCTDLB | 0272 | 0110 | DCTSEC | | | | |
| 0006 | 0006 | DCTASP | 0273 | 0111 | DCTSDL | | | | |

### Alphabetical list of fields in CHADCT

| FIELD | DEC | HEX | | FIELD | DEC | HEX | FIELD | DEC | HEX |
|-------|-----|-----|---|-------|-----|-----|-------|-----|-----|
| DCTASP | 0006 | 0006 | | DCTHTB | 0008 | 0008 | DCTSEC | 0272 | 0110 |
| DCTBL | 0001 | 0001 | | DCTID | 0000 | 0000 | DCTSEN | 0264 | 0108 |
| DCTDAT | 0276 | 0114 | (EQU) | DCTNXT | 0274 | 0112 | | | |
| DCTDLB | 0004 | 0004 | | DCTSDL | 0273 | 0111 | | | |

### Assembler listing of CHADCT

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|----------|-------------|--------|------|------|---------|
| | 25 00000 | CHADCT | DSECT | | , CONTROL DICTIONARY HEADING |
| 25 00000 | | DCTID | DS | CL1 | FIXED OR VARIABLE IDENTIFIER |
| 25 00001 | | DCTBL | DS | CL3 | UNUSED SPACE |
| 25 00004 | | DCTDLB | DS | H | LENGTH OF DICTIONARY IN BYTES |
| 25 00006 | | DCTASP | DS | AL2 | AVAILABLE SPACE POINTER |
| 25 00008 | | DCTHTB | DS | 128AL2 | HASH TABLE POINTERS |
| 25 00108 | | DCTSEN | DS | CL8 | BLANK ENTRY NAME START ENTRY |
| 25 00110 | | DCTSEC | DS | XL1 | STARTING ENTRY CODE-255 |
| 25 00111 | | DCTSDL | DS | XL1 | LENGTH OF DATA IN BYTES |
| 25 00112 | | DCTNXT | DS | AL2 | NEXT ENTRY |
| | 25 00114 | DCTDAT | EQU | * | DATA STARTS HERE |

## CHADEN Storage map

```
DEC   HEX _____
  0     0 |                              DENNAM                                |
          |_____|
  8     8 | DENCOD  | DENDL   |      DENNXT      | DENLIB  |      DENEXT         |
          |_____|_____|_____|_____|_____|
 16    10 |              DENEXT   (CONT)                  |
          |_____|
```
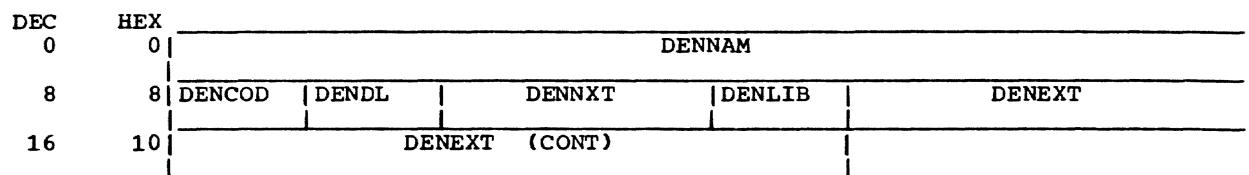
## Fields in CHADEN -- by displacement

| DEC | HEX | FIELD | | DEC | HEX | FIELD | | DEC | HEX | FIELD |
|-----|-----|-------|---|-----|-----|-------|---|-----|-----|-------|
| 0000 | 0000 | DENNAM | | 0010 | 000A | DENNXT | | 0013 | 000D | DENEXT |
| 0008 | 0008 | DENCOD | | 0012 | 000C | DENDAT | (EQU) | | | | |
| 0009 | 0009 | DENDL | | 0012 | 000C | DENLIB | | | | | |

## Alphabetical list of fields in CHADEN

| FIELD | DEC | HEX | | FIELD | DEC | HEX | | FIELD | DEC | HEX |
|-------|-----|-----|---|-------|-----|-----|---|-------|-----|-----|
| DENCOD | 0008 | 0008 | | DENEXT | 0013 | 000D | | DENNXT | 0010 | 000A |
| DENDAT | 0012 | 000C | (EQU) | DENLIB | 0012 | 000C | | | | |
| DENDL | 0009 | 0009 | | DENNAM | 0000 | 0000 | | | | |

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|---|---|---|---|---|---|
| | 28 00000 | CHADEN | DSECT | | ,            CONTROL |
| | | * | | | DICTIONARY ENTRY |
| 28 00000 | | DENNAM | DS | CL8 | ENTRY NAME |
| 28 00008 | | DENCOD | DS | XL1 | ENTRY CODE |
| | 00000004 | DENSYN | EQU | 4 | SYNONYM CODE |
| | 00000008 | DENDEF | EQU | 8 | DEFAULT CODE |
| | 00000010 | DENTXP | EQU | 16 | TEXTUAL PROCEDURE CODE |
| | 00000020 | DENBIP | EQU | 32 | BUILTIN CODE |
| | 00000040 | DENICS | EQU | 64 | INTEGER COMMAND SYMBOL CODE |
| | 00000041 | DENFPS | EQU | 65 | FLOATING POINT COMMAND |
| | | * | | | SYMBOL |
| | | * | | | CODE |
| | 00000042 | DENCSS | EQU | 66 | CHARACTER STRING COMMAND |
| | | * | | | SYMBOL |
| | | * | | | CODE |
| | 0000004A | DENLCS | EQU | 74 | LOGICAL COMMAND SYMBOL CODE |
| | | * | | | I6400 |
| | 00000043 | DENHCS | EQU | 67 | HEX COMMAND SYSMBOL CODE |
| | | * | | | I6400 |
| 28 00009 | | DENDL | DS | XL1 | ENTRY DATA LENGTH IN BYTES |
| | | * | | | INCLUDES LENGTH OF DENLIB |
| | | * | | | FIELD |
| | 00000009 | DENLB | EQU | 9 | BUILTIN ENTRY LENGTH |
| | 00000001 | DENLT | EQU | 1 | TEXTUAL PROCEDURE LENGTH |
| 28 0000A | | DENNXT | DS | AL2 | POINTER TO NEXT ENTRY IN |
| | | * | | | HASH |
| | | * | | | CHAIN |
| | | * | | | ENTRY DATA STARTS HERE |
| 28 0000C | | DENLIB | DS | XL1 | LIBRARY DESIGNATION FOR |
| | | * | | | BUILTINS |
| | | * | | | AND TEXTUAL PROCEDURES |
| | 00000000 | DENSLM | EQU | X'0' | SYSLIB CODE |
| | 00000001 | DENULM | EQU | X'1' | USERLIB CODE |
| | 28 0000C | DENDAT | EQU | DENLIB | FOR SYNONYM, DEFAULT OR |
| | | * | | | COMMAND |
| | | * | | | SYMBOL ENTRIES, FIELD |
| | | * | | | CONTAINS |
| | | * | | | LENGTH OF DATA IN DENEXT |
| | | * | | | FIELD |
| 28 0000D | | DENEXT | DS | CL8 | DATA FIELD |
| | | * | DATA FIELD CONTAINS - FOR SYNONYM, DEFAULT OR | | |
| | | * | COMMAND SYMBOL, THE | | |
| | | * | | | ASSOCIATED VALUE |
| | | * | -FOR TEXTUAL PROCEDURE, NOT USED | | |
| | | * | -FOR BUILTIN IF FIRST BYTE NON-ZERO, | | |
| | | * | THE BPKD EXTERNAL SYMBOL (APPLIES | | |
| | | * | | | TO ALL USER LIB ENTRIES) |
| | | * | -FOR BUILTIN IF FIRST BYTE ZERO, | | |
| | | * | THE STORAGE PROTECTION CLASS IN FOURTH BYTE. | | |
| | | * | AND VCON OF BPKD IN LAST FOUR BYTES | | |

## Data Extent Block (CHADEB)

The Data Extent Block (DEB) provides the requested attributes of both the data set and the device on which the volume for that data set resides. It also contains pointers to other control blocks associated with the data set. If a direct access volume is used, the DEB also contains information about the volume extents.

The user has read-only access to the DEB, which occupies a minimum of 84 bytes of virtual storage aligned on word boundaries.

The DEB is logically divided into three sections:
- An 84-byte section containing information about the data set, and the device on which the volume for that data set resides.
- A 4-byte section containing a chain of pointers to DECBs which have not yet been checked by the user. The chain is updated by the CHECK routine and is variable in length depending on the NCP parameter.
- A third section which exists only if direct access volumes are involved. The length depends on the number of extents within the volume. This section contains information about the extents, and the length of the section in bytes is 40 plus 16 times the number of extents.

The DCB and JFCB contain pointers to the DEB.

### CHADEB Storage map

| DEC | HEX | | | | | | | | |
|-----|-----|---|---|---|---|---|---|---|---|
| 0 | 0 | DEBDCB | | | | DEBJFC | | | |
| 8 | 8 | DEBSDT | | | | DEBMDL | DEBDVC | DEBUNT | DEBFEA |
| 16 | 10 | DEBIO | | DEBIOC | | DEBBTK | | DEBTKC | |
| 24 | 18 | DEBSYM | | DEBMSK | | DEBID | | DEBSIZ | |
| 32 | 20 | DEBPSV | | | | DEBPSR | | | |
| 40 | 28 | DEBNF | DEBENOF | DEBFL | DEBDN | DEBCLS | | UNNAMED | |
| 48 | 30 | DEBER2 | | | | DEBWRK | | | |
| 56 | 38 | DEBIOF | DEBOPT | DEBLBC | | DEBUSZ | | DEBVOL | |
| 64 | 40 | DEBBF1 | | | | DEBBF2 | | | |
| 72 | 48 | DEBLSW | | | | DEBNP | | DEBNPC | |
| 80 | 50 | DEBDEL | | | | DEBDEC | | | |
| 88 | 58 | DEBLWR | DEBLWM | DEBLWB | | DEBLWC | | DEBLWH | |
| 96 | 60 | DEBNIR | DEBNIM | DEBNIB | | DEBNIC | | DEBNIH | |
| 104 | 68 | DEBLIR | DEBLIM | DEBLIB | | DEBLIC | | DEBLIH | |
| 112 | 70 | DEBETR | DEBETM | DEBETB | | DEBETC | | DEBETH | |
| 120 | 78 | DEBATR | DEBATM | DEBATB | | DEBATC | | DEBATH | |
| 128 | 80 | DEBEXF | DEBMBM | DEBBBB | | DEBLCC | | DEBLHH | |
| 136 | 88 | DEBUCC | | DEBUHH | | DEBTKN | | DEBBLT | |

## Fields in CHADEB -- by displacement

| DEC | HEX | FIELD | | DEC | HEX | FIELD | | DEC | HEX | FIELD | |
|-----|-----|-------|---|-----|-----|-------|---|-----|-----|-------|---|
| 0000 | 0000 | DEBDCB | | 0057 | 0039 | DEBOPT | | 0110 | 006E | DEBLIH | |
| 0000 | 0000 | DEBBEG | | 0058 | 003A | DEBLBC | | 0112 | 0070 | DEBETR | |
| 0004 | 0004 | DEBJFC | | 0060 | 003C | DEBUSZ | | 0112 | 0070 | DEBETK | |
| 0008 | 0008 | DEBSDT | | 0062 | 003E | DEBVOL | | 0113 | 0071 | DEBETM | |
| 0012 | 000C | DEBMDL | | 0064 | 0040 | DEBBF1 | | 0114 | 0072 | DEBETB | |
| 0012 | 000C | DEBCLT | | 0068 | 0044 | DEBBF2 | | 0116 | 0074 | DEBETC | |
| 0013 | 000D | DEBDVC | | 0072 | 0048 | DEBLSW | | 0118 | 0076 | DEBETH | |
| 0014 | 000E | DEBUNT | | 0076 | 004C | DEBNP | | 0120 | 0078 | DEBATR | |
| 0015 | 000F | DEBFEA | | 0078 | 004E | DEBNPC | | 0120 | 0078 | DEBATK | |
| 0016 | 0010 | DEBIO | | 0080 | 0050 | DEBDEL | | 0121 | 0079 | DEBATM | |
| 0018 | 0012 | DEBIOC | | 0084 | 0054 | DEBDEC | | 0122 | 007A | DEBATB | |
| 0020 | 0014 | DEBBTK | | 0088 | 0058 | DEBLWR | | 0124 | 007C | DEBATC | |
| 0022 | 0016 | DEBTKC | | 0088 | 0058 | DEBLWT | | 0126 | 007E | DEBATH | |
| 0024 | 0018 | DEBSYM | | 0088 | 0058 | DEBDAF | (EQU) | 0128 | 0080 | DEBEXF | |
| 0026 | 001A | DEBMSK | | 0088 | 0058 | DEBEND | (EQU) | 0128 | 0080 | DEBDAV | (EQU) |
| 0028 | 001C | DEBID | | 0089 | 0059 | DEBLWM | | 0128 | 0080 | DEBEDF | (EQU) |
| 0030 | 001E | DEBSIZ | | 0090 | 005A | DEBLWB | | 0129 | 0081 | DEBMBM | |
| 0032 | 0020 | DEBPSV | | 0092 | 005C | DEBLWC | | 0129 | 0081 | DEBMBB | |
| 0036 | 0024 | DEBPSR | | 0094 | 005E | DEBLWH | | 0130 | 0082 | DEBBBB | |
| 0040 | 0028 | DEBNF | | 0096 | 0060 | DEBNIR | | 0132 | 0084 | DEBLCC | |
| 0040 | 0028 | DEBER1 | | 0096 | 0060 | DEBNIO | | 0132 | 0084 | DEBLCH | |
| 0041 | 0029 | DEBENOF | | 0097 | 0061 | DEBNIM | | 0134 | 0086 | DEBLHH | |
| 0042 | 002A | DEBDA | (EQU) | 0098 | 0062 | DEBNIB | | 0136 | 0088 | DEBUCC | |
| 0042 | 002A | DEBTP | (EQU) | 0100 | 0064 | DEBNIC | | 0136 | 0088 | DEBUCH | |
| 0042 | 002A | DEBFL | | 0102 | 0066 | DEBNIH | | 0138 | 008A | DEBUHH | |
| 0043 | 002B | DEBDN | | 0104 | 0068 | DEBLIR | | 0140 | 008C | DEBTKN | |
| 0044 | 002C | DEBCLS | | 0104 | 0068 | DEBLIO | | 0142 | 008E | DEBBLT | |
| 0048 | 0030 | DEBER2 | | 0105 | 0069 | DEBLIM | | 0144 | 0090 | DEBEDV | (EQU) |
| 0052 | 0034 | DEBWRK | | 0106 | 006A | DEBLIB | | | | | |
| 0056 | 0038 | DEBIOF | | 0108 | 006C | DEBLIC | | | | | |

## Alphabetical list of fields in CHADEB

| FIELD | DEC | HEX | | FIELD | DEC | HEX | | FIELD | DEC | HEX | |
|-------|-----|-----|---|-------|-----|-----|---|-------|-----|-----|---|
| DEBATB | 0122 | 007A | | DEBETH | 0118 | 0076 | | DEBMBM | 0129 | 0081 | |
| DEBATC | 0124 | 007C | | DEBETK | 0112 | 0070 | | DEBMDL | 0012 | 000C | |
| DEBATH | 0126 | 007E | | DEBETM | 0113 | 0071 | | DEBMSK | 0026 | 001A | |
| DEBATK | 0120 | 0078 | | DEBETR | 0112 | 0070 | | DEBNF | 0040 | 0028 | |
| DEBATM | 0121 | 0079 | | DEBEXF | 0128 | 0080 | | DEBNIB | 0098 | 0062 | |
| DEBATR | 0120 | 0078 | | DEBFEA | 0015 | 000F | | DEBNIC | 0100 | 0064 | |
| DEBBBB | 0130 | 0082 | | DEBFL | 0042 | 002A | | DEBNIH | 0102 | 0066 | |
| DEBBEG | 0000 | 0000 | | DEBID | 0028 | 001C | | DEBNIM | 0097 | 0061 | |
| DEBBF1 | 0064 | 0040 | | DEBIO | 0016 | 0010 | | DEBNIO | 0096 | 0060 | |
| DEBBF2 | 0068 | 0044 | | DEBIOC | 0018 | 0012 | | DEBNIR | 0096 | 0060 | |
| DEBBLT | 0142 | 008E | | DEBIOF | 0056 | 0038 | | DEBNP | 0076 | 004C | |
| DEBBTK | 0020 | 0014 | | DEBJFC | 0004 | 0004 | | DEBNPC | 0078 | 004E | |
| DEBCLS | 0044 | 002C | | DEBLBC | 0058 | 003A | | DEBOPT | 0057 | 0039 | |
| DEBCLT | 0012 | 000C | | DEBLCC | 0132 | 0084 | | DEBPSR | 0036 | 0024 | |
| DEBDA | 0042 | 002A | (EQU) | DEBLCH | 0132 | 0084 | | DEBPSV | 0032 | 0020 | |
| DEBDAF | 0088 | 0058 | (EQU) | DEBLHH | 0134 | 0086 | | DEBSDT | 0008 | 0008 | |
| DEBDAV | 0128 | 0080 | (EQU) | DEBLIB | 0106 | 006A | | DEBSIZ | 0030 | 001E | |
| DEBDCB | 0000 | 0000 | | DEBLIC | 0108 | 006C | | DEBSYM | 0024 | 0018 | |
| DEBDEC | 0084 | 0054 | | DEBLIH | 0110 | 006E | | DEBTKC | 0022 | 0016 | |
| DEBDEL | 0080 | 0050 | | DEBLIM | 0105 | 0069 | | DEBTKN | 0140 | 008C | |
| DEBDN | 0043 | 002B | | DEBLIO | 0104 | 0068 | | DEBTP | 0042 | 002A | (EQU) |
| DEBDVC | 0013 | 000D | | DEBLIR | 0104 | 0068 | | DEBUCC | 0136 | 0088 | |
| DEBEDF | 0128 | 0080 | (EQU) | DEBLSW | 0072 | 0048 | | DEBUCH | 0136 | 0088 | |
| DEBEDV | 0144 | 0090 | (EQU) | DEBLWB | 0090 | 005A | | DEBUHH | 0138 | 008A | |
| DEBEND | 0088 | 0058 | (EQU) | DEBLWC | 0092 | 005C | | DEBUNT | 0014 | 000E | |
| DEBENOF | 0041 | 0029 | | DEBLWH | 0094 | 005E | | DEBUSZ | 0060 | 003C | |
| DEBER1 | 0040 | 0028 | | DEBLWM | 0089 | 0059 | | DEBVOL | 0062 | 003E | |
| DEBER2 | 0048 | 0030 | | DEBLWR | 0088 | 0058 | | DEBWRK | 0052 | 0034 | |
| DEBETB | 0114 | 0072 | | DEBLWT | 0088 | 0058 | | | | | |
| DEBETC | 0116 | 0074 | | DEBMBB | 0129 | 0081 | | | | | |

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|---|---|---|---|---|---|
| | 26 00000 | CHADEB | DSECT | | DATA EXTENT BLOCK |
| 26 00000 | | DEBBEG | DS | 0F | ALIGN TABLE ON A WORD BOUNDARY |
| | | * | | | |
| 26 00000 | | DEBDCB | DS | F | POINTER TO DCB FOR DATA SET |
| 26 00004 | | DEBJFC | DS | F | POINTER TO JFCB FOR DATA SET |
| | | * | | | |
| 26 00008 | | DEBSDT | DS | F | POINTER TO SDAT ENTRY FOR ASSIGNED DEVICE |
| | | * | | | |
| 26 0000C | | DEBCLT | DS | 0F | CLASSIFICATION AND TYPE DATA FROM SDAT |
| | | * | | | |
| 26 0000C | | DEBMDL | DS | X | MODEL OF DEVICE |
| | 00000000 | DEBMD1 | EQU | X'00' | MODEL CODE FOR TAPE,DIRECT ACC AND UNIT R |
| | | * | | | |
| | 00000001 | DEBMDA | EQU | X'01' | 1050 TERMINAL SYSTEM MASK |
| | 00000002 | DEBMDB | EQU | X'02' | 2741 TERMINAL MASK |
| | 00000003 | DEBMDC | EQU | X'03' | MOD 35 TTY MASK |
| | 00000004 | DEBMDD | EQU | X'04' | 1052 MOD 7 TERMINAL MASK |
| 26 0000D | | DEBDVC | DS | X | TYPE OF DEVICE |
| | 00000080 | DEBDTP | EQU | X'80' | DEVICE CODE-- MAG TAPE |
| | 00000020 | DEBDDA | EQU | X'20' | DEVICE CODE-- DIRECT ACCESS |
| | 00000008 | DEBDUR | EQU | X'08' | DEVICE CODE-- UNIT RECORD |
| | 00000001 | DEBDVA | EQU | X'01' | DIAL LINE MASK |
| | 00000002 | DEBDVB | EQU | X'02' | DEDICATED LINE MASK |
| 26 0000E | | DEBUNT | DS | X | UNIT DESCRIPTION FOR DEVICE TYPE |
| | | * | | | |
| | 00000001 | DEBUTP | EQU | X'01' | UNIT TYPE -- MAG TAPE--2400 |
| | | * | | | |
| | 00000001 | DEBUDP | EQU | X'01' | UNIT TYPE -- DIRECT ACCESS-- 2311 |
| | | * | | | |
| | 00000002 | DEBUD1 | EQU | X'02' | UNIT TYPE -- DIRECT ACCESS-- 2301 |
| | | * | | | |
| | 00000003 | DEBUDC | EQU | X'03' | UNIT TYPE -- DIRECT ACCESS-- 2321 |
| | | * | | | |
| | 00000004 | DEBUD2 | EQU | X'04' | UNIT TYPE -- DIRECT ACCESS-- 2302 |
| | | * | | | |
| | 00000008 | DEBUD3 | EQU | X'08' | UNIT TYPE -- DIRECT ACCESS-- 2314 |
| | | * | | | |
| | 00000001 | DEBUCR | EQU | X'01' | UNIT TYPE -- UNIT RECORD -- 2540 READER |
| | | * | | | |
| | 00000002 | DEBUCP | EQU | X'02' | UNIT TYPE -- UNIT RECORD -- 2540 PUNCH |
| | | * | | | |
| | 00000008 | DEBUPR | EQU | X'08' | UNIT TYPE -- UNIT RECORD -- 1403 PRINTER |
| | | * | | | |
| | 00000010 | DEBUPT | EQU | X'10' | UNIT TYPE -- UNIT RECORD -- 2671 PPT RDR |
| | | * | | | |
| | 00000012 | DEBREM | EQU | X'12' | UNIT TYPE 2701 REMOTE LINE |
| | 00000010 | DEBUNA | EQU | X'10' | IBM TERMINAL CONTROL TYPE 1 MASK |
| | | * | | | |
| | 00000020 | DEBUNB | EQU | X'20' | IBM TERMINAL CONTROL TYPE 2 MASK |
| | | * | | | |
| | 00000030 | DEBUNC | EQU | X'30' | TELEGRAPH CONTROL TYPE 1 MASK |
| | | * | | | |
| | 00000040 | DEBUND | EQU | X'40' | TELEGRAPH CONTROL TYPE 2 MASK |
| | | * | | | |
| | 00000080 | DEBUNE | EQU | X'80' | WORLD TRADE TERMINAL CONTROL MASK |
| | | * | | | |
| | 00000001 | DEBUNF | EQU | X'01' | 2702 TRANSMISSION CONTROL MASL |
| | | * | | | |
| | 00000002 | DEBUNG | EQU | X'02' | 2701 DATA ADAPTER UNIT MASK |
| | 00000003 | DEBUNH | EQU | X'03' | MULTIPLEXOR CHANNEL MASK |
| | 00000004 | DEBUNI | EQU | X'04' | SELECTOR CHANNEL MASK |
| 26 0000F | | DEBFEA | DS | X | DEVICE FEATURES |
| | 00000020 | DEBO7 | EQU | X'20' | OPTIONAL FEATURES--7 TRACK COMPAT |
| | | * | | | |
| | 000000E0 | DEBO7D | EQU | X'E0' | OPTIONAL FEATURES--DATA CONVERTER/7 TRK |
| | | * | | | |
| | 000000A0 | DEBO7N | EQU | X'A0' | OPTIONAL FEATUES-- 7 TRACK NO DATA CONV |
| | | * | | | |

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|---|---|---|---|---|---|
| | 00000020 | DEBO9T * | EQU | X'20' | OPTIONAL FEATURES-- NINE TRACK TAPE |
| | 00000080 | DEBOSC | EQU | X'80' | OPTIONAL FEATURES-- SCAN |
| | 00000040 | DEBOTO * | EQU | X'40' | OPTIONAL FEATUES-- TRACK OVERFLOW |
| | 00000080 | DEBOCI | EQU | X'80' | OPTIONAL FEATURES-- CARD IMAGE |
| | 00000040 | DEBOPR * | EQU | X'40' | OPTIONAL FEATURES-- PCH-FEED-READ |
| | 00000080 | DEBOUC * | EQU | X'80' | OPTIONAL FEATURES-- UNIV CHAR SET FOR PRT |
| | 00000040 | DEBOSL * | EQU | X'40' | OPTIONAL FEATURES-- SEL TAPE LISTING |
| | 00000001 | DEBFE1 | EQU | X'01' | SAD ONE MASK |
| | 00000002 | DEBFE2 | EQU | X'02' | SAD TWO MASK |
| | 00000003 | DEBFE3 | EQU | X'03' | SAD THREE MASK |
| 26 00010 | | DEBIO * | DS | H | NUMBER OF OUTSTANDING IORCBS ALLOWED |
| 26 00012 | | DEBIOC * | DS | H | CURRENT NUMBER OF OUTSTANDING IORCBS |
| 26 00014 | | DEBBTK | DS | H | NUMBER OF BYTES PER TRACK |
| 26 00016 | | DEBTKC * | DS | H | NUMBER OF TRACKS PER CYLINDER |
| 26 00018 | | DEBSYM * | DS | H | SYSTEM SYMBOLIC DEVICE ADDRESS |
| 26 0001A | | DEBMSK | DS | H | POSTING INFORMATION MASK |
| 26 0001C | | DEBID | DS | H | DEB IDENTIFIER |
| 26 0001E | | DEBSIZ | DS | H | SIZE OF DEB IN BYTES |
| 26 00020 | | DEBPSV * | DS | F | POINTER (ACON) TO POSTING (SAM) ENTRY |
| 26 00024 | | DEBPSR * | DS | F | POINTER (ACON) TO POSTING (SAM) PSECT |
| 26 00028 | | DEBER1 | DS | 0F | ERROR INFORMATION |
| 26 00028 | | DEBNF | DS | X | ERROR FLAGS |
| | 00000080 | DEBNF1 | EQU | X'80' | UNRECOVERABLE ERROR |
| | 00000040 | DEBNF2 | EQU | X'40' | PERMANENT ERROR |
| | 00000020 | DEBNF3 * * | EQU | X'20' | END OF TAPE OR EXCEPTIONAL CONDITION (MSAM) |
| | 00000010 | DEBNF4 * * | EQU | X'10' | DSCB EXTENTS ARE NOT IN CONSECUTIVE ORDER OR CONTROL MARK(MSAM) |
| | 00000008 | DEBNF5 * * | EQU | X'08' | READ/WRITE NO EXTENTS FLAG OR RETRY IN PROGRESS(MSAM) |
| | 00000004 | DEBNF6 | EQU | X'04' | EOV NO EXTENTS FLAG |
| | 00000002 | DEBNF7 * | EQU | X'02' | SYNAD REQUESTED BY CHECK PRIOR TO LAST IOREQ |
| 26 00029 | | DEBENOF * | DS | XL1 | INTERNAL INDICATION TO MSAM POSTING--EOF |
| 26 0002A | | DEBFL | DS | XL1 | POSTING RETRY INFORMATION |
| | 26 0002A | DEBTP | EQU | DEBFL | TAPE RETRY INFORMATION |
| | 26 0002A | DEBDA * | EQU | DEBFL | DIRECT ACCESS RETRY INFORMATION |
| 26 0002B | | DEBDN | DS | XL1 | TAPE DENSITY |
| | 00000003 | DEBDN1 | EQU | X'03' | 200 BPI |
| | 00000043 | DEBDN2 | EQU | X'43' | 556 BPI |
| | 00000083 | DEBDN3 | EQU | X'83' | 800 BPI |
| 26 0002C | | DEBCLS | DS | X | PROTECTION CLASS OF DCB |
| | 00000001 | DEBCLA | EQU | X'01' | PROTECTION CLASS A |
| | 00000003 | DEBCLB | EQU | X'03' | PROTECTION CLASS B |
| | 00000007 | DEBCLC | EQU | X'07' | PROTECTION CLASS C |
| 26 0002D | | | DS | XL3 | RESERVED |
| 26 00030 | | DEBER2 | DS | F | ERROR INFORMATION |
| 26 00034 | | DEBWRK | DS | F | POINTER TO WORK PAGE |
| 26 00038 | | DEBIOF | DS | X | I/O STATUS INFORMATION |
| | 00000080 | DEBWPE * | EQU | X'80' | A WRITE WAS PREVIOUSLY EXECUTED |

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|---|---|---|---|---|---|
| | 00000040 | DEBWSF * | EQU | X'40' | LAST I/O OPERATION WAS WRITE |
| | 00000020 | DEBRSB * | EQU | X'20' | LAST I/O OPERATION WAS A READ BACKWARD |
| | 00000010 | DEBRSF * | EQU | X'10' | LAST I/O OPERATION WAS A READ FORWARD |
| | 00000008 | DEBIBT | EQU | X'08' | INTEGRITY BIT |
| | 00000004 | DEBBP | EQU | X'04' | LAST I/O WAS A BSP OR POINT |
| | 00000002 | DEBIPT | EQU | X'02' | INCREMENT POINT FLAG |
| | 00000001 | DEBDBP * | EQU | X'01' | DEB IS IN PROTECTED VIRTUAL MEMORY |
| 26 00039 | | DEBOPT | DS | X | COPY OF DCB'S OPTION FIELD |
| | 00000040 | DEBRDO * | EQU | X'40' | REREAD OPEN OPTION--BITS-0,1 |
| | 000000C0 | DEBLVO * | EQU | X'C0' | LEAVE OPEN OPTION--BITS-0,1 |
| | 00000000 | DEBINP | EQU | X'00' | INPUT -- BITS-- 2-5 ONLY |
| | 0000003C | DEBOUT | EQU | X'3C' | OUTPUT -- BITS-- 2-5 ONLY |
| | 0000000C | DEBINO | EQU | X'0C' | INOUT -- BITS-- 2-5 ONLY |
| | 0000001C | DEBOIN | EQU | X'1C' | OUTIN -- BITS-- 2-5 ONLY |
| | 00000004 | DEBRDB | EQU | X'04' | RDBACK -- BITS-- 2-5 ONLY |
| | 00000010 | DEBUPD | EQU | X'10' | UPDATE -- BITS-- 2-5 ONLY |
| | 00000001 | DEBRDC * | EQU | X'01' | REREAD CLOSE OPTIONS--BITS-6,7 |
| | 00000003 | DEBLVC * | EQU | X'03' | LEAVE CLOSE OPTIONS--BITS 6,7 |
| 26 0003A | | DEBLBC * | DS | H | NUMBER OF USER LABEL WRITTEN TO DIRECT AC |
| 26 0003C | | DEBUSZ * | DS | H | SIZE OF DEB AREA CURRENTLY IN USE |
| 26 0003E | | DEBVOL * | DS | H | VOLUME SEQUENCE FOR THIS DEB |
| 26 00040 | | DEBBF1 | DS | F | QSAM DATA |
| 26 00044 | | DEBBF2 * | DS | F | QSAM DATA/MSAM TIMER SAVE AREA |
| 26 00048 | | DEBLSW * | DS | F | POINTER TO DEB'S LST DIRECT AC WRITE ADDR |
| 26 0004C | | DEBNP | DS | H | COPY OF DCB'S NCP FIELD |
| 26 0004E | | DEBNPC * | DS | H | NUMBER OF DECBS IN UNCHECKED DECB QUEUE |
| 26 00050 | | DEBDEL * | DS | F | POINTER TO LAST DECB UNCHECKED ENTRY |
| 26 00054 | | DEBDEC | DS | F | POINTER TO UNCHECKED DECB |
| | 26 00058 | DEBEND | EQU | * | END OF COMMON DEB |
| | 26 00058 | DEBDAF * | EQU | * | START OF DIRECT ACCESS FIXED PORTION |
| 26 00058 | | DEBLWT | DS | 0XL8 | LAST DIRECT ACCESS WRITE |
| 26 00058 | | DEBLWR * | DS | C | RECORD NUMBER WITHIN A TRACK (R) |
| 26 00059 | | DEBLWM | DS | C | EXTENT NUMBER (M) |
| 26 0005A | | DEBLWB | DS | H | BIN OR MODULE ADDRESS (BB) |
| 26 0005C | | DEBLWC | DS | H | CYLINDER NUMBER (CC) |
| 26 0005E | | DEBLWH | DS | H | HEAD (TRACK) NUMBER (HH) |
| 26 00060 | | DEBNIO * | DS | 0XL8 | ADDRESS OF NEXT READ OPERATION |
| 26 00060 | | DEBNIR * | DS | C | RECORD NUMBER WITHIN A TRACK (R) |
| 26 00061 | | DEBNIM | DS | C | EXTENT NUMBER (M) |
| 26 00062 | | DEBNIB | DS | H | BIN OR MODULE ADDRESS (BB) |
| 26 00064 | | DEBNIC | DS | H | CYLINDER NUMBER (CC) |
| 26 00066 | | DEBNIH | DS | H | HEAD (TRACK) NUMBER (HH) |
| 26 00068 | | DEBLIO | DS | 0XL8 | ADDRESS OF LAST READ OR WRITE OPERATION |
| 26 00068 | | DEBLIR * | DS | C | RECORD NUMBER WITHIN A TRACK (R) |
| 26 00069 | | DEBLIM | DS | C | EXTENT NUMBER (M) |
| 26 0006A | | DEBLIB | DS | H | BIN OR MODULE ADDRESS (BB) |
| 26 0006C | | DEBLIC | DS | H | CYLINDER NUMBER (CC) |

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|----------|-------------|--------|------|------|---------|
| 26 0006E | | DEBLIH | DS | H | HEAD (TRACK) NUMBER (HH) |
| 26 00070 | | DEBETK | DS | 0XL8 | ADDRESS OF LAST TRK TO GIVE |
| | | * | | | CONDITION CK |
| 26 00070 | | DEBETR | DS | C | RECORD NUMBER WITHIN A |
| | | * | | | TRACK (R) |
| 26 00071 | | DEBETM | DS | C | EXTENT NUMBER (M) |
| 26 00072 | | DEBETB | DS | H | BIN OR MODULE ADDRESS (BB) |
| 26 00074 | | DEBETC | DS | H | CYLINDER NUMBER (CC) |
| 26 00076 | | DEBETH | DS | H | HEAD (TRACK) NUMBER (HH) |
| 26 00078 | | DEBATK | DS | 0XL8 | ALTERNATE TRACK ADDRESS FOR |
| | | * | | | LAST ERROR TK |
| 26 00078 | | DEBATR | DS | C | RECORD NUMBER WITHIN A |
| | | * | | | TRACK (R) |
| 26 00079 | | DEBATM | DS | C | EXTENT NUMBER (M) |
| 26 0007A | | DEBATB | DS | H | BIN OR MODULE ADDRESS (BB) |
| 26 0007C | | DEBATC | DS | H | CYLINDER NUMBER (CC) |
| 26 0007E | | DEBATH | DS | H | HEAD (TRACK) NUMBER (HH) |
| | 26 00080 | DEBEDF | EQU | * | END OF DIRECT ACCESS FIXED |
| | | * | | | PORTION |
| | 26 00080 | DEBDAV | EQU | * | START OF DIRECT ACCESS |
| | | * | | | VARIABLE PORTION |
| 26 00080 | | DEBEXF | DS | X | EXTENT FLAGS |
| | 00000080 | DEBMEX | EQU | X'80' | THIS IS THE LAST EXTENT |
| | 00000040 | DEBEHT | EQU | X'40' | HEADER/TRAILER LABEL EXISTS |
| 26 00081 | | DEBMBB | DS | 0CL3 | FIRST 3 BYTES OF DIRECT |
| | | * | | | ACCESS ADDRESS |
| 26 00081 | | DEBMBM | DS | X | EXTENT NUMBER (M) |
| 26 00082 | | DEBBBB | DS | H | BIN OR MODULE ADDRESS (BB) |
| 26 00084 | | DEBLCH | DS | 0F | LOWER LIMIT OF EXTENT |
| 26 00084 | | DEBLCC | DS | H | CYLINDER NUMBER (CC) |
| 26 00086 | | DEBLHH | DS | H | HEAD (TRACK) NUMBER (HH) |
| 26 00088 | | DEBUCH | DS | 0F | UPPER LIMIT OF EXTENT |
| 26 00088 | | DEBUCC | DS | H | CYLINDER NUMBER (CC) |
| 26 0008A | | DEBUHH | DS | H | HEAD (TRACK) NUMBER (HH) |
| 26 0008C | | DEBTKN | DS | H | NUMBER TRACKS IN EXTENT |
| 26 0008E | | DEBBLT | DS | H | BYTES REMAINING ON LAST |
| | | * | | | TRACK WRITTEN |
| | 26 00090 | DEBEDV | EQU | * | END OF DIRECT ACCESS |
| | | * | | | VARIABLE PORTION |
| | 00000058 | DEBSZ1 | EQU | DEBEND-DEBBEG | SIZE OF COMMON DEB |
| | 00000028 | DEBSZ2 | EQU | DEBEDF-DEBDAF | SIZE OF DIRECT ACCESS |
| | | * | | | FIXED PORTION |
| | 00000010 | DEBSZ3 | EQU | DEBEDV-DEBDAV | SIZE OF DIRECT ACCESS |
| | | * | | | VARIABLE PORTION |

## Data Event Control Block (CHADEC)

The Data Event Control Block (DECB) describes the status of an I/O operation and furnishes the access method routine with the parameters necessary for I/O execution.
The DECB is set by macro-supplied parameters and POSTING subroutines.  Data in the DECB is used by the problem program, and read/write routines, and by the Check and Control (CNTL) routines.
The Read/Write DECB (40 bytes) and the IOREQ DECB (48 bytes) are aligned on doubleword boundaries.

### CHADEC Storage map

| DEC | HEX | | | | | | | |
|-----|-----|---|---|---|---|---|---|---|
| 0 | 0 | DECECB | DECBSF | DECSVC | | DECTYP | | DECLEN |
| 8 | 8 | DECDCB | | | | DECDAD | | |
| 16 | 10 | DECSAD | | | | DECKAD | | |
| 24 | 18 | DECLFN | DECSTA | DECSB0 | DECSB1 | DECRES | DECCSC | DECFLG |
| 32 | 20 | DECCSW | | | | | | |
| 40 | 28 | DECASB | | | | | | |

ORG    DECBSF

| 1 | 1 | DECMSF |
|---|---|--------|

ORG    DECTYP

| 4 | 4 | DECTY1 | DECTY2 |
|---|---|--------|--------|

ORG    DECKAD

| 20 | 14 | DECTAD |
|----|----|--------|

ORG    DECKAD

| 20 | 14 | DECVCA |
|----|----|--------|

ORG    DECLFN

| 24 | 18 | DECID |
|----|----|-------|

```
DEC    HEX

ORG    DECRES


28     1C                                          | DECVCL  |
                                                   |_____|

ORG    DECCSC


29     1D                                            | DECVCS |
                                                     |_____|

ORG    DECFLG


30     1E                                                | DECFL1  | DECFL2 |
                                                         |_____|_____|

ORG    DECCSW


32     20 |_____DECCS1_____|
          |_____|

ORG    DECCS1


32     20 |_____DECVCW_____|DECCB1 |DECCB2 |____DECCBN____|
          |_____|_____|_____|_____|
```

Fields in CHADEC -- by displacement

| DEC | HEX | FIELD | | DEC | HEX | FIELD | | DEC | HEX | FIELD | |
|-----|-----|-------|---|-----|-----|-------|---|-----|-----|-------|---|
| 0000 | 0000 | DECECB | | 0016 | 0010 | DECSAD | | 0031 | 001F | DECGB | (EQU) |
| 0000 | 0000 | DECBEG | | 0020 | 0014 | DECVCA | | 0031 | 001F | DECGA | (EQU) |
| 0001 | 0001 | DECMSF | | 0020 | 0014 | DECTAD | | 0031 | 001F | DECG9 | (EQU) |
| 0001 | 0001 | DECEOF | (EQU) | 0020 | 0014 | DECKAD | | 0031 | 001F | DECG8 | (EQU) |
| 0001 | 0001 | DECMRF | (EQU) | 0024 | 0018 | DECID | | 0032 | 0020 | DECVCW | |
| 0001 | 0001 | DECRSU | (EQU) | 0024 | 0018 | DECLFN | | 0032 | 0020 | DECCS1 | |
| 0001 | 0001 | DECF7 | (EQU) | 0025 | 0019 | DECTWA | (EQU) | 0032 | 0020 | DECCSW | |
| 0001 | 0001 | DECSS | (EQU) | 0025 | 0019 | DECSTA | | 0036 | 0024 | DECCB1 | |
| 0001 | 0001 | DECF3 | (EQU) | 0026 | 001A | DECTO | (EQU) | 0036 | 0024 | DECMUE | (EQU) |
| 0001 | 0001 | DECF2 | (EQU) | 0026 | 001A | DECSB0 | | 0036 | 0024 | DECMUC | (EQU) |
| 0001 | 0001 | DECF1 | (EQU) | 0027 | 001B | DECSB1 | | 0036 | 0024 | DECMDE | (EQU) |
| 0001 | 0001 | DECF0 | (EQU) | 0028 | 001C | DECVCL | | 0036 | 0024 | DECMCE | (EQU) |
| 0001 | 0001 | DECBSF | | 0028 | 001C | DECRES | | 0036 | 0024 | DECMBU | (EQU) |
| 0002 | 0002 | DECSVC | | 0029 | 001D | DECVCS | | 0036 | 0024 | DECMCU | (EQU) |
| 0004 | 0004 | DECTY1 | | 0029 | 001D | DECCSC | | 0036 | 0024 | DECMST | (EQU) |
| 0004 | 0004 | DECIO | (EQU) | 0030 | 001E | DECFL1 | | 0036 | 0024 | DECMAT | (EQU) |
| 0004 | 0004 | DECR07 | (EQU) | 0030 | 001E | DECG7 | (EQU) | 0037 | 0025 | DECCB2 | |
| 0004 | 0004 | DECTYP | | 0030 | 001E | DECG6 | (EQU) | 0037 | 0025 | DECCNC | (EQU) |
| 0005 | 0005 | DECTY2 | | 0030 | 001E | DECG5 | (EQU) | 0037 | 0025 | DECICC | (EQU) |
| 0005 | 0005 | DECTF | (EQU) | 0030 | 001E | DECG4 | (EQU) | 0037 | 0025 | DECCHC | (EQU) |
| 0005 | 0005 | DECTE | (EQU) | 0030 | 001E | DECG3 | (EQU) | 0037 | 0025 | DECCDC | (EQU) |
| 0005 | 0005 | DECTD | (EQU) | 0030 | 001E | DECG2 | (EQU) | 0037 | 0025 | DECPTC | (EQU) |
| 0005 | 0005 | DECTC | (EQU) | 0030 | 001E | DECG1 | (EQU) | 0037 | 0025 | DECPGC | (EQU) |
| 0005 | 0005 | DECTB | (EQU) | 0030 | 001E | DECG0 | (EQU) | 0037 | 0025 | DECINL | (EQU) |
| 0005 | 0005 | DECTA | (EQU) | 0030 | 001E | DECFLG | | 0037 | 0025 | DECPCI | (EQU) |
| 0005 | 0005 | DECT9 | (EQU) | 0031 | 001F | DECFL2 | | 0038 | 0026 | DECCBN | |
| 0005 | 0005 | DECT8 | (EQU) | 0031 | 001F | DECGF | (EQU) | 0040 | 0028 | DECASB | |
| 0006 | 0006 | DECLEN | | 0031 | 001F | DECGE | (EQU) | 0048 | 0030 | DECEND | (EQU) |
| 0008 | 0008 | DECDCB | | 0031 | 001F | DECGD | (EQU) | | | | |
| 0012 | 000C | DECDAD | | 0031 | 001F | DECGC | (EQU) | | | | |

## Alphabetical list of fields in CHADEC

| FIELD | DEC | HEX | | FIELD | DEC | HEX | | FIELD | DEC | HEX | |
|-------|-----|-----|---|-------|-----|-----|---|-------|-----|-----|---|
| DECASB | 0040 | 0028 | | DECGF | 0031 | 001F | (EQU) | DECPTC | 0037 | 0025 | (EQU) |
| DECBEG | 0000 | 0000 | | DECG0 | 0030 | 001E | (EQU) | DECRES | 0028 | 001C | |
| DECBSF | 0001 | 0001 | | DECG1 | 0030 | 001E | (EQU) | DECRSU | 0001 | 0001 | (EQU) |
| DECCBN | 0038 | 0026 | | DECG2 | 0030 | 001E | (EQU) | DECR07 | 0004 | 0004 | (EQU) |
| DECCB1 | 0036 | 0024 | | DECG3 | 0030 | 001E | (EQU) | DECSAD | 0016 | 0010 | |
| DECCB2 | 0037 | 0025 | | DECG4 | 0030 | 001E | (EQU) | DECSB0 | 0026 | 001A | |
| DECCDC | 0037 | 0025 | (EQU) | DECG5 | 0030 | 001E | (EQU) | DECSB1 | 0027 | 001B | |
| DECCHC | 0037 | 0025 | (EQU) | DECG6 | 0030 | 001E | (EQU) | DECSS | 0001 | 0001 | (EQU) |
| DECCNC | 0037 | 0025 | (EQU) | DECG7 | 0030 | 001E | (EQU) | DECSTA | 0025 | 0019 | |
| DECCSC | 0029 | 001D | | DECG8 | 0031 | 001F | (EQU) | DECSVC | 0002 | 0002 | |
| DECCSW | 0032 | 0020 | | DECG9 | 0031 | 001F | (EQU) | DECTA | 0005 | 0005 | (EQU) |
| DECCS1 | 0032 | 0020 | | DECICC | 0037 | 0025 | (EQU) | DECTAD | 0020 | 0014 | |
| DECDAD | 0012 | 000C | | DECID | 0024 | 0018 | | DECTB | 0005 | 0005 | (EQU) |
| DECDCB | 0008 | 0008 | | DECINL | 0037 | 0025 | (EQU) | DECTC | 0005 | 0005 | (EQU) |
| DECECB | 0000 | 0000 | | DECIO | 0004 | 0004 | (EQU) | DECTD | 0005 | 0005 | (EQU) |
| DECEND | 0048 | 0030 | (EQU) | DECKAD | 0020 | 0014 | | DECTE | 0005 | 0005 | (EQU) |
| DECEOF | 0001 | 0001 | (EQU) | DECLEN | 0006 | 0006 | | DECTF | 0005 | 0005 | (EQU) |
| DECFLG | 0030 | 001E | | DECLFN | 0024 | 0018 | | DECTO | 0026 | 001A | (EQU) |
| DECFL1 | 0030 | 001E | | DECMAT | 0036 | 0024 | | DECTWA | 0025 | 0019 | (EQU) |
| DECFL2 | 0031 | 001F | | DECMBU | 0036 | 0024 | (EQU) | DECTYP | 0004 | 0004 | |
| DECF0 | 0001 | 0001 | (EQU) | DECMCE | 0036 | 0024 | (EQU) | DECTY1 | 0004 | 0004 | |
| DECF1 | 0001 | 0001 | (EQU) | DECMCU | 0036 | 0024 | (EQU) | DECTY2 | 0005 | 0005 | |
| DECF2 | 0001 | 0001 | (EQU) | DECMDE | 0036 | 0024 | (EQU) | DECT8 | 0005 | 0005 | (EQU) |
| DECF3 | 0001 | 0001 | (EQU) | DECMRF | 0001 | 0001 | (EQU) | DECT9 | 0005 | 0005 | (EQU) |
| DECF7 | 0001 | 0001 | (EQU) | DECMSF | 0001 | 0001 | | DECVCA | 0020 | 0014 | |
| DECGA | 0031 | 001F | (EQU) | DECMST | 0036 | 0024 | (EQU) | DECVCL | 0028 | 001C | |
| DECGB | 0031 | 001F | (EQU) | DECMUC | 0036 | 0024 | (EQU) | DECVCS | 0029 | 001D | |
| DECGC | 0031 | 001F | (EQU) | DECMUE | 0036 | 0024 | (EQU) | DECVCW | 0032 | 0020 | |
| DECGD | 0031 | 001F | (EQU) | DECPCI | 0037 | 0025 | (EQU) | | | | |
| DECGE | 0031 | 001F | (EQU) | DECPGC | 0037 | 0025 | (EQU) | | | | |

## Assembler listing of CHADEC

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|----------|-------------|--------|------|------|---------|
| | 27 00000 | CHADEC | DSECT | 0D | DATA EVENT CONTROL BLOCK |
| 27 00000 | | DECBEG | DS | 0D | ALIGN ON DOUBLE WORD |
| | | * | | | BOUNDARY |
| 27 00000 | | DECECB | DS | XL1 | EVENT CONTROL BLOCK (ECB) |
| | 00000040 | DECECM | EQU | X'40' | COMPLETION FLAG |
| | 00000000 | DECEC0 | EQU | X'00' | ECB "READ/WRITE" REQUEST |
| | | * | | | CODE |
| | 0000007F | DECEC1 | EQU | X'7F' | ECB "NORMAL COMPLETION" |
| | | * | | | CODE |
| | 00000041 | DECEC2 | EQU | X'41' | ECB "COMPLETE WITH ERROR" |
| | | * | | | CODE |
| | 0000007E | DECEC3 | EQU | X'7E' | ECB "INTERCEPTED" CODE |
| | 00000080 | DECEC4 | EQU | X'80' | ECB "WAIT" CODE |
| | 00000014 | DECEC5 | EQU | X'14' | ECB 'RJE INTERVENTION |
| | | * | | | REQUIRED' CODE |
| 27 00001 | | DECBSF | DS | XL1 | BSAM FLAGS |
| | 27 00001 | DECF0 | EQU | DECBSF | IORCB NOT ISSUED-MSAM |
| | 00000080 | DECF0M | EQU | X'80' | MASK |
| | 27 00001 | DECF1 | EQU | DECBSF | RESERVED |
| | 00000040 | DECF1M | EQU | X'40' | DCF1 MASK BIT |
| | 27 00001 | DECF2 | EQU | DECBSF | RESERVED |
| | 00000020 | DECF2M | EQU | X'20' | DECF2 MASK BIT |
| | 27 00001 | DECF3 | EQU | DECBSF | SIO FAILURE-IOREQ |
| | 00000010 | DECF3M | EQU | X'10' | MASK |
| | 27 00001 | DECSS | EQU | DECBSF | SENSE BYTES COUNT FIELD |
| | | * | | | BITS 4-6    X'02'=8 BYTES |
| | 0000000E | DECSSM | EQU | X'0E' | SENSE BYTE COUNT MASK |
| | | * | | | BITS 4-6 (MODULO 8) |
| | 27 00001 | DECF7 | EQU | DECBSF | EXTENDED AWAIT FLAG |
| | 00000001 | DECF7M | EQU | X'01' | EXTENDED AWAIT MASK |
| | 27 00001 | | |ORG| | DECBSF | |
| 27 00001 | | DECMSF | DS | XL1 | MSAM FLAGS |

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|---|---|---|---|---|---|
| | 27 00001 | DECRSU | EQU | DECBSF | TO BE REISSUED FLAG |
| | 00000080 | DECRSUM | EQU | X'80' | MASK |
| | 27 00001 | DECMRF | EQU | DECBSF | MRF FORMAT WHEN ON |
| | 00000040 | DECMRFM | EQU | X'40' | |
| | 27 00001 | DECEOF | EQU | DECBSF | END OF FILE INDICATER |
| | 00000020 | DECEOFM | EQU | X'20' | |
| 27 00002 | | DECSVC | DS | H | AWAIT SUPVR CALL |
| 27 00004 | | DECTYP | DS | H | OPERATION TYPE CODE |
| | 27 00004 | | \|ORG\| | DECTYP | |
| 27 00004 | | DECTY1 | DS | XL1 | OPN CODE HI ORDER BYTE |
| | 27 00004 | DECR07 | EQU | DECTY1 | REPEAT OPTION BIT |
| | 00000001 | DECROM | EQU | X'01' | REPEAT OPTION BIT MASK |
| | 000000FE | DECRON | EQU | X'FE' | REPEAT OPTION MASK |
| | | * | | | ELIMINATOR |
| | 00000002 | DEC02 | EQU | X'02' | READ INITIAL WITH |
| | | * | | | DIALING(TID)-TAM- |
| | 00000003 | DEC03 | EQU | X'03' | READ INITIAL WITH |
| | | * | | | DIALING/REPEAT(TDR)-TAM- |
| | 00000004 | DEC04 | EQU | X'04' | READ INITIAL (TIN)-TAM- |
| | 00000005 | DEC05 | EQU | X'05' | READ INITIAL/REPEAT |
| | | * | | | (TNR)-TAM- |
| | 00000006 | DEC06 | EQU | X'06' | READ CONTINUE (TCN)-TAM- |
| | 00000007 | DEC07 | EQU | X'07' | READ CONTINUE/REPEAT |
| | | * | | | (TCR)-TAM- |
| | 00000008 | DEC08 | EQU | X'08' | WRITE INITIAL WITH DIALING |
| | | * | | | (TID)-TAM- |
| | 00000009 | DEC09 | EQU | X'09' | WRITE INITIAL WITH |
| | | * | | | DIALING/REPEAT(TDR)-TAM- |
| | 0000000A | DEC0A | EQU | X'0A' | WRITE INITIAL (TIN)-TAM- |
| | 0000000B | DEC0B | EQU | X'0B' | WRITE |
| | | * | | | INITIAL/REPEAT(TNR)-TAM- |
| | 0000000C | DEC0C | EQU | X'0C' | WRITE CONTINUE(TCN)-TAM- |
| | 0000000D | DEC0D | EQU | X'0D' | WRITE |
| | | * | | | CONTINUE/REPEAT(TCR)-TAM- |
| | 0000000E | DEC0E | EQU | X'0E' | WRITE WITH |
| | | * | | | RESPONSE(TIA)-TAM- |
| | 0000000F | DEC0F | EQU | X'0F' | WRITE WITH |
| | | * | | | RESPONSE/REPEAT(TAR)-TAM- |
| | 00000020 | DEC20 | EQU | X'20' | READ-SEQUENTIAL |
| | | * | | | FORWARD(SF)-SAM- |
| | 00000024 | DEC24 | EQU | X'24' | READ-SEQUENTIAL |
| | | * | | | BACKWARD(SB)-SAM- |
| | 00000028 | DEC28 | EQU | X'28' | WRITE-SEQUENTIAL |
| | | * | | | FORWARD(SF)-SAM- |
| | 00000029 | DEC29 | EQU | X'29' | WRITE END OF FILE(WEF)-SAM- |
| | 00000040 | DEC40 | EQU | X'40' | REPLACE BY RETRIEVAL |
| | | * | | | ADDRESS(KR)-VIS-WRITE |
| | 00000043 | DEC43 | EQU | X'43' | REPLACE BY |
| | | * | | | KEY(KS)-VIS-WRITE |
| | 00000044 | DEC44 | EQU | X'44' | WRITE NEW KEY(KT)-VIS-WRITE |
| | 00000048 | DEC48 | EQU | X'48' | READ BY SPECIFIC |
| | | * | | | KEY(KY)-VIS-READ |
| | 00000049 | DEC49 | EQU | X'49' | READ BY RETRIEVAL |
| | | * | | | ADDR.(KZ)-VIS-READ |
| | 0000004A | DEC4A | EQU | X'4A' | EXCLUSIVE READ(KX)-VIS-READ |
| | 27 00004 | DECIO | EQU | DECTY1 | IOREQ DECB |
| | 00000050 | DECIOM | EQU | X'50' | DECIO MASK |
| | 00000064 | DEC64 | EQU | X'64' | AUTOWRAP (2702 OPTION) |
| | 00000065 | DEC65 | EQU | X'65' | DISABLE (2702 OPTION) |
| | 00000066 | DEC66 | EQU | X'66' | ENABLE (2702 OPTION) |
| | 00000067 | DEC67 | EQU | X'67' | INHIBIT (2702 OPTION) |
| | 00000068 | DEC68 | EQU | X'68' | PREPARE (2702 OPTION) |
| | 00000069 | DEC69 | EQU | X'69' | SADONE (2702 OPTION) |
| | 0000006A | DEC6A | EQU | X'6A' | SADTWO (2702 OPTION) |
| | 0000006B | DEC6B | EQU | X'6B' | SADTHREE (2702 OPTION) |
| | 0000006C | DEC6C | EQU | X'6C' | SADZER (2702 OPTION) |
| | 0000006D | DEC6D | EQU | X'6D' | BREAK (2702 OPTION) |
| | 000000C7 | DECC7 | EQU | X'C7' | GAM OPN CODE |

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|----------|-------------|--------|------|------|---------|
| 27 00005 | | DECTY2 | DS | XL1 | OPN CODE LOW ORDER BYTE |
| | 27 00005 | DECT8 | EQU | DECTY2 | CHAR. 'S' IN MACRO OPERAND |
| | | * | | | LENGTH FIELD |
| | 00000080 | DECT8M | EQU | X'80' | DECT 8 MASK BIT |
| | 27 00005 | DECT9 | EQU | DECTY2 | CHAR. 'S' IN VIS MACRO |
| | | * | | | OPERAND AREA FIELD |
| | 00000040 | DECT9M | EQU | X'40' | DECT 9 MASK BIT |
| | 27 00005 | DECTA | EQU | DECTY2 | CHAR C IN MACRO OPERAND |
| | | * | | | LENGTH FIELD |
| | 00000020 | DECTAM | EQU | X'20' | DECTA MASK BIT |
| | 27 00005 | DECTB | EQU | DECTY2 | RESERVED |
| | 00000010 | DECTBM | EQU | X'10' | DECTB MASK BIT |
| | 27 00005 | DECTC | EQU | DECTY2 | RESERVED |
| | 00000008 | DECTCM | EQU | X'08' | DECTC MASK BIT |
| | 27 00005 | DECTD | EQU | DECTY2 | RESERVED |
| | 00000004 | DECTDM | EQU | X'04' | DECTD MASK BIT |
| | 27 00005 | DECTE | EQU | DECTY2 | IOREQ BUFFERED |
| | 00000002 | DECTEM | EQU | X'02' | DECTE MASK BIT |
| | 27 00005 | DECTF | EQU | DECTY2 | RESERVED |
| | 00000001 | DECTFM | EQU | X'01' | DECTF MASK BIT |
| 27 00006 | | DECLEN | DS | H | DATA AREA LENGTH |
| 27 00008 | | DECDCB | DS | F | DCB ADDRESS |
| 27 0000C | | DECDAD | DS | F | DATA AREA ADDRESS |
| 27 00010 | | DECSAD | DS | F | STATUS INDICATORS ADDRESS |
| 27 00014 | | DECKAD | DS | F | ADDRESS OF VIS KEY |
| | 27 00014 | | \|ORG\| | DECKAD | |
| 27 00014 | | DECTAD | DS | F | ADDRESS OF TAM TERMINAL |
| | | * | | | ENTRY LIST |
| | 27 00014 | | \|ORG\| | DECKAD | |
| 27 00014 | | DECVCA | DS | F | VCCW LIST ADDRESS |
| 27 00018 | | DECLFN | DS | XL1 | LOGICAL FUNCTION (TAM) |
| | 27 00018 | | \|ORG\| | DECLFN | |
| 27 00018 | | DECID | DS | XL1 | USER MESSAGE IDENTITY-BSAM |
| | 00000080 | DECI80M | EQU | X'80' | NON-RETRYABLE ERROR |
| | 00000040 | DECI40M | EQU | X'40' | UNPREDICTABLE |
| | | * | | | RESULTS-PROCEED AT |
| | | * | | | OWN RISK |
| 27 00019 | | DECSTA | DS | C | RESERVED FOR STATUS |
| | 27 00019 | DECTWA | EQU | DECSTA | TWAIT REQUIRED |
| | 00000080 | DECTWM | EQU | X'80' | DECTWA MASK BIT FOR TWAIT |
| 27 0001A | | DECSB0 | DS | XL1 | SENSE BYTE 0 |
| | 27 0001A | DECTO | EQU | DECSB0 | TIME OUT FLAG |
| | 00000001 | DECTOM | EQU | X'01' | TIME OUT MASK |
| 27 0001B | | DECSB1 | DS | XL1 | SENSE BYTE 1 |
| 27 0001C | | DECRES | DS | C | RESPONSE--TAM-- |
| | 27 0001C | | \|ORG\| | DECRES | |
| 27 0001C | | DECVCL | DS | CL1 | VCCW LIST DOUBLE-WORD |
| | | * | | | LENGTH |
| 27 0001D | | DECCSC | DS | XL1 | TAM CHARACTER SET CODE |
| | 27 0001D | | \|ORG\| | DECCSC | |
| 27 0001D | | DECVCS | DS | CL1 | NO.OF DBL WDS TO START CCW |
| | | * | | | FROM VCCW ORIGIN |
| 27 0001E | | | DS | 0H | |
| 27 0001E | | DECFLG | DS | XL2 | FLAGS |
| | 27 0001E | | \|ORG\| | DECFLG | |
| 27 0001E | | DECFL1 | DS | XL1 | FLAGS 1 BYTE |
| | 27 0001E | DECG0 | EQU | DECFL1 | 'PURGE' BIT (SET BY |
| | | * | | | QSAM),CHECK ZEROS IT |
| | 00000080 | DECG0M | EQU | X'80' | DECG0 MASK BIT |
| | 27 0001E | DECG1 | EQU | DECFL1 | 'PERMANENT ERROR'SET BY |
| | | * | | | CHECK ROUTINE |
| | 00000040 | DECG1M | EQU | X'40' | DECG 1 MASK BIT |
| | 27 0001E | DECG2 | EQU | DECFL1 | 'ACTIVE'(SET BY TAM OR SAM |
| | | * | | | OR IOREQ |
| | 00000020 | DECG2M | EQU | X'20' | DECG2 MASK BIT |
| | 27 0001E | DECG3 | EQU | DECFL1 | USER ERROR -- TAM -- |
| | 00000010 | DECG3M | EQU | X'10' | DECG3 MASK BIT |
| | 27 0001E | DECG4 | EQU | DECFL1 | RECORD OVERFLOW -- TAM -- |

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|---|---|---|---|---|---|
| | 00000008 | DECG4M | EQU | X'08' | DECG4 MASK BIT |
| | 27 0001E | DECG5 | EQU | DECFL1 | BUFFER OVERFLOW(TAM) OR NEW |
| | | * | | | PAGE |
| | | * | | | INDICATOR(MSAM) |
| | 00000004 | DECG5M | EQU | X'04' | DECG5 MASK BIT |
| | 27 0001E | DECG6 | EQU | DECFL1 | SYSTEM ERROR -- TAM -- |
| | 00000002 | DECG6M | EQU | X'02' | DECG6 MASK BIT |
| | 27 0001E | DECG7 | EQU | DECFL1 | INTERVENTION REQUIRED -- |
| | | * | | | TAM -- |
| | 00000001 | DECG7M | EQU | X'01' | DECG7 MASK BIT |
| 27 0001F | | DECFL2 | DS | XL1 | FLAGS 2 BYTE |
| | 27 0001F | DECG8 | EQU | DECFL2 | ABEND REQUIRED |
| | 00000080 | DECG8M | EQU | X'80' | DECG 8 MASK BIT |
| | 27 0001F | DECG9 | EQU | DECFL2 | EOV REQUESTED |
| | 00000040 | DECG9M | EQU | X'40' | DECG9 MASK BIT |
| | 27 0001F | DECGA | EQU | DECFL2 | SYNAD REQUESTED |
| | 00000020 | DECGAM | EQU | X'20' | DECGA MASK BIT |
| | 27 0001F | DECGB | EQU | DECFL2 | IN USE |
| | 00000010 | DECGBM | EQU | X'10' | DECGB MASK BIT |
| | 27 0001F | DECGC | EQU | DECFL2 | (TAM) WRITE |
| | 00000008 | DECGCM | EQU | X'08' | DECGC MASK BIT |
| | 27 0001F | DECGD | EQU | DECFL2 | (TAM) READ |
| | 00000004 | DECGDM | EQU | X'04' | DECGD MASK BIT |
| | 27 0001F | DECGE | EQU | DECFL2 | (TAM) RESPONSE |
| | 00000002 | DECGEM | EQU | X'02' | DECGE MASK BIT |
| | 27 0001F | DECGF | EQU | DECFL2 | (TAM)ATTENTION |
| | 00000001 | DECGFM | EQU | X'01' | DECGF MASK BIT |
| 27 00020 | | | DS | 0D | |
| 27 00020 | | DECCSW | DS | XL8 | CHANNEL STATUS WORD (CSW) |
| | 27 00020 | | \|ORG\| | DECCSW | |
| 27 00020 | | DECCS1 | DS | XL4 | FIRST WORD OF CSW |
| | 27 00020 | | \|ORG\| | DECCS1 | |
| 27 00020 | | DECVCW | DS | F | VCCW ADDRESS OF OFFENDING |
| | | * | | | CCW |
| 27 00024 | | DECCB1 | DS | XL1 | FIFTH BYTE OF CSW |
| | 27 00024 | DECMAT | EQU | DECCB1 | ATTENTION FLAG |
| | 00000080 | DECMATM | EQU | X'80' | ATTENTION MASK |
| | 27 00024 | DECMST | EQU | DECCB1 | STATUS MODIFIER FLAG |
| | 00000040 | DECMSTM | EQU | X'40' | STATUS MODIFIER MASK |
| | 27 00024 | DECMCU | EQU | DECCB1 | CONTROL UNIT END FLAG |
| | 00000020 | DECMCUM | EQU | X'20' | CONTROL UNIT END MASK |
| | 27 00024 | DECMBU | EQU | DECCB1 | BUSY FLAG |
| | 00000010 | DECMBUM | EQU | X'10' | BUSY MASK |
| | 27 00024 | DECMCE | EQU | DECCB1 | CHANNEL END FLAG |
| | 00000008 | DECMCEM | EQU | X'08' | CHANNEL END MASK |
| | 27 00024 | DECMDE | EQU | DECCB1 | DEVICE END MASK |
| | 00000004 | DECMDEM | EQU | X'04' | DEVICE END FLAG |
| | 27 00024 | DECMUC | EQU | DECCB1 | UNIT CHECK FLAG |
| | 00000002 | DECMUCM | EQU | X'02' | UNIT CHECK MASK |
| | 27 00024 | DECMUE | EQU | DECCB1 | UNIT EXCEPTION FLAG |
| | 00000001 | DECMUEM | EQU | X'01' | UNIT EXCEPTION MASK |
| 27 00025 | | DECCB2 | DS | XL1 | SIXTH BYTE OF CSW |
| | 27 00025 | DECPCI | EQU | DECCB2 | PROGRAM-CONTROLLED |
| | | * | | | INTERRUPTION FLAG |
| | 00000080 | DECPCIM | EQU | X'80' | PROGRAM-CONTROLLED |
| | | * | | | INTERRUPTION MASK |
| | 27 00025 | DECINL | EQU | DECCB2 | INCORRECT LENGTH FLAG |
| | 00000040 | DECINLM | EQU | X'40' | INCORRECT LENGTH MASK |
| | 27 00025 | DECPGC | EQU | DECCB2 | PROGRAM CHECK FLAG |

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|---|---|---|---|---|---|
| | 00000020 | DECPGCM | EQU | X'20' | PROGRAM CHECK MASK |
| | 27 00025 | DECPTC | EQU | DECCB2 | PROTECTION CHECK FLAG |
| | 00000010 | DECPTCM | EQU | X'10' | PROTECTION CHECK MASK |
| | 27 00025 | DECCDC | EQU | DECCB2 | CHANNEL DATA CHECK FLAG |
| | 00000008 | DECCDCM | EQU | X'08' | CHANNEL DATA CHECK MASK |
| | 27 00025 | DECCHC | EQU | DECCB2 | CHANNEL CONTROL CHECK FLAG |
| | 00000004 | DECCHCM | EQU | X'04' | CHANNEL CONTROL CHECK MASK |
| | 27 00025 | DECICC | EQU | DECCB2 | INTERFACE CONTROL CHECK |
| | | * | | | FLAG |
| | 00000002 | DECICCM | EQU | X'02' | INTERFACE CONTROL CHECK |
| | | * | | | MASK |
| | 27 00025 | DECCNC | EQU | DECCB2 | CHAINING CHECK FLAG |
| | 00000001 | DECCNCM | EQU | X'01' | CHAINING CHECK MASK |
| 27 00026 | | DECCBN | DS | H | LAST 2 BYTES OF CSW |
| 27 00028 | | | DS | 0D | |
| 27 00028 | | DECASB | DS | XL8 | SENSE BYTES 0,1,ETC. |
| | 27 00030 | DECEND | EQU | * | |
| | 00000030 | DECSZ | EQU | DECEND-DECBEG | DECB SIZE |

## Device Group Table (CHADEV)

The Device Group Table (CHADEV), by maintaining the current status of each device in the table, provides the data required to assign or release devices. CHADEV occupies 24 bytes of core storage, aligned on a doubleword boundary.

### CHADEV Storage map

```
DEC   HEX
  0     0| DEVLOCK |DEVMAX  |DEVF   |DEVLB   |            DEVAEP              |
         |_____|_____|_____|_____|_____|
  8     8|                            DEVPP                                  |
         |                                                                   |
 16    10| DEVFLG  |UNNAMED |DEVDIG |DEVEP  |DEVNO  |DEVTP  |     DEVSDA      |
         |_____|_____|_____|_____|_____|_____|_____|
```

### ORG   DEVBEG

```
  0     0|                DEVTSI             |       DEVASD      |DEVI    |
         |_____|_____|_____|
```

### Fields in CHADEV -- by displacement

| DEC | HEX | FIELD | | DEC | HEX | FIELD | | DEC | HEX | FIELD | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0000 | 0000 | DEVTSI | | 0003 | 0003 | DEVLB | | 0016 | 0010 | DEVP | (EQU) |
| 0000 | 0000 | DEVAIO | | 0004 | 0004 | DEVASD | | 0016 | 0010 | DEVA | (EQU) |
| 0000 | 0000 | DEVTIO | (EQU) | 0004 | 0004 | DEVAEP | | 0016 | 0010 | DEVFLG | |
| 0000 | 0000 | DEVTCT | (EQU) | 0006 | 0006 | DEVI | | 0016 | 0010 | DEVEN | |
| 0000 | 0000 | DEVLOCK | | 0006 | 0006 | DEVDI | (EQU) | 0018 | 0012 | DEVDIG | |
| 0000 | 0000 | DEVBEG | | 0006 | 0006 | DEVHP | (EQU) | 0019 | 0013 | DEVE7 | (EQU) |
| 0001 | 0001 | DEVMAX | | 0006 | 0006 | DEVHE | (EQU) | 0019 | 0013 | DEVE6 | (EQU) |
| 0002 | 0002 | DEVAE | (EQU) | 0006 | 0006 | DEVHD | (EQU) | 0019 | 0013 | DEVE5 | (EQU) |
| 0002 | 0002 | DEVCT | (EQU) | 0006 | 0006 | DEVRT | (EQU) | 0019 | 0013 | DEVE4 | (EQU) |
| 0002 | 0002 | DEVMS | (EQU) | 0006 | 0006 | DEVMT | (EQU) | 0019 | 0013 | DEVE3 | (EQU) |
| 0002 | 0002 | DEVF | | 0006 | 0006 | DEVT | (EQU) | 0019 | 0013 | DEVE2 | (EQU) |
| 0003 | 0003 | DEVB7 | (EQU) | 0006 | 0006 | DEVD | (EQU) | 0019 | 0013 | DEVE1 | (EQU) |
| 0003 | 0003 | DEVB6 | (EQU) | 0006 | 0006 | DEVN | (EQU) | 0019 | 0013 | DEVE0 | (EQU) |
| 0003 | 0003 | DEVB5 | (EQU) | 0006 | 0006 | DEVC | (EQU) | 0019 | 0013 | DEVEP | |
| 0003 | 0003 | DEVB4 | (EQU) | 0008 | 0008 | DEVPP | | 0020 | 0014 | DEVNO | |
| 0003 | 0003 | DEVB3 | (EQU) | 0016 | 0010 | DEVE | (EQU) | 0021 | 0015 | DEVTP | |
| 0003 | 0003 | DEVB2 | (EQU) | 0016 | 0010 | DEVR | (EQU) | 0022 | 0016 | DEVSDA | |
| 0003 | 0003 | DEVB1 | (EQU) | 0016 | 0010 | DEVS | (EQU) | | | | |
| 0003 | 0003 | DEVB0 | (EQU) | 0016 | 0010 | DEVM | (EQU) | | | | |

### Alphabetical list of fields in CHADEV

| FIELD | DEC | HEX | | FIELD | DEC | HEX | | FIELD | DEC | HEX | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| DEVA | 0016 | 0010 | (EQU) | DEVE | 0016 | 0010 | (EQU) | DEVM | 0016 | 0010 | (EQU) |
| DEVAE | 0002 | 0002 | (EQU) | DEVEN | 0016 | 0010 | | DEVMAX | 0001 | 0001 | |
| DEVAEP | 0004 | 0004 | | DEVEP | 0019 | 0013 | | DEVMS | 0002 | 0002 | (EQU) |
| DEVAIO | 0000 | 0000 | | DEVE0 | 0019 | 0013 | (EQU) | DEVMT | 0006 | 0006 | (EQU) |
| DEVASD | 0004 | 0004 | | DEVE1 | 0019 | 0013 | (EQU) | DEVN | 0006 | 0006 | (EQU) |
| DEVBEG | 0000 | 0000 | | DEVE2 | 0019 | 0013 | (EQU) | DEVNO | 0020 | 0014 | |
| DEVB0 | 0003 | 0003 | (EQU) | DEVE3 | 0019 | 0013 | (EQU) | DEVP | 0016 | 0010 | (EQU) |
| DEVB1 | 0003 | 0003 | (EQU) | DEVE4 | 0019 | 0013 | (EQU) | DEVPP | 0008 | 0008 | |
| DEVB2 | 0003 | 0003 | (EQU) | DEVE5 | 0019 | 0013 | (EQU) | DEVR | 0016 | 0010 | (EQU) |
| DEVB3 | 0003 | 0003 | (EQU) | DEVE6 | 0019 | 0013 | (EQU) | DEVRT | 0006 | 0006 | (EQU) |
| DEVB4 | 0003 | 0003 | (EQU) | DEVE7 | 0019 | 0013 | (EQU) | DEVS | 0016 | 0010 | (EQU) |
| DEVB5 | 0003 | 0003 | (EQU) | DEVF | 0002 | 0002 | | DEVSDA | 0022 | 0016 | |
| DEVB6 | 0003 | 0003 | (EQU) | DEVFLG | 0016 | 0010 | | DEVT | 0006 | 0006 | (EQU) |
| DEVB7 | 0003 | 0003 | (EQU) | DEVHD | 0006 | 0006 | (EQU) | DEVTCT | 0000 | 0000 | (EQU) |
| DEVC | 0006 | 0006 | (EQU) | DEVHE | 0006 | 0006 | (EQU) | DEVTIO | 0000 | 0000 | (EQU) |
| DEVCT | 0002 | 0002 | (EQU) | DEVHP | 0006 | 0006 | (EQU) | DEVTP | 0021 | 0015 | |
| DEVD | 0006 | 0006 | (EQU) | DEVI | 0006 | 0006 | | DEVTSI | 0000 | 0000 | |
| DEVDI | 0006 | 0006 | (EQU) | DEVLB | 0003 | 0003 | | | | | |
| DEVDIG | 0018 | 0012 | | DEVLOCK | 0000 | 0000 | | | | | |

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|---|---|---|---|---|---|
| | 29 00000 | CHADEV | DSECT | | DEVICE GROUP TABLE |
| 29 00000 | | DEVBEG | DS | 0D | ALIGN TABLE ON A DOUBLE |
| | | * | | | WORD BOUNDARY |
| 29 00000 | | DEVLOCK | DS | XL1 | LOCK BYTE |
| 29 00001 | | DEVMAX | DS | XL1 | MAX DEVICE ADDRESS IN TABLE |
| 29 00002 | | DEVF | DS | XL1 | TABLE FLAGS |
| | 29 00002 | DEVMS | EQU | DEVF | CHANNEL TYPE FLAG |
| | 00000080 | DEVMSM | EQU | X'80' | CHANNEL TYPE MASK |
| | 29 00002 | DEVCT | EQU | DEVF | NUMBER OF ACTUAL PATH |
| | | * | | | ENTRIES |
| | 00000070 | DEVCTM | EQU | X'70' | NUMBER OF ACTUAL PATH |
| | | * | | | ENTRIES MASK |
| | 29 00002 | DEVAE | EQU | DEVF | ASYNCHRONOUS INTERRUPT TYPE |
| | | * | | | FLAG |
| | 00000008 | DEVAEM | EQU | X'08' | ASYNCHRONOUS INTERRUPT TYPE |
| | | * | | | MASK |
| 29 00003 | | DEVLB | DS | XL1 | LOW ORDER PATH ADDRESS BITS |
| | 29 00003 | DEVB0 | EQU | DEVLB | FOR PATH 0 |
| | 00000080 | DEVB0M | EQU | X'80' | FOR PATH 0 MASK |
| | 29 00003 | DEVB1 | EQU | DEVLB | FOR PATH 1 |
| | 00000040 | DEVB1M | EQU | X'40' | FOR PATH 1 MASK |
| | 29 00003 | DEVB2 | EQU | DEVLB | FOR PATH 2 |
| | 00000020 | DEVB2M | EQU | X'20' | FOR PATH 2 MASK |
| | 29 00003 | DEVB3 | EQU | DEVLB | FOR PATH 3 |
| | 00000010 | DEVB3M | EQU | X'10' | FOR PATH 3 MASK |
| | 29 00003 | DEVB4 | EQU | DEVLB | FOR PATH 4 |
| | 00000008 | DEVB4M | EQU | X'08' | FOR PATH 4 MASK |
| | 29 00003 | DEVB5 | EQU | DEVLB | FOR PATH 5 |
| | 00000004 | DEVB5M | EQU | X'04' | FOR PATH 5 MASK |
| | 29 00003 | DEVB6 | EQU | DEVLB | FOR PATH 6 |
| | 00000002 | DEVB6M | EQU | X'02' | FOR PATH 6 MASK |
| | 29 00003 | DEVB7 | EQU | DEVLB | FOR PATH 7 |
| | 00000001 | DEVB7M | EQU | X'01' | FOR PATH 7 MASK |
| 29 00004 | | DEVAEP | DS | F | ASYNCHRONOUS INTERRUPT LIST |
| | | * | | | POINTER |
| 29 00008 | | DEVPP | DS | D | ACTUAL PATHS TO DEVICE |
| 29 00010 | | DEVEN | DS | 0D | DOUBLEWORD ENTRY FOR EACH |
| | | * | | | DEVICE IN TABLE |
| 29 00010 | | DEVFLG | DS | XL1 | DEVICE FLAGS |
| | 29 00010 | DEVA | EQU | DEVFLG | AVAILABILITY FLAG |
| | 00000080 | DEVAMK | EQU | X'80' | AVAILABILITY MASK |
| | 29 00010 | DEVP | EQU | DEVFLG | PARTITIONED FLAG |
| | 00000040 | DEVPM | EQU | X'40' | PARTITIONED MASK |
| | 29 00010 | DEVM | EQU | DEVFLG | UNIT DOWN FLAG |
| | 00000020 | DEVMM | EQU | X'20' | UNIT DOWN MASK |
| | 29 00010 | DEVS | EQU | DEVFLG | SENSE HOLD FLAG |
| | 00000010 | DEVSM | EQU | X'10' | SENSE HOLD MASK |
| | 29 00010 | DEVR | EQU | DEVFLG | RESERVED FLAG |
| | 00000008 | DEVRM | EQU | X'08' | RESERVED MASK |
| | 00000078 | DEVAM | EQU | X'78' | INDS RESTRCTING AVAIL OF |
| | | * | | | DEVICE |
| | 29 00010 | DEVE | EQU | DEVFLG | NONEXISTENT FLAG |
| | 00000002 | DEVEM | EQU | X'02' | NON-EXISTENT MASK |
| 29 00011 | | | DS | XL1 | RESERVED |
| 29 00012 | | DEVDIG | DS | XL1 | DIG CODE FOR DEVICE |
| 29 00013 | | DEVEP | DS | XL1 | ENABLE PATH |
| | 29 00013 | DEVE0 | EQU | DEVEP | PATH 0 ENABLED |
| | 00000080 | DEVE0M | EQU | X'80' | PATH 0 ENABLED MASK |
| | 29 00013 | DEVE1 | EQU | DEVEP | PATH 1 ENABLED |
| | 00000040 | DEVE1M | EQU | X'40' | PATH 1 ENABLED MASK |
| | 29 00013 | DEVE2 | EQU | DEVEP | PATH 2 ENABLED |
| | 00000020 | DEVE2M | EQU | X'20' | PATH 2 ENABLED MASK |
| | 29 00013 | DEVE3 | EQU | DEVEP | PATH 3 ENABLED |
| | 00000010 | DEVE3M | EQU | X'10' | PATH 3 ENABLED MASK |
| | 29 00013 | DEVE4 | EQU | DEVEP | PATH 4 ENABLED |
| | 00000008 | DEVE4M | EQU | X'08' | PATH 4 ENABLED MASK |
| | 29 00013 | DEVE5 | EQU | DEVEP | PATH 5 ENABLED |
| | 00000004 | DEVE5M | EQU | X'04' | PATH 5 ENABLED MASK |

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|---|---|---|---|---|---|
| | 29 00013 | DEVE6 | EQU | DEVEP | PATH 6 ENABLED |
| | 00000002 | DEVE6M | EQU | X'02' | PATH 6 ENABLED MASK |
| | 29 00013 | DEVE7 | EQU | DEVEP | PATH 7 ENABLED |
| | 00000001 | DEVE7M | EQU | X'01' | PATH 7 ENABLED MASK |
| 29 00014 | | DEVNO | DS | C | NOT USED |
| 29 00015 | | DEVTP | DS | XL1 | DEVICE TYPE |
| | 00000000 | DEV01 | EQU | X'0' | CODE FOR 2301 DRUM |
| | 00000001 | DEV11 | EQU | X'01' | CODE FOR 2311 DISK |
| | 00000003 | DEV21 | EQU | X'03' | CODE FOR 2321 DATA CELL |
| | 00000004 | DEV14 | EQU | X'04' | CODE FOR 2314 DISK |
| | 00000008 | DEV27 | EQU | X'08' | CODE FOR 2702 TERMINAL |
| | | * | | | DEVICES |
| | 00000010 | DEV2701L | EQU | X'10' | 2701 DEDICATED(LEASED) LINE |
| | 00000011 | DEV2701S | EQU | X'11' | 2701 DIAL UP(SWITCHED) LINE |
| | 00000006 | DEV2703 | EQU | X'06' | CODE FOR 2703 TERMINAL |
| | | * | | | DEVICE |
| | 00000016 | DEV2703L | EQU | X'16' | 2703 DEDICATED(LEASED) LINE |
| | | * | | | I5649 |
| | | * | | | TO A 2780 DEVICE |
| | | * | | | I5649 |
| | 00000017 | DEV2703S | EQU | X'17' | 2703 DIAL UP(SWITCHED) LINE |
| | | * | | | I5649 |
| | | * | | | TO A 2780 DEVICE |
| | | * | | | I5649 |
| 29 00016 | | DEVSDA | DS | H | SYSTEM SYMBOLIC DEVICE |
| | | * | | | ADDRESS |
| | 29 00000 | | \|ORG\| | DEVBEG | |
| 29 00000 | | DEVAIO | DS | 0D | ASYNCHRONOUS INTERRUPT |
| | | * | | | ENTRY |
| 29 00000 | | DEVTSI | DS | F | TASK STATUS INDEX (TSI) |
| | | * | | | POINTER |
| | 29 00000 | DEVTCT | EQU | DEVTSI | POINTER TO TCT SLOT |
| | | * | | | (MT/T) |
| | 29 00000 | DEVTIO | EQU | DEVTSI | POINTER TO TIOCB |
| 29 00004 | | DEVASD | DS | H | SYSTEM SYMBOLIC DEVICE |
| | | * | | | ADDRESS |
| 29 00006 | | DEVI | DS | XL1 | ASYNCHRONOUS INTERRUPT |
| | | * | | | FLAGS |
| | 29 00006 | DEVC | EQU | DEVI | ATTENTION INTERRUPT IS |
| | | * | | | BEING PROCESSED FG |
| | 00000080 | DEVCM | EQU | X'80' | ATTENTION INTERRUPT IS |
| | | * | | | BEING PROCESSED MK |
| | 29 00006 | DEVN | EQU | DEVI | TASK INITIATED FLAG |
| | 00000040 | DEVNM | EQU | X'40' | TASK INITIATED MASK |
| | 29 00006 | DEVD | EQU | DEVI | IGNORE DEVICE END |
| | 00000020 | DEVDM | EQU | X'20' | IGNORE DEVICE END MASK |
| | 29 00006 | DEVT | EQU | DEVI | TSS-ORIENTED FLAG |
| | | * | | | (MT/T) |
| | 00000010 | DEVTM | EQU | X'10' | TSS-ORIENTED MASK |
| | | * | | | (MT/T) |
| | 29 00006 | DEVMT | EQU | DEVI | SPECIAL TASK-ORIENTED FLAG |
| | | * | | | (MT/T) |
| | 00000008 | DEVMTM | EQU | X'08' | SPECIAL TASK-ORIENTED MASK |
| | | * | | | (MT/T) |
| | 29 00006 | DEVRT | EQU | DEVI | TSS UNDER RTAM FLAG |
| | | * | | | (RTAM) |
| | 00000004 | DEVRTM | EQU | X'04' | TSS UNDER RTAM MASK |
| | | * | | | (RTAM) |
| | | * | | | THE FOLLOWING FLAGS HAVE |
| | | * | | | MEANING ONLY |
| | | * | | | WHEN DEVICE CODE |
| | | * | | | EQUALS:DEV2701S OR 2701L |
| | 29 00006 | DEVHD | EQU | DEVI | DISABLE AFTER HIO TO 2701 |
| | | * | | | SDA II FLAG |
| | 00000010 | DEVHDM | EQU | X'10' | DISABLE AFTER HIO TO 2701 |
| | | * | | | SDA II MASK |
| | 29 00006 | DEVHE | EQU | DEVI | ENABLE AFTER HIO TO 2701 |
| | | * | | | SDA II FLAG |

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|----------|-------------|--------|------|------|---------|
| | 00000008 | DEVHEM * | EQU | X'08' | ENABLE AFTER HIO TO 2701 SDA II MASK |
| 29 | 00006 | DEVHP * | EQU | DEVI | PRIME AFTER HIO TO 2701 SDA II FLAG |
| | 00000004 | DEVHPM * | EQU | X'04' | PRIME AFTER HIO TO 2701 SDA II MASK |
| 29 | 00006 | DEVDI * | EQU | DEVI | REMOTE JOB ENTRY DISABLE INTERRUPT FLAG |
| | 00000002 | DEVDIM * | EQU | X'02' | REMOTE JOB ENTRY DISABLE INTERRUPT MASK |

```
* NOTE 1- THE SYMBOLIC DEVICE ENTRIES (LABELS
* DEVFLG THRU DEVSDA) ARE
*                VARIABLE IN NUMBER.  THEY WILL BE
*                EQUIVALENT TO THE NUMBER
*                OF DEVICES SPECIFIED AS BEING ATTACHED TO
*                THE CONTROL UNIT(S)
*                WHOSE ENTRY(IES) IN THE CONTROL UNIT
*                TABLE POINT TO THIS
*                             DEVICE GROUP TABLE.
* NOTE 2- THE ASYNCHRONOUS INTERRUPT ENTRIES
* (DEVAIO)
*                ARE VARIABLE IN NUMBER WITH A MATCHING
*                ENTRY FOR EACH SYM-
*                BOLIC DEVICE ENTRY.  HOWEVER, ONLY THOSE
*                ASYNCHRONOUS ENTRIES
*                THAT MATCH A TERMINAL CLASS SYMBOLIC
*                DEVICE ENTRIES WILL BE
*                ACTIVE.  THOSE THAT MATCH NON-TERMINAL
*                CLASS SYMBOLIC DEVICE
*                ENTRIES WILL BE MARKED NONEXISTENT.
* NOTE 3- SYMBOLIC DEVICE AND ASYNCHRONOUS
* INTERRUPT ENTRIES MUST BEGIN
*                             ON DOUBLE WORD BOUNDARIES.
```

## Damage Report (CHADMR)

The Damage Report describes the nature and extent of CPU and/or storage failures; it also provides for evaluation of the effects of machine malfunction upon programming.

The damage report is prepared by either the System Environment Recording and Retry (SERR) or the recovery nucleus, and furnishes data to the reconfiguration program.

A core storage entry of 16 bytes in the prefixed storage area is allocated to the damage report. It is aligned on a doubleword boundary.

DMRFCC: Failure Classification Code is a positive integer defined to indicate the nature of the machine failure and/or the extent of damage as follows:

| | |
|---|---|
| 00 | Invalid |
| 01 | CPU Failure |
| 02 | Storage Element Failure |
| 03 | CPU and Storage Element Failure |
| 04 | Solid Storage Parity Error |
| 05 | Intermittent Storage Parity Error on a Page |
| 06 | Intermittent Storage Parity Error on a Storage Element |
| 07-3F | Unassigned |
| 40 | Retry Possible |
| 41 | Retry Possible but CPU Failure is solid |
| 42-47 | Unassigned |
| 48 | No drum path available to SERR |
| 49 | Drum Failure during SERR operation |
| 4A-7F | Unassigned |
| 80 | Machine Error with Global Damage |
| 81-8F | Unassigned |
| 90 | SERR Auxiliary Queue Overflow |
| 91-9F | Unassigned |
| A0 | SERR Auxiliary Queue Interlocked |
| A1-FE | Unassigned |
| FF | Failing CCU (Set by Ext. Mach. Check Handler) |

Note: Bit 0 of this byte, if 1, indicates that the System Restart is mandatory.

### CHADMR Storage map

| DEC | HEX | | | | | |
|---|---|---|---|---|---|---|
| 0 | 0 | DMRMOP | | | | |
| 8 | 8 | DMRSC1 | DMRSC2 | DMRSC3 | DMRSCN | DMRFCC |

### Fields in CHADMR -- by displacement

| DEC | HEX | FIELD | | DEC | HEX | FIELD | | | DEC | HEX | FIELD |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0000 | 0000 | DMRMOP | | 0012 | 000C | DMRSC3 | | | 0015 | 000F | DMRFCC |
| 0008 | 0008 | DMRSC1 | | 0014 | 000E | DMRCPU | (EQU) | | | | |
| 0010 | 000A | DMRSC2 | | 0014 | 000E | DMRSCN | | | | | |

### Alphabetical list of fields in CHADMR

| FIELD | DEC | HEX | | FIELD | DEC | HEX | | FIELD | DEC | HEX |
|---|---|---|---|---|---|---|---|---|---|---|
| DMRCPU | 0014 | 000E | (EQU) | DMRSCN | 0014 | 000E | | DMRSC3 | 0012 | 000C |
| DMRFCC | 0015 | 000F | | DMRSC1 | 0008 | 0008 | | | | |
| DMRMOP | 0000 | 0000 | | DMRSC2 | 0010 | 000A | | | | |

### Assembler listing of CHADMR

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|---|---|---|---|---|---|
| | 2B 00000 | CHADMR | DSECT | | |
| | | * | | | DAMAGE REPORT |
| 2B 00000 | | | DS | 0D | |
| 2B 00000 | | DMRMOP | DS | XL8 | MACHINE CHECK OLD PSW |
| 2B 00008 | | DMRSC1 | DS | XL2 | FAILING CORE ADDRESS 1 |
| 2B 0000A | | DMRSC2 | DS | XL2 | FAILING CORE ADDRESS 2 |
| 2B 0000C | | DMRSC3 | DS | XL2 | FAILING CORE ADDRESS 3 |
| 2B 0000E | | DMRSCN | DS | XL1 | NO OF SICK CORES LISTED |

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|----------|-------------|--------|------|------|---------|
| | 2B 0000E | DMRCPU | EQU | DMRSCN | FAILING CPU ID |
| 2B 0000F | | DMRFCC | DS | XL1 | FAILURE CLASSIFICATION CODE |

<u>Data Set Control Blocks in the VTOC (CHADSC & CHADSV & CHADAS & CHADAV & CHAVTC)</u>


The Data Set Control Blocks (DSCBs) for the data sets mounted on a SAM volume are all contained in the Volume Table of Contents (VTOC). All records in the VTOC have a 44-byte key and a 96-byte data entry. Each VTOC record becomes a DSCB of varying type and describes the attributes and extents of a data set.

The first record in the Volume Table of Contents is the VTOC-DSCB, which describes the extents of the VTOC itself. The VTOC-DSCB is format 4 DSCB. The second DSCB in the VTOC is always a direct access device space management (DADSM) DSCB which uses a format 5 DSCB for SAM volumes. The remaining DSCBs in the VTOC describe the extents and attributes of datasets residing on the volume.

A format 1 DSCB defines SAM datasets. If additional space is required to describe the SAM dataset, the format 1 DSCB is chained to one or more format 3 DSCBs to provide additional extents. For VAM, no VTOC exists. DSCBs are located via the catalog or PAT page (see CHAPAT). The format E DSCB describes the VAM datasets. If additional space is needed, these are chained to format F DSCBs.

Each DSCB occupies 140 bytes (44 byte key plus a 96 byte data entry) in virtual storage, aligned on word boundaries.

<u>CHADSC Storage map</u>
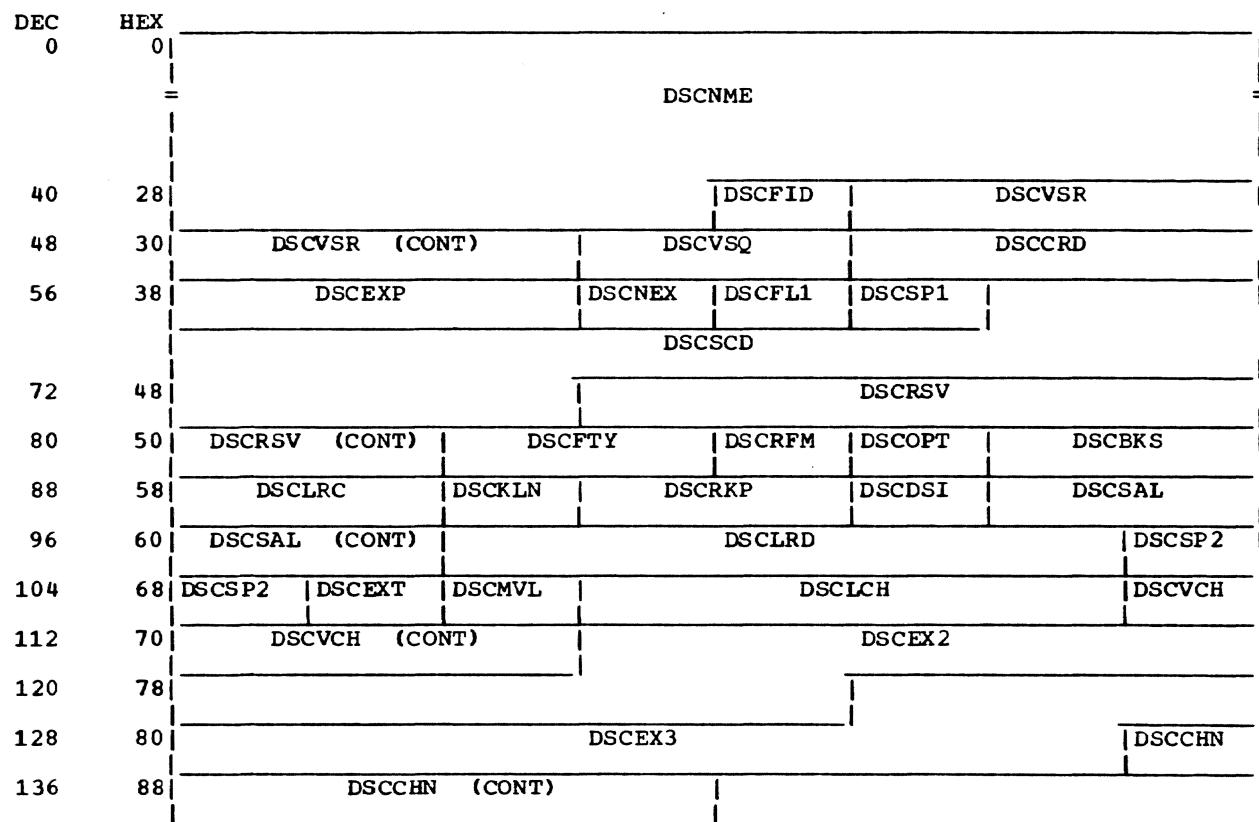


<u>Fields in CHADSC -- by displacement</u>

| DEC | HEX | FIELD | | DEC | HEX | FIELD | | DEC | HEX | FIELD | |
|------|------|--------|-------|------|------|--------|-------|------|------|--------|-------|
| 0000 | 0000 | DSCKY3 | (EQU) | 0060 | 003C | DSCFL1 | | 0084 | 0054 | DSCXTR | (EQU) |
| 0000 | 0000 | DSCNME | | 0061 | 003D | DSCSP1 | | 0084 | 0054 | DSCXBL | (EQU) |
| 0000 | 0000 | DSCSTA | (EQU) | 0062 | 003E | DSCSCD | | 0084 | 0054 | DSCXTO | (EQU) |
| 0004 | 0004 | DSCEX4 | (EQU) | 0075 | 004B | DSCRSV | | 0084 | 0054 | DSCXFL | (EQU) |
| 0044 | 002C | DSCID3 | (EQU) | 0082 | 0052 | DSCXAB | (EQU) | 0084 | 0054 | DSCRFM | |
| 0044 | 002C | DSCFID | | 0082 | 0052 | DSCXIS | (EQU) | 0085 | 0055 | DSCXVC | (EQU) |
| 0045 | 002D | DSCEX9 | (EQU) | 0082 | 0052 | DSCXOU | (EQU) | 0085 | 0055 | DSCOPT | |
| 0045 | 002D | DSCVSR | | 0082 | 0052 | DSCXPO | (EQU) | 0086 | 0056 | DSCBKS | |
| 0051 | 0033 | DSCVSQ | | 0082 | 0052 | DSCXDO | (EQU) | 0088 | 0058 | DSCLRC | |
| 0053 | 0035 | DSCCRD | | 0082 | 0052 | DSCXSO | (EQU) | 0090 | 005A | DSCKLN | |
| 0056 | 0038 | DSCEXP | | 0082 | 0052 | DSCFTY | | 0091 | 005B | DSCRKP | |
| 0059 | 003B | DSCNEX | | 0084 | 0054 | DSCXCC | (EQU) | 0093 | 005D | DSCX14 | (EQU) |

| DEC | HEX | FIELD | | | DEC | HEX | FIELD | | | DEC | HEX | FIELD | |
|------|------|--------|------|---|------|------|--------|------|---|------|------|--------|------|
| 0093 | 005D | DSCX13 | (EQU) | | 0105 | 0069 | DSCX33 | (EQU) | | 0107 | 006B | DSCLCH | |
| 0093 | 005D | DSCX12 | (EQU) | | 0105 | 0069 | DSCX32 | (EQU) | | 0111 | 006F | DSCVCH | |
| 0093 | 005D | DSCX10 | (EQU) | | 0105 | 0069 | DSCX29 | (EQU) | | 0115 | 0073 | DSCEX2 | |
| 0093 | 005D | DSCDSI | | | 0105 | 0069 | DSCX28 | (EQU) | | 0125 | 007D | DSCEX3 | |
| 0094 | 005E | DSCX23 | (EQU) | | 0105 | 0069 | DSCX27 | (EQU) | | 0135 | 0087 | DSCCN3 | (EQU) |
| 0094 | 005E | DSCX22 | (EQU) | | 0105 | 0069 | DSCX26 | (EQU) | | 0135 | 0087 | DSCCHN | |
| 0094 | 005E | DSCSAL | | | 0105 | 0069 | DSCX25 | (EQU) | | 0140 | 008C | DSCEND | (EQU) |
| 0098 | 0062 | DSCLRD | | | 0105 | 0069 | DSCEXT | | | | | | |
| 0103 | 0067 | DSCSP2 | | | 0106 | 006A | DSCMVL | | | | | | |

## Alphabetical list of fields in CHADSC

| FIELD | DEC | HEX | | FIELD | DEC | HEX | | FIELD | DEC | HEX | |
|--------|------|------|------|--------|------|------|------|--------|------|------|------|
| DSCBKS | 0086 | 0056 | | DSCMVL | 0106 | 006A | | DSCXOU | 0082 | 0052 | (EQU) |
| DSCCHN | 0135 | 0087 | | DSCNEX | 0059 | 003B | | DSCXPO | 0082 | 0052 | (EQU) |
| DSCCN3 | 0135 | 0087 | (EQU) | DSCNME | 0000 | 0000 | | DSCXSO | 0082 | 0052 | (EQU) |
| DSCCRD | 0053 | 0035 | | DSCOPT | 0085 | 0055 | | DSCXTO | 0084 | 0054 | (EQU) |
| DSCDSI | 0093 | 005D | | DSCRFM | 0084 | 0054 | | DSCXTR | 0084 | 0054 | (EQU) |
| DSCEND | 0140 | 008C | (EQU) | DSCRKP | 0091 | 005B | | DSCXVC | 0085 | 0055 | (EQU) |
| DSCEXP | 0056 | 0038 | | DSCRSV | 0075 | 004B | | DSCX10 | 0093 | 005D | (EQU) |
| DSCEXT | 0105 | 0069 | | DSCSAL | 0094 | 005E | | DSCX12 | 0093 | 005D | (EQU) |
| DSCEX2 | 0115 | 0073 | | DSCSCD | 0062 | 003E | | DSCX13 | 0093 | 005D | (EQU) |
| DSCEX3 | 0125 | 007D | | DSCSP1 | 0061 | 003D | | DSCX14 | 0093 | 005D | (EQU) |
| DSCEX4 | 0004 | 0004 | (EQU) | DSCSP2 | 0103 | 0067 | | DSCX22 | 0094 | 005E | (EQU) |
| DSCEX9 | 0045 | 002D | (EQU) | DSCSTA | 0000 | 0000 | (EQU) | DSCX23 | 0094 | 005E | (EQU) |
| DSCFID | 0044 | 002C | | DSCVCH | 0111 | 006F | | DSCX25 | 0105 | 0069 | (EQU) |
| DSCFL1 | 0060 | 003C | | DSCVSQ | 0051 | 0033 | | DSCX26 | 0105 | 0069 | (EQU) |
| DSCFTY | 0082 | 0052 | | DSCVSR | 0045 | 002D | | DSCX27 | 0105 | 0069 | (EQU) |
| DSCID3 | 0044 | 002C | (EQU) | DSCXAB | 0082 | 0052 | (EQU) | DSCX28 | 0105 | 0069 | (EQU) |
| DSCKLN | 0090 | 005A | | DSCXBL | 0084 | 0054 | (EQU) | DSCX29 | 0105 | 0069 | (EQU) |
| DSCKY3 | 0000 | 0000 | (EQU) | DSCXCC | 0084 | 0054 | (EQU) | DSCX32 | 0105 | 0069 | (EQU) |
| DSCLCH | 0107 | 006B | | DSCXDO | 0082 | 0052 | (EQU) | DSCX33 | 0105 | 0069 | (EQU) |
| DSCLRC | 0088 | 0058 | | DSCXFL | 0084 | 0054 | (EQU) | | | | |
| DSCLRD | 0098 | 0062 | | DSCXIS | 0082 | 0052 | (EQU) | | | | |

## Assembler listing of CHADSC

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|----------|-------------|--------|------|------|---------|
| 2C 00000 | | CHADSC | DSECT | | |
| | | * DSECT FOR FORMATS 1 AND 3 DSCBS FOR SAM DATA | | | |
| | | * SETS. | | | |
| 2C 00000 | | DSCSTA | EQU | * | START OF DSCB |
| 2C 00000 | | DSCNME | DS | CL44 | DSNAME |
| 2C 0002C | | DSCFID | DS | X | FORMAT ID |
| 2C 0002D | | DSCVSR | DS | XL6 | VOL SERIAL |
| 2C 00033 | | DSCVSQ | DS | XL2 | VOL SEQUENCE |
| 2C 00035 | | DSCCRD | DS | XL3 | CREATION DATE |
| 2C 00038 | | DSCEXP | DS | XL3 | EXPIRATION DATE |
| 2C 0003B | | DSCNEX | DS | X | NUMBER OF EXTENTS ON VOL |
| 2C 0003C | | DSCFL1 | DS | X | BYTES IN DIR BLK |
| 2C 0003D | | DSCSP1 | DS | X | SPARE |
| 2C 0003E | | DSCSCD | DS | XL13 | SYSTEMS CODE |
| 2C 0004B | | DSCRSV | DS | CL7 | RESERVED |
| 2C 00052 | | DSCFTY | DS | XL2 | FILE TYPE |
| | 2C 00052 | DSCXSO | EQU | DSCFTY | SEQUENTIAL ORGANIZATION |
| | 2C 00052 | DSCXDO | EQU | DSCFTY | DIRECT |
| | 2C 00052 | DSCXPO | EQU | DSCFTY | PARTITIONED |
| | 2C 00052 | DSCXOU | EQU | DSCFTY | UNDEFINED |
| | 2C 00052 | DSCXIS | EQU | DSCFTY | INDEXED SEQUENTIAL |
| | 2C 00052 | DSCXAB | EQU | DSCFTY | ABSOLUTE LOCATION MUST NOT |
| | | * | | | CHANGE |
| | | * | | | MASKS TO TEST FILE TYPE. |
| | 00000040 | DSCM15 | EQU | X'40' | SEQUENTIAL ORGANIZATION |
| | 00000020 | DSCM16 | EQU | X'20' | DIRECT ORGANIZATION |
| | 00000002 | DSCM17 | EQU | X'02' | PARTITIONED ORGANIZATION |
| | 00000000 | DSCM18 | EQU | X'00' | ORGANIZATION UNDEFINED. |
| | 00000080 | DSCM30 | EQU | X'80' | INDEXED SEQUENTIAL |
| | | * | | | ORGANIZATION |

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|----------|-------------|--------|------|------|---------|
| | 00000001 | DSCM31 | EQU | X'01' | ABSOLUTE LOCATION MUST NOT |
| | | * | | | CHANGE |
| 2C 00054 | | DSCRFM | DS | X | RECFM |
| | 2C 00054 | DSCXFL | EQU | DSCRFM | FIXED,VARIABLE OR UNDEFINED |
| | | * | | | LENGTH FORMAT |
| | 2C 00054 | DSCXTO | EQU | DSCRFM | TRACK OVERFLOW BIT |
| | 2C 00054 | DSCXBL | EQU | DSCRFM | BLOCKED RECORD BIT |
| | 2C 00054 | DSCXTR | EQU | DSCRFM | TRUNCATED RECORD BIT |
| | 2C 00054 | DSCXCC | EQU | DSCRFM | ASA OR MACHINE CODE CONTROL |
| | | * | | | CHARACTER |
| | | * | | | MASKS TO TEST RECORD FORMAT. |
| | 00000080 | DSCM01 | EQU | X'80' | FIXED LENGTH RECORD |
| | 00000040 | DSCM02 | EQU | X'40' | VARIABLE LENGTH RECORD |
| | 000000C0 | DSCM03 | EQU | X'C0' | UNDEFINED RECORD FORMAT |
| | 00000020 | DSCM04 | EQU | X'20' | TRACK OVERFLOW FEATURE MUST |
| | | * | | | BE USED |
| | 00000010 | DSCM05 | EQU | X'10' | BLOCKED |
| | 00000008 | DSCM06 | EQU | X'08' | TRUNCATED RECORDS IN FILE |
| | 00000004 | DSCM07 | EQU | X'04' | CONTROL CHARACTER ASA CODE |
| | 00000002 | DSCM08 | EQU | X'02' | CONTROL CHARACTER MACHINE |
| | | * | | | CODE |
| 2C 00055 | | DSCOPT | DS | X | OPTCD |
| | 2C 00055 | DSCXVC | EQU | DSCOPT | DATA SET CREATED USING |
| | | * | | | VALIDITY CHECK |
| | | * | | | MASKS TO TEST OPTION CODES. |
| | 00000080 | DSCM19 | EQU | X'80' | DATA SET CREATED USING WRT |
| | | * | | | VLDTY CHK |
| 2C 00056 | | DSCBKS | DS | XL2 | BLKSIZE |
| 2C 00058 | | DSCLRC | DS | XL2 | LREC |
| 2C 0005A | | DSCKLN | DS | X | KEYLEN |
| 2C 0005B | | DSCRKP | DS | XL2 | KEY LOCATION --RKP |
| 2C 0005D | | DSCDSI | DS | X | DS INDICATORS |
| | 2C 0005D | DSCX10 | EQU | DSCDSI | LAST VOLUME CONTAINING DATA |
| | | * | | | SET |
| | 2C 0005D | DSCX12 | EQU | DSCDSI | BLOCK LENGTH MULTIPLE OF 8 |
| | | * | | | BYTES |
| | 2C 0005D | DSCX13 | EQU | DSCDSI | DATA SET SECURITY PROTECTED |
| | 2C 0005D | DSCX14 | EQU | DSCDSI | INTEGRITY BIT |
| | | * MASKS TO TEST DATA SET INDICATORS. | | | |
| | 00000080 | DSCM10 | EQU | X'80' | LAST VOLUME CONTAINING DATA |
| | | * | | | SET. |
| | 00000020 | DSCM12 | EQU | X'20' | BLOCK LENGTH MULTIPLE OF 8 |
| | | * | | | BYTES |
| | 00000010 | DSCM13 | EQU | X'10' | DATA SET SECURITY PROTECTED |
| | 00000008 | DSCM14 | EQU | X'08' | INTEGRITY BIT |
| 2C 0005E | | DSCSAL | DS | XL4 | SECONDARY ALLOCATION |
| | 2C 0005E | DSCX22 | EQU | DSCSAL | RECORDS TRACKS OR CYLINDERS |
| | 2C 0005E | DSCX23 | EQU | DSCSAL | ORIGINAL REQUEST WAS FOR |
| | | * | | | INDEXED SEQUENTL |
| | | * SECONDARY SPACE ALLOCATION TYPE. | | | |
| | 000000C0 | DSCM22 | EQU | X'C0' | SET,CYLINDERS.UNSET,NO |
| | | * | | | 2NDRY ALLOCTN |
| | 00000080 | DSCM34 | EQU | X'80' | TRACKS |
| | 00000040 | DSCM35 | EQU | X'40' | RECORDS |
| | 00000020 | DSCM23 | EQU | X'20' | INDEXED SEQUENTIAL |
| | 00000001 | DSCM36 | EQU | X'01' | ORIG REQUEST WAS A RECORD |
| | | * | | | REQUEST TOBE ROUNDED UP |
| | 00000002 | DSCM37 | EQU | X'02' | ORIG REQUEST WAS FOR THE 5 |
| | | * | | | OR LESS SPECIFIED EXTS |
| | 00000004 | DSCM38 | EQU | X'04' | ORIGINAL REQUEST WAS FOR |
| | | * | | | MAX CONTIGUOUS QUANTITY |
| | 00000008 | DSCM39 | EQU | X'08' | ORIGINAL REQUEST WAS FOR A |
| | | * | | | CONTIGUOUS EXTENT |
| 2C 00062 | | DSCLRD | DS | XL5 | TTRLL OF LAST RECORD |
| 2C 00067 | | DSCSP2 | DS | XL2 | SPARE |
| 2C 00069 | | DSCEXT | DS | X | EXTENT TYPE |
| | 2C 00069 | DSCX25 | EQU | DSCEXT | EXTENT FIELDS UNUSED |
| | 2C 00069 | DSCX26 | EQU | DSCEXT | PRIME OR CONSECUTIVE AREA |

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|----------|-------------|--------|------|------|---------|
| | 2C 00069 | DSCX27 * | EQU | DSCEXT | OVERFLOW AREA FOR INDEXED SEQUENTIAL |
| | 2C 00069 | DSCX28 * | EQU | DSCEXT | INDEX AREA FOR INDEXED SEQUENTIAL |
| | 2C 00069 | DSCX29 * | EQU | DSCEXT | 1 TRACK RESERVED FOR USER LABELS |
| | 2C 00069 | DSCX32 | EQU | DSCEXT | EXTENT IS SHARING CYLINDERS |
| | 2C 00069 | DSCX33 * * | EQU | DSCEXT | EXTENT OCCUPIES INTEGER NUMBER OF CYLNDRS EXTENT TYPE INDICATOR |
| | 00000000 | DSCM25 | EQU | X'00' | EXTENT FIELDS UNUSED |
| | 00000001 | DSCM26 | EQU | X'01' | PRIME OR CONSECUTIVE AREA |
| | 00000002 | DSCM27 * | EQU | X'02' | OVERFLOW AREA FOR INDEXED SEQUENTIAL |
| | 00000040 | DSCM28 * | EQU | X'40' | 1 TRACK RESERVED FOR USERS LABELS |
| | 00000080 | DSCM29 | EQU | X'80' | SHARED CYLINDERS |
| | 00000080 | DSCM32 | EQU | X'80' | EXTENT IS SHARING CYLINDERS |
| | 00000081 | DSCM33 * | EQU | X'81' | EXTENT OCCUPIES INTEGER NUMBER OF CYLNDRS |
| 2C 0006A | | DSCMVL * | DS | X | EXTENT SEQUENCE ALWAYS 0 IN FORMAT 1 DSCB |
| 2C 0006B | | DSCLCH | DS | XL4 | LOWER CCHH |
| 2C 0006F | | DSCVCH | DS | XL4 | UPPER CCHH |
| 2C 00073 | | DSCEX2 | DS | XL10 | FIRST ADDITIONAL EXTENT |
| 2C 0007D | | DSCEX3 | DS | XL10 | SECOND ADDITIONAL EXTENT |
| 2C 00087 | | DSCCHN | DS | XL5 | CCHHR CHAIN TO FORMAT 3 |
| | 2C 0008C | DSCEND | EQU | * | END OF DSCB |
| | 0000008C | DSCSIZ | EQU | DSCEND-DSCSTA | SIZE OF DSCB |
| | 0000000A | DSCESZ | EQU | DSCEX2-DSCEXT | SIZE OF EXTENT ENTRY |
| | | * | | FORMAT 3 DSCB.CONTINUATION DSCB FOR SAM DATA | |
| | | * | | SETS. | |
| | 2C 00000 | DSCKY3 | EQU | DSCNME | KEY IDENTIFICATION-1 WORD |
| | 2C 00004 | DSCEX4 * | EQU | DSCNME+4 | ADDR OF FIRST 4 EXTS OF FM3 DSCB |
| | 2C 0002C | DSCID3 | EQU | DSCFID | FORMAT ID,X'F3' |
| | 2C 0002D | DSCEX9 * | EQU | DSCFID+1 | ADDR OF NEXT 9 EXTS OF FM3 DSCB |
| | 2C 00087 | DSCCN3 | EQU | DSCCHN | NEXT DSCB |

## CHADSV Storage map

```
DEC   HEX  _____
  0    0| |                                                                   |
       | |                                                                   |
       = |                              DSVNME                               =
       | |                                                                   |
       | |                                                                   |
 40   28| |                    |DSVFID  |         DSVDLU                      |
 48   30| |        DSVROU       |      DSVVSQ      |        DSVCRD            |
 56   38| |        DSVEXD       |DSVNEX  |    DSVLPB    |                     |
       | |                      |          DSVSCD                            |
       | |                                                                   |
 72   48| |                   |DSVXPD  |          DSVSP1                      |
 80   50| | DSVSP1  (CONT)  |     DSVFTP    |DSVRFM |DSVOPC |     DSVRCL       |
 88   58| | DSVRCL  (CONT) |DSVKYL |     DSVKLC    |DSVDSI |    DSVSAL         |
 96   60| | DSVSAL  (CONT) |    DSVNDP    |     DSVDOP     |DSVNOP |DSVTNP     |
104   68|DSVTNP |    DSVNXP   |     DSVFXP    |     DSVFVN     |              |
       | |                          DSVXP2                                   |
       | |                                                                   |
       | |                                                                   |
       | |                                                                   |
128   80| |                                                      |DSVNXT     |
136   88| |            DSVNXT  (CONT)              |                          |
       | |_____|                          |
```
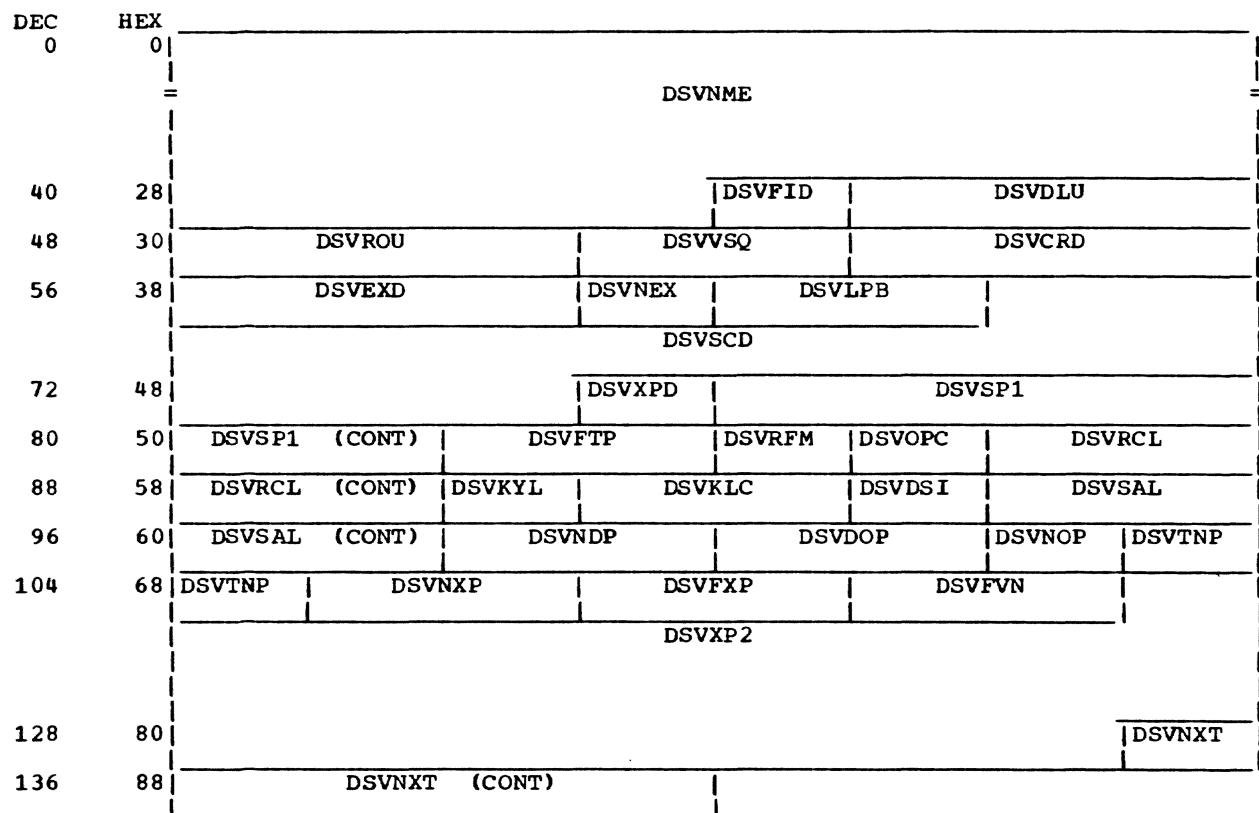
## Fields in CHADSV -- by displacement

| DEC  | HEX  | FIELD  |       | DEC  | HEX  | FIELD  |       | DEC  | HEX  | FIELD  |       |
|------|------|--------|-------|------|------|--------|-------|------|------|--------|-------|
| 0000 | 0000 | DSV7KY | (EQU) | 0082 | 0052 | DSVX04 | (EQU) | 0093 | 005D | DSVX19 | (EQU) |
| 0000 | 0000 | DSVNME |       | 0082 | 0052 | DSVX03 | (EQU) | 0093 | 005D | DSVX17 | (EQU) |
| 0000 | 0000 | DSVSTA | (EQU) | 0082 | 0052 | DSVX02 | (EQU) | 0093 | 005D | DSVDSI |       |
| 0002 | 0002 | DSV7X1 | (EQU) | 0082 | 0052 | DSVX01 | (EQU) | 0094 | 005E | DSVX24 | (EQU) |
| 0044 | 002C | DSV7ID | (EQU) | 0082 | 0052 | DSVFTP |       | 0094 | 005E | DSVSAL |       |
| 0044 | 002C | DSVFID |       | 0084 | 0054 | DSVX12 | (EQU) | 0098 | 0062 | DSVNDP |       |
| 0045 | 002D | DSV7X2 | (EQU) | 0084 | 0054 | DSVX11 | (EQU) | 0100 | 0064 | DSVDOP |       |
| 0045 | 002D | DSVDLU |       | 0084 | 0054 | DSVX10 | (EQU) | 0102 | 0066 | DSVNOP |       |
| 0048 | 0030 | DSVROU |       | 0084 | 0054 | DSVX09 | (EQU) | 0103 | 0067 | DSVTNP |       |
| 0051 | 0033 | DSVVSQ |       | 0084 | 0054 | DSVX06 | (EQU) | 0105 | 0069 | DSVX25 | (EQU) |
| 0053 | 0035 | DSVCRD |       | 0084 | 0054 | DSVRFM |       | 0105 | 0069 | DSVNXP |       |
| 0056 | 0038 | DSVEXD |       | 0085 | 0055 | DSVX14 | (EQU) | 0107 | 006B | DSVFXP |       |
| 0059 | 003B | DSVNEX |       | 0085 | 0055 | DSVOPC |       | 0109 | 006D | DSVFVN |       |
| 0060 | 003C | DSVLPB |       | 0086 | 0056 | DSVRCL |       | 0111 | 006F | DSVXP2 |       |
| 0062 | 003E | DSVSCD |       | 0090 | 005A | DSVKYL |       | 0135 | 0087 | DSV7NX | (EQU) |
| 0075 | 004B | DSVXPD |       | 0091 | 005B | DSVKLC |       | 0135 | 0087 | DSVNXT |       |
| 0076 | 004C | DSVSP1 |       | 0093 | 005D | DSVX21 | (EQU) | 0140 | 008C | DSVEND | (EQU) |
| 0082 | 0052 | DSVX07 | (EQU) | 0093 | 005D | DSVX20 | (EQU) |      |      |        |       |

## Alphabetical list of fields in CHADSV

| FIELD  | DEC  | HEX  |       | FIELD  | DEC  | HEX  | FIELD  | DEC  | HEX  |       |
|--------|------|------|-------|--------|------|------|--------|------|------|-------|
| DSVCRD | 0053 | 0035 |       | DSVFXP | 0107 | 006B | DSVNXT | 0135 | 0087 |       |
| DSVDLU | 0045 | 002D |       | DSVKLC | 0091 | 005B | DSVOPC | 0085 | 0055 |       |
| DSVDOP | 0100 | 0064 |       | DSVKYL | 0090 | 005A | DSVRCL | 0086 | 0056 |       |
| DSVDSI | 0093 | 005D |       | DSVLPB | 0060 | 003C | DSVRFM | 0084 | 0054 |       |
| DSVEND | 0140 | 008C | (EQU) | DSVNDP | 0098 | 0062 | DSVROU | 0048 | 0030 |       |
| DSVEXD | 0056 | 0038 |       | DSVNEX | 0059 | 003B | DSVSAL | 0094 | 005E |       |
| DSVFID | 0044 | 002C |       | DSVNME | 0000 | 0000 | DSVSCD | 0062 | 003E |       |
| DSVFTP | 0082 | 0052 |       | DSVNOP | 0102 | 0066 | DSVSP1 | 0076 | 004C |       |
| DSVFVN | 0109 | 006D |       | DSVNXP | 0105 | 0069 | DSVSTA | 0000 | 0000 | (EQU) |

| FIELD | DEC | HEX | | FIELD | DEC | HEX | | FIELD | DEC | HEX | |
|-------|-----|-----|--|-------|-----|-----|--|-------|-----|-----|--|
| DSVTNP | 0103 | 0067 | | DSVX07 | 0082 | 0052 | (EQU) | DSVX21 | 0093 | 005D | (EQU) |
| DSVVSQ | 0051 | 0033 | | DSVX09 | 0084 | 0054 | (EQU) | DSVX24 | 0094 | 005E | (EQU) |
| DSVXPD | 0075 | 004B | | DSVX10 | 0084 | 0054 | (EQU) | DSVX25 | 0105 | 0069 | (EQU) |
| DSVXP2 | 0111 | 006F | | DSVX11 | 0084 | 0054 | (EQU) | DSV7ID | 0044 | 002C | (EQU) |
| DSVX01 | 0082 | 0052 | (EQU) | DSVX12 | 0084 | 0054 | (EQU) | DSV7KY | 0000 | 0000 | (EQU) |
| DSVX02 | 0082 | 0052 | (EQU) | DSVX14 | 0085 | 0055 | (EQU) | DSV7NX | 0135 | 0087 | (EQU) |
| DSVX03 | 0082 | 0052 | (EQU) | DSVX17 | 0093 | 005D | (EQU) | DSV7X1 | 0002 | 0002 | (EQU) |
| DSVX04 | 0082 | 0052 | (EQU) | DSVX19 | 0093 | 005D | (EQU) | DSV7X2 | 0045 | 002D | (EQU) |
| DSVX06 | 0084 | 0054 | (EQU) | DSVX20 | 0093 | 005D | (EQU) | | | | |

## Assembler listing of CHADSV

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|----------|-------------|--------|------|------|---------|
| | 2F 00000 | CHADSV | DSECT | | |
| | | * | DSECT FOR FORMATS A AND B ,VAM,DSCBS. | | |
| | | * | | | FORMAT A DSCB. |
| | 2F 00000 | DSVSTA | EQU | * | |
| 2F 00000 | | DSVNME | DS | CL44 | DS NAME |
| 2F 0002C | | DSVFID | DS | X | FORMAT IDENTIFIER |
| 2F 0002D | | DSVDLU | DS | XL3 | DATE LAST USED |
| 2F 00030 | | DSVROU | DS | XL3 | RATE OF USE |
| 2F 00033 | | DSVVSQ | DS | XL2 | VOLUME SEQUENCE NUMBER |
| 2F 00035 | | DSVCRD | DS | XL3 | CREATION DATE |
| 2F 00038 | | DSVEXD | DS | XL3 | EXPIRATION DATE |
| 2F 0003B | | DSVNEX | DS | X | NUMBER OF EXTENTS |
| 2F 0003C | | DSVLPB | DS | XL2 | NUMBER OF BYTES USED IN |
| | | * | | | LAST PAGE |
| 2F 0003E | | DSVSCD | DS | XL13 | SYSTEM CODE |
| 2F 0004B | | DSVXPD | DS | X | PAD FOR INDEX SEQUENTIAL DS |
| 2F 0004C | | DSVSP1 | DS | XL6 | SPARE |
| 2F 00052 | | DSVFTP | DS | XL2 | FILE TYPE |
| | 2F 00052 | DSVX01 | EQU | DSVFTP | VAM SEQUENTIAL ORGANIZATION |
| | 2F 00052 | DSVX02 | EQU | DSVFTP | VAM INDEX SEQUENTIAL |
| | 2F 00052 | DSVX03 | EQU | DSVFTP | VAM PARTITIONED   INDEX |
| | | * | | | SEQUENTIAL |
| | 2F 00052 | DSVX04 | EQU | DSVFTP | VAM PARTITIONED   SEQUENTIAL |
| | 2F 00052 | DSVX07 | EQU | DSVFTP | VAM PARTITIONED |
| | | * | | | FILE TYPE |
| | 00000072 | DSVM01 | EQU | X'72' | SEQUENTIAL ORGANIZATION |
| | 00000071 | DSVM02 | EQU | X'71' | INDEX SEQUENTIAL |
| | 00000073 | DSVM03 | EQU | X'73' | PARTITIONED INDEX |
| | | * | | | SEQUENTIAL |
| | 00000074 | DSVM04 | EQU | X'74' | PARTITIONED SEQUENTIAL |
| | 00000075 | DSVM24 | EQU | X'75' | PARTITIONED |
| 2F 00054 | | DSVRFM | DS | X | RECORD FORMAT |
| | 2F 00054 | DSVX06 | EQU | DSVRFM | FIXED,VARIABLE OR UNDEFINED |
| | | * | | | LENGTH |
| | 2F 00054 | DSVX09 | EQU | DSVRFM | TRACK OVERFLOW FEATURE |
| | | * | | | REQUIRED |
| | 2F 00054 | DSVX10 | EQU | DSVRFM | BLOCKED |
| | 2F 00054 | DSVX11 | EQU | DSVRFM | TRUNCATED RECORDS |
| | 2F 00054 | DSVX12 | EQU | DSVRFM | ASA OR MACHINE CODE CONTROL |
| | | * | | | CHARACTE. |
| | 00000080 | DSVM06 | EQU | X'80' | FIXED LENGTH RECORD |
| | 00000040 | DSVM07 | EQU | X'40' | VARIABLE LENGTH RECORD |
| | 000000C0 | DSVM08 | EQU | X'C0' | UNDEFINED RECORD LENGTH |
| | 00000020 | DSVM09 | EQU | X'20' | TRACK OVERFLOW FEATURE MUST |
| | | * | | | BE USED |
| | 00000010 | DSVM10 | EQU | X'10' | BLOCKED |
| | 00000008 | DSVM11 | EQU | X'08' | TRUNCATED RECORDS IN FILE |
| | 00000004 | DSVM12 | EQU | X'04' | CONTROL CHARACTER ASA CODE |
| | 00000002 | DSVM13 | EQU | X'02' | CONTROL CHARACTER MACHINE |
| | | * | | | CODE |
| 2F 00055 | | DSVOPC | DS | X | OPTION CODES |
| | 2F 00055 | DSVX14 | EQU | DSVOPC | DATA SET CREATED USING WRT |
| | | * | | | VLDTY CHK |
| | | * | | | OPTION CODES. |
| | 00000080 | DSVM14 | EQU | X'80' | DATA SET CREATED WITH WRT |

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|----------|-------------|--------|------|------|---------|
|          |             | *      |      |      | VLDTY CHK |
| 2F 00056 |             | DSVRCL | DS   | XL4  | RECORD LENGTH |
| 2F 0005A |             | DSVKYL | DS   | X    | KEY LENGTH |
| 2F 0005B |             | DSVKLC | DS   | XL2  | KEY LOCATION |
| 2F 0005D |             | DSVDSI | DS   | X    | DATA SET INDICATORS |
|          | 2F 0005D    | DSVX17 | EQU  | DSVDSI | LAST VOLUME CONTAINING DATA |
|          |             | *      |      |      | SET |
|          | 2F 0005D    | DSVX19 | EQU  | DSVDSI | BLOCK LENGTH MULTIPLE OF 8 |
|          |             | *      |      |      | BYTES |
|          | 2F 0005D    | DSVX20 | EQU  | DSVDSI | DATA SET SECURITY PROTECTED |
|          | 2F 0005D    | DSVX21 | EQU  | DSVDSI | INTEGRITY BIT |
|          |             | *      |      |      | DATA SET INDICATORS. |
|          | 00000080    | DSVM17 | EQU  | X'80' | LAST VOLUME CONTAINING DATA |
|          |             | *      |      |      | SET |
|          | 00000020    | DSVM19 | EQU  | X'20' | BLOCK LENGTH MULTIPLE OF 8 |
|          |             | *      |      |      | BYTES |
|          | 00000010    | DSVM20 | EQU  | X'10' | DATA SET SECURITY PROTECTED |
|          | 00000008    | DSVM21 | EQU  | X'08' | INTEGRITY BIT |
| 2F 0005E |             | DSVSAL | DS   | XL4  | SECONDARY ALLOCATION |
|          | 2F 0005E    | DSVX24 | EQU  | DSVSAL | SECONDARY ALLOCATION FLAG |
|          | 00000040    | DSVM26 | EQU  | X'40' | 1-SEC ALLOCATION IN PAGES |
|          |             | *      |      |      | 0-NO SEC ALLOCATION |
| 2F 00062 |             | DSVNDP | DS   | XL2  | NUMBER OF DATA PAGES |
| 2F 00064 |             | DSVDOP | DS   | XL2  | NUMBER OF DIRECTORY PAGES |
| 2F 00066 |             | DSVNOP | DS   | X    | NUMBER OF OVERFLOW PAGES |
| 2F 00067 |             | DSVTNP | DS   | XL2  | TOTAL NUMBER OP PAGES |
|          |             | *      |      |      | ASSIGNED |
|          |             | *      |      |      | EXTENTS FIELD. |
| 2F 00069 |             | DSVNXP | DS   | XL2  | EXTENT FLAG AND NUMBER |
|          |             | *      |      |      | XTRNL PAGES |
|          | 2F 00069    | DSVX25 | EQU  | DSVNXP | FIRST 2 BITS ARE FLAGS |
|          | 000000C0    | DSVM22 | EQU  | X'C0' | AFTER TM CC8 MEANS PAGES |
|          |             | *      |      |      | ASSIGNED AND IN USE |
|          | 00000040    | DSVM23 | EQU  | X'40' | PAGES AVAILABLE FOR USE |
| 2F 0006B |             | DSVFXP | DS   | XL2  | FIRST EXTERNAL PAGE NUMBER |
| 2F 0006D |             | DSVFVN | DS   | XL2  | FIRST VIRTUAL PAGE NUMBER |
| 2F 0006F |             | DSVXP2 | DS   | XL24 | 4 MORE EXTENTS |
| 2F 00087 |             | DSVNXT | DS   | XL5  | CONTINUATION DSCB CCHHR |
|          | 2F 0008C    | DSVEND | EQU  | *    | END OF DSCB |
|          | 0000008C    | DSVSIZ | EQU  | DSVEND-DSVNME | SIZE OF DSCB |
|          | 00000006    | DSVXSZ | EQU  | DSVXP2-DSVNXP | SIZE OF EXTENT FIELD |
|          |             | *      | FORMAT B DSCB.CONTINUATION DSCB FOR VAM DATA |  |  |
|          |             | *      | SET. |      |  |
|          | 2F 00000    | DSV7KY | EQU  | DSVNME | FORMAT 7 KEY FIELD |
|          | 2F 00002    | DSV7X1 | EQU  | DSVNME+2 | ADDRESS OF FIRST 7 EXTENTS |
|          | 2F 0002C    | DSV7ID | EQU  | DSVFID | FORMAT ID,X'FB' |
|          | 2F 0002D    | DSV7X2 | EQU  | DSVDLU | ADDRESS OF NEXT 15 EXTENTS |
|          | 2F 00087    | DSV7NX | EQU  | DSVNXT | NEXT DSCB |

## CHADAS Storage map

| DEC | HEX | | | |
|-----|-----|--|--|--|
| 0 | 0 | DASKEY | DASE11 | DASE12 |
| 8 | 8 | DASE13 | | |

```
DEC   HEX
                |_____|
            |___|  |                                                     |
            |      |                    DASE2                             |
            |      |                                                      |
            |      |                                                      |
            |      |                                                      |
 40    28|  |      |                            | DASFID |                |
         |  |_____|_____|_____|_____|
         =                         DASE9                                  =
         |  |                                                             |
         |  |                                                             |
128    80|  |                                                  | DASCHA   |
         |  |_____|_____|
136    88|  |_____DASCHA___(CONT)_____|                  |
         |  |_____|
```
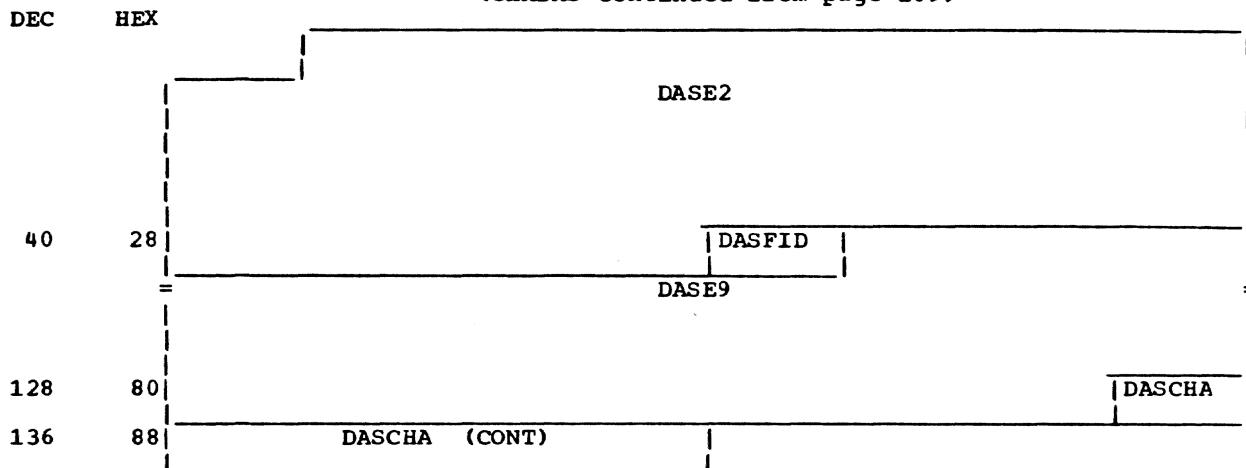
## Fields in CHADAS -- by displacement

| DEC  | HEX  | FIELD  | DEC  | HEX  | FIELD  | DEC  | HEX  | FIELD  |
|------|------|--------|------|------|--------|------|------|--------|
| 0000 | 0000 | DASKEY | 0006 | 0006 | DASE12 | 0044 | 002C | DASFID |
| 0004 | 0004 | DASE11 | 0008 | 0008 | DASE13 | 0045 | 002D | DASE9  |
| 0004 | 0004 | DASE1  | 0009 | 0009 | DASE2  | 0135 | 0087 | DASCHA |

## Alphabetical list of fields in CHADAS

| FIELD  | DEC  | HEX  | FIELD  | DEC  | HEX  | FIELD  | DEC  | HEX  |
|--------|------|------|--------|------|------|--------|------|------|
| DASCHA | 0135 | 0087 | DASE12 | 0006 | 0006 | DASE9  | 0045 | 002D |
| DASE1  | 0004 | 0004 | DASE13 | 0008 | 0008 | DASFID | 0044 | 002C |
| DASE11 | 0004 | 0004 | DASE2  | 0009 | 0009 | DASKEY | 0000 | 0000 |

## Assembler listing of CHADAS

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|----------|-------------|--------|------|------|---------|
|          | 22 00000    | CHADAS | DSECT |     | SAM DADSM DSCB - FORMAT 5 |
| 22 00000 |             |        | DS   | 0F   |         |
| 22 00000 |             | DASKEY | DS   | XL4  | KEY X'05050505' |
| 22 00004 |             | DASE1  | DS   | 0XL5 | 1ST EXTENT |
| 22 00004 |             | DASE11 | DS   | XL2  | RELATIVE TRACK ADDRESS - 2 |
|          |             | *      |      |      | BYTES |
| 22 00006 |             | DASE12 | DS   | XL2  | NUMBER OF FULL CYLINDERS - |
|          |             | *      |      |      | 2 BYTES |
| 22 00008 |             | DASE13 | DS   | XL1  | NUMBER OF TRACKS IN |
|          |             | *      |      |      | ADDITION TO CYLS - 1 BYTE |
| 22 00009 |             | DASE2  | DS   | 7XL5 | 2ND-8TH EXTENTS |
| 22 0002C |             | DASFID | DS   | XL1  | FORMAT IDENTIFIER - X'F5' |
| 22 0002D |             | DASE9  | DS   | 18XL5 | 9TH-26TH EXTENTS |
| 22 00087 |             | DASCHA | DS   | XL5  | POINTER TO NEXT FORMAT 5 |
|          |             | *      |      |      | DSCB - CCHHR |

## CHAVTC Storage map

```
DEC   HEX
  0    0|_____|
        |                                                            |
        =                          VTCKEY                            =
        |                                                            |
        |                                                            |
 40   28|                        | VTCFID  |        VTCHPC           |
        |_____|_____|_____|
 48   30| VTCHPC   (CONT) |    VTCHCT       |        VTCHCA           |
        |_____|_____|_____|
 56   38|    VTCNAT     |VTCFL1 |VTCNEX |     UNNAMED    |   VTCNLC   |
        |_____|_____|_____|_____|_____|
```
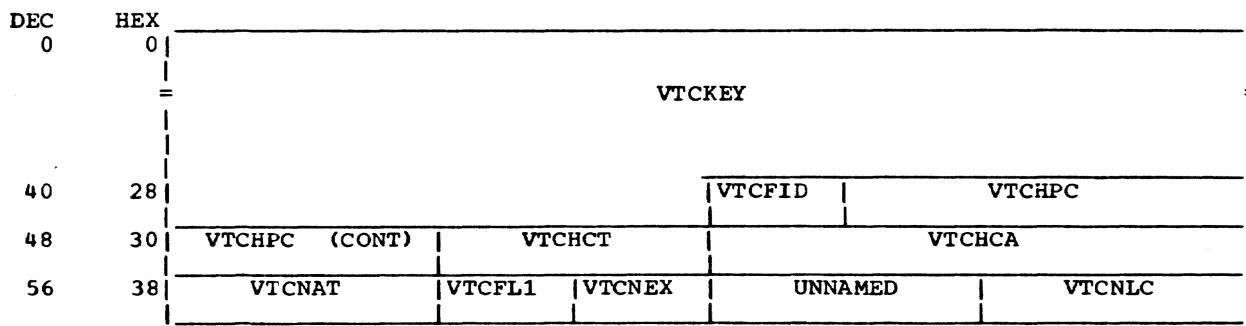
```
DEC   HEX
 64    40| VTCLCS        |  VTCTRL        |VTCOHI |VTCOHL |VTCOHK |VTCDFL |
         |              |                |       |       |       |       |
 72    48| VTCTOL       |VTCDPT |VTCDBT  |                               |
         |_____|_____|_____|                               |
         |                         UNNAMED                                |
         |                                                                |
 88    58|                                               |VTCGSC         |
         |                                               |_____|
 96    60| VTCGSA       |  VTCGSB        |       VTCPTR                   |
         |              |                |                               |
104    68|VTCPTR |VTCEX1 |VTCEX2 |        VTCEX3          |VTCEX4         |
         |       |       |       |                       |               |
112    70|    VTCEX4   (CONT)   |                                        |
         |_____|                                         |
         |                         UNNAMED                               |
         |                                                               |
         |                        _____|
         |                       |
136    88|                       |
         |_____|
```

## Fields in CHAVTC -- by displacement

| DEC | HEX | FIELD | | DEC | HEX | FIELD | | DEC | HEX | FIELD | |
|-----|-----|-------|---|-----|-----|-------|---|-----|-----|-------|---|
| 0000 | 0000 | VTCKEY | | 0062 | 003E | VTCNLC | | 0075 | 004B | VTCDBT | |
| 0000 | 0000 | VTCSTA | (EQU) | 0064 | 0040 | VTCLCS | | 0095 | 005F | VTCGSC | |
| 0044 | 002C | VTCFID | | 0066 | 0042 | VTCTRL | | 0096 | 0060 | VTCGSA | |
| 0045 | 002D | VTCHPC | | 0068 | 0044 | VTCOHI | | 0098 | 0062 | VTCGSB | |
| 0050 | 0032 | VTCHCT | | 0069 | 0045 | VTCOHL | | 0100 | 0064 | VTCPTR | |
| 0052 | 0034 | VTCHCA | | 0070 | 0046 | VTCOHK | | 0105 | 0069 | VTCEX1 | |
| 0056 | 0038 | VTCNAT | | 0071 | 0047 | VTCX07 | (EQU) | 0106 | 006A | VTCEX2 | |
| 0058 | 003A | VTCX03 | (EQU) | 0071 | 0047 | VTCX06 | (EQU) | 0107 | 006B | VTCEX3 | |
| 0058 | 003A | VTCX02 | (EQU) | 0071 | 0047 | VTCX05 | (EQU) | 0111 | 006F | VTCEX4 | |
| 0058 | 003A | VTCX01 | (EQU) | 0071 | 0047 | VTCDFL | | 0140 | 008C | VTCEND | (EQU) |
| 0058 | 003A | VTCFL1 | | 0072 | 0048 | VTCTOL | | | | | |
| 0059 | 003B | VTCNEX | | 0074 | 004A | VTCDPT | | | | | |

## Alphabetical list of fields in CHAVTC

| FIELD | DEC | HEX | | FIELD | DEC | HEX | | FIELD | DEC | HEX | |
|-------|-----|-----|---|-------|-----|-----|---|-------|-----|-----|---|
| VTCDBT | 0075 | 004B | | VTCGSC | 0095 | 005F | | VTCPTR | 0100 | 0064 | |
| VTCDFL | 0071 | 0047 | | VTCHCA | 0052 | 0034 | | VTCSTA | 0000 | 0000 | (EQU) |
| VTCDPT | 0074 | 004A | | VTCHCT | 0050 | 0032 | | VTCTOL | 0072 | 0048 | |
| VTCEND | 0140 | 008C | (EQU) | VTCHPC | 0045 | 002D | | VTCTRL | 0066 | 0042 | |
| VTCEX1 | 0105 | 0069 | | VTCKEY | 0000 | 0000 | | VTCX01 | 0058 | 003A | (EQU) |
| VTCEX2 | 0106 | 006A | | VTCLCS | 0064 | 0040 | | VTCX02 | 0058 | 003A | (EQU) |
| VTCEX3 | 0107 | 006B | | VTCNAT | 0056 | 0038 | | VTCX03 | 0058 | 003A | (EQU) |
| VTCEX4 | 0111 | 006F | | VTCNEX | 0059 | 003B | | VTCX05 | 0071 | 0047 | (EQU) |
| VTCFID | 0044 | 002C | | VTCNLC | 0062 | 003E | | VTCX06 | 0071 | 0047 | (EQU) |
| VTCFL1 | 0058 | 003A | | VTCOHI | 0068 | 0044 | | VTCX07 | 0071 | 0047 | (EQU) |
| VTCGSA | 0096 | 0060 | | VTCOHK | 0070 | 0046 | | | | | |
| VTCGSB | 0098 | 0062 | | VTCOHL | 0069 | 0045 | | | | | |

## Assembler listing of CHAVTC

```
LOCATION    INSTRUCTION  SOURCE   INST   OPER     COMMENT
            B6 00000     CHAVTC   DSECT
                         *  DSECT FOR VTOC DSCB,FORMAT 4.
            B6 00000     VTCSTA   EQU    *
B6 00000                 VTCKEY   DS     XL44     KEY FIELD
B6 0002C                 VTCFID   DS     C        FORMAT ID
B6 0002D                 VTCHPC   DS     XL5      HIGHEST PRIME CCHHR
B6 00032                 VTCHCT   DS     XL2      AVAILABLE DSCB RECORDS
B6 00034                 VTCHCA   DS     XL4      HIGHEST CCHH OR ALTERNATE
                         *                        TRACKS
B6 00038                 VTCNAT   DS     XL2      NUMBER OF ALTERNATE TRACKS
                         *                        AVAILABLE
B6 0003A                 VTCFL1   DS     X        VTOC INDICATORS
            B6 0003A     VTCX01   EQU    VTCFL1   NO FORMAT 5 OR C DSCBS
```

| LOCATION | INSTRUCTION | SOURCE | INST | OPER. | COMMENT |
|---|---|---|---|---|---|
| | B6 0003A | VTCX02 | EQU | VTCFL1 | FORMAT C DADSM IN USE |
| | B6 0003A | VTCX03 | EQU | VTCFL1 | SYSTEM VOLUME |
| | | * MASKS | TO TEST | VTOC | INDICATORS. |
| | 00000080 | VTCM01 | EQU | X'80' | NO FORMAT 5 OR C |
| | 00000040 | VTCM02 | EQU | X'40' | FORMAT C DADSM |
| | 00000020 | VTCM03 | EQU | X'20' | SYSTEM VOLUME |
| B6 0003B | | VTCNEX | DS | X | NUMBER OF EXTENTS SET TO |
| | | * | | | X'01' |
| B6 0003C | | | DS | XL2 | SPARE |
| B6 0003E | | VTCNLC | DS | XL2 | NUMBER OF LOGICAL |
| | | * | | | CYLINDERS/VOLUME |
| B6 00040 | | VTCLCS | DS | XL2 | NUMBER OF TRACKS/LOGICAL |
| | | * | | | CYLINDER |
| B6 00042 | | VTCTRL | DS | XL2 | NUMBER OF AVAILABLE |
| | | * | | | BYTES/TRACK |
| B6 00044 | | VTCOHI | DS | X | OVERHEAD FOR KEYED RECORD |
| B6 00045 | | VTCOHL | DS | X | OVERHEAD FOR LAST KEYED RCD |
| | | * | | | ON TRACK |
| B6 00046 | | VTCOHK | DS | X | OVH BYTES TO BE SUBTRACTED |
| | | * | | | IF NO KEY |
| B6 00047 | | VTCDFL | DS | X | FLAG FIELD |
| | B6 00047 | VTCX05 | EQU | VTCDFL | CCHH USED AS IN 2301 |
| | B6 00047 | VTCX06 | EQU | VTCDFL | CCHH USED AS IN 2321 |
| | B6 00047 | VTCX07 | EQU | VTCDFL | TOLERANCE MUST BE APPLIED |
| | | * | | | MASKS FOR DEVICE CONSTANTS. |
| | 00000004 | VTCM05 | EQU | X'04' | CCHH IS USED AS IN 2301 |
| | 00000002 | VTCM06 | EQU | X'02' | CCHH IS USED AS IN 2321 |
| | 00000001 | VTCM07 | EQU | X'01' | TOLERANCE FACTOR MUST BE |
| | | * | | | APPLIED |
| B6 00048 | | VTCTOL | DS | XL2 | TOLERANCE/512 GIVES EFF |
| | | * | | | LNGTH OF RCD |
| B6 0004A | | VTCDPT | DS | X | DSCBS/TRACK |
| B6 0004B | | VTCDBT | DS | X | DIRECTORY BLOCKS/TRACK |
| B6 0004C | | | DS | XL19 | SPARE |
| B6 0005F | | VTCGSC | DS | X | SET TO X'FF' IF TSS VOLUME |
| B6 00060 | | VTCGSA | DS | XL2 | GROSS SPACE AVAILABLE.FIRST |
| | | * | | | 2 BYTES |
| B6 00062 | | VTCGSB | DS | XL2 | GROSS SPACE |
| | | * | | | AVAILABLE.SECOND 2 BYTES |
| B6 00064 | | VTCPTR | DS | XL5 | POINTER TO FORMAT 6 DSCB,IF |
| | | * | | | ANY. |
| B6 00069 | | VTCEX1 | DS | X | EXTENT TYPE INDICATOR |
| | | * MASK | FOR EXTENT | TYPE | INDICATOR. |
| | 00000001 | VTCM08 | EQU | X'01' | VTOC EXTENTS MUST BE TYPE |
| | | * | | | 1. |
| B6 0006A | | VTCEX2 | DS | X | EXTENT SEQUENCE NUMBER |
| B6 0006B | | VTCEX3 | DS | XL4 | LOWER LIMIT   CCHH |
| B6 0006F | | VTCEX4 | DS | XL4 | UPPER LIMIT   CCHH |
| B6 00073 | | | DS | XL25 | SPARE |
| | B6 0008C | VTCEND | EQU | * | END OF DSCB |
| | 0000008C | VTCSIZ | EQU | VTCEND-VTCKEY | SIZE OF DSCB |

## Page Assignment Table (PAT) Oriented DSCBs (CHADSE & CHADSF)

   CHADSE (format E DSCB) and CHADSF (format F DSCB) define the particular pages
occupied by a VAM2 data set.   Each VAM2 data set has one associated format E DSCB.   A
variable number of format F DSCBs are used to accept overflow from the format E DSCB.
A data set's residence is defined by a chain of DSCBs for that data set.   The chain
consists of one format E DSCB, followed by a series of format F DSCBs, when required.
   Each data set page is assigned a fullword entry in that data set's DSCB.   This
entry describes the physical location of the page as follows:

```
0     1         3 4        15 16              31
r------T---------T----------T------------------1
|      |         |  REL     |                  |
| AF   | unused  |  VOL     |   PAGE IN        |
|      |         |  NO      |     VOL          |
L_____i_____i_____i_____J
```

"AF" is a one bit assignment flag where:
      0=page is assigned and used
      1=page is assigned and unused
   CHADSE and CHADSF are each 256 bytes in length, reside in virtual storage, and are
aligned on word boundaries.

### CHADSE Storage map

| DEC | HEX | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 0 | | | | DSENME | | | | |
| 40 | 28 | | | | | | | | |
| | | | | | DSESCD | | | | |
| 56 | 38 | | DSEXPD | DSELPB | | DSERFM | UNNAMED | DSEFTP | |
| 64 | 40 | UNNAMED | | DSERCL | | UNNAMED | DSEKYL | DSEKLC | |
| 72 | 48 | DSESAI | | DSESAL | | DSENDP | | DSEDOP | |
| 80 | 50 | DSENOP | DSENVL | DSETNP | | UNNAMED | | DSECRD | |
| 88 | 58 | | DSEEXD | | | | UNNAMED | | |
| 96 | 60 | | | | | | | | |
| | | | | | DSEENT | | | | |
| 248 | F8 | | | DSECHN | | DSETYP | UNNAMED | DSECKS | |

### ORG   DSEENT

| | | | |
|---|---|---|---|
| 96 | 60 | DSEVOL | |

DEC    HEX

ORG   DSEENT

```
 96    60| _____
          |               DSEEPE                 |
          |_____|
```

ORG   DSEEPE

```
 96    60| _____|_____
          |      DSERVN             |   DSERPN    |
          |_____|_____|
```

## Fields in CHADSE -- by displacement

| DEC | HEX | FIELD | | DEC | HEX | FIELD | | DEC | HEX | FIELD | |
|------|------|--------|-----|------|------|--------|-----|------|------|--------|-----|
| 0000 | 0000 | DSENME | | 0062 | 003E | DSEX01 | (EQU) | 0088 | 0058 | DSEEXD | |
| 0000 | 0000 | DSESTA | (EQU) | 0062 | 003E | DSEFTP | | 0096 | 0060 | DSERVN | |
| 0044 | 002C | DSESCD | | 0065 | 0041 | DSERCL | | 0096 | 0060 | DSEEPE | |
| 0057 | 0039 | DSEXPD | | 0069 | 0045 | DSEKYL | | 0096 | 0060 | DSEVOL | |
| 0058 | 003A | DSELPB | | 0070 | 0046 | DSEKLC | | 0096 | 0060 | DSEASF | (EQU) |
| 0060 | 003C | DSEX08 | (EQU) | 0072 | 0048 | DSESAI | | 0096 | 0060 | DSEENT | |
| 0060 | 003C | DSEX07 | (EQU) | 0073 | 0049 | DSESAL | | 0098 | 0062 | DSERPN | |
| 0060 | 003C | DSEX06 | (EQU) | 0076 | 004C | DSENDP | | 0248 | 00F8 | DSECHN | |
| 0060 | 003C | DSERFM | | 0078 | 004E | DSEDOP | | 0252 | 00FC | DSETYP | |
| 0062 | 003E | DSEX05 | (EQU) | 0080 | 0050 | DSENOP | | 0254 | 00FE | DSECKS | |
| 0062 | 003E | DSEX04 | (EQU) | 0081 | 0051 | DSENVL | | 0256 | 0100 | DSEEND | |
| 0062 | 003E | DSEX03 | (EQU) | 0082 | 0052 | DSETNP | | | | | |
| 0062 | 003E | DSEX02 | (EQU) | 0085 | 0055 | DSECRD | | | | | |

## Alphabetical list of fields in CHADSE

| FIELD | DEC | HEX | | FIELD | DEC | HEX | | FIELD | DEC | HEX | |
|--------|------|------|-----|--------|------|------|-----|--------|------|------|-----|
| DSEASF | 0096 | 0060 | (EQU) | DSENDP | 0076 | 004C | | DSETYP | 0252 | 00FC | |
| DSECHN | 0248 | 00F8 | | DSENME | 0000 | 0000 | | DSEVOL | 0096 | 0060 | |
| DSECKS | 0254 | 00FE | | DSENOP | 0080 | 0050 | | DSEXPD | 0057 | 0039 | |
| DSECRD | 0085 | 0055 | | DSENVL | 0081 | 0051 | | DSEX01 | 0062 | 003E | (EQU) |
| DSEDOP | 0078 | 004E | | DSERCL | 0065 | 0041 | | DSEX02 | 0062 | 003E | (EQU) |
| DSEEND | 0256 | 0100 | | DSERFM | 0060 | 003C | | DSEX03 | 0062 | 003E | (EQU) |
| DSEENT | 0096 | 0060 | | DSERPN | 0098 | 0062 | | DSEX04 | 0062 | 003E | (EQU) |
| DSEEPE | 0096 | 0060 | | DSERVN | 0096 | 0060 | | DSEX05 | 0062 | 003E | (EQU) |
| DSEEXD | 0088 | 0058 | | DSESAI | 0072 | 0048 | | DSEX06 | 0060 | 003C | (EQU) |
| DSEFTP | 0062 | 003E | | DSESAL | 0073 | 0049 | | DSEX07 | 0060 | 003C | (EQU) |
| DSEKLC | 0070 | 0046 | | DSESCD | 0044 | 002C | | DSEX08 | 0060 | 003C | (EQU) |
| DSEKYL | 0069 | 0045 | | DSESTA | 0000 | 0000 | (EQU) | | | | |
| DSELPB | 0058 | 003A | | DSETNP | 0082 | 0052 | | | | | |

## Assembler listing of CHADSE

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|----------|-------------|--------|------|------|---------|
| | 2D 00000 | CHADSE | DSECT | | |
| | | * | | | - DSECT FOR FORMAT E DSCB - |
| | 2D 00000 | DSESTA | EQU | * | |
| 2D 00000 | | DSENME | DS | CL44 | DATA SET NAME. |
| 2D 0002C | | DSESCD | DS | CL13 | SYSTEM CODE. |
| 2D 00039 | | DSEXPD | DS | CL1 | INDEX SEQUENTIAL PAD. |
| 2D 0003A | | DSELPB | DS | CL2 | BYTES IN LAST DATA PAGE. |
| 2D 0003C | | DSERFM | DS | XL1 | RECORD FORMAT. |
| | 2D 0003C | DSEX06 | EQU | DSERFM | FIXED LENGTH RECORD FLAG |
| | 00000080 | DSEM06 | EQU | X'80' | FIXED LENGTH RECORD MASK |
| | 2D 0003C | DSEX07 | EQU | DSERFM | VARIABLE LENGTH RECORD FLAG |
| | 00000040 | DSEM07 | EQU | X'40' | VARIABLE LENGTH RECORD MASK |
| | 2D 0003C | DSEX08 | EQU | DSERFM | UNDEFINED RECORD LENGTH |
| | | * | | | FLAG |
| | 000000C0 | DSEM08 | EQU | X'C0' | UNDEFINED RECORD LENGTH |
| | | * | | | MASK |
| 2D 0003D | | | DS | XL1 | RESERVED |
| 2D 0003E | | DSEFTP | DS | XL2 | DATA SET ORGANIZATION. |
| | 2D 0003E | DSEX01 | EQU | DSEFTP | VAM SEQUENTIAL |

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|----------|-------------|--------|------|------|---------|
| | | * | | | ORGANIZATION. |
| | 2D 0003E | DSEX02 | EQU | DSEFTP | VAM INDEX SEQUENTIAL. |
| | 2D 0003E | DSEX03 | EQU | DSEFTP | VAM PARTITIONED INDEX |
| | | * | | | SEQUENTIAL. |
| | 2D 0003E | DSEX04 | EQU | DSEFTP | VAM PARTITIONED SEQUENTIAL. |
| | 2D 0003E | DSEX05 | EQU | DSEFTP | VAM PARTITIONED |
| | | * | | | FILE TYPE |
| | 00000072 | DSEM01 | EQU | X'72' | SEQUENTIAL ORGANIZATION. |
| | 00000071 | DSEM02 | EQU | X'71' | INDEX SEQUENTIAL. |
| | 00000073 | DSEM03 | EQU | X'73' | PARTITIONED INDEX SEQ. |
| | 00000074 | DSEM04 | EQU | X'74' | PARTITIONED SEQUENTIAL. |
| | 00000075 | DSEM05 | EQU | X'75' | PARTITIONED |
| 2D 00040 | | | DS | CL1 | SPARE |
| 2D 00041 | | DSERCL | DS | CL3 | RECORD LENGTH. |
| 2D 00044 | | | DS | XL1 | RESERVED |
| 2D 00045 | | DSEKYL | DS | CL1 | KEY LENGTH. |
| 2D 00046 | | DSEKLC | DS | CL2 | KEY LOCATION. |
| 2D 00048 | | DSESAI | DS | XL1 | SECONDARY ALLOCATION |
| | | * | | | INDICATOR. |
| 2D 00049 | | DSESAL | DS | CL3 | SECONDARY ALLOCATION. |
| 2D 0004C | | DSENDP | DS | H | NUMBER OF DATA PAGES. |
| 2D 0004E | | DSEDOP | DS | H | NUMBER OF DIRECTORY PAGES. |
| 2D 00050 | | DSENOP | DS | CL1 | NUMBER OF OVERFLOW PAGES. |
| 2D 00051 | | DSENVL | DS | CL1 | NUMBER OF PRIVATE VOLUMES. |
| 2D 00052 | | DSETNP | DS | H | TOTAL NUMBER OF ASGD. PAGES |
| | | * | | | AT CLOSE. |
| 2D 00054 | | | DS | CL1 | SPARE. |
| 2D 00055 | | DSECRD | DS | CL3 | REFERENCE DATE |
| 2D 00058 | | DSEEXD | DS | CL3 | CHANGE DATE |
| 2D 0005B | | | DS | CL5 | SPARE |
| 2D 00060 | | DSEENT | DS | 38F | FIELD FOR VOLUME ENTRIES |
| | | * | | | AND EXTERNAL |
| | | * | | | PAGE ENTRIES. FOR PRIVATE |
| | | * | | | DATA SETS A LIST |
| | | * | | | OF 6 BYTE VOLUME ID |
| | | * | | | ENTRIES WILL PRECEDE THE |
| | | * | | | LIST OF PAGE ENTRIES. THE |
| | | * | | | NUMBER OF VOLUME |
| | | * | | | ENTRIES IS CONTAINED IN |
| | | * | | | DSENVL. THE PAGE |
| | | * | | | ENTRIES WILL BEGIN ON THE |
| | | * | | | NEXT FULL-WORD |
| | | * | | | BOUNDARY FOLLOWING THE |
| | | * | | | VOLUME ID LIST. |
| | | * | | | FOR PUBLIC DATA SETS, ONLY |
| | | * | | | PAGE ENTRIES |
| | | * | | | OCCUPY THIS FIELD. |
| 2D 000F8 | | DSECHN | DS | F | POINTER TO FORMAT F DSCB |
| | | * | | | (NEXT IN CHAIN). |
| 2D 000FC | | DSETYP | DS | XL1 | DSCB TYPE |
| 2D 000FD | | | DS | C | SPARE |
| 2D 000FE | | DSECKS | DS | H | CHECKSUM |
| | 0000003F | DSEWDCT | EQU | (DSETYP-CHADSE)/4 | NUMBER WORDS IN |
| | | * | | | CHECKSUM          I6478 |
| 2D 00100 | | DSEEND | DS | 0X | END OF FORMAT-E DSCB |
| | | * | | | I6478 |
| | 00000100 | DSELNGTH | EQU | DSEEND-CHADSE | LENGTH OF FORMAT-E |
| | | * | | | DSCB              I6478 |
| 2D 00060 | | | |ORG| | DSEENT |

(Listing of CHADSE continued from page 175)

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|---|---|---|---|---|---|
| 2D 00060 | | DSEVOL | DS | CL6 | VOLUME SERIAL NUMBER |
| | 00000019 | DSEMXVE | EQU | (DSECHN-DSEENT)/L'DSEVOL | MAX VOLUME |
| | | * | | | ENTRIES        16478 |
| 2D 00060 | | | \|ORG\| | DSEENT | |
| 2D 00060 | | DSEEPE | DS | F | EXTERNAL PAGE ENTRIES |
| | 2D 00060 | DSEASF | EQU | DSEEPE | EXTERNAL PAGE ASSIGNMENT |
| | | * | | | FLAG |
| | 00000080 | DSEASFM | EQU | X'80' | 1=EXTERNAL PAGE NOT IN USE |
| | 00000026 | DSEMXPE | EQU | (DSECHN-DSEENT)/L'DSEEPE | MAX PAGE |
| | | * | | | ENTRIES        16478 |
| | | * | | | 0=EXTERNAL PAGE IN USE |
| 2D 00060 | | | \|ORG\| | DSEEPE | |
| 2D 00060 | | DSERVN | DS | XL2 | RELATIVE VOL. NO. (LOW |
| | | * | | | ORDER 12 BITS) |
| 2D 00062 | | DSERPN | DS | XL2 | RELATIVE PAGE NUMBER |

CHADSF Storage map

```
DEC    HEX  _____
  0     0|                                                        |
        |=                         DSFENT                        =|
        |                                                         |
        |                                                         |
248    F8|_____DSFCHN_____|__DSFTYP__|_UNNAMED_|____DSFCKS_____|
        |_____|
```

ORG   DSFENT

```
  0     0| _____
         |                  DSFVOL                 |
         |_____|
```

ORG   DSFENT

```
  0     0| _____
         |           DSFEPE             |
         |_____|
```

ORG   DSFEPE

```
  0     0| _____|_____
         |     DSFRVN     |    DSFRPN    |
         |_____|_____|
```
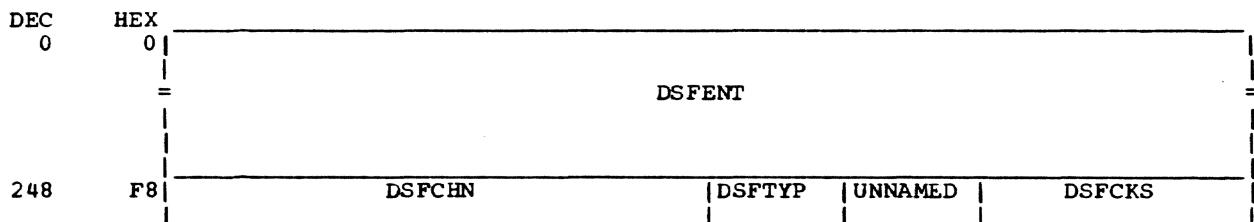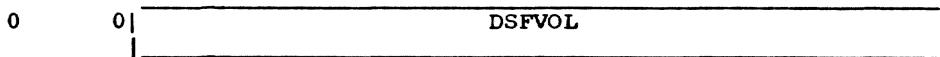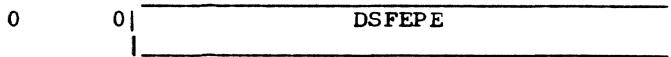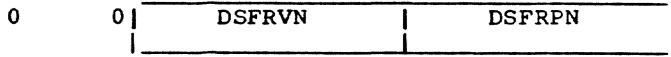
Fields in CHADSF -- by displacement

| DEC | HEX | FIELD | | DEC | HEX | FIELD | DEC | HEX | FIELD |
|-----|-----|-------|--|-----|-----|-------|-----|-----|-------|
| 0000 | 0000 | DSFRVN | | 0000 | 0000 | DSFENT | 0254 | 00FE | DSFCKS |
| 0000 | 0000 | DSFEPE | | 0002 | 0002 | DSFRPN | 0256 | 0100 | DSFEND |
| 0000 | 0000 | DSFVOL | | 0248 | 00F8 | DSFCHN | | | |
| 0000 | 0000 | DSFASF | (EQU) | 0252 | 00FC | DSFTYP | | | |

Alphabetical list of fields in CHADSF

| FIELD | DEC | HEX | | FIELD | DEC | HEX | FIELD | DEC | HEX |
|-------|-----|-----|--|-------|-----|-----|-------|-----|-----|
| DSFASF | 0000 | 0000 | (EQU) | DSFENT | 0000 | 0000 | DSFTYP | 0252 | 00FC |
| DSFCHN | 0248 | 00F8 | | DSFEPE | 0000 | 0000 | DSFVOL | 0000 | 0000 |
| DSFCKS | 0254 | 00FE | | DSFRPN | 0002 | 0002 | | | |
| DSFEND | 0256 | 0100 | | DSFRVN | 0000 | 0000 | | | |

Assembler listing of CHADSF

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|----------|-------------|--------|------|------|---------|
| | 2E 00000 | CHADSF | DSECT | | |
| | | * | | | FORMAT F DSCB. |
| | | * | THIS IS THE FORMAT OF ALL DSCB'S FOR ANY PAT | | |
| | | * | ORGANIZED | | |
| | | * | VAM DATA SET FOLLOWING THE FORMAT E DSCB. | | |
| | 2E 00000 | DSFENT | DS | 62F | FIELD FOR 62 EXTERNAL PAGE |
| | | * | | | ENTRIES OR 41 VOLUME ENTRIES |
| | | * | | | OR BOTH. FOR PRIVATE DATA |
| | | * | | | SETS A LIST OF 6 BYTE VOLUME |
| | | * | | | ENTRIES MAY EXTEND FROM THE |
| | | * | | | PREVIOUS DSCB. THE PAGE ENTRIES |
| | | * | | | WILL BEGIN ON THE FIRST FULL |
| | | * | | | WORD AFTER THE VOLUME ENTRIES. |
| | 2E 000F8 | DSFCHN | DS | F | PTR TO FORMAT F DSCB (NEXT |
| | | * | | | IN |
| | | * | | | CHAIN) (ZERO IN LAST DSCB). |
| | 2E 000FC | DSFTYP | DS | XL1 | DSCB TYPE. |
| | 2E 000FD | | DS | C | SPARE. |
| | 2E 000FE | DSFCKS | DS | H | CHECKSUM. |
| | 2E 00100 | DSFEND | DS | 0X | END OF FORMAT-F DSCB |

(Listing of CHADSF continued from page 177)

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|---|---|---|---|---|---|
| | | * | | | I6478 |
| | 00000100 | DSFLNGTH | EQU | DSFEND-CHADSF | LENGTH OF FORMAT-F |
| | | * | | | DSCB          I6478 |
| 2E 00000 | 2E 00000 | | \|ORG\| | DSFENT | |
| 2E 00000 | | DSFVOL | DS | CL6 | VOLUME SERIAL NUMBER |
| | 00000029 | DSFMXVE | EQU | (DSFCHN-DSFENT)/L'DSFVOL | MAX VOLUME |
| | | * | | | ENTRIES          I6478 |
| 2E 00000 | 2E 00000 | | \|ORG\| | DSFENT | |
| 2E 00000 | | DSFEPE | DS | F | EXTERNAL PAGE ENTRIES |
| 2E 00000 | | DSFASF | EQU | DSFEPE | EXTERNAL PAGE ASSIGNMENT |
| | | * | | | FLAG |
| | 00000080 | DSFASFM | EQU | X'80' | 1=EXTERNAL PAGE NOT IN USE |
| | | * | | | 0=EXTERNAL PAGE IN USE |
| 2E 00000 | 2E 00000 | | \|ORG\| | DSFEPE | |
| 2E 00000 | | DSFRVN | DS | XL2 | RELATIVE VOL. NO. (LOW |
| | | * | | | ORDER 12 BITS) |
| 2E 00002 | | DSFRPN | DS | XL2 | RELATIVE PAGE NUMBER |

## Support System Input/Output Request Block (CHAECW)

CHAECW defines the Support System I/O Request Block used as the SIORCB by both RSS and VSS. It serves both as the communications area between modules requesting I/O service and the I/O system, and it serves as the I/O system PSECT used for internal communication. The paramters for an I/O request are passed in the SIORCB.

CHAECW Storage map

| DEC | HEX | | | | | |
|-----|-----|---|---|---|---|---|
| 0 | 0 | ECWASAVE | | | | |
| 72 | 48 | ECWAPSCT | | ECWASDA | | ECWAUFL1 | ECWAUFL2 |
| 80 | 50 | ECWABFFR | | ECWAOPCD | ECWAACMD | ECWALEN |
| 88 | 58 | ECWALRCL | | ECWASLEN | | ECWARES1 |
| 96 | 60 | ECWASEEK | | | | |
| 104 | 68 | ECWASCSV | | | | |
| 168 | A8 | ECWASDAT | ECWAPHP | ECWAPHP2 | ECWAFL1 | ECWAFL2 |
| 176 | B0 | ECWADEV | | ECWACAW | | |
| 184 | B8 | ECWASAPT | | ECWACSW | | |
| 192 | C0 | ECWACSW (CONT) | | ECWAPSW | | |
| 200 | C8 | ECWAPSW (CONT) | | ECWAIC01 | ECWAERCT | |
| 208 | D0 | ECWASENS | | | | |
| 216 | D8 | ECWARTN | | ECWARAM | | |
| 224 | E0 | ECWAACSW | | | | |
| 232 | E8 | ECWAAPSW | | | | |
| 240 | F0 | ECWAIC02 | ECWALENV | ECWAACAW | | |
| 248 | F8 | ECWASFRS | | ECWASLST | | |
| 256 | 100 | ECWAREC | | | | |
| 264 | 108 | ECWACLOA | | | | |
| 288 | 120 | ECWABFFV | | ECWAAAOP | ECWAAOP | ECWAXSAV |
| 296 | 128 | ECWASFL1 | ECWASFL2 | ECWASFL3 | ECWASFL4 | ECWARES2 |

| DEC | HEX | | | |
|---|---|---|---|---|
| 304 | 130 | | ECWATRIN | |
| 560 | 230 | | ECWAIORF | |
| 640 | 280 | | ECWAPGLS | |
| 704 | 2C0 | | ECWACCWS | |
| 784 | 310 | | ECWACCWF | |
| 1504 | 5E0 | ECWAFRST | | ECWALAST |
| 1512 | 5E8 | ECWAIOCA | | ECWAIOCB |
| 1520 | 5F0 | ECWACAM | | ECWADAM |
| 1528 | 5F8 | ECWASAM | | ECWATAM |
| 1536 | 600 | ECWAIOCP | | ECWAEDIT |
| 1544 | 608 | ECWASSDT | | ECWATSSV |
| 1552 | 610 | ECWAMSGA | | ECWAMSGB |
| 1560 | 618 | ECWATAB | | ECWAERSC |
| 1568 | 620 | ECWADERA | | ECWADERB |
| 1576 | 628 | ECWADERC | | ECWASERB |
| 1584 | 630 | ECWASERA | | ECWASERD |
| 1592 | 638 | ECWADERE | | ECWACERA |
| 1600 | 640 | ECWACERB | | ECWAIOIN |
| 1608 | 648 | ECWASERE | | ECWATERA |
| 1616 | 650 | ECWATERB | | ECWAERSD |

```
DEC    HEX
1624   658| _____ECWASERC_____ | _____ECWADERD_____ |
           |                                 |                                 |
1632   660| _____ECWACERD_____ |
           |_____|
```

ORG   ECWADEV

```
176    B0| ECWADEA | ECWADEB | ECWADEC | ECWADED |
         |_____|_____|_____|_____|
```

## Fields in CHAECW -- by displacement

| DEC | HEX | FIELD | | DEC | HEX | FIELD | | DEC | HEX | FIELD | |
|-----|-----|-------|---|-----|-----|-------|---|-----|-----|-------|---|
| 0000 | 0000 | ECWASAVE | | 0224 | 00E0 | ECWAACSW | | 0299 | 012B | ECWAADC | (EQU) |
| 0000 | 0000 | ECWALDA | | 0232 | 00E8 | ECWAAPSW | | 0299 | 012B | ECWASFL4 | |
| 0072 | 0048 | ECWAPSCT | | 0240 | 00F0 | ECWAIC02 | | 0300 | 012C | ECWARES2 | |
| 0076 | 004C | ECWASDA | | 0242 | 00F2 | ECWALENV | | 0304 | 0130 | ECWATRIN | |
| 0076 | 004C | ECWAUBEG | | 0244 | 00F4 | ECWAACAW | | 0560 | 0230 | ECWAIORF | |
| 0078 | 004E | ECWAUBF (EQU) | | 0248 | 00F8 | ECWASFRS | | 0640 | 0280 | ECWAPGLS | |
| 0078 | 004E | ECWAUAP (EQU) | | 0252 | 00FC | ECWASLST | | 0704 | 02C0 | ECWACCWS | |
| 0078 | 004E | ECWACAL (EQU) | | 0256 | 0100 | ECWAREC | | 0784 | 0310 | ECWACCWF | |
| 0078 | 004E | ECWASAV (EQU) | | 0264 | 0108 | ECWACLOA | | 1504 | 05E0 | ECWAFRST | |
| 0078 | 004E | ECWAUFL1 | | 0288 | 0120 | ECWABFFV | | 1508 | 05E4 | ECWALAST | |
| 0079 | 004F | ECWAUFL2 | | 0292 | 0124 | ECWAAAOP | | 1512 | 05E8 | ECWAIOCA | |
| 0080 | 0050 | ECWABFFR | | 0293 | 0125 | ECWAAOP | | 1512 | 05E8 | ECWAVCON | |
| 0080 | 0050 | ECWAUCCW | | 0294 | 0126 | ECWAXSAV | | 1516 | 05EC | ECWAIOCB | |
| 0084 | 0054 | ECWAOPCD | | 0296 | 0128 | ECWASBI (EQU) | | 1520 | 05F0 | ECWACAM | |
| 0085 | 0055 | ECWAMODE (EQU) | | 0296 | 0128 | ECWARDC (EQU) | | 1524 | 05F4 | ECWADAM | |
| 0085 | 0055 | ECWAACMD | | 0296 | 0128 | ECWAADM (EQU) | | 1528 | 05F8 | ECWASAM | |
| 0086 | 0056 | ECWALEN | | 0296 | 0128 | ECWATS (EQU) | | 1532 | 05FC | ECWATAM | |
| 0088 | 0058 | ECWALRCL | | 0296 | 0128 | ECWANIE (EQU) | | 1536 | 0600 | ECWAIOCP | |
| 0092 | 005C | ECWASLEN | | 0296 | 0128 | ECWARTA (EQU) | | 1540 | 0604 | ECWAEDIT | |
| 0094 | 005E | ECWARES1 | | 0296 | 0128 | ECWAERC (EQU) | | 1544 | 0608 | ECWASSDT | |
| 0096 | 0060 | ECWASEEK | | 0296 | 0128 | ECWACCS (EQU) | | 1548 | 060C | ECWATSSV | |
| 0104 | 0068 | ECWASCSV | | 0296 | 0128 | ECWASFL1 | | 1552 | 0610 | ECWAMSGA | |
| 0104 | 0068 | ECWAUEND (EQU) | | 0296 | 0128 | ECWASFLA | | 1556 | 0614 | ECWAMSGB | |
| 0168 | 00A8 | ECWASDAT | | 0297 | 0129 | ECWAPLO (EQU) | | 1560 | 0618 | ECWATAB | |
| 0168 | 00A8 | ECWAGDE | | 0297 | 0129 | ECWANAP (EQU) | | 1564 | 061C | ECWAERSC | |
| 0170 | 00AA | ECWAPHP | | 0297 | 0129 | ECWAPA (EQU) | | 1568 | 0620 | ECWADERA | |
| 0172 | 00AC | ECWAPHP2 | | 0297 | 0129 | ECWAPDL (EQU) | | 1572 | 0624 | ECWADERB | |
| 0174 | 00AE | ECWACBC (EQU) | | 0297 | 0129 | ECWAPSN (EQU) | | 1576 | 0628 | ECWADERC | |
| 0174 | 00AE | ECWAVAM (EQU) | | 0297 | 0129 | ECWAPPS (EQU) | | 1580 | 062C | ECWASERB | |
| 0174 | 00AE | ECWAFL1 | | 0297 | 0129 | ECWAPCS (EQU) | | 1584 | 0630 | ECWASERA | |
| 0175 | 00AF | ECWAFL2 | | 0297 | 0129 | ECWASFL2 | | 1588 | 0634 | ECWASERD | |
| 0176 | 00B0 | ECWADEA | | 0298 | 012A | ECWARDA (EQU) | | 1592 | 0638 | ECWADERE | |
| 0176 | 00B0 | ECWADEV | | 0298 | 012A | ECWATAMB (EQU) | | 1596 | 063C | ECWACERA | |
| 0177 | 00B1 | ECWADEB | | 0298 | 012A | ECWASAMB (EQU) | | 1600 | 0640 | ECWACERB | |
| 0178 | 00B2 | ECWADEC | | 0298 | 012A | ECWADAMB (EQU) | | 1604 | 0644 | ECWAIOIN | |
| 0179 | 00B3 | ECWADED | | 0298 | 012A | ECWACAMB (EQU) | | 1608 | 0648 | ECWASERE | |
| 0180 | 00B4 | ECWACAW | | 0298 | 012A | ECWAEOS (EQU) | | 1612 | 064C | ECWATERA | |
| 0184 | 00B8 | ECWASAPT | | 0298 | 012A | ECWACON (EQU) | | 1616 | 0650 | ECWATERB | |
| 0188 | 00BC | ECWACSW | | 0298 | 012A | ECWADSB (EQU) | | 1620 | 0654 | ECWAERSD | |
| 0196 | 00C4 | ECWAPSW | | 0298 | 012A | ECWASFL3 | | 1624 | 0658 | ECWASERC | |
| 0204 | 00CC | ECWAIC01 | | 0299 | 012B | ECWATOI (EQU) | | 1628 | 065C | ECWADERD | |
| 0206 | 00CE | ECWAERCT | | 0299 | 012B | ECWAMCW (EQU) | | 1632 | 0660 | ECWACERD | |
| 0208 | 00D0 | ECWASENS | | 0299 | 012B | ECWARIR (EQU) | | 1636 | 0664 | ECWALDB | |
| 0216 | 00D8 | ECWARTN | | 0299 | 012B | ECWAINR (EQU) | | | | | |
| 0220 | 00DC | ECWARAM | | 0299 | 012B | ECWAWDC (EQU) | | | | | |

| FIELD | DEC | HEX | | FIELD | DEC | HEX | | FIELD | DEC | HEX | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ECWAAAOP | 0292 | 0124 | | ECWAFRST | 1504 | 05E0 | | ECWASAPT | 0184 | 00B8 | |
| ECWAACAW | 0244 | 00F4 | | ECWAGDE | 0168 | 00A8 | | ECWASAV | 0078 | 004E | (EQU) |
| ECWAACMD | 0085 | 0055 | | ECWAIC01 | 0204 | 00CC | | ECWASAVE | 0000 | 0000 | |
| ECWAACSW | 0224 | 00E0 | | ECWAIC02 | 0240 | 00F0 | | ECWASBI | 0296 | 0128 | (EQU) |
| ECWAADC | 0299 | 012B | (EQU) | ECWAINR | 0299 | 012B | (EQU) | ECWASCSV | 0104 | 0068 | |
| ECWAADM | 0296 | 0128 | (EQU) | ECWAIOCA | 1512 | 05E8 | | ECWASDA | 0076 | 004C | |
| ECWAAOP | 0293 | 0125 | | ECWAIOCB | 1516 | 05EC | | ECWASDAT | 0168 | 00A8 | |
| ECWAAPSW | 0232 | 00E8 | | ECWAIOCP | 1536 | 0600 | | ECWASEEK | 0096 | 0060 | |
| ECWABFFR | 0080 | 0050 | | ECWAIOIN | 1604 | 0644 | | ECWASENS | 0208 | 00D0 | |
| ECWABFFV | 0288 | 0120 | | ECWAIORF | 0560 | 0230 | | ECWASERA | 1584 | 0630 | |
| ECWACAL | 0078 | 004E | (EQU) | ECWALAST | 1508 | 05E4 | | ECWASERB | 1580 | 062C | |
| ECWACAM | 1520 | 05F0 | | ECWALDA | 0000 | 0000 | | ECWASERC | 1624 | 0658 | |
| ECWACAMB | 0298 | 012A | (EQU) | ECWALDB | 1636 | 0664 | | ECWASERD | 1588 | 0634 | |
| ECWACAW | 0180 | 00B4 | | ECWALEN | 0086 | 0056 | | ECWASERE | 1608 | 0648 | |
| ECWACBC | 0174 | 00AE | (EQU) | ECWALENV | 0242 | 00F2 | | ECWASFLA | 0296 | 0128 | |
| ECWACCS | 0296 | 0128 | (EQU) | ECWALRCL | 0088 | 0058 | | ECWASFL1 | 0296 | 0128 | |
| ECWACCWF | 0784 | 0310 | | ECWAMCW | 0299 | 012B | (EQU) | ECWASFL2 | 0297 | 0129 | |
| ECWACCWS | 0704 | 02C0 | | ECWAMODE | 0085 | 0055 | (EQU) | ECWASFL3 | 0298 | 012A | |
| ECWACERA | 1596 | 063C | | ECWAMSGA | 1552 | 0610 | | ECWASFL4 | 0299 | 012B | |
| ECWACERB | 1600 | 0640 | | ECWAMSGB | 1556 | 0614 | | ECWASFRS | 0248 | 00F8 | |
| ECWACERD | 1632 | 0660 | | ECWANAP | 0297 | 0129 | (EQU) | ECWASLEN | 0092 | 005C | |
| ECWACLOA | 0264 | 0108 | | ECWANIE | 0296 | 0128 | (EQU) | ECWASLST | 0252 | 00FC | |
| ECWACON | 0298 | 012A | (EQU) | ECWAOPCD | 0084 | 0054 | | ECWASSDT | 1544 | 0608 | |
| ECWACSW | 0188 | 00BC | | ECWAPA | 0297 | 0129 | (EQU) | ECWATAB | 1560 | 0618 | |
| ECWADAM | 1524 | 05F4 | | ECWAPCS | 0297 | 0129 | (EQU) | ECWATAM | 1532 | 05FC | |
| ECWADAMB | 0298 | 012A | (EQU) | ECWAPDL | 0297 | 0129 | (EQU) | ECWATAMB | 0298 | 012A | (EQU) |
| ECWADEA | 0176 | 00B0 | | ECWAPGLS | 0640 | 0280 | | ECWATERA | 1612 | 064C | |
| ECWADEB | 0177 | 00B1 | | ECWAPHP | 0170 | 00AA | | ECWATERB | 1616 | 0650 | |
| ECWADEC | 0178 | 00B2 | | ECWAPHP2 | 0172 | 00AC | | ECWATOI | 0299 | 012B | (EQU) |
| ECWADED | 0179 | 00B3 | | ECWAPLO | 0297 | 0129 | (EQU) | ECWATRIN | 0304 | 0130 | |
| ECWADERA | 1568 | 0620 | | ECWAPPS | 0297 | 0129 | (EQU) | ECWATS | 0296 | 0128 | (EQU) |
| ECWADERB | 1572 | 0624 | | ECWAPSCT | 0072 | 0048 | | ECWATSSV | 1548 | 060C | |
| ECWADERC | 1576 | 0628 | | ECWAPSN | 0297 | 0129 | (EQU) | ECWAUAP | 0078 | 004E | (EQU) |
| ECWADERD | 1628 | 065C | | ECWAPSW | 0196 | 00C4 | | ECWAUBEG | 0076 | 004C | |
| ECWADERE | 1592 | 0638 | | ECWARAM | 0220 | 00DC | | ECWAUBF | 0078 | 004E | (EQU) |
| ECWADEV | 0176 | 00B0 | | ECWARDA | 0298 | 012A | (EQU) | ECWAUCCW | 0080 | 0050 | |
| ECWADSB | 0298 | 012A | (EQU) | ECWARDC | 0296 | 0128 | (EQU) | ECWAUEND | 0104 | 0068 | (EQU) |
| ECWAEDIT | 1540 | 0604 | | ECWAREC | 0256 | 0100 | | ECWAUFL1 | 0078 | 004E | |
| ECWAEOS | 0298 | 012A | (EQU) | ECWARES1 | 0094 | 005E | | ECWAUFL2 | 0079 | 004F | |
| ECWAERC | 0296 | 0128 | (EQU) | ECWARES2 | 0300 | 012C | | ECWAVAM | 0174 | 00AE | (EQU) |
| ECWAERCT | 0206 | 00CE | | ECWARIR | 0299 | 012B | (EQU) | ECWAVCON | 1512 | 05E8 | |
| ECWAERSC | 1564 | 061C | | ECWARTA | 0296 | 0128 | (EQU) | ECWAWDC | 0299 | 012B | (EQU) |
| ECWAERSD | 1620 | 0654 | | ECWARTN | 0216 | 00D8 | | ECWAXSAV | 0294 | 0126 | |
| ECWAFL1 | 0174 | 00AE | | ECWASAM | 1528 | 05F8 | | | | | |
| ECWAFL2 | 0175 | 00AF | | ECWASAMB | 0298 | 012A | (EQU) | | | | |

## Assembler listing of CHAECW

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|---|---|---|---|---|---|
| 30 00000 | | CHAECW | DSECT | | |

```
***********************************************************************
*TITLE: 'CHAECW- SUPPORT SYSTEM INPUT/OUTPUT REQUEST BLOCK (SIORCB)   *
*STATUS: CHANGE LEVEL 000                                             *
*FUNCTION/OPERATION: THE SIORCB IS A GENERAL PURPOSE TABLE USED IN    *
*                    BOTH RSS AND VSS. IT SERVES BOTH AS THE          *
*                    COMMUNICATIONS AREA BETWEEN MODULES DESIRING I/O *
*                    SERVICE AND THE I/O SYSTEM, AND AS THE I/O SYSTEM*
*                    PSECT USED FOR INTERNAL COMMUNICATION. THE       *
*                    PARAMETERS FOR AN I/O REQUEST ARE PASSED IN THE  *
*                    SIORCB.                                          *
*ENTRY POINTS: CHAECW = PSECT NAME                                    *
*             CHAECW = DSECT NAME                                     *
*INPUT/OUTPUT: NOT APPLICABLE                                         *
*EXITS:  NOT APPLICABLE                                               *
*TABLES/WORK AREAS: NOT APPLICABLE                                    *
*ATTRIBUTES: RESIDENT                                                 *
```

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|----------|-------------|--------|------|------|---------|
| | | | | | |
| | | * THE SUPPORT SYSTEM INPUT/OUTPUT REQUEST CONTROL | | | |
| | | * BLOCK (SIORCB) | | | |
| 30 00000 | | | DS | 0D | |
| 30 00000 | | ECWALDA | DS | 0B | BEGINNING OF LOAD AREA |
| 30 00000 | | ECWASAVE | DS | 18F | I/O SYSTEM SAVE AREA - 1ST |
| | | * | | | LEVEL |
| 30 00048 | | ECWAPSCT | DS | 1F | POINTER TO SIORCB |
| | | * THE FOLLOWING FIELDS ARE SET UP BY THE I/O USER | | | |
| 30 0004C | | ECWAUBEG | DS | 0F | BEGINING OF USER AREA |
| 30 0004C | | ECWASDA | DS | 1H | SYMBOLIC DEVICE ADDRESS |
| 30 0004E | | ECWAUFL1 | DS | 1B | USER FLAG BYTE 1 |
| | 30 0004E | ECWASAV | EQU | ECWAUFL1 | 'SKIP THE NUMBER OF DOUBLE |
| | | * | | | WORDS IN |
| | 00000080 | ECWASAVM | EQU | X'80' | 'SKIP ECWASLEN' MASK |
| | 30 0004E | ECWACAL | EQU | ECWAUFL1 | 'I/O REQUEST RESULT OF |
| | | * | | | CALL' BYTE |
| | 00000040 | ECWACALM | EQU | X'40' | 'I/O REQUEST RESULT OF |
| | | * | | | CALL' MASK |
| | 30 0004E | ECWAUAP | EQU | ECWAUFL1 | 'DON'T USE ALTERNATE PATH' |
| | | * | | | BYTE |
| | 00000020 | ECWAUAPM | EQU | X'20' | 'DON'T USE ALTERNATE PATH' |
| | | * | | | MASK |
| | 30 0004E | ECWAUBF | EQU | ECWAUFL1 | 'BLOCKED RECORDS USED' BYTE |
| | 00000010 | ECWAUBFM | EQU | X'10' | 'BLOCKED RECORDS USED' MASK |
| 30 0004F | | ECWAUFL2 | DS | 1B | USER FLAG BYTE 2 |
| 30 00050 | | ECWAUCCW | DS | 0D | |
| 30 00050 | | ECWABFFR | DS | 1F | START ADDRESS OF CCW AND |
| | | * | | | BUFFER AREA |
| | | * | | | OR DATA FIELD |
| 30 00054 | | ECWAOPCD | DS | 1B | OPERATION CODE AS REQUIRED |
| | | * | | | BY ACCESS |
| | | * | | | METHODS |
| 30 00055 | | ECWAACMD | DS | 1B | ACTUAL COMMAND CODE - USED |
| | | * | | | WHEN |
| | | * | | | ECWAOPCD IS A CONTROL |
| | | * | | | OPERATION |
| | | * | | | CODE AS REQUIRED BY ACCESS |
| | | * | | | METH. |
| | 30 00055 | ECWAMODE | EQU | ECWAACMD | MODE SET OP FOR 7 TRK TAPE |
| 30 00056 | | ECWALEN | DS | 1H | LENGTH IN BYTES OF DATA TO |
| | | * | | | BE TRANSF. |
| 30 00058 | | ECWALRCL | DS | 1F | LOGICAL RECORD LENGTH |
| 30 0005C | | ECWASLEN | DS | 1H | NUMBER OF DOUBLE WORDS TO |
| | | * | | | BE SKIPPED |
| 30 0005E | | ECWARES1 | DS | 1H | RESERVED FOR FUTURE USE |
| | | * | | | BEFORE READING DATA |
| 30 00060 | | ECWASEEK | DS | 2F | SEEK ADDRESS - BBCCHHRX |
| | | * | | | X=UNUSED |
| | 30 00068 | ECWAUEND | EQU | * | END OF USER AREA |
| | | * THE FOLLOWING FIELDS ARE USED OR SET UP BY THE | | | |
| | | * I/O SYSTEM | | | |
| 30 00068 | | | DS | 0D | |
| 30 00068 | | ECWASCSV | DS | 16F | ERROR SCAN SAVE AREA |
| 30 000A8 | | ECWAGDE | DS | 0CL12 | SSDAT ENTRY |
| 30 000A8 | | ECWASDAT | DS | 1H | SYMBOLIC DEVICE ADDRESS |
| 30 000AA | | ECWAPHP | DS | 1H | PHYSICAL PATH |
| 30 000AC | | ECWAPHP2 | DS | 1H | ALTERNATE PHYSICAL PATH |
| 30 000AE | | ECWAFL1 | DS | 1C | FLAG BYTE 1 |
| | 30 000AE | ECWAVAM | EQU | ECWAFL1 | 'DEVICE IS VAM FORMATED' |
| | | * | | | FLAG BYTE |
| | 00000080 | ECWAVAMM | EQU | X'80' | 'DEVICE IS VAM FORMATED' |
| | | * | | | ;LAG MASK |
| | 30 000AE | ECWACBC | EQU | ECWAFL1 | 'DEVICE CAN BE CALLED' FLAG |
| | | * | | | BYTE |
| | 00000040 | ECWACBCM | EQU | X'40' | 'DEVICE CAN BE CALLED' FLAG |
| | | * | | | MASK |
| 30 000AF | | ECWAFL2 | DS | 1C | FLAG BYTE 2 |

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|---|---|---|---|---|---|
| 30 000B0 | | ECWADEV | DS | 1F | DEVICE DEFINING INFORMATION |
| | 30 000B0 | | \|ORG\| | ECWADEV | |
| 30 000B0 | | ECWADEA | DS | 1B | MODEL CODE |
| | 00000000 | ECWAMCNM | EQU | X'00' | NON-TERMINAL DEVICE |
| | 00000001 | ECWAMCAM | EQU | X'01' | 1050 MASK |
| | 00000002 | ECWAMCBM | EQU | X'02' | 2741 MASK |
| | 00000003 | ECWAMCCM | EQU | X'03' | TTY MOD 35 MASK |
| | 00000004 | ECWAMCDM | EQU | X'04' | 1052-7 MASK |
| | 00000005 | ECWAMCEM | EQU | X'05' | 2260 MASK |
| 30 000B1 | | ECWADEB | DS | 1B | DEVICE CLASSES |
| | 00000008 | ECWADCAM | EQU | X'08' | UNIT RECORD MASK |
| | 00000020 | ECWADCBM | EQU | X'20' | DIRECT ACCESS MASK |
| | 00000080 | ECWADCCM | EQU | X'80' | MAGNETIC TAPE MASK |
| | 00000001 | ECWADCDM | EQU | X'01' | DIAL LINE MASK |
| | 00000002 | ECWADCEM | EQU | X'02' | DEDICATED LINE MASK |
| | 00000004 | ECWADCFM | EQU | X'04' | AUTOMATIC CALL FEATURE MASK |
| 30 000B2 | | ECWADEC | DS | 1B | UNIT TYPE |
| | 00000001 | ECWAUTAM | EQU | X'01' | 2540 CARD READER MASK |
| | 00000002 | ECWAUTBM | EQU | X'02' | 2540 CARD PUNCH MASK |
| | 00000008 | ECWAUTCM | EQU | X'08' | 1403 PRINTER MASK |
| | 00000010 | ECWAUTDM | EQU | X'10' | 2671 PPT READER MASK |
| | 00000001 | ECWAUTEM | EQU | X'01' | 2311 MASK |
| | 00000002 | ECWAUTFM | EQU | X'02' | 2301 MASK |
| | 00000003 | ECWAUTGM | EQU | X'03' | 2321 MASK |
| | 00000004 | ECWAUTHM | EQU | X'04' | 2302 MASK |
| | 00000008 | ECWAUTIM | EQU | X'08' | 2314 MASK |
| | 00000001 | ECWAUTJM * | EQU | X'01' | 2400 SERIES MAGNETIC TAPE MASK |
| | 00000010 | ECWAUTKM * | EQU | X'10' | IBM TERMINAL ADAPTER TYPE I MASK |
| | 00000020 | ECWAUTLM * | EQU | X'20' | IBM TERMINAL ADAPTER TYPE II MASK |
| | 00000030 | ECWAUTMM * | EQU | X'30' | IBM TELEGRAPH ADAPTER TYPE I MASK |
| | 00000040 | ECWAUTNM * | EQU | X'40' | TELEGRAPH ADAPTER TYPE I MASK |
| | 00000050 | ECWAUTOM * | EQU | X'50' | TELEGRAPH ADAPTER TYPE II MASK |
| | 00000060 | ECWAUTPM * | EQU | X'60' | WORDL TRADE TELEGRAPH ADAPTER MASK |
| | 00000070 | ECWAUTQM * | EQU | X'70' | SYNCHRONOUS ADAPTER TYPE I MASK |
| | 00000080 | ECWAUTRM * | EQU | X'80' | IBM TERMINAL ADAPTER TYPE III MASK |
| | 00000001 | ECWAUTSM | EQU | X'01' | 2702 MASK |
| | 00000002 | ECWAUTTM | EQU | X'02' | 2701 ON MULTIPLEXOR MASK |
| | 00000003 | ECWAUTUM | EQU | X'03' | 1052-7 ON MULTIPLEXOR MASK |
| | 00000004 | ECWAUTVM | EQU | X'04' | 1052-7 ON SELECTOR MASK |
| | 00000005 | ECWAUTWM | EQU | X'05' | 2701 ON SELECTOR MASK |
| | 00000006 | ECWAUTXM * | EQU | X'06' | 2703 TRANSMISSION CONTROL I5542 |
| 30 000B3 | | ECWADED | DS | 1B | OPTIONAL FEATURES |
| | 00000080 | ECWAOFAM | EQU | X'80' | CARD IMAGE MASK-SAM |
| | 00000040 | ECWAOFBM | EQU | X'40' | PUNCH FEED MASK-SAM |
| | 00000080 | ECWAOFCM * | EQU | X'80' | UNIVERSAL CHARACTER MASK-SAM |
| | 00000080 | ECWAOFDM | EQU | X'80' | SCAN MASK-DASDAM |
| | 00000040 | ECWAOFEM | EQU | X'40' | TRACK OVERFLOW MASK-DASDAM |
| | 000000E0 | ECWAOFFM * | EQU | X'E0' | 7 TRACK WITH DATA CONVERSION MASK-SAM |
| | 000000A0 | ECWAOFGM * | EQU | X'A0' | 7 TRACK WITHOUT DATA CONVERSION-SAM |
| | 00000000 | ECWAOFHM | EQU | X'00' | 9 TRACK-SAM |
| | 000000C0 | ECWAOFIM | EQU | X'C0' | 9 TRACK-SAM |
| | 00000080 | ECWAOFJM | EQU | X'80' | 9 TRACK-SAM |
| | 00000000 | ECWAOFKM | EQU | X'00' | SAD ZERO MASK-TAM |
| | 00000001 | ECWAOFLM | EQU | X'01' | SAD ONE MASK-TAM |
| | 00000002 | ECWAOFMM | EQU | X'02' | SAD TWO MASK-TAM |

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|----------|-------------|--------|------|------|---------|
| | 00000003 | ECWAOFNM | EQU | X'03' | SAD THREE MASK-TAM |
| | 30 000B4 | | \|ORG\| | | |

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*************************************************************************
*                   ECWADEA = MODEL CODE                                *
*                   ECWADEB = DEVICE CLASSES                            *
*              ECWADEC = UNIT TYPE                                      *
*              ECWADED = OPTIONAL FEATURES                             *
* ECWADEA               ECWADEB        ECWADEC              ECWADED      *
* 00                    08=UNIT        01=2540 READER    80=CARD IMAGE   *
*                         RECORD       02=2540 PUNCH     40=PUNCH FEED   *
*                                      08=1403 PRINTER   80=UNIVERSAL    *
*                                                          CHARACTERS    *
*                                      10=2671 PPT READER                *
*                       20=DIRECT      01=2311           80=SCAN         *
*                         ACCESS       02=2301           40=TRACK OVERFLOW *
*                                      03=2321                           *
*                                      04=2302                           *
*                                      08=2314                           *
*                       80=MAGNETIC    01=2400 SERIES    E0=7 TRACK WITH  *
*                         TAPE                             DATA CONVERSION*
*                                                        A0=7 TRACK WITHOUT*
*                                                          DATA CONVERSION*
*                                                        C0,80 = 9 TRACK  *
*************************************************************************
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| | | * THE FOLLOWING CONTINUES THE I/O SYSTEM FIELDS | | | |
|---|---|---|---|---|---|
| 30 000B4 | | ECWACAW | DS | 1F | CHANNEL ADDRESS WORD |
| 30 000B8 | | ECWASAPT | DS | 1F | SUPPORT SYSTEM ACTIVE DEV. |
| | | * | | | TABLE PTR. |
| 30 000BC | | ECWACSW | DS | 2F | CHANNEL STATUS WORD |
| 30 000C4 | | ECWAPSW | DS | 2F | PROGRAM STATUS WORD |
| 30 000CC | | ECWAIC01 | DS | 1H | EXTENDED PSW INTERRUPTION |
| | | * | | | CODE |
| 30 000CE | | ECWAERCT | DS | 1H | ERROR RETRY COUNTER |
| 30 000D0 | | ECWASENS | DS | 2F | SENSE DATA |
| 30 000D8 | | ECWARTN | DS | 1F | ERROR ROUTINE RETURN |
| | | * | | | ADDRESS |
| 30 000DC | | ECWARAM | DS | 1F | ACCESS METHOD RETURN |
| | | * | | | ADDRESS |
| 30 000E0 | | ECWAACSW | DS | 2F | CSW SAVE AREA |
| 30 000E8 | | ECWAAPSW | DS | 2F | PSW SAVE AREA |
| 30 000F0 | | ECWAIC02 | DS | 1H | EXTENDED PSW INTERRUPTION |
| | | * | | | CODE |
| 30 000F2 | | ECWALENV | DS | 1H | ECWALEN SAVE AREA |
| 30 000F4 | | ECWAACAW | DS | 1F | CAW SAVE AREA |
| 30 000F8 | | ECWASFRS | DS | 1F | ECWAFRST ADDRESS SAVE |
| 30 000FC | | ECWASLST | DS | 1F | ECWALAST ADDRESS SAVE |
| 30 00100 | | ECWAREC | DS | 2F | I/O WORK AREA |
| 30 00108 | | ECWACLOA | DS | 6F | CHANNEL LOG OUT AREA |
| 30 00120 | | ECWABFFV | DS | 1F | ECWABFFR SAVE AREA |
| 30 00124 | | ECWAAAOP | DS | 1B | ACTUAL COMMAND CODE SAVE |
| | | * | | | AREA |
| 30 00125 | | ECWAAOP | DS | 1B | OP CODE SAVE AREA |
| 30 00126 | | ECWAXSAV | DS | 1H | SAVE AREA FOR RESIDUAL |
| | | * | | | COUNT |
| 30 00128 | | ECWASFLA | DS | 0F | SYSTEM FLAGS |
| 30 00128 | | ECWASFL1 | DS | 1B | FLAG BYTE 1 |
| | 30 00128 | ECWACCS | EQU | ECWASFL1 | 'CSW STORED ON SIO' FLAG |
| | | * | | | BYTE |
| | 00000080 | ECWACCSM | EQU | X'80' | 'CSW STORED ON SIO' MASK |
| | 30 00128 | ECWAERC | EQU | ECWASFL1 | 'ERROR ROUTINE IN CONTROL' |
| | | * | | | FLG BYTE |
| | 00000040 | ECWAERCM | EQU | X'40' | 'ERROR ROUTINE IN CONTROL' |
| | | * | | | MASK |
| | 30 00128 | ECWARTA | EQU | ECWASFL1 | 'RETURN TO ACCESS METHOD' |
| | | * | | | FLAG BYTE |
| | 00000020 | ECWARTAM | EQU | X'20' | 'RETURN TO ACCESS METHOD' |
| | | * | | | MASK |
| | 30 00128 | ECWANIE | EQU | ECWASFL1 | 'NO INTERRUPT EXPECTED' |

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|---|---|---|---|---|---|
| | | * | | | FLAG BYTE |
| | 00000010 | ECWANIEM | EQU | X'10' | 'NO INTERRUPT EXPECTED' |
| | | * | | | MASK |
| | 30 00128 | ECWATS | EQU | ECWASFL1 | 'ISSUE TERMINAL HIO |
| | | * | | | SEQUENCE' BYTE |
| | 00000008 | ECWATSM | EQU | X'08' | 'ISSUE TERMINAL HIO |
| | | * | | | SEQUENCE' MASK |
| | 30 00128 | ECWAADM | EQU | ECWASFL1 | 'ADDRESS MARKER MISSING' |
| | | * | | | FLAG BYTE |
| | 00000004 | ECWAADMM | EQU | X'04' | 'ADDRESS MARKER MISSING' |
| | | * | | | MASK |
| | 30 00128 | ECWARDC | EQU | ECWASFL1 | 'READ DATA CHECK' FLAG BYTE |
| | 00000002 | ECWARDCM | EQU | X'02' | 'READ DATA CHECK' MASK |
| | 30 00128 | ECWASBI | EQU | ECWASFL1 | 'SENSE BYTE INFO' FLAG BYTE |
| | 00000001 | ECWASBIM | EQU | X'01' | 'SENSE BYTE INFO' MASK |
| 30 00129 | | ECWASFL2 | DS | 1B | FLAG BYTE 2 |
| | 30 00129 | ECWAPCS | EQU | ECWASFL2 | 'PRINT CSW ON ERROR' FLAG |
| | | * | | | BYTE |
| | 00000080 | ECWAPCSM | EQU | X'80' | 'PRINT CSW ON ERROR' MASK |
| | 30 00129 | ECWAPPS | EQU | ECWASFL2 | 'PRINT PSW ON ERROR' FLAG |
| | | * | | | BYTE |
| | 00000040 | ECWAPPSM | EQU | X'40' | 'PRINT PSW ON ERROR' MASK |
| | 30 00129 | ECWAPSN | EQU | ECWASFL2 | 'PRINT SENSE INFO ON ERROR' |
| | | * | | | BYTE |
| | 00000020 | ECWAPSNM | EQU | X'20' | 'PRINT SENSE INFO ON ERROR' |
| | | * | | | MASK |
| | 30 00129 | ECWAPDL | EQU | ECWASFL2 | 'PRINT SYMBOLIC DEVICE |
| | | * | | | ADDRESS' BYTE |
| | 00000010 | ECWAPDLM | EQU | X'10' | 'PRINT SYMBOLIC DEVICE |
| | | * | | | ADDRESS' MASK |
| | 30 00129 | ECWAPA | EQU | ECWASFL2 | 'PRINT ACTUAL PATH' BYTE |
| | 00000008 | ECWAPAM | EQU | X'08' | 'PRINT ACTUAL PATH' MASK |
| | 30 00129 | ECWANAP | EQU | ECWASFL2 | 'PRINT ALTERNATE PATH USED' |
| | | * | | | BYTE |
| | 00000004 | ECWANAPM | EQU | X'04' | 'PRINT ALTERNATE PATH USED' |
| | | * | | | MASK |
| | 30 00129 | ECWAPLO | EQU | ECWASFL2 | 'PRINT CHANNEL LOG OUT |
| | | * | | | AREA' BYTE |
| | 00000002 | ECWAPLOM | EQU | X'02' | 'PRINT CHANNEL LOG OUT |
| | | * | | | AREA' BYTE |
| 30 0012A | | ECWASFL3 | DS | 1B | FLAG BYTE 3 |
| | 30 0012A | ECWADSB | EQU | ECWASFL3 | 'DON'T SAVE ECWABFFR & |
| | | * | | | ECWALEN' BYTE |
| | 00000080 | ECWADSBM | EQU | X'80' | 'DON'T SAVE ECWABFFR & |
| | | * | | | ECWALEN' MASK |
| | 30 0012A | ECWACON | EQU | ECWASFL3 | 'CONTINUTAION CHARACTER' |
| | | * | | | BYTE |
| | 00000040 | ECWACONM | EQU | X'40' | 'CONTINUTAION CHARACTER' |
| | | * | | | MASK |
| | 30 0012A | ECWAEOS | EQU | ECWASFL3 | 'END OF SCAN' FLAG |
| | 00000020 | ECWAEOSM | EQU | X'20' | 'END OF SCAN' MASK |
| | 30 0012A | ECWACAMB | EQU | ECWASFL3 | 'CAM IN CONTROL' BYTE |
| | 00000010 | ECWACAMM | EQU | X'10' | 'CAM IN CONTROL' MASK |
| | 30 0012A | ECWADAMB | EQU | ECWASFL3 | 'DASDAM IN CONTROL' BYTE |
| | 00000008 | ECWADAMM | EQU | X'08' | 'DASDAM IN CONTROL' MASK |
| | 30 0012A | ECWASAMB | EQU | ECWASFL3 | 'SAM IN CONTROL' BYTE |
| | 00000004 | ECWASAMM | EQU | X'04' | 'SAM IN CONTROL' MASK |
| | 30 0012A | ECWATAMB | EQU | ECWASFL3 | 'TAM IN CONTROL' BYTE |
| | 00000002 | ECWATAMM | EQU | X'02' | 'TAM IN CONTROL' MASK |
| | 30 0012A | ECWARDA | EQU | ECWASFL3 | 'EDITOR RETURN TO ACCESS |
| | | * | | | METHOD' FLAG |
| | 00000001 | ECWARDAM | EQU | X'01' | 'EDITOR RETURN TO ACCESS |
| | | * | | | METHOD' MASK |
| 30 0012B | | ECWASFL4 | DS | 1B | FLAG BYTE 4 |
| | 30 0012B | ECWAADC | EQU | ECWASFL4 | DC 1ST PASS FLAG |
| | 00000004 | ECWAADCM | EQU | X'04' | DC 1ST PASS MASK |
| | 30 0012B | ECWAWDC | EQU | ECWASFL4 | UCS DATA CHECK FLAG |
| | 00000008 | ECWAWDCM | EQU | X'08' | UCS DATA CHECK MASK |

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|----------|-------------|--------|------|------|---------|
|          | 30 0012B    | ECWAINR | EQU | ECWASFL4 | INTERVENTION REQUIRED IN |
|          |             | *       |     |          | PROCESS |
|          | 00000080    | ECWAINRM | EQU | X'80' | INTERVENTION REQ. IN |
|          |             | *       |     |          | PROCESS MASK |
|          | 30 0012B    | ECWARIR | EQU | ECWASFL4 | RESET INTERVENTION REQUIRED |
|          |             | *       |     |          | FLAGS |
|          | 00000040    | ECWARIRM | EQU | X'40' | RESET INTERVENTION REQUIRED |
|          |             | *       |     |          | MASK |
|          | 30 0012B    | ECWAMCW | EQU | ECWASFL4 | MODIFY CAW FLAG |
|          | 00000020    | ECWAMCWM | EQU | X'20' | MODIFY CAW MASK |
|          | 30 0012B    | ECWATOI | EQU | ECWASFL4 | CLEAR STATUS SAVE AREA FLAG |
|          | 00000010    | ECWATOIM | EQU | X'10' | CLEAR STATUS SAVE AREA MASK |
| 30 0012C |             | ECWARES2 | DS | 1F | I/O WORK AREA |
| 30 00130 |             | ECWATRIN | DS | 32D | TERMINAL READ IN AREA |
| 30 00230 |             | ECWAIORF | DS | 10D | IORCB FLAGS |
| 30 00280 |             | ECWAPGLS | DS | 8D | IORCB PAGE LIST |
|          |             | * THE FOLLOWING ARE CCW'S SET UP BY THE ACCESS | | | |
|          |             | * METHODS | | | |
|          |             | * AND BY ERROR RECOVERY MODULES | | | |
| 30 002C0 |             | ECWACCWS | DS | 10D | ERROR RECOVERY CCW'S |
| 30 00310 |             | ECWACCWF | DS | 90D | ACCESS METHOD CCW'S |
| 30 005E0 |             | ECWAFRST | DS | 1F | POINTER TO FIRST ACTIVE CCW |
| 30 005E4 |             | ECWALAST | DS | 1F | POINTER TO LAST ACTIVE CCW |

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**********************************************************************
* THE FOLLOWING IS THE FORMAT OF THE CCW'S BUILT BY THE              *
* ACCESS METHODS AND THE ERROR RECOVERY MODULES                     *
*    0      *       *        *       31*32    39*40    47*48    *    63     *
*    ****************************************************************    *
*    *      *       *        *         *         *         *      *    *
*    *   VM  OR  RM  ADDRESS        * FLAGS *OP CODE* BYTE COUNT  *    *
*    *      *       *        *         *         *         *      *    *
*    ****************************************************************    *
**********************************************************************
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|          |             | * THE FOLLOWING ARE THE VCONS USED BY THE I/O | | | |
|          |             | * SYSTEM | | | |
| 30 005E8 |             | ECWAVCON | DS | 0F | TABLE OF VCONS |
| 30 005E8 |             | ECWAIOCA | DS | 1F | POINTER TO I/O CONTROL MAIN |
|          |             | *        |    |    | ENTRY |
| 30 005EC |             | ECWAIOCB | DS | 1F | POINTER TO I/O CONTROL |
|          |             | *        |    |    | SECONDARY NTRY |
| 30 005F0 |             | ECWACAM | DS | 1F | POINTER TO CAM |
| 30 005F4 |             | ECWADAM | DS | 1F | POINTER TO DASDAM |
| 30 005F8 |             | ECWASAM | DS | 1F | POINTER TO SAM |
| 30 005FC |             | ECWATAM | DS | 1F | POINTER TO TAM |
| 30 00600 |             | ECWAIOCP | DS | 1F | POINTER TO I/O COMPLETION |
| 30 00604 |             | ECWAEDIT | DS | 1F | POINTER TO I/O EDITOR |
| 30 00608 |             | ECWASSDT | DS | 1F | POINTER TO SSDAT |
| 30 0060C |             | ECWATSSV | DS | 1F | TSS STATUS SAVE AREA |
| 30 00610 |             | ECWAMSGA | DS | 1F | ENTRY TO MESSAGE FOR |
|          |             | *        |    |    | INTERVENTION REQUIRED |
| 30 00614 |             | ECWAMSGB | DS | 1F | ENTRY TO MESSAGE FOR |
|          |             | *        |    |    | UNRECOVERABLE I/O ERROR |
| 30 00618 |             | ECWATAB | DS | 1F | POINTER TO TABLE CONTAIN. |
|          |             | *        |    |    | SADT |
| 30 0061C |             | ECWAERSC | DS | 1F | POINTER TO ERROR SCAN AND |
|          |             | *        |    |    | RECOVERY |
| 30 00620 |             | ECWADERA | DS | 1F | ENTRY TO DASDAM ERROR |
|          |             | *        |    |    | RECOVERY |
| 30 00624 |             | ECWADERB | DS | 1F | ENTRY TO DASDAM ERROR |
|          |             | *        |    |    | RECOVERY |
| 30 00628 |             | ECWADERC | DS | 1F | ENTRY TO DASDAM ERROR |
|          |             | *        |    |    | RECOVERY |
| 30 0062C |             | ECWASERB | DS | 1F | ENTRY TO SAM ERROR RECOVERY |
| 30 00630 |             | ECWASERA | DS | 1F | ENTRY TO SAM ERROR RECOVERY |
| 30 00634 |             | ECWASERD | DS | 1F | ENTRY TO SAM ERROR RECOVERY |
| 30 00638 |             | ECWADERE | DS | 1F | ENTRY TO ERROR SCAN-UNIT |
|          |             | *        |    |    | EXE |
| 30 0063C |             | ECWACERA | DS | 1F | ENTRY TO CAM ERROR RECOVERY |

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|----------|-------------|--------|------|------|---------|
| 30 00640 | | ECWACERB | DS | 1F | ENTRY TO CAM ERROR RECOVERY |
| 30 00644 | | ECWAIOIN | DS | 1F | POINTER TO I/O INITIATION |
| | | * | | | ALSO USED |
| | | * | | | BY ERROR SC AN FOR UNIT |
| | | * | | | EXCEPTION |
| | | * | | | ON THE 1052-7 |
| 30 00648 | | ECWASERE | DS | 1F | ENTRY TO SAM ERROR RECOVERY |
| 30 0064C | | ECWATERA | DS | 1F | ENTRY TO TAM ERROR RECOVERY |
| 30 00650 | | ECWATERB | DS | 1F | ENTRY TO TAM ERROR RECOVERY |
| 30 00654 | | ECWAERSD | DS | 1F | ENTRY TO ERROR SCAN FOR |
| | | * | | | INTERVENTION REQUIRED |
| 30 00658 | | ECWASERC | DS | 1F | ENTRY TO SAM ERROR RECOVERY |
| 30 0065C | | ECWADERD | DS | 1F | ENTRY TO DASDAM ERROR |
| | | * | | | RECOVERY |
| 30 00660 | | ECWACERD | DS | 1F | ENTRY TO CAM ERROR RECOVERY |
| 30 00664 | | ECWALDB | DS | 0B | END OF LOAD AREA |

## Support System Device Allocation Table (CHAECX)

The Support System Device Allocation Table (SSDAT) maintains certain information about the system devices for TSSS I/O. The VSS copy of the SSDAT resides in IVM. The RSS copy is divided into a resident and a transient portion.

The resident portion of the SSDAT comprises a 12 byte header and four twelve-byte entries. The first entry is contiguous to the header and defines the Main Operator's terminal. The next three device entries are contiguous to the first and define the RSS residence devices.

The remainder of the SSDAT is nonresident, loaded by the RSS loader when RSS is activated. This portion of the SSDAT contains one device entry for every device in the system.

The SSDAT is created by SYSGEN/STARTUP from information contained in CHASDA, and the Pathfinding tables.

### CHAECX Storage map

```
DEC   HEX
  0    0 |-----------------------------------------------------------------------|
         |            ECXBFDE             |            ECXBLDE                    |
  8    8 |-------------------------------------------------------------------|
         |            ECXBSADT            |                                       |
         |                         ECXBMOT                                        |
 24   18 |-----------------------------------------------------------------------|
         |                         ECXBRRES                                       |
 32   20 |-----------------------------------------------------------------------|
         |                                |                                       |
         |                         ECXBSRES                                       |
 48   30 |-----------------------------------------------------------------------|
         |                         ECXBTRES                                       |
 56   38 |-----------------------------------------------------------------------|
         |                    |    ECXBSDA       |        ECXBPHP                  |
 64   40 |    ECXBPHP2    |ECXBFL1|ECXBFL2|             ECXBDEV                   |
         |-----------------------------------------------------------------------|
```

### ORG   ECXBDEV

```
 68   44                                   |ECXBDEA |ECXBDEB |ECXBDEC |ECXBDED |
                                           |_____|_____|_____|_____|
```

### Fields in CHAECX -- by displacement

| DEC | HEX | FIELD | DEC | HEX | FIELD | DEC | HEX | FIELD |
|-----|-----|-------|-----|-----|-------|-----|-----|-------|
| 0000 | 0000 | ECXBFDE | 0048 | 0030 | ECXBTRES | 0066 | 0042 | ECXBFL1 |
| 0000 | 0000 | ECXBHEAD | 0060 | 003C | ECXBSDA | 0067 | 0043 | ECXBFL2 |
| 0004 | 0004 | ECXBLDE | 0060 | 003C | ECXBGDE | 0068 | 0044 | ECXBDEA |
| 0008 | 0008 | ECXBSADT | 0062 | 003E | ECXBPHP | 0068 | 0044 | ECXBDEV |
| 0012 | 000C | ECXBMOT | 0064 | 0040 | ECXBPHP2 | 0069 | 0045 | ECXBDEB |
| 0024 | 0018 | ECXBRRES | 0066 | 0042 | ECXBCAL (EQU) | 0070 | 0046 | ECXBDEC |
| 0036 | 0024 | ECXBSRES | 0066 | 0042 | ECXBVAM (EQU) | 0071 | 0047 | ECXBDED |

### Alphabetical list of fields in CHAECX

| FIELD | DEC | HEX | FIELD | DEC | HEX | FIELD | DEC | HEX |
|-------|-----|-----|-------|-----|-----|-------|-----|-----|
| ECXBCAL | 0066 | 0042 (EQU) | ECXBFL1 | 0066 | 0042 | ECXBPHP2 | 0064 | 0040 |
| ECXBDEA | 0068 | 0044 | ECXBFL2 | 0067 | 0043 | ECXBRRES | 0024 | 0018 |
| ECXBDEB | 0069 | 0045 | ECXBGDE | 0060 | 003C | ECXBSADT | 0008 | 0008 |
| ECXBDEC | 0070 | 0046 | ECXBHEAD | 0000 | 0000 | ECXBSDA | 0060 | 003C |
| ECXBDED | 0071 | 0047 | ECXBLDE | 0004 | 0004 | ECXBSRES | 0036 | 0024 |
| ECXBDEV | 0068 | 0044 | ECXBMOT | 0012 | 000C | ECXBTRES | 0048 | 0030 |
| ECXBFDE | 0000 | 0000 | ECXBPHP | 0062 | 003E | ECXBVAM | 0066 | 0042 (EQU) |

```
LOCATION INSTRUCTION SOURCE    INST  OPER       COMMENT
         31 00000    CHAECX    DSECT
************************************************************************
*TITLE  'CHAECX' - SUPPORT SYSTEM DEVICE ALLOCATION TABLE ( SSDAT )  *
*STATUS: CHANGE LEVEL 000                                            *
*FUNCTION/OPERATION: THE RESIDENT PORTION OF THE SSDAT CONSISTS OF A *
*                    12 BYTE HEADER AND 4 - 12 BYTE ENTRIES. THE FIRST*
*                    DEVICE ENTRY IS CONTIGUOUS TO THE HEADER AND    *
*                    DEFINES THE MAIN OPERATOR'S TERMINAL. THE NEXT  *
*                    THREE DEVICE ENTRIES DEFINE TSSS RESIDENCE AND  *
*                    ARE CONTIGUOUS TO THE MOT ENTRY. THE REMAINDER OF*
*                    THE TABLE IS NON-RESIDENT AND IS LOADED BY THE  *
*                    RSS LOADER WHEN RSS IS ACTIVATED. IT IS CREATED *
*                    BY TSS SYSGEN/STARTUP FROM INFO CONTAINED IN THE *
*                    SDAT AND PATH-FINDING TABLES AND STORED IN A    *
*                    PREDEFINED LOCATION ON THE RSS RESIDENCE DEVICES.*
*                    IT CONSISTS OF ONE DEVICE ENTRY FOR EVERY DEVICE *
*                    ON THE SYSTEM AT STARTUP IN ASCENDING ORDER BY  *
*                    SYMBOLIC DEVICE ADDRESS.  ALL ENTRIES IN THE    *
*                    NON-RESIDENT PORTION OF THIS TABLE ARE CONTIGUOUS*
*ENTRY POINTS: NOT APPLICABLE                                        *
*INPUT/OUTPUT: NOT APPLICABLE                                        *
*EXITS:  NOT APPLICABLE                                              *
*TABLES/WORK AREAS: NOT APPLICABLE                                   *
*ATTRIBUTES: PARTIALLY RESIDENT                                      *
*           PARTIALLY NON-RESIDENT                                   *
*NOTES      THE CSECT NAMES FOR THIS TABLE ARE AS FOLLOWS -          *
*           RSS - CHBECXRA                                           *
*                 RESIDENT PORTION - CHBECXRA                        *
*                 NON-RESIDENT PORTION - CHBECXRB                    *
*           VSS - CHBECXVA                                           *
************************************************************************
31 00000                         DS    0D
                        * THE FOLLOWING FIELDS REPRESENT THE HEADER
31 00000                ECXBHEAD DS    0CL12
31 00000                ECXBFDE  DS    1F         POINTER TO THE FIRST
                        *                         NON-RESIDENT DEVICE ENTRY
31 00004                ECXBLDE  DS    1F         POINTER TO THE LAST
                        *                         NON-RESIDENT DEVICE ENTRY
31 00008                ECXBSADT DS    1F         RESERVED FOR USE BY
                        *                         RSS/VSS.
                        * THE FOLLOWING ENTRIES ARE RESIDENT AND CONTIGUOUS
                        * WITH THE HEADER.
31 0000C                ECXBMOT  DS    3F         MAIN OPERATOR'S TERMINAL
                        *                         ENTRY
31 00018                ECXBRRES DS    3F         RSS RESIDENCE DEVICE ENTRY
31 00024                ECXBSRES DS    3F         RESIDENCE DEVICE ENTRY
31 00030                ECXBTRES DS    3F         RESIDENCE DEVICE ENTRY
*           A RESIDENCE DEVICE ENTRY WHICH IS NON-EXISTENT           *
*           WILL HAVE ALL BITS ON IN THE SYMBOLIC DEVICE             *
*           ADDRESS, PHYSICAL PATH AND ALTERNATE PATH FIELDS         *
*           OF THE ENTRY.                                            *
                        * THE FOLLOWING IS A GENERAL DEVICE ENTRY
*           THE ALTERNATE PHYSICAL PATH FIELD OF A DEVICE            *
*           ENTRY WILL HAVE ALL BITS ON IF NO ALTERNATE             *
*           PATH EXISTS.                                             *
*           ONLY THE DEVICES READY AT STARTUP WILL HAVE             *
*           ENTRIES GENERATED FOR THEM.  THEREFORE, EVERY           *
*           GENERAL DEVICE ENTRY WILL HAVE A VALID SYMBOLIC          *
*           DEVICE ADDRESS AND PHYSICAL PATH.                        *
31 0003C                ECXBGDE  DS    0CL12      THIS LABEL SHOULD BE USED
                        *                         AS A BASE WHEN
                        *                         ADDRESSING ANY GENERAL
                        *                         DEVICE ENTRY
31 0003C                ECXBSDA  DS    1H         SYMBOLIC DEVICE ADDRESS
31 0003E                ECXBPHP  DS    1H         PHYSICAL PATH
31 00040                ECXBPHP2 DS    1H         ALTERNATE PHYSICAL PATH
31 00042                ECXBFL1  DS    1C         FLAG BYTE 1
         31 00042       ECXBVAM  EQU   ECXBFL1    'DEVICE IS VAM
```

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|----------|-------------|--------|------|------|---------|
| | | * | | | FORMATED'FLAG BYTE |
| | 00000080 | ECXBVAMM | EQU | X'80' | 'DEVICE IS VAM |
| | | * | | | FORMATTED'FLAG |
| | 31 00042 | ECXBCAL | EQU | ECXBFL1 | 'DEVICE CAN BE CALLED' FLAG |
| | | * | | | BYTE |
| | 00000040 | ECXBCALM | EQU | X'40' | 'DEVICE CAN BE CALLED' MASK |

```
*           FLAG BYTE ECXBFL1 IS FILLED IN BY STARTUP.          *
*           ACCESS DEVICE CONTAINS A VAM FORMATTED PACK OR DRUM. *
*           DEVICE CAN BE CALLED FLAG IS SET WHEN THE DEVICE     *
*           DRIVE, 2540 CARD READER, 1050 TELECOMMUNICATIONS     *
*           SYSTEM WITH A 1056 CARD READER ATTACHED.            *
```

| | | | | | |
|----------|-------------|--------|------|------|---------|
| 31 00043 | | ECXBFL2 | DS | 1C | RESERVED FOR FUTURE USE. |

```
*           THE FOLLOWING WORD OF DEVICE DEFINING INFORMATION IS  *
*           EXACTLY THE SAME AS ITS CORRESPONDING WORD IN TSS SDAT.*
```

| | | | | | |
|----------|-------------|--------|------|------|---------|
| 31 00044 | | ECXBDEV | DS | 1F | DEVICE DEFINING INFORMATION |
| | 31 00044 | | \|ORG\| | ECXBDEV | |
| 31 00044 | | ECXBDEA | DS | 1B | MODEL CODE |
| | 00000000 | ECXBMCNM | EQU | X'00' | NON-TERMINAL DEVICE |
| | 00000001 | ECXBMCAM | EQU | X'01' | 1050 MASK |
| | 00000002 | ECXBMCBM | EQU | X'02' | 2741 MASK |
| | 00000003 | ECXBMCCM | EQU | X'03' | TTY MOD 35 MASK |
| | 00000004 | ECXBMCDM | EQU | X'04' | 1052-7 MASK |
| 31 00045 | | ECXBDEB | DS | 1B | DEVICE CLASS |
| | 00000008 | ECXBDCAM | EQU | X'08' | UNIT RECORD MASK |
| | 00000020 | ECXBDCBM | EQU | X'20' | DIRECT ACCESS MASK |
| | 00000080 | ECXBDCCM | EQU | X'80' | MAGNETIC TAPE MASK |
| | 00000001 | ECXBDCDM | EQU | X'01' | DIAL LINE MASK |
| 31 00046 | | ECXBDEC | DS | 1B | UNIT TYPE |
| | 00000002 | ECXBUTBM | EQU | X'02' | 2540 CARD PUNCH MASK |
| | 00000008 | ECXBUTCM | EQU | X'08' | 1403 PRINTER MASK |
| | 00000001 | ECXBUTEM | EQU | X'01' | 2311 MASK |
| | 00000002 | ECXBUTFM | EQU | X'02' | 2301 MASK |
| | 00000003 | ECXBUTGM | EQU | X'03' | 2321 MASK |
| | 00000008 | ECXBUTIM | EQU | X'08' | 2314 MASK |
| | 00000001 | ECXBUTJM | EQU | X'01' | 2400 SERIES MAGNETIC TAPE |
| | | * | | | MASK |
| | 00000010 | ECXBUTDM | EQU | X'10' | 2671 PPT READER MASK |
| | 00000010 | ECXBUTKM | EQU | X'10' | IBM TERMINAL ADAPTER TYPE I |
| | | * | | | MASK |
| | 00000020 | ECXBUTLM | EQU | X'20' | IBM TERMINAL ADAPTER TYPE |
| | | * | | | II MASK |
| | 00000030 | ECXBUTMM | EQU | X'30' | TELEGRAPH ADAPTER TYPE I |
| | | * | | | MASK |
| | 00000040 | ECXBUTNM | EQU | X'40' | TELEGRAPH ADAPTER TYPE II |
| | | * | | | MASK |
| | 00000080 | ECXBUTPM | EQU | X'80' | WORLD TRADE TELEGRAPH |
| | | * | | | ADAPTER MASK - TAM |
| | 00000001 | ECXBUTSM | EQU | X'01' | 2702 ON MULTIPLEXOR CHANNEL |
| | | * | | | MASK - TAM |
| | 00000002 | ECXBUTTM | EQU | X'02' | 2701 ON MULTIPLEXOR MASK |
| | 00000003 | ECXBUTUM | EQU | X'03' | 1052-7 ON MULTIPLEXOR MASK |
| | 00000004 | ECXBUTVM | EQU | X'04' | 1052-7 ON SELECTOR MASK |
| | 00000005 | ECXBUTWM | EQU | X'05' | 2701 ON SELECTOR MASK |
| | 00000006 | ECXBUTXM | EQU | X'06' | 2703 TRANSMISSION CONTROL |
| | | * | | | UNIT |
| 31 00047 | | ECXBDED | DS | 1B | OPTIONAL FEATURES |
| | 00000080 | ECXBOFAM | EQU | X'80' | CARD IMAGE MASK-SAM |
| | 00000040 | ECXBOFBM | EQU | X'40' | PUNCH FEED MASK-SAM |
| | 00000080 | ECXBOFCM | EQU | X'80' | UNIVERSAL CHARACTER |
| | | * | | | MASK-SAM |
| | 00000080 | ECXBOFDM | EQU | X'80' | SCAN MASK-DASDAM |
| | 00000040 | ECXBOFEM | EQU | X'40' | TRACK OVERFLOW MASK-DASDAM |
| | 000000B0 | ECXBOFTM | EQU | X'B0' | SCAN & TRACK OVERFLOW MASK |
| | | * | | | - DASDAM |
| | 000000E0 | ECXBOFFM | EQU | X'E0' | 7 TRACK WITH DATA |
| | | * | | | CONVERSION MASK-SAM |

```
*           DEVICE IS VAM FORMATTED FLAG IS SET WHEN A DIRECT    *
*           IS A SEQUENTIAL INPUT DEVICE IE. 2400 TAPE          *
```

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|---|---|---|---|---|---|
| | 00000002 | ECXBDCEM | EQU | X'02' | DEDICATED LINE MASK |
| | 00000004 | ECXBDCFM | EQU | X'04' | AUTOMATIC CALL FEATURE MASK |
| | 00000001 | ECXBUTAM | EQU | X'01' | 2540 CARD READER MASK |
| | 00000000 | ECXBOFKM | EQU | X'00' | SAD ZERO MASK-TAM |
| | 00000001 | ECXBOFLM | EQU | X'01' | SAD ONE MASK-TAM |
| | 00000002 | ECXBOFMM | EQU | X'02' | SAD TWO MASK-TAM |
| | 00000003 | ECXBOFNM | EQU | X'03' | SAD THREE MASK-TAM |
| | 00000010 | ECXBOFOM | EQU | X'10' | IBM LINE ADAPTER TYPE I - |
| | | * | | | TAM |
| | 00000020 | ECXBOFPM | EQU | X'20' | IBM LINE ADAPTER TYPE II - |
| | | * | | | TAM |
| | 00000030 | ECXBOFQM | EQU | X'30' | DATA SET LINE ADAPTER - TAM |
| | 00000040 | ECXBOFRM | EQU | X'40' | AUTOMATIC CALL ADAPTER - |
| | | * | | | TAM |
| | 00000050 | ECXBOFSM | EQU | X'50' | TELEGRAPH LINE ADAPTER - |
| | | * | | | TAM |
| | 31 00048 | | |ORG| | | |

```
*************************************************************************
*                 ECXBDEA = MODEL CODE                                  *
*                 ECXBDEB = DEVICE CLASSES                              *
*                 ECXBDEC = UNIT TYPE                                   *
*                 ECXBDED = OPTIONAL FEATURES                          *
* ECXBDEA           ECXBDEB          ECXBDEC          ECXBDED          *
* 00                08=UNIT          01=2540 READER   80=CARD IMAGE     *
*                      RECORD        02=2540 PUNCH    40=PUNCH FEED      *
*                                    08=1403 PRINTER  80=UNIVERSAL      *
*                                                        CHARACTERS     *
*                                    10=2671 PPT READER                 *
```

# Error Recovery Control Communications Area (CHAERC)

CHAERC contains information about system configuration, system status, and device paths which will be used by the SERR modules.

## CHAERC Storage map

| DEC | HEX | Contents | | |
|-----|-----|----------|----------|----------|
| 0 | 0 | RESERVED | | |
| 3072 | C00 | ERCSYS | ERCPLS | |
| 3080 | C08 | ERCPLR | ERCSAQ | |
| 3088 | C10 | UNNAMED | ERCDPP | |
| 3096 | C18 | ERCDPL | ERCODP | |
| 3104 | C20 | ERCODL | ERCPDA | ERCODA |
| 3112 | C28 | ERCSSA | ERCSRT | |
| 3120 | C30 | ERCSP1 | ERCSP2 | |
| 3128 | C38 | ERCR14 | ERCR00 | |
| 3136 | C40 | ERCR01 | ERCR02 | |
| 3144 | C48 | ERCR03 | ERCR04 | |
| 3152 | C50 | ERCNUC | ERCMID | ERCCDE |
| 3160 | C58 | ERCDLY | UNNAMED | |
| 3168 | C60 | ERCA31 | | |
| 3176 | C68 | ERCA11 | | |
| 3184 | C70 | ERCJ11 | ERCPTH | |
| 3192 | C78 | ERCBAS | ERCODE | UNNAMED |
| 3200 | C80 | ERCDIS | | |
| 3208 | C88 | ERCMCW | | |
| 3216 | C90 | ERCPSW | | |
| 3224 | C98 | ERCZIP | | |
| 3232 | CA0 | ERCPAG | ERCEIG | ERCCLK |
| 3240 | CA8 | ERCOPA | | |
| 3248 | CB0 | ERCTGR | | |

```
DEC   HEX
3312  CF0 |----------------------------------------------------------------|
          |                                                                |
          =                           UNNAMED                              =
          |                                                                |
          |                                                                |
3360  D20 | ERCMA1  | ERCTIM  | ERCGPR  | ERCMA2  |   ERCSIC   | ERCMUL | ERCALT |
          |                                                                |
3368  D28 | ERCPIN  | ERCTPP  | ERCPRI  | UNNAMED |        ERCTMP          |
          |                                                                |
3376  D30 |          ERCLCL            |          ERCSCL                   |
          |                                                                |
3384  D38 |          ERCCR6            |          ERCR12                   |
          |----------------------------------------------------------------|
```

## Fields in CHAERC -- by displacement

| DEC | HEX | FIELD | DEC | HEX | FIELD | DEC | HEX | FIELD |
|-----|-----|-------|-----|-----|-------|-----|-----|-------|
| 3072 | 0C00 | ERCSYS | 3148 | 0C4C | ERCR04 | 3248 | 0CB0 | ERCTGR |
| 3076 | 0C04 | ERCPLS | 3152 | 0C50 | ERCNUC | 3360 | 0D20 | ERCMA1 |
| 3080 | 0C08 | ERCPLR | 3156 | 0C54 | ERCMID | 3360 | 0D20 | ERCBYT |
| 3084 | 0C0C | ERCSAQ | 3158 | 0C56 | ERCCDE | 3361 | 0D21 | ERCTIM |
| 3092 | 0C14 | ERCDPP | 3160 | 0C58 | ERCDLY | 3362 | 0D22 | ERCGPR |
| 3096 | 0C18 | ERCDPL | 3168 | 0C60 | ERCA31 | 3363 | 0D23 | ERCMA2 |
| 3100 | 0C1C | ERCODP | 3176 | 0C68 | ERCA11 | 3364 | 0D24 | ERCSIC |
| 3104 | 0C20 | ERCODL | 3184 | 0C70 | ERCJ11 | 3366 | 0D26 | ERCMUL |
| 3108 | 0C24 | ERCPDA | 3188 | 0C74 | ERCPTH | 3367 | 0D27 | ERCALT |
| 3110 | 0C26 | ERCODA | 3192 | 0C78 | ERCBAS | 3368 | 0D28 | ERCPIN |
| 3112 | 0C28 | ERCSSA | 3196 | 0C7C | ERCODE | 3369 | 0D29 | ERCTPP |
| 3116 | 0C2C | ERCSRT | 3200 | 0C80 | ERCDIS | 3370 | 0D2A | ERCPRI |
| 3120 | 0C30 | ERCSP1 | 3208 | 0C88 | ERCMCW | 3372 | 0D2C | ERCTMP |
| 3124 | 0C34 | ERCSP2 | 3216 | 0C90 | ERCPSW | 3376 | 0D30 | ERCLCL |
| 3128 | 0C38 | ERCR14 | 3224 | 0C98 | ERCZIP | 3380 | 0D34 | ERCSCL |
| 3132 | 0C3C | ERCR00 | 3232 | 0CA0 | ERCPAG | 3384 | 0D38 | ERCCR6 |
| 3136 | 0C40 | ERCR01 | 3234 | 0CA2 | ERCEIG | 3388 | 0D3C | ERCR12 |
| 3140 | 0C44 | ERCR02 | 3236 | 0CA4 | ERCCLK | | | |
| 3144 | 0C48 | ERCR03 | 3240 | 0CA8 | ERCOPA | | | |

## Alphabetical list of fields in CHAERC

| FIELD | DEC | HEX | FIELD | DEC | HEX | FIELD | DEC | HEX |
|-------|-----|-----|-------|-----|-----|-------|-----|-----|
| ERCALT | 3367 | 0D27 | ERCMID | 3156 | 0C54 | ERCR03 | 3144 | 0C48 |
| ERCA11 | 3176 | 0C68 | ERCMUL | 3366 | 0D26 | ERCR04 | 3148 | 0C4C |
| ERCA31 | 3168 | 0C60 | ERCNUC | 3152 | 0C50 | ERCR12 | 3388 | 0D3C |
| ERCBAS | 3192 | 0C78 | ERCODA | 3110 | 0C26 | ERCR14 | 3128 | 0C38 |
| ERCBYT | 3360 | 0D20 | ERCODE | 3196 | 0C7C | ERCSAQ | 3084 | 0C0C |
| ERCCDE | 3158 | 0C56 | ERCODL | 3104 | 0C20 | ERCSCL | 3380 | 0D34 |
| ERCCLK | 3236 | 0CA4 | ERCODP | 3100 | 0C1C | ERCSIC | 3364 | 0D24 |
| ERCCR6 | 3384 | 0D38 | ERCOPA | 3240 | 0CA8 | ERCSP1 | 3120 | 0C30 |
| ERCDIS | 3200 | 0C80 | ERCPAG | 3232 | 0CA0 | ERCSP2 | 3124 | 0C34 |
| ERCDLY | 3160 | 0C58 | ERCPDA | 3108 | 0C24 | ERCSRT | 3116 | 0C2C |
| ERCDPL | 3096 | 0C18 | ERCPIN | 3368 | 0D28 | ERCSSA | 3112 | 0C28 |
| ERCDPP | 3092 | 0C14 | ERCPLR | 3080 | 0C08 | ERCSYS | 3072 | 0C00 |
| ERCEIG | 3234 | 0CA2 | ERCPLS | 3076 | 0C04 | ERCTGR | 3248 | 0CB0 |
| ERCGPR | 3362 | 0D22 | ERCPRI | 3370 | 0D2A | ERCTIM | 3361 | 0D21 |
| ERCJ11 | 3184 | 0C70 | ERCPSW | 3216 | 0C90 | ERCTMP | 3372 | 0D2C |
| ERCLCL | 3376 | 0D30 | ERCPTH | 3188 | 0C74 | ERCTPP | 3369 | 0D29 |
| ERCMA1 | 3360 | 0D20 | ERCR00 | 3132 | 0C3C | ERCZIP | 3224 | 0C98 |
| ERCMA2 | 3363 | 0D23 | ERCR01 | 3136 | 0C40 | | | |
| ERCMCW | 3208 | 0C88 | ERCR02 | 3140 | 0C44 | | | |

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|----------|-------------|--------|------|------|---------|
| | 33 00000 | CHAERC | DSECT | | |

```
*****************************************************************
* THIS DSECT IS USED TO COVER THE ERROR RECOVERY CONTROL COMMUNICATION*
* WORK AREA WHICH IS MAINTAINED IN THE MODULE CHBER. IT CONTAINS   *
* INFORMATION ABOUT SYSTEM CONFIGURATION, SYSTEM STATUS AND DEVICE *
* PATHS WHICH WILL BE USED BY THE SERR MODULES. THIS DSECT HAS BEEN *
* RECODED FOR APAR I5420.                                          *
*****************************************************************
```

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|----------|-------------|--------|------|------|---------|
| | 33 00C00 | | \|ORG\| | CHAERC+3072 | |
| 33 00C00 | | ERCSYS | DS | A | SYSTEM TABLE ADDR |
| 33 00C04 | | ERCPLS | DS | A | SERR PAGE LOC - FIRST |
| | | * | | | MODULE |
| 33 00C08 | | ERCPLR | DS | A | RECONFIGURATION PAGE LOC |
| 33 00C0C | | ERCSAQ | DS | A | SERR AUXILLARY QUE ADDR |
| 33 00C10 | | | DS | XL4 | RESERVED |
| 33 00C14 | | ERCDPP | DS | A | ADDR OF PAGE DEVICE ADDRESS |
| | | * | | | TBL |
| 33 00C18 | | ERCDPL | DS | F | LENGTH OF PAGE DEVICE |
| | | * | | | ADDRESS TBL |
| 33 00C1C | | ERCODP | DS | A | ADDR OF OP DEVICE PATH TBL |
| 33 00C20 | | ERCODL | DS | F | LENGTH OF OP DEVICE PATH |
| | | * | | | TBL |
| 33 00C24 | | ERCPDA | DS | XL2 | PAGE DRUM PATH |
| 33 00C26 | | ERCODA | DS | XL2 | OP DEVICE PATH |
| 33 00C28 | | ERCSSA | DS | A | SERR SAVE AREA ADDR |
| 33 00C2C | | ERCSRT | DS | A | SERR BOOT RET ADDR |
| 33 00C30 | | ERCSP1 | DS | XL4 | SERR TEST CONTROL WORD |
| 33 00C34 | | ERCSP2 | DS | A | HOOK FOR TEST CASES |
| | | * SERR BOOT PARAMETER SAVE AREA | | | |
| 33 00C38 | | ERCR14 | DS | A | GPR 14 RETURN ADDR |
| 33 00C3C | | ERCR00 | DS | A | GPR  0 CALL TYPE CODE - LOW |
| | | * | | | ORDER BYTE |
| 33 00C40 | | ERCR01 | DS | A | GPR  1 FAIL CPU ID - DATA |
| | | * | | | RECORD ADDR |
| 33 00C44 | | ERCR02 | DS | A | GPR  2 FAIL CPU PREFIX |
| 33 00C48 | | ERCR03 | DS | A | GPR  3 SERR OP AREA ADDR |
| 33 00C4C | | ERCR04 | DS | A | GPR  4 CALLER SAVE AREA |
| | | * | | | ADDR |
| 33 00C50 | | ERCNUC | DS | A | NUCLEUS BASE ADDR |
| | | * | | | SERR BOOT WORK AREA |
| 33 00C54 | | ERCMID | DS | XL2 | REQUESTED MODULE ID |
| 33 00C56 | | ERCCDE | DS | XL2 | CHANNEL STATUS ON PAGE OP |
| 33 00C58 | | ERCDLY | DS | F | DELAY COUNT FOR PAGE OP |
| 33 00C5C | | | DS | XL4 | RESERVED |
| 33 00C60 | | ERCA31 | DS | XL8 | DRUM LOC OF MODULE LOADED |
| 33 00C68 | | ERCA11 | DS | XL8 | INPUT AREA FOR SENSE |
| 33 00C70 | | ERCJ11 | DS | A | CURRENT AUXILLARY QUE ENTRY |
| | | * | | | ADDR |
| 33 00C74 | | ERCPTH | DS | A | CURRENT DRUM PATH ENTRY |
| | | * | | | ADDR |
| 33 00C78 | | ERCBAS | DS | A | SERR BOOT BASE ADDR |
| | | * | | | RECOVERY NUCLEUS WORK AREA |
| 33 00C7C | | ERCODE | DS | X | ERROR CODE STORAGE |
| 33 00C7D | | | DS | XL3 | RESERVED |
| 33 00C80 | | ERCDIS | DS | XL8 | ENABLE-DISABLE PSW |
| | | * DIAGNOSE MAINTENANCE CONTROL WORD (MCW) | | | |
| 33 00C88 | | ERCMCW | DS | XL8 | MCW BUILD AREA |
| 33 00C90 | | ERCPSW | DS | XL8 | SAVE PSW |
| 33 00C98 | | ERCZIP | DS | XL8 | PSW BUILD AREA |
| 33 00CA0 | | ERCPAG | DS | H | PAGE LENGTH |
| 33 00CA2 | | ERCEIG | DS | AL2 | CPU STATUS ADDR |
| 33 00CA4 | | ERCCLK | DS | XL4 | SAVED CLOCK |
| 33 00CA8 | | ERCOPA | DS | XL8 | EXTNL OLD PSW |
| 33 00CB0 | | ERCTGR | DS | 16A | GPR SAVE AREA |
| 33 00CF0 | | | DS | 12A | NUCLEUS GPR 2-13 |
| 33 00D20 | | ERCBYT | DS | 0D | DUPLEX TEST BYTES AND FLAGS |
| 33 00D20 | | ERCMA1 | DS | X | MALFUNCTION ALERT FLAG 1 |
| 33 00D21 | | ERCTIM | DS | X | CLOCK SAVED FLAG |

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|----------|-------------|--------|------|------|---------|
| 33 00D22 | | ERCGPR | DS | X | GPR SAVED FLAG |
| 33 00D23 | | ERCMA2 | DS | X | MALFUNCTION ALERT FLAG 2 |
| 33 00D24 | | ERCSIC | DS | XL2 | SAVED INSTRUCTION COUNTER |
| 33 00D26 | | ERCMUL | DS | X | DUPLEX DOUBLE MACH CHECK |
| | | * | | | FLAG |
| 33 00D27 | | ERCALT | DS | X | ALTERNATE PREFIX IN USE |
| | | * | | | FLAG |
| 33 00D28 | | ERCPIN | DS | X | DOUBLE MACH CHECK INTERRUPT |
| | | * | | | CODE |
| 33 00D29 | | ERCTPP | DS | X | PING-PONG FLAG |
| 33 00D2A | | ERCPRI | DS | X | CPU PRIORITY FLAG |
| 33 00D2B | | | DS | X | RESERVED |
| 33 00D2C | | ERCTMP | DS | A | TEMPORARY GPR SAVE |
| 33 00D30 | | ERCLCL | DS | F | CLOCK RESET VALUE |
| 33 00D34 | | ERCSCL | DS | XL4 | SAVED CLOCK |
| 33 00D38 | | ERCCR6 | DS | A | ECR 6 SAVE AREA |
| 33 00D3C | | ERCR12 | DS | A | TEMPORARY REG 12 SAVE |

## SERR/EMCI Data Table (CHAERE)

The SERR/EMCI Data Table (CHAERE) maintains data passed from the External Machine Check Interrupt Processor (EMCI) to the System Environment Recording (SERR) Program. The 88-byte CHAERE resides in core storage aligned on word boundaries.

### CHAERE Storage map

| DEC | HEX | | | | | | | |
|-----|-----|---|---|---|---|---|---|---|
| 0 | 0 | ERECPU | UNNAMED | ERETLN | EREMOD | ERECTC | EREF1 | EREF2 |
| 8 | 8 | EREDAT | | | ERETIM | | | |
| 16 | 10 | EREUID | | | | | | |
| 24 | 18 | EREPSW | | | | | | |
| 32 | 20 | EREPF | | | ERECCA | | | |
| 40 | 28 | ERECAM | | | | | | |
| 48 | 30 | ERECUA | | ERESDA | | EREINT | ERERCT | EREPNG |
| 56 | 38 | ERECSW | | | | | | |
| 64 | 40 | ERELOG | | | | | | |

### Fields in CHAERE -- by displacement

| DEC | HEX | FIELD | | DEC | HEX | FIELD | | DEC | HEX | FIELD |
|-----|-----|-------|---|-----|-----|-------|---|-----|-----|-------|
| 0000 | 0000 | ERECPU | | 0007 | 0007 | ERERS | (EQU) | 0036 | 0024 | ERECCA |
| 0002 | 0002 | ERETLN | | 0007 | 0007 | ERELP | (EQU) | 0040 | 0028 | ERECAM |
| 0004 | 0004 | EREMOD | | 0007 | 0007 | ERECP | (EQU) | 0048 | 0030 | ERECUA |
| 0005 | 0005 | ERECTC | | 0007 | 0007 | EREF2 | | 0050 | 0032 | ERESDA |
| 0006 | 0006 | ERECM | (EQU) | 0008 | 0008 | EREDAT | | 0052 | 0034 | EREINT |
| 0006 | 0006 | EREEC | (EQU) | 0012 | 000C | ERETIM | | 0054 | 0036 | ERERCT |
| 0006 | 0006 | EREF1 | | 0016 | 0010 | EREUID | | 0055 | 0037 | EREPNG |
| 0007 | 0007 | ERESF | (EQU) | 0024 | 0018 | EREPSW | | 0056 | 0038 | ERECSW |
| 0007 | 0007 | ERECS | (EQU) | 0032 | 0020 | EREPF | | 0064 | 0040 | ERELOG |

### Alphabetical list of fields in CHAERE

| FIELD | DEC | HEX | | FIELD | DEC | HEX | | FIELD | DEC | HEX | |
|-------|-----|-----|---|-------|-----|-----|---|-------|-----|-----|---|
| ERECAM | 0040 | 0028 | | EREDAT | 0008 | 0008 | | EREPNG | 0055 | 0037 | |
| ERECCA | 0036 | 0024 | | EREEC | 0006 | 0006 | (EQU) | EREPSW | 0024 | 0018 | |
| ERECM | 0006 | 0006 | (EQU) | EREF1 | 0006 | 0006 | | ERERCT | 0054 | 0036 | |
| ERECP | 0007 | 0007 | (EQU) | EREF2 | 0007 | 0007 | | ERERS | 0007 | 0007 | (EQU) |
| ERECPU | 0000 | 0000 | | EREINT | 0052 | 0034 | | ERESDA | 0050 | 0032 | |
| ERECS | 0007 | 0007 | (EQU) | ERELOG | 0064 | 0040 | | ERESF | 0007 | 0007 | (EQU) |
| ERECSW | 0056 | 0038 | | ERELP | 0007 | 0007 | (EQU) | ERETIM | 0012 | 000C | |
| ERECTC | 0005 | 0005 | | EREMOD | 0004 | 0004 | | ERETLN | 0002 | 0002 | |
| ERECUA | 0048 | 0030 | | EREPF | 0032 | 0020 | | EREUID | 0016 | 0010 | |

### Assembler listing of CHAERE

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|----------|-------------|--------|------|------|---------|
| | 34 00000 | CHAERE | DSECT | | SERR EMCI DATA TABLE |
| 34 00000 | | ERECPU | DS | X | CPU(S) ID (ORED TOGETHER) |
| 34 00001 | | | DS | X | NOT USED |
| 34 00002 | | ERETLN | DS | H | TABLE LENGTH IN BYTES (=88) |
| 34 00004 | | EREMOD | DS | X | S/360 MODEL NUMBER (=67) |
| 34 00005 | | ERECTC | DS | X | CALL TYPE CODE (=X'29') |
| 34 00006 | | EREF1 | DS | X | FIRST FLAG FIELD |
| | 34 00006 | EREEC | EQU | EREF1 | RECORD ENTRY COMPLETE |

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|----------|-------------|--------|------|------|---------|
| | 00000080 | EREECM | EQU | X'80' | EREEC MASK |
| 34 00006 | | ERECM | EQU | EREF1 | CPU MODEL: |
| | | * | | | ON--2067-1/OFF--2067-2 |
| | 00000040 | ERECMM | EQU | X'40' | ERECM MASK |
| 34 00007 | | EREF2 | DS | X | SECOND FLAG FIELD |
| | 34 00007 | ERECP | EQU | EREF2 | CSW PRESENT |
| | 00000080 | ERECPM | EQU | X'80' | ERECP MASK |
| | 34 00007 | ERELP | EQU | EREF2 | CHANNEL LOG-OUT DATA |
| | | * | | | PRESENT |
| | 00000040 | ERELPM | EQU | X'40' | ERELP MASK |
| | 34 00007 | ERERS | EQU | EREF2 | RETRY ATTEMPTED |
| | 00000020 | ERERSM | EQU | X'20' | ERERS MASK |
| | 34 00007 | ERECS | EQU | EREF2 | ERECUA PRESENT |
| | 00000010 | ERECSM | EQU | X'10' | ERECS MASK |
| | 34 00007 | ERESF | EQU | EREF2 | SELECT IO FAILURE |
| | 00000008 | ERESFM | EQU | X'08' | ERESF MASK |
| 34 00008 | | EREDAT | DS | F | ERECUA FOR OTHER CPU (IF |
| | | * | | | APPLICABLE) |
| 34 0000C | | ERETIM | DS | F | TIME OF EMCI |
| 34 00010 | | EREUID | DS | D | CURRENT USER ID |
| 34 00018 | | EREPSW | DS | D | MACHINE CHECK OLD PSW |
| | | * | | | (EMCI'D CPU) |
| 34 00020 | | EREPF | DS | F | ACTIVE PREFIX OF EMCI'D CPU |
| 34 00024 | | ERECCA | DS | F | CCU CHANNEL ACTIVITY MAP |
| 34 00028 | | ERECAM | DS | D | SYSTEM CHANNEL TYPE MAP |
| 34 00030 | | ERECUA | DS | H | CHAN-UNIT ADDR (ACTUAL |
| | | * | | | DEVICE ADDR) |
| 34 00032 | | ERESDA | DS | H | NOT USED |
| 34 00034 | | EREINT | DS | H | INTERRUPT CODE OF PSW IN |
| | | * | | | EREPSW |
| 34 00036 | | ERERCT | DS | X | CHANNEL FAILURE COUNT |
| 34 00037 | | EREPNG | DS | X | NO. OF CPU'S HANDLING OWN |
| | | * | | | EMCI IN DUPLEX ENVIRONMENT |
| 34 00038 | | ERECSW | DS | D | CSW (CAUSED BY EMCI) |
| 34 00040 | | ERELOG | DS | 3D | CHANNEL LOG-OUT DATA (DUE |
| | | * | | | TO EMCI) |

Error Recording Block (CHAERR)

CHAERR is used to pass error recording information from main storage
(CEATCS) to virtual storage (VMSDR and V|ER). Module CZCTR processes
this interface. CHAERR contains error recording statistics, such as:

1. The CSW which indicates the error.
2. The initial CCW causing the error.
3. The sense data.

CHAERR Storage map

```
DEC    HEX
  0     0 |_____|
          |                          ERRCSW                          |
  8     8 |_____|
          |                                                          |
          |                                                          |
          |                          ERRCHAN                         |
          |                                                          |
          |                                                          |
 32    20 |ERRCNT  |ERRFLG1 |ERRFLG2 |ERRNO  |ERRREL   |    ERRSAV1   |
          |_____|_____|_____|_____|_____|_____|
 40    28 |                                                          |
          |                                                          |
        = |                          ERRCCW                          =
          |                                                          |
          |                                                          |
120    78 |ERRSNS0 |ERRSNS1 |ERRSNS2 |ERRSNS3|ERRSNS4 |ERRSNS5 |ERRSNS6|ERRSNS7|
          |_____|_____|_____|_____|_____|_____|_____|_____|
128    80 |    ERRSDA       |   ERRPATH      |
          |_____|_____|
```

ORG   ERRCSW

```
  0     0 |ERRCSW1 |      ERRCSW2      |      ERRCSW3      |
          |_____|_____|_____|
```

ORG   ERRCSW3

```
  4     4                                |ERRSTA1 |ERRSTA2 |   ERRCSW4    |
                                         |_____|_____|_____|
```

Fields in CHAERR -- by displacement

| DEC | HEX | FIELD | | DEC | HEX | FIELD | | DEC | HEX | FIELD |
|------|------|---------|-------|------|------|---------|-------|------|------|---------|
| 0000 | 0000 | ERRCSW1 | | 0033 | 0021 | ERRINL1 | (EQU) | 0037 | 0025 | ERRSAV1 |
| 0000 | 0000 | ERRCSW | | 0033 | 0021 | ERRINT | (EQU) | 0040 | 0028 | ERRCCW |
| 0001 | 0001 | ERRCSW2 | | 0033 | 0021 | ERRSLD | (EQU) | 0120 | 0078 | ERRSNS0 |
| 0004 | 0004 | ERRSTA1 | | 0033 | 0021 | ERRIN | (EQU) | 0121 | 0079 | ERRSNS1 |
| 0004 | 0004 | ERRCSW3 | | 0033 | 0021 | ERROUT | | 0122 | 007A | ERRSNS2 |
| 0005 | 0005 | ERRSTA2 | | 0033 | 0021 | ERRSN2 | (EQU) | 0123 | 007B | ERRSNS3 |
| 0006 | 0006 | ERRCSW4 | | 0033 | 0021 | ERRSN1 | (EQU) | 0124 | 007C | ERRSNS4 |
| 0008 | 0008 | ERRCHAN | | 0033 | 0021 | ERRFLG1 | | 0125 | 007D | ERRSNS5 |
| 0032 | 0020 | ERRCNT | | 0034 | 0022 | ERRCD | (EQU) | 0126 | 007E | ERRSNS6 |
| 0033 | 0021 | ERRVD | (EQU) | 0034 | 0022 | ERRFLG2 | | 0127 | 007F | ERRSNS7 |
| 0033 | 0021 | ERRINL2M | (EQU) | 0035 | 0023 | ERRNO | | 0128 | 0080 | ERRSDA |
| 0033 | 0021 | ERRINL2 | (EQU) | 0036 | 0024 | ERRREL | | 0130 | 0082 | ERRPATH |

## Alphabetical list of fields in CHAERR

| FIELD | DEC | HEX | | FIELD | DEC | HEX | | FIELD | DEC | HEX | |
|-------|-----|-----|---|-------|-----|-----|---|-------|-----|-----|---|
| ERRCCW | 0040 | 0028 | | ERRINL1 | 0033 | 0021 | (EQU) | ERRSNS1 | 0121 | 0079 | |
| ERRCD | 0034 | 0022 | (EQU) | ERRINL2 | 0033 | 0021 | (EQU) | ERRSNS2 | 0122 | 007A | |
| ERRCHAN | 0008 | 0008 | | ERRINL2M | 0033 | 0021 | (EQU) | ERRSNS3 | 0123 | 007B | |
| ERRCNT | 0032 | 0020 | | ERRINT | 0033 | 0021 | (EQU) | ERRSNS4 | 0124 | 007C | |
| ERRCSW | 0000 | 0000 | | ERRNO | 0035 | 0023 | | ERRSNS5 | 0125 | 007D | |
| ERRCSW1 | 0000 | 0000 | | ERROUT | 0033 | 0021 | (EQU) | ERRSNS6 | 0126 | 007E | |
| ERRCSW2 | 0001 | 0001 | | ERRPATH | 0130 | 0082 | | ERRSNS7 | 0127 | 007F | |
| ERRCSW3 | 0004 | 0004 | | ERRREL | 0036 | 0024 | | ERRSN1 | 0033 | 0021 | (EQU) |
| ERRCSW4 | 0006 | 0006 | | ERRSAV1 | 0037 | 0025 | | ERRSN2 | 0033 | 0021 | (EQU) |
| ERRFLG1 | 0033 | 0021 | | ERRSDA | 0128 | 0080 | | ERRSTA1 | 0004 | 0004 | |
| ERRFLG2 | 0034 | 0022 | | ERRSLD | 0033 | 0021 | (EQU) | ERRSTA2 | 0005 | 0005 | |
| ERRIN | 0033 | 0021 | (EQU) | ERRSNS0 | 0120 | 0078 | | ERRVD | 0033 | 0021 | (EQU) |

## Assembler listing of CHAERR

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|----------|-------------|--------|------|------|---------|
| | 35 00000 | CHAERR | DSECT | | ERROR RECORDING BACK |
| 35 00000 | | | DS | 0D | ALIGN ON DOUBLE WORD |
| 35 00000 | | ERRCSW | DS | D | CSW FROM INTERRUPT GQE- |
| | 35 00000 | | \|ORG\| | ERRCSW | INDENTIFY FIELDS IN CSW |
| 35 00000 | | ERRCSW1 | DS | X | KEY-FIRST 4 |
| | | * | | | BITS/UNUSED-SECOND 4 BITS |
| 35 00001 | | ERRCSW2 | DS | 3XL1 | COMMAND ADDRESS |
| 35 00004 | | ERRCSW3 | DS | H | STATUS |
| | 35 00004 | | \|ORG\| | ERRCSW3 | |
| 35 00004 | | ERRSTA1 | DS | X | 1ST BYTE OF STATUS |
| | 00000080 | ERRSTA1A | EQU | X'80' | ATTENTION-NOT APPLICABLE |
| | | * | | | FOR TERMINALS |
| | 00000040 | ERRSTA1B | EQU | X'40' | STATUS MODIFIER |
| | 00000020 | ERRSTA1C | EQU | X'20' | CONTROL UNIT END |
| | 00000010 | ERRSTA1D | EQU | X'10' | BUSY |
| | 00000008 | ERRSTA1E | EQU | X'08' | CHANNEL END |
| | 00000004 | ERRSTA1F | EQU | X'04' | DEVICE END |
| | 00000002 | ERRSTA1G | EQU | X'02' | UNIT CHECK |
| | 00000001 | ERRSTA1H | EQU | X'01' | UNIT EXCEPTION |
| 35 00005 | | ERRSTA2 | DS | X | 2ND BYTE OF STATUS |
| | 00000080 | ERRSTA2A | EQU | X'80' | PCI |
| | 00000040 | ERRSTA2B | EQU | X'40' | INCORRECT LENGTH |
| | 00000020 | ERRSTA2C | EQU | X'20' | PROGRAM CHECK |
| | 00000010 | ERRSTA2D | EQU | X'10' | PROTECTION CHECK |
| | 00000008 | ERRSTA2E | EQU | X'08' | CHANNEL DATA CHECK |
| | 00000004 | ERRSTA2F | EQU | X'04' | CHANNEL CONTROL CHECK |
| | 00000002 | ERRSTA2G | EQU | X'02' | INTERFACE CONTROL CHECK |
| | 00000001 | ERRSTA2H | EQU | X'01' | CHAINING CHECK |
| 35 00006 | | ERRCSW4 | DS | H | BYTE COUNT |
| 35 00008 | | ERRCHAN | DS | 3D | CHANNEL LOGOUT DATA |
| 35 00020 | | ERRCNT | DS | X | TOTAL RETRY COUNT |
| | | *NOTE: IF SOLID ERROR FLAG SET THEN ERRCNT | | | |
| | | *REPRESENTS THE NUMBER OF | | | |
| | | * | | | RETRYS |
| | | *ATTEMPTED BEFORE THE RECOVERY PROCESSOR GAVE UP | | | |
| 35 00021 | | ERRFLG1 | DS | X | FLAG BYTE 1 |
| | 35 00021 | ERRSN1 | EQU | ERRFLG1 | SENSE DATA EXISTS |
| | 00000080 | ERRSN1M | EQU | X'80' | SENSE DATA EXISTS MASK-IF |
| | | * | | | OFF U.C. IS |
| | | * | | | ALSO OFF |
| | 35 00021 | ERRSN2 | EQU | ERRFLG1 | SENSE FAILED |
| | 00000040 | ERRSN2M | EQU | X'40' | SENSE OPERATION FAILED FLAG |
| | | * | | | MASK-NO SENSE |
| | | * | | | EXISTS |
| | 35 00021 | ERROUT | EQU | ERRFLG1 | OUTBOARD ERROR OCCURRED |
| | 00000020 | ERROUTM | EQU | X'20' | OUTBOARD ERROR MASK |
| | 35 00021 | ERRIN | EQU | ERRFLG1 | INBOARD ERROR |
| | 00000010 | ERRINM | EQU | X'10' | INBOARD ERROR MASK |
| | 35 00021 | ERRSLD | EQU | ERRFLG1 | SOLID ERROR-RECOVERY FAILED |
| | 00000008 | ERRSLDM | EQU | X'08' | SOLID ERROR MASK |

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|----------|-------------|--------|------|------|---------|
| | 35 00021 | ERRINT * | EQU | ERRFLG1 | INTERMITTENT ERROR-RECOVERY SUCCESSFUL |
| | 00000004 | ERRINTM | EQU | X'04' | INTERMITTENT ERROR MASK |
| | 35 00021 | ERRINL1 * | EQU | ERRFLG1 | ERROR ON INITIAL INTERRUPT-NO CCW LIST |
| | 00000002 | ERRINL1M * | EQU | X'02' | ERROR ON INTIAL INTERRUPT MASK |
| | 35 00021 | ERRINL2 * * * | EQU | ERRFLG1 | ERROR ON INITIAL INTERRUPT-CCW LIST REPRESENTS RECOVERY STRING ISSUED |
| | 35 00021 | ERRINL2M * * | EQU | ERRFLG1 | ERROR ON INITIAL INTERRUPT WITH RECOVERY LIST ISSUED MASK |
| | 35 00021 | ERRVD | EQU | ERRFLG1 | NO SENSE ISSUED |
| | 00000001 | ERRVDM | EQU | X'01' | NO SENSE ISSUED MASK |
| 35 00022 | | ERRFLG2 | DS | X | FLAG BYTE 2 |
| | 35 00022 | ERRCD | EQU | ERRFLG2 | CHANNEL LOGOUT DATA EXISTS |
| | 00000080 | ERRCDM * | EQU | X'80' | CHANNEL LOGOUT DATA EXISTS MASK |
| 35 00023 | | ERRNO | DS | X | NUMBER OF CCWS (MAX10) |
| 35 00024 | | ERRREL * | DS | X | RELATIVE NUMBER OF FAILING CCW |
| 35 00025 | | ERRSAV1 | DS | 3XL1 | UNUSED |
| 35 00028 | | ERRCCW | DS | 10D | AREA FOR CCW LIST |
| 35 00078 | | ERRSNS0 | DS | X | SENSE BYTE 0 |
| 35 00079 | | ERRSNS1 | DS | X | SENSE BYTE 1 |
| 35 0007A | | ERRSNS2 | DS | X | SENSE BYTE 2 |
| 35 0007B | | ERRSNS3 | DS | X | SENSE BYTE 3 |
| 35 0007C | | ERRSNS4 | DS | X | SENSE BYTE 4 |
| 35 0007D | | ERRSNS5 | DS | X | SENSE BYTE 5 |
| 35 0007E | | ERRSNS6 | DS | X | SENSE BYTE 6 |
| 35 0007F | | ERRSNS7 | DS | X | SENSE BYTE 7 |
| 35 00080 | | ERRSDA | DS | H | SYMBOLIC DEVICE ADDRESS |
| 35 00082 | | ERRPATH | DS | H | ACTUAL PATH ADDRESS |

## Enter Tables 1 and 2 (CHAET1 & CHAET2)

Enter Tables 1 and 2 (ET1 and ET2) are private tables for the use of the task monitor ENTER SVC routine.

ET1 consists of one word for each possible ENTER code beginning with zero. For assigned ENTER codes the corresponding word in the table contains a pointer to an entry in ET2; for unassigned ENTER codes the corresponding word contains all zeros.

ET2 contains an entry for each assigned ENTER code and can be accessed only by pointers in ET1.

Note: When ENTER code is invalid the entry word contains all zeros; for a valid ENTER code the entry word contains a pointer to ET2.

### CHAET1 Storage map

```
DEC   HEX _____
  0     0 |                 ET1HVC              |            ET1FST         |
          |_____|_____|
```

### Fields in CHAET1 -- by displacement

| DEC | HEX | FIELD | DEC | HEX | FIELD | DEC | HEX | FIELD |
|------|------|--------|------|------|--------|------|------|--------|
| 0000 | 0000 | ET1HVC | 0004 | 0004 | ET1FST | | | |

### Alphabetical list of fields in CHAET1

| FIELD | DEC | HEX | FIELD | DEC | HEX | FIELD | DEC | HEX |
|--------|------|------|--------|------|------|--------|------|------|
| ET1FST | 0004 | 0004 | ET1HVC | 0000 | 0000 | | | |

### Assembler listing of CHAET1

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|----------|-------------|--------|------|------|---------|
| | 36 00000 | CHAET1 | DSECT | | |
| | | ***** | | | TASK MONITOR ENTER TABLE 1 -- |
| | | *CONTAINS | POINTERS | | |
| | | ***** | | | TO ENTRIES IN ENTER TABLE 2 |
| 36 00000 | | | DS | 0F | |
| 36 00000 | | ET1HVC | DS | F | HIGHEST VALID ENTER CODE |
| 36 00004 | | ET1FST | DS | F | ADDRESS OF 1ST ENTER CODE |

CHAET2 Storage map

```
DEC   HEX _____
  0     0 |ET2FB1 |        UNNAMED       |              ET2VC                  |
          |       |                      |                                    |
  8     8 |            ET2RC             |
          |_____|
```

ORG  ET2VC

```
  4     4                               _____
                                        |       ET2SVC        |
                                        |_____|
```

Fields in CHAET2 -- by displacement

| DEC | HEX | FIELD | | DEC | HEX | FIELD | | DEC | HEX | FIELD |
|------|------|-------|------|------|------|-------|------|------|------|-------|
| 0000 | 0000 | ET2P1 | (EQU) | 0000 | 0000 | ET2FB1 | | 0008 | 0008 | ET2RC |
| 0000 | 0000 | ET2IS | (EQU) | 0004 | 0004 | ET2SVC | | | | |
| 0000 | 0000 | ET2TY | (EQU) | 0004 | 0004 | ET2VC | | | | |

Alphabetical list of fields in CHAET2

| FIELD | DEC | HEX | | FIELD | DEC | HEX | | FIELD | DEC | HEX |
|-------|------|------|------|-------|------|------|------|-------|------|------|
| ET2FB1 | 0000 | 0000 | | ET2RC | 0008 | 0008 | | ET2VC | 0004 | 0004 |
| ET2IS | 0000 | 0000 | (EQU) | ET2SVC | 0004 | 0004 | | | | |
| ET2P1 | 0000 | 0000 | (EQU) | ET2TY | 0000 | 0000 | (EQU) | | | |

Assembler listing of CHAET2

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|----------|-------------|--------|------|------|---------|
| | 37 00000 | CHAET2 | DSECT | | |
| | | ***** | . | | TASK MONITOR ENTER TABLE 2 |
| 37 00000 | | | DS | 0F | |
| 37 00000 | | ET2FB1 | DS | XL1 | INDICATOR WORD  1ST BYTE |
| | 37 00000 | ET2TY | EQU | ET2FB1 | TYPE 0 - V AND R CON |
| | 00000080 | ET2TYM | EQU | X'80' | 1 - ADCON GROUP |
| | 37 00000 | ET2IS | EQU | ET2FB1 | INT. STATUS 0 - NOT INT. |
| | 00000040 | ET2ISM | EQU | X'40' | 1 - INTERRUPTABLE |
| | 37 00000 | ET2P1 | EQU | ET2FB1 | P1 SETTING  0 - SET P1 OFF |
| | 00000020 | ET2P1M | EQU | X'20' | 1 - SET P1 ON |
| 37 00001 | | | DS | XL3 | NOT USED |
| 37 00004 | | ET2VC | DS | F | V CON |
| 37 00008 | | ET2RC | DS | F | R CON |
| | 37 00004 | | |ORG| | ET2VC | ADCON GROUP |
| 37 00004 | | ET2SVC | DS | H | BEGINNING OF ADCON GROUP |
| | | *** | | TO ACCESS THE ADCON GROUP, THE ADCOND | |
| | | *GROUP IS USED | | | |

## TSS External Page Table (CHAEXT)

CHAEXT defines and correlates main storage addresses and corresponding external locations of TSS Supervisor main storage pages rolled out by RSS. It contains any additional information necessary for defining the rolled out TSS pages. The table is built by the RSS loader and referenced by the RSS unloader.

## CHAEXT Storage map

```
DEC    HEX _____
 0      0|       EXTXPTCA     |      EXTXPTSA     |               EXTXPTD               |
         |_____|_____|_____|
 8      8|            EXTXPTD (CONT)              |EXTXPTK1|EXTXPTK2|       EXTXPTKV     |
         |_____|_____|_____|_____|
```

## Fields in CHAEXT -- by displacement

| DEC | HEX | FIELD | DEC | HEX | FIELD | DEC | HEX | FIELD |
|------|------|---------|------|------|---------|------|------|---------|
| 0000 | 0000 | EXTXPTCA | 0004 | 0004 | EXTXPTD | 0013 | 000D | EXTXPTK2 |
| 0002 | 0002 | EXTXPTSA | 0012 | 000C | EXTXPTK1 | 0014 | 000E | EXTXPTKV |

## Alphabetical list of fields in CHAEXT

| FIELD | DEC | HEX | FIELD | DEC | HEX | FIELD | DEC | HEX |
|---------|------|------|---------|------|------|---------|------|------|
| EXTXPTCA | 0000 | 0000 | EXTXPTKV | 0014 | 000E | EXTXPTK2 | 0013 | 000D |
| EXTXPTD | 0004 | 0004 | EXTXPTK1 | 0012 | 000C | EXTXPTSA | 0002 | 0002 |

## Assembler listing of CHAEXT

```
LOCATION  INSTRUCTION SOURCE   INST  OPER        COMMENT
          38 00000    CHAEXT   DSECT
**********************************************************************
                     *              TITLE: 'CHAEXT' - TSS EXTERNAL PAGE TABLE
          *      STATUS: CHANGE LEVEL 000                                      *
                     *              FUNCTION: THIS TABLE IS PRIMARILY USED TO
                     *              DEFINE AND CORRELATE
          *          REAL CORE ADDRESSES AND CORRESPONDING EXTERNAL           *
          *          LOCATIONS OF TSS SUPERVISOR CORE PAGES THAT WERE         *
          *          ROLLED OUT BY RSS. IT ALSO CONTAINS ANY ADDITIONAL       *
          *          INFORMATION NECESSARY FOR DEFINING THE ROLLED OUT        *
          *          TSS PAGES.                                               *
          *             THE TABLE IS BUILT BY RSS LOADER AND SUBSEQUENTLY     *
          *          REFERENCED BY RSS UNLOADER.                              *
**********************************************************************
          38 00000                 DS    0F          ALIGN ON WORD BOUNDRY
          38 00000    EXTXPTCA DS   CL2         TSS REAL CORE ADDRESS (PT
                     *                                ENTRY)
                     *              BYTE 0 - BITS 0-3   SEGMENT NUMBER
                     *              BYTE 0 - BITS 4-7   PAGE NUMBER
                     *              BYTE 1 - BITS 0-3   PAGE NUMBER
                     *                               BYTE 1 - BITS 4-7  NOT USED
          38 00002    EXTXPTSA DS   CL2         SYMBOLIC DEVICE ADDRESS
          38 00004    EXTXPTD  DS   CL8         PHYSICAL DEVICE LOCATION
                     *                               -BBCCHHR
                     *                          BYTE 0       B
                     *                          BYTE 1       B
                     *                          BYTE 2       C
                     *                          BYTE 3       C
                     *                          BYTE 4       H
                     *                          BYTE 5       H
                     *                          BYTE 6       R
                     *                          BYTE 7       UNUSED
          38 0000C    EXTXPTK1 DS   CL1         FIRST PROTEXT KEY SAVE AREA
          38 0000D    EXTXPTK2 DS   CL1         SECOND PROTECT KEY SAVE
                     *                               AREA
          38 0000E    EXTXPTKV DS   CL2         DROP AREA FOR RSS PROTECT
                     *                               KEYS
```

## Macro Instruction Parameter Lists (CHAFNQ, CHARDQ, CHAWRQ, CHACLQ & CHAFRQ)

The macro instruction parameter lists contain information which is passed from a macro processor to an application program.

CHAFNQ, 16 bytes in length, passes FINDQ information.
CHARDQ, 8 bytes in length, passes READQ information.
CHAWRQ, 16 bytes in length, passes WRITEQ information.
CHACLQ, 4 bytes in length, passes CLEARQ information.
CHAFRQ, 8 bytes in length, passes FREEQ information.

### CHAFNQ Storage map

| DEC | HEX | | | | | |
|-----|-----|--------|--------|--------|--------|--------|
| 0 | 0 | FNQCTL | FNQMSL | | FNQMSA | |
| 8 | 8 | FNQPDV | FNQFLG | FNQDVT | FNQUNS | FNQSDA |

### Fields in CHAFNQ -- by displacement

| DEC | HEX | FIELD | DEC | HEX | FIELD | | DEC | HEX | FIELD |
|------|------|--------|------|------|--------|-------|------|------|--------|
| 0000 | 0000 | FNQCTL | 0010 | 000A | FNQDWN | (EQU) | 0011 | 000B | FNQDVT |
| 0002 | 0002 | FNQMSL | 0010 | 000A | FNQATT | (EQU) | 0012 | 000C | FNQUNS |
| 0004 | 0004 | FNQMSA | 0010 | 000A | FNQWRP | (EQU) | 0014 | 000E | FNQSDA |
| 0008 | 0008 | FNQPDV | 0010 | 000A | FNQFLG | | | | |

### Alphabetical list of fields in CHAFNQ

| FIELD | DEC | HEX | | FIELD | DEC | HEX | | FIELD | DEC | HEX | |
|--------|------|------|-------|--------|------|------|---|--------|------|------|-------|
| FNQATT | 0010 | 000A | (EQU) | FNQFLG | 0010 | 000A | | FNQSDA | 0014 | 000E | |
| FNQCTL | 0000 | 0000 | | FNQMSA | 0004 | 0004 | | FNQUNS | 0012 | 000C | |
| FNQDVT | 0011 | 000B | | FNQMSL | 0002 | 0002 | | FNQWRP | 0010 | 000A | (EQU) |
| FNQDWN | 0010 | 000A | (EQU) | FNQPDV | 0008 | 0008 | | | | | |

### Assembler listing of CHAFNQ

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|----------|-------------|--------|------|------|---------|
| | 39 00000 | CHAFNQ | DSECT | | |
| 39 00000 | | FNQCTL | DS | H | MACRO CONTROL: FFFF=SCAN |
| | | * | | | OPTN, OR DEV NBR |
| 39 00002 | | FNQMSL | DS | H | MESSAGE LENGTH |
| 39 00004 | | FNQMSA | DS | F | MESSAGE AREA |
| 39 00008 | | FNQPDV | DS | H | POLLED DEVICE |
| 39 0000A | | FNQFLG | DS | XL1 | FLAG BYTE |
| | 39 0000A | FNQWRP | EQU | FNQFLG | POLLING MODE WRAP-AROUND |
| | 00000080 | FNQWRPM | EQU | X'80' | POLLING MODE WRAP-AROUND |
| | | * | | | MASK |
| | 39 0000A | FNQATT | EQU | FNQFLG | ATTENTION RECEIVED |
| | 00000040 | FNQATTM | EQU | X'40' | ATTENTION RECEIVED MASK |
| | 39 0000A | FNQDWN | EQU | FNQFLG | DEAD LINE FLAG |
| | | * | | | I5441 |
| | 00000020 | FNQDWNM | EQU | X'20' | DEAD LINE MASK |
| | | * | | | I5441 |
| 39 0000B | | FNQDVT | DS | XL1 | DEVICE TYPE |
| 39 0000C | | FNQUNS | DS | H | UNASSIGNED |
| 39 0000E | | FNQSDA | DS | H | SYMBOLIC DEVICE ADDRESS |

## CHARDQ Storage map

```
DEC   HEX  _____
  0     0 |     UNNAMED     |     RDQDEV     |UNNAMED |RDQTRN  |RDQINT  |RDQCSL  |
         |                 |                |        |        |        |        |
         |_____|_____|_____|_____|_____|_____|
```

## Fields in CHARDQ -- by displacement

| DEC | HEX | FIELD | DEC | HEX | FIELD | DEC | HEX | FIELD |
|------|------|--------|------|------|--------|------|------|--------|
| 0002 | 0002 | RDQDEV | 0005 | 0005 | RDQTRN | 0006 | 0006 | RDQINT |
|      |      |        |      |      |        | 0007 | 0007 | RDQCSL |

## Alphabetical list of fields in CHARDQ

| FIELD | DEC | HEX | FIELD | DEC | HEX | FIELD | DEC | HEX |
|--------|------|------|--------|------|------|--------|------|------|
| RDQCSL | 0007 | 0007 | RDQDEV | 0002 | 0002 | RDQINT | 0006 | 0006 |
|        |      |      |        |      |      | RDQTRN | 0005 | 0005 |

## Assembler listing of CHARDQ

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|----------|-------------|--------|------|------|---------|
|          | 6C 00000    | CHARDQ | DSECT |     |         |
| 6C 00000 |             |        | DS   | H    | UNUSED  |
| 6C 00002 |             | RDQDEV | DS   | H    | DEVICE NUMBER |
| 6C 00004 |             |        | DS   | XL1  | UNUSED  |
| 6C 00005 |             | RDQTRN | DS   | XL1  | TRANSLATE?  C'Y'=YES, |
|          |             | *      |      |      | C'N'=NO |
| 6C 00006 |             | RDQINT | DS   | XL1  | INTERRUPT?  C'Y'=YES, |
|          |             | *      |      |      | C'N'=NO |
| 6C 00007 |             | RDQCSL | DS   | XL1  | COMPONENT SELECT: X'00', OR |
|          |             | *      |      |      | X'05' - X'07' |

## CHAWRQ Storage map

```
DEC   HEX  _____
  0     0 |WRQCIN  |WRQCOUT |     WRQDEV     |             WRQMSGA               |
         |_____|_____|_____|_____|
  8     8 |WRQBRK  |WRQINT  |     WRQMSGL    |UNNAMED |WRQRSP  |WRQTROUT|WRQTRIN  |
         |_____|_____|_____|_____|_____|_____|_____|
```

## Fields in CHAWRQ -- by displacement

| DEC | HEX | FIELD | DEC | HEX | FIELD | DEC | HEX | FIELD |
|------|------|--------|------|------|--------|------|------|--------|
| 0000 | 0000 | WRQCIN  | 0008 | 0008 | WRQBRK  | 0014 | 000E | WRQTROUT |
| 0001 | 0001 | WRQCOUT | 0009 | 0009 | WRQINT  | 0015 | 000F | WRQTRIN  |
| 0002 | 0002 | WRQDEV  | 0010 | 000A | WRQMSGL |      |      |          |
| 0004 | 0004 | WRQMSGA | 0013 | 000D | WRQRSP  |      |      |          |

## Alphabetical list of fields in CHAWRQ

| FIELD | DEC | HEX | FIELD | DEC | HEX | FIELD | DEC | HEX |
|--------|------|------|--------|------|------|--------|------|------|
| WRQBRK  | 0008 | 0008 | WRQINT  | 0009 | 0009 | WRQTRIN  | 0015 | 000F |
| WRQCIN  | 0000 | 0000 | WRQMSGA | 0004 | 0004 | WRQTROUT | 0014 | 000E |
| WRQCOUT | 0001 | 0001 | WRQMSGL | 0010 | 000A |          |      |      |
| WRQDEV  | 0002 | 0002 | WRQRSP  | 0013 | 000D |          |      |      |

Assembler listing of CHAWRQ

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|---|---|---|---|---|---|
| | B8 00000 | CHAWRQ | DSECT | | |
| B8 00000 | | WRQCIN * | DS | XL1 | COMPONENT IN   X'00', OR X'05' --- X'07' |
| B8 00001 | | WRQCOUT * | DS | XL1 | COMPONENT OUT X'09', OR X'01' --- X'04' |
| B8 00002 | | WRQDEV | DS | H | DEVICE NUMBER |
| B8 00004 | | WRQMSGA | DS | F | VM ADDR OF MESSAGE |
| B8 00008 | | WRQBRK * | DS | XL1 | BREAK OPTION   C'Y' = YES, C'N' = NO |
| B8 00009 | | WRQINT * | DS | XL1 | INTRPT OPTION C'Y' = YES, C'N' = NO |
| B8 0000A | | WRQMSGL | DS | H | MESSAGE LENGTH |
| B8 0000C | | | DS | XL1 | UNUSED |
| B8 0000D | | WRQRSP * | DS | XL1 | RESP OPTION    C'Y' = YES, C'N' = NO |
| B8 0000E | | WRQTROUT * | DS | XL1 | TRNSL OUT      C'Y' = YES, C'N' = NO |
| B8 0000F | | WRQTRIN * | DS | XL1 | TRNSL IN       C'Y' = YES, C'N' = NO |

CHACLQ Storage map

| DEC | HEX | | |
|---|---|---|---|
| 0 | 0 | UNNAMED | CLQDEV |

Fields in CHACLQ -- by displacement

| DEC | HEX | FIELD | DEC | HEX | FIELD | DEC | HEX | FIELD |
|---|---|---|---|---|---|---|---|---|
| 0002 | 0002 | CLQDEV | | | | | | |

Alphabetical list of fields in CHACLQ

| FIELD | DEC | HEX | FIELD | DEC | HEX | FIELD | DEC | HEX |
|---|---|---|---|---|---|---|---|---|
| CLQDEV | 0002 | 0002 | | | | | | |

Assembler listing of CHACLQ

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT | |
|---|---|---|---|---|---|---|
| | 1A 00000 | CHACLQ | DSECT | | | |
| 1A 00000 | | | DS | H | UNUSED | |
| 1A 00002 | | CLQDEV | DS | H | DEVICE NUMBER | |
| * | | 22-23 UNUSED | | 12 | | * |
| * | | 24-25 UNUSED | | 14 | | * |
| * | | 26-27 UNUSED | | 16 | | * |
| * | | 28-29 UNUSED | | 18 | | * |
| * | | 30-31 UNUSED | | 1A | | * |

CHAFRQ Storage map

| DEC | HEX | | | | |
|---|---|---|---|---|---|
| 0 | 0 | FRQDIS | UNNAMED | FRQDEV | FRQMSG |

Fields in CHAFRQ -- by displacement

| DEC | HEX | FIELD | DEC | HEX | FIELD | DEC | HEX | FIELD |
|------|------|--------|------|------|--------|------|------|--------|
| 0000 | 0000 | FRQDIS | 0002 | 0002 | FRQDEV | 0004 | 0004 | FRQMSG |

Alphabetical list of fields in CHAFRQ

| FIELD | DEC | HEX | FIELD | DEC | HEX | FIELD | DEC | HEX |
|--------|------|------|--------|------|------|--------|------|------|
| FRQDEV | 0002 | 0002 | FRQDIS | 0000 | 0000 | FRQMSG | 0004 | 0004 |

Assembler listing of CHAFRQ

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|----------|-------------|--------|------|------|---------|
|          | 3A 00000    | CHAFRQ | DSECT |     |         |
| 3A 00000 |             |        | DS   | 0H   |         |
| 3A 00000 |             | FRQDIS | DS   | XL1  | DISCONNECT BYTE |
|          | 000000FF    | FRQDISM | EQU | X'FF' |        |
| 3A 00001 |             |        | DS   | XL1  | UNUSED |
| 3A 00002 |             | FRQDEV | DS   | H    | DEVICE NUMBER |
| 3A 00004 |             | FRQMSG | DS   | F    | MSG POINTER |

General Queue Entry Table (CHAGQE)


The General Queue Entry Table (GQE), a universal bookkeeping area internal to the supervisor, contains information needed by various queue processors and task interrupt routines.

Any field in the GQE, used by a routine, must be initialized by that routine, or by the routine passing information to that field.

There are four types of GQE: program interrupt GQE; SVC interrupt GQE; external interrupt GQE; and I/O interrupt GQE.

The GQE occupies 64 bytes of core storage, aligned on word boundaries.

## CHAGQE Storage map

| DEC | HEX | | | | | | |
|---|---|---|---|---|---|---|---|
| 0 | 0 | GQEFWD | | | | GQETSI | |
| 8 | 8 | GQESVC | | | GQESLN | | GQEUNPR | GQEUNPO |
| 16 | 10 | GQEERR | GQEF0 | GQEF5 | GQEF4 | GQEPCB | |
| 24 | 18 | GQECNT | GQEF1 | GQEF2 | GQEF3 | GQEQPS | |
| 32 | 20 | GQEQPS (CONT) | | | | GQESPT | |
| 40 | 28 | GQEIGQ | | | | GQETBID | |
| 48 | 30 | GQECSW | | | | | |
| 56 | 38 | GQEDEV | | GQEINT | | GQEREV | |

## ORG GQEIGQ

| | | |
|---|---|---|
| 40 | 28 | GQESNS |

## ORG GQESNS

| | | | |
|---|---|---|---|
| 40 | 28 | UNNAMED | GQEDT |

## ORG GQECSW

| | | | | | |
|---|---|---|---|---|---|
| 48 | 30 | UNNAMED | GQEST | UNNAMED | GQEIA |

## Fields in CHAGQE -- by displacement

| DEC | HEX | FIELD | | DEC | HEX | FIELD | | DEC | HEX | FIELD | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0000 | 0000 | GQEFWD | | 0017 | 0011 | GQECE | (EQU) | 0025 | 0019 | GQEVR | (EQU) |
| 0004 | 0004 | GQETSI | | 0017 | 0011 | GQEF0 | | 0025 | 0019 | GQESS | (EQU) |
| 0008 | 0008 | GQEMCB | (EQU) | 0018 | 0012 | GQEF5 | | 0025 | 0019 | GQEWS | (EQU) |
| 0008 | 0008 | GQEIOR | (EQU) | 0019 | 0013 | GQEPP | (EQU) | 0025 | 0019 | GQEVS | (EQU) |
| 0008 | 0008 | GQESVC | | 0019 | 0013 | GQEPAR | (EQU) | 0025 | 0019 | GQEPO | (EQU) |
| 0012 | 000C | GQESLN | | 0019 | 0013 | GQERI | (EQU) | 0025 | 0019 | GQEPI | (EQU) |
| 0012 | 000C | GQESAT | | 0019 | 0013 | GQELGDT | (EQU) | 0025 | 0019 | GQEF1 | |
| 0014 | 000E | GQEUNPR | | 0019 | 0013 | GQEWSP | (EQU) | 0026 | 001A | GQEFT | (EQU) |
| 0015 | 000F | GQEUNPO | | 0019 | 0013 | GQESMG | (EQU) | 0026 | 001A | GQECN | (EQU) |
| 0016 | 0010 | GQEPIP | (EQU) | 0019 | 0013 | GQEPB | (EQU) | 0026 | 001A | GQEPTP | (EQU) |
| 0016 | 0010 | GQEERR | | 0019 | 0013 | GQEDR | (EQU) | 0026 | 001A | GQEPA | (EQU) |
| 0017 | 0011 | GQERPST | (EQU) | 0019 | 0013 | GQEF4 | | 0026 | 001A | GQEF2 | |
| 0017 | 0011 | GQESK | (EQU) | 0020 | 0014 | GQELOG | (EQU) | 0027 | 001B | GQEDE | (EQU) |
| 0017 | 0011 | GQEIG | (EQU) | 0020 | 0014 | GQEPCB | | 0027 | 001B | GQEHI | (EQU) |
| 0017 | 0011 | GQEPR | (EQU) | 0024 | 0018 | GQETIC | (EQU) | 0027 | 001B | GQEPE | (EQU) |
| 0017 | 0011 | GQEIP | (EQU) | 0024 | 0018 | GQECNT | | 0027 | 001B | GQEXP | (EQU) |
| 0017 | 0011 | GQEP2 | (EQU) | 0025 | 0019 | GQERC | (EQU) | 0027 | 001B | GQEOT | (EQU) |
| 0017 | 0011 | GQESN | (EQU) | 0025 | 0019 | GQEIL | (EQU) | 0027 | 001B | GQEQE | (EQU) |

| DEC | HEX | FIELD | | DEC | HEX | FIELD | | DEC | HEX | FIELD | |
|------|------|--------|------|------|------|--------|------|------|------|--------|------|
| 0027 | 001B | GQESP | (EQU) | 0036 | 0024 | GQESPT | | 0052 | 0034 | GQEST | |
| 0027 | 001B | GQEF3 | | 0040 | 0028 | GQESNS | | 0055 | 0037 | GQEIA | |
| 0028 | 001C | GQEHP | (EQU) | 0040 | 0028 | GCEIGQ | | 0056 | 0038 | GQEDEV | |
| 0028 | 001C | GQEQPS | | 0044 | 002C | GQETBID | | 0058 | 003A | GQEINT | |
| 0028 | 001C | GQELQ | | 0047 | 002F | GQEDT | | 0059 | 003B | GQEEXT | (EQU) |
| 0036 | 0024 | GQEQGQ | (EQU) | 0048 | 0030 | GQECSW | | 0060 | 003C | GQEREV | |

## Alphabetical list of fields in CHAGQE

| FIELD | DEC | HEX | | FIELD | DEC | HEX | | FIELD | DEC | HEX | |
|--------|------|------|------|--------|------|------|------|--------|------|------|------|
| GQECE | 0017 | 0011 | (EQU) | GQEINT | 0058 | 003A | | GQEREV | 0060 | 003C | |
| GQECN | 0026 | 001A | (EQU) | GQEIOR | 0008 | 0008 | (EQU) | GQERI | 0019 | 0013 | (EQU) |
| GQECNT | 0024 | 0018 | | GQEIP | 0017 | 0011 | (EQU) | GQERPST | 0017 | 0011 | (EQU) |
| GQECSW | 0048 | 0030 | | GQELGDT | 0019 | 0013 | (EQU) | GQESAT | 0012 | 000C | |
| GQEDE | 0027 | 001B | (EQU) | GQELOG | 0020 | 0014 | (EQU) | GQESK | 0017 | 0011 | (EQU) |
| GQEDEV | 0056 | 0038 | | GQELQ | 0028 | 001C | | GQESLN | 0012 | 000C | |
| GQEDR | 0019 | 0013 | (EQU) | GQEMCB | 0008 | 0008 | (EQU) | GQESMG | 0019 | 0013 | (EQU) |
| GQEDT | 0047 | 002F | | GQEOT | 0027 | 001B | (EQU) | GQESN | 0017 | 0011 | (EQU) |
| GQEERR | 0016 | 0010 | | GQEPA | 0026 | 001A | (EQU) | GQESNS | 0040 | 0028 | |
| GQEEXT | 0059 | 003B | (EQU) | GQEPAR | 0019 | 0013 | (EQU) | GQESP | 0027 | 001B | (EQU) |
| GQEFT | 0026 | 001A | (EQU) | GQEPB | 0019 | 0013 | (EQU) | GQESPT | 0036 | 0024 | |
| GQEFWD | 0000 | 0000 | | GQEPCB | 0020 | 0014 | | GQESS | 0025 | 0019 | (EQU) |
| GQEF0 | 0017 | 0011 | | GQEPE | 0027 | 001B | (EQU) | GQEST | 0052 | 0034 | |
| GQEF1 | 0025 | 0019 | | GQEPI | 0025 | 0019 | (EQU) | GQESVC | 0008 | 0008 | |
| GQEF2 | 0026 | 001A | | GQEPIP | 0016 | 0010 | (EQU) | GQETBID | 0044 | 002C | |
| GQEF3 | 0027 | 001B | | GQEPO | 0025 | 0019 | (EQU) | GQETIC | 0024 | 0018 | (EQU) |
| GQEF4 | 0019 | 0013 | | GQEPP | 0019 | 0013 | (EQU) | GQETSI | 0004 | 0004 | |
| GQEF5 | 0018 | 0012 | | GQEPR | 0017 | 0011 | (EQU) | GQEUNPO | 0015 | 000F | |
| GQEHI | 0027 | 001B | (EQU) | GQEPTP | 0026 | 001A | (EQU) | GQEUNPR | 0014 | 000E | |
| GQEHP | 0028 | 001C | (EQU) | GQEP2 | 0017 | 0011 | (EQU) | GQEVR | 0025 | 0019 | (EQU) |
| GQEIA | 0055 | 0037 | | GQEQE | 0027 | 001B | (EQU) | GQEVS | 0025 | 0019 | (EQU) |
| GQEIG | 0017 | 0011 | (EQU) | GQEQGQ | 0036 | 0024 | (EQU) | GQEWS | 0025 | 0019 | (EQU) |
| GQEIGQ | 0040 | 0028 | | GQEQPS | 0028 | 001C | | GQEWSP | 0019 | 0013 | (EQU) |
| GQEIL | 0025 | 0019 | (EQU) | GQERC | 0025 | 0019 | (EQU) | GQEXP | 0027 | 001B | (EQU) |

## Assembler listing of CHAGQE

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|----------|-------------|--------|------|------|---------|
| 3B 00000 | | CHAGQE | DSECT | | , GENERAL QUEUE ENTRY |
| 3B 00000 | | | DS | 0F | |
| 3B 00000 | | GQEFWD | DS | F | FORWARD LINK |
| 3B 00004 | | GQETSI | DS | F | TSI POINTER |
| 3B 00008 | | GQESVC | DS | F | SVC OR IORCB OR MCB POINTER |
| | 3B 00008 | GQEIOR | EQU | GQESVC | |
| | 3B 00008 | GQEMCB | EQU | GQESVC | |
| 3B 0000C | | GQESAT | DS | 0F | |
| 3B 0000C | | GQESLN | DS | H | 9 BIT SLOT MASK |
| 3B 0000E | | GQEUNPR | DS | XL1 | NUMBER OF UNPROCESSED PCBES |
| 3B 0000F | | GQEUNPO | DS | XL1 | NUMBER OF UNPOSTED PCBES |
| 3B 00010 | | GQEERR | DS | XL1 | I/O ERROR COUNT |
| | 3B 00010 | GQEPIP | EQU | GQEERR | PROGRAM INTERRUPT PRIORITY |
| | | * | | | CODE |
| 3B 00011 | | GQEF0 | DS | XL1 | |
| | 3B 00011 | GQECE | EQU | GQEF0 | CONTROL UNIT END FLAG |
| | 00000080 | GQECEM | EQU | X'80' | CONTROL UNIT END MASK |
| | 3B 00011 | GQESN | EQU | GQEF0 | SENSE DATA PRESENT FLAG |
| | 00000040 | GQESNM | EQU | X'40' | SENSE DATA PRESENT MASK |
| | 3B 00011 | GQEP2 | EQU | GQEF0 | SECOND TSEND PAGE SCAN |
| | | * | | | REQUIRED FLAG |
| | 00000020 | GQEP2M | EQU | X'20' | SECOND TSEND PAGE SCAN |
| | | * | | | REQUIRED MASK |
| | 3B 00011 | GQEIP | EQU | GQEF0 | PAGING INTERRUPT FLAG |
| | 00000010 | GQEIPM | EQU | X'10' | PAGING INTERRUPT MASK |
| | 3B 00011 | GQEPR | EQU | GQEF0 | I/O PURGED FLAG |
| | 00000008 | GQEPRM | EQU | X'08' | I/O PURGED MASK |
| | 3B 00011 | GQEIG | EQU | GQEF0 | IGNORE DEVICE END FLAG |
| | 00000004 | GQEIGM | EQU | X'04' | IGNORE DEVICE END MASK |
| | 3B 00011 | GQESK | EQU | GQEF0 | SKIP I/O REQUEST FLAG |

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|---|---|---|---|---|---|
| | 00000002 | GQESKM | EQU | X'02' | SKIP I/O REQUEST MASK |
| | 3B 00011 | GQERPST | EQU | GQEF0 | PCB REPOSTING FLAG 1 = |
| | | * | | | REPOST |
| | 00000001 | GQERPSTM | EQU | X'01' | |
| 3B 00012 | | GQEF5 | DS | XL1 | RESERVED FOR SIPE |
| 3B 00013 | | GQEF4 | DS | XL1 | |
| | 3B 00013 | GQEDR | EQU | GQEF4 | DRAM IORCB POSTING REQUEST |
| | | * | | | FLAG |
| | 00000080 | GQEDRM | EQU | X'80' | |
| | 3B 00013 | GQEPB | EQU | GQEF4 | CEAAS WAITING ON BUSY PATH |
| | | * | | | FLAG |
| | 00000040 | GQEPBM | EQU | X'40' | |
| | 3B 00013 | GQESMG | EQU | GQEF4 | SHARED PAGE MIGRATION FLAG |
| | 00000020 | GQESMGM | EQU | X'20' | SHARED PAGE MIGRATION MASK |
| | 3B 00013 | GQEWSP | EQU | GQEF4 | SHARED PAGE POSTING FLAG |
| | 00000010 | GQEWSPM | EQU | X'10' | SHARED PAGE POSTING MASK |
| | 3B 00013 | GQELGDT | EQU | GQEF4 | PTR TO GQELOG OR GQEIGQ IS |
| | | * | | | PRESENT |
| | 00000008 | GQELGDTM | EQU | X'08' | |
| | 3B 00013 | GQERI | EQU | GQEF4 | REACTIVATE INTERRUPT FLAG |
| | 00000004 | GQERIM | EQU | X'04' | REACTIVATE INTERRUPT MASK |
| | 3B 00013 | GQEPAR | EQU | GQEF4 | PARTIALLY PROCESSED FLAG |
| | 00000002 | GQEPARM | EQU | X'02' | PARTIALLY PROCESSED MASK |
| | 3B 00013 | GQEPP | EQU | GQEF4 | TWAIT PAGEOUT IN PROGRESS |
| | | * | | | FLAG |
| | 00000001 | GQEPPM | EQU | X'01' | TWAIT PAGEOUT IN PROGRESS |
| | | * | | | MASK |
| 3B 00014 | | | DS | 0F | |
| 3B 00014 | | GQEPCB | DS | F | PCB POINTER |
| | 3B 00014 | GQELOG | EQU | GQEPCB | CHANNEL LOGOUT DATA |
| 3B 00018 | | GQECNT | DS | XL1 | PCB COUNT |
| | 3B 00018 | GQETIC | EQU | GQECNT | TYPE OF INTERRUPT |
| 3B 00019 | | GQEF1 | DS | XL1 | |
| | 3B 00019 | GQEPI | EQU | GQEF1 | PAGING IN FLAG |
| | | * | | | 1=ON |
| | 00000080 | GQEPIM | EQU | X'80' | |
| | 3B 00019 | GQEPO | EQU | GQEF1 | PAGING OUT FLAG |
| | | * | | | 1=ON |
| | 00000040 | GQEPOM | EQU | X'40' | |
| | 3B 00019 | GQEVS | EQU | GQEF1 | VAM OR SYSTEM PAGING FLAG |
| | | * | | | 1=VAM |
| | 00000020 | GQEVSM | EQU | X'20' | |
| | 3B 00019 | GQEWS | EQU | GQEF1 | WAITING ON SENSE FLAG |
| | | * | | | 1=ON |
| | 00000010 | GQEWSM | EQU | X'10' | |
| | 3B 00019 | GQESS | EQU | GQEF1 | SEEK ARG. TABLE SETUP FLAG |
| | | * | | | 1=ON |
| | 00000008 | GQESSM | EQU | X'08' | |
| | 3B 00019 | GQEVR | EQU | GQEF1 | VAM READ-AFTER-WRITE CHECK |
| | | * | | | FLAG |
| | 00000004 | GQEVRM | EQU | X'04' | |
| | 3B 00019 | GQEIL | EQU | GQEF1 | INSTRUCTION LENGTH CODE |
| | | * | | | * |
| | 00000002 | GQEILM | EQU | X'02' | 0= DIRECT SVC;1= EXECUTE |
| | | * | | | SVC |
| | 3B 00019 | GQERC | EQU | GQEF1 | IORCB ASSOCIATED WITH GQE |
| | | * | | | 1=YES |
| | 00000001 | GQERCM | EQU | X'01' | |
| 3B 0001A | | GQEF2 | DS | XL1 | |
| | 3B 0001A | GQEPA | EQU | GQEF2 | PATH |
| | | * | | | * |
| | 00000040 | GQEPAM | EQU | X'40' | |
| | 3B 0001A | GQEPTP | EQU | GQEF2 | PTP PAGING REQUESTED FLAG |
| | | * | | | N470 |
| | 00000008 | GQEPTPM | EQU | X'08' | PTP PAGING REQUESTED MASK |
| | | * | | | N470 |
| | 3B 0001A | GQECN | EQU | GQEF2 | CPU NUMBER |
| | | * | | | * |

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|---|---|---|---|---|---|
| | 00000006 | GQECNM | EQU | X'06' | CPU NUMBER MASK |
| | 3B 0001A | GQEFT | EQU | GQEF2 | FORCED TIME SLICE END FLAG |
| | | * | | | 1=ON |
| | 00000001 | GQEFTM | EQU | X'01' | |
| 3B 0001B | | GQEF3 | DS | XL1 | |
| | 3B 0001B | GQESP | EQU | GQEF3 | SHARED PAGE TABLE FLAG |
| | | * | | | 1=ON |
| | 00000080 | GQESPM | EQU | X'80' | |
| | 3B 0001B | GQEQE | EQU | GQEF3 | QUEUE ERROR FLAG |
| | | * | | | 1=ON |
| | 00000040 | GQEQEM | EQU | X'40' | |
| | 3B 0001B | GQEOT | EQU | GQEF3 | TWAIT FLAG |
| | 00000010 | GQEOTM | EQU | X'10' | TWAIT MASK |
| | 000000EF | GQEOTC | EQU | 255-GQEOTM | TWAIT MASK COMPLEMENT |
| | 3B 0001B | GQEXP | EQU | GQEF3 | ASAQP PROCESS FLAG  1=ON |
| | 00000008 | GQEXPM | EQU | X'08' | |
| | 3B 0001B | GQEPE | EQU | GQEF3 | PATH ERROR FLAG |
| | 00000004 | GQEPEM | EQU | X'04' | |
| | 3B 0001B | GQEHI | EQU | GQEF3 | HALT I/O ISSUED FLAG |
| | 00000002 | GQEHIM | EQU | X'02' | |
| | 3B 0001B | GQEDE | EQU | GQEF3 | AWAITING DEVICE END FLAG |
| | 00000001 | GQEDEM | EQU | X'01' | |
| 3B 0001C | | GQELQ | DS | 0H | LOC ON QUEUE |
| 3B 0001C | | GQEQPS | DS | 4H | QUEUE PROCESSOR STRINGS |
| | 3B 0001C | GQEHP | EQU | GQEQPS | HIGH PRIORITY PAGING |
| | | * | | | OPERATION FLAG |
| | 00000080 | GQEHPM | EQU | X'80' | HIGH PRIORITY PAGING |
| | | * | | | OPERATION MASK |
| | | ** EACH OF THE 4 ENTRIES IN GQEQPS WILL USE THIS | | | |
| | | *GQEHPM MASK | | | |
| | | * GQEQPS AND GQESPT ARE ALSO USED AS REGISTER SAVE | | | |
| | | * AREAS BY THE | | | |
| | | * 'QUEUE GQE ON TSI' SUBROUTINE. | | | |
| 3B 00024 | | | DS | 0F | |
| 3B 00024 | | GQESPT | DS | F | SHARED PAGE TABLE POINTER |
| | | * | | | * |
| | 3B 00024 | GQEQGQ | EQU | GQESPT | BYTE USED BY QUEUE GQE ON |
| | | * | | | TSI. |
| 3B 00028 | | | DS | 0D | |
| 3B 00028 | | GQEIGQ | DS | F | PTR. TO I/O INTERRUPT GQE |
| 3B 0002C | | GQETBID | DS | F | PTR. TO BLOCK FOR CONTIG |
| | | * | | | CORE ALLOC. |
| | 3B 00028 | | |ORG| | GQEIGQ | |
| 3B 00028 | | GQESNS | DS | D | SENSE DATA |
| | 3B 00028 | | |ORG| | GQESNS | |
| 3B 00028 | | | DS | XL7 | SENSE DATA |
| 3B 0002F | | GQEDT | DS | XL1 | |
| 3B 00030 | | GQECSW | DS | D | CHANNEL STATUS WORD |
| | 3B 00030 | | |ORG| | GQECSW | |
| 3B 00030 | | | DS | XL4 | RESERVED FOR CSW |
| 3B 00034 | | GQEST | DS | XL2 | CHANNEL STATUS |
| 3B 00036 | | | DS | XL1 | RESERVED FOR CSW |
| 3B 00037 | | GQEIA | DS | XL1 | |
| 3B 00038 | | GQEDEV | DS | H | SYMBOLIC DEVICE |
| 3B 0003A | | GQEINT | DS | H | INTERRUPT CODE |
| | 3B 0003B | GQEEXT | EQU | GQEINT+1 | EXTERNAL INTERRUPT CODE |
| | | * | | | FIELD |
| | | * | | | 0=VSEND, 1=XSEND |
| 3B 0003C | | | DS | 0F | |
| 3B 0003C | | GQEREV | DS | F | REVERSE LINK |

General Services Macro Table (CHAGSM)


The General Services Macro Table (GSM) provides a format for parameter input to the Common OPEN and Common CLOSE routines in data management.  This GSM input list is built by the OPEN or CLOSE macro instruction expansion at assembly time.
The GSM, a variable length table, occupies from 8 bytes (minimum) to 800 bytes (maximum) in virtual storage, aligned on doubleword boundaries.
The fields in the GSM are:
      GSMADD:  Pointer to DCB.
      GSMCOD:  Option byte -- contains the OPEN or CLOSE options and control informa-
              tion for the Common OPEN or Common CLOSE routines.  The following bits
              are equated to GSMCOD:
      GSMC0 (C0M EQU X'80'):  Last DCB to be processed bit.
      GSMC1 (C1M EQU X'40'):  Type T close bit.
      GSMC2 (C2M EQU X'30'):  Codemask for reread and leave.
      GSMC3 (C3C EQU X'0F'):  Codemask for options.
The coding for Common OPEN is:

| Bit | Binary Contents | Meaning |
|-----|-----------------|---------|
| 0 | 0 | Another DCB to be opened |
| 0 | 1 | Last DCB to be opened |
| 1 | - | Not Used |
| 2-3 | 01 | Reread |
| 2-3 | 11 | Leave |
| 4-7 | 0000 | Input |
|  | 1111 | Output |
|  | 0011 | Inout |
|  | 0111 | Outin |
|  | 0001 | Readback |
|  | 0100 | Update |

The coding for Common CLOSE is:

| Bit | Binary Contents | Meaning |
|-----|-----------------|---------|
| 0 | 0 | Another DCB to be opened |
| 0 | 1 | Last DCB to be opened |
| 1 | 0 | Normal Close |
| 1 | 1 | Type T Close |
| 2-3 | 01 | Reread |
| 2-3 | 11 | Leave |
| 47 | - | Not Used |

      GSMRSV:  Not Used
Note:  The GSM contains one doubleword entry (100 entries maximum, 1 entry minimum) for each DCB which is to be opened or closed.


CHAGSM Storage map

```
DEC     HEX _____
  0       0|                                    |        |                    |
           |             GSMADD                 |GSMCOD  |      GSMRSV        |
           |_____|_____|_____|
```

Fields in CHAGSM -- by displacement

| DEC | HEX | FIELD | | DEC | HEX | FIELD | | DEC | HEX | FIELD |
|-----|-----|-------|---|-----|-----|-------|---|-----|-----|-------|
| 0000 | 0000 | GSMADD | | 0004 | 0004 | GSMC1 | (EQU) | 0005 | 0005 | GSMRSV |
| 0004 | 0004 | GSMC3 | (EQU) | 0004 | 0004 | GSMC0 | (EQU) | | | |
| 0004 | 0004 | GSMC2 | (EQU) | 0004 | 0004 | GSMCOD | | | | |

Alphabetical list of fields in CHAGSM

| FIELD | DEC | HEX | | FIELD | DEC | HEX | | | FIELD | DEC | HEX |
|-------|------|------|--------|-------|------|------|--------|--|--------|------|------|
| GSMADD | 0000 | 0000 | | GSMC1 | 0004 | 0004 | (EQU) | | GSMRSV | 0005 | 0005 |
| GSMCOD | 0004 | 0004 | | GSMC2 | 0004 | 0004 | (EQU) | | | | |
| GSMC0 | 0004 | 0004 | (EQU) | GSMC3 | 0004 | 0004 | (EQU) | | | | |

Assembler listing of CHAGSM

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|----------|-------------|--------|------|------|---------|
| | 3C 00000 | CHAGSM | DSECT | | GENERAL SERVICES MACRO TABLE |
| | | * | | | |
| 3C 00000 | | | DS | 0D | |
| 3C 00000 | | GSMADD | DS | F | DCB ADDRESS |
| 3C 00004 | | GSMCOD | DS | X | OPTIONS BYTE |
| | 3C 00004 | GSMC0 | EQU | GSMCOD | |
| | 00000080 | GSMC0M | EQU | X'80' | LAST DCB TO BE PROCESSED BIT |
| | | * | | | |
| | 3C 00004 | GSMC1 | EQU | GSMCOD | |
| | 00000040 | GSMC1M | EQU | X'40' | TYPE T CLOSE BIT |
| | 3C 00004 | GSMC2 | EQU | GSMCOD | |
| | 00000030 | GSMC2C | EQU | X'30' | CODEMASK FOR REREAD AND LEAVE |
| | | * | | | |
| | 3C 00004 | GSMC3 | EQU | GSMCOD | |
| | 0000000F | GSMC3C | EQU | X'0F' | CODEMASK FOR OPTIONS |
| 3C 00005 | | GSMRSV | DS | CL3 | NOT USED |

## Available Device Table (CHAHED, CHAAHD, and CHAAVE)

The Available Device Table contains a count of each class of allocatable device within the system.

The Available Device Table resides in shared virtual storage, aligned on double-word boundaries.

Note:  The device type codes found in field AHDDTC are:

| Code | Device Type |
|------|-------------|
| 0801 | 2540 card reader |
| 0802 | 2540 card reader |
| 0808 | 1403 printer |
| 0810 | 2671 perforated tape reader |
| 2001 | 2311 disk pack |
| 2002 | 2301 drum |
| 2003 | 2321 data cell |
| 2008 | 2314 disk |
| 8001 | 2400 tape drive |

## CHAHED Storage map

```
DEC   HEX _____
 0      0 |HEDLCK |     HEDCNT    |              HEDSPR                    |
          |_____|_____|_____|
```

## Fields in CHAHED -- by displacement

| DEC | HEX | FIELD | DEC | HEX | FIELD | DEC | HEX | FIELD |
|-----|-----|-------|-----|-----|-------|-----|-----|-------|
| 0000 | 0000 | HEDLCK | 0001 | 0001 | HEDCNT | 0003 | 0003 | HEDSPR |

## Alphabetical list of fields in CHAHED

| FIELD | DEC | HEX | FIELD | DEC | HEX | FIELD | DEC | HEX |
|-------|-----|-----|-------|-----|-----|-------|-----|-----|
| HEDCNT | 0001 | 0001 | HEDLCK | 0000 | 0000 | HEDSPR | 0003 | 0003 |

## Assembler listing of CHAHED

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|----------|-------------|--------|------|------|---------|
|          | 3D 00000 | CHAHED | DSECT |      | DSECT      FOR THE AVAILABLE DEVICE TABLE |
|          |          | * |      |      | |
| 3D 00000 |          |        | DS | 0D | ALIGN TO DOUBLE WORD BOUNDARY |
|          |          | * |      |      | |
| 3D 00000 |          | HEDLCK | DS | XL1 | LOCK BYTE  X'00' = UNLOCKED |
| 3D 00001 |          | HEDCNT | DS | XL2 | COUNT OF SUBQUEUE HEADERS |
| 3D 00003 |          | HEDSPR | DS | CL5 | SPARE BYTES |
|          | 3E 00000 | CHAAHD | DSECT |      | DSECT      FOR SUBQUEUE HEADERS |
|          |          | * |      |      | |
| 3E 00000 |          |        | DS | 0D | ALIGN TO DOUBLE WORD |
| 3E 00000 |          | AHDDTC | DS | H | DEVICE TYPE CODE (SAME AS SDADEV,CHASDA 2.4.38 |
|          |          | * |      |      | |
| 3E 00002 |          |        | DS | H | RESERVED |
| 3E 00004 |          | AHDADR | DS | F | POINTER TO FIRST SUBQUEUE ENTRY |
|          |          | * |      |      | |
| 3E 00008 |          | AHDLCK | DS | XL1 | HEADER LOCK BYTE |
| 3E 00009 |          | AHDCNT | DS | XL2 | NO. OF ENTRIES IN THE SUBQUEUE |
|          |          | * |      |      | |
| 3E 0000B |          | AHDSPR | DS | CL5 | SPARE BYTES |
| 3E 00010 |          | AHDEND | DS | 0X | END OF AVAILABLE DEVICE TABLE   I5943 |
|          |          | * |      |      | |
|          | 00000010 | AHDSZE | EQU | AHDEND-AHDDTC | AVAILABLE DEVICE TABLE SIZE      I5943 |
|          |          | * |      |      | |
|          | 3F 00000 | CHAAVE | DSECT |      | DSECT FOR SUBQUEUE ENTRY |
| 3F 00000 |          |        | DS | 0D | ALIGNMENT |
| 3F 00000 |          | AVEDEV | DS | F | FULL DEVICE CODE - HEX |
| 3F 00004 |          | AVEPNT | DS | F | POINTER TO SDAT ENTRY |
|          |          | * |      |      | (2.4.38) |

## CHAAHD Storage map

```
DEC   HEX  _____
 0     0|        AHDDTC        |      UNNAMED      |            AHDADR              |
       |_____|_____|_____|
 8     8|AHDLCK    |     AHDCNT     |                   AHDSPR                      |
       |_____|_____|_____|
```

### Fields in CHAAHD -- by displacement

| DEC | HEX | FIELD | DEC | HEX | FIELD | DEC | HEX | FIELD |
|-----|-----|-------|-----|-----|-------|-----|-----|-------|
| 0000 | 0000 | AHDDTC | 0008 | 0008 | AHDLCK | 0011 | 000B | AHDSPR |
| 0004 | 0004 | AHDADR | 0009 | 0009 | AHDCNT | 0016 | 0010 | AHDEND |

### Alphabetical list of fields in CHAAHD

| FIELD | DEC | HEX | FIELD | DEC | HEX | FIELD | DEC | HEX |
|-------|-----|-----|-------|-----|-----|-------|-----|-----|
| AHDADR | 0004 | 0004 | AHDDTC | 0000 | 0000 | AHDLCK | 0008 | 0008 |
| AHDCNT | 0009 | 0009 | AHDEND | 0016 | 0010 | AHDSPR | 0011 | 000B |


## CHAAVE Storage map

```
DEC   HEX  _____
 0     0|              AVEDEV               |              AVEPNT                   |
       |_____|_____|
```

### Fields in CHAAVE -- by displacement

| DEC | HEX | FIELD | DEC | HEX | FIELD | DEC | HEX | FIELD |
|-----|-----|-------|-----|-----|-------|-----|-----|-------|
| 0000 | 0000 | AVEDEV | 0004 | 0004 | AVEPNT | | | |


### Alphabetical list of fields in CHAAVE

| FIELD | DEC | HEX | FIELD | DEC | HEX | FIELD | DEC | HEX |
|-------|-----|-----|-------|-----|-----|-------|-----|-----|
| AVEDEV | 0000 | 0000 | AVEPNT | 0004 | 0004 | | | |

Interrupt Control Block (CHAICB)

The Interrupt Control Block contains interruption information necessary for interruption handling routines. The ICB is constructed by any of the following macro expansions:

    Specify Program Entry Condition (SPEC)
    Specify SVC Entry Condition (SSEC)
    Specify External Entry Condition (SEEC)
    Specify Asynchronous I/O Entry Condition (SAEC)
    Specify Timer Entry Condition (STEC)
    Specify Synchronous I/O Entry Condition (SIEC)
    Set Interval Timer (STIMER)

The ICB may be used by the Task Monitor Queue Linkage Editor, Scanner-Dispatcher Specify Interrupt routine, Delete Interrupt routine, and the Interrupt Inquiry routine.
The 44 byte ICB resides in virtual storage, aligned on doubleword boundaries.

CHAICB Storage map

| DEC | HEX | | | | | | |
|-----|-----|---|---|---|---|---|---|
| 0 | 0 | ICBCOM | | | ICBDCB | | |
| 8 | 8 | ICBOVY | | | | | |
| 16 | 10 | ICBEPV | | | ICBEPR | | |
| 24 | 18 | ICBEP2 | | UNNAMED | ICBINH | UNNAMED | ICBDET |
| 32 | 20 | ICBRSA | | | ICBPMS | | |
| 40 | 28 | ICBAMS | | | | | |

ORG   ICBOVY

| 8 | 8 | ICBPIM |
|---|---|--------|

ORG   ICBOVY

| 8 | 8 | UNNAMED | ICBSVC |
|---|---|---------|--------|

ORG   ICBOVY

| 8 | 8 | UNNAMED | ICBXML | ICBXMN | ICBXMP |
|---|---|---------|--------|--------|--------|

ORG   ICBOVY

| 8 | 8 | UNNAMED | ICBATM |
|---|---|---------|--------|

ORG   ICBOVY

| 8 | 8 | ICBTMC | ICBTIM | ICBTNO | ICBTIN |
|---|---|--------|--------|--------|--------|

## Fields in CHAICB -- by displacement

| DEC | HEX | FIELD | DEC | HEX | FIELD | DEC | HEX | FIELD | |
|------|------|--------|------|------|--------|------|------|--------|------|
| 0000 | 0000 | ICBCOM | 0010 | 000A | ICBXMN | 0029 | 001D | ICBHDR | (EQU) |
| 0004 | 0004 | ICBDCB | 0010 | 000A | ICBSVC | 0029 | 001D | ICBINH | |
| 0008 | 0008 | ICBTMC | 0012 | 000C | ICBTIN | 0031 | 001F | ICBDET | |
| 0008 | 0008 | ICBPIM | 0012 | 000C | ICBATM | 0032 | 0020 | ICBRSA | |
| 0008 | 0008 | ICBOVY | 0012 | 000C | ICBXMP | 0036 | 0024 | ICBPMS | |
| 0009 | 0009 | ICBTIM | 0016 | 0010 | ICBEPV | 0040 | 0028 | ICBAMS | |
| 0009 | 0009 | ICBXML | 0020 | 0014 | ICBEPR | | | | |
| 0010 | 000A | ICBTNO | 0024 | 0018 | ICBEP2 | | | | |

## Alphabetical list of fields in CHAICB

| FIELD | DEC | HEX | FIELD | DEC | HEX | | FIELD | DEC | HEX |
|--------|------|------|--------|------|------|------|--------|------|------|
| ICBAMS | 0040 | 0028 | ICBHDR | 0029 | 001D | (EQU) | ICBTIN | 0012 | 000C |
| ICBATM | 0012 | 000C | ICBINH | 0029 | 001D | | ICBTMC | 0008 | 0008 |
| ICBCOM | 0000 | 0000 | ICBOVY | 0008 | 0008 | | ICBTNO | 0010 | 000A |
| ICBDCB | 0004 | 0004 | ICBPIM | 0008 | 0008 | | ICBXML | 0009 | 0009 |
| ICBDET | 0031 | 001F | ICBPMS | 0036 | 0024 | | ICBXMN | 0010 | 000A |
| ICBEPR | 0020 | 0014 | ICBRSA | 0032 | 0020 | | ICBXMP | 0012 | 000C |
| ICBEPV | 0016 | 0010 | ICBSVC | 0010 | 000A | | | | |
| ICBEP2 | 0024 | 0018 | ICBTIM | 0009 | 0009 | | | | |

## Assembler listing of CHAICB

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|----------|-------------|--------|------|------|---------|
| | 40 00000 | CHAICB | DSECT | | |
| | | * INTERRUPT CONTROL BLOCK --- ICB --- | | | |
| 40 00000 | | | DS | 0D | |
| 40 00000 | | ICBCOM | DS | F | PTR TO COMAREA |
| 40 00004 | | ICBDCB | DS | F | PTR TO DCB - I/O INTERRUPTS |
| | | * | | | ONLY |
| 40 00008 | | ICBOVY | DS | 2F | OVERLAID FIELDS FOR VARIOUS |
| | | * | | | INT. TYPES |
| 40 00010 | | ICBEPV | DS | F | ENTRY POINT 1 V CON |
| 40 00014 | | ICBEPR | DS | F | ENTRY POINT 1 R CON |
| 40 00018 | | ICBEP2 | DS | F | ENTRY POINT 2 |
| 40 0001C | | | DS | CL1 | UNUSED |
| 40 0001D | | ICBINH | DS | X | PRIV AND HEADER FLAG |
| | | * | | | N456 |
| | 00000001 | ICBINHM | EQU | X'01' | PRIV AND HEADER MASK |
| | | * | | | N456 |
| | 40 0001D | ICBHDR | EQU | ICBINH | PASS HEADER FLAG |
| | | * | | | N456 |
| | 00000080 | ICBHDRM | EQU | X'80' | PASS HEADER MASK |
| | | * | | | N456 |
| 40 0001E | | | DS | CL1 | UNUSED |
| 40 0001F | | ICBDET | DS | XL1 | DE TYPE CODE |
| | 00000000 | ICBDEP | EQU | X'00' | PROGRAM |
| | 00000001 | ICBDES | EQU | X'01' | SVC |
| | 00000002 | ICBDEX | EQU | X'02' | EXTERNAL |
| | 00000003 | ICBDEA | EQU | X'03' | ASYNCHRONOUS |
| | 00000004 | ICBDTT | EQU | X'04' | TIMER |
| | 00000005 | ICBDEI | EQU | X'05' | SYNCHRONOUS |
| 40 00020 | | ICBRSA | DS | F | SAVE AREA FOR MODE EQUALS R |
| 40 00024 | | ICBPMS | DS | F | PROGRAM MASK SAVE AREA |
| 40 00028 | | ICBAMS | DS | F | ATTENTION MASK SAVE AREA |
| | 40 00008 | | |ORG| | ICBOVY |
| | | * AREAS USED FOR PROGRAM INTERRUPTS | | | |
| 40 00008 | | ICBPIM | DS | F | PROGRAM INTERRUPT MASK |
| | 40 00008 | | |ORG| | ICBOVY |
| | | * AREAS USED FOR SVC INTERRUPTS | | | |
| 40 00008 | | | DS | CL2 | UNUSED |
| 40 0000A | | ICBSVC | DS | CL2 | SVC INTEGER |
| | 40 00008 | | |ORG| | ICBOVY |
| | | * AREAS USED FOR EXTERNAL INTERRUPTS | | | |
| 40 00008 | | | DS | CL1 | UNUSED |
| 40 00009 | | ICBXML | DS | CL1 | MESSAGE LENGTH |

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|----------|-------------|--------|------|------|---------|
| 40 0000A |             | ICBXMN | DS   | CL2  | MESSAGE NUMBER |
| 40 0000C |             | ICBXMP | DS   | F    | MESSAGE AREA PTR |
|          | 40 00008    |        | \|ORG\| | ICBOVY |       |
|          |             | * AREAS USED FOR ASYNCHRONOUS INTERRUPTS |  |  |  |
| 40 00008 |             |        | DS   | F    | UNUSED |
| 40 0000C |             | ICBATM | DS   | F    | ATTENTION TYPE MASK |
|          | 00000001    | ICBANM | EQU  | X'01' | ATTENTION KEY MASK BIT |
|          | 40 00008    |        | \|ORG\| | ICBOVY |       |
|          |             | * AREAS USED FOR TIMER INTERRUPTS |  |  |  |
| 40 00008 |             | ICBTMC | DS   | CL1  | TIMER CODE |
| 40 00009 |             | ICBTIM | DS   | CL1  | TIMER TYPE - TASK OR REAL |
| 40 0000A |             | ICBTNO | DS   | CL2  | TIMER NUMBER |
| 40 0000C |             | ICBTIN | DS   | F    | PTR TO TIMER INTERVAL |
|          |             | *      |      |      | REQUESTED |
|          |             | * SYNCHRONOUS I/O HAS NO SPECIAL FIELDS |  |  |  |

## Interrupt Device Entry (CHAIDE)

The Interrupt Device Entry (IDE) handles queuing of interruption types for the various devices.  The IDE is constructed by one of two methods.  The Specify Interrupt Routine (SIR) constructs and queues the appropriate interruption chain in the Task Monitor Interrupt Table (CHBITB); or the IDE exists, predefined, in the ITB.
Predefined IDEs exist for four of the six interruption types (program, SVC, external and timer).  The asynchronous and synchronous I/O interruption IDEs are built by SIR for each symbolic device allocation table (SDAT) defined device.  When Interrupt Request Entries (IRE) are built for interruption handling routines, the IREs are queued in the IDE.
The IDE is used by the Task Monitor's Queue Linkage Entry, Scanner-Dispatcher routines, SIR, Delete Interrupt, and Interrupt Inquiry routines.
The 32 byte IDE resides in virtual storage, aligned on doubleword boundaries.

## CHAIDE Storage map

| DEC | HEX | | | | |
|---|---|---|---|---|---|
| 0 | 0 | IDEID | UNNAMED | IDETYP | IDEFPR |
| 8 | 8 | IDEBPR | | | IDEHRE |
| 16 | 10 | IDESDT | | | IDEHAR |
| 24 | 18 | UNNAMED | | | UNNAMED |

## Fields in CHAIDE -- by displacement

| DEC | HEX | FIELD | DEC | HEX | FIELD | DEC | HEX | FIELD |
|---|---|---|---|---|---|---|---|---|
| 0000 | 0000 | IDEID | 0008 | 0008 | IDEBPR | 0020 | 0014 | IDEHAR |
| 0003 | 0003 | IDETYP | 0012 | 000C | IDEHRE | | | |
| 0004 | 0004 | IDEFPR | 0016 | 0010 | IDESDT | | | |

## Alphabetical list of fields in CHAIDE

| FIELD | DEC | HEX | FIELD | DEC | HEX | FIELD | DEC | HEX |
|---|---|---|---|---|---|---|---|---|
| IDEBPR | 0008 | 0008 | IDEHRE | 0012 | 000C | IDETYP | 0003 | 0003 |
| IDEFPR | 0004 | 0004 | IDEID | 0000 | 0000 | | | |
| IDEHAR | 0020 | 0014 | IDESDT | 0016 | 0010 | | | |

## Assembler listing of CHAIDE

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|---|---|---|---|---|---|
| | 41 00000 | CHAIDE | DSECT | | |
| 41 00000 | | | DS | 0D | |
| 41 00000 | | IDEID | DS | CL2 | ID= 'DE' |
| 41 00002 | | | DS | CL1 | UNUSED |
| 41 00003 | | IDETYP | DS | XL1 | DETYP CODE |
| | 00000000 | IDEDEP | EQU | X'00' | PROGRAM TYPE |
| | 00000001 | IDEDES | EQU | X'01' | SVC TYPE |
| | 00000002 | IDEDEX | EQU | X'02' | EXTERNAL TYPE |
| | 00000003 | IDEDEA | EQU | X'03' | ASYNCHRONOUS TYPE |
| | 00000004 | IDEDTT | EQU | X'04' | TIMER TYPE |
| | 00000005 | IDEDEI | EQU | X'05' | SYNCHRONOUS TYP |
| 41 00004 | | IDEFPR | DS | F | FORWARD PTR |
| 41 00008 | | IDEBPR | DS | F | BACKWARD PTR |
| 41 0000C | | IDEHRE | DS | F | HIGHEST PRTY RE |
| 41 00010 | | IDESDT | DS | F | SDAT PTR |
| 41 00014 | | IDEHAR | DS | F | HIGHEST PRTY ACTIVE RE |
| 41 00018 | | | DS | F | UNUSED |
| 41 0001C | | | DS | F | UNUSED |

## I/O Inboard Error Record (CHAIER)

   The I/O Inboard Error Record (CHAIER) contains data from an I/O inboard error, and is preserved in drum storage.

   CHAIER is constructed by virtual storage error recording or core error recording, depending on the type of I/O operation (task or paging).

### CHAIER Storage map

| DEC | HEX | | | | | | |
|-----|-----|---|---|---|---|---|---|
| 0 | 0 | UNNAMED | IERRL | UNNAMED | IERTYP | UNNAMED | |
| 8 | 8 | IERSDA | IERALT | IERLP | | UNNAMED | |
| 16 | 10 | IERLSA | | | | | |
| 24 | 18 | IERTIM | | | | | |
| 32 | 20 | IERPID | | | | | |
| 40 | 28 | IERCSW | | | | | |
| 48 | 30 | IERLOG | | | | | |
| 72 | 48 | IERMAP | | | | | |
| 80 | 50 | IERNCC | UNNAMED | IERFCC | | | |
| 88 | 58 | IERCCW | | | | | |

### Fields in CHAIER -- by displacement

| DEC | HEX | FIELD | DEC | HEX | FIELD | DEC | HEX | FIELD |
|-----|-----|-------|-----|-----|-------|-----|-----|-------|
| 0002 | 0002 | IERRL | 0016 | 0010 | IERLSA | 0072 | 0048 | IERMAP |
| 0005 | 0005 | IERTYP | 0024 | 0018 | IERTIM | 0080 | 0050 | IERNCC |
| 0008 | 0008 | IERSDA | 0032 | 0020 | IERPID | 0084 | 0054 | IERFCC |
| 0010 | 000A | IERALT | 0040 | 0028 | IERCSW | 0088 | 0058 | IERCCW |
| 0012 | 000C | IERLP | 0048 | 0030 | IERLOG | | | |

### Alphabetical list of fields in CHAIER

| FIELD | DEC | HEX | FIELD | DEC | HEX | FIELD | DEC | HEX |
|-------|-----|-----|-------|-----|-----|-------|-----|-----|
| IERALT | 0010 | 000A | IERLP | 0012 | 000C | IERRL | 0002 | 0002 |
| IERCCW | 0088 | 0058 | IERLSA | 0016 | 0010 | IERSDA | 0008 | 0008 |
| IERCSW | 0040 | 0028 | IERMAP | 0072 | 0048 | IERTIM | 0024 | 0018 |
| IERFCC | 0084 | 0054 | IERNCC | 0080 | 0050 | IERTYP | 0005 | 0005 |
| IERLOG | 0048 | 0030 | IERPID | 0032 | 0020 | | | |

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|----------|-------------|--------|------|------|---------|
| | 42 00000 | CHAIER | DSECT | | |

**** I/O INBOARD ERROR RECORD (DWB 2.4.55) *****

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|----------|-------------|--------|------|------|---------|
| 42 00000 | | | DS | 0D | |
| 42 00000 | | | DS | H | SPARE |
| 42 00002 | | IERRL * | DS | H | RECORD LENGTH (120 TO 160 BYTES) |
| 42 00004 | | | DS | C | SPARE |
| 42 00005 | | IERTYP | DS | X | RECORD TYPE (2C OR 2D) |
| 42 00006 | | | DS | H | SPARE |
| 42 00008 | | IERSDA | DS | XL2 | SYMBOLIC DEVICE ADDRESS |
| 42 0000A | | IERALT * | DS | XL2 | ALTERNATE PATH IF DRUM; OTHERWISE UNUSED |
| 42 0000C | | IERLP * | DS | XL2 | PATH LAST USED (ACTUAL I/O ADDRESS) |
| 42 0000E | | | DS | H | SPARE |
| 42 00010 | | IERLSA * | DS | XL8 | LAST SEEK ADDRESS IF DRUM; ELSE UNUSED |
| 42 00018 | | IERTIM * | DS | 2F | TIME AND DATE OF ERROR INCIDENT N392 |
| 42 00020 | | IERPID | DS | CL8 | PROGRAM ID |
| 42 00028 | | IERCSW | DS | XL8 | CHANNEL STATUS WORD |
| 42 00030 | | IERLOG | DS | 3XL8 | CHANNEL LOG |
| 42 00048 | | IERMAP | DS | XL8 | CHANNEL MAP |
| 42 00050 | | IERNCC | DS | H | NO. OF CCW'S IN CCW LIST |
| 42 00052 | | | DS | H | SPARE |
| 42 00054 | | IERFCC | DS | XL4 | POINTER TO FAILING CCW |
| 42 00058 | | IERCCW | DS | 9XL8 | CCW LIST (4 TO 9 CCW'S) |

## I/O Paging Control Block (CHAIOP)

The I/O Paging Control Block (IOPCB) serves as the communication link between the page oriented access methods (VAM) and the resident supervisor.

The IOPCB, a variable length parameter list, follows a PGOUT supervisor call. The PGOUT is issued when a program in virtual storage requests the execution of a page oriented I/O operation. Since the IOPCB cannot appear in-line, both the PGOUT and its IOPCB are stored in a constant area. The SVC is executed by an in-line execute instruction. The IOPCB must be in core storage at PGOUT time.

The IOPCB occupies from 12 to 40 bytes in virtual and core storage, aligned on word boundaries and contained within one page.

Only one 32-bit virtual storage page address is given. For multiple page operations the subsequent virtual storage pages immediately follow the specified page.

### CHAIOP Storage map

| DEC | HEX | | | | |
|-----|-----|---|---|---|---|
| 0 | 0 | IOPSV | IOPFG \| IOPCT | | IOPVM |
| 8 | 8 | IOPSS1 | IOPEP1 | IOPSS2 | IOPEP2 |
| 16 | 10 | IOPSS3 | IOPEP3 | IOPSS4 | IOPEP4 |
| 24 | 18 | IOPSS5 | IOPEP5 | IOPSS6 | IOPEP6 |
| 32 | 20 | IOPSS7 | IOPEP7 | IOPSS8 | IOPEP8 |

### Fields in CHAIOP -- by displacement

| DEC | HEX | FIELD | | DEC | HEX | FIELD | DEC | HEX | FIELD |
|-----|-----|-------|---|-----|-----|-------|-----|-----|-------|
| 0000 | 0000 | IOPSV | | 0012 | 000C | IOPES2 | 0028 | 001C | IOPSS6 |
| 0000 | 0000 | IOPBEG | | 0014 | 000E | IOPEP2 | 0028 | 001C | IOPES6 |
| 0002 | 0002 | IOPVCR | (EQU) | 0016 | 0010 | IOPSS3 | 0030 | 001E | IOPEP6 |
| 0002 | 0002 | IOPFG | | 0016 | 0010 | IOPES3 | 0032 | 0020 | IOPSS7 |
| 0002 | 0002 | IOPEL | | 0018 | 0012 | IOPEP3 | 0032 | 0020 | IOPES7 |
| 0003 | 0003 | IOPCT | | 0020 | 0014 | IOPSS4 | 0034 | 0022 | IOPEP7 |
| 0004 | 0004 | IOPVM | | 0020 | 0014 | IOPES4 | 0036 | 0024 | IOPSS8 |
| 0008 | 0008 | IOPSS1 | | 0022 | 0016 | IOPEP4 | 0036 | 0024 | IOPES8 |
| 0008 | 0008 | IOPES1 | | 0024 | 0018 | IOPSS5 | 0038 | 0026 | IOPEP8 |
| 0010 | 000A | IOPEP1 | | 0024 | 0018 | IOPES5 | | | |
| 0012 | 000C | IOPSS2 | | 0026 | 001A | IOPEP5 | | | |

### Alphabetical list of fields in CHAIOP

| FIELD | DEC | HEX | FIELD | DEC | HEX | FIELD | DEC | HEX | |
|-------|-----|-----|-------|-----|-----|-------|-----|-----|---|
| IOPBEG | 0000 | 0000 | IOPES1 | 0008 | 0008 | IOPSS3 | 0016 | 0010 | |
| IOPCT | 0003 | 0003 | IOPES2 | 0012 | 000C | IOPSS4 | 0020 | 0014 | |
| IOPEL | 0002 | 0002 | IOPES3 | 0016 | 0010 | IOPSS5 | 0024 | 0018 | |
| IOPEP1 | 0010 | 000A | IOPES4 | 0020 | 0014 | IOPSS6 | 0028 | 001C | |
| IOPEP2 | 0014 | 000E | IOPES5 | 0024 | 0018 | IOPSS7 | 0032 | 0020 | |
| IOPEP3 | 0018 | 0012 | IOPES6 | 0028 | 001C | IOPSS8 | 0036 | 0024 | |
| IOPEP4 | 0022 | 0016 | IOPES7 | 0032 | 0020 | IOPSV | 0000 | 0000 | |
| IOPEP5 | 0026 | 001A | IOPES8 | 0036 | 0024 | IOPVCR | 0002 | 0002 | (EQU) |
| IOPEP6 | 0030 | 001E | IOPFG | 0002 | 0002 | IOPVM | 0004 | 0004 | |
| IOPEP7 | 0034 | 0022 | IOPSS1 | 0008 | 0008 | | | | |
| IOPEP8 | 0038 | 0026 | IOPSS2 | 0012 | 000C | | | | |

### Assembler listing of CHAIOP

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|----------|-------------|--------|------|------|---------|
| | 43 00000 | CHAIOP | DSECT | | INPUT/OUTPUT PAGING CONTROL BLOCK |
| | | * | | | |
| 43 00000 | | IOPBEG | DS | 0F | ALIGN ON A WORD BOUNDARY |
| 43 00000 | | IOPSV | DS | H | SVC FOR PGOUT |
| 43 00002 | | IOPEL | DS | 0H | FLAG AND COUNT FIELD |
| 43 00002 | | IOPFG | DS | XL1 | FLAG BYTE |
| | 43 00002 | IOPVCR | EQU | IOPFG | VALIDITY CHECK REQUIRED FLAG |
| | | * | | | |

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|---|---|---|---|---|---|
| | 00000080 | IOPVCRM * | EQU | X'80' | VALIDITY CHECK REQUIRED MASK |
| 43 00003 | | IOPCT * | DS | XL1 | COUNT OF NO. ENTRIES IN EXT STORAGE LIST |
| 43 00004 | | IOPVM | DS | F | VIRTUAL MEMORY PAGE ADDRESS |
| 43 00008 | | IOPES1 | DS | 0F | EXTERNAL STORAGE ADDRESS 1 |
| 43 00008 | | IOPSS1 * | DS | H | SYSTEM SYMBOLIC DEVICE ADDRESS 1 |
| 43 0000A | | IOPEP1 | DS | H | EXTERNAL PAGE NUMBER 1 |
| 43 0000C | | IOPES2 * | DS | 0F | EXTERNAL STORAGE ADDRESS 2 (SEE NOTE 1) |
| 43 0000C | | IOPSS2 * | DS | H | SYSTEM SYMBOLIC DEVICE ADDRESS 2 |
| 43 0000E | | IOPEP2 | DS | H | EXTERNAL PAGE NUMBER 2 |
| 43 00010 | | IOPES3 * | DS | 0F | EXTERNAL STORAGE ADDRESS 3 (SEE NOTE 1) |
| 43 00010 | | IOPSS3 * | DS | H | SYSTEM SYMBOLIC DEVICE ADDRESS 3 |
| 43 00012 | | IOPEP3 | DS | H | EXTERNAL PAGE NUMBER 3 |
| 43 00014 | | IOPES4 * | DS | 0F | EXTERNAL STORAGE ADDRESS 4 (SEE NOTE1) |
| 43 00014 | | IOPSS4 * | DS | H | SYSTEM SYMBOLIC DEVICE ADDRESS 4 |
| 43 00016 | | IOPEP4 | DS | H | EXTERNAL PAGE NUMBER 4 |
| 43 00018 | | IOPES5 * | DS | 0F | EXTERNAL STORAGE ADDRESS 5 (SEE NOTE 1) |
| 43 00018 | | IOPSS5 * | DS | H | SYSTEM SYMBOLIC DEVICE ADDRESS 5 |
| 43 0001A | | IOPEP5 | DS | H | EXTERNAL PAGE NUMBER 5 |
| 43 0001C | | IOPES6 * | DS | 0F | EXTERNAL STORAGE ADDRESS 6 (SEE NOTE 1) |
| 43 0001C | | IOPSS6 * | DS | H | SYSTEM SYMBOLIC DEVICE ADDRESS 6 |
| 43 0001E | | IOPEP6 | DS | H | EXTERNAL PAGE NUMBER 6 |
| 43 00020 | | IOPES7 * | DS | 0F | EXTERNAL STORAGE ADDRESS 7 (SEE NOTE 1) |
| 43 00020 | | IOPSS7 * | DS | H | SYSTEM SYMBOLIC DEVICE ADDRESS 7 |
| 43 00022 | | IOPEP7 | DS | H | EXTERNAL PAGE NUMBER 7 |
| 43 00024 | | IOPES8 * | DS | 0F | EXTERNAL STORAGE ADDRESS 8 (SEE NOTE 1) |
| 43 00024 | | IOPSS8 * | DS | H | SYSTEM SYMBOLIC DEVICE ADDRESS 8 |
| 43 00026 | | IOPEP8 | DS | H | EXTERNAL PAGE NUMBER 8 |

```
* NOTE 1- IF THE COUNT OF THE NUMBER OF EXTERNAL
* STORAGE LIST ENTRIES
*            IS NOT EQUAL TO OR GREATER THAN THIS
*            ENTRY NUMBER, THEN THIS
*            WORD DOES NOT EXIST IN THE ACTUAL TABLE.
```

# I/O Request Control Block (CHAIOR)

The I/O Request Control Block (IORCB) provides one of the basic communication links between virtual storage and the resident supervisor.

The IORCB consists of an 80 byte, fixed-length area followed by three variable subareas: data buffer, page list, and channel command word list. The three subareas jointly may not exceed 1840 bytes of storage, and this space must be used in increments of doubleword size. Only the page list has a maximum size (8 doublewords).

The IORCB resides in both virtual storage and core storage, aligned on doubleword boundaries.

## CHAIOR Storage map

| DEC | HEX | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 0 | IORSV | | IORCSB | IORF3 | IORDA0 | IORDA1 | IORDA2 | IORDA3 |
| 8 | 8 | IORLN | IORGL | IORPO | IORKY | IORSF | IORCL | IORCS | IORST |
| 16 | 10 | IORBL | IORBS | IORAP | | IORDA4 | IORDA5 | IORSD | |
| 24 | 18 | IORDE | | | | IORDC | | | |
| 32 | 20 | IORPV | | | | IORPR | | | |
| 40 | 28 | IORDT | IORDA6 | IORBB | | IORCN | IORDR | | |
| 48 | 30 | IORSB0 | IORSB1 | IORSB2 | IORSB3 | IORSB4 | IORSB5 | IORSB6 | IORSB7 |
| 56 | 38 | IORSN | IORSU | | IORSL | IORHF | IORBY5 | IORBY6 | IORDBA |
| 64 | 40 | IORDA7 | IORDA8 | IORDA9 | IORHE | IORF1 | IORF2 | IORF4 | IORF5 |
| 72 | 48 | IORSA | IORSE | | | IORSG | IORF6 | IORSH | |
| 80 | 50 | RESERVED | | | | | | | |
| 4096 | 1000 | IORRHO | IORRHE | | | IORRHF | RESERVED | IORRHC | |
| 4104 | 1008 | IORRZO | IORRZE | | | IORRZF | RESERVED | IORRZC | |
| 4112 | 1010 | UNNAMED | | | IORHAF | IORHCC | | IORHHH | |
| 4120 | 1018 | IORDCY | | IORDHD | | IORDRC | UNNAMED | | |
| 4128 | 1020 | IORACY | | IORAHD | | IORARC | UNNAMED | | |
| 4136 | 1028 | IORSER | IORSEM | IORSEB | | IORSEC | | IORSEH | |
| 4144 | 1030 | IORSCY | | IORSRW | | IORSCR | IORSKL | IORDL | |
| 4152 | 1038 | IORRJNCC | IORRJNGC | IORRJNTC | IORRJNUE | IORRJNIL | IORRJNBY | IORRJNAT | IORRJNSM |
| 4160 | 1040 | IORJESAV | | | | | | | |
| 4224 | 1080 | IORJEFCE | | | | | | | |

```
        DEC      HEX
                        |                |                                      |
                        |_____|_____|
                      = |                             IORTBR                    |=
                        |                |                                       |
        4368    1110|                |                                       |
                        |_____|_____|
                      = |                             RESERVED                   |=
                        |                                                        |
        8192    2000|_____|
                        |                             IORPL                      |
                        |_____|
```

ORG  IORDT

```
         40      28|                 IORVB                    |
                        |_____|
```

ORG  IORDB

```
       4096    1000|                  IORJESNS                  |IORJEFLG|UNNAMED |
                        |_____|_____|_____|
       4104    1008|                  IORJECSW                            |
                        |_____|
```

ORG  IORJECSW

```
       4104    1008|IORJECKY|      IORJECAD       |    IORJECST     |    IORJECCT    |
                        |_____|_____|_____|_____|
       4112    1010|IORJECC |IORJEIC |IORJECD |IORJELD |IORJETO |IORJEIR |IORJEBO |IORJEDC |
                        |_____|_____|_____|_____|_____|_____|_____|_____|
       4120    1018|IORJEOV |IORJEIL |IORJENEC|IORJENLD|IORJENTO|IORJENBO|IORJENDC|IORJENOV|
                        |_____|_____|_____|_____|_____|_____|_____|_____|
       4128    1020|IORJENCR|IORJENCC|IORJENGC|IORJENTC|IORJENUE|IORJENIL|IORJENBY|IORJENAT|
                        |_____|_____|_____|_____|_____|_____|_____|_____|
       4136    1028|IORJENSM|IORRJCD |IORRJLD |IORRJTO |IORRJIR |IORRJBO |IORRJDC |IORRJOV |
                        |_____|_____|_____|_____|_____|_____|_____|_____|
       4144    1030|IORRJIL |IORRJNEC|IORRJNLD|IORRJNTO|IORRJNBO|IORRJNDC|IORRJNOV|IORRJNCR|
                        |_____|_____|_____|_____|_____|_____|_____|_____|
```

ORG  IORPL

```
       8192    2000|       IORPN        |IORPF   |UNNAMED |       IORCA            |
                        |_____|_____|_____|_____|
```

ORG  IORBEG+12288

```
       2288     8F0|                             IORCW                          |
                        |_____|
```

ORG  IORCW

```
       2288     8F0|IOROP   |IORPP   |IORFDA  |IORFDB  |IORCF   |UNNAMED |    IORCT    |
                        |_____|_____|_____|_____|_____|_____|_____|
```

Fields in CHAIOR -- by displacement

**Group 1**

| DEC | HEX | FIELD | |
|---|---|---|---|
| 0000 | 0000 | IORSV | |
| 0000 | 0000 | IORBEG | |
| 0002 | 0002 | IORCSB | |
| 0003 | 0003 | IORSWA | (EQU) |
| 0003 | 0003 | IOREOT | (EQU) |
| 0003 | 0003 | IORGET | (EQU) |
| 0003 | 0003 | IORRJ | (EQU) |
| 0003 | 0003 | IOROB | (EQU) |
| 0003 | 0003 | IORCE | (EQU) |
| 0003 | 0003 | IORF3 | |
| 0004 | 0004 | IORPR0 | (EQU) |
| 0004 | 0004 | IORPT0 | (EQU) |
| 0004 | 0004 | IORCR0 | (EQU) |
| 0004 | 0004 | IORMT0 | (EQU) |
| 0004 | 0004 | IORDA0 | |
| 0005 | 0005 | IORPR1 | (EQU) |
| 0005 | 0005 | IORPT1 | (EQU) |
| 0005 | 0005 | IORCR1 | (EQU) |
| 0005 | 0005 | IORMT1 | (EQU) |
| 0005 | 0005 | IORDA1 | |
| 0006 | 0006 | IORIN | (EQU) |
| 0006 | 0006 | IORMT2 | (EQU) |
| 0006 | 0006 | IORDA2 | |
| 0007 | 0007 | IORMT3 | (EQU) |
| 0007 | 0007 | IORDA3 | |
| 0008 | 0008 | IORLN | |
| 0009 | 0009 | IORGL | |
| 0010 | 000A | IORPO | |
| 0011 | 000B | IORKY | |
| 0012 | 000C | IORSF | |
| 0013 | 000D | IORCL | |
| 0014 | 000E | IORCS | |
| 0015 | 000F | IORST | |
| 0016 | 0010 | IORBL | |
| 0017 | 0011 | IORBS | |
| 0018 | 0012 | IORAP | |
| 0020 | 0014 | IORMT4 | (EQU) |
| 0020 | 0014 | IORDA4 | |
| 0021 | 0015 | IORMT5 | (EQU) |
| 0021 | 0015 | IORDA5 | |
| 0022 | 0016 | IORSD | |
| 0024 | 0018 | IORDE | |
| 0028 | 001C | IORDC | |
| 0032 | 0020 | IORPV | |
| 0036 | 0024 | IORPR | |
| 0040 | 0028 | IORVB | |
| 0040 | 0028 | IORCI | (EQU) |
| 0040 | 0028 | IORRV | (EQU) |
| 0040 | 0028 | IORCV | (EQU) |
| 0040 | 0028 | IORMD | (EQU) |
| 0040 | 0028 | IORDT | |
| 0041 | 0029 | IORDA6 | |
| 0042 | 002A | IORBB | |
| 0044 | 002C | IORSO | (EQU) |
| 0044 | 002C | IORTC | (EQU) |
| 0044 | 002C | IORTO | (EQU) |
| 0044 | 002C | IORCN | |
| 0044 | 002C | IORBA | |
| 0045 | 002D | IORDR | |
| 0048 | 0030 | IORSB0 | |
| 0048 | 0030 | IORSNS | |
| 0049 | 0031 | IORSB1 | |
| 0050 | 0032 | IORSB2 | |
| 0051 | 0033 | IORSB3 | |
| 0052 | 0034 | IORSB4 | |
| 0053 | 0035 | IORSB5 | |
| 0054 | 0036 | IORSB6 | |

**Group 2**

| DEC | HEX | FIELD | |
|---|---|---|---|
| 0055 | 0037 | IORSB7 | |
| 0056 | 0038 | IORSN | |
| 0057 | 0039 | IORSU | |
| 0059 | 003B | IORSM | (EQU) |
| 0059 | 003B | IORSL | |
| 0060 | 003C | IORHF | |
| 0061 | 003D | IORDAA | (EQU) |
| 0061 | 003D | IORBY5 | |
| 0062 | 003E | IORDDA | (EQU) |
| 0062 | 003E | IORDCA | (EQU) |
| 0062 | 003E | IORBY6 | |
| 0063 | 003F | IORDBA | |
| 0064 | 0040 | IORDA7 | |
| 0065 | 0041 | IORDA8 | |
| 0066 | 0042 | IORDA9 | |
| 0067 | 0043 | IORRDN | (EQU) |
| 0067 | 0043 | IORWTR | (EQU) |
| 0067 | 0043 | IORDCDA | (EQU) |
| 0067 | 0043 | IORCLE | (EQU) |
| 0067 | 0043 | IORAPE | (EQU) |
| 0067 | 0043 | IORMDS | (EQU) |
| 0067 | 0043 | IOROPSK | (EQU) |
| 0067 | 0043 | IOROPP | (EQU) |
| 0067 | 0043 | IORHE | |
| 0068 | 0044 | IORUE | (EQU) |
| 0068 | 0044 | IORAT | (EQU) |
| 0068 | 0044 | IORUR | (EQU) |
| 0068 | 0044 | IORHI | (EQU) |
| 0068 | 0044 | IORER | (EQU) |
| 0068 | 0044 | IORSC | (EQU) |
| 0068 | 0044 | IORRS | (EQU) |
| 0068 | 0044 | IORIS | (EQU) |
| 0068 | 0044 | IORSP | (EQU) |
| 0068 | 0044 | IORF1 | |
| 0068 | 0044 | IORFL | |
| 0069 | 0045 | IORCR | (EQU) |
| 0069 | 0045 | IORSB | (EQU) |
| 0069 | 0045 | IORRB | (EQU) |
| 0069 | 0045 | IORBH | (EQU) |
| 0069 | 0045 | IORIB | |
| 0069 | 0045 | IORWE | |
| 0069 | 0045 | IORNP | |
| 0069 | 0045 | IORES | |
| 0069 | 0045 | IORF2 | |
| 0070 | 0046 | IORAM | (EQU) |
| 0070 | 0046 | IORQI | (EQU) |
| 0070 | 0046 | IORIOC | (EQU) |
| 0070 | 0046 | IORIC | (EQU) |
| 0070 | 0046 | IORDS | (EQU) |
| 0070 | 0046 | IORRD | (EQU) |
| 0070 | 0046 | IORVT | (EQU) |
| 0070 | 0046 | IORIP | (EQU) |
| 0070 | 0046 | IORF4 | |
| 0071 | 0047 | IORAL | (EQU) |
| 0071 | 0047 | IORVA | (EQU) |
| 0071 | 0047 | IORBP | (EQU) |
| 0071 | 0047 | IORFC | |
| 0071 | 0047 | IORFP | |
| 0071 | 0047 | IORRM | |
| 0071 | 0047 | IOREC | |
| 0071 | 0047 | IORGI | |
| 0071 | 0047 | IORF5 | |
| 0072 | 0048 | IORSA | |
| 0072 | 0048 | IORSNC | |
| 0073 | 0049 | IORSE | |
| 0076 | 004C | IORSG | |
| 0077 | 004D | IORMOD | (EQU) |

**Group 3**

| DEC | HEX | FIELD | |
|---|---|---|---|
| 0077 | 004D | IORP | (EQU) |
| 0077 | 004D | IORDTSI | (EQU) |
| 0077 | 004D | IORMC | (EQU) |
| 0077 | 004D | IORPG | (EQU) |
| 0077 | 004D | IORF6 | |
| 0078 | 004E | IORSH | |
| 0080 | 0050 | IORFE | |
| 2288 | 3000 | IOROP | |
| 2288 | 3000 | IORCW | |
| 2289 | 3001 | IORPP | |
| 2290 | 3002 | IORFDA | |
| 2290 | 3002 | IORFD | |
| 2290 | 3002 | IORF0 | (EQU) |
| 2291 | 3003 | IORFDB | |
| 2292 | 3004 | IORCF | |
| 2292 | 3004 | IORPC | (EQU) |
| 2292 | 3004 | IORSK | (EQU) |
| 2292 | 3004 | IORSI | (EQU) |
| 2292 | 3004 | IORCO | (EQU) |
| 2292 | 3004 | IORCD | (EQU) |
| 2294 | 3006 | IORCT | |
| 4096 | 1000 | IORJESNS | |
| 4096 | 1000 | IORRHO | |
| 4096 | 1000 | IORRHA | |
| 4096 | 1000 | IORHA | (EQU) |
| 4096 | 1000 | IORDB | |
| 4097 | 1001 | IORRHE | |
| 4100 | 1004 | IORRHF | |
| 4102 | 1006 | IORJEFLG | |
| 4102 | 1006 | IORTAB | (EQU) |
| 4102 | 1006 | IORJEAN | (EQU) |
| 4102 | 1006 | IORJEDB | (EQU) |
| 4102 | 1006 | IORJEOT | (EQU) |
| 4102 | 1006 | IORJEOC | (EQU) |
| 4102 | 1006 | IORJEWE | (EQU) |
| 4102 | 1006 | IORJESN | (EQU) |
| 4102 | 1006 | IORRHC | |
| 4104 | 1008 | IORJECKY | |
| 4104 | 1008 | IORJECSW | |
| 4104 | 1008 | IORRZO | |
| 4104 | 1008 | IORRZA | |
| 4105 | 1009 | IORJECAD | |
| 4105 | 1009 | IORRZE | |
| 4108 | 100C | IORJECST | |
| 4108 | 100C | IORRZF | |
| 4110 | 100E | IORJECCT | |
| 4110 | 100E | IORRZC | |
| 4112 | 1010 | IORJECC | |
| 4112 | 1010 | IORJECT | (EQU) |
| 4113 | 1011 | IORJEIC | |
| 4114 | 1012 | IORJECD | |
| 4115 | 1013 | IORJELD | |
| 4115 | 1013 | IORHAF | |
| 4116 | 1014 | IORJETO | |
| 4116 | 1014 | IORHCC | |
| 4117 | 1015 | IORJEIR | |
| 4118 | 1016 | IORJEBO | |
| 4118 | 1016 | IORHHH | |
| 4119 | 1017 | IORJEDC | |
| 4120 | 1018 | IORJEOV | |
| 4120 | 1018 | IORDCY | |
| 4120 | 1018 | IORDTA | |
| 4121 | 1019 | IORJEIL | |
| 4122 | 101A | IORJENEC | |
| 4122 | 101A | IORDHD | |
| 4123 | 101B | IORJENLD | |
| 4124 | 101C | IORJENTO | |

| DEC | HEX | FIELD | | | DEC | HEX | FIELD | | | DEC | HEX | FIELD | |
|-----|-----|-------|---|---|-----|-----|-------|---|---|-----|-----|-------|---|
| 4124 | 101C | IORDRC | | | 4137 | 1029 | IORSEM | | | 4150 | 1036 | IORRJNOV | |
| 4125 | 101D | IORJENBO | | | 4138 | 102A | IORRJLD | | | 4150 | 1036 | IORDL | |
| 4126 | 101E | IORJENDC | | | 4138 | 102A | IORSEB | | | 4151 | 1037 | IORRJNCR | |
| 4127 | 101F | IORJENOV | | | 4139 | 102B | IORRJTO | | | 4152 | 1038 | IORRJNCC | |
| 4128 | 1020 | IORJENCR | | | 4140 | 102C | IORRJIR | | | 4152 | 1038 | IORBDB | |
| 4128 | 1020 | IORACY | | | 4140 | 102C | IORSEC | | | 4153 | 1039 | IORRJNGC | |
| 4128 | 1020 | IORATA | | | 4141 | 102D | IORRJBO | | | 4154 | 103A | IORRJNTC | |
| 4129 | 1021 | IORJENCC | | | 4142 | 102E | IORRJDC | | | 4155 | 103B | IORRJNUE | |
| 4130 | 1022 | IORJENGC | | | 4142 | 102E | IORSEH | | | 4156 | 103C | IORRJNIL | |
| 4130 | 1022 | IORAHD | | | 4143 | 102F | IORRJOV | | | 4157 | 103D | IORRJNBY | |
| 4131 | 1023 | IORJENTC | | | 4144 | 1030 | IORRJIL | | | 4158 | 103E | IORRJNAT | |
| 4132 | 1024 | IORJENUE | | | 4144 | 1030 | IORSCY | | | 4159 | 103F | IORRJNSM | |
| 4132 | 1024 | IORARC | | | 4144 | 1030 | IORSCH | | | 4160 | 1040 | IORJESAV | |
| 4133 | 1025 | IORJENIL | | | 4145 | 1031 | IORRJNEC | | | 4160 | 1040 | IORRJND | (EQU) |
| 4134 | 1026 | IORJENBY | | | 4145 | 1031 | IORRJNCT | (EQU) | | 4224 | 1080 | IORJEFCE | |
| 4135 | 1027 | IORJENAT | | | 4146 | 1032 | IORRJNLD | | | 4228 | 1084 | IORTBR | |
| 4136 | 1028 | IORJENSM | | | 4146 | 1032 | IORSRW | | | 8192 | 2000 | IORPN | |
| 4136 | 1028 | IORSER | | | 4147 | 1033 | IORRJNTO | | | 8192 | 2000 | IORPL | |
| 4136 | 1028 | IORSEK | | | 4148 | 1034 | IORRJNBO | | | 8195 | 2003 | IORPF | |
| 4137 | 1029 | IORRJCD | | | 4148 | 1034 | IORSCR | | | 8195 | 2003 | IORPS | (EQU) |
| 4137 | 1029 | IORRJCT | (EQU) | | 4149 | 1035 | IORRJNDC | | | 8195 | 2003 | IORAG | (EQU) |
| 4137 | 1029 | IORJEND | (EQU) | | 4149 | 1035 | IORSKL | | | 8197 | 2005 | IORCA | |

## Alphabetical list of fields in CHAIOR

| FIELD | DEC | HEX | | FIELD | DEC | HEX | | FIELD | DEC | HEX | |
|-------|-----|-----|---|-------|-----|-----|---|-------|-----|-----|---|
| IORACY | 4128 | 1020 | | IORDA5 | 0021 | 0015 | | IORHAF | 4115 | 1013 | |
| IORAG | 8195 | 2003 | (EQU) | IORDA6 | 0041 | 0029 | | IORHCC | 4116 | 1014 | |
| IORAHD | 4130 | 1022 | | IORDA7 | 0064 | 0040 | | IORHE | 0067 | 0043 | |
| IORAL | 0071 | 0047 | (EQU) | IORDA8 | 0065 | 0041 | | IORHF | 0060 | 003C | |
| IORAM | 0070 | 0046 | (EQU) | IORDA9 | 0066 | 0042 | | IORHHH | 4118 | 1016 | |
| IORAP | 0018 | 0012 | | IORDB | 4096 | 1000 | | IORHI | 0068 | 0044 | (EQU) |
| IORAPE | 0067 | 0043 | (EQU) | IORDBA | 0063 | 003F | | IORIB | 0069 | 0045 | (EQU) |
| IORARC | 4132 | 1024 | | IORDC | 0028 | 001C | | IORIC | 0070 | 0046 | (EQU) |
| IORAT | 0068 | 0044 | (EQU) | IORDCA | 0062 | 003E | (EQU) | IORIN | 0006 | 0006 | (EQU) |
| IORATA | 4128 | 1020 | | IORDCDA | 0067 | 0043 | (EQU) | IORIOC | 0070 | 0046 | (EQU) |
| IORBA | 0044 | 002C | | IORDCY | 4120 | 1018 | | IORIP | 0070 | 0046 | (EQU) |
| IORBB | 0042 | 002A | | IORDDA | 0062 | 003E | (EQU) | IORIS | 0068 | 0044 | (EQU) |
| IORBDB | 4152 | 1038 | | IORDE | 0024 | 0018 | | IORJEAN | 4102 | 1006 | (EQU) |
| IORBEG | 0000 | 0000 | | IORDHD | 4122 | 101A | | IORJEBO | 4118 | 1016 | |
| IORBH | 0069 | 0045 | (EQU) | IORDL | 4150 | 1036 | | IORJECAD | 4105 | 1009 | |
| IORBL | 0016 | 0010 | | IORDR | 0045 | 002D | | IORJECC | 4112 | 1010 | |
| IORBP | 0071 | 0047 | (EQU) | IORDRC | 4124 | 101C | | IORJECCT | 4110 | 100E | |
| IORBS | 0017 | 0011 | | IORDS | 0070 | 0046 | (EQU) | IORJECD | 4114 | 1012 | |
| IORBY5 | 0061 | 003D | | IORDT | 0040 | 0028 | | IORJECKY | 4104 | 1008 | |
| IORBY6 | 0062 | 003E | | IORDTA | 4120 | 1018 | | IORJECST | 4108 | 100C | |
| IORCA | 8197 | 2005 | | IORDTSI | 0077 | 004D | (EQU) | IORJECSW | 4104 | 1008 | |
| IORCD | 2292 | 3004 | (EQU) | IOREC | 0071 | 0047 | (EQU) | IORJECT | 4112 | 1010 | (EQU) |
| IORCE | 0003 | 0003 | (EQU) | IOREOT | 0003 | 0003 | (EQU) | IORJEDB | 4102 | 1006 | (EQU) |
| IORCF | 2292 | 3004 | | IORER | 0068 | 0044 | (EQU) | IORJEDC | 4119 | 1017 | |
| IORCI | 0040 | 0028 | (EQU) | IORES | 0069 | 0045 | (EQU) | IORJEFCE | 4224 | 1080 | |
| IORCL | 0013 | 000D | | IORFC | 0071 | 0047 | (EQU) | IORJEFLG | 4102 | 1006 | |
| IORCLE | 0067 | 0043 | (EQU) | IORFD | 2290 | 3002 | | IORJEIC | 4113 | 1011 | |
| IORCN | 0044 | 002C | | IORFDA | 2290 | 3002 | | IORJEIL | 4121 | 1019 | |
| IORCO | 2292 | 3004 | (EQU) | IORFDB | 2291 | 3003 | | IORJEIR | 4117 | 1015 | |
| IORCR | 0069 | 0045 | (EQU) | IORFE | 0080 | 0050 | | IORJELD | 4115 | 1013 | |
| IORCR0 | 0004 | 0004 | (EQU) | IORFL | 0068 | 0044 | | IORJENAT | 4135 | 1027 | |
| IORCR1 | 0005 | 0005 | (EQU) | IORFP | 0071 | 0047 | (EQU) | IORJENBO | 4125 | 101D | |
| IORCS | 0014 | 000E | | IORF0 | 2290 | 3002 | (EQU) | IORJENBY | 4134 | 1026 | |
| IORCSB | 0002 | 0002 | | IORF1 | 0068 | 0044 | | IORJENCC | 4129 | 1021 | |
| IORCT | 2294 | 3006 | | IORF2 | 0069 | 0045 | | IORJENCR | 4128 | 1020 | |
| IORCV | 0040 | 0028 | (EQU) | IORF3 | 0003 | 0003 | | IORJEND | 4137 | 1029 | (EQU) |
| IORCW | 2288 | 3000 | | IORF4 | 0070 | 0046 | | IORJENDC | 4126 | 101E | |
| IORDAA | 0061 | 003D | (EQU) | IORF5 | 0071 | 0047 | | IORJENEC | 4122 | 101A | |
| IORDA0 | 0004 | 0004 | | IORF6 | 0077 | 004D | | IORJENGC | 4130 | 1022 | |
| IORDA1 | 0005 | 0005 | | IORGET | 0003 | 0003 | (EQU) | IORJENIL | 4133 | 1025 | |
| IORDA2 | 0006 | 0006 | | IORGI | 0071 | 0047 | (EQU) | IORJENLD | 4123 | 101B | |
| IORDA3 | 0007 | 0007 | | IORGL | 0009 | 0009 | | IORJENOV | 4127 | 101F | |
| IORDA4 | 0020 | 0014 | | IORHA | 4096 | 1000 | (EQU) | IORJENSM | 4136 | 1028 | |

| FIELD | DEC | HEX | | FIELD | DEC | HEX | | FIELD | DEC | HEX | |
|-------|-----|-----|---|-------|-----|-----|---|-------|-----|-----|---|
| IORJENTC | 4131 | 1023 | | IORRDN | 0067 | 0043 | (EQU) | IORSB3 | 0051 | 0033 | |
| IORJENTO | 4124 | 101C | | IORRHA | 4096 | 1000 | | IORSB4 | 0052 | 0034 | |
| IORJENUE | 4132 | 1024 | | IORRHC | 4102 | 1006 | | IORSB5 | 0053 | 0035 | |
| IORJEOC | 4102 | 1006 | (EQU) | IORRHE | 4097 | 1001 | | IORSB6 | 0054 | 0036 | |
| IORJEOT | 4102 | 1006 | (EQU) | IORRHF | 4100 | 1004 | | IORSB7 | 0055 | 0037 | |
| IORJEOV | 4120 | 1018 | | IORRHO | 4096 | 1000 | | IORSC | 0068 | 0044 | (EQU) |
| IORJESAV | 4160 | 1040 | | IORRJ | 0003 | 0003 | (EQU) | IORSCH | 4144 | 1030 | |
| IORJESN | 4102 | 1006 | (EQU) | IORRJBO | 4141 | 102D | | IORSCR | 4148 | 1034 | |
| IORJESNS | 4096 | 1000 | | IORRJCD | 4137 | 1029 | | IORSCY | 4144 | 1030 | |
| IORJETO | 4116 | 1014 | | IORRJCT | 4137 | 1029 | (EQU) | IORSD | 0022 | 0016 | |
| IORJEWE | 4102 | 1006 | (EQU) | IORRJDC | 4142 | 102E | | IORSE | 0073 | 0049 | |
| IORKY | 0011 | 000B | | IORRJIL | 4144 | 1030 | | IORSEB | 4138 | 102A | |
| IORLN | 0008 | 0008 | | IORRJIR | 4140 | 102C | | IORSEC | 4140 | 102C | |
| IORMC | 0077 | 004D | (EQU) | IORRJLD | 4138 | 102A | | IORSEH | 4142 | 102E | |
| IORMD | 0040 | 0028 | (EQU) | IORRJNAT | 4158 | 103E | | IORSEK | 4136 | 1028 | |
| IORMDS | 0067 | 0043 | (EQU) | IORRJNBO | 4148 | 1034 | | IORSEM | 4137 | 1029 | |
| IORMOD | 0077 | 004D | (EQU) | IORRJNBY | 4157 | 103D | | IORSER | 4136 | 1028 | |
| IORMT0 | 0004 | 0004 | (EQU) | IORRJNCC | 4152 | 1038 | | IORSF | 0012 | 000C | |
| IORMT1 | 0005 | 0005 | (EQU) | IORRJNCR | 4151 | 1037 | | IORSG | 0076 | 004C | |
| IORMT2 | 0006 | 0006 | (EQU) | IORRJNCT | 4145 | 1031 | (EQU) | IORSH | 0078 | 004E | |
| IORMT3 | 0007 | 0007 | (EQU) | IORRJND | 4160 | 1040 | (EQU) | IORSI | 2292 | 3004 | (EQU) |
| IORMT4 | 0020 | 0014 | (EQU) | IORRJNDC | 4149 | 1035 | | IORSK | 2292 | 3004 | (EQU) |
| IORMT5 | 0021 | 0015 | (EQU) | IORRJNEC | 4145 | 1031 | | IORSKL | 4149 | 1035 | |
| IORNP | 0069 | 0045 | (EQU) | IORRJNGC | 4153 | 1039 | | IORSL | 0059 | 003B | |
| IOROB | 0003 | 0003 | (EQU) | IORRJNIL | 4156 | 103C | | IORSM | 0059 | 003B | (EQU) |
| IOROP | 2288 | 3000 | | IORRJNLD | 4146 | 1032 | | IORSN | 0056 | 0038 | |
| IOROPP | 0067 | 0043 | (EQU) | IORRJNOV | 4150 | 1036 | | IORSNC | 0072 | 0048 | |
| IOROPSK | 0067 | 0043 | (EQU) | IORRJNSM | 4159 | 103F | | IORSNS | 0048 | 0030 | |
| IORP | 0077 | 004D | (EQU) | IORRJNTC | 4154 | 103A | | IORSO | 0044 | 002C | (EQU) |
| IORPC | 2292 | 3004 | (EQU) | IORRJNTO | 4147 | 1033 | | IORSP | 0068 | 0044 | (EQU) |
| IORPF | 8195 | 2003 | | IORRJNUE | 4155 | 103B | | IORSRW | 4146 | 1032 | |
| IORPG | 0077 | 004D | (EQU) | IORRJOV | 4143 | 102F | | IORST | 0015 | 000F | |
| IORPL | 8192 | 2000 | | IORRJTO | 4139 | 102B | | IORSU | 0057 | 0039 | |
| IORPN | 8192 | 2000 | | IORRM | 0071 | 0047 | (EQU) | IORSV | 0000 | 0000 | |
| IORPO | 0010 | 000A | | IORRS | 0068 | 0044 | (EQU) | IORSWA | 0003 | 0003 | (EQU) |
| IORPP | 2289 | 3001 | | IORRV | 0040 | 0028 | (EQU) | IORTAB | 4102 | 1006 | (EQU) |
| IORPR | 0036 | 0024 | | IORRZA | 4104 | 1008 | | IORTBR | 4228 | 1084 | |
| IORPR0 | 0004 | 0004 | (EQU) | IORRZC | 4110 | 100E | | IORTC | 0044 | 002C | (EQU) |
| IORPR1 | 0005 | 0005 | (EQU) | IORRZE | 4105 | 1009 | | IORTO | 0044 | 002C | (EQU) |
| IORPS | 8195 | 2003 | (EQU) | IORRZF | 4108 | 100C | | IORUE | 0068 | 0044 | (EQU) |
| IORPT0 | 0004 | 0004 | (EQU) | IORRZO | 4104 | 1008 | | IORUR | 0068 | 0044 | (EQU) |
| IORPT1 | 0005 | 0005 | (EQU) | IORSA | 0072 | 0048 | | IORVA | 0071 | 0047 | (EQU) |
| IORPV | 0032 | 0020 | | IORSB | 0069 | 0045 | (EQU) | IORVB | 0040 | 0028 | |
| IORQI | 0070 | 0046 | (EQU) | IORSB0 | 0048 | 0030 | | IORVT | 0070 | 0046 | (EQU) |
| IORRB | 0069 | 0045 | (EQU) | IORSB1 | 0049 | 0031 | | IORWE | 0069 | 0045 | (EQU) |
| IORRD | 0070 | 0046 | (EQU) | IORSB2 | 0050 | 0032 | | IORWTR | 0067 | 0043 | (EQU) |

## Assembler listing of CHAIOR

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|----------|-------------|--------|------|------|---------|
| | 44 00000 | CHAIOR | DSECT | | INPUT/OUTPUT REQUEST CONTROL BLOCK |
| | | * | | | |
| 44 00000 | | IORBEG | DS | 0D | ALIGN ON DOUBLE WORD BOUNDARY |
| | | * | | | |
| 44 00000 | | IORSV | DS | H | SVC FOR IOCAL |
| 44 00002 | | IORCSB | DS | XL1 | CSW CHANNEL STATUS BYTE |
| 44 00003 | | IORF3 | DS | XL1 | IORCB FLAG BYTE 3 |
| | 44 00003 | IORCE | EQU | IORF3 | PENDING 'COMPLETE WITH ERRORS' |
| | | * | | | |
| | 00000080 | IORCEM | EQU | X'80' | IORCE FLAG |
| | 44 00003 | IOROB | EQU | IORF3 | IORCB ISSUED BY OBTAIN OR RETAIN |
| | | * | | | |
| | 00000040 | IOROBM | EQU | X'40' | IOROB FLAG |
| | 44 00003 | IORRJ | EQU | IORF3 | REMOTE JOB ENTRY FLAG |
| | 00000020 | IORRJM | EQU | X'20' | REMOTE JOB ENTRY MASK |
| | 44 00003 | IORGET | EQU | IORF3 | ON=GET, OFF=PUT FLAG |
| | 00000010 | IORGETM | EQU | X'10' | ON=GET, OFF=PUT MASK |
| | 44 00003 | IOREOT | EQU | IORF3 | EOT WRITTEN BY THIS IORCB |

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|---|---|---|---|---|---|
| | 00000008 | IOREOTM | EQU | X'08' | IOREOT MASK |
| | 44 00003 | IORSWA | EQU | IORF3 | SWITCH ACKNOWLEDGEMENTS IN |
| | | * | | | THIS IORCB FLG |
| | 00000004 | IORSWAM | EQU | X'04' | SWITCH ACKNOWLEDGEMENTS IN |
| | | * | | | THIS IORCB MSK |
| 44 00004 | | IORDA0 | DS | XL1 | D/A SEEK CHECK RETRY CNTR |
| | 44 00004 | IORMT0 | EQU | IORDA0 | MAG TAPE DATA CHECK WRITE |
| | | * | | | RETRY CNTR |
| | 44 00004 | IORCR0 | EQU | IORDA0 | CARD RDR/PCH CHNL DATA CHK |
| | | * | | | RETRY CNT |
| | 44 00004 | IORPT0 | EQU | IORDA0 | PAPER TAPE EQUIP CHECK |
| | | * | | | RETRY CNTR |
| | 44 00004 | IORPR0 | EQU | IORDA0 | PRINTER CODE GEN STOR |
| | | * | | | PARITY RETRY |
| 44 00005 | | IORDA1 | DS | XL1 | D/A OVERRUN RETRY CNTR |
| | 44 00005 | IORMT1 | EQU | IORDA1 | MAG TAPE OVERRUN RETRY CNTR |
| | 44 00005 | IORCR1 | EQU | IORDA1 | CARD RDR/PCH BUS-OUT CHECK |
| | | * | | | RETRY CNT |
| | 44 00005 | IORPT1 | EQU | IORDA1 | PAPER TAPE BUS OUT CHECK |
| | | * | | | RETRY CNTR |
| | 44 00005 | IORPR1 | EQU | IORDA1 | PRINTER BUS OUT CHECK CNTR |
| 44 00006 | | IORDA2 | DS | XL1 | D/A NO RECORD FOUND RETRY |
| | | * | | | CNTR |
| | 44 00006 | IORMT2 | EQU | IORDA2 | MAG TAPE DATA CHK CONTROL |
| | | * | | | RETRY CNTR |
| | 44 00006 | IORIN | EQU | IORDA2 | UNIT RECORD INITIAL |
| | | * | | | SELECTION RETRY |
| 44 00007 | | IORDA3 | DS | XL1 | D/A MISSING ADDRESS MARKERS |
| | | * | | | RETRY |
| | 44 00007 | IORMT3 | EQU | IORDA3 | MAG TAPE CHAINING CHECK |
| | | * | | | RETRY CNTR |
| 44 00008 | | IORLN | DS | XL1 | LENGTH OF IORCB (MODULO 64) |
| 44 00009 | | IORGL | DS | XL1 | LENGTH OF PAGE LIST (MODULO |
| | | * | | | 8) |
| 44 0000A | | IORPO | DS | XL1 | RELATIVE ORIGIN OF PAGE |
| | | * | | | LIST (MODULO 8) |
| 44 0000B | | IORKY | DS | XL1 | PROTECTION KEY |
| | 0000000F | IORKYM | EQU | X'0F' | PROTECTION KEY MASK |
| | 00000001 | IOREQ1 | EQU | X'01' | CHANNEL PROTECT KEY - 1 |
| | 00000002 | IOREQ2 | EQU | X'02' | 2 |
| | 00000004 | IOREQ4 | EQU | X'04' | 4 |
| 44 0000C | | IORSF | DS | XL1 | START INPUT/OUTPUT FAILURE |
| | | * | | | COUNT |
| 44 0000D | | IORCL | DS | XL1 | LENGTH OF CCW LIST (MODULO |
| | | * | | | 8) |
| 44 0000E | | IORCS | DS | XL1 | RELATIVE ORIGIN OF CCW LIST |
| | | * | | | (MODULO 8) |
| 44 0000F | | IORST | DS | XL1 | RELATIVE ORIGIN OF START |
| | | * | | | CCW |
| 44 00010 | | IORBL | DS | XL1 | LENGTH OF DATA BUFFER |
| | | * | | | (MODULO 8) |
| 44 00011 | | IORBS | DS | XL1 | RELATIVE ORIGIN OF DATA |
| | | * | | | BUFFER (MODULO 8) |
| 44 00012 | | IORAP | DS | H | ACTUAL PATH |
| 44 00014 | | IORDA4 | DS | XL1 | D/A CHAINING CHK RETRY CNTR |
| | 44 00014 | IORMT4 | EQU | IORDA4 | MAG TAPE DATA CHK RE-READ |
| | | * | | | RETRY CNTR |
| 44 00015 | | IORDA5 | DS | XL1 | D/A DATA CHK RETRY CNTR |
| | 44 00015 | IORMT5 | EQU | IORDA5 | MAG TAPE BUS-OUT CHECK |
| | | * | | | RETRY CNTR |
| 44 00016 | | IORSD | DS | H | SYSTEM SYMBOLIC DEVICE |
| | | * | | | ADDRESS |
| 44 00018 | | IORDE | DS | F | DATA EXTENT BLOCK POINTER |
| 44 0001C | | IORDC | DS | F | DATA EVENT CONTROL BLOCK |
| | | * | | | POINTER |
| 44 00020 | | IORPV | DS | F | VCON POINTER TO POSTING |
| | | * | | | ROUTINE |
| 44 00024 | | IORPR | DS | F | RCON POINTER TO POSTING |

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|---|---|---|---|---|---|
| | | * | | | ROUTINE |
| 44 00028 | | IORDT | DS | XL1 | DEVICE TYPE AND CODES |
| | 000000F0 | IORDTM | EQU | X'F0' | DEVICE TYPE MASK |
| | 00000010 | IORDRM | EQU | X'10' | PRINTER |
| | 00000020 | IORDPM | EQU | X'20' | PAPER TAPE |
| | 00000030 | IORDCM | EQU | X'30' | CARD READER/PUNCH |
| | 00000040 | IORDMM | EQU | X'40' | MAGNETIC TAPE |
| | 00000050 | IORDAM | EQU | X'50' | 2321 DIR ACC DEVICE |
| | 00000060 | IOR02M | EQU | X'60' | 2302 |
| | 00000070 | IOR11M | EQU | X'70' | 2311 |
| | 00000080 | IOR14 | EQU | X'80' | 2314 |
| 44 00028 | | IORMD | EQU | IORDT | MOVE DATA TO USER'S VIRTUAL |
| | | * | | | MEMORY |
| | 00000008 | IORMDM | EQU | X'08' | MOVE DATA TO USER'S VIRTUAL |
| | | * | | | MEMORY MASK |
| 44 00028 | | IORCV | EQU | IORDT | CODE CONVERSION REQUIRED |
| | 00000004 | IORCVM | EQU | X'04' | CODE CONVERSION REQUIRED |
| | | * | | | MASK |
| 44 00028 | | IORRV | EQU | IORDT | READ VARIABLE LENGTH DISK |
| | | * | | | RECORDS |
| | 00000002 | IORRVM | EQU | X'02' | READ VARIABLE LENGTH DISK |
| | | * | | | RECORDS MASK |
| 44 00028 | | IORCI | EQU | IORDT | CONTROL ROUTINE IORCB |
| | 00000001 | IORCIM | EQU | X'01' | CONTROL ROUTINE IORCB MASK |
| 44 00029 | | IORDA6 | DS | XL1 | D/A NO REC.FOUND + MISS |
| | | * | | | ADD MARK |
| 44 0002A | | IORBB | DS | H | LENGTH OF DATA BUFFER IN |
| | | * | | | BYTES |
| 44 00028 | | | \|ORG\| | IORDT | |
| 44 00028 | | IORVB | DS | F | POINTER TO IORCB VIRTUAL |
| | | * | | | MEMORY BUFFER |
| 44 0002C | | IORBA | DS | 0F | WORD BOUNDARY ALIGNED LABEL |
| | | * | | | FOR DATA BUFFER ADDRE |
| | | | | | SS |
| 44 0002C | | IORCN | DS | XL1 | CONDITION CODES |
| | 44 0002C | IORTO | EQU | IORCN | CONDITION CODE FOR TIO |
| | 00000030 | IORTOM | EQU | X'30' | CONDITION CODE FOR TIO MASK |
| | 44 0002C | IORTC | EQU | IORCN | CONDITION CODE FOR TCH |
| | 0000000C | IORTCM | EQU | X'0C' | CONDITION CODE FOR TCH MASK |
| | 44 0002C | IORSO | EQU | IORCN | CONDITION CODE FOR SIO OR |
| | | * | | | HIO |
| | 00000003 | IORSOM | EQU | X'03' | CONDITION CODE FOR SIO OR |
| | | * | | | HIO MASK |
| 44 0002D | | IORDR | DS | XL3 | POINTER TO DATA BUFFER |
| | | * | | | RESIDENT ADDRESS |
| 44 00030 | | IORSNS | DS | 0D | SENSE BYTES |
| | | * | | | 6,0-7 |
| 44 00030 | | IORSB0 | DS | XL1 | SENSE BYTE 0 |
| 44 00031 | | IORSB1 | DS | XL1 | SENSE BYTE 1 |
| 44 00032 | | IORSB2 | DS | XL1 | SENSE BYTE 2 |
| 44 00033 | | IORSB3 | DS | XL1 | SENSE BYTE 3 |
| 44 00034 | | IORSB4 | DS | XL1 | SENSE BYTE 4 |
| 44 00035 | | IORSB5 | DS | XL1 | SENSE BYTE 5 |
| 44 00036 | | IORSB6 | DS | XL1 | SENSE BYTE 6 |
| 44 00037 | | IORSB7 | DS | XL1 | SENSE BYTE 7 |
| 44 00038 | | IORSN | DS | XL1 | CONDITION CODES FROM SENSE |
| | 00000030 | IORSDM | EQU | X'30' | FOR TEST I/O |
| | 0000000C | IORSTM | EQU | X'0C' | FOR TEST CHANNEL |
| | 00000003 | IORSSM | EQU | X'03' | FOR START I/O |
| 44 00039 | | IORSU | DS | XL2 | SENSE STATUS FIELD |
| 44 0003B | | IORSL | DS | XL1 | SENSE FAILURE FLAGS |
| | 44 0003B | IORSM | EQU | IORSL | INTERRUPTS STORED FOR OTHER |
| | | * | | | DEVICE FLAG |
| | 00000080 | IORSMM | EQU | X'80' | INTERRUPTS STORED FOR OTHER |
| | | * | | | DEVICE MASK |
| 44 0003C | | IORHF | DS | XL1 | HIO RETRY COUNT |
| 44 0003D | | IORBY5 | DS | XL1 | DIRECT ACCESS COUNTERS |
| | 44 0003D | IORDAA | EQU | IORBY5 | APPENDED'SEEK'RETRY COUNTER |

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|---|---|---|---|---|---|
| | 0000000F | IORDMA | EQU | X'0F' | IORDAA MASK |
| 44 0003E | | IORBY6 | DS | XL1 | DIRECT ACCESS COUNTERS |
| | 44 0003E | IORDCA | EQU | IORBY6 | REISSUE ORIG'SEEK'RETRY CTR |
| | 000000C0 | IORXC0 | EQU | X'C0' | IORDCA MASK |
| | 44 0003E | IORDDA | EQU | IORBY6 | 32 RETRIES CTR (2321) |
| | 0000003F | IORX3F | EQU | X'3F' | IORDDA MASK |
| 44 0003F | | IORDBA | DS | XL1 | 2321 'DATA CHK' MAX NO |
| | | * | | | RETRY CTR |
| | 000000FF | IORXFF | EQU | X'FF' | IORDBA MASK AND CTR EQU 255 |
| | | * | | | (BITS 0-7) |
| 44 00040 | | IORDA7 | DS | XL1 | D/A BUS-OUT CHECK RETRY |
| | | * | | | CNTR |
| 44 00041 | | IORDA8 | DS | XL1 | D/A CHANNEL DATA CHK RETRY |
| | | * | | | CNTR |
| 44 00042 | | IORDA9 | DS | XL1 | D/A HOME ADDRESS RETRY |
| | | * | | | COUNTER |
| 44 00043 | | IORHE | DS | XL1 | ALTERNATE PATH RETRY |
| | | * | | | COUNTER |
| | 00000080 | IORINBD | EQU | X'80' | INBOARD FAILURE MASK |
| | 00000040 | IOROUTBD | EQU | X'40' | OUTBOARD FAILURE MASK |
| | 00000007 | IORAPCNT | EQU | X'07' | ALTERNATE PATH RETRY |
| | | * | | | COUNTER MASK |
| | 44 00043 | IOROPP | EQU | IORHE | TAPE-READ OPPOSITE |
| | | * | | | N217.4 |
| | 00000020 | IOROPPM | EQU | X'20' | N217.4 |
| | 44 00043 | IOROPSK | EQU | IORHE | TAPE-READ OPPOSITE WITH |
| | | * | | | SKIP  N217.4 |
| | 00000010 | IOROPSKM | EQU | X'10' | N217.4 |
| | 44 00043 | IORMDS | EQU | IORHE | TAPE-MODE SET |
| | | * | | | N217.4 |
| | 00000008 | IORMDSM | EQU | X'08' | N217.4 |
| | 44 00043 | IORAPE | EQU | IORHE | TAPE-CCW APPENDAGE |
| | | * | | | N217.4 |
| | 00000004 | IORAPEM | EQU | X'04' | N217.4 |
| | 44 00043 | IORCLE | EQU | IORHE | TAPE-CLEANER ACTION |
| | | * | | | N217.4 |
| | 00000002 | IORCLEM | EQU | X'02' | N217.4 |
| | 44 00043 | IORDCDA | EQU | IORHE | D/A DATA CHECK FLAG |
| | 00000010 | IORDCDAM | EQU | X'10' | D/A DATA CHECK MASK |
| | 44 00043 | IORWTR | EQU | IORDCDA | WRITE AFTER FAILING READ |
| | | * | | | FLAG |
| | 00000020 | IORWTRM | EQU | X'20' | WRITE AFTER FAILING READ |
| | | * | | | MASK |
| | 44 00043 | IORRDN | EQU | IORDCDA | READ WITH NO TRANSMIT FLAG |
| | 00000008 | IORRDNM | EQU | X'08' | READ WITH NO TRANSMIT MASK |
| 44 00044 | | IORFL | DS | 0F | IORCB FLAGS |
| 44 00044 | | IORF1 | DS | XL1 | IORCB FLAG BYTE 1 |
| | 44 00044 | IORSP | EQU | IORF1 | SPECIFIC PATH |
| | 00000080 | IORSPM | EQU | X'80' | SPECIFIC PATH MASK |
| | 44 00044 | IORIS | EQU | IORF1 | IGNORE SICK INDICATOR |
| | 00000040 | IORISM | EQU | X'40' | IGNORE SICK INDICATOR MASK |
| | 44 00044 | IORRS | EQU | IORF1 | REISSUE START INPUT/OUTPUT |
| | 00000020 | IORRSM | EQU | X'20' | REISSUE START INPUT/OUTPUT |
| | | * | | | MASK |
| | 44 00044 | IORSC | EQU | IORF1 | SOFTWARE COMMAND CHAIN |
| | 00000010 | IORSCM | EQU | X'10' | SOFTWARE COMMAND CHAIN MASK |
| | 44 00044 | IORER | EQU | IORF1 | ERROR RETRY |
| | 00000008 | IORERM | EQU | X'08' | ERROR RETRY MASK |
| | 44 00044 | IORHI | EQU | IORF1 | ISSUE HALT INPUT/OUTPUT |
| | 00000004 | IORHIM | EQU | X'04' | ISSUE HALT INPUT/OUTPUT |
| | | * | | | MASK |
| | 44 00044 | IORUR | EQU | IORF1 | ON UNIT CHECK READ R0 |
| | 00000002 | IORURM | EQU | X'02' | ON UNIT CHECK READ R0 MASK |
| | 44 00044 | IORAT | EQU | IORF1 | ALTERNATE TRACK FLAG DIR |
| | | * | | | ACCESS |
| | 00000001 | IORATM | EQU | X'01' | IORAT MASK |
| | 44 00044 | IORUE | EQU | IORF1 | UNIT EXCEPTION REQUIRED |
| | | * | | | FLAG |

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|----------|-------------|--------|------|------|---------|
|          | 00000001    | IORUEM | EQU  | X'01' | IORUE FLAG |
| 44 00045 |             | IORF2  | DS   | XL1  | IORCB FLAG BYTE 2 |
|          | 44 00045    | IORES  | EQU  | IORF2 | PCI EQUAL CHANNEL/DEVICE |
|          |             | *      |      |      | END FLAG |
|          | 00000080    | IORESM | EQU  | X'80' | PCI EQUAL CHANNEL/DEVICE |
|          |             | *      |      |      | END MASK |
|          | 44 00045    | IORNP  | EQU  | IORF2 | NO PATH EXISTS FLAG |
|          | 00000040    | IORNPM | EQU  | X'40' | NO PATH EXISTS MASK |
|          | 44 00045    | IORWE  | EQU  | IORF2 | CCW SPECIFICATION ERROR |
|          |             | *      |      |      | FLAG |
|          | 00000020    | IORWEM | EQU  | X'20' | CCW SPECIFICATION ERROR |
|          |             | *      |      |      | MASK |
|          | 44 00045    | IORIB  | EQU  | IORF2 | SIO FAILED FLAG |
|          | 00000010    | IORIBM | EQU  | X'10' | SIO FAILED MASK |
|          | 44 00045    | IORBH  | EQU  | IORF2 | HIO FAILED |
|          | 00000008    | IORBHM | EQU  | X'08' | HIO FAILED MASK |
|          | 44 00045    | IORRB  | EQU  | IORF2 | READ R0 FAILED |
|          | 00000004    | IORRBM | EQU  | X'04' | READ R0 FAILED MASK |
|          | 44 00045    | IORSB  | EQU  | IORF2 | SENSE FAILED |
|          | 00000002    | IORSBM | EQU  | X'02' | SENSE FAILED MASK |
|          | 44 00045    | IORCR  | EQU  | IORF2 | CHANNEL COMMAND WORDS ARE |
|          |             | *      |      |      | RELOCATED |
|          | 00000001    | IORCRM | EQU  | X'01' | CHANNEL COMMAND WORDS ARE |
|          |             | *      |      |      | RELOCATED MASK |
| 44 00046 |             | IORF4  | DS   | XL1  | IORCB FLAG BYTE 3 |
|          | 44 00046    | IORIP  | EQU  | IORF4 | IORCB IS INTERCEPTED |
|          | 00000080    | IORIPM | EQU  | X'80' | IORCB IS INTERCEPTED MASK |
|          | 44 00046    | IORVT  | EQU  | IORF4 | SAVE RETRY COUNT |
|          | 00000040    | IORVTM | EQU  | X'40' | SAVE RETRY COUNT MASK |
|          | 44 00046    | IORRD  | EQU  | IORF4 | RESET DEVICE |
|          | 00000020    | IORRDM | EQU  | X'20' | RESET DEVICE MASK |
|          | 44 00046    | IORDS  | EQU  | IORF4 | RESET SUPPRESS FLAG F1 FLAG |
|          | 00000010    | IORDSM | EQU  | X'10' | RESET SUPPRESS FLAG F1 MASK |
|          | 44 00046    | IORIC  | EQU  | IORF4 | INTERRUPT CODE STORED FLAG |
|          | 00000008    | IORICM | EQU  | X'08' | INTERRUPT CODE STORED MASK |
|          | 44 00046    | IORIOC | EQU  | IORF4 | IORCB CHAINING FLAG |
|          | 00000004    | IORIOM | EQU  | X'04' | IORCB CHAINING MASK |
|          | 44 00046    | IORQI  | EQU  | IORF4 | QUEUE CHANNEL INTERRUPT GQE |
|          |             | *      |      |      | FLAG |
|          | 00000002    | IORQIM | EQU  | X'02' | QUEUE CHANNEL INTERRUPT GQE |
|          |             | *      |      |      | MASK |
|          | 44 00046    | IORAM  | EQU  | IORF4 | DRUM REQUEST ACCESS METHOD |
|          |             | *      |      |      | FLAG |
|          | 00000001    | IORAMM | EQU  | X'01' | DRUM REQUEST ACCESS METHOD |
|          |             | *      |      |      | MASK |
| 44 00047 |             | IORF5  | DS   | XL1  | IORCB FLAG BYTE 5 |
|          | 44 00047    | IORGI  | EQU  | IORF5 | INCORRECT LENGTH IS AN |
|          |             | *      |      |      | ERROR FLG |
|          | 00000080    | IORGIM | EQU  | X'80' | INCORRECT LENGTH IS AN |
|          |             | *      |      |      | ERROR MSK |
|          | 44 00047    | IOREC  | EQU  | IORF5 | ERROR CHECK OCCURED |
|          | 00000040    | IORECM | EQU  | X'40' | ERROR CHECK OCCURED MASK |
|          | 44 00047    | IORRM  | EQU  | IORF5 | MULTIPLE I/O RETURN FLAG |
|          | 00000020    | IORRMM | EQU  | X'20' | MULTIPLE I/O RETURN MASK |
|          | 44 00047    | IORFP  | EQU  | IORF5 | FORCE CE/DE/PCI ON FIRST |
|          |             | *      |      |      | SCC |
|          | 00000010    | IORFPM | EQU  | X'10' | |
|          | 44 00047    | IORFC  | EQU  | IORF5 | IOS FLAG  TO INDICATE FORCE |
|          |             | *      |      |      | DE ON 1ST SCC |
|          | 00000008    | IORFCM | EQU  | X'08' | |
|          | 44 00047    | IORBP  | EQU  | IORF5 | LINE BEING PREPARED FLAG |
|          | 00000004    | IORBPM | EQU  | X'04' | LINE BEING PREPARED MASK |
|          | 44 00047    | IORVA  | EQU  | IORF5 | VSS I/O FLAG |
|          | 00000002    | IORVAM | EQU  | X'02' | VSS I/O MASK |
|          | 44 00047    | IORAL  | EQU  | IORF5 | USE ALTERNATE PATH AND |
|          |             | *      |      |      | DISABLE ACTUAL |
|          |             | *      |      |      | PATH TO DEVICE |
|          | 00000001    | IORALM | EQU  | X'01' | MASK |

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|----------|-------------|--------|------|------|---------|
| 44 00048 | | IORSNC | DS | 0D | SENSE COMMAND |
| 44 00048 | | IORSA | DS | XL1 | SENSE OP CODE |
| 44 00049 | | IORSE | DS | XL3 | SENSE ADDRESS |
| 44 0004C | | IORSG | DS | XL1 | SENSE FLAGS |
| 44 0004D | | IORF6 | DS | XL1 | IORCB FLAG BYTE 6 |
| | 44 0004D | IORPG | EQU | IORF6 | I/O OPERATION PURGED |
| | 00000080 | IORPGM | EQU | X'80' | I/O OPERATION PURGED MASK |
| | 44 0004D | IORMC | EQU | IORF6 | EXTERNAL MACH CHECK ERROR |
| | * | | | | FLAG |
| | 00000040 | IORMCM | EQU | X'40' | MACH CHECK MASK |
| | 44 0004D | IORDTSI | EQU | IORF6 | TASK DELETED FLAG |
| | * | | | | N405.1 |
| | 00000020 | IORDTSIM | EQU | X'20' | TASK DELETED MASK |
| | * | | | | N405.1 |
| | 44 0004D | IORP | EQU | IORF6 | IF ON, LAST PCI |
| | * | | | | N486 |
| | 00000010 | IORPM | EQU | X'10' | N486 |
| | 44 0004D | IORMOD | EQU | IORF6 | MODE OF BULKIO OPERATION |
| | * | | | | N486 |
| | 00000008 | IORMODM | EQU | X'08' | 0=TIMER DRIVEN; 1=INTRPT |
| | * | | | | DRIVEN    N486 |
| 44 0004E | | IORSH | DS | H | SENSE COUNT |
| 44 00050 | | IORFE | DS | 0D | END OF FIXED AREA |
| | 00000050 | IORFAS | EQU | IORFE-IORBEG | FIXED AREA SIZE |
| | 44 01000 | | |ORG| | IORBEG+4096 |
| 44 01000 | | IORDB | DS | 0D | DATA BUFFER %SEE NOTE 1< |
| | 44 01000 | IORHA | EQU | IORDB | READ aHOME ADDRESSaSTORAGE |
| 44 01000 | | IORRHA | DS | 0D | READ HA CCW |
| 44 01000 | | IORRHO | DS | XL1 | OP CODE |
| 44 01001 | | IORRHE | DS | XL3 | ADDRESS |
| 44 01004 | | IORRHF | DS | XL1 | FLAGS |
| 44 01006 | | IORRHC | DS | H | COUNT |
| 44 01008 | | IORRZA | DS | 0D | READ RECORD ZERO CCW |
| 44 01008 | | IORRZO | DS | XL1 | OP CODE |
| 44 01009 | | IORRZE | DS | XL3 | ADDRESS |
| 44 0100C | | IORRZF | DS | XL1 | FLAGS |
| 44 0100E | | IORRZC | DS | H | COUNT |
| 44 01010 | | | DS | XL3 | NOT USED |
| 44 01013 | | IORHAF | DS | XL1 | 'HOME ADDRESS' FLAG BYTE |
| 44 01014 | | IORHCC | DS | H | aHOME ADDRESSa %CC< BYTES |
| 44 01016 | | IORHHH | DS | H | aHOME ADDRESSa %HH< BYTES |
| 44 01018 | | IORDTA | DS | 0D | DEFECTIVE TRK ADDR (R0 |
| | * | | | | COUNT AREA) |
| 44 01018 | | IORDCY | DS | H | DEFECTIVE TRK CYLINDER |
| | * | | | | NO.(CC) |
| 44 0101A | | IORDHD | DS | H | DEFECTIVE TRK R/W HEAD |
| | * | | | | NO.(HH) |
| 44 0101C | | IORDRC | DS | XL1 | DEFECTIVE TRK RECORD NO (R) |
| 44 0101D | | | DS | XL3 | NOT USED |
| 44 01020 | | IORATA | DS | 0D | ALTERNATE TRK ADDR (R0 DATA |
| | * | | | | AREA) |
| 44 01020 | | IORACY | DS | H | ALTERNATE TRK CYLINDER |
| | * | | | | NO.(CC) |
| 44 01022 | | IORAHD | DS | H | ALTERNATE TRK R/W HEAD |
| | * | | | | NO.(HH) |
| 44 01024 | | IORARC | DS | XL1 | ALTERNATE TRK RECORD NO (R) |
| 44 01025 | | | DS | XL3 | NOT USED |
| 44 01028 | | IORSEK | DS | 0D | SEEK ARGUMENT |
| 44 01028 | | IORSER | DS | XL1 | TRACK RECORD NO (R) |
| 44 01029 | | IORSEM | DS | XL1 | EXTENT NO (M) |
| 44 0102A | | IORSEB | DS | H | BIN OR CELL NO.(BB) |
| 44 0102C | | IORSEC | DS | H | TRACK CYLINDER NO(CC) |
| 44 0102E | | IORSEH | DS | H | TRACK R/W HEAD NO(HH) |
| 44 01030 | | IORSCH | DS | 0D | SEARCH ARG. OR NEXT I/O |
| | * | | | | ADDR |
| 44 01030 | | IORSCY | DS | H | CYLINDER NO(CC) |
| 44 01032 | | IORSRW | DS | H | TRACK R/W HEAD NO.(HH) |
| 44 01034 | | IORSCR | DS | XL1 | TRACK RECORD NO (R) |

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|----------|-------------|--------|------|------|---------|
| 44 01035 | | IORSKL | DS | XL1 | KEY LENGTH |
| 44 01036 | | IORDL | DS | H | DATA LENGTH |
| 44 01038 | | IORBDB | DS | 0D | START OF FIRST DATA BYTE |
| | 44 01000 | | \|ORG\| | IORDB | |
| | | * | | | THE FOLLOWING SECTION OF |
| | | * | | | THE IORCB IS |
| | | * | | | USED FOR 'REMOTE JOB |
| | | * | | | ENTRY' I/O ERROR |
| | | * | | | RETRY INFORMATION, AND |
| | | * | | | OCCUPIES THE AREA |
| | | * | | | NORMALLY OCCUPIED BY THE |
| | | * | | | DATA BUFFER |
| | | * | | | INDIVIDUAL ERROR COUNTERS |
| | | * | | | ARE INCLUDED |
| | | * | | | FOR EACH I/O ERROR DEFINED |
| | | * | | | AS RETRYABLE. |
| | | * | | | USE OF THESE ERROR |
| | | * | | | COUNTERS MAY BE |
| | | * | | | QUALIFIED AS TO TYPE OF |
| | | * | | | CCW AND WHETHER |
| | | * | | | THE SYSTEM IS RECEIVING OR |
| | | * | | | TRANSMITTING |
| | | * | | | DATA. THESE QUALIFICATIONS |
| | | * | | | APPEAR IN THE |
| | | * | | | COMMENTS FIELD AND OBSERVE |
| | | * | | | THIS NOTATION |
| | | * | | | ZZZ DS COUNT |
| | | * | | | ZZZ(LC,M/N,M/N,...) |
| | | * | | | INDICATES THAT ERROR |
| | | * | | | 'ZZZ' OCCURRED UNDER |
| | | * | | | SPECIFIED CONDITIONS |
| | | * | | | WHERE: |
| | | * | | | LC = LINE CONTROL |
| | | * | | | M = R(RECEIVE MODE) OR |
| | | * | | | M = T(TRANSMIT MODE) |
| | | * | | | N = R(READ CCW) OR |
| | | * | | | N = W(WRITE CCW) |
| 44 01000 | | IORJESNS | DS | XL6 | INITIAL ERROR SENSE DATA |
| 44 01006 | | IORJEFLG | DS | XL1 | FLAGS(SEE BELOW) |
| 44 01007 | | | DS | XL1 | UNUSED |
| 44 01008 | | IORJECSW | DS | XL8 | INITIAL ERROR CSW |
| | 44 01008 | | \|ORG\| | IORJECSW | |
| 44 01008 | | IORJECKY | DS | XL1 | PROTECTION KEY |
| 44 01009 | | IORJECAD | DS | XL3 | CCW ADDRESS+8 |
| 44 0100C | | IORJECST | DS | XL2 | CSW STATUS |
| 44 0100E | | IORJECCT | DS | XL2 | RESIDUAL BYTE COUNT |
| | | * | | | THE FOLLOWING TWO |
| | | * | | | SUBSECTIONS ARE |
| | | * | | | ACCUMULATIVE ERROR RETRY |
| | | * | | | COUNTERS |
| | | * | | | INDICATING THE TOTAL |
| | | * | | | NUMBER OF ERROR |
| | | * | | | OCCURRANCES PER IORCB |
| | 44 01010 | IORJECT | EQU | * | |
| 44 01010 | | IORJECC | DS | X | CHANNEL CONTROL BLOCK |
| 44 01011 | | IORJEIC | DS | X | INTERFACE CONTROL CHECK |
| 44 01012 | | IORJECD | DS | X | CHANNEL DATA CHECK |
| 44 01013 | | IORJELD | DS | X | UNIT CHECK/LOST DATA (R/R) |
| 44 01014 | | IORJETO | DS | X | UNIT CHECK/TIME OUT (R/R,T/R) |
| 44 01015 | | IORJEIR | DS | X | UNIT CHECK INTERVENTION REQ |
| 44 01016 | | IORJEBO | DS | X | UNIT CHECK/BUS OUT CHECK (LC,R/W,T/W) |
| 44 01017 | | IORJEDC | DS | X | UNIT CHECK/DATA CHECK (R/R) |
| 44 01018 | | IORJEOV | DS | X | UNIT CHECK/OVERRUN (R/R) |
| 44 01019 | | IORJEIL | DS | X | INCORRECR LENGTH (R/R,T/R) |

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|----------|-------------|--------|------|------|---------|
| | | * | | | THE FOLLOWING ERRORS |
| | | * | | | SHOULD NOT OCCUR |
| 44 0101A | | IORJENEC DS | | X | UNIT CHECK/EQUIPMENT CHECK |
| 44 0101B | | IORJENLD DS | | X | UNIT CHECK/LOST DATA |
| | | * | | | (R/W,T/R,T/W) |
| 44 0101C | | IORJENTO DS | | X | UNIT CHECK/TIME OUT |
| | | * | | | (LC,R/W,T/W) |
| 44 0101D | | IORJENBO DS | | X | UNIT CHECK/BUS  OUT |
| | | * | | | CHECK(R/R,T/R) |
| 44 0101E | | IORJENDC DS | | X | UNIT CHECK/DATA CHECK |
| | | * | | | (LC,R/W,T/R,T/W) |
| 44 0101F | | IORJENOV DS | | X | UNIT CHECK/OVERRUN |
| | | * | | | (LC,R/W,T/R,T/W) |
| 44 01020 | | IORJENCR DS | | X | UNIT CHECK/COMMAND REJECT |
| 44 01021 | | IORJENCC DS | | X | CHAINING CHECK |
| 44 01022 | | IORJENGC DS | | X | PROGRAM CHECK |
| 44 01023 | | IORJENTC DS | | X | PROTECTION CHECK |
| 44 01024 | | IORJENUE DS | | X | UNIT EXCEPTION |
| | | * | | | (LC,R/W,T/W) |
| 44 01025 | | IORJENIL DS | | X | INCORRECT LENGTH |
| | | * | | | (LC,R/W,T/W) |
| 44 01026 | | IORJENBY DS | | X | BUSY |
| 44 01027 | | IORJENAT DS | | X | ATTENTION |
| 44 01028 | | IORJENSM DS | | X | STATUS MODIFIER |
| | 44 01029 | IORJEND EQU | | * | |
| | | * | | | THE FOLLOWING TWO |
| | | * | | | SUBSECTIONS ARE ERROR |
| | | * | | | RETRY COUNTERS RECORDING |
| | | * | | | THE NUMBER OF |
| | | * | | | ERROR OCCURRANCES IN THE |
| | | * | | | CURRENT |
| | | * | | | INTERMITTANT I/O ERROR |
| | | * | | | RETRY SEQUENCE |
| | 44 01029 | IORRJCT EQU | | * | |
| 44 01029 | | IORRJCD DS | | X | CHANNEL DATA CHECK |
| 44 0102A | | IORRJLD DS | | X | UNIT CHECK LOST DATA |
| 44 0102B | | IORRJTO DS | | X | UNIT CHECK/TIME OUT |
| | | * | | | (R/R,T/R) |
| 44 0102C | | IORRJIR DS | | X | UNIT CHECK INTERNENTION REQ |
| 44 0102D | | IORRJBO DS | | X | UNIT CHECK/BUS OUT CHECK |
| | | * | | | (LC,R/W,T/W) |
| 44 0102E | | IORRJDC DS | | X | UNIT CHECK/DATA CHECK |
| | | * | | | (R/R) |
| 44 0102F | | IORRJOV DS | | X | UNIT CHECK/OVERRUN |
| | | * | | | (R/R) |
| 44 01030 | | IORRJIL DS | | X | INCORRECT LENGTH |
| | | * | | | THE FOLLOWING ERRORS |
| | | * | | | SHOULD NOT OCCUR |
| | 44 01031 | IORRJNCT EQU | | * | |
| 44 01031 | | IORRJNEC DS | | X | UNIT CHECK/EQUIPMENT CHECK |
| 44 01032 | | IORRJNLD DS | | X | UNIT CHECK/LOST DATA |
| | | * | | | (R/W,T/R,T/W) |
| 44 01033 | | IORRJNTO DS | | X | UNIT CHECK/TIME OUT |
| | | * | | | (LC,R/W,T/W) |
| 44 01034 | | IORRJNBO DS | | X | UNIT CHECK/BUS OUT CHECK |
| | | * | | | (R/R,T/R) |
| 44 01035 | | IORRJNDC DS | | X | UNIT CHECK/DATA CHECK |
| | | * | | | (R/W,T/R,T/W) |
| 44 01036 | | IORRJNOV DS | | X | UNIT CHECK/OVERRUN |
| | | * | | | (LC,R/W,T/R,T/W) |
| 44 01037 | | IORRJNCR DS | | X | UNIT CHECK/COMMAND REJECT |
| 44 01038 | | IORRJNCC DS | | X | CHAINING CHECK |
| 44 01039 | | IORRJNGC DS | | X | PROGRAM CHECK |
| 44 0103A | | IORRJNTC DS | | X | PROTECTION CHECK |
| 44 0103B | | IORRJNUE DS | | X | UNIT EXCEPTION |
| | | * | | | (LC,R/W,T/W) |
| 44 0103C | | IORRJNIL DS | | X | INCORRECT LENGTH |
| | | * | | | (LC,R/W,T/W) |

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|----------|-------------|--------|------|------|---------|
| 44 0103D |             | IORRJNBY | DS | X | BUSY |
| 44 0103E |             | IORRJNAT | DS | X | ATTENTION |
| 44 0103F |             | IORRJNSM | DS | X | STATUS MODIFIER |
|          | 44 01040    | IORRJND | EQU | * | |
| 44 01040 |             |        | DS | 0F | |
| 44 01040 |             | IORJESAV | DS | XL(IORRJND-IORJESNS) | PREVIOUS ERROR |
|          |             | *      |    |      | SAVE AREA |
| 44 01080 |             |        | DS | 0F | |
| 44 01080 |             | IORJEFCE | DS | XL4 | FARTHEST CCW EXECUTED |
|          |             | *      | NOTE: | RETRY THRESHOLD VALUES IN THE RJE AND | |
|          |             | *      | SDT TABLES MUST | | |
|          |             | *      |    | HAVE A ONE-TO ONE CORRESPONDENCE WITH | |
|          |             | *      |    | THE 'SHOULD OCCUR' | |
|          |             | *      |    | ERROR RETRY COUNTERS AT IORRJCT. ONE | |
|          |             | *      |    | RETRY THRESHOLD | |
|          |             | *      |    | WILL EXIST IN THOSE TABLES FOR 'SHOULD | |
|          |             | *      |    | NOT OCCUR ERRORS' | |
|          |             | *      |    | LENGTH DATA FOR ABOVE | |
|          |             | *      |    | SECTION OF IORCB | |
|          | 00000084    | IORJESZ | EQU | *-IORJESNS | BYTE LENGTH |
|          | 00000011    | IORJDSZ | EQU | (IORJESZ+7)/8 | DOUBLE WORD LENGTH |
|          |             | *      |    |      | ROUNDED UP TO |
|          |             | *      |    |      | DOUBLE WORD BOUNDARY |
|          | 00000019    | IORJELN | EQU | IORJEND-IORJECT | BYTE LENGTH OF |
|          |             | *      |    |      | SECTION 1 |
|          | 00000017    | IORRJLN | EQU | IORRJND-IORRJCT | BYTE LENGTH OF |
|          |             | *      |    |      | SECTION 2 |
|          | 44 01006    | IORJESN | EQU | IORJEFLG | ERROR SHOULD NOT OCCUR FLAG |
|          | 00000080    | IORJESNM | EQU | X'80' | ERROR SHOULD NOT OCCUR MASK |
|          | 44 01006    | IORJEWE | EQU | IORJEFLG | ERROR OCCURRED ON WRITE ENQ |
|          |             | *      |    |      | FLAG |
|          | 00000040    | IORJEWEM | EQU | X'40' | ERROR OCCURRED ON WRITE ENQ |
|          |             | *      |    |      | MASK |
|          | 44 01006    | IORJEOC | EQU | IORJEFLG | ONE CARD READ INTO BUFFER |
|          |             | *      |    |      | FLAG |
|          | 00000020    | IORJEOCM | EQU | X'20' | ONE CARD READ INTO BUFFER |
|          |             | *      |    |      | MASK |
|          | 44 01006    | IORJEOT | EQU | IORJEFLG | IO ERROR ON WR EOT |
|          | 00000010    | IORJEOTM | EQU | X'10' | IORJEOT MASK |
|          | 44 01006    | IORJEDB | EQU | IORJEFLG | DISREGARD PREVIOUS BUFFER |
|          | 00000008    | IORJEDBM | EQU | X'08' | |
|          | 44 01006    | IORJEAN | EQU | IORJEFLG | EOT WRITTEN AFTER SOLID RD |
|          |             | *      |    |      | NAK ERROR |
|          | 00000004    | IORJEANM | EQU | X'04' | |
|          | 44 01006    | IORTAB | EQU | IORJEFLG | TAB RECORD FLAG |
|          |             | *      |    |      | N412.2 |
|          | 00000002    | IORTABM | EQU | X'02' | TAB RECORD MASK |
|          |             | *      |    |      | N412.2 |
| 44 01084 |             | IORTBR | DS | XL144 | RJE PRINTER TAB RECORD |
|          |             | *      |    |      | N412.2 |
|          | 00000114    | IORJTSZ | EQU | *-IORJESNS | TOTAL BUFFER LENGTH |
|          |             | *      |    |      | N412.2 |
|          | 00000023    | IORJTDSZ | EQU | (IORJTSZ+7)/8 | TOTAL DOUBLEWORD |
|          |             | *      |    |      | BUFFER LNG    N412.2 |
|          | 44 02000    |        | \|ORG\| | IORBEG+8192 | |
| 44 02000 |             | IORPL  | DS | D | PAGE LIST (SEE NOTE 2) |
|          | 44 02000    |        | \|ORG\| | IORPL | |
| 44 02000 |             | IORPN  | DS | XL3 | HIGH ORDER 20 BITS OF |
|          |             | *      |    |      | VIRTUAL ADDRESS |
| 44 02003 |             | IORPF  | DS | XL1 | PAGE LIST FLAGS |
|          | 44 02003    | IORAG  | EQU | IORPF | ANY PAGE |
|          | 00000080    | IORAGM | EQU | X'80' | ANY PAGE MASK |
|          | 44 02003    | IORPS  | EQU | IORPF | SHARED PAGE FLAG |
|          |             | *      |    |      | N405.1 |
|          | 00000020    | IORPSM | EQU | X'20' | SHARED PAGE MASK |
|          |             | *      |    |      | N405.1 |
| 44 02004 |             |        | DS | XL1 | NOT USED |
| 44 02005 |             | IORCA  | DS | XL3 | CORE LOCATION OF VIRTUAL |

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|---|---|---|---|---|---|
| | | * | | | BUFFER PAGES |
| | 44 03000 | | |ORG| | IORBEG+12288 |
| 44 03000 | | IORCW | DS | D | CHANNEL COMMAND WORD LIST |
| | | * | | | (SEE NOTE 3) |
| | 44 03000 | | |ORG| | IORCW |
| 44 03000 | | IOROP | DS | XL1 | OPERATION CODE |
| 44 03001 | | IORPP | DS | XL1 | POSITION OF PAGE LIST ENTRY |
| | | * | | | (MODULO 8) |
| 44 03002 | | IORFD | DS | 0H | FLAGS AND DISPLACEMENT |
| 44 03002 | | IORFDA | DS | XL1 | FLAGS AND HI ORDER 4 BITS |
| | | * | | | OF DISPLACEMENT |
| | 44 03002 | IORF0 | EQU | IORFDA | INHIBIT RELOCATION OF CCW |
| | | * | | | ADDRESS FLAG |
| | 00000080 | IORF0M | EQU | X'80' | INHIBIT RELOCATION OF CCW |
| | | * | | | ADDRESS MASK |
| | 0000000F | IORFDM | EQU | X'0F' | DISPLACEMENT MASK - 4 HI |
| | | * | | | ORDER BITS |
| 44 03003 | | IORFDB | DS | XL1 | DISPLACEMENT-LOW ORDER 8 |
| | | * | | | BITS |
| 44 03004 | | IORCF | DS | XL1 | CHANNEL COMMAND WORD FLAGS |
| | 44 03004 | IORCD | EQU | IORCF | CHAIN DATA |
| | 00000080 | IORCDM | EQU | X'80' | CHAIN DATA MASK |
| | 44 03004 | IORCO | EQU | IORCF | CHAIN COMMAND |
| | 00000040 | IORCOM | EQU | X'40' | CHAIN COMMAND MASK |
| | 44 03004 | IORSI | EQU | IORCF | SUPPRESS INCORRECT LENGTH |
| | 00000020 | IORSIM | EQU | X'20' | SUPPRESS INCORRECT LENGTH |
| | | * | | | MASK |
| | 44 03004 | IORSK | EQU | IORCF | SKIP |
| | 00000010 | IORSKM | EQU | X'10' | SKIP MASK |
| | 44 03004 | IORPC | EQU | IORCF | PROGRAM CONTROLLED |
| | | * | | | INTERRUPTION |
| | 00000008 | IORPCM | EQU | X'08' | PROGRAM CONTROLLED |
| | | * | | | INTERRUPTION MASK |
| 44 03005 | | | DS | XL1 | THIS BYTE AND PRECEDING 3 |
| | | * | | | BITS MUST=0 |
| 44 03006 | | IORCT | DS | H | BYTE COUNT |

```
* NOTE 1- THE DATA BUFFER IS VARIABLE IN LENGTH AND
* MUST BE ADDRESSED
*              USING THE CONTENTS OF THE IORBS FIELD AS
*              A BASE ADDRESS.   THE
*              EXTENT (IN DOUBLE WORDS) OF THE DATA
*              BUFFER IS SPECIFIED BY
*              THE CONTENTS OF THE FIELD LABELED IORBL.
* NOTE 2- THE PAGE LIST IS VARIABLE IN LENGTH
* (MAXIMUM SIZE = 8 DOUBLE
*              WORDS) AND MUST BE ADDRESSED USING THE
*              CONTENTS OF THE IORPO
*              FIELD AS A BASE ADDRESS.   THE EXTENT (IN
*              DOUBLE WORDS) OF THE
*              PAGE LIST IS SPECIFIED BY THE CONTENTS OF
*              THE FIELD LABELED
*                     IORGL.
* NOTE 3- THE CHANNEL COMMAND WORD LIST IS VARIABLE
* IN LENGTH AND MUST
*              BE ADDRESSED USING THE CONTENTS OF THE
*              FIELD LABELED IORCS AS
*              A BASE ADDRESS.   THE EXTENT (IN DOUBLE
*              WORDS) OF THE CHANNEL
*              COMMAND WORD LIST IS SPECIFIED BY THE
*              CONTENTS OF THE FIELD
*                     LABELED IORCL.
```

## Interrupt Queue Entry (CHAIQE)

The Interrupt Queue Entry (IQE) contains interrupt data from the VPSW and sense and status data from the ISA that is required by the Task Monitor's Scanner-Dispatcher. Some IQE data is moved to a user-defined communications area (COM) for analysis of conditions and status at interrupt time.

The IQE is built by the Queue LE routine in the Task Monitor for each interrupt. The IQE is queued on the Interrupt Request Entry (IRE) for that type of interrupt. The IQE occupies 32 bytes of virtual storage, aligned on doubleword boundaries.

CHAIQE Storage map

```
DEC    HEX
  0     0|   IQEID    | IQELE   | UNNAMED |         IQEFPR             |
        |_____|_____|_____|_____|
  8     8|          IQEBPR         | IQEDET  |                        |
        |_____|_____|                        |
        |                     IQEOVY                                 |
        |                                                            |
        |                                                            |
        |_____|


ORG  IQEOVY

 13     D                                   | UNNAMED |    IQEINT     |
        |_____|_____|_____|
 16    10|        IQEPSW           |              IQEPIM             |
        |_____|_____|
 24    18|                     UNNAMED                               |
        |_____|


ORG  IQEOVY

 13     D                                   | UNNAMED |    IQESVC     |
        |_____|_____|_____|
 16    10|        UNNAMED          |                                 |
        |_____|                                 |
        |                     UNNAMED                               |
        |_____|


ORG  IQEOVY

 13     D                                   | IQEXML  |    IQEXMN     |
        |_____|_____|_____|
 16    10|        IQEMSG           |                                 |
        |_____|                                 |
        |                     UNNAMED                               |
        |_____|


ORG  IQEOVY

 13     D                                | UNNAMED      | IQEASI     |
        |_____|_____|_____|
 16    10|        IQESNS           |              UNNAMED           |
        |_____|_____|
 24    18|        IQEATM           |              UNNAMED           |
        |_____|_____|
```

DEC    HEX

ORG  IQEOVY

```
13     D                                                    | IQETIM  |    IQETNO        |
                                                            |_____|_____|
16     10|                   UNNAMED            |
         |_____|_____|
         |                          UNNAMED                                          |
         |_____|
```

ORG  IQEOVY

```
13     D                                                    | UNNAMED |    IQESTA        |
                                                            |_____|_____|
16     10|                   UNNAMED            |
         |_____|_____|
         |                          UNNAMED                                          |
         |_____|
```

ORG  IQEOVY

```
13     D                                                    |          UNNAMED          |
                                                            |_____|
16     10|              IQEVAD                 |            IQERAD                      |
         |_____|_____|
24     18|              IQEGR0                 |            IQEGR1                      |
         |_____|_____|
```
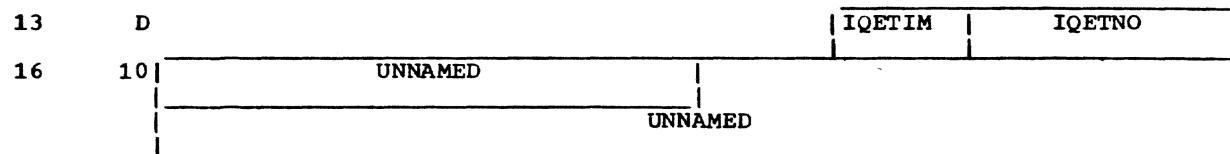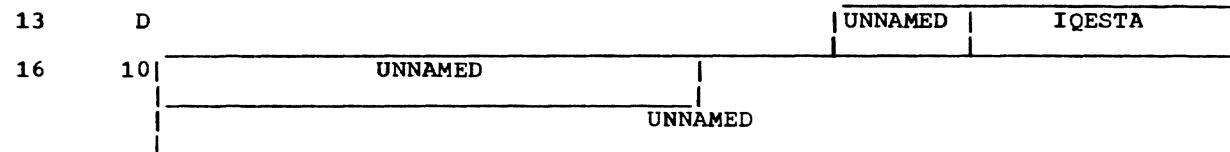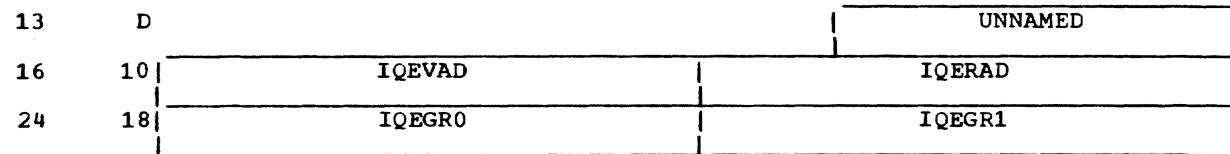
Fields in CHAIQE -- by displacement

| DEC | HEX | FIELD | DEC | HEX | FIELD | DEC | HEX | FIELD |
|-----|-----|-------|-----|-----|-------|-----|-----|-------|
| 0000 | 0000 | IQEID | 0014 | 000E | IQESTA | 0016 | 0010 | IQEMSG |
| 0002 | 0002 | IQELE | 0014 | 000E | IQETNO | 0016 | 0010 | IQEPSW |
| 0004 | 0004 | IQEFPR | 0014 | 000E | IQEXMN | 0020 | 0014 | IQERAD |
| 0008 | 0008 | IQEBPR | 0014 | 000E | IQESVC | 0020 | 0014 | IQEPIM |
| 0012 | 000C | IQEDET | 0014 | 000E | IQEINT | 0024 | 0018 | IQEGR0 |
| 0013 | 000D | IQETIM | 0015 | 000F | IQEASI | 0024 | 0018 | IQEATM |
| 0013 | 000D | IQEXML | 0016 | 0010 | IQEVAD | 0028 | 001C | IQEGR1 |
| 0013 | 000D | IQEOVY | 0016 | 0010 | IQESNS | | | |

Alphabetical list of fields in CHAIQE

| FIELD | DEC | HEX | FIELD | DEC | HEX | FIELD | DEC | HEX |
|-------|-----|-----|-------|-----|-----|-------|-----|-----|
| IQEASI | 0015 | 000F | IQEINT | 0014 | 000E | IQESTA | 0014 | 000E |
| IQEATM | 0024 | 0018 | IQELE | 0002 | 0002 | IQESVC | 0014 | 000E |
| IQEBPR | 0008 | 0008 | IQEMSG | 0016 | 0010 | IQETIM | 0013 | 000D |
| IQEDET | 0012 | 000C | IQEOVY | 0013 | 000D | IQETNO | 0014 | 000E |
| IQEFPR | 0004 | 0004 | IQEPIM | 0020 | 0014 | IQEVAD | 0016 | 0010 |
| IQEGR0 | 0024 | 0018 | IQEPSW | 0016 | 0010 | IQEXML | 0013 | 000D |
| IQEGR1 | 0028 | 001C | IQERAD | 0020 | 0014 | IQEXMN | 0014 | 000E |
| IQEID | 0000 | 0000 | IQESNS | 0016 | 0010 | | | |

Assembler listing of CHAIQE

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|----------|-------------|--------|------|------|---------|
| | 45 00000 | CHAIQE | DSECT | | INTERRUPT QUEUE ENTRY |
| | | * | | | |
| 45 00000 | | | DS | 0D | COMMONLY USED PORTIONS OF QE |
| | | * | | | |
| 45 00000 | | IQEID | DS | CL2 | ID EQUALS QE |
| 45 00002 | | IQELE | DS | CL1 | CODE FOR LE TYPE QE |
| | 000000D3 | IQELEC | EQU | C'L' | LE TYPE CODE |
| 45 00003 | | | DS | CL1 | UNUSED |
| 45 00004 | | IQEFPR | DS | F | FORWARD POINTER |
| 45 00008 | | IQEBPR | DS | F | BACKWARD POINTER |
| 45 0000C | | IQEDET | DS | CL1 | DE TYPE CODE |

240 CHAIQE

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|----------|-------------|--------|------|------|---------|
|          | 00000000    | IQEDEP | EQU  | X'00' | PROGRAM |
|          | 00000001    | IQEDES | EQU  | X'01' | SVC |
|          | 00000002    | IQEDEX | EQU  | X'02' | EXTERNAL |
|          | 00000003    | IQEDEA | EQU  | X'03' | ASYNCHRONOUS |
|          | 00000004    | IQEDTT | EQU  | X'04' | TIMER |
|          | 00000005    | IQEDEI | EQU  | X'05' | SYNCHRONOUS |
| 45 0000D |             | IQEOVY | DS   | CL19 | OVERLAID FIELDS FOR VARIOUS |
|          |             | *      |      |      | INT. TYPES |
| 45 0000D |             |        | \|ORG\| | IQEOVY | |
|          |             | * FIELDS USED FOR PROGRAM INTERRUPTS | | | |
| 45 0000D |             |        | DS   | CL1  | UNUSED |
| 45 0000E |             | IQEINT | DS   | CL2  | INTERRUPT CODEFROM VPSW |
| 45 00010 |             | IQEPSW | DS   | F    | ADDR IN VPSW AT INTERRUPT |
| 45 00014 |             | IQEPIM | DS   | F    | PROGRAM INTERRUPT MASK |
| 45 00018 |             |        | DS   | CL8  | UNUSED |
| 45 0000D |             |        | \|ORG\| | IQEOVY | |
|          |             | * FIELDS USED FOR SVC INTER9UPTS | | | |
| 45 0000D |             |        | DS   | CL1  | UNUSED |
| 45 0000E |             | IQESVC | DS   | CL2  | SVC INTEGER FROM VPSW |
| 45 00010 |             |        | DS   | F    | VPSW ADDR - USES IQEPSW |
| 45 00014 |             |        | DS   | CL12 | UNUSED |
| 45 0000D |             |        | \|ORG\| | IQEOVY | |
|          |             | * FIELDS USED FOR EXTERNAL INTERRUPTS | | | |
| 45 0000D |             | IQEXML | DS   | CL1  | MESSAGE LENGTH |
| 45 0000E |             | IQEXMN | DS   | CL2  | MESSAGE NUMBER |
| 45 00010 |             | IQEMSG | DS   | F    | PTR TO MESSAGE AREA |
| 45 00014 |             |        | DS   | CL12 | UNUSED |
| 45 0000D |             |        | \|ORG\| | IQEOVY | |
|          |             | * FIELDS USED FOR ASYNCHRONOUS INTERRUPTS | | | |
| 45 0000D |             |        | DS   | CL2  | UNUSED |
| 45 0000F |             | IQEASI | DS   | CL1  | TYPE CODE FO-9 ASYNCHRONOUS |
|          | 00000005    | IQEATC | EQU  | X'05' | ATTENTION KEY |
| 45 00010 |             | IQESNS | DS   | F    | SENSE INFO |
| 45 00014 |             |        | DS   | F    | UNUSED |
| 45 00018 |             | IQEATM | DS   | F    | ATTENTION TYPE MASK |
|          | 00000001    | IQEANM | EQU  | X'01' | ATTENTION KEY MASK |
| 45 0001C |             |        | DS   | CL4  | UNUSED |
| 45 0000D |             |        | \|ORG\| | IQEOVY | |
|          |             | * FIELDS USED FOR TIMER INTERRUPTS | | | |
| 45 0000D |             | IQETIM | DS   | CL1  | TIMER TYPE - TASK OR REAL |
|          | 000000D9    | IQETMR | EQU  | C'R' | REAL TIMER |
|          | 000000E3    | IQETMT | EQU  | C'T' | TASK TIMER |
| 45 0000E |             | IQETNO | DS   | CL2  | TIMER NUMBER |
| 45 00010 |             |        | DS   | F    | VPSW ADDR - USES IQEPSW |
| 45 00014 |             |        | DS   | CL12 | UNUSED |
| 45 0000D |             |        | \|ORG\| | IQEOVY | |
|          |             | * FIELDS USED FOR SYNCHRONOUS INTERRUPTS | | | |
| 45 0000D |             |        | DS   | CL1  | UNUSED |
| 45 0000E |             | IQESTA | DS   | CL2  | CSW STATUS INFORMATION |
| 45 00010 |             |        | DS   | F    | SENSE INFO - USES IQESNS |
| 45 00014 |             |        | DS   | CL12 | UNUSED |
| 45 0000D |             |        | \|ORG\| | IQEOVY | |
|          |             | *      |      |      | FIELDS USED FOR LE TYPE QE'S |
| 45 0000D |             |        | DS   | CL3  | UNUSED |
| 45 00010 |             | IQEVAD | DS   | F    | VCON FOR LE |
| 45 00014 |             | IQERAD | DS   | F    | RCON FOR LE |
| 45 00018 |             | IQEGR0 | DS   | F    | INFO FOR REG 0 |
| 45 0001C |             | IQEGR1 | DS   | F    | INFO FOR REG 1 |

## Interrupt Request Entry (CHAIRE)

The Interrupt Request Entry (IRE) describes the priority status, and mode of operation for the routine specified in its Interrupt Control Block (ICB).
The IRE is built by the Specify Interrupt Routine (SIR) in the Task Monitor. It is deleted by the Delete Interrupt Routine (DIR).
An IRE is built each time an ICB is made available to the system via a SIR macro instruction; it is then queued on the appropriate Interrupt Device Entry (IDE) in the Task Monitor's Interrupt Table (CHBITB).
The IRE occupies 32 bytes of virtual storage, aligned on doubleword boundaries.

### CHAIRE Storage map

| DEC | HEX | | | | | | |
|-----|-----|---|---|---|---|---|---|
| 0 | 0 | IREID | IRELE | IREACT | IREFPR | | |
| 8 | 8 | IREBPR | | | IREAPR | | |
| 16 | 10 | IREPDS | | | IREQEP | | |
| 24 | 18 | IREICB | | | IREINS | IREDLT | IREINH | IREPRY |

### Fields in CHAIRE -- by displacement

| DEC | HEX | FIELD | DEC | HEX | FIELD | DEC | HEX | FIELD |
|------|------|--------|------|------|--------|------|------|--------|
| 0000 | 0000 | IREID | 0012 | 000C | IREAPR | 0029 | 001D | IREDLT |
| 0002 | 0002 | IRELE | 0016 | 0010 | IREPDS | 0030 | 001E | IREINH |
| 0003 | 0003 | IREACT | 0020 | 0014 | IREQEP | 0031 | 001F | IREPRY |
| 0004 | 0004 | IREFPR | 0024 | 0018 | IREICB | | | |
| 0008 | 0008 | IREBPR | 0028 | 001C | IREINS | | | |

### Alphabetical list of fields in CHAIRE

| FIELD | DEC | HEX | FIELD | DEC | HEX | FIELD | DEC | HEX |
|--------|------|------|--------|------|------|--------|------|------|
| IREACT | 0003 | 0003 | IREICB | 0024 | 0018 | IREPDS | 0016 | 0010 |
| IREAPR | 0012 | 000C | IREID | 0000 | 0000 | IREPRY | 0031 | 001F |
| IREBPR | 0008 | 0008 | IREINH | 0030 | 001E | IREQEP | 0020 | 0014 |
| IREDLT | 0029 | 001D | IREINS | 0028 | 001C | | | |
| IREFPR | 0004 | 0004 | IRELE | 0002 | 0002 | | | |

### Assembler listing of CHAIRE

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|----------|-------------|--------|------|------|---------|
| | 46 00000 | CHAIRE | DSECT | | START DSECT |
| 46 00000 | | | DS | 0D | |
| 46 00000 | | IREID | DS | CL2 | ID = 'RE' |
| 46 00002 | | IRELE | DS | CL1 | LE CODE INDICATOR |
| | 000000D3 | IRELEC | EQU | C'L' | CODE FOR REL |
| 46 00003 | | IREACT | DS | CL1 | ACTIVITY CODE |
| | 000000C1 | IREACC | EQU | C'A' | ACTIVE INDICATOR |
| 46 00004 | | IREFPR | DS | F | FORWARD PTR |
| 46 00008 | | IREBPR | DS | F | BACKWARD PTR |
| 46 0000C | | IREAPR | DS | F | ACTIVE PTR TO A LOWER |
| | | * | | | PRIORITY |
| 46 00010 | | IREPDS | DS | F | PTR TO PUSHDOWN SAVE AREA |
| 46 00014 | | IREQEP | DS | F | PTR TO FIRST QE |
| 46 00018 | | IREICB | DS | F | PTR TO ICB |
| 46 0001C | | IREINS | DS | CL1 | INSERT CODE |
| | 00000001 | IREINC | EQU | X'01' | INSERTED |
| 46 0001D | | IREDLT | DS | CL1 | DELETE CODE |
| | 000000C4 | IREDLC | EQU | C'D' | DELETED |
| 46 0001E | | IREINH | DS | CL1 | P-NP INHIBIT SWITCH |
| | 00000001 | IREPRV | EQU | X'01' | PRIVILEGED |
| | 00000000 | IRENPR | EQU | X'00' | NON-PRIVILEGED |
| | 00000000 | IREENA | EQU | X'00' | INTERRUPTS ENABLED |
| | 00000010 | IREDIS | EQU | X'10' | INTERRUPTS DISABLED |
| 46 0001F | | IREPRY | DS | CL1 | PRIORITY |

## Interrupt Storage Area (CHAISA)

The Interrupt Storage Area (ISA), a prefixed storage area for virtual storage, serves as a virtual storage holding area during task interrupts.

The ISA includes a set of old and new Virtual Program Status Words (VPSW) for all presently defined task interrupts.  The ISA also contains space to save general purpose registers, floating point registers, channel status word, sense data, constants, and flags used by virtual storage programs.

The ISA page (4096 bytes) is located at segment zero, page zero of virtual storage, and is aligned on doubleword boundaries.

CHAISA Storage map

```
 DEC    HEX
   0      0|_____
          |                                                                 |
          =                            UNNAMED                              =
          |                                                                 |
  48     30|_____|
          |                            ISASNS                               |
  56     38|_____|
          |                            ISACSW                               |
  64     40|_____|
          |                                                                 |
          =                           RESERVED                              =
          |                                                                 |
1560    618|_____|_____|_____|
          |      ISAPIF        |     ISAPIC        |         ISAPICT         |
1568    620|_____|_____|_____|
          |           ISAPI13          |                                     |
          |_____|  ISAPI14                            |
          |                                                                 |
          |                                                                 |
1600    640|_____|
          |                            ISAORP                               |
1608    648|_____|_____|
          |          ISAORV            |           ISAORE                    |
1616    650|_____|
          |                                                                 |
          |                            ISARS                                |
          |                                                                 |
1648    670|_____|
          |                            ISAOV                                |
1656    678|_____|
          |                            ISAVS                                |
          |                                                                 |
1680    690|ISADTY |UNNAMED |ISAF5 |ISAU1 |   ISARSP   |      ISARTN        |
          |_____|_____|_____|_____|_____|_____|
```

```
DEC    HEX
1688   698 |--------------------------------------------------------------------|
           |                                                                    |
           |                               ISALOG                               |
           |                                                                    |
           |                                                                    |
1712   6B0 |-----------------------ISAMSA-------------|----------UNNAMED---------|
           |                                          |                         |
1720   6B8 |------ISASOF------|--------ISASOC---------|----------ISASOI---------|
           |                  |                       |                         |
1728   6C0 |--------------ISAS13---------|            |                         |
           |                             |------------ISAS14---------------------|
           |                                          |                         |
           |                                          |                         |
           |                                          |                         |
           |                                          |                         |
1760   6E0 |-----------UNNAMED-----------|------------|----------ISA113---------|
           |                             |            |                         |
1768   6E8 |-----------ISA1SA------------|            |----------ISA114---------|
           |                             |            |                         |
1776   6F0 |-----------ISA115------------|            |----------ISA10----------|
           |                             |            |                         |
1784   6F8 |-----------ISA11-------------|            |                         |
           |                             |------------ISA12----------------------|
           |                                          |                         |
1800   708 |--------------------------------------------------------------------|
           |                                                                    |
           |                               ISA15                                |
           |                                                                    |
           |                                                                    |
           |                                                                    |
1832   728 |ISAPSF|------------UNNAMED-------|--------|----------UNNAMED---------|
           |      |                          |       |                          |
1840   730 |---------------------------------ISA1OP------------------------------|
           |                                                                    |
1848   738 |---------------------------------ISA1F0------------------------------|
           |                                                                    |
1856   740 |---------------------------------ISA1F2------------------------------|
           |                                                                    |
1864   748 |---------------------------------ISA1F4------------------------------|
           |                                                                    |
1872   750 |---------------------------------ISA1F6------------------------------|
           |                                                                    |
1880   758 |-----------UNNAMED-----------|------------|----------ISA213---------|
           |                             |            |                         |
1888   760 |-----------ISA2SA------------|            |----------ISA214---------|
           |                             |            |                         |
1896   768 |-----------ISA215------------|            |----------ISA20----------|
           |                             |            |                         |
1904   770 |-----------ISA21-------------|            |                         |
           |                             |------------ISA22----------------------|
           |                                          |                         |
1920   780 |--------------------------------------------------------------------|
           |                                                                    |
           |                               ISA25                                |
           |                                                                    |
           |                                                                    |
           |                                                                    |
           |                                                                    |
           |--------------------------------------------------------------------|
```

| DEC | HEX | | | | | | | | |
|-----|-----|---|---|---|---|---|---|---|---|
| 1952 | 7A0 | UNNAMED | | | | | | | |
| 1960 | 7A8 | ISA2OP | | | | | | | |
| 1968 | 7B0 | ISA2F0 | | | | | | | |
| 1976 | 7B8 | ISA2F2 | | | | | | | |
| 1984 | 7C0 | ISA2F4 | | | | | | | |
| 1992 | 7C8 | ISA2F6 | | | | | | | |
| 2000 | 7D0 | ISAPT | ISACP | ISAIN | | ISAIC | | | |
| 2008 | 7D8 | ISAOS | | | | | | | |
| 2016 | 7E0 | ISAOX | | | | | | | |
| 2024 | 7E8 | ISAOA | | | | | | | |
| 2032 | 7F0 | ISAOT | | | | | | | |
| 2040 | 7F8 | ISAOI | | | | | | | |
| 2048 | 800 | ISANP | | | | | | | |
| 2056 | 808 | ISANS | | | | | | | |
| 2064 | 810 | ISANX | | | | | | | |
| 2072 | 818 | ISANA | | | | | | | |
| 2080 | 820 | ISANT | | | | | | | |
| 2088 | 828 | ISANI | | | | | | | |
| 2096 | 830 | ISANR | | | | | | | |
| 2104 | 838 | ISANV | | | | | | | |
| 2112 | 840 | ISAPP3 | | | | ISAF1 | ISAABN | ISAF3 | ISAF4 |
| 2120 | 848 | ISAVMP | | | | ISANAS | | UNNAMED | |
| 2128 | 850 | ISATDT | | | | ISAFA | ISAFB | ISAVLKCT | ISAVLK |
| 2136 | 858 | ISASPN | | ISAP3 | ISAP1 | UNNAMED | | | |
| 2144 | 860 | ISACVP | | | | | | | |
| 2152 | 868 | ISATDY | | | | ISASDS | | | |
| 2160 | 870 | ISASLP | | | | ISAJLC | | | |
| 2168 | 878 | ISAUTH | ISAEF | ISALCK | ISAVAR | ISATMP | | | |
| 2176 | 880 | ISARCB | | | | | | | |

DEC     HEX

ORG  ISASNS

```
48      30 |ISASN1    |                    UNNAMED                          |
           |_____|_____ __|
```

ORG  ISASNS

```
48      30 |ISASN2    |                    UNUSED                           |
           |_____|_____ __|
```

ORG  ISACSW

```
56      38 |ISAKEY |ISAF10 |    ISARCL   | ISAIC1 | ISAIC2 |    ISACNT      |
           |_____|_____|_____|_____|_____|_____|
```

ORG  ISAS14

```
1732    6C4                            |            ISAS14R                |
                                       |_____|
1736    6C8 |          ISAS15R         |            ISAS0R                 |
            |_____|_____|
1744    6D0 |          ISAS1R          |            ISAS2R                 |
            |_____|_____|
1752    6D8 |          ISAS3R          |            ISAS4R                 |
            |_____|_____|
```

Fields in CHAISA -- by displacement

| DEC | HEX | FIELD | | DEC | HEX | FIELD | | DEC | HEX | FIELD | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0048 | 0030 | ISASN2 | | 1600 | 0640 | ISAORP | | 1772 | 06EC | ISA1R | |
| 0048 | 0030 | ISASN1 | | 1600 | 0640 | ISAOR | | 1776 | 06F0 | ISA115 | |
| 0048 | 0030 | ISAN28 | (EQU) | 1608 | 0648 | ISAORV | | 1780 | 06F4 | ISA10 | |
| 0048 | 0030 | ISAN27 | (EQU) | 1612 | 064C | ISAORE | | 1784 | 06F8 | ISA11 | |
| 0048 | 0030 | ISAN26 | (EQU) | 1616 | 0650 | ISARS | | 1788 | 06FC | ISA12 | |
| 0048 | 0030 | ISAN25 | (EQU) | 1648 | 0670 | ISAOV | | 1800 | 0708 | ISA15 | |
| 0048 | 0030 | ISAN24 | (EQU) | 1656 | 0678 | ISAVS | | 1832 | 0728 | ISANPIR | (EQU) |
| 0048 | 0030 | ISAN23 | (EQU) | 1680 | 0690 | ISADTY | | 1832 | 0728 | ISAPSF | |
| 0048 | 0030 | ISAN22 | (EQU) | 1682 | 0692 | ISAIP | (EQU) | 1840 | 0730 | ISA1OP | |
| 0048 | 0030 | ISAN21 | (EQU) | 1682 | 0692 | ISACI | (EQU) | 1848 | 0738 | ISA1F0 | |
| 0048 | 0030 | ISAN18 | (EQU) | 1682 | 0692 | ISAF5 | | 1856 | 0740 | ISA1F2 | |
| 0048 | 0030 | ISAN17 | (EQU) | 1683 | 0693 | ISAU1 | | 1864 | 0748 | ISA1F4 | |
| 0048 | 0030 | ISAN16 | (EQU) | 1684 | 0694 | ISARSP | | 1872 | 0750 | ISA1F6 | |
| 0048 | 0030 | ISAN15 | (EQU) | 1686 | 0696 | ISARTN | | 1880 | 0758 | ISALS2 | |
| 0048 | 0030 | ISAN14 | (EQU) | 1688 | 0698 | ISALOG | | 1884 | 075C | ISA213 | |
| 0048 | 0030 | ISAN13 | (EQU) | 1712 | 06B0 | ISAMSA | | 1888 | 0760 | ISA2SA | |
| 0048 | 0030 | ISAN12 | (EQU) | 1720 | 06B8 | ISAPF | (EQU) | 1892 | 0764 | ISA214 | |
| 0048 | 0030 | ISAN11 | (EQU) | 1720 | 06B8 | ISASOF | | 1892 | 0764 | ISA2R | |
| 0048 | 0030 | ISASNS | | 1720 | 06B8 | ISASO | | 1896 | 0768 | ISA215 | |
| 0049 | 0031 | UNUSED | | 1720 | 06B8 | ISASSA | | 1900 | 076C | ISA20 | |
| 0056 | 0038 | ISAKEY | | 1722 | 06BA | ISASOC | | 1904 | 0770 | ISA21 | |
| 0056 | 0038 | ISACSW | | 1724 | 06BC | ISASOI | | 1908 | 0774 | ISA22 | |
| 0057 | 0039 | ISAF10 | | 1728 | 06C0 | ISAS13 | | 1920 | 0780 | ISA25 | |
| 0058 | 003A | ISARCL | | 1728 | 06C0 | ISASR | | 1960 | 07A8 | ISA2OP | |
| 0060 | 003C | ISAIC1 | | 1732 | 06C4 | ISAS14R | | 1968 | 07B0 | ISA2F0 | |
| 0061 | 003D | ISAIC2 | | 1732 | 06C4 | ISAS14 | | 1976 | 07B8 | ISA2F2 | |
| 0062 | 003E | ISACNT | | 1736 | 06C8 | ISAS15R | | 1984 | 07C0 | ISA2F4 | |
| 1560 | 0618 | ISAPIP | (EQU) | 1740 | 06CC | ISAS0R | | 1992 | 07C8 | ISA2F6 | |
| 1560 | 0618 | ISAPIF | | 1744 | 06D0 | ISAS1R | | 2000 | 07D0 | ISAII | (EQU) |
| 1560 | 0618 | ISAPIV | | 1748 | 06D4 | ISAS2R | | 2000 | 07D0 | ISATR | (EQU) |
| 1560 | 0618 | ISAPISA | | 1752 | 06D8 | ISAS3R | | 2000 | 07D0 | ISAAI | (EQU) |
| 1562 | 061A | ISAPIC | | 1756 | 06DC | ISAS4R | | 2000 | 07D0 | ISAXI | (EQU) |
| 1564 | 061C | ISAPICT | | 1760 | 06E0 | ISALS1 | | 2000 | 07D0 | ISAAP | (EQU) |
| 1568 | 0620 | ISAPI13 | | 1764 | 06E4 | ISA113 | | 2000 | 07D0 | ISAPP2 | (EQU) |
| 1568 | 0620 | ISAPIR | | 1768 | 06E8 | ISA1SA | | 2000 | 07D0 | ISAPV | (EQU) |
| 1572 | 0624 | ISAPI14 | | 1772 | 06EC | ISA114 | | 2000 | 07D0 | ISAPT | |

| DEC | HEX | FIELD | | DEC | HEX | FIELD | | DEC | HEX | FIELD | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 2000 | 07D0 | ISAOP | | 2116 | 0844 | ISAVSC | (EQU) | 2119 | 0847 | ISAWO | (EQU) |
| 2001 | 07D1 | ISASF | (EQU) | 2116 | 0844 | ISASHUT | (EQU) | 2119 | 0847 | ISAOLT | (EQU) |
| 2001 | 07D1 | ISAEU | (EQU) | 2116 | 0844 | ISASPP | (EQU) | 2119 | 0847 | ISAF4 | |
| 2001 | 07D1 | ISADO | (EQU) | 2116 | 0844 | ISAHLD | (EQU) | 2120 | 0848 | ISAVMP | |
| 2001 | 07D1 | ISAFO | (EQU) | 2116 | 0844 | ISAPCS | (EQU) | 2124 | 084C | ISANAS | |
| 2001 | 07D1 | ISAPM | (EQU) | 2116 | 0844 | ISAF1 | | 2128 | 0850 | ISATDT | |
| 2001 | 07D1 | ISACC | (EQU) | 2116 | 0844 | ISAFLG | | 2132 | 0854 | ISAFA | |
| 2001 | 07D1 | ISALC | (EQU) | 2117 | 0845 | ISAABNF4 | (EQU) | 2133 | 0855 | ISAFB | |
| 2001 | 07D1 | ISACP | | 2117 | 0845 | ISAABNF3 | (EQU) | 2134 | 0856 | ISAVLKCT | |
| 2002 | 07D2 | ISAIN | | 2117 | 0845 | ISAABNF2 | (EQU) | 2135 | 0857 | ISAPPIR | (EQU) |
| 2004 | 07D4 | ISAIC | | 2117 | 0845 | ISAABNF1 | (EQU) | 2135 | 0857 | ISAVLK | |
| 2008 | 07D8 | ISAOS | | 2117 | 0845 | ISAABN | | 2136 | 0858 | ISASPN | |
| 2016 | 07E0 | ISAOX | | 2118 | 0846 | ISACF | (EQU) | 2138 | 085A | ISAP3 | |
| 2024 | 07E8 | ISAOA | | 2118 | 0846 | ISAVEF | (EQU) | 2139 | 085B | ISAP1 | |
| 2032 | 07F0 | ISAOT | | 2118 | 0846 | ISALP | (EQU) | 2144 | 0860 | ISACVP | |
| 2040 | 07F8 | ISAOI | | 2118 | 0846 | ISADF | (EQU) | 2152 | 0868 | ISATDY | |
| 2048 | 0800 | ISANP | | 2118 | 0846 | ISAD2 | (EQU) | 2156 | 086C | ISASDS | |
| 2056 | 0808 | ISANS | | 2118 | 0846 | ISAP2 | (EQU) | 2160 | 0870 | ISASLP | |
| 2064 | 0810 | ISANX | | 2118 | 0846 | ISACPU | (EQU) | 2164 | 0874 | ISAJLC | |
| 2072 | 0818 | ISANA | | 2118 | 0846 | ISAF3 | | 2168 | 0878 | ISAUTH | |
| 2080 | 0820 | ISANT | | 2119 | 0847 | ISATI | (EQU) | 2169 | 0879 | ISAEF | |
| 2088 | 0828 | ISANI | | 2119 | 0847 | ISASP | (EQU) | 2170 | 087A | ISALCK | |
| 2096 | 0830 | ISANR | | 2119 | 0847 | ISAPS | (EQU) | 2171 | 087B | ISAVAR | |
| 2104 | 0838 | ISANV | | 2119 | 0847 | ISASI | (EQU) | 2172 | 087C | ISATMP | |
| 2112 | 0840 | ISAPP3 | | 2119 | 0847 | ISAAT | (EQU) | 2176 | 0880 | ISARCB | |
| 2116 | 0844 | ISARIN | (EQU) | 2119 | 0847 | ISADL | (EQU) | | | | |

## Alphabetical list of fields in CHAISA

| FIELD | DEC | HEX | | FIELD | DEC | HEX | | FIELD | DEC | HEX | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ISAABN | 2117 | 0845 | | ISAJLC | 2164 | 0874 | | ISAOR | 1600 | 0640 | |
| ISAABNF1 | 2117 | 0845 | (EQU) | ISAKEY | 0056 | 0038 | | ISAORE | 1612 | 064C | |
| ISAABNF2 | 2117 | 0845 | (EQU) | ISALC | 2001 | 07D1 | (EQU) | ISAORP | 1600 | 0640 | |
| ISAABNF3 | 2117 | 0845 | (EQU) | ISALCK | 2170 | 087A | | ISAORV | 1608 | 0648 | |
| ISAABNF4 | 2117 | 0845 | (EQU) | ISALOG | 1688 | 0698 | | ISAOS | 2008 | 07D8 | |
| ISAAI | 2000 | 07D0 | (EQU) | ISALP | 2118 | 0846 | (EQU) | ISAOT | 2032 | 07F0 | |
| ISAAP | 2000 | 07D0 | (EQU) | ISALS1 | 1760 | 06E0 | | ISAOV | 1648 | 0670 | |
| ISAAT | 2119 | 0847 | (EQU) | ISALS2 | 1880 | 0758 | | ISAOX | 2016 | 07E0 | |
| ISACC | 2001 | 07D1 | (EQU) | ISAMSA | 1712 | 06B0 | | ISAPCS | 2116 | 0844 | (EQU) |
| ISACF | 2118 | 0846 | (EQU) | ISANA | 2072 | 0818 | | ISAPF | 1720 | 06B8 | (EQU) |
| ISACI | 1682 | 0692 | (EQU) | ISANAS | 2124 | 084C | | ISAPIC | 1562 | 061A | |
| ISACNT | 0062 | 003E | | ISANI | 2088 | 0828 | | ISAPICT | 1564 | 061C | |
| ISACP | 2001 | 07D1 | | ISANP | 2048 | 0800 | | ISAPIF | 1560 | 0618 | |
| ISACPU | 2118 | 0846 | (EQU) | ISANPIR | 1832 | 0728 | (EQU) | ISAPIP | 1560 | 0618 | (EQU) |
| ISACSW | 0056 | 0038 | | ISANR | 2096 | 0830 | | ISAPIR | 1568 | 0620 | |
| ISACVP | 2144 | 0860 | | ISANS | 2056 | 0808 | | ISAPISA | 1560 | 0618 | |
| ISADF | 2118 | 0846 | (EQU) | ISANT | 2080 | 0820 | (EQU) | ISAPIV | 1560 | 0618 | |
| ISADL | 2119 | 0847 | (EQU) | ISANV | 2104 | 0838 | | ISAPI13 | 1568 | 0620 | |
| ISADO | 2001 | 07D1 | (EQU) | ISANX | 2064 | 0810 | | ISAPI14 | 1572 | 0624 | |
| ISADTY | 1680 | 0690 | | ISAN11 | 0048 | 0030 | (EQU) | ISAPM | 2001 | 07D1 | (EQU) |
| ISAD2 | 2118 | 0846 | (EQU) | ISAN12 | 0048 | 0030 | (EQU) | ISAPPIR | 2135 | 0857 | (EQU) |
| ISAEF | 2169 | 0879 | | ISAN13 | 0048 | 0030 | (EQU) | ISAPP2 | 2000 | 07D0 | (EQU) |
| ISAEU | 2001 | 07D1 | (EQU) | ISAN14 | 0048 | 0030 | (EQU) | ISAPP3 | 2112 | 0840 | |
| ISAFA | 2132 | 0854 | | ISAN15 | 0048 | 0030 | (EQU) | ISAPS | 2119 | 0847 | (EQU) |
| ISAFB | 2133 | 0855 | | ISAN16 | 0048 | 0030 | (EQU) | ISAPSF | 1832 | 0728 | |
| ISAFLG | 2116 | 0844 | | ISAN17 | 0048 | 0030 | (EQU) | ISAPT | 2000 | 07D0 | |
| ISAFO | 2001 | 07D1 | (EQU) | ISAN18 | 0048 | 0030 | (EQU) | ISAPV | 2000 | 07D0 | (EQU) |
| ISAF1 | 2116 | 0844 | | ISAN21 | 0048 | 0030 | (EQU) | ISAP1 | 2139 | 085B | |
| ISAF10 | 0057 | 0039 | | ISAN22 | 0048 | 0030 | (EQU) | ISAP2 | 2118 | 0846 | (EQU) |
| ISAF3 | 2118 | 0846 | | ISAN23 | 0048 | 0030 | (EQU) | ISAP3 | 2138 | 085A | |
| ISAF4 | 2119 | 0847 | | ISAN24 | 0048 | 0030 | (EQU) | ISARCB | 2176 | 0880 | |
| ISAF5 | 1682 | 0692 | | ISAN25 | 0048 | 0030 | (EQU) | ISARCL | 0058 | 003A | |
| ISAHLD | 2116 | 0844 | (EQU) | ISAN26 | 0048 | 0030 | (EQU) | ISARIN | 2116 | 0844 | (EQU) |
| ISAIC | 2004 | 07D4 | | ISAN27 | 0048 | 0030 | (EQU) | ISARS | 1616 | 0650 | |
| ISAIC1 | 0060 | 003C | | ISAN28 | 0048 | 0030 | (EQU) | ISARSP | 1684 | 0694 | |
| ISAIC2 | 0061 | 003D | | ISAOA | 2024 | 07E8 | | ISARTN | 1686 | 0696 | |
| ISAII | 2000 | 07D0 | (EQU) | ISAOI | 2040 | 07F8 | | ISASDS | 2156 | 086C | |
| ISAIN | 2002 | 07D2 | | ISAOLT | 2119 | 0847 | (EQU) | ISASF | 2001 | 07D1 | (EQU) |
| ISAIP | 1682 | 0692 | (EQU) | ISAOP | 2000 | 07D0 | | ISASHUT | 2116 | 0844 | (EQU) |

| FIELD | DEC | HEX | | FIELD | DEC | HEX | | FIELD | DEC | HEX |
|-------|-----|-----|---|-------|-----|-----|---|-------|-----|-----|
| ISASI | 2119 | 0847 | (EQU) | ISATDT | 2128 | 0850 | | ISA10 | 1780 | 06F4 |
| ISASLP | 2160 | 0870 | | ISATDY | 2152 | 0868 | | ISA11 | 1784 | 06F8 |
| ISASNS | 0048 | 0030 | | ISATI | 2119 | 0847 | (EQU) | ISA113 | 1764 | 06E4 |
| ISASN1 | 0048 | 0030 | | ISATMP | 2172 | 087C | | ISA114 | 1772 | 06EC |
| ISASN2 | 0048 | 0030 | | ISATR | 2000 | 07D0 | (EQU) | ISA115 | 1776 | 06F0 |
| ISASO | 1720 | 06B8 | | ISAUTH | 2168 | 0878 | | ISA12 | 1788 | 06FC |
| ISASOC | 1722 | 06BA | | ISAU1 | 1683 | 0693 | | ISA15 | 1800 | 0708 |
| ISASOF | 1720 | 06B8 | | ISAVAR | 2171 | 087B | | ISA2F0 | 1968 | 07B0 |
| ISASOI | 1724 | 06BC | | ISAVEF | 2118 | 0846 | (EQU) | ISA2F2 | 1976 | 07B8 |
| ISASP | 2119 | 0847 | (EQU) | ISAVLK | 2135 | 0857 | | ISA2F4 | 1984 | 07C0 |
| ISASPN | 2136 | 0858 | | ISAVLKCT | 2134 | 0856 | | ISA2F6 | 1992 | 07C8 |
| ISASPP | 2116 | 0844 | (EQU) | ISAVMP | 2120 | 0848 | | ISA2OP | 1960 | 07A8 |
| ISASR | 1728 | 06C0 | | ISAVS | 1656 | 0678 | | ISA2R | 1892 | 0764 |
| ISASSA | 1720 | 06B8 | | ISAVSC | 2116 | 0844 | (EQU) | ISA2SA | 1888 | 0760 |
| ISAS0R | 1740 | 06CC | | ISAWO | 2119 | 0847 | (EQU) | ISA20 | 1900 | 076C |
| ISAS1R | 1744 | 06D0 | | ISAXI | 2000 | 07D0 | (EQU) | ISA21 | 1904 | 0770 |
| ISAS13 | 1728 | 06C0 | | ISA1F0 | 1848 | 0738 | | ISA213 | 1884 | 075C |
| ISAS14 | 1732 | 06C4 | | ISA1F2 | 1856 | 0740 | | ISA214 | 1892 | 0764 |
| ISAS14R | 1732 | 06C4 | | ISA1F4 | 1864 | 0748 | | ISA215 | 1896 | 0768 |
| ISAS15R | 1736 | 06C8 | | ISA1F6 | 1872 | 0750 | | ISA22 | 1908 | 0774 |
| ISAS2R | 1748 | 06D4 | | ISA1OP | 1840 | 0730 | | ISA25 | 1920 | 0780 |
| ISAS3R | 1752 | 06D8 | | ISA1R | 1772 | 06EC | | UNUSED | 0049 | 0031 |
| ISAS4R | 1756 | 06DC | | ISA1SA | 1768 | 06E8 | | | | |

## Assembler listing of CHAISA

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|----------|-------------|--------|------|------|---------|
| 47 00000 | | CHAISA | DSECT | | --- INTERRUPT STORAGE |
| | | * | | | AREA --- I S A --- |
| 47 00000 | | | DS | 0D | |
| 47 00000 | | | DS | 12F | UNUSED |
| 47 00030 | | ISASNS | DS | D | SENSE DATA |
| | | *** | | | |

*** THE FOLLOWING DETAIL OF THE SENSE DATA FIELD
*APPLIES ONLY TO THE
*** 2702.  FOR OTHER DEVICES THE DEFINITION OF THE
*FIELD SHOULD BE
*** REDEFINED BY INSERTING CARDS IN THIS DSECT,
*BEGINNING WITH AN
*** ORG ISASNS CARD. THE ENTIRE EIGHT BYTES SHOULD
*BE DEFINED.

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|----------|-------------|--------|------|------|---------|
| 47 00030 | | | \|ORG\| | ISASNS | |
| 47 00030 | | ISASN1 | DS | XL1 | SENSE BYTE ZERO |
| 47 00030 | | ISAN11 | EQU | ISASN1 | 2702 COMMAND REJECT |
| | 00000080 | ISA11M | EQU | X'80' | 2702 COMMAND REJECT MASK |
| 47 00030 | | ISAN12 | EQU | ISASN1 | 2702 INTERVENTION REQUIRED |
| | 00000040 | ISA12M | EQU | X'40' | 2702 INTERV REQ MASK |
| 47 00030 | | ISAN13 | EQU | ISASN1 | 2702 BUS OUT CHECK |
| | 00000020 | ISA13M | EQU | X'20' | 2702 BUS OUT CHECK MASK |
| 47 00030 | | ISAN14 | EQU | ISASN1 | 2702 EQUIPMENT CHECK |
| | 00000010 | ISA14M | EQU | X'10' | 2702 EQUIPMENT CHECK MASK |
| 47 00030 | | ISAN15 | EQU | ISASN1 | 2702 DATA CHECK |
| | 00000008 | ISA15M | EQU | X'08' | 2702 DATA CHECK MASK |
| 47 00030 | | ISAN16 | EQU | ISASN1 | 2702 OVERRUN |
| | 00000004 | ISA16M | EQU | X'04' | 2702 OVERRUN MASK |
| 47 00030 | | ISAN17 | EQU | ISASN1 | 2702 RECEIVING CHECK |
| | 00000002 | ISA17M | EQU | X'02' | 2702 RECEIVING CHECK MASK |
| 47 00030 | | ISAN18 | EQU | ISASN1 | 2702 TIME OUT |
| | 00000001 | ISA18M | EQU | X'01' | 2702 TIME OUT MASK |
| 47 00031 | | | DS | CL7 | 2702 UNUSED |
| 47 00030 | | | \|ORG\| | ISASNS | SENSE DATA FOR 2701 |
| 47 00030 | | ISASN2 | DS | XL1 | SENSE BYTE ZERO |
| 47 00030 | | ISAN21 | EQU | ISASN2 | 2701 COMMAND REJECT |
| | 00000080 | ISA21M | EQU | X'80' | 2701 COMMAND REJECT MASK |
| 47 00030 | | ISAN22 | EQU | ISASN2 | 2701 INTERVENTION REQUIRED |
| | 00000040 | ISA22M | EQU | X'40' | INTERVENTION REQUIRED MASK |
| 47 00030 | | ISAN23 | EQU | ISASN2 | 2701 BUS OUT CHECK |
| | 00000020 | ISA23M | EQU | X'20' | 2701 BUS OUT CHECK MASK |

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|---|---|---|---|---|---|
| | 47 00030 | ISAN24 | EQU | ISASN2 | 2701 EQUIPMENT CHECK |
| | 00000010 | ISA24M | EQU | X'10' | 2701 EQUIPMENT CHECK MASK |
| | 47 00030 | ISAN25 | EQU | ISASN2 | 2701 DATA CHECK |
| | 00000008 | ISA25M | EQU | X'08' | 2701 DATA CHECK MASK |
| | 47 00030 | ISAN26 | EQU | ISASN2 | 2701 OVER RUN |
| | 00000004 | ISA26M | EQU | X'04' | 2701 OVER RUN MASK |
| | 47 00030 | ISAN27 | EQU | ISASN2 | 2701 LOST DATA |
| | 00000002 | ISA27M | EQU | X'02' | 2701 LOST DATA MASK |
| | 47 00030 | ISAN28 | EQU | ISASN2 | 2701 TIME OUT |
| | 00000001 | ISA28M | EQU | X'01' | 2701 TIME OUT MASK |
| 47 00038 | | ISACSW | DS | D | CHANNEL STATUS WORD |
| | 47 00038 | | \|ORG\| | ISACSW | |
| 47 00038 | | ISAKEY | DS | XL1 | CSW KEY |
| 47 00039 | | ISAF10 | DS | XL1 | UNUSED FOR RELATIVE |
| | | * | | | POSITIONING |
| 47 0003A | | ISARCL | DS | XL2 | RELATIVE CCW LOCATION DW |
| | | * | | | MOD |
| 47 0003C | | ISAIC1 | DS | XL1 | INTERRUPT CODE BYTE 1 |
| | 00000080 | ISAC11 | EQU | X'80' | ATTENTION |
| | 00000040 | ISAC12 | EQU | X'40' | STATUS MODIFIER |
| | 00000020 | ISAC13 | EQU | X'20' | CONTROL UNIT END |
| | 00000010 | ISAC14 | EQU | X'10' | BUSY |
| | 00000008 | ISAC15 | EQU | X'08' | CHANNEL END |
| | 00000004 | ISAC16 | EQU | X'04' | DEVICE END |
| | 00000002 | ISAC17 | EQU | X'02' | UNIT CHECK |
| | 00000001 | ISAC18 | EQU | X'01' | UNIT EXCEPTION |
| 47 0003D | | ISAIC2 | DS | XL1 | INTERRUPT CODE BYTE 2 |
| | 00000080 | ISAC21 | EQU | X'80' | PCI |
| | 00000040 | ISAC22 | EQU | X'40' | INCORRECT LENGTH |
| | 00000020 | ISAC23 | EQU | X'20' | PROGRAM CHECK |
| | 00000010 | ISAC24 | EQU | X'10' | PROTECTION CHECK |
| | 00000008 | ISAC25 | EQU | X'08' | CHANNEL DATA CHECK |
| | 00000004 | ISAC26 | EQU | X'04' | CHANNEL CONTROL CHECK |
| | 00000002 | ISAC27 | EQU | X'02' | INTERFACE CONTROL CHECK |
| | 00000001 | ISAC28 | EQU | X'01' | CHAINING CHECK |
| 47 0003E | | ISACNT | DS | H | BYTE COUNT |
| | 47 00618 | | \|ORG\| | *+1496 | |
| 47 00618 | | ISAPISA | DS | 0XL40 | PGM INT SHORT SAVE AREA |
| 47 00618 | | ISAPIV | DS | 0D | OLD PGM INT. VPSW |
| 47 00618 | | ISAPIF | DS | XL2 | FLAGS |
| | 47 00618 | ISAPIP | EQU | ISAPIF | PRIVILEGED STATUS INDICATOR |
| | 00000080 | ISAPIPM | EQU | X'80' | PRIVILEGED STATUS MASK |
| 47 0061A | | ISAPIC | DS | H | INTERRUPT CODE |
| 47 0061C | | ISAPICT | DS | F | INSTRUCTION COUNTER |
| 47 00620 | | ISAPIR | DS | 0XL32 | SHORT SAVE REG. SAVE AREA |
| | | * | | | 13 - 4 |
| 47 00620 | | ISAPI13 | DS | F | REGISTER 13 |
| 47 00624 | | ISAPI14 | DS | 7F | REGISTERS 14 TO 4 |
| 47 00640 | | ISAOR | DS | 0CL16 | RECOVERABLE DATA SET PAGING |
| | | * | | | ERROR VPSW |
| 47 00640 | | ISAORP | DS | D | OLD VPSW PORTION |
| 47 00648 | | ISAORV | DS | F | VM ADDRESS PORTION |
| 47 0064C | | ISAORE | DS | F | EXT. ADDRESS PORTION |
| 47 00650 | | ISARS | DS | 8F | SHORT SAVE AREA FOR RECOV. |
| | | * | | | DATA SET PAGING |
| 47 00670 | | ISAOV | DS | D | OLD VSS INTERRUPT VPSW |
| 47 00678 | | ISAVS | DS | 6F | SHORT SAVE AREA FOR VSS |
| | | * | | | INTERRUPTS |
| 47 00690 | | ISADTY | DS | XL1 | TERMINAL TYPE |
| | | * | | | NSRB 403 |
| | 00000001 | ISADTY1 | EQU | X'01' | 1050 PTTC/8 |
| | 00000002 | ISADTY2 | EQU | X'02' | 2741 CORRESPONDENCE |
| | 00000003 | ISADTY3 | EQU | X'03' | 2741 PTTC/8 |
| | 00000004 | ISADTY4 | EQU | X'04' | TELETYPE TTY35 |
| | 00000005 | ISADTY5 | EQU | X'05' | 1052-7 OPERATOR CONSOLE |
| 47 00691 | | | DS | XL1 | UNUSED |
| 47 00692 | | ISAF5 | DS | XL1 | 24 OR 32 BIT MODE FLAGS |
| | 47 00692 | ISACI | EQU | ISAF5 | CURRENT SYSTEM INDICATOR |

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|----------|-------------|--------|------|------|---------|
| | | * | | | (VMA) |
| | 00000002 | ISACIM | EQU | X'02' | CURRENT SYSTEM MASK |
| | | * | | | 1=ON |
| | 47 00692 | ISAIP | EQU | ISAF5 | CURRENT SYSTEM PACKING |
| | | * | | | INDICATOR (VMA) |
| | 00000008 | ISAIPM | EQU | X'08' | CURRENT SYSTEM PACKING MASK |
| | | * | | | 1=ON |

```
*************************************************************************
                       * TASK INTERRUPT HANDLING MACROS ARE REQUIRED TO
                       * REFER TO ISAU1
                       * WITH AN ABSOLUTE ADDRESS OF 1683 DECIMAL.
                       * THEREFORE, IF THIS
                       * CELL IS MOVED THOSE MACROS MUST BE REDEFINED.
```

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|----------|-------------|--------|------|------|---------|
| 47 00693 | | ISAU1 | DS | XL1 | 1683 U1 FLAG |
| | 00000080 | ISAU1M | EQU | X'80' | |

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*************************************************************************
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| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|----------|-------------|--------|------|------|---------|
| 47 00694 | | ISARSP | DS | H | RSPRV INSTRUCTION |
| 47 00696 | | ISARTN | DS | H | RTRN INSTRUCTION |
| 47 00698 | | ISALOG | DS | XL24 | 1688 CHANNEL LOGOUT |
| 47 006B0 | | ISAMSA | DS | F | LOCATION OF MINIMAL SAVE |
| | | * | | | AREA |
| 47 006B4 | | | DS | F | UNUSED |
| 47 006B8 | | ISASSA | DS | 0XL40 | 1720 SHORT SAVE AREA |
| 47 006B8 | | ISASO | DS | 0D | SHORT SAVE AREA OLD VIRTUAL |
| | | * | | | PSW |
| 47 006B8 | | ISASOF | DS | XL2 | 1720 FLAGS |
| | 47 006B8 | ISAPF | EQU | ISASOF | PRIVILEGED STATUS IND. |
| | 00000080 | ISAPFM | EQU | X'80' | |
| 47 006BA | | ISASOC | DS | H | INTERRUPT CODE |
| 47 006BC | | ISASOI | DS | F | INSTRUCTION COUNTER |
| 47 006C0 | | ISASR | DS | 0XL32 | 1728  SHORT SAVE REG. SAVE |
| | | * | | | AREA 13-4 |
| 47 006C0 | | ISAS13 | DS | 1F | REGISTER 13 |
| 47 006C4 | | ISAS14 | DS | 7F | REGISTERS 14 TO 4 |
| | 47 006C4 | | \|ORG\| | ISAS14 | |
| 47 006C4 | | ISAS14R | DS | F | REGISTER 14 |
| 47 006C8 | | ISAS15R | DS | F | REGISTER 15 |
| 47 006CC | | ISAS0R | DS | F | REGISTER 0 |
| 47 006D0 | | ISAS1R | DS | F | REGISTER 1 |
| 47 006D4 | | ISAS2R | DS | F | REGISTER 2 |
| 47 006D8 | | ISAS3R | DS | F | REGISTER 3 |
| 47 006DC | | ISAS4R | DS | F | REGISTER 4 |
| 47 006E0 | | ISALS1 | DS | 0XL120 | 1760  LONG SAVE AREA 1 |
| 47 006E0 | | | DS | 1F | LENGTH OF LONG SAVE AREA - |
| | | * | | | 30 WDS |
| 47 006E4 | | ISA113 | DS | 1F | REG. 13 SAVE AREA |
| 47 006E8 | | ISA1SA | DS | 1F | SAVE AREA OF CALLED PROGRAM |
| 47 006EC | | ISA1R | DS | 0XL28 | 1772 BEGINNING OF REG SAVE |
| | | * | | | AREA |
| 47 006EC | | ISA114 | DS | 1F | REGISTER 14 |
| 47 006F0 | | ISA115 | DS | 1F | REGISTER 15 |
| 47 006F4 | | ISA10 | DS | 1F | REGISTER  0 |
| 47 006F8 | | ISA11 | DS | 1F | REGISTER  1 |
| 47 006FC | | ISA12 | DS | 3F | REGISTER  2 - 4 |
| 47 00708 | | ISA15 | DS | 8F | REGISTER  5 - 12 |
| 47 00728 | | ISAPSF | DS | XL1 | FLAGS SAVED IN LONG SAVE |
| | | * | | | AREA |
| | 47 00728 | ISANPIR | EQU | ISAPSF | NON-PRIV PROG INTR FLAG |
| | 00000080 | ISANPIRM | EQU | X'80' | RECOVERY=1  NO RECOVERY=0 |
| 47 00729 | | | DS | XL3 | UNUSED |
| 47 0072C | | | DS | 1F | UNUSED |
| 47 00730 | | ISA1OP | DS | D | OLD PSW SAVE AREA |
| 47 00738 | | ISA1F0 | DS | D | FP REGISTER 0 |
| 47 00740 | | ISA1F2 | DS | D | FP REGISTER 2 |
| 47 00748 | | ISA1F4 | DS | D | FP REGISTER 4 |
| 47 00750 | | ISA1F6 | DS | D | FP REGISTER 6 |
| 47 00758 | | ISALS2 | DS | 0XL120 | 1880 LONG SAVE AREA 2 |
| 47 00758 | | | DS | 1F | LENGTH OF LONG SAVE AREA - |

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|---|---|---|---|---|---|
| | | * | | | 30 WDS |
| 47 0075C | | ISA213 | DS | 1F | REG. 13 SAVE AREA |
| 47 00760 | | ISA2SA | DS | 1F | SAVE AREA OF CALLED PROGRAM |
| 47 00764 | | ISA2R | DS | 0XL28 | 1892BEGINNING OF REG SAVE |
| | | * | | | AREA |
| 47 00764 | | ISA214 | DS | 1F | REGISTER 14 |
| 47 00768 | | ISA215 | DS | 1F | REGISTER 15 |
| 47 0076C | | ISA20 | DS | 1F | REGISTER  0 |
| 47 00770 | | ISA21 | DS | 1F | REGISTER  1 |
| 47 00774 | | ISA22 | DS | 3F | REGISTER  2 - 4 |
| 47 00780 | | ISA25 | DS | 8F | REGISTER  5 - 12 |
| 47 007A0 | | | DS | 2F | NOT USED |
| 47 007A8 | | ISA2OP | DS | D | OLD PSW SAVE AREA |
| 47 007B0 | | ISA2F0 | DS | D | FP REGISTER 0 |
| 47 007B8 | | ISA2F2 | DS | D | FP REGISTER 2 |
| 47 007C0 | | ISA2F4 | DS | D | FP REGISTER 4 |
| 47 007C8 | | ISA2F6 | DS | D | FP REGISTER 6 |
| 47 007D0 | | ISAOP | DS | 0D | OLD PROGRAM VIRTUAL PSW |
| 47 007D0 | | ISAPT | DS | X | STATE AND MASK FLAG I3472 |
| | 47 007D0 | ISAPV | EQU | ISAPT | PRIVLEGE STATE FLAG I3472 |
| | 00000080 | ISAPVM | EQU | X'80' | NON-PRIVLEGED=1 I3472 |
| | 47 007D0 | ISAPP2 | EQU | ISAPT | PAGING INTERRUPT FLAG I3472 |
| | 00000020 | ISAPP2M | EQU | X'20' | PAGING INTERRUPT MASK I3472 |
| | 47 007D0 | ISAAP | EQU | ISAPT | ASYNCRONOUS PROGRAM INTERRUPT I3472 |
| | 00000010 | ISAAPM | EQU | X'10' | PROGRAM INTERRUPT MASK I3472 |
| | 0000001F | ISASTM | EQU | X'1F' | PROGRAM INTERRUPT MASK I3472 |
| | 47 007D0 | ISAXI | EQU | ISAPT | EXTERNAL INTERRUPT FLAG I3472 |
| | 00000008 | ISAXIM | EQU | X'08' | EXTERNAL INTERRUPT MASK I3472 |
| | 47 007D0 | ISAAI | EQU | ISAPT | ASYNCHRONOUS INTERRUPT MASK |
| | 00000004 | ISAAIM | EQU | X'04' | |
| | 47 007D0 | ISATR | EQU | ISAPT | TIMER INTERRUPT MASK |
| | 00000002 | ISATRM | EQU | X'02' | |
| | 47 007D0 | ISAII | EQU | ISAPT | I/O INTERRUPT MASK |
| | 00000001 | ISAIIM | EQU | X'01' | |
| 47 007D1 | | ISACP | DS | XL1 | ILC,CC,AND PROGRAM MASK |
| | 47 007D1 | ISALC | EQU | ISACP | INSTRUCTION LENGTH CODE (ILC) |
| | 000000C0 | ISALCM | EQU | X'C0' | |
| | 47 007D1 | ISACC | EQU | ISACP | CONDITION CODE (CC) |
| | 00000030 | ISACCM | EQU | X'30' | |
| | 47 007D1 | ISAPM | EQU | ISACP | PROGRAM MASK |
| | 0000000F | ISAPMM | EQU | X'0F' | |
| | 47 007D1 | ISAFO | EQU | ISACP | FLOATING POINT OVERFLOW MASK |
| | 00000008 | ISAFOM | EQU | X'08' | |
| | 47 007D1 | ISADO | EQU | ISACP | DECIMAL OVERFLOW MASK |
| | 00000004 | ISADOM | EQU | X'04' | |
| | 47 007D1 | ISAEU | EQU | ISACP | EXPONENTIAL UNDERFLOW MASK |
| | 00000002 | ISAEUM | EQU | X'02' | |
| | 47 007D1 | ISASF | EQU | ISACP | SIGNIFICANCE MASK |
| | 00000001 | ISASFM | EQU | X'01' | |
| 47 007D2 | | ISAIN | DS | XL2 | INTERRUPT CODE |
| 47 007D4 | | ISAIC | DS | F | INSTRUCTION COUNTER |
| 47 007D8 | | ISAOS | DS | D | OLD SUPERVISOR CALL VIRTUAL PSW |
| 47 007E0 | | ISAOX | DS | D | OLD EXTERNAL VIRTUAL PSW |
| 47 007E8 | | ISAOA | DS | D | OLD ASYNCHRONOUS I/O VIRTUAL PSW |

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|---|---|---|---|---|---|
| 47 007F0 | | ISAOT | DS | D | OLD TIMER VIRTUAL PSW |
| 47 007F8 | | ISAOI | DS | D | OLD SYNCHRONOUS I/O VIRTUAL |
| | | * | | | PSW |
| 47 00800 | | ISANP | DS | D | NEW PROGRAM VIRTUAL PSW |
| 47 00808 | | ISANS | DS | D | NEW SUPERVISOR CALL VIRTUAL |
| | | * | | | PSW |
| 47 00810 | | ISANX | DS | D | NEW EXTERNAL VIRTUAL PSW |
| 47 00818 | | ISANA | DS | D | NEW ASYNCHRONOUS I/O |
| | | * | | | VIRTUAL PSW |
| 47 00820 | | ISANT | DS | D | NEW TIMER VIRTUAL PSW |
| 47 00828 | | ISANI | DS | D | NEW SYNCHRONOUS I/O VIRTUAL |
| | | * | | | PSW |
| 47 00830 | | ISANR | DS | D | NEW RECOV. DATA SET PAGING |
| | | * | | | VPSW |
| 47 00838 | | ISANV | DS | D | NEW VSS VPSW |
| 47 00840 | | ISAPP3 | DS | F | PUSHDOWN POINTER FOR TYPE-3 |
| | | * | | | LINKAGE |
| 47 00844 | | ISAFLG | DS | 0F | FULL WORD OF FLAGS |
| 47 00844 | | ISAF1 | DS | XL1 | 2116  FLAG BYTE 1 |
| | 47 00844 | ISAPCS | EQU | ISAF1 | PCS PROGRAM INTERRUPT FLAG |
| | 00000080 | ISAPCSM | EQU | X'80' | PCS PROGRAM INTERRUPT MASK |
| | 47 00844 | ISAHLD | EQU | ISAF1 | SYSIN TERMINAL IS BEING |
| | | * | | | HELD      N393 |
| | 00000040 | ISAHLDM | EQU | X'40' | N393 |
| | 47 00844 | ISASPP | EQU | ISAF1 | SPECIAL PRIVILEGE PROGRAM |
| | | * | | | FLAG |
| | 00000020 | ISASPPM | EQU | X'20' | SPECIAL PRIVILEGE PROGRAM |
| | | * | | | MASK |
| | 47 00844 | ISASHUT | EQU | ISAF1 | FORCED SHUTDOWN FLAG |
| | 00000010 | ISASHUTM | EQU | X'10' | FORCED SHUTDOWN MASK |
| | 47 00844 | ISAVSC | EQU | ISAF1 | VSS CONNECTED FLAG |
| | 00000008 | ISAVSCM | EQU | X'08' | VSS CONNECTED MASK |
| | 47 00844 | ISARIN | EQU | ISAF1 | ITI RESET FLAG |
| | 00000004 | ISARINM | EQU | X'04' | ITI RESET MASK |
| 47 00845 | | ISAABN | DS | XL1 | ABEND FLAGS |
| | 47 00845 | ISAABNF1 | EQU | ISAABN | ABEND IN TASK BEING CREATED |
| | 00000080 | ISAABN1M | EQU | X'80' | |
| | 47 00845 | ISAABNF2 | EQU | ISAABN | RECURSION IN COMPCODE 2 |
| | | * | | | ABEND |
| | 00000002 | ISAABN2M | EQU | X'02' | |
| | 47 00845 | ISAABNF3 | EQU | ISAABN | LOGOFF IN PROCESS |
| | 00000004 | ISAABN3M | EQU | X'04' | |
| | 47 00845 | ISAABNF4 | EQU | ISAABN | RECURSION IN COMPCODE ABEND |
| | | * | | | 1 |
| | 00000001 | ISAABN4M | EQU | X'01' | |
| | 00000083 | ISAABNM | EQU | X'83' | ABEND IN PROCESS |
| 47 00846 | | ISAF3 | DS | XL1 | 2118  FLAG BYTE 3 |
| | 47 00846 | ISACPU | EQU | ISAF3 | CPU NUMBER (2 BITS) |
| | 000000C0 | ISACPUM | EQU | X'C0' | CPU NUMBER MASK |
| | 47 00846 | ISAP2 | EQU | ISAF3 | P2 FLAG - DATA SET PAGING |
| | | * | | | INT. |
| | 00000020 | ISAP2M | EQU | X'20' | |
| | 47 00846 | ISAD2 | EQU | ISAF3 | SECOND IMPLICIT DYNAMIC |
| | | * | | | LOAD FL |
| | 00000010 | ISAD2M | EQU | X'10' | |
| | 47 00846 | ISADF | EQU | ISAF3 | DYNAMIC LOADER BIT |
| | 00000008 | ISADFM | EQU | X'08' | |
| | 47 00846 | ISALP | EQU | ISAF3 | LOGON IN PROGRESS FLAG |
| | 00000004 | ISALPM | EQU | X'04' | |
| | 47 00846 | ISAVEF | EQU | ISAF3 | VSS ACTIVE FLAG |
| | 00000002 | ISAVEFM | EQU | X'02' | |
| | 47 00846 | ISACF | EQU | ISAF3 | CLEANUP FLAG |
| | 00000001 | ISACFM | EQU | X'01' | |
| 47 00847 | | ISAF4 | DS | XL1 | FLAG BYTE 4 |
| | 47 00847 | ISAOLT | EQU | ISAF4 | INTERLOCK FOR OLTS |
| | 00000080 | ISAOLTM | EQU | X'80' | |
| | 47 00847 | ISAWO | EQU | ISAF4 | |
| | 00000040 | ISAWOM | EQU | X'40' | |

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|---|---|---|---|---|---|
| | 47 00847 | ISADL | EQU | ISAF4 | IMPLICIT DYNAMIC LINKAGE |
| | | * | | | FLAG |
| | 00000020 | ISADLM | EQU | X'20' | |
| | 47 00847 | ISAAT | EQU | ISAF4 | ATTENTION FLAG |
| | 00000010 | ISAATM | EQU | X'10' | |
| | 47 00847 | ISASI | EQU | ISAF4 | SYSTEM INDICATOR (VMA) |
| | 00000008 | ISASIM | EQU | X'08' | |
| | 47 00847 | ISAPS | EQU | ISAF4 | PUBLIC SEGMENT INDICATOR |
| | | * | | | (VMA) |
| | 00000004 | ISAPSM | EQU | X'04' | |
| | 47 00847 | ISASP | EQU | ISAF4 | SYSTEM PACKING PARAMER |
| | | * | | | (VMA) |
| | 00000002 | ISASPM | EQU | X'02' | |
| | 47 00847 | ISATI | EQU | ISAF4 | TASK INITIATION FLAG |
| | | * | | | 1 = ON |
| | 00000001 | ISATIM | EQU | X'01' | |
| 47 00848 | | | DS | 0F | |
| 47 00848 | | ISAVMP | DS | F | VIRTUAL MEMORY PACKING |
| | | * | | | ORIGIN |
| 47 0084C | | ISANAS | DS | XL2 | NEXT AVAILABLE SEGMENT |
| | | * | | | I6235 |
| 47 0084E | | | DS | XL2 | RESERVED |
| | | * | | | I6235 |
| 47 00850 | | ISATDT | DS | F | TDT ORIGIN - DATA |
| | | * | | | MANAGEMENT |
| 47 00854 | | ISAFA | DS | XL1 | 2132  FLAG A |
| 47 00855 | | ISAFB | DS | XL1 | 2133  FLAG B |
| 47 00856 | | ISAVLKCT | DS | XL1 | VAM INTERLOCK HELD COUNT |
| 47 00857 | | ISAVLK | DS | XL1 | VAM INTERLOCK WAIT FLAG |
| | 00000080 | ISAVLKM | EQU | X'80' | VAM INTERLOCK WAIT MASK |
| | 47 00857 | ISAPPIR | EQU | ISAVLK | PRIV PROG INTR FLAG |
| | 00000040 | ISAPPIRM | EQU | X'40' | RECOVERY=1  NO RECOVERY=0 |
| 47 00858 | | ISASPN | DS | H | SHARED PAGE TABLE NUMBER OF |
| | | * | | | PUB SEG |
| 47 0085A | | ISAP3 | DS | C | P3 FLAG--ONE BYTE COUNTER |

**************************************************************************
```
                          * TASK INTERRUPT HANDLING MACROS ARE REQUIRED TO
                          * REFER TO ISAP1
                          * WITH AN ABSOLUTE ADDRESS OF 2139 DECIMAL.
                          * THEREFORE, IF THIS
                          * CELL IS MOVED THOSE MACROS MUST BE REDEFINED.
```

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|---|---|---|---|---|---|
| 47 0085B | | ISAP1 | DS | XL1 | P1 FLAG |
| | 00000080 | ISAP1M | EQU | X'80' | |
| 47 0085C | | | DS | F | UNUSED |
| 47 00860 | | ISACVP | DS | D | CURRENT VIRTUAL PSW (COPY) |
| 47 00868 | | ISATDY | DS | F | POINTER TO DYNAMIC LOADER |
| | | * | | | TABLE |
| 47 0086C | | ISASDS | DS | F | POINTER TO SDST |
| 47 00870 | | ISASLP | DS | F | SYSLIB DCB |
| 47 00874 | | ISAJLC | DS | F | JOBLIB DCB CHAIN |
| 47 00878 | | ISAUTH | DS | XL1 | 2168 AUTHORITY CODE |
| 47 00879 | | ISAEF | DS | XL1 | ENTER FLAG -- ONE BYTE |
| | | * | | | COUNTER |
| 47 0087A | | ISALCK | DS | XL1 | 2170  TASK INTERRUPT |
| | | * | | | INHIBITION LOCK BYTE |
| 47 0087B | | ISAVAR | DS | XL1 | VARIABLE LENGTH SEGMENT |
| | | * | | | INCRMNT |
| 47 0087C | | ISATMP | DS | F | POINTER TO TASK MONITOR |
| | | * | | | PSECT |
| 47 00880 | | ISARCB | DS | 240D | IORCB AREA |

# Internal Symbol Dictionary (CHAISD)

The Internal Symbol Dictionary (ISD) is used by the program checkout subsystem (PCS) for processing checkout statements.

An ISD is produced by the Assembler, FORTRAN Compiler, or Linkage Editor. The Assembler and FORTRAN ISDs contain a section name table identifying control sections by name and version, and a symbol table listing relocatable values. The Assembler ISD maintains a using table containing USING and DROP statements. The FORTRAN ISD maintains a number table containing an entry for each source statement and offset in a FORTRAN program.

The Linkage Editor ISD contains a series of control sections listing the output control section name, the number of these output control sections, and the name and displacement of the input control section.

The ISD resides in virtual storage and is aligned on word boundaries.

## CHAISD Storage map

| DEC | HEX | | | |
|-----|-----|--------|--------|--------|
| 0 | 0 | ISDTYP | ISDLVL | ISDLNG |
| 8 | 8 | ISDDST | | ISDNSN |
| 16 | 10 | ISDNUT | | ISDNSM |

ORG ISDNUT

| DEC | HEX | |
|-----|-----|--------|
| 16 | 10 | ISDNST |

ORG ISDDST

| DEC | HEX | | |
|-----|-----|--------------|--------|
| 8 | 8 | ISDDPI | ISDOMN |
| 16 | 10 | ISDOMN (CONT) | ISDNIM |

ORG CHAISD

| DEC | HEX | |
|-----|-----|--------|
| 0 | 0 | ISDSNM |
| 8 | 8 | ISDVID |

ORG CHAISD

| DEC | HEX | | | | | |
|-----|-----|--------|--------|--------|---------|--------|
| 0 | 0 | ISDSXN | ISDDIS | ISDFLG | UNNAMED | ISDSNR |
| 8 | 8 | ISDBAS | | | | |

ORG CHAISD

| DEC | HEX | | | | | |
|-----|-----|--------|--------|--------|--------|--------|
| 0 | 0 | ISDSMN | | | | |
| 8 | 8 | ISDSTP | ISDNDM | ISDELN | ISDSNO | ISDDCS |

```
DEC    HEX

ORG  ISDSNO


12      C   |                            |          ISDIMV           |
           |                            |                           |
16     10| |         ISDSLN             |          ISDDMF           |
           |                            |                           |


ORG  CHAISD


 0      0| |         ISDSTN             |          ISDSDI           |
           |                            |                           |


ORG  CHAISD


 0      0| |                          ISDIMN                        |
           |                                                        |
 8      8| |         ISDDNX             |          ISDDIM           |
           |                            |                           |
16     10| |         ISDOCS             |
           |                            |


ORG  CHAISD


 0      0| |                          ISDCSN                        |
           |                                                        |
 8      8| |         ISDNCS             |
           |                            |


ORG  CHAISD


 0      0| |                          ISDINM                        |
           |                                                        |
 8      8| |         ISDTXT             |
           |                            |
```
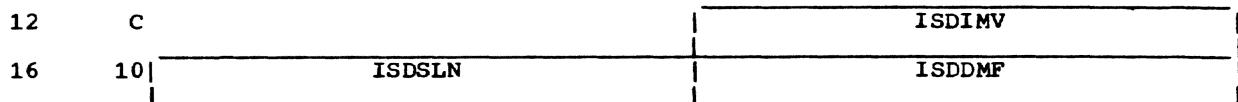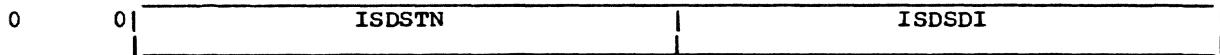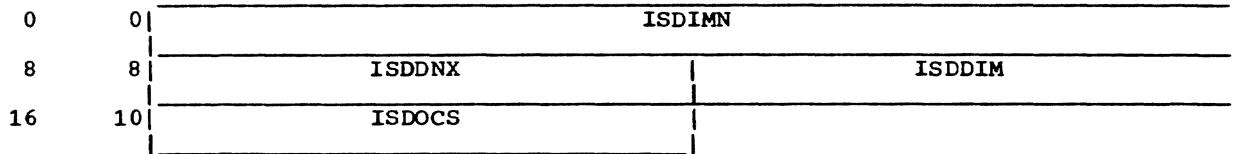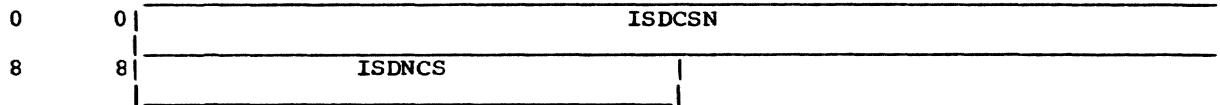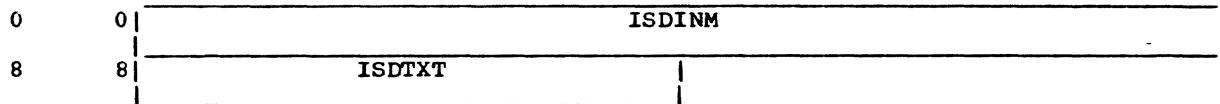
## Fields in CHAISD -- by displacement

| DEC | HEX | FIELD | DEC | HEX | FIELD | DEC | HEX | FIELD |
|-----|-----|-------|-----|-----|-------|-----|-----|-------|
| 0000 | 0000 | ISDINM | 0001 | 0001 | ISDDIS | 0010 | 000A | ISDELN |
| 0000 | 0000 | ISDICS | 0002 | 0002 | ISDLVL | 0012 | 000C | ISDDIM |
| 0000 | 0000 | ISDCSN | 0004 | 0004 | ISDSDI | 0012 | 000C | ISDIMV |
| 0000 | 0000 | ISDCSH | 0004 | 0004 | ISDFLG | 0012 | 000C | ISDSNO |
| 0000 | 0000 | ISDIMN | 0004 | 0004 | ISDLNG | 0012 | 000C | ISDOMN |
| 0000 | 0000 | ISDIMH | 0007 | 0007 | ISDSNR | 0012 | 000C | ISDNSN |
| 0000 | 0000 | ISDSTN | 0008 | 0008 | ISDTXT | 0013 | 000D | ISDDCS |
| 0000 | 0000 | ISDSNT | 0008 | 0008 | ISDNCS | 0016 | 0010 | ISDOCS |
| 0000 | 0000 | ISDSMN | 0008 | 0008 | ISDDNX | 0016 | 0010 | ISDSLN |
| 0000 | 0000 | ISDSYM | 0008 | 0008 | ISDSTP | 0016 | 0010 | ISDNST |
| 0000 | 0000 | ISDSXN | 0008 | 0008 | ISDBAS | 0016 | 0010 | ISDNUT |
| 0000 | 0000 | ISDUSE | 0008 | 0008 | ISDVID | 0020 | 0014 | ISDDMF |
| 0000 | 0000 | ISDSNM | 0008 | 0008 | ISDDPI | 0020 | 0014 | ISDNIM |
| 0000 | 0000 | ISDSCT | 0008 | 0008 | ISDDST | 0020 | 0014 | ISDNSM |
| 0000 | 0000 | ISDTYP | 0009 | 0009 | ISDNDM | | | |

## Alphabetical list of fields in CHAISD

| FIELD | DEC | HEX | FIELD | DEC | HEX | FIELD | DEC | HEX |
|-------|------|------|-------|------|------|-------|------|------|
| ISDBAS | 0008 | 0008 | ISDIMV | 0012 | 000C | ISDSLN | 0016 | 0010 |
| ISDCSH | 0000 | 0000 | ISDINM | 0000 | 0000 | ISDSMN | 0000 | 0000 |
| ISDCSN | 0000 | 0000 | ISDLNG | 0004 | 0004 | ISDSNM | 0000 | 0000 |
| ISDDCS | 0013 | 000D | ISDLVL | 0002 | 0002 | ISDSNO | 0012 | 000C |
| ISDDIM | 0012 | 000C | ISDNCS | 0008 | 0008 | ISDSNR | 0007 | 0007 |
| ISDDIS | 0001 | 0001 | ISDNDM | 0009 | 0009 | ISDSNT | 0000 | 0000 |
| ISDDMF | 0020 | 0014 | ISDNIM | 0020 | 0014 | ISDSTN | 0000 | 0000 |
| ISDDNX | 0008 | 0008 | ISDNSM | 0020 | 0014 | ISDSTP | 0008 | 0008 |
| ISDDPI | 0008 | 0008 | ISDNSN | 0012 | 000C | ISDSXN | 0000 | 0000 |
| ISDDST | 0008 | 0008 | ISDNST | 0016 | 0010 | ISDSYM | 0000 | 0000 |
| ISDELN | 0010 | 000A | ISDNUT | 0016 | 0010 | ISDTXT | 0008 | 0008 |
| ISDFLG | 0004 | 0004 | ISDOCS | 0016 | 0010 | ISDTYP | 0000 | 0000 |
| ISDICS | 0000 | 0000 | ISDOMN | 0012 | 000C | ISDUSE | 0000 | 0000 |
| ISDIMH | 0000 | 0000 | ISDSCT | 0000 | 0000 | ISDVID | 0008 | 0008 |
| ISDIMN | 0000 | 0000 | ISDSDI | 0004 | 0004 |  |  |  |

## Assembler listing of CHAISD

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|----------|-------------|--------|------|------|---------|
|  | 48 00000 | CHAISD | DSECT |  | ISD HEADING |
|  |  | * |  |  | INTERNAL SYMBOL DICTIONARY |
| 48 00000 |  | ISDTYP | DS | H | TYPE |
|  | 00000000 | ISDLED | EQU | 0 | LINKAGE EDITOR |
|  | 00000004 | ISDASM | EQU | 4 | ASSEMBLER |
|  | 00000008 | ISDFOR | EQU | 8 | FORTRAN |
| 48 00002 |  | ISDLVL | DS | H | LEVEL |
| 48 00004 |  | ISDLNG | DS | F | LENGTH |
| 48 00008 |  | ISDDST | DS | F | DELTA TO SYMBOL TABLE |
| 48 0000C |  | ISDNSN | DS | F | NO. OF SECTION NAMES |
| 48 00010 |  | ISDNUT | DS | F | NO. OF USING TABLES |
|  | 48 00010 |  | \|ORG\| | ISDNUT |  |
| 48 00010 |  | ISDNST | DS | F | NO. OF STATEMENT NOS. |
| 48 00014 |  | ISDNSM | DS | F | NO. OF SYMBOLS |
|  | 48 00008 |  | \|ORG\| | ISDDST |  |
| 48 00008 |  | ISDDPI | DS | F | DELTA TO PRECEDING ISD |
| 48 0000C |  | ISDOMN | DS | CL8 | OUTPUT MODULE NAME |
| 48 00014 |  | ISDNIM | DS | F | NUMB. OF INPUT MODULES |
|  | 00000018 | ISDHSZ | EQU | *-CHAISD | SIZE OF ISD HEADING |
|  | 48 00000 |  | \|ORG\| | CHAISD |  |
| 48 00000 |  | ISDSCT | DS | 0F | SECTION NAME TBL |
| 48 00000 |  | ISDSNM | DS | CL8 | SECTION NAME |
| 48 00008 |  | ISDVID | DS | CL8 | VERSION ID |
|  | 00000010 | ISDSSZ | EQU | *-ISDSCT | SIZE OF SECTION NAME TABLE |
|  | 48 00000 |  | \|ORG\| | CHAISD |  |
| 48 00000 |  | ISDUSE | DS | 0F | USING TABLE |
| 48 00000 |  | ISDSXN | DS | XL1 | SECTION NUMBER |
| 48 00001 |  | ISDDIS | DS | XL3 | DISPLACEMENT |
|  | 00000004 | ISDUHS | EQU | *-ISDUSE | SIZE OF USING TABLE HEADER |
| 48 00004 |  | ISDFLG | DS | XL1 | UNUSED/ABS FLAGS |
|  | 00000080 | ISDUNU | EQU | X'80' | UNUSED BIT |
|  | 00000001 | ISDABS | EQU | X'01' | ABSOLUTE |
|  | 00000081 | ISDUAB | EQU | X'81' | BOTH |
| 48 00005 |  |  | DS | XL2 | NOT USED |
| 48 00007 |  | ISDSNR | DS | XL1 | SECTION NUMBER REGISTER 1 |
|  |  | * |  |  | ETC |
| 48 00008 |  | ISDBAS | DS | F | BASE VALUE OR DISP |
|  | 00000008 | ISDUES | EQU | *-ISDFLG | SIZE OF USING TABLE ENTRY |
|  | 48 00000 |  | \|ORG\| | CHAISD |  |
| 48 00000 |  | ISDSYM | DS | 0F | SYMBOL TABLE |
| 48 00000 |  | ISDSMN | DS | CL8 | NAME |
| 48 00008 |  | ISDSTP | DS | XL1 | TYPE |
|  | 00000001 | ISDINS | EQU | 1 | INSTRUCTION |
|  | 00000002 | ISDEQU | EQU | 2 | IMMEDIATE VALUE (EQUATE) |
|  | 00000003 | ISDSNA | EQU | 3 | SECTION NAME |
|  | 00000004 | ISDINT | EQU | 4 | INTEGER CONSTANT |
|  | 00000005 | ISDREL | EQU | 5 | REAL NUMBER |

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|----------|-------------|--------|------|------|---------|
|  | 00000006 | ISDCHC | EQU | 6 | CHAR. CONSTANT |
|  | 00000007 | ISDHEX | EQU | 7 | HEX. CONSTANT |
|  | 00000008 | ISDBIN | EQU | 8 | BINARY CONSTANT |
|  | 00000009 | ISDPAC | EQU | 9 | PACKED DECIMAL CONSTANT |
|  | 0000000A | ISDZON | EQU | 10 | ZONED DECIMAL CONSTANT |
|  | 0000000B | ISDSAD | EQU | 11 | S ADCON |
|  | 0000000C | ISDOTH | EQU | 12 | OTHER ADCON |
|  | 0000000D | ISDCOM | EQU | 13 | COMPLEX |
|  | 0000000E | ISDLOG | EQU | 14 | LOGICAL |
|  | 00000080 | ISDDSB | EQU | X'80' | DSECT BIT |
|  | 00000040 | ISDDUM | EQU | X'40' | DUMMY VARIABLE IN SUBRO ARG |
| 48 00009 |  | ISDNDM | DS | XL1 | NO. OF DIMENSIONS |
| 48 0000A |  | ISDELN | DS | H | ENTRY LENGTH |
| 48 0000C |  | ISDSNO | DS | XL1 | SECTION NO. |
| 48 0000D |  | ISDDCS | DS | XL3 | DISP. IN CTL SECTION |
|  | 48 0000C |  | |ORG| | ISDSNO |  |
| 48 0000C |  | ISDIMV | DS | F | IMMEDIATE VALUE |
|  | 0000000C | ISDDIV | EQU | ISDIMV-ISDSYM | POSN. OF IMMED. VALUE |
|  |  | ♦ |  |  | ENTRY |
| 48 00010 |  | ISDSLN | DS | F | SYMBOL LENGTH |
| 48 00014 |  | ISDDMF | DS | F | DIMENSION FACTOR |
|  | 00000018 | ISDSTS | EQU | *-ISDSYM | SIZE OF SYMBOL TABLE |
|  | 48 00000 |  | |ORG| | CHAISD |  |
| 48 00000 |  | ISDSNT | DS | 0F | STATEMENT NO. TABLE |
| 48 00000 |  | ISDSTN | DS | F | STMT NO. |
| 48 00004 |  | ISDSDI | DS | F | DISPLACEMENT |
|  | 00000008 | ISDSNS | EQU | *-ISDSNT | SIZE OF STMNT NO. TABLE |
|  | 48 00000 |  | |ORG| | CHAISD |  |
| 48 00000 |  | ISDIMH | DS | 0F | INPUT MODULE HEADING |
| 48 00000 |  | ISDIMN | DS | CL8 | INPUT MODULE NAME |
| 48 00008 |  | ISDDNX | DS | F | DELTA TO NEXT INPUT MODULE |
| 48 0000C |  | ISDDIM | DS | F | DELTA TO ISD FOR MODULE |
| 48 00010 |  | ISDOCS | DS | F | NO OF OUTPUT CS FROM INPUT |
|  |  | ♦ |  |  | MOD |
|  | 00000014 | ISDMHS | EQU | *-ISDIMH | SIZE OF MODULE HEADING |
|  | 48 00000 |  | |ORG| | CHAISD |  |
| 48 00000 |  | ISDCSH | DS | 0F | OUTPUT CTL SECTION |
| 48 00000 |  | ISDCSN | DS | CL8 | OUTPUT CONTROL SECTION NAME |
| 48 00008 |  | ISDNCS | DS | F | NUMB OF INPUT C.S. |
|  | 0000000C | ISDCSS | EQU | *-ISDCSH | SIZE OF CTL SECTION HEADING |
|  | 48 00000 |  | |ORG| | CHAISD |  |
| 48 00000 |  | ISDICS | DS | 0F | INPUT CTL SECTION |
| 48 00000 |  | ISDINM | DS | CL8 | NAME |
| 48 00008 |  | ISDTXT | DS | F | TEXT ORIGIN-RELATIVE TO |
|  |  | ♦ |  |  | O.C.S. |
|  | 0000000C | ISDISZ | EQU | *-ISDICS | SIZE OF INPUT CTL SECTION |

## Task Monitor Interruption Table (CHAITB)

The Task Monitor Interruption Table (ITB) maintains information for queuing and dispatching interruptions.

ITB, located in the Task Monitor PSECT, contains two sections; the preface, and the body. The preface maintains request activity information, and necessary pointers and flags. The body maintains the following entries:

- Device entry (DE) - contains information for the device type for each interruption type. Each DE carries a queue of request entries.
- Request entry (RE) - contains information for interruption type, interruption handling routines, and dispatching priority. Predefined REs exist for standard IBM routines; additional entries may be added or deleted. Each RE carries a Queue Entry queue.
- Queue entry (QE) - contains information for real or simulated interruption or dispatch.

The 4096-byte ITB resides in the Task Monitor PSECT, aligned on doubleword boundaries.

### CHAITB Storage map

| DEC | HEX | | |
|-----|-----|---|---|
| 0 | 0 | ITBDEP | ITBDES |
| 8 | 8 | ITBDEX | ITBDEA |
| 16 | 10 | ITBDET | ITBDEI |
| 24 | 18 | ITBNAP | ITBHAR |
| 32 | 20 | ITBCAP | ITBQCT |
| 40 | 28 | ITBRDP | ITBRDS |
| 48 | 30 | ITBRSD | ITBRXC |
| 56 | 38 | ITBRXN | ITBRPV |
| 64 | 40 | ITBRNP | ITBSDT |
| 72 | 48 | ITBHDE | ITBACT |
| 80 | 50 | ITBPDE | |
| 112 | 70 | ITBSDE | |
| 144 | 90 | ITBXDE | |

| DEC | HEX | |
|-----|-----|---|
| 176 | B0 | ITBTDE |
| 208 | D0 | ITBDPR |
| 240 | F0 | ITBDSR |
| 272 | 110 | ITBSDR |
| 304 | 130 | ITBXXR |
| 336 | 150 | ITBUXR |
| 368 | 170 | ITBMPR |
| 400 | 190 | ITBMNR |

```
DEC   HEX
432   1B0 ┌─────────────────────────────────────────────────────┐
          │                                                     │
          =                      ITBDPI                         =
          │                                                     │
          │                                                     │
472   1D8 │                        ┌────────────────────────────┤
          │                        │         UNNAMED            │
480   1E0 ├────────────────────────┴────────────────────────────┤
          │                                                     │
          =                      ITBDIC                         =
          │                                                     │
520   208 │                        ┌────────────────────────────┤
          │                        │         ITBAIC             │
528   210 ├────────────────────────┴────────────────────────────┤
          │                                                     │
          │                      ITBDPC                         │
          │                                                     │
544   220 ├─────────────────────────────────────────────────────┤
          │                                                     │
          │                      ITBDCO                         │
          │                                                     │
560   230 ├─────────────────────────────────────────────────────┤
          │                                                     │
          │                      ITBE01                         │
          │                                                     │
          │                                                     │
592   250 ├─────────────────────────────────────────────────────┤
          │                                                     │
          =                     RESERVED                        =
          │                                                     │
          │                                                     │
4088  FF8 │                        ┌────────────────────────────┤
          │                        │         ITBPFP             │
          └────────────────────────┴────────────────────────────┘
```

Fields in CHAITB -- by displacement

| DEC | HEX | FIELD | | DEC | HEX | FIELD | DEC | HEX | FIELD |
|------|------|--------|---|------|------|--------|------|------|--------|
| 0000 | 0000 | ITBDEP | | 0048 | 0030 | ITBRSD | 0240 | 00F0 | ITBDSR |
| 0004 | 0004 | ITBDES | | 0052 | 0034 | ITBRXC | 0272 | 0110 | ITBSDR |
| 0008 | 0008 | ITBDEX | | 0056 | 0038 | ITBRXN | 0304 | 0130 | ITBXXR |
| 0012 | 000C | ITBDEA | | 0060 | 003C | ITBRPV | 0336 | 0150 | ITBUXR |
| 0016 | 0010 | ITBDET | | 0064 | 0040 | ITBRNP | 0368 | 0170 | ITBMPR |
| 0020 | 0014 | ITBDEI | | 0068 | 0044 | ITBSDT | 0400 | 0190 | ITBMNR |
| 0024 | 0018 | ITBNAP | | 0072 | 0048 | ITBHDE | 0432 | 01B0 | ITBDPI |
| 0028 | 001C | ITBHAR | | 0076 | 004C | ITBACT | 0480 | 01E0 | ITBDIC |
| 0032 | 0020 | SYSCAP | (EQU) | 0080 | 0050 | ITBPDE | 0524 | 020C | ITBAIC |
| 0032 | 0020 | ITBCAP | | 0112 | 0070 | ITBSDE | 0528 | 0210 | ITBDPC |
| 0036 | 0024 | ITBQCT | | 0144 | 0090 | ITBXDE | 0544 | 0220 | ITBDCO |
| 0040 | 0028 | ITBRDP | | 0176 | 00B0 | ITBTDE | 0560 | 0230 | ITBE01 |
| 0044 | 002C | ITBRDS | | 0208 | 00D0 | ITBDPR | 4092 | 0FFC | ITBPFP |

Alphabetical list of fields in CHAITB

| FIELD | DEC | HEX | FIELD | DEC | HEX | FIELD | DEC | HEX |
|--------|------|------|--------|------|------|--------|------|------|
| ITBACT | 0076 | 004C | ITBDEX | 0008 | 0008 | ITBMNR | 0400 | 0190 |
| ITBAIC | 0524 | 020C | ITBDIC | 0480 | 01E0 | ITBMPR | 0368 | 0170 |
| ITBCAP | 0032 | 0020 | ITBDPC | 0528 | 0210 | ITBNAP | 0024 | 0018 |
| ITBDCO | 0544 | 0220 | ITBDPI | 0432 | 01B0 | ITBPDE | 0080 | 0050 |
| ITBDEA | 0012 | 000C | ITBDPR | 0208 | 00D0 | ITBPFP | 4092 | 0FFC |
| ITBDEI | 0020 | 0014 | ITBDSR | 0240 | 00F0 | ITBQCT | 0036 | 0024 |
| ITBDEP | 0000 | 0000 | ITBE01 | 0560 | 0230 | ITBRDP | 0040 | 0028 |
| ITBDES | 0004 | 0004 | ITBHAR | 0028 | 001C | ITBRDS | 0044 | 002C |
| ITBDET | 0016 | 0010 | ITBHDE | 0072 | 0048 | ITBRNP | 0064 | 0040 |

| FIELD | DEC | HEX | FIELD | DEC | HEX | FIELD | DEC | HEX |
|-------|-----|-----|-------|-----|-----|-------|-----|-----|
| ITBRPV | 0060 | 003C | ITBSDE | 0112 | 0070 | ITBUXR | 0336 | 0150 |
| ITBRSD | 0048 | 0030 | ITBSDR | 0272 | 0110 | ITBXDE | 0144 | 0090 |
| ITBRXC | 0052 | 0034 | ITBSDT | 0068 | 0044 | ITBXXR | 0304 | 0130 |
| ITBRXN | 0056 | 0038 | ITBTDE | 0176 | 00B0 | SYSCAP | 0032 | 0020 (EQU) |

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|----------|-------------|--------|------|------|---------|
| | 49 00000 | CHAITB | DSECT | | INTERRUPT         TABLE --- |
| | | * | | | ITB --- |
| 49 00000 | | | DS | 0D | |
| 49 00000 | | ITBDEP | DS | F | PTR TO PROGRAM DE |
| 49 00004 | | ITBDES | DS | F | PTR TO SVC DE |
| 49 00008 | | ITBDEX | DS | F | PTR TO EXTERNAL DE |
| 49 0000C | | ITBDEA | DS | F | PTR TO FIRST ASYNCHRONOUS |
| | | * | | | I/O DE |
| 49 00010 | | ITBDET | DS | F | PTR TO TIMER DE |
| 49 00014 | | ITBDEI | DS | F | PTR TO FIRST SYNCHRONOUS |
| | | * | | | I/O DE |
| 49 00018 | | ITBNAP | DS | F | PTR TO NEXT AVAILABLE BLOCK |
| | | * | | | IN TABLE |
| 49 0001C | | ITBHAR | DS | F | PTR TO HIGHEST PRIORITY |
| | | * | | | ACTIVE RE |
| 49 00020 | | ITBCAP | DS | F | PTR TO CURRENT ACTIVE RE |
| | 49 00020 | SYSCAP | EQU | ITBCAP | FOR SYSTEM REFERENCE |
| 49 00024 | | ITBQCT | DS | F | QE COUNT |
| 49 00028 | | ITBRDP | DS | F | PTR TO REL FOR PROGRAM |
| | | * | | | DIAGNO |
| 49 0002C | | ITBRDS | DS | F | PTR TO REL FOR SVC DIAGNO |
| 49 00030 | | ITBRSD | DS | F | PTR TO SHUTDOWN REL |
| 49 00034 | | ITBRXC | DS | F | PTR TO EXTERNAL REL |
| 49 00038 | | ITBRXN | DS | F | PTR TO EXTERNAL REL NO USER |
| | | * | | | MATCH |
| 49 0003C | | ITBRPV | DS | F | PTR TO PRIVILEGED REL |
| 49 00040 | | ITBRNP | DS | F | PTR TO NON-PRIVILEGED REL |
| 49 00044 | | ITBSDT | DS | F | PTR TO SYSIN SDAT |
| | | * *** | | | THE NEXT FIELD IS THE HIGHEST VALID DE |
| | | * TYPE SHIFTED LEFT 2 | | | |
| | | * *** | | | IT IS USED WHEN SEARCHING THE DE CHAIN TO |
| | | * DETERMINE WHEN | | | |
| | | * *** | | | THE END HAS BEEN REACHED. |
| 49 00048 | | ITBHDE | DS | F | HIGHEST VALID DE TYPE |
| 49 0004C | | ITBACT | DS | F | COUNT OF DISPATCHED |
| | | * | | | NON-PRIV  N369.2 |
| | | * | | | INTERRUPT ROUTINES |
| | | * | | | N369.2 |
| 49 00050 | | | DS | 0D | |
| 49 00050 | | ITBPDE | DS | 8F | PROGRAM DE |
| 49 00070 | | ITBSDE | DS | 8F | SVC DE |
| 49 00090 | | ITBXDE | DS | 8F | EXTERNAL DE |
| 49 000B0 | | ITBTDE | DS | 8F | TIMER DE |
| 49 000D0 | | ITBDPR | DS | 8F | DIAGNO REL FOR PROGRAM |
| 49 000F0 | | ITBDSR | DS | 8F | DIAGNO REL FOR SVC |
| 49 00110 | | ITBSDR | DS | 8F | SHUTDOWN REL |
| 49 00130 | | ITBXXR | DS | 8F | EXTERNAL REL |
| 49 00150 | | ITBUXR | DS | 8F | EXTERNAL REL NO USER MATCH |
| 49 00170 | | ITBMPR | DS | 8F | PRIVILEGED REL |
| 49 00190 | | ITBMNR | DS | 8F | NON-PRIVILEGED REL |
| 49 001B0 | | ITBDPI | DS | 11F | ICB FOR DIAGNO RELS |
| 49 001DC | | | DS | F | NOT USED |
| 49 001E0 | | ITBDIC | DS | 11F | DUMMY ICB FOR OTHER RELS |
| 49 0020C | | ITBAIC | DS | F | PTR TO DUMMY ICB |
| 49 00210 | | ITBDPC | DS | 4F | COM AREA FOR DIAGNO |
| | | * | | | DISPATCHES |
| 49 00220 | | ITBDCO | DS | 4F | DUMMY COM AREA FOR DUMMY |
| | | * | | | ICB |
| 49 00230 | | ITBE01 | DS | 8F | FIRST AVAILABLE BLOCK IN |
| | | * | | | TABLE |
| | | * *** | | | THE SPACE FROM ITBE01 TO THE LAST WORD IN |
| | | * THE TABLE IS DIVIDED | | | |
| | | * *** | | | INTO 110 BLOCKS OF 8 WORDS EACH TO BE USED |
| | | * AS DE, RE OR QE. | | | |
| | 49 00FFC | | \|ORG\| | CHAITB+4092 | |
| 49 00FFC | | ITBPFP | DS | F | PTR TO NEXT PAGE OF ITB IF |
| | | * | | | NEEDED |

## Data Set Header/Trailer Label 1 (CHALB1)

The Data Set Header/Trailer Label 1 (LB1) contains the system data and device-dependent information required to locate, and verify, the data set and its references.  The information contained in LB1 also serves to protect the data set from unauthorized use.

LB1 is IBM Standard File Label 1 which is 80 EBCDIC characters written on nine-track tape or BCD written on seven-track tape.  In addition, LB1 must be written in even parity.  The format of a tape volume is:
  I. Volume labels (up to 8).
 II. Data Set plus data set labels.
    1. Standard header labels 1 and 2
    2. User header labels (up to 8)
    3. Tape mark
    4. Data Set Records
    5. Tape mark
    6. Standard Trailer labels 1 and 2
    7. User trailer labels (up to 8)
    8. Tape mark
III. Additional data sets as in II above.
 IV. Tape mark.

Standard header label 1 and standard trailer label 1 are identical in format and are also identical in content for a given data set, except for the label identification and block count.

The LB1 table occupies 80 bytes of virtual storage, aligned on doubleword boundaries.

### ChALB1 Storage map

```
DEC    HEX
  0     0|_____LB1LID_____|____LB1DSL____|_____|
         |                         |              |                                    |
         |_____LB1DID_____|
         |                                                                              |
 16    10|_____|_____LB1DSS_____|
         |                                             |                                |
 24    18|_____LB1DSS___(CONT)_____|_____LB1VSN_____|_____LB1DSN_____|
         |                           |                                |                  |
 32    20|_____LB1DSN___(CONT)_____|_____LB1GEN_____|_____LB1VNG_____|
         |                           |                                |                  |
 40    28|LB1VNG__|_____LB1CDT_____|LB1EDT__|
         |        |                                                              |        |
 48    30|_____LB1EDT____(CONT)_____|__LB1DSQ__|_____LB1BCT_____|
         |                                              |          |                      |
 56    38|_____LB1BCT____(CONT)_____|_____|
         |                                      |                                         |
         |_____LB1SCD_____|
         |                                                                               |
 72    48|_____|_____LB1RS1_____|
         |          |                                                                    |
```
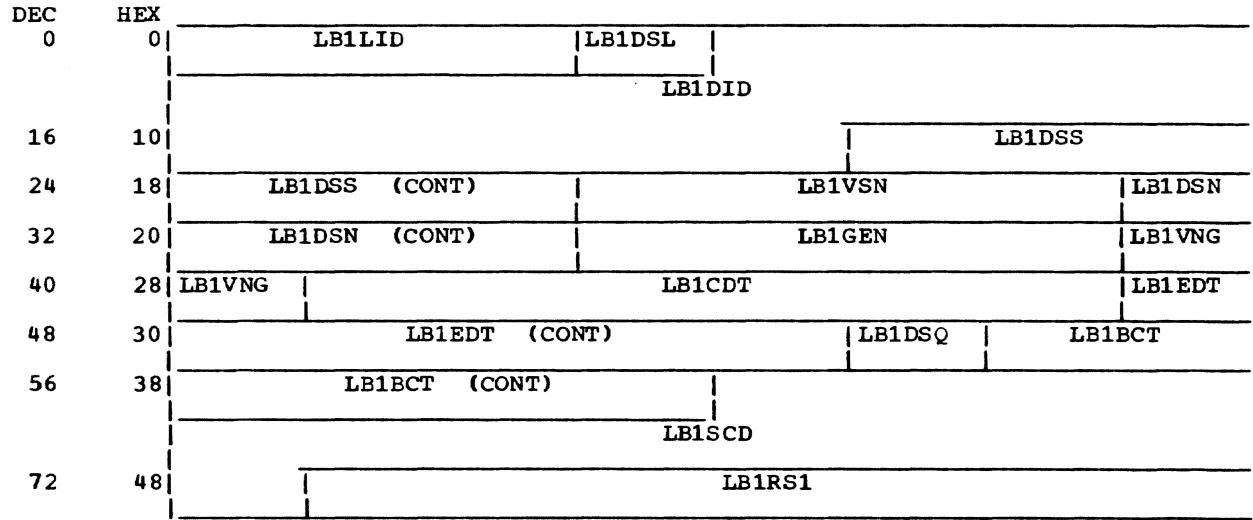
### Fields in CHALB1 -- by displacement

| DEC | HEX | FIELD | DEC | HEX | FIELD | DEC | HEX | FIELD | |
|------|------|--------|------|------|--------|------|------|--------|---|
| 0000 | 0000 | LB1LID | 0031 | 001F | LB1DSN | 0054 | 0036 | LB1BCT | |
| 0000 | 0000 | LB1 | 0035 | 0023 | LB1GEN | 0060 | 003C | LB1SCD | |
| 0003 | 0003 | LB1DSL | 0039 | 0027 | LB1VNG | 0073 | 0049 | LB1RS1 | |
| 0004 | 0004 | LB1DID | 0041 | 0029 | LB1CDT | 0080 | 0050 | LB1END | (EQU) |
| 0021 | 0015 | LB1DSS | 0047 | 002F | LB1EDT | | | | |
| 0027 | 001B | LB1VSN | 0053 | 0035 | LB1DSQ | | | | |

## Alphabetical list of fields in CHALB1

| FIELD | DEC | HEX | FIELD | DEC | HEX | | FIELD | DEC | HEX |
|-------|------|------|--------|------|------|---|--------|------|------|
| LB1 | 0000 | 0000 | LB1DSQ | 0053 | 0035 | | LB1RS1 | 0073 | 0049 |
| LB1BCT | 0054 | 0036 | LB1DSS | 0021 | 0015 | | LB1SCD | 0060 | 003C |
| LB1CDT | 0041 | 0029 | LB1EDT | 0047 | 002F | | LB1VNG | 0039 | 0027 |
| LB1DID | 0004 | 0004 | LB1END | 0080 | 0050 | (EQU) LB1VSN | 0027 | 001B |
| LB1DSL | 0003 | 0003 | LB1GEN | 0035 | 0023 | | | | |
| LB1DSN | 0031 | 001F | LB1LID | 0000 | 0000 | | | | |

## Assembler listing of CHALB1

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|----------|-------------|--------|------|------|---------|
| | 4A 00000 | CHALB1 | DSECT | | |
| 4A 00000 | | LB1 | DS | 0F | |
| 4A 00000 | | LB1LID | DS | CL3 | LABEL IDENTIFIER |
| 4A 00003 | | LB1DSL | DS | CL1 | DATA SET LABEL NUMBER |
| 4A 00004 | | LB1DID | DS | CL17 | DATA SET IDENTIFIER |
| 4A 00015 | | LB1DSS | DS | CL6 | DATA SET SERIAL NUMBER |
| 4A 0001B | | LB1VSN | DS | CL4 | VOLUME SEQUENCE NUMBER |
| 4A 0001F | | LB1DSN | DS | CL4 | DATA SET SEQUENCE NUMBER |
| 4A 00023 | | LB1GEN | DS | CL4 | GENERATION NUMBER |
| 4A 00027 | | LB1VNG | DS | CL2 | VERSION NUMBER OF |
| | | * | | | GENERATION |
| 4A 00029 | | LB1CDT | DS | CL6 | CREATION DATE |
| 4A 0002F | | LB1EDT | DS | CL6 | EXPIRATION DATE |
| 4A 00035 | | LB1DSQ | DS | CL1 | DATA SET SECURITY NUMBER |
| 4A 00036 | | LB1BCT | DS | CL6 | BLOCK COUNT |
| 4A 0003C | | LB1SCD | DS | CL13 | SYSTEM CODE |
| 4A 00049 | | LB1RS1 | DS | CL7 | RESERVED IN LABEL1 |
| | 4A 00050 | LB1END | EQU | * | END OF LABEL1 |
| | 00000050 | LB1SZ | EQU | LB1END-LB1 | SIZE OF TAPE LABEL 1 |

Data Set Header/Trailer Label 2 (CHALB2)

    The Data Set Header/Trailer Label 2 (LB2) contains the data set attributes.  These
attributes assist in reading the data set from the tape and also serve as a source of
fill for the null parameters in the Data Control Block (DCB).
    LB2 is IBM OS/360 Standard Tape File Label 2 which is written in EBCDIC on nine-
track tape or in BCD in seven-track tape.  In addition, LB2 must be written in even
parity.  The format of a tape volume is:
  I. Volume labels (up to 8).
 II. Data Set plus data set labels.
     1. Standard header labels 1 and 2
     2. User header labels (up to 8)
     3. Tape mark
     4. Data Set Records
     5. Tape mark
     6. Standard Trailer labels 1 and 2
     7. User trailer labels (up to 8)
     8. Tape mark
III. Additional data sets as in II above.
 IV. Tape mark.
    Standard header label 2 and standard trailer label 2 are identical in format and
are also identical in content for a given data set, except for the label identifica-
tion and block count.
    The LB2 table occupies 80 bytes of virtual storage, aligned on doubleword
boundaries.

CHALB2 Storage map
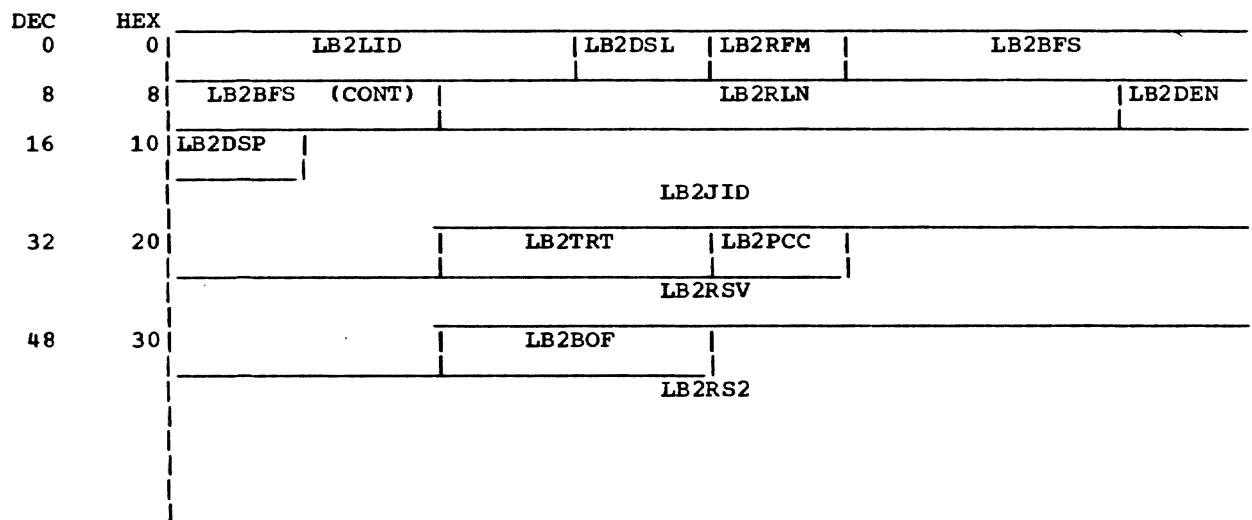


Fields in CHALB2 -- by displacement

| DEC | HEX | FIELD | DEC | HEX | FIELD | DEC | HEX | FIELD |
|-----|-----|-------|-----|-----|-------|-----|-----|-------|
| 0000 | 0000 | LB2LID | 0010 | 000A | LB2RLN | 0036 | 0024 | LB2PCC |
| 0000 | 0000 | LB2 | 0015 | 000F | LB2DEN | 0037 | 0025 | LB2RSV |
| 0003 | 0003 | LB2DSL | 0016 | 0010 | LB2DSP | 0050 | 0032 | LB2BOF |
| 0004 | 0004 | LB2RFM | 0017 | 0011 | LB2JID | 0052 | 0034 | LB2RS2 |
| 0005 | 0005 | LB2BFS | 0034 | 0022 | LB2TRT | 0080 | 0050 | LB2END | (EQU)|

## Alphabetical list of fields in CHALB2

| FIELD | DEC | HEX | | FIELD | DEC | HEX | | FIELD | DEC | HEX |
|-------|------|------|--|-------|------|------|------|-------|------|------|
| LB2 | 0000 | 0000 | | LB2DSP | 0016 | 0010 | | LB2RFM | 0004 | 0004 |
| LB2BFS | 0005 | 0005 | | LB2END | 0080 | 0050 | (EQU) | LB2RLN | 0010 | 000A |
| LB2BOF | 0050 | 0032 | | LB2JID | 0017 | 0011 | | LB2RSV | 0037 | 0025 |
| LB2DEN | 0015 | 000F | | LB2LID | 0000 | 0000 | | LB2RS2 | 0052 | 0034 |
| LB2DSL | 0003 | 0003 | | LB2PCC | 0036 | 0024 | | LB2TRT | 0034 | 0022 |

## Assembler listing of CHALB2

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|----------|-------------|--------|------|------|---------|
| | 4B 00000 | CHALB2 | DSECT | | |
| 4B 00000 | | LB2 | DS | 0F | |
| 4B 00000 | | LB2LID | DS | CL3 | LABEL IDENTIFIER |
| 4B 00003 | | LB2DSL | DS | CL1 | FILE LABEL NUMBER |
| 4B 00004 | | LB2RFM | DS | CL1 | RECORD FORMAT |
| 4B 00005 | | LB2BFS | DS | CL5 | BLOCK LENGTH |
| 4B 0000A | | LB2RLN | DS | CL5 | LOGICAL RECORD LENGTH |
| 4B 0000F | | LB2DEN | DS | CL1 | DENSITY |
| 4B 00010 | | LB2DSP | DS | CL1 | FILE POSITION |
| 4B 00011 | | LB2JID | DS | CL17 | JOB/STEP IDENTIFICATION |
| 4B 00022 | | LB2TRT | DS | CL2 | TAPE RECORDING TECHNIQUE |
| 4B 00024 | | LB2PCC | DS | CL1 | PRINT CONTROL CHARACTER |
| 4B 00025 | | LB2RSV | DS | CL13 | RESERVED IN LABEL2 |
| 4B 00032 | | LB2BOF | DS | CL2 | BUFFER OFFSET (ASCII) |
| 4B 00034 | | LB2RS2 | DS | CL28 | RESERVED IN LABEL2 |
| | 4B 00050 | LB2END | EQU | * | END OF LABEL 2 |
| | 00000050 | LB2SZ | EQU | LB2END-LB2 | SIZE OF TAPE LABEL 2 |

## System Operator Log (CHALOG) Header

The System Operator Log (SYSLOG) contains a record of the communications between the operator and the system.

Each data set in SYSLOG, a generation data group, is VAM sequential and contains the log information for a startup-to-shutdown session.

SYSLOG occupies a minimum of 33 bytes of virtual storage, aligned on doubleword boundaries.

### CHALOG Storage map

| DEC | HEX | | | | |
|-----|-----|---|---|---|---|
| 0 | 0 | LOGLEN | | LOGDAT | |
| 8 | 8 | LOGDAT (CONT) | | LOGTIM | |
| 16 | 10 | LOGTIM (CONT) | LOGSPR | | |
| 24 | 18 | LOGUSE | | | |

### Fields in CHALOG -- by displacement

| DEC | HEX | FIELD | DEC | HEX | FIELD | DEC | HEX | FIELD |
|-----|-----|-------|-----|-----|-------|-----|-----|-------|
| 0000 | 0000 | LOGLEN | 0012 | 000C | LOGTIM | 0024 | 0018 | LOGUSE |
| 0004 | 0004 | LOGDAT | 0018 | 0012 | LOGSPR | 0032 | 0020 | LOGMES |

### Alphabetical list of fields in CHALOG

| FIELD | DEC | HEX | FIELD | DEC | HEX | FIELD | DEC | HEX |
|-------|-----|-----|-------|-----|-----|-------|-----|-----|
| LOGDAT | 0004 | 0004 | LOGMES | 0032 | 0020 | LOGTIM | 0012 | 000C |
| LOGLEN | 0000 | 0000 | LOGSPR | 0018 | 0012 | LOGUSE | 0024 | 0018 |

### Assembler listing of CHALOG

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|----------|-------------|--------|------|------|---------|
| | 4C 00000 | CHALOG<br>* | DSECT | | HEADER     FOR MESSAGES TO<br>BE PUT IN SYSLOG-( |
| 4C 00000 | | | DS | 0D | |
| 4C 00000 | | LOGLEN<br>* | DS | F | LENGTH OF MESSAGE<br>(INCLUDING HEADING OF 32 BYTES) |
| 4C 00004 | | LOGDAT | DS | CL8 | DATE 'MM/DD/YY' FORMAT |
| 4C 0000C | | LOGTIM | DS | CL6 | TIME ' HH:MM'    FORMAT |
| 4C 00012 | | LOGSPR | DS | 6C | SIX SPARE BYTES |
| 4C 00018 | | LOGUSE<br>* | DS | 8C | EIGHT CHARACTER USER-1D OF<br>MESSAGE SENDER |
| 4C 00020 | | LOGMES<br>* | DS | 0C | MESSAGE TEXT MAX. OF 18888<br>CHARACTERS |

## Message Control Block (CHAMCB)

The Message Control Block (MCB) controls message transmission between tasks. It contains a length indicator which counts the number of doublewords of textual information, a code to determine the type of intertask message being sent, and indicators that a message reply is expected or that a message constitutes a reply to some other message.

The MCB also contains an SVC which the supervisor recognizes as a VSEND, or intertask communication operation, consisting of: task identification of the sending and receiving tasks; and, the address of a Message Event Control Block (MEB), if a reply is expected.

The MCB serves the users of the VSEND operation; e.g., Device Management, Batch Monitor, etc.

The MCB occupies a maximum of 1920 bytes of virtual storage, aligned on doubleword boundaries, and is contained within one page of storage.

### CHAMCB Storage map

| DEC | HEX | | | | | | |
|-----|-----|--------|--------|--------|--------|--------|--------|
| 0 | 0 | MCBLNG | MCBCOD | MCBRCD | MCBCD1 | MCBSVC | MCBSPR |
| 8 | 8 | MCBSND | | MCBRCV | | MCBECB | |

### Fields in CHAMCB -- by displacement

| DEC | HEX | FIELD | | DEC | HEX | FIELD | | DEC | HEX | FIELD | |
|------|------|--------|-------|------|------|--------|-------|------|------|--------|-------|
| 0000 | 0000 | MCBLNG | | 0002 | 0002 | MCBRCD | | 0010 | 000A | MCBRCV | |
| 0001 | 0001 | MCBCN | (EQU) | 0003 | 0003 | MCBCD1 | | 0012 | 000C | MCBMEB | (EQU) |
| 0001 | 0001 | MCBRE | (EQU) | 0004 | 0004 | MCBSVC | | 0012 | 000C | MCBECB | |
| 0001 | 0001 | MCBRX | (EQU) | 0006 | 0006 | MCBSPR | | 0016 | 0010 | MCBTXT | |
| 0001 | 0001 | MCBCOD | | 0008 | 0008 | MCBSND | | | | | |

### Alphabetical list of fields in CHAMCB

| FIELD | DEC | HEX | | FIELD | DEC | HEX | | FIELD | DEC | HEX |
|--------|------|------|-------|--------|------|------|-------|--------|------|------|
| MCBCD1 | 0003 | 0003 | | MCBMEB | 0012 | 000C | (EQU) | MCBSND | 0008 | 0008 |
| MCBCN | 0001 | 0001 | (EQU) | MCBRCD | 0002 | 0002 | | MCBSPR | 0006 | 0006 |
| MCBCOD | 0001 | 0001 | | MCBRCV | 0010 | 000A | | MCBSVC | 0004 | 0004 |
| MCBECB | 0012 | 000C | | MCBRE | 0001 | 0001 | (EQU) | MCBTXT | 0016 | 0010 |
| MCBLNG | 0000 | 0000 | | MCBRX | 0001 | 0001 | (EQU) | | | |

### Assembler listing of CHAMCB

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|----------|-------------|--------|------|------|---------|
| | 4E 00000 | CHAMCB | DSECT | | |
| 4E 00000 | | | DS | 0D | |
| 4E 00000 | | MCBLNG | DS | XL1 | MESSAGE LENGTH IN DOUBLE WORDS |
| 4E 00001 | | MCBCOD | DS | XL1 | FLAG BYTE |
| | 4E 00001 | MCBRX | EQU | MCBCOD | MCBCOD REPLY EXPECTED FLAG |
| | 00000080 | MCBRXM | EQU | X'80' | REPLY EXPECTED MASK |
| | 4E 00001 | MCBRE | EQU | MCBCOD | REPLY FLAG- MEB ADDRESS IMPLIED IF ON (1) |
| | 00000040 | MCBREM | EQU | X'40' | REPLY MASK |
| | 4E 00001 | MCBCN | EQU | MCBCOD | REPLY CANCELLATION MESSAGE |
| | 00000020 | MCBCNM | EQU | X'20' | REPLY CANCELLATION MESSAGE MASK |
| 4E 00002 | | MCBRCD | DS | XL1 | RETURN CODE FOR MEB |
| 4E 00003 | | MCBCD1 | DS | XL1 | MCB MESSAGE CODE |

(Listing of CHAMCB continued from page 268)

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|----------|-------------|--------|------|------|---------|
| 4E 00004 | | | DS | 0H | |
| 4E 00004 | | MCBSVC | DS | H | VSEND SVC |
| 4E 00006 | | MCBSPR | DS | H | SPARE SPACE |
| 4E 00008 | | MCBSND | DS | H | TID OF THE SENDING TASK |
| 4E 0000A | | MCBRCV | DS | H | TID OF THE RECEIVING TASK |
| 4E 0000C | | | DS | 0F | |
| 4E 0000C | | MCBECB | DS | F | ADDRESS OF EVENT CONTROL BLOCK |
| | 4E 0000C | MCBMEB | EQU | MCBECB | EVENT CONTROL BLOCK |
| 4E 00010 | | | DS | 0D | |
| 4E 00010 | | MCBTXT | DS | 0C | MESSAGE TEXT |

## Multiplexer Channel Table (CHAMCH)

The Multiplexer Channel Table (CHAMCH) contains status information concerning the connection between the multiplexer channel and its assigned control units. CHAMCH occupies from 4 to 64 bytes of core storage, aligned on word boundaries.

### CHAMCH Storage map

```
DEC   HEX   _____
  0     0  | MCHF     | UNNAMED |     UNNAMED        |
           |_____|_____|_____|
```

ORG   MCHBEG

```
  0     0  | MCHF1    | MCHF2   |     MCHCTD         |
           |_____|_____|_____|
```

### Fields in CHAMCH -- by displacement

| DEC | HEX | FIELD | | DEC | HEX | FIELD | | DEC | HEX | FIELD |
|-----|-----|-------|---|-----|-----|-------|---|-----|-----|-------|
| 0000 | 0000 | MCHF1 | | 0000 | 0000 | MCHE | (EQU) | 0001 | 0001 | MCHF2 |
| 0000 | 0000 | MCHFLG | | 0000 | 0000 | MCHP | (EQU) | 0002 | 0002 | MCHCTD |
| 0000 | 0000 | MCHS | (EQU) | 0000 | 0000 | MCHF | | | | |
| 0000 | 0000 | MCHR | (EQU) | 0000 | 0000 | MCHBEG | | | | |

### Alphabetical list of fields in CHAMCH

| FIELD | DEC | HEX | | FIELD | DEC | HEX | | FIELD | DEC | HEX | |
|-------|-----|-----|---|-------|-----|-----|---|-------|-----|-----|---|
| MCHBEG | 0000 | 0000 | | MCHFLG | 0000 | 0000 | | MCHR | 0000 | 0000 | (EQU) |
| MCHCTD | 0002 | 0002 | | MCHF1 | 0000 | 0000 | | MCHS | 0000 | 0000 | (EQU) |
| MCHE | 0000 | 0000 | (EQU) | MCHF2 | 0001 | 0001 | | | | | |
| MCHF | 0000 | 0000 | | MCHP | 0000 | 0000 | (EQU) | | | | |

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|---|---|---|---|---|---|
| | 4F 00000 | CHAMCH | DSECT | | MULTIPLEXOR CHANNEL (N) |
| | | * | | | TABLE (N=0 TO 31) |
| 4F 00000 | | MCHBEG | DS | 0F | ALIGN TABLE ON WORD |
| | | * | | | BOUNDARY |
| 4F 00000 | | MCHF | DS | C | NOT USED |
| 4F 00001 | | | DS | XL1 | RESERVED |
| 4F 00002 | | | DS | H | NOT USED |
| | 4F 00000 | | |ORG| | MCHBEG | |
| 4F 00000 | | MCHFLG | DS | 0H | FLAG FIELD |
| 4F 00000 | | MCHF1 | DS | X | FIRST BYTE OF FLAG FIELD |
| | 4F 00000 | MCHP | EQU | MCHF1 | PARTITIONED FLAG |
| | 00000080 | MCHPM | EQU | X'80' | PARTITIONED FLAG MASK |
| | 4F 00000 | MCHE | EQU | MCHF1 | NONEXISTENT FLAG |
| | 00000040 | MCHEM | EQU | X'40' | NONEXISTENT FLAG MASK |
| | 4F 00000 | MCHR | EQU | MCHF1 | RESERVED FLAG |
| | 00000020 | MCHRM | EQU | X'20' | RESERVED MASK |
| | 4F 00000 | MCHS | EQU | MCHF1 | SELECTOR SUBCHAN ON MPX |
| | | * | | | FLAG |
| | 00000001 | MCHSM | EQU | X'01' | SELECTOR SUBCHAN ON MPX |
| | | * | | | MASK |
| 4F 00001 | | MCHF2 | DS | X | SECOND BYTE OF FLAG FIELD |
| 4F 00002 | | MCHCTD | DS | H | CONTROL UNIT TABLE |
| | | * | | | DISPLACEMENT |

```
*  NOTE 1- THERE IS A ONE WORD ENTRY (I.E., FIELDS
*  LABELED MCHFLG AND
*           MCHCTD ARE REPEATED) FOR EVERY CONTROL
*           UNIT ADDRESS ON THIS
*           CHANNEL BEGINNING WITH ZERO AND
*           CONTINUING IN SEQUENTIAL
*           ORDER UP TO AND INCLUDING THE HIGHEST
*           ACTIVE ADDRESS (I.E.,
*           HIGHEST CONTROL UNIT ADDRESS THAT HAS
*           BEEN SPECIFIED AS
*           HAVING A CONTROL UNIT PHYSICALLY COUPLED
*           TO IT).
```

## Message Event Control Block (CHAMEB)

The Message Event Control Block (MEB) controls both the waiting for completion of a VSEND event and the posting of the event.

The MEB aids the message control block (MCB) in inter-task communication. When an MCB is constructed to send a message which requires a reply, an MEB is also constructed containing an AWAIT or TWAIT SVC.

The MEB furnishes data to the main operator control program, batch monitor, and CLI, etc.

Sixteen bytes of virtual storage are allocated to the MEB, aligned on doubleword boundaries.

## CHAMEB Storage map

```
DEC   HEX  _____
  0     0 |        MEBECB       |       MEBSVC       |      MEBTID      |      MEBKEY      |
          |                     |                    |                 |                 |
  8     8 |_____MEBMCB_____|_____UNNAMED_____|
          |                                     |                                       |
          |_____|_____|
```

## Fields in CHAMEB -- by displacement

| DEC | HEX | FIELD | | DEC | HEX | FIELD | | DEC | HEX | FIELD |
|-----|-----|-------|---|-----|-----|-------|---|-----|-----|-------|
| 0000 | 0000 | MEBEV | (EQU) | 0002 | 0002 | MEBSVC | | 0008 | 0008 | MEBMCB |
| 0000 | 0000 | MEBWT | (EQU) | 0004 | 0004 | MEBTID | | | | |
| 0000 | 0000 | MEBECB | | 0006 | 0006 | MEBKEY | | | | |

## Alphabetical list of fields in CHAMEB

| FIELD | DEC | HEX | | FIELD | DEC | HEX | | FIELD | DEC | HEX | |
|-------|-----|-----|---|-------|-----|-----|---|-------|-----|-----|---|
| MEBECB | 0000 | 0000 | | MEBMCB | 0008 | 0008 | | MEBWT | 0000 | 0000 | (EQU) |
| MEBEV | 0000 | 0000 | (EQU) | MEBSVC | 0002 | 0002 | | | | | |
| MEBKEY | 0006 | 0006 | | MEBTID | 0004 | 0004 | | | | | |

## Assembler listing of CHAMEB

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|----------|-------------|--------|------|------|---------|
| | 50 00000 | CHAMEB | DSECT | | MESSAGE EVENT CONTROL BLOCK |
| 50 00000 | | | DS | 0D | DOUBLE WORD BOUNDARY |
| | | * | | | ALIGNMENT |
| 50 00000 | | MEBECB | DS | XL2 | EVENT COMPLETION FLAGS |
| | 50 00000 | MEBWT | EQU | MEBECB | WAIT FLAG |
| | 00000080 | MEBWTM | EQU | X'80' | WAIT MASK |
| | 50 00000 | MEBEV | EQU | MEBECB | EVENT COMPLETION FLAG |
| | 00000040 | MEBEVM | EQU | X'40' | EVENT COMPLETION MASK |
| 50 00002 | | MEBSVC | DS | H | SCV HALFWORD |
| 50 00004 | | MEBTID | DS | H | TID OF RECEIVING TASK |
| 50 00006 | | MEBKEY | DS | H | RETURN CODE |
| 50 00008 | | MEBMCB | DS | F | ADDRESS OF MCB |
| 50 0000C | | | DS | F | UNUSED |

## Merge List (CHAMGL)

The PL/I merge list supplies the Object Data Set Converter (ODC) with object module names for conversion to TSS object modules. CHAMGL is built by the PL/I Program Language Controller (PLC).
The 128-byte Merge List is aligned on word boundaries.

### CHAMGL Storage map

```
DEC   HEX  _____
  0     0 |           MGLCNT            |           MGLPTR                |
          |_____|_____|
  8     8 |                        MGLNME                                 |
          |_____|
 16    10 |                                                              |
          |                                                              |
          =                        UNNAMED                               =
          |                                                              |
          |                                                              |
          |_____|
```
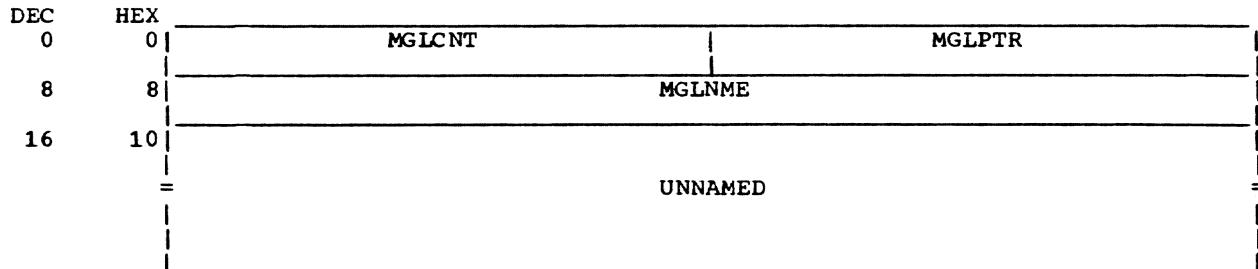
### Fields in CHAMGL -- by displacement

| DEC  | HEX  | FIELD  | DEC  | HEX  | FIELD  | DEC  | HEX  | FIELD  |
|------|------|--------|------|------|--------|------|------|--------|
| 0000 | 0000 | MGLCNT | 0004 | 0004 | MGLPTR | 0008 | 0008 | MGLNME |

### Alphabetical list of fields in CHAMGL

| FIELD  | DEC  | HEX  | FIELD  | DEC  | HEX  | FIELD  | DEC  | HEX  |
|--------|------|------|--------|------|------|--------|------|------|
| MGLCNT | 0000 | 0000 | MGLNME | 0008 | 0008 | MGLPTR | 0004 | 0004 |

### Assembler listing of CHAMGL

| LOCATION | INSTRUCTION | SOURCE | INST  | OPER | COMMENT |
|----------|-------------|--------|-------|------|---------|
|          | 51 00000    | CHAMGL | DSECT |      | DSECT FOR MERGELIST BLOCKS |
| 51 00000 |             | MGLCNT | DS    | F    | COUNT OF MODULE NAMES IN THIS BLOCK |
|          |             | *      |       |      | |
| 51 00004 |             | MGLPTR | DS    | F    | FOREWARD POINTER TO NEXT BLOCK |
|          |             | *      |       |      | |
| 51 00008 |             | MGLNME | DS    | D    | FIRST MODULE NAME IN THE BLOCK |
|          |             | *      |       |      | |
| 51 00010 |             |        | DS    | 14D  | SPACE RESERVED FOR 14 MORE NAMES |
|          |             | *      |       |      | |

## Symbol Control Block (CHAMSW)

The Symbol Control Block is used to define a symbol and contains all of the symbol attributes. It may also be used to resolve a literal. During language area processing, one SCB will exist for each symbol or literal in the polish string.

### CHAMSW Storage map

```
 DEC   HEX
   0    0|_____MSWLEN_____|_____MSWSIZE_____|
         |                                      |                                    |
   8    8|_____MSWUNUS_____|MSWTYPE |MSWCLASS|MSWFLAGS|MSWBLNK1|
         |                                      |        |        |        |        |
  16   10|_____MSWBASE_____|_____MSWPTR_____|
         |                                      |                                    |
  24   18|___MSWSDEV____|_MSWCYL_|_MSWTRK_|_____MSWREC_____|MSWDEVC_|MSWMODE_|
         |              |        |        |                   |        |        |
  32   20|_____MSWQUAL_____|_____MSWBKPT_____|
         |                                      |                                    |
  40   28|_____MSWSYMB_____|
         |                                                                            |
```

### Fields in CHAMSW -- by displacement

| DEC | HEX | FIELD | | DEC | HEX | FIELD | | DEC | HEX | FIELD | |
|-----|-----|-------|---|-----|-----|-------|---|-----|-----|-------|---|
| 0000 | 0000 | MSWLEN | | 0014 | 000E | MSWSUBJ | (EQU) | 0028 | 001C | MSWREC | |
| 0004 | 0004 | MSWSIZE | | 0014 | 000E | MSWNULL | (EQU) | 0030 | 001E | MSW2301 | (EQU) |
| 0008 | 0008 | MSWUNUS | | 0014 | 000E | MSWUNDF | (EQU) | 0030 | 001E | MSW2314 | (EQU) |
| 0012 | 000C | MSWINT | (EQU) | 0014 | 000E | MSWFLAGS | | 0030 | 001E | MSW2311 | (EQU) |
| 0012 | 000C | MSWCHAR | (EQU) | 0015 | 000F | MSWBUND | (EQU) | 0030 | 001E | MSW1403 | (EQU) |
| 0012 | 000C | MSWHEX | (EQU) | 0015 | 000F | MSWBINT | (EQU) | 0030 | 001E | MSW2400 | (EQU) |
| 0012 | 000C | MSWTYPE | | 0015 | 000F | MSWBINS | (EQU) | 0030 | 001E | MSW2540 | (EQU) |
| 0013 | 000D | MSWNAD | (EQU) | 0015 | 000F | MSWBEOF | (EQU) | 0030 | 001E | MSWTERM | (EQU) |
| 0013 | 000D | MSWLIT | (EQU) | 0015 | 000F | MSWBOVF | (EQU) | 0030 | 001E | MSWDEVC | |
| 0013 | 000D | MSWEXT | (EQU) | 0015 | 000F | MSWBREC | (EQU) | 0031 | 001F | MSWMODE | |
| 0013 | 000D | MSWSP | (EQU) | 0015 | 000F | MSWBFLG | (EQU) | 0032 | 0020 | MSWEXTN | (EQU) |
| 0013 | 000D | MSWSYS | (EQU) | 0015 | 000F | MSWBRET | (EQU) | 0032 | 0020 | MSWVM1 | (EQU) |
| 0013 | 000D | MSWCLASS | | 0015 | 000F | MSWBLNK1 | | 0032 | 0020 | MSWVM | (EQU) |
| 0014 | 000E | MSWRCD | (EQU) | 0016 | 0010 | MSWBASE | | 0032 | 0020 | MSWRM1 | (EQU) |
| 0014 | 000E | MSWTRCK | (EQU) | 0020 | 0014 | MSWPTR | | 0032 | 0020 | MSWRM | (EQU) |
| 0014 | 000E | MSWCYLR | (EQU) | 0024 | 0018 | MSWSDEV | | 0032 | 0020 | MSWQUAL | |
| 0014 | 000E | MSWPHYS | (EQU) | 0026 | 001A | MSWCYL | | 0036 | 0024 | MSWBKPT | |
| 0014 | 000E | MSWWKAR | (EQU) | 0027 | 001B | MSWTRK | | 0040 | 0028 | MSWSYMB | |

### Alphabetical list of fields in CHAMSW

| FIELD | DEC | HEX | | FIELD | DEC | HEX | | FIELD | DEC | HEX | |
|-------|-----|-----|---|-------|-----|-----|---|-------|-----|-----|---|
| MSWBASE | 0016 | 0010 | | MSWFLAGS | 0014 | 000E | | MSWSUBJ | 0014 | 000E | (EQU) |
| MSWBEOF | 0015 | 000F | (EQU) | MSWHEX | 0012 | 000C | (EQU) | MSWSYMB | 0040 | 0028 | |
| MSWBFLG | 0015 | 000F | (EQU) | MSWINT | 0012 | 000C | (EQU) | MSWSYS | 0013 | 000D | (EQU) |
| MSWBINS | 0015 | 000F | (EQU) | MSWLEN | 0000 | 0000 | | MSWTERM | 0030 | 001E | (EQU) |
| MSWBINT | 0015 | 000F | (EQU) | MSWLIT | 0013 | 000D | (EQU) | MSWTRCK | 0014 | 000E | (EQU) |
| MSWBKPT | 0036 | 0024 | | MSWMODE | 0031 | 001F | | MSWTRK | 0027 | 001B | |
| MSWBLNK1 | 0015 | 000F | | MSWNAD | 0013 | 000D | (EQU) | MSWTYPE | 0012 | 000C | |
| MSWBOVF | 0015 | 000F | (EQU) | MSWNULL | 0014 | 000E | (EQU) | MSWUNDF | 0014 | 000E | (EQU) |
| MSWBREC | 0015 | 000F | (EQU) | MSWPHYS | 0014 | 000E | (EQU) | MSWUNUS | 0008 | 0008 | |
| MSWBRET | 0015 | 000F | (EQU) | MSWPTR | 0020 | 0014 | | MSWVM | 0032 | 0020 | (EQU) |
| MSWBUND | 0015 | 000F | (EQU) | MSWQUAL | 0032 | 0020 | | MSWVM1 | 0032 | 0020 | (EQU) |
| MSWCHAR | 0012 | 000C | (EQU) | MSWRCD | 0014 | 000E | (EQU) | MSWWKAR | 0014 | 000E | (EQU) |
| MSWCLASS | 0013 | 000D | | MSWREC | 0028 | 001C | | MSW1403 | 0030 | 001E | (EQU) |
| MSWCYL | 0026 | 001A | | MSWRM | 0032 | 0020 | (EQU) | MSW2301 | 0030 | 001E | (EQU) |
| MSWCYLR | 0014 | 000E | (EQU) | MSWRM1 | 0032 | 0020 | (EQU) | MSW2311 | 0030 | 001E | (EQU) |
| MSWDEVC | 0030 | 001E | | MSWSDEV | 0024 | 0018 | | MSW2314 | 0030 | 001E | (EQU) |
| MSWEXT | 0013 | 000D | (EQU) | MSWSIZE | 0004 | 0004 | | MSW2400 | 0030 | 001E | (EQU) |
| MSWEXTN | 0032 | 0020 | (EQU) | MSWSP | 0013 | 000D | (EQU) | MSW2540 | 0030 | 001E | (EQU) |

```
LOCATION  INSTRUCTION  SOURCE    INST   OPER        COMMENT
          53 00000     CHAMSW    DSECT
******************** S Y M B O L   C O N T R O L   B L O C K ********
53 00000               MSWLEN    DS     CL4         BYTES NEEDED FOR AN ITEM
                       *                            0-64K
*************************************************************************
53 00004               MSWSIZE   DS     CL4         NUMBER MEMORY ELEMENTS
                       *                            NEEDED 0-64K
*************************************************************************
                       *                            CLASSIFICATION
53 00008               MSWUNUS   DS     CL4         UNUSED BYTES TO KEEP MSW DW
                       *                            BOUNDARY
*************************************************************************
53 0000C               MSWTYPE   DS     CL1         DESIGNATION ASTO VALUE
      53 0000C         MSWHEX    EQU    MSWTYPE
      00000001         MSWHEXM   EQU    X'01'       HEX
      53 0000C         MSWCHAR   EQU    MSWTYPE
      00000002         MSWCHARM  EQU    X'02'       CHARACTER
      53 0000C         MSWINT    EQU    MSWTYPE
      00000003         MSWINTM   EQU    X'03'       INTEGER
*************************************************************************
53 0000D               MSWCLASS  DS     CL1         DESIGNATES TYPE OF SYMBOL
      53 0000D         MSWSYS    EQU    MSWCLASS
      00000001         MSWSYSM   EQU    X'01'       SYSTEM-$
      53 0000D         MSWSP     EQU    MSWCLASS
      00000002         MSWSPM    EQU    X'02'       SP
      53 0000D         MSWEXT    EQU    MSWCLASS
      00000003         MSWEXTM   EQU    X'03'       EXTERNAL
      53 0000D         MSWLIT    EQU    MSWCLASS
      00000004         MSWLITM   EQU    X'04'       LITERAL
      53 0000D         MSWNAD    EQU    MSWCLASS
      00000005         MSWNADM   EQU    X'05'       IMMEDIATE DATA - NO ADDRESS
                       *                            FLAG
*************************************************************************
53 0000E               MSWFLAGS  DS     CL1
      53 0000E         MSWUNDF   EQU    MSWFLAGS    0 - UNDEFINED SYMBOL  X'80'
      00000080         MSWUNDFM  EQU    X'80'
      53 0000E         MSWNULL   EQU    MSWFLAGS    1 - NULL MSW          X'40'
      00000040         MSWNULLM  EQU    X'40'
      53 0000E         MSWSUBJ   EQU    MSWFLAGS    2 - SUBJECT MSW       X'20'
      00000020         MSWSUBJM  EQU    X'20'
      53 0000E         MSWWKAR   EQU    MSWFLAGS    3 - DATA IN WORK AREA X'10'
      00000010         MSWWKARM  EQU    X'10'
      53 0000E         MSWPHYS   EQU    MSWFLAGS    4 - PHYSICAL DATA     X'08'
      00000008         MSWPHYSM  EQU    X'08'
      53 0000E         MSWCYLR   EQU    MSWFLAGS
      00000004         MSWCYLRM  EQU    X'04'       BIT 5 - CYLINDER =
      53 0000E         MSWTRCK   EQU    MSWFLAGS
      00000002         MSWTRCKM  EQU    X'02'       BIT 6 - TRACK =
      53 0000E         MSWRCD    EQU    MSWFLAGS
      00000001         MSWRCDM   EQU    X'01'       BIT 7 - RECORD =
*************************************************************************
53 0000F               MSWBLNK1  DS     CL1         KEYWORD FLAGS
      53 0000F         MSWBRET   EQU    MSWBLNK1
      00000080         MSWBRETM  EQU    X'80'       MORE DATA TO FORMAT DUMP
      53 0000F         MSWBFLG   EQU    MSWBLNK1
      00000040         MSWBFLGM  EQU    X'40'       ALL OF AT OR PATCH TABLE
      53 0000F         MSWBREC   EQU    MSWBLNK1
      00000020         MSWBRECM  EQU    X'20'       RECORD OVER 4096 BYTES
      53 0000F         MSWBOVF   EQU    MSWBLNK1
      00000010         MSWBOVFM  EQU    X'10'       SET OVERFLOW CONDITION
      53 0000F         MSWBEOF   EQU    MSWBLNK1
      00000008         MSWBEOFM  EQU    X'08'       END OF FILE CONDITION FROM
                       *                            I/O
      53 0000F         MSWBINS   EQU    MSWBLNK1
      00000004         MSWBINSM  EQU    X'04'       ONE BYTE OF INSTRUCTION IN
                       *                            ACB
      53 0000F         MSWBINT   EQU    MSWBLNK1
      00000002         MSWBINTM  EQU    X'02'       TWO BYTES OF INSTRUCTION IN
```

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|----------|-------------|--------|------|------|---------|
| | | * | | | ACB |
| | 53 0000F | MSWBUND | EQU | MSWBLNK1 | |
| | 00000001 | MSWBUNDM | EQU | X'01' | UNUSED FLAG |
| ************************************************************************* |
| 53 00010 | | MSWBASE | DS | CL4 | ADDRESS OF MEMORY AREA |
| ************************************************************************* |
| 53 00014 | | MSWPTR | DS | CL4 | CONSTANT USED TO CALCULATE |
| | | * | | | ADDRESS |
| ************************************************************************* |
| 53 00018 | | MSWSDEV | DS | CL2 | DEVICE ADDRESS |
| 53 0001A | | MSWCYL | DS | CL1 | CYLINDER NUMBER |
| 53 0001B | | MSWTRK | DS | CL1 | TRACK NUMBER |
| 53 0001C | | MSWREC | DS | CL2 | RECORD NUMBER |
| 53 0001E | | MSWDEVC | DS | CL1 | DEVICE CODE IN HEX |
| | 53 0001E | MSWTERM | EQU | MSWDEVC | |
| | 00000000 | MSWTERMM | EQU | X'00' | TERMINAL |
| | 53 0001E | MSW2540 | EQU | MSWDEVC | |
| | 00000001 | MSW2540M | EQU | X'01' | 2540 CARD READ PUNCH |
| | 53 0001E | MSW2400 | EQU | MSWDEVC | |
| | 00000002 | MSW2400M | EQU | X'02' | 2400 MAGNETIC TAPE |
| | 53 0001E | MSW1403 | EQU | MSWDEVC | |
| | 00000003 | MSW1403M | EQU | X'03' | 1403 PRINTER |
| | 53 0001E | MSW2311 | EQU | MSWDEVC | |
| | 00000004 | MSW2311M | EQU | X'04' | 2311 DISK STORAGE DRIVE |
| | 53 0001E | MSW2314 | EQU | MSWDEVC | |
| | 00000005 | MSW2314M | EQU | X'05' | 2314 STORAGE FACILITY |
| | 53 0001E | MSW2301 | EQU | MSWDEVC | |
| | 00000006 | MSW2301M | EQU | X'06' | 2301 DRUM STORAGE |
| 53 0001F | | MSWMODE | DS | CL1 | MODE SET |
| ************************************************************************* |
| 53 00020 | | MSWQUAL | DS | CL4 | SYMBOL RESIDES IN RM OR VM |
| | | * | | | ONE BYTE EQUALS |
| | | * | | | QUALIFICATION |
| | 53 00020 | MSWRM | EQU | MSWQUAL | |
| | 00000000 | MSWRMM | EQU | X'00' | REAL MEMORY UNQUALIFIED |
| | 53 00020 | MSWRM1 | EQU | MSWQUAL | |
| | 00000001 | MSWRM1M | EQU | X'01' | REAL MEMORY QUALIFIED |
| | 53 00020 | MSWVM | EQU | MSWQUAL | |
| | 00000002 | MSWVMM | EQU | X'02' | VIRTUAL MEMORY UNQUALIFIED |
| | 53 00020 | MSWVM1 | EQU | MSWQUAL | |
| | 00000003 | MSWVM1M | EQU | X'03' | VIRTUAL MEMORY QUALIFIED |
| | 53 00020 | MSWEXTN | EQU | MSWQUAL | |
| | 00000004 | MSWEXTNM | EQU | X'04' | EXTERNAL QUALIFIATION |
| | | * | | | THREE BYTES EQUAL |
| | | * | | | PREFIX FOR RM |
| | | * | | | OR TASKID |
| ************************************************************************* |
| 53 00024 | | MSWBKPT | DS | CL4 | POINTS TO ORIGINAL MSW FOR |
| | | * | | | $ OR SP |
| ************************************************************************* |
| 53 00028 | | MSWSYMB | DS | CL8 | STRING OF ALPHA OR NUMERIC |
| | | * | | | CHAR |
| ************************************************************************* |

## Multiterminal Status Control Block (CHAMTS)

There are two types of CHAMTS used by RTAM: a system CHAMTS contains a pointer to the system Terminal Control Table; an application CHAMTS contains pointers to the application Terminal Control Table. Both types of CHAMTS serve as the basic communication links between a task, in virtual storage, and the resident portion of RTAM; they enable both virtual and resident storage programs to reference the Terminal Control Tables. CHAMTS occupies 64 bytes of storage.

### CHAMTS Storage map

| DEC | HEX | | | | |
|---|---|---|---|---|---|
| 0 | 0 | MTSCPTB | MTSLCK | UNNAMED | |
| 8 | 8 | MTSAPN | | | |
| 16 | 10 | MTSTCP | | MTSBUF | |
| 24 | 18 | MTSMAX | MTSCUR | MTSBLH | MTSDSH |
| 32 | 20 | MTSFLG1 / MTSFLG2 | MTSVMP | MTSSLT | MTSRCT |
| 40 | 28 | MTSCSW | | | |
| 48 | 30 | MTSTLM | MTSRAN | | |
| | | UNNAMED | | | |

### Fields in CHAMTS -- by displacement

| DEC | HEX | FIELD | DEC | HEX | FIELD | DEC | HEX | FIELD |
|---|---|---|---|---|---|---|---|---|
| 0000 | 0000 | MTSCPTB | 0026 | 001A | MTSCUR | 0036 | 0024 | MTSSLT |
| 0004 | 0004 | MTSLCK | 0028 | 001C | MTSBLH | 0038 | 0026 | MTSRCT |
| 0008 | 0008 | MTSAPN | 0030 | 001E | MTSDSH | 0040 | 0028 | MTSCSW |
| 0016 | 0010 | MTSTCP | 0032 | 0020 | MTSFLG1 | 0048 | 0030 | MTSTLM |
| 0020 | 0014 | MTSBUF | 0033 | 0021 | MTSFLG2 | 0050 | 0032 | MTSRAN |
| 0024 | 0018 | MTSMAX | 0034 | 0022 | MTSVMP | | | |

### Alphabetical list of fields in CHAMTS

| FIELD | DEC | HEX | FIELD | DEC | HEX | FIELD | DEC | HEX |
|---|---|---|---|---|---|---|---|---|
| MTSAPN | 0008 | 0008 | MTSDSH | 0030 | 001E | MTSRCT | 0038 | 0026 |
| MTSBLH | 0028 | 001C | MTSFLG1 | 0032 | 0020 | MTSSLT | 0036 | 0024 |
| MTSBUF | 0020 | 0014 | MTSFLG2 | 0033 | 0021 | MTSTCP | 0016 | 0010 |
| MTSCPTB | 0000 | 0000 | MTSLCK | 0004 | 0004 | MTSTLM | 0048 | 0030 |
| MTSCSW | 0040 | 0028 | MTSMAX | 0024 | 0018 | MTSVMP | 0034 | 0022 |
| MTSCUR | 0026 | 001A | MTSRAN | 0050 | 0032 | | | |

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|---|---|---|---|---|---|
| | 54 00000 | CHAMTS | DSECT | | |
| 54 00000 | | MTSCPTB * | DS | A | ADDR OF PG TBLS FOR TSS N349.10 |
| 54 00004 | | MTSLCK | DS | X | LOCK BYTE |
| 54 00005 | | | DS | 3X | UNUSED |
| 54 00008 | | MTSAPN | DS | D | APPLICATION NAME |
| 54 00010 | | MTSTCP | DS | F | TCT POINTER (VM) |
| 54 00014 | | MTSBUF | DS | F | BUFFER POINTER (VM) |
| 54 00018 | | MTSMAX | DS | H | MAX NUMBER OF LINES |
| 54 0001A | | MTSCUR | DS | H | CURRENT NUMBER OF USERS |
| 54 0001C | | MTSBLH | DS | H | BUFFER LENGTH |
| 54 0001E | | MTSDSH | DS | H | DRUM SHARE |
| 54 00020 | | MTSFLG1 * | DS | XL1 | FLAG BYTE 1 NO BITS ASSIGNED YET |
| 54 00021 | | MTSFLG2 | DS | XL1 | FLAG BYTE 2 |
| | 00000080 | MTSPGE * | EQU | X'80' | OBTAIN BUFFER PAGE-1 / TCT PAGE-0 |
| | 00000040 | MTSRPG * | EQU | X'40' | RELEASE BUFFER PAGE-1 / TCT PAGE-0 |
| | 00000020 | MTSFRE | EQU | X'20' | FREE ALL USERS |
| | 00000010 | MTSFIN | EQU | X'10' | FINISH BIT |
| | 00000008 | MTSBEL | EQU | X'08' | 1052-7 BELL INDICATOR |
| 54 00022 | | MTSVMP * | DS | H | TOTAL VM PAGES FOR BUFFER + TCT |
| 54 00024 | | MTSSLT | DS | H | NUMBER OF BUFFER SLOTS |
| 54 00026 | | MTSRCT | DS | H | COUNT |
| 54 00028 | | MTSCSW | DS | D | CSW FOR 1052-7 |
| 54 00030 | | MTSTLM * | DS | H 6 | CURRENT CONV. TASK LIMIT N38 |
| 54 00032 | | MTSRAN * | DS | H 6 | RELATIVE APPLICATION NUMBER N38 |
| 54 00034 | | * | DS | 3XL4 | RESERVED N386 |
| | 00000040 | MTSLGH * | EQU | *-CHAMTS | MTS LENGTH N349.10 |

## Module Usage Table (CHAMUT)

The Module Usage Table (MUT) maintains a list of CALLS in a task.  This list
reflects the linkage between called and calling modules.  Each MUT entry contains a
linkage to the PMD of the calling module and a linkage to the called module PMD.
The MUT is created by the Dynamic Loader.
The MUT resides in virtual storage aligned on fullword boundaries.

### CHAMUT Storage map

```
DEC   HEX _____
  0     0|              MUTFPL              |              MUTBPL            |
         |_____|_____|
  8     8|              MUTSVC              |              MUTFBL            |
         |_____|_____|
 16    10|              MUTBBL              |              MUTCDP            |
         |_____|_____|
```

### Fields in CHAMUT -- by displacement

| DEC  | HEX  | FIELD  | DEC  | HEX  | FIELD  | DEC  | HEX  | FIELD  |
|------|------|--------|------|------|--------|------|------|--------|
| 0000 | 0000 | MUTFPL | 0008 | 0008 | MUTSVC | 0016 | 0010 | MUTBBL |
| 0004 | 0004 | MUTBPL | 0012 | 000C | MUTFBL | 0020 | 0014 | MUTCDP |

### Alphabetical list of fields in CHAMUT

| FIELD  | DEC  | HEX  | FIELD  | DEC  | HEX  | FIELD  | DEC  | HEX  |
|--------|------|------|--------|------|------|--------|------|------|
| MUTBBL | 0016 | 0010 | MUTCDP | 0020 | 0014 | MUTFPL | 0000 | 0000 |
| MUTBPL | 0004 | 0004 | MUTFBL | 0012 | 000C | MUTSVC | 0008 | 0008 |

### Assembler listing of CHAMUT

```
LOCATION  INSTRUCTION  SOURCE    INST   OPER      COMMENT
          55 00000     CHAMUT    DSECT            MUT ENTRY STRUCTURE
**********************************************************************************
                       *    MODULE USAGE TABLE (MUT) ENTRY DSECT
**********************************************************************************
55 00000               MUTFPL    DS     F         FORWARD PAPA LINK
55 00004               MUTBPL    DS     F         BACKWARD PAPA LINK
55 00008               MUTSVC    DS     F         ADDRESS OF CALLING SVC
55 0000C               MUTFBL    DS     F         FORWARD BABY LINK
55 00010               MUTBBL    DS     F         BACKWARD BABY LINK
55 00014               MUTCDP    DS     F         ADDRESS OF PMD CALLED BY
                       *                          SVC
        00000018       MUTESZ    EQU    *-CHAMUT
```

## New Task Common (CHANTC)

The New Task Common (CHANTC), replacing CHATCM, contains system values referenced by more than one system module in a single task.

CHANTC, read-protected from the user, is initialized by the operator task, LOGEX, or TSS2SIM.

CHANTC resides in virtual storage (in module CZBNTC), aligned on word boundaries.

### CHANTC Storage map

```
DEC   HEX
  0    0|_____NTCTSK_____|
         |                                                            |
  8    8|_____NTCBID_____|
         |                                                            |
 16   10|_____NTCSWQ_____|
         |                                                            |
 24   18|_____NTCNAM_____|
         |                                                            |
 32   20|_____NTCDNO_____|_____NTCTID_____|_NTCCPI_|_RESERVED_|
         |                                                            |
 40   28|                                                            |
         |                                                            |
         |                          RESERVED                          |
         |                                                            |
         |                                                            |
 64   40|_____|NTCAIC_|NTCVSS_|NTCMTU_|NTCSUE_|_____RESERVED_____|
         |                                                            |
 72   48|_____NTCTMR_____|                      |
```

### ORG  NTCSWQ

```
 16   10|___NTCSW1___|NTCSW2_|NTCSW3_|NTCSW4_|NTCSW5_|_____NTCSW6_____|
```

### Fields in CHANTC -- by displacement

| DEC | HEX | FIELD | DEC | HEX | FIELD | DEC | HEX | FIELD |
|-----|-----|-------|-----|-----|-------|-----|-----|-------|
| 0000 | 0000 | NTCTSK | 0021 | 0015 | NTCSW5 | 0066 | 0042 | NTCAIC |
| 0008 | 0008 | NTCBID | 0022 | 0016 | NTCSW6 | 0067 | 0043 | NTCVSS |
| 0016 | 0010 | NTCSW1 | 0024 | 0018 | NTCNAM | 0068 | 0044 | NTCMTU |
| 0016 | 0010 | NTCSWQ | 0032 | 0020 | NTCDNO | 0069 | 0045 | NTCSUE |
| 0018 | 0012 | NTCSW2 | 0036 | 0024 | NTCTID | 0072 | 0048 | NTCTMR |
| 0019 | 0013 | NTCSW3 | 0038 | 0026 | NTCCPI | | | |
| 0020 | 0014 | NTCSW4 | 0040 | 0028 | NTCPCT | (EQU) | | |

### Alphabetical list of fields in CHANTC

| FIELD | DEC | HEX | | FIELD | DEC | HEX | FIELD | DEC | HEX |
|-------|-----|-----|-----|-------|-----|-----|-------|-----|-----|
| NTCAIC | 0066 | 0042 | | NTCSUE | 0069 | 0045 | NTCSW6 | 0022 | 0016 |
| NTCBID | 0008 | 0008 | | NTCSWQ | 0016 | 0010 | NTCTID | 0036 | 0024 |
| NTCCPI | 0038 | 0026 | | NTCSW1 | 0016 | 0010 | NTCTMR | 0072 | 0048 |
| NTCDNO | 0032 | 0020 | | NTCSW2 | 0018 | 0012 | NTCTSK | 0000 | 0000 |
| NTCMTU | 0068 | 0044 | | NTCSW3 | 0019 | 0013 | NTCVSS | 0067 | 0043 |
| NTCNAM | 0024 | 0018 | | NTCSW4 | 0020 | 0014 | | | |
| NTCPCT | 0040 | 0028 (EQU) | | NTCSW5 | 0021 | 0015 | | | |

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|----------|-------------|--------|------|------|---------|
| | 56 00000 | CHANTC | DSECT | | ,        NEW TASK |
| | | * | | | COMMON |
| 56 00000 | | NTCTSK | DS | CL8 | TASK NAME...INITIALIZED |
| | | * | | | SET TO 'OPERATOR' BY LOGON3 |
| 56 00008 | | NTCBID | DS | CL8 | BULKIO TASK ID |
| 56 00010 | | NTCSWQ | DS | CL8 | SWQ KEY |
| | | * | | | THIS IS INITIALIZED IN THE FOLLOWING SUB |
| | | * | | | FIELDS BY LOGON3 |
| | 56 00010 | | \|ORG\| | NTCSWQ | |
| 56 00010 | | NTCSW1 | DS | H | H'0'     TASK |
| 56 00012 | | NTCSW2 | DS | C | C'0'     JOB CATEGORY |
| 56 00013 | | NTCSW3 | DS | C | C'0'     NOT USED |
| 56 00014 | | NTCSW4 | DS | C | C'1'     CONVERSATIONAL |
| | 00000001 | NTCCOV | EQU | X'1' | |
| 56 00015 | | NTCSW5 | DS | C | C'0'     PRIORITY |
| 56 00016 | | NTCSW6 | DS | H | H'0'     SEQUENCE NUMBER |
| | | * | | | SEE ALSO CHASWQ FOR FURTHER DESCRIPTION. |
| 56 00018 | | NTCNAM | DS | CL8 | NAME OF CURRENT |
| | | * | | | PROGRAM...SET BY CAE |
| | | * | | | ...SET BY LOGON2 |
| 56 00020 | | NTCDNO | DS | F | DEFAULT NUMBER...SET TO 0 |
| | | * | | | BY LOGON2 |
| | | * | | | INCREMENTED FOR EACH |
| | | * | | | DEFAULT COMMAND |
| | | * | | | THIS COUNTER CAN BE INTERROGATED TO SEE IF A |
| | | * | | | DEFAULT HAS OCCURRED |
| | | * | | | SINCE THE LAST INQUIRY. |
| 56 00024 | | NTCTID | DS | H | TASK ID. SET BY LOGON2 FROM |
| | | * | | | MCB |
| 56 00026 | | NTCCPI | DS | XL1 | CSECT PACKING INDICATOR |
| | | * | | | THE CR OF THE FOLLOWING CODES INDICATES PACKING |
| | | * | | | X'01'=PRIVATE STORAGE KEY A |
| | | * | | | X'02'=PRIVATE STORAGE KEY B |
| | | * | | | X'04'=PRIVATE STORAGE KEY C |
| | | * | | | X'08'=PUBLIC STORAGE KEY A |
| | | * | | | X'10'=PUBLIC STORAGE KEY B |
| | | * | | | X'20'=PUBLIC STORAGE KEY C |
| 56 00028 | | | DS | 0F | |
| | 56 00028 | NTCPCT | EQU | * | PROFILE CHARACTER AND |
| | | * | | | SWITCH TABLE |
| | 56 00042 | | \|ORG\| | NTCPCT+X'1A' | N366 |
| 56 00042 | | NTCAIC | DS | CL1 | ATTENTION INDICATOR |
| | | * | | | CHARACTER |
| | | * | | | SET TO ' ' BY LOGON2. |
| 56 00043 | | NTCVSS | DS | XL1 | VSS IN OPERATION SWITCH. |
| | | * | | | SET TO 0 BY LOGON3. |
| 56 00044 | | NTCMTU | DS | XL1 | MULTIPLE TASK USER FLAG |
| | | * | | | ...SET AND USED BY |
| | | * | | | RESOURCE CONTROL |
| 56 00045 | | NTCSUE | DS | XL1 | SHARED USER EXTENDING FLAG |
| | | * | | | ...SET AND USED BY |
| | | * | | | RESOURCE CONTROL |
| 56 00048 | | NTCTMR | DS | A | TASK MONITOR REG 13 SAVE |
| | | * | | | N369.2 |
| | 0000004C | NTCLEN | EQU | *-CHANTC | LENGTH OF CHANTC TABLE |

## Operator's Device Path Table (CHAODP)

The Operator's Device Path Table (ODP) contains one entry for each path to the operator's device(s).
ODP entries are contiguous in core storage and aligned on word boundaries.

## CHAODP Storage map

```
DEC   HEX  _____
  0     0 | ODPLOK  | UNNAMED |     ODPATH         |
         |_____|_____|_____|
```

## Fields in CHAODP -- by displacement

| DEC | HEX | FIELD | DEC | HEX | FIELD | DEC | HEX | FIELD |
|-----|-----|-------|-----|-----|-------|-----|-----|-------|
| 0000 | 0000 | ODPLOK | 0002 | 0002 | ODPATH | | | |

## Alphabetical list of fields in CHAODP

| FIELD | DEC | HEX | FIELD | DEC | HEX | FIELD | DEC | HEX |
|-------|-----|-----|-------|-----|-----|-------|-----|-----|
| ODPATH | 0002 | 0002 | ODPLOK | 0000 | 0000 | | | |

## Assembler listing of CHAODP

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|----------|-------------|--------|------|------|---------|
| | 57 00000 | CHAODP | DSECT | | |
| 57 00000 | | | DS | 0F | |
| 57 00000 | | ODPLOK | DS | C | LOCK BYTE |
| 57 00001 | | | DS | C | SPARE |
| 57 00002 | | ODPATH | DS | H | PATH ADDRESS |
| | 00000004 | ODPSZE | EQU | *-ODPLOK | SIZE OF TABLE ENTRY |

## I/O Outboard Error Record (CHAOER)

The I/O Outboard Error Record (OER) specifies a record format containing statistical data on outboard errors. In the event of a solid outboard error on a task or paging I/O device, or SDR bucket overflow, an I/O outboard error record is constructed and stored on drum.

Prior to the creation and storage of an OER, the required information will be temporarily stored in the I/O Statistical Data Table for task I/O devices, or it will be stored in the Direct Access Paging Statistical Data Record for paging I/O devices. The OER contains edited data.

The OER occupies from 104 to 176 bytes of virtual and core storage, aligned on doubleword boundaries.

Note 1. The retry threshold depends upon the type of the error condition and device. Thus, each byte of the OERRTH field is assigned to a specific error condition as its retry threshold bytes device dependent.

Note 2. The SDR save areas contain 4-bit frequency counters for each bit of the sense data. An SDR area is incremented by 1 each time its associated sense bit is 1 in the summary sense data on a VMSDR or RCSDR call.

### CHAOER Storage map

| DEC | HEX | | | | | |
|-----|-----|---|---|---|---|---|
| 0 | 0 | UNNAMED | OERRL | OERDVC | OERTYP | OERDVT |
| 8 | 8 | OERSDA | OERALT | OERCS | | OERCNT |
| 16 | 10 | OERLSA | | | | |
| 24 | 18 | OERLP | OEREIC | OERRET | OERKEY | OERFCC |
| 32 | 20 | OERADD | | | | |
| 40 | 28 | OERTM2 | | | | |
| 48 | 30 | OERTM1 | | | | |
| 56 | 38 | OERSDR | | | | |
| 88 | 58 | OERSNS | | | | |
| 96 | 60 | OERVID | | | OERNCC | |
| 104 | 68 | OERCCW | | | | |

### Fields in CHAOER -- by displacement

| DEC | HEX | FIELD | DEC | HEX | FIELD | | DEC | HEX | FIELD |
|-----|-----|-------|-----|-----|-------|---|-----|-----|-------|
| 0002 | 0002 | OERRL | 0016 | 0010 | OERLSA | | 0032 | 0020 | OERADD |
| 0004 | 0004 | OERDVC | 0024 | 0018 | OERLP | | 0040 | 0028 | OERTM2 |
| 0005 | 0005 | OERTYP | 0026 | 001A | OEREIC | | 0048 | 0030 | OERTM1 |
| 0006 | 0006 | OERDVT | 0028 | 001C | OERRET | | 0056 | 0038 | OERSDR |
| 0008 | 0008 | OERSDA | 0030 | 001E | OERKEY | | 0088 | 0058 | OERSNS |
| 0010 | 000A | OERALT | 0031 | 001F | OERFCC | | 0096 | 0060 | OERVID |
| 0012 | 000C | OERCS | 0032 | 0020 | OERSID | (EQU) | 0102 | 0066 | OERNCC |
| 0014 | 000E | OERCNT | 0032 | 0020 | OERHMA | (EQU) | 0104 | 0068 | OERCCW |

## Alphabetical list of fields in CHAOER

| FIELD | DEC | HEX | | FIELD | DEC | HEX | | FIELD | DEC | HEX | |
|-------|-----|-----|--|-------|-----|-----|--|-------|-----|-----|--|
| OERADD | 0032 | 0020 | | OERFCC | 0031 | 001F | | OERSDA | 0008 | 0008 | |
| OERALT | 0010 | 000A | | OERHMA | 0032 | 0020 | (EQU) | OERSDR | 0056 | 0038 | |
| OERCCW | 0104 | 0068 | | OERKEY | 0030 | 001E | | OERSID | 0032 | 0020 | (EQU) |
| OERCNT | 0014 | 000E | | OERLP | 0024 | 0018 | | OERSNS | 0088 | 0058 | |
| OERCS | 0012 | 000C | | OERLSA | 0016 | 0010 | | OERTM1 | 0048 | 0030 | |
| OERDVC | 0004 | 0004 | | OERNCC | 0102 | 0066 | | OERTM2 | 0040 | 0028 | |
| OERDVT | 0006 | 0006 | | OERRET | 0028 | 001C | | OERTYP | 0005 | 0005 | |
| OEREIC | 0026 | 001A | | OERRL | 0002 | 0002 | | OERVID | 0096 | 0060 | |

## Assembler listing of CHAOER

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|----------|-------------|--------|------|------|---------|
| | 58 00000 | CHAOER | DSECT | | |
| | | * | I/O | OUTBOARD | ERROR RECORD |
| 58 00000 | | | DS | 0D | |
| 58 00000 | | | DS | H | SPARE |
| 58 00002 | | OERRL | DS | H | RECORD LENGTH (96 TO 184 |
| | | * | | | BYTES) |
| 58 00004 | | OERDVC | DS | XL1 | DEVICE CLASS CODE |
| 58 00005 | | OERTYP | DS | XL1 | RECORD TYPE |
| 58 00006 | | OERDVT | DS | H | DEVIVE TYPE CODE |
| 58 00008 | | OERSDA | DS | XL2 | SYMBOLIC DEVICE ADDRESS |
| 58 0000A | | OERALT | DS | XL2 | ALT PATH IF DRUM; OTHERWISE |
| | | * | | | UNUSED |
| 58 0000C | | OERCS | DS | H | CSW STATUS BITS |
| 58 0000E | | OERCNT | DS | H | CSW BYTE COUNT |
| 58 00010 | | OERLSA | DS | XL8 | LAST SEEK ADDRESS |
| 58 00018 | | OERLP | DS | XL2 | PATH LAST USED (ACTUAL I/O |
| | | * | | | ADDRESS) |
| 58 0001A | | OEREIC | DS | XL2 | TOTAL ERROR COUNT |
| 58 0001C | | OERRET | DS | XL2 | TOTAL RETRY COUNT |
| 58 0001E | | OERKEY | DS | XL1 | CSW KEY |
| 58 0001F | | OERFCC | DS | XL1 | POINTER TO FAILING CCW |
| 58 00020 | | OERADD | DS | 2F | HOME ADDRESS OR RJE STATION |
| | | * | | | ID |
| | 58 00020 | OERHMA | EQU | OERADD | HOME ADDRESS |
| | 58 00020 | OERSID | EQU | OERADD | RJE STATION ID |
| 58 00028 | | OERTM2 | DS | 2F | DATE AND TIME OF RECORDING |
| | | * | | | (LAST ERROR) |
| 58 00030 | | OERTM1 | DS | 2F | DATE AND TIME OF RECORDING |
| | | * | | | (FIRST ERROR) |
| 58 00038 | | OERSDR | DS | 8XL4 | SDR BUCKETS (64ə 1/2 BYTE) |
| 58 00058 | | OERSNS | DS | 2F | LAST SENSE DATA |
| 58 00060 | | OERVID | DS | 3H | VOLUME ID |
| 58 00066 | | OERNCC | DS | H | NO. OF CCW'S IN CCW LIST |
| 58 00068 | | | DS | 0D | I5926 |
| 58 00068 | | OERCCW | DS | 10XL8 | CCW LIST (MAXIMUM OF 10 |
| | | * | | | CCW'S) |

## Option O UFLOW Macro Table (CHAOFL)

CHAOFL defines the entries set for the UFLOW macro, option O.
Option O sets the user limit, which must be set to a non-negative
value less than the maximum value imposed by the MTT administrator.

The list in the buffer is ended with eight bytes of X'FF'.
CHAOFL defines the same entries upon return from the UFLOW macro.
If an invalid OFLNAME or OFLRAN field is given, OFLLMT and OFLMAX are set
to X'FFFF'.  If an invalid OFLMT is given, OFLLMT and OFLMAX are set to
C'**' and the limit OFLMAX is placed in OFLBLK.

### CHAOFL Storage map

| DEC | HEX | | | | |
|---|---|---|---|---|---|
| 0 | 0 | OFLNAME | | | |
| 8 | 8 | OFLRAN | OFLLMT | OFLMAX | OFLBLK |

### Fields in CHAOFL -- by displacement

| DEC | HEX | FIELD | DEC | HEX | FIELD | DEC | HEX | FIELD |
|---|---|---|---|---|---|---|---|---|
| 0000 | 0000 | OFLNAME | 0010 | 000A | OFLLMT | 0014 | 000E | OFLBLK |
| 0008 | 0008 | OFLRAN | 0012 | 000C | OFLMAX | | | |

### Alphabetical list of fields in CHAOFL

| FIELD | DEC | HEX | FIELD | DEC | HEX | FIELD | DEC | HEX |
|---|---|---|---|---|---|---|---|---|
| OFLBLK | 0014 | 000E | OFLMAX | 0012 | 000C | OFLRAN | 0008 | 0008 |
| OFLLMT | 0010 | 000A | OFLNAME | 0000 | 0000 | | | |

### Assembler listing of CHAOFL

```
LOCATION INSTRUCTION SOURCE    INST  OPER      COMMENT
         59 00000     CHAOFL    DSECT           NSRB 386
****************************************************************************
*      CHAOFL COVERS THE ENTRIES SET FOR THE UFLOW MACRO,OPTION O.      *
*      THIS OPTION SETS THE USER LIMIT, WHICH MUST BE SET TO A NON-NEG  *
*      VALUE LESS THAN THE MAX IMPOSED BY THE MTT ADMINISTRATOR.        *
*      THE LIST IN THE BUFFER IS ENDED WITH 8 BYTES OF X'FF'.           *
*      IT ALSO COVERS THE SAME ENTRIES UPON RETURN FROM UFLOW.          *
*      WHEN AN INVALID OFLNAME OR OFLRAN FIELD WAS GIVEN, OFLLMT AND    *
*      OFLMAX ARE SET TO X'FFFF'                                        *
*      WHEN AN INVALID OFLLMT IS GIVEN, OFLLMT AND OFLMAX ARE SET TO    *
*      C'**' AND THE LIMIT OFLMAX IS PLACED IN OFLBLK.                  *
****************************************************************************
59 00000              OFLNAME   DS    CL8       APPLICATION NAME
59 00008              OFLRAN    DS    H         RELATIVE APPLICATION NUMBER
59 0000A              OFLLMT    DS    H         MTT USER LIMIT
59 0000C              OFLMAX    DS    H         MAXIMUM NUMBER OF MTT USERS
59 0000E              OFLBLK    DS    H         BLOCK SIZE
```

## Operator Header (CHAOPH)

The Operator Header (OPH) describes the header required on all messages sent to the system operators.

The OPH is preceded by the MCB header in the 32-byte preface attached to system operator messages.

### CHAOPH Storage map

```
DEC   HEX  _____
 0     0 |                            OPHUID                               |
         |_____|
 8     8 |OPHMFL  |OPHDES |OPHCOD |OPHRCD |    OPHMNO      |     OPHTID     |
         |_____|_____|_____|_____|_____|_____|
```

### Fields in CHAOPH -- by displacement

| DEC | HEX | FIELD | | DEC | HEX | FIELD | | DEC | HEX | FIELD |
|-----|-----|-------|---|-----|-----|-------|---|-----|-----|-------|
| 0000 | 0000 | OPHUID | | 0008 | 0008 | OPHRC | (EQU) | 0010 | 000A | OPHCOD |
| 0008 | 0008 | OPHF2 | (EQU) | 0008 | 0008 | OPHRR | (EQU) | 0011 | 000B | OPHRCD |
| 0008 | 0008 | OPHMO | (EQU) | 0008 | 0008 | OPHTM | (EQU) | 0012 | 000C | OPHMNO |
| 0008 | 0008 | OPHF1 | (EQU) | 0008 | 0008 | OPHMFL | | 0014 | 000E | OPHTID |
| 0008 | 0008 | OPHHP | (EQU) | 0009 | 0009 | OPHWTL | (EQU) | | | |
| 0008 | 0008 | OPHVT | (EQU) | 0009 | 0009 | OPHDES | | | | |

### Alphabetical list of fields in CHAOPH

| FIELD | DEC | HEX | | FIELD | DEC | HEX | | FIELD | DEC | HEX | |
|-------|-----|-----|---|-------|-----|-----|---|-------|-----|-----|---|
| OPHCOD | 0010 | 000A | | OPHMNO | 0012 | 000C | | OPHTM | 0008 | 0008 | (EQU) |
| OPHDES | 0009 | 0009 | | OPHMO | 0008 | 0008 | (EQU) | OPHUID | 0000 | 0000 | |
| OPHF1 | 0008 | 0008 | (EQU) | OPHRC | 0008 | 0008 | (EQU) | OPHVT | 0008 | 0008 | (EQU) |
| OPHF2 | 0008 | 0008 | (EQU) | OPHRCD | 0011 | 000B | | OPHWTL | 0009 | 0009 | (EQU) |
| OPHHP | 0008 | 0008 | (EQU) | OPHRR | 0008 | 0008 | (EQU) | | | | |
| OPHMFL | 0008 | 0008 | | OPHTID | 0014 | 000E | | | | | |

### Assembler listing of CHAOPH

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|----------|-------------|--------|------|------|---------|
| | 5A 00000 | CHAOPH | DSECT | | OPERATOR HEADER |
| 5A 00000 | | | DS | 0D | |
| 5A 00000 | | OPHUID | DS | CL8 | USERID OF MESSAGE |
| | | * | | | ORIGINATOR |
| 5A 00008 | | OPHMFL | DS | XL1 | MESSAGE FLAGS |
| | 5A 00008 | OPHTM | EQU | OPHMFL | MUST BE ON, IDICATES TEXT |
| | | * | | | MES |
| | | * | | | SAGE |
| | 00000080 | OPHTMM | EQU | X'80' | |
| | 5A 00008 | OPHRR | EQU | OPHMFL | REPLY REQUIRED |
| | 00000040 | OPHRRM | EQU | X'40' | |
| | 5A 00008 | OPHRC | EQU | OPHMFL | REPLY CHECKING REQUIRED |
| | 00000020 | OPHRCM | EQU | X'20' | |
| | 5A 00008 | OPHVT | EQU | OPHMFL | VARIABLE TEXT IN REPLY |
| | 00000010 | OPHVTM | EQU | X'10' | |
| | 5A 00008 | OPHHP | EQU | OPHMFL | HIGH PRIORITY MESSAGE |
| | 00000008 | OPHHPM | EQU | X'08' | |
| | 5A 00008 | OPHF1 | EQU | OPHMFL | MUST BE OFF |
| | 00000004 | OPHF1M | EQU | X'04' | |
| | 5A 00008 | OPHMO | EQU | OPHMFL | REPLY TO BE PROCESSED IN |
| | | * | | | MAIN |
| | 00000002 | OPHMOM | EQU | X'02' | OPERATOR TASK |
| | 5A 00008 | OPHF2 | EQU | OPHMFL | MUST BE OFF |
| | 00000001 | OPHF2M | EQU | X'01' | |
| 5A 00009 | | OPHDES | DS | XL1 | DESTINATION CODE |
| | 5A 00009 | OPHWTL | EQU | OPHDES | MESSAGE TO LOG ONLY FLAG |
| | 00000080 | OPHWTLM | EQU | X'80' | MESSAGE TO LOG ONLY MASK |
| | 00000000 | OPHDEM | EQU | X'00' | |
| | 00000001 | OPHDE1 | EQU | X'01' | |
| | 00000002 | OPHDE2 | EQU | X'02' | |
| | 00000004 | OPHDE3 | EQU | X'04' | |

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|---|---|---|---|---|---|
| 5A 0000A | | OPHCOD | DS | XL1 | IF OPHMC IS OFF, THIS BYTE CONT |
| | | * | | | AINS A RETURN IDENTIFIER AS S |
| | | * | | | PECIFIED BY THE SENDER. THE R |
| | | * | | | EPLY TO HIS MESSAGE WILL BE R |
| | | * | | | ETURNED TO HIM WITH THIS CODE |
| | | * | | | . IF OPHMC IS ON, THIS BYTE C |
| | | * | | | ONTAINS A CODE. IT IDENTIFIES |
| | | * | | | THE ROUTINE IN THE MAIN OPERA |
| | | * | | | TOR TASK THAT IS TO PROCESS T |
| | | * | | | HE REPLY. |
| | | * | | | 0 = MAIN OPERATOR HOUSEKEEPIN |
| | | * | | | G ROUTINE (REMAINING CODES UN |
| | | * | | | SPECIFIED) |
| 5A 0000B | | OPHRCD | DS | XL1 | REPLY CODE - |
| | | * | | | 0 = DO NOT CHECK REPLY |
| | | * | | | 1-255 = COMPARE THE ACTUAL RE |
| | | * | | | PLY TO THE 7 BYTE REPLIES ASS |
| | | * | | | OCIATED WITH THIS NUMBER IN T |
| | | * | | | HE REPLY CHECKING TABLE (2.4. |
| | | * | | | 138) |
| 5A 0000C | | OPHMNO | DS | XL2 | IF THE MCB IS FROM THE REPLY CO |
| | | * | | | MMAND ROUTINE THIS FIELD CONT |
| | | * | | | AINS THE NUMBER OF THE MESSAG |
| | | * | | | E BEING REPLIED TO. OTHERWISE |
| | | * | | | THE FIELD IS UNUSED. |
| 5A 0000E | | OPHTID | DS | XL2 | IF THE MCB IS FROM THE REPLY CO |
| | | * | | | MMAND ROUTINE THIS FIELD CONT |
| | | * | | | AINS THE TASKID OF THE TASK R |
| | | * | | | ECEIVING A REPLY. OTHERWISE T |
| | | * | | | HE FIELD IS UNUSED. |

## Page Allocation Table (CHAPAT)

The Page Allocation Table (CHAPAT) contains entries for each page on a volume; it occupies one page for a 2311, and two pages for a 2314. Each PAT entry is one byte long, and contains information indicating page type (DSCB, data, error) and availability. The last 384 bytes on the PAT page contain 96 relocation entries and one relocation control entry. The relocation entries, each one word in length, are in reverse order (from byte 4094 to byte 3708) on the page; they are structured such that the first halfword of each entry contains the error page number, and the second halfword contains the new page number. The fullword relocation control entry contains a halfword count of relocation entries, and a halfword of X'FFFF' if any relocation entries exist.

The one-byte PAT entries may have the following bit settings:

| | |
|---|---|
| X'00' | Page available |
| X'80' | DSCB page with less than 12 slots used |
| X'82' | DSCB page with 12 to 15 slots used |
| X'83' | DSCB page with all slots used |
| X'01' | Data page |
| X'41' | Data page not yet in a DSCB |
| X'C0' | Error page |
| X'7F' | Page Allocation Table page |

## CHAPAT Storage map

```
DEC    HEX
  0      0 |_____|
           |                                                      |
           |                        PATLPP                        |
         = |                                                      | =
           |                                                      |
           |_____|
```
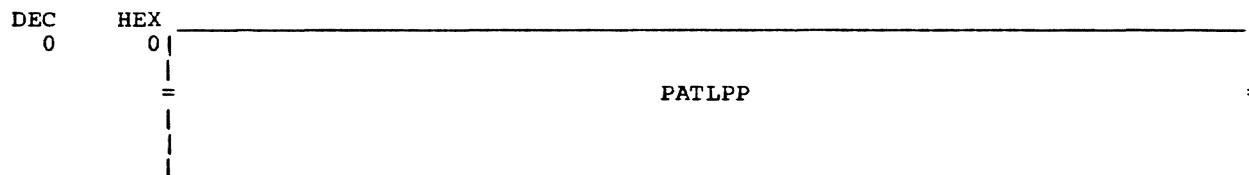
ORG  PATLPP+4088

```
4088    FF8 |_____PATFRE_____|____PATNRE____|____PATRLF____|
            |_____|_____|_____|
```

## Fields in CHAPAT -- by displacement

| DEC | HEX | FIELD | DEC | HEX | FIELD | DEC | HEX | FIELD |
|---|---|---|---|---|---|---|---|---|
| 0000 | 0000 | PATLPP | 4088 | 0FF8 | PATFRE | 4092 | 0FFC | PATNRE |
| | | | | | | 4094 | 0FFE | PATRLF |

## Alphabetical list of fields in CHAPAT

| FIELD | DEC | HEX | FIELD | DEC | HEX | FIELD | DEC | HEX |
|---|---|---|---|---|---|---|---|---|
| PATFRE | 4088 | 0FF8 | PATLPP | 0000 | 0000 | PATNRE | 4092 | 0FFC |
| | | | | | | PATRLF | 4094 | 0FFE |

## Assembler listing of CHAPAT

```
LOCATION  INSTRUCTION  SOURCE   INST  OPER      COMMENT
          5B 00000     CHAPAT   DSECT           DSECT FOR PAGE ALLOCATION
                       *                        TABLE
****************************************************************************
* THE FIRST SECTION OF THE PAT DESCRIBES THE STATUS OF EACH PAGE ON     *
* THE DEVICE AND CONSISTS OF ONE-BYTE ENTRIES DEFINED AS FOLLOWS:       *
* DUE TO OVERLAPPING BIT DEFINITIONS IN THE PATLPP FIELD THE USER MUST*
* EXERCISE CAUTION WHEN USING THE EQU LABELS IN THIS FIELD FOR          *
* IMMEDIATE OPERATIONS                                                  *
          5B 00000              PATLPP   DS    4096XL1   PAGE STATUS ENTRY
                                *                        *
          00000000              PATPA    EQU   X'00'     PAGE AVAILABLE
                                *                        *
          0000000F              PATD4    EQU   X'0F'     DATA PAGE(LAST FOUR BITS=
                                *                        *
   *                                           NUMBER OF USERS)          *
          0000004F              PATD5    EQU   X'4F'     DATA PAGE (NOT YET INCLUDED
```

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|---|---|---|---|---|---|
| | | * | | | IN DSCB)* |
| * | | | | | LAST FOUR BITS=NUMBER OF USERS     * |
| | 0000007F | PATPT | EQU | X'7F' | PAT TABLE ENTRY |
| | | * | | | * |
| | 00000080 | PATD1 | EQU | X'80' | DSCB PAGE (LESS THAN 12 |
| | | * | | | SLOTS USED) * |
| | 00000082 | PATD2 | EQU | X'82' | DSCB PAGE (12 TO 15 SLOTS |
| | | * | | | USED)      * |
| | 00000083 | PATD3 | EQU | X'83' | DSCB PAGE (ALL SLOTS USED) |
| | | * | | | * |
| | 000000C0 | PATER | EQU | X'C0' | ERROR PAGE |

```
* THE NUMBER OF PAGE STATUS ENTRIES IS DEVICE DEPENDENT                    *
* AS FOLLOWS:                                                             *
*              2311 = 1624                                                *
*              2314 = 6496                                                *
* THE 2311 USES ONLY 1 PAGE TO CONTAIN THE COMPLETE                       *
* PAT.  THE 2314 USES 2 PAGES                                             *
*************************************************************************
* THE PAGE RELOCATION ENTRIES RESIDE AT THE END OF THE LAST PAT PAGE. *
* RELOCATION ENTRIES IN THE FOLLOWING FORMAT WILL BEGIN AT PATFRE AND *
* PROCEED TOWARD THE LAST ALLOWABLE ENTRY AT PATREL.                      *
*                                       BITS 0 - 15 PAGE NO. OF ERROR PAGE *
*                                            16 - 31 NEW PAGE NUMBER       *
* TO ADDRESS RELOCATION ENTRIES - SET USING TO                           *
* ADDRESS=PAT ORIGIN + 4096*(NUM PAT PAGES-1)                            *
```

| | 5B 00E7C | | \|ORG\| | PATLPP+3708 | * |
| 5B 00E7C | | PATREL | DS | 0F | LAST ALLOWABLE RELOCATION |
| | | * | | | ENTRY IN LAST PAT PAGE * |
| | 5B 00FF8 | | \|ORG\| | PATLPP+4088 | * |
| 5B 00FF8 | | PATFRE | DS | F | FIRST RELOCATION ENTRY |
| | | * | | | * |
| 5B 00FFC | | PATNRE | DS | H | NO. OF RELOCATION ENTRIES |
| | | * | | | * |
| 5B 00FFE | | PATRLF | DS | H | FFFF = RELOCATION ENTRIES |
| | | * | | | EXIST      * |

```
*************************************************************************
```

## Page Control Block (CHAPCB)

The Page Control Block (PCB) controls the movement of virtual storage pages between core, auxiliary, and external storage. This movement of virtual storage pages consists of: reading pages into core storage from auxiliary or external storage; writing pages out of core storage to auxiliary or external storage; and posting to the program's page tables.

A complete PCB table consists of one or more 64-byte data blocks. The first PCB table block is located by the GQE; subsequent PCB table blocks are located by the previous table block, through the chain address (last 4 bytes in each block).

Sixty-four bytes of core storage, aligned on word boundaries, are allocated to each PCB.

### CHAPCB Storage map

```
DEC   HEX
  0    0|_____
        |          PCBIA            |      PCBDEV       |PCBHN   |PCBSN    |
        |                           |                   |                 |
  8    8|_____|_____|_____|_____|_____|
        |          PCBVA            |PCBF1   |PCBF2   |PCBF3   |PCBF4     |
        |                           |        |        |        |          |
 16   10|_____|_____|_____|_____|_____|
        |          PCBER            |                                     |
        |_____|                                     |
        |                          PCBE2                                  |
        |                                                                 |
        |                                                                 |
 40   28|_____|
        |                                                                 |
        |                          PCBE3                                  |
        |                                                                 |
 56   38|_____|_____|
        |                                |           PCBCA                |
        |_____|_____|
```

### Fields in CHAPCB -- by displacement

| DEC | HEX | FIELD | | | DEC | HEX | FIELD | | | DEC | HEX | FIELD | |
|------|------|-------|---|---|------|------|-------|---|---|------|------|-------|---|
| 0000 | 0000 | PCBIA | | | 0013 | 000D | PCBVM | (EQU) | | 0014 | 000E | PCBX2 | (EQU) |
| 0000 | 0000 | PCBE1 | | | 0013 | 000D | PCBAD | (EQU) | | 0014 | 000E | PCBX1 | (EQU) |
| 0000 | 0000 | PCBBEG | | | 0013 | 000D | PCBXP | (EQU) | | 0014 | 000E | PCBF3 | |
| 0004 | 0004 | PCBDEV | | | 0013 | 000D | PCBCR | (EQU) | | 0015 | 000F | PCBRC | (EQU) |
| 0004 | 0004 | PCBXA | | | 0013 | 000D | PCBDP | (EQU) | | 0015 | 000F | PCBSA | (EQU) |
| 0006 | 0006 | PCBHN | | | 0013 | 000D | PCBRW | (EQU) | | 0015 | 000F | PCBPP | (EQU) |
| 0007 | 0007 | PCBSN | | | 0013 | 000D | PCBWC | (EQU) | | 0015 | 000F | PCBVV | (EQU) |
| 0008 | 0008 | PCBVA | | | 0013 | 000D | PCBF2 | | | 0015 | 000F | PCBSP | (EQU) |
| 0012 | 000C | PCBPC | (EQU) | | 0014 | 000E | PCBMS | (EQU) | | 0015 | 000F | PCBTS | (EQU) |
| 0012 | 000C | PCBNS | (EQU) | | 0014 | 000E | PCBDS | (EQU) | | 0015 | 000F | PCBF4 | |
| 0012 | 000C | PCBVX | (EQU) | | 0014 | 000E | PCBRI | (EQU) | | 0016 | 0010 | PCBER | |
| 0012 | 000C | PCBBY | (EQU) | | 0014 | 000E | PCBIC | (EQU) | | 0020 | 0014 | PCBE2 | (EQU) |
| 0012 | 000C | PCBVS | (EQU) | | 0014 | 000E | PCBTW | (EQU) | | 0040 | 0028 | PCBE3 | (EQU) |
| 0012 | 000C | PCBF1 | | | 0014 | 000E | PCBX4 | (EQU) | | 0060 | 003C | PCBCA | |
| 0013 | 000D | PCBXT | (EQU) | | 0014 | 000E | PCBX3 | (EQU) | | | | | |

### Alphabetical list of fields in CHAPCB

| FIELD | DEC | HEX | | FIELD | DEC | HEX | | FIELD | DEC | HEX | |
|-------|------|------|---|-------|------|------|---|-------|------|------|---|
| PCBAD | 0013 | 000D | (EQU) | PCBF4 | 0015 | 000F | | PCBTW | 0014 | 000E | (EQU) |
| PCBBEG | 0000 | 0000 | | PCBHN | 0006 | 0006 | | PCBVA | 0008 | 0008 | |
| PCBBY | 0012 | 000C | (EQU) | PCBIA | 0000 | 0000 | | PCBVM | 0013 | 000D | (EQU) |
| PCBCA | 0060 | 003C | | PCBIC | 0014 | 000E | (EQU) | PCBVS | 0012 | 000C | (EQU) |
| PCBCR | 0013 | 000D | (EQU) | PCBMS | 0014 | 000E | (EQU) | PCBVV | 0015 | 000F | (EQU) |
| PCBDEV | 0004 | 0004 | | PCBNS | 0012 | 000C | (EQU) | PCBVX | 0012 | 000C | (EQU) |
| PCBDP | 0013 | 000D | (EQU) | PCBPC | 0012 | 000C | (EQU) | PCBWC | 0013 | 000D | (EQU) |
| PCBDS | 0014 | 000E | (EQU) | PCBPP | 0015 | 000F | (EQU) | PCBXA | 0004 | 0004 | |
| PCBER | 0016 | 0010 | | PCBRC | 0015 | 000F | (EQU) | PCBXP | 0013 | 000D | (EQU) |
| PCBE1 | 0000 | 0000 | | PCBRI | 0014 | 000E | (EQU) | PCBXT | 0013 | 000D | (EQU) |
| PCBE2 | 0020 | 0014 | | PCBRW | 0013 | 000D | (EQU) | PCBX1 | 0014 | 000E | (EQU) |
| PCBE3 | 0040 | 0028 | | PCBSA | 0015 | 000F | (EQU) | PCBX2 | 0014 | 000E | (EQU) |
| PCBF1 | 0012 | 000C | | PCBSN | 0007 | 0007 | | PCBX3 | 0014 | 000E | (EQU) |
| PCBF2 | 0013 | 000D | | PCBSP | 0015 | 000F | (EQU) | PCBX4 | 0014 | 000E | (EQU) |
| PCBF3 | 0014 | 000E | | PCBTS | 0015 | 000F | (EQU) | | | | |

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|---|---|---|---|---|---|
| | 5C 00000 | CHAPCB | DSECT | | PAGE CONTROL BLOCK TABLE |
| | | * | | | AND ENTRY |
| 5C 00000 | | PCBBEG | DS | 0F | ALIGN ON A WORD BOUNDARY |
| 5C 00000 | | PCBE1 | DS | 0CL20 | PCB ENTRY (1) |
| 5C 00000 | | PCBIA | DS | F | INTERNAL ADDRESS OF PAGE |
| 5C 00004 | | PCBXA | DS | 0F | EXTERNAL ADDRESS OF PAGE |
| 5C 00004 | | PCBDEV | DS | H | DEVICE |
| 5C 00006 | | PCBHN | DS | C | HEAD NUMBER |
| 5C 00007 | | PCBSN | DS | C | SLOT NUMBER |
| 5C 00008 | | PCBVA | DS | F | STET |
| | | * WHEN PCBX1 FLAG INDICATES VIRTUAL MEMORY PAGE, | | | |
| | | * PCBVA WILL CONTAIN VIRTUAL MEMORY ADDRESS. | | | |
| | | * THE LOW ORDER 12 BITS WILL CONTAIN IDENTIFICATION | | | |
| | | * WITHIN TYPE FOR AN XTSI PAGE (PTP, AST, ETC) AND | | | |
| | | * HIGH | | | |
| | | * ORDER 20 BITS WILL BE ZERO, WHEN PCBF3 | | | |
| | | * FLAG INDICATES XTSI TYPE OF PAGE (PCBX2, PCBX3 ON | | | |
| | | * SINGLY | | | |
| | | * | | | OR IN COMBINATION) |
| 5C 0000C | | PCBF1 | DS | XL1 | PCB FLAGS |
| | 5C 0000C | PCBVS | EQU | PCBF1 | VAM PAGEOUT SEQUENCE NUMBER |
| | 000000E0 | PCBVSM | EQU | X'E0' | |
| | 5C 0000C | PCBBY | EQU | PCBF1 | BYPASS FLAG |
| | 00000010 | PCBBYM | EQU | X'10' | |
| | 5C 0000C | PCBVX | EQU | PCBF1 | VIRT MEMORY OR XTSI PAGE |
| | | * | | | FLAGS |
| | 0000000C | PCBVXM | EQU | X'0C' | |
| | 5C 0000C | PCBNS | EQU | PCBF1 | NULL STATE FLAG |
| | 00000002 | PCBNSM | EQU | X'02' | |
| | 5C 0000C | PCBPC | EQU | PCBF1 | PCB PROCESSED-CHANNEL |
| | | * | | | PROGRAM BUILT |
| | 00000001 | PCBPCM | EQU | X'01' | |
| 5C 0000D | | PCBF2 | DS | XL1 | PCB FLAGS |
| | 5C 0000D | PCBWC | EQU | PCBF2 | WRITE CHECK OPERATION FLAG |
| | 00000080 | PCBWCM | EQU | X'80' | |
| | 5C 0000D | PCBRW | EQU | PCBF2 | READ/WRITE FLAG |
| | 00000040 | PCBRWM | EQU | X'40' | |
| | 5C 0000D | PCBDP | EQU | PCBF2 | DEVICE PREFERENCE FLAG |
| | 00000020 | PCBDPM | EQU | X'20' | |
| | 5C 0000D | PCBCR | EQU | PCBF2 | USER CORE RELEASE FLAG |
| | 00000010 | PCBCRM | EQU | X'10' | |
| | 5C 0000D | PCBXP | EQU | PCBF2 | XTSI OR PSW PAGE FLAG |
| | 00000008 | PCBXPM | EQU | X'08' | |
| | 5C 0000D | PCBAD | EQU | PCBF2 | PREFERENCE FOR AUXILIARY |
| | | * | | | DISK FLAG |
| | 00000004 | PCBADM | EQU | X'04' | |
| | 5C 0000D | PCBVM | EQU | PCBF2 | VIRTUAL MEMORY PAGE |
| | 00000002 | PCBVMM | EQU | X'02' | |
| | 5C 0000D | PCBXT | EQU | PCBF2 | XTSI PAGE |
| | 00000001 | PCBXTM | EQU | X'01' | |
| 5C 0000E | | PCBF3 | DS | XL1 | PCB FLAGS |
| | 5C 0000E | PCBX1 | EQU | PCBF3 | TYPE 1-V.M. PAGE |
| | 00000000 | PCBX1M | EQU | X'00' | |
| | 5C 0000E | PCBX2 | EQU | PCBF3 | TYPE 2 - PAGE TABLE PAGE |
| | | * | | | (PTP) |
| | 00000040 | PCBX2M | EQU | X'40' | |
| | 5C 0000E | PCBX3 | EQU | PCBF3 | TYPE 3 - AUXSEGMENT |
| | | * | | | PAGE(AST) |
| | 00000080 | PCBX3M | EQU | X'80' | |
| | 5C 0000E | PCBX4 | EQU | PCBF3 | TYPE 4-SEGMENT TABLE PG |
| | | * | | | (ST) OR 1ST XTSI PAGE |
| | 000000C0 | PCBX4M | EQU | X'C0' | |
| | 5C 0000E | PCBTW | EQU | PCBF3 | TWAIT PAGING OPERATION |
| | 00000020 | PCBTWM | EQU | X'20' | |
| | 5C 0000E | PCBIC | EQU | PCBF3 | IOCAL PAGING OPERATION |
| | 00000010 | PCBICM | EQU | X'10' | |
| | 5C 0000E | PCBRI | EQU | PCBF3 | RELOCATION PAGING OPERATION |
| | 00000008 | PCBRIM | EQU | X'08' | |

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|---|---|---|---|---|---|
| | 5C 0000E | PCBDS | EQU | PCBF3 | DISPATCHER PAGING OPERATION |
| | 00000002 | PCBDSM | EQU | X'02' | |
| | 5C 0000E | PCBMS | EQU | PCBF3 | MONITOR SHARING PAGING |
| | | * | | | OPERATION |
| | 00000001 | PCBMSM | EQU | X'01' | |
| 5C 0000F | | PCBF4 | DS | XL1 | PCB FLAGS |
| | 5C 0000F | PCBTS | EQU | PCBF4 | TSEND PAGING OPERATION |
| | 00000080 | PCBTSM | EQU | X'80' | |
| | 5C 0000F | PCBSP | EQU | PCBF4 | SUPPRESS POSTING FOR THIS |
| | | * | | | PAGING OPERATION |
| | 00000040 | PCBSPM | EQU | X'40' | |
| | 5C 0000F | PCBVV | EQU | PCBF4 | PAGING REQUESTED BY VAM |
| | 00000020 | PCBVVM | EQU | X'20' | |
| | 5C 0000F | PCBPP | EQU | PCBF4 | PAGE POSTING READ |
| | 00000010 | PCBPPM | EQU | X'10' | |
| | 5C 0000F | PCBSA | EQU | PCBF4 | SUPPRESS ALLOCATION |
| | 00000008 | PCBSAM | EQU | X'08' | |
| | 5C 0000F | PCBRC | EQU | PCBF4 | STOLEN PAGE RECLAIMED FLAG |
| | | * | | | (MT/T) |
| | 00000004 | PCBRCM | EQU | X'04' | STOLEN PAGE RECLAIMED MASK |
| | | * | | | (MT/T) |
| 5C 00010 | | PCBER | DS | F | TWAIT MIGRATION XPT POINTER |
| | | * | | | SAVE AREA |
| 5C 00014 | | PCBE2 | DS | CL20 | PCB ENTRY (2) |
| 5C 00028 | | PCBE3 | DS | CL20 | PCB ENTRY (3) |
| 5C 0003C | | PCBCA | DS | F | PCB CHAIN ADDRESS |
| | 00000040 | PCBTSZ | EQU | 64 | TABLE SIZE |
| | 00000014 | PCBESZ | EQU | 20 | ENTRY SIZE |
| | 00000003 | PCBENM | EQU | PCBTSZ/PCBESZ | NUMBER OF ENTRIES |

## Task Monitor Push Down Save Area (CHAPDS)

The Task Monitor Push Down Save Area (PDS) maintains program and machine status from the last task interruption, and a save area used by the interruption handling routine.

The 256-byte PDS resides in privileged or nonprivileged virtual storage depending on the privilege level of the dispatched routine.

### CHAPDS Storage map

| DEC | HEX | | | |
|---|---|---|---|---|
| 0 | 0 | PDSID | UNNAMED | PDSFPR |
| 8 | 8 | PDSPFP | | PDSPIC |
| 16 | 10 | PDSSIZ | | PDSR13 |
| 24 | 18 | UNNAMED | | PDSR14 |
| 32 | 20 | PDSR15 | | PDSR0 |
| 40 | 28 | PDSR1 | | |
| = | = | PDSR2 | | = |
| 88 | 58 | PDSPSF | UNNAMED | UNNAMED |
| 96 | 60 | PDSOP | | |
| 104 | 68 | PDSF0 | | |
| 112 | 70 | PDSF2 | | |
| 120 | 78 | PDSF4 | | |
| 128 | 80 | PDSF6 | | |
| 136 | 88 | PDSFLG | | PDSPP3 |
| 144 | 90 | | | |
| = | = | PDSSAV | | = |

### Fields in CHAPDS -- by displacement

| DEC | HEX | FIELD | | DEC | HEX | FIELD | | | DEC | HEX | FIELD |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0000 | 0000 | PDSID | | 0036 | 0024 | PDSR0 | | | 0112 | 0070 | PDSF2 |
| 0004 | 0004 | PDSFPR | | 0040 | 0028 | PDSR1 | | | 0120 | 0078 | PDSF4 |
| 0008 | 0008 | PDSPFP | | 0044 | 002C | PDSR2 | | | 0128 | 0080 | PDSF6 |
| 0012 | 000C | PDSPIC | | 0056 | 0038 | PDSR5 | (EQU) | | 0136 | 0088 | PDSFLG |
| 0016 | 0010 | PDSSIZ | | 0088 | 0058 | PDSNPIR | (EQU) | | 0140 | 008C | PDSPP3 |
| 0020 | 0014 | PDSR13 | | 0088 | 0058 | PDSPSF | | | 0144 | 0090 | PDSSAV |
| 0028 | 001C | PDSR14 | | 0096 | 0060 | PDSOP | | | | | |
| 0032 | 0020 | PDSR15 | | 0104 | 0068 | PDSF0 | | | | | |

## Alphabetical list of fields in CHAPDS

| FIELD | DEC | HEX | | FIELD | DEC | HEX | | FIELD | DEC | HEX | |
|-------|-----|-----|---|-------|-----|-----|---|-------|-----|-----|---|
| PDSFLG | 0136 | 0088 | | PDSOP | 0096 | 0060 | | PDSR14 | 0028 | 001C | |
| PDSFPR | 0004 | 0004 | | PDSPFP | 0008 | 0008 | | PDSR15 | 0032 | 0020 | |
| PDSF0 | 0104 | 0068 | | PDSPIC | 0012 | 000C | | PDSR2 | 0044 | 002C | |
| PDSF2 | 0112 | 0070 | | PDSPP3 | 0140 | 008C | | PDSR5 | 0056 | 0038 | (EQU) |
| PDSF4 | 0120 | 0078 | | PDSPSF | 0088 | 0058 | | PDSSAV | 0144 | 0090 | |
| PDSF6 | 0128 | 0080 | | PDSR0 | 0036 | 0024 | | PDSSIZ | 0016 | 0010 | |
| PDSID | 0000 | 0000 | | PDSR1 | 0040 | 0028 | | | | | |
| PDSNPIR | 0088 | 0058 | (EQU) | PDSR13 | 0020 | 0014 | | | | | |

## Assembler listing of CHAPDS

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|----------|-------------|--------|------|------|---------|
| | 5E 00000 | CHAPDS | DSECT | | |
| | | * TASK MONITOR PUSH DOWN SAVE AREA | | | |
| 5E 00000 | | | DS | 0D | |
| 5E 00000 | | PDSID | DS | CL2 | ID FIELD |
| 5E 00002 | | | DS | CL2 | UNUSED |
| 5E 00004 | | PDSFPR | DS | F | FOWARD PTR TO NEXT ENTRY |
| 5E 00008 | | PDSPFP | DS | F | FORWARD PAGE PTR - 1ST |
| | | * | | | ENTRY ONLY |
| 5E 0000C | | PDSPIC | DS | F | PTR TO PDSSIZ |
| 5E 00010 | | PDSSIZ | DS | F | SIZE OF SAVE AREA |
| 5E 00014 | | PDSR13 | DS | F | SAVE FOR REG 13 |
| 5E 00018 | | | DS | F | UNUSED |
| 5E 0001C | | PDSR14 | DS | F | SAVE FOR REG 14 |
| 5E 00020 | | PDSR15 | DS | F | SAVE FOR REG 15 |
| 5E 00024 | | PDSR0 | DS | F | SAVE FOR REG 0 |
| 5E 00028 | | PDSR1 | DS | F | SAVE FOR REG 1 |
| 5E 0002C | | PDSR2 | DS | 11F | SAVE FOR REGS 2 TO 12 |
| | 5E 00038 | PDSR5 | EQU | PDSR2+12 | |
| 5E 00058 | | PDSPSF | DS | XL1 | FLAGS SAVED IN LONG SAVE |
| | | * | | | AREA |
| | 5E 00058 | PDSNPIR | EQU | PDSPSF | NON-PRIV INTR FLAG |
| | 00000080 | PDSNPIRM | EQU | X'80' | RECOVERY=1  NO RECOVERY=0 |
| 5E 00059 | | | DS | XL3 | UNUSED |
| 5E 0005C | | | DS | 1F | UNUSED |
| 5E 00060 | | PDSOP | DS | D | OLD VPSW |
| 5E 00068 | | PDSF0 | DS | D | FP REG 0 |
| 5E 00070 | | PDSF2 | DS | D | FP REG 2 |
| 5E 00078 | | PDSF4 | DS | D | FP REG 4 |
| 5E 00080 | | PDSF6 | DS | D | FP REG 6 |
| 5E 00088 | | PDSFLG | DS | F | PUSHDOWN FLAG |
| 5E 0008C | | PDSPP3 | DS | F | PUSHDOWN PTR FROM ISA |
| 5E 00090 | | PDSSAV | DS | 28F | SAVE AREA FOR USER |

## Paging-Error Control Block (CHAPEC)

The Paging-Error Control Block (PECB) is the common information storage area for the paging error recovery subroutines.

The Paging I/O Error Recovery Control subroutine (CEAAM) creates a PECB upon the first entry to CEAAM for a paging operation error. The PECB is chained to either the Drum Interface Control Block (SYSDIC), (for drum paging errors) by a pointer in SYSPEB, or to the Direct Access Interface Block (DAIB), (for disk paging errors) by a pointer in DIAPEB.

The PECB occupies 192 bytes of core storage-aligned on doubleword boundaries.

### CHAPEC Storage map

| DEC | HEX | | | | | | | | |
|-----|-----|---|---|---|---|---|---|---|---|
| 0 | 0 | PECSAV | | | | | | | |
| 64 | 40 | PECSDC | | | | | | | |
| 72 | 48 | PECSPM | PECAPM | PECMCDC | PECMATN | PECMCC | PECMNSTD | PECMEC | UNNAMED |
| 80 | 50 | UNNAMED (CONT) | | | PECMIR | PECMBOC | PECMDC | UNNAMED | PECMOVRN |
| 88 | 58 | UNNAMED | PECMNSND | PECFL2 | UNNAMED | PECFL0 | PECFL1 | PECPSD | |
| 96 | 60 | PECCCW | | | | | | | |
| 168 | A8 | PECRHA | | | | | | | |
| 176 | B0 | PECSAR | | | | | | | |
| 184 | B8 | PECNCW | ORG OVERLAP | | | PECRCW | ORG OVERLAP | | |

ORG   PECAPM+1

| DEC | HEX | | | | | | | | |
|-----|-----|---|---|---|---|---|---|---|---|
| 74 | 4A | | PECKCDC | PECKATN | PECKCC | PECKNSTD | PECKEC | PECKNRF1 | |
| 80 | 50 | PECKNRF2 | PECKNRF3 | PECKSC | PECKIR | PECKBOC | PECKDC1 | PECKDC2 | PECKOVRN |
| 88 | 58 | PECKMAM | PECKNSND | | | | | | |

ORG   PECNCW

| DEC | HEX | |
|-----|-----|---|
| 184 | B8 | PECCPS |

ORG   PECRCW

| DEC | HEX | |
|-----|-----|---|
| 188 | BC | PECEPT |

| DEC | HEX | FIELD | | DEC | HEX | FIELD | | DEC | HEX | FIELD | |
|------|------|---------|------|------|------|---------|------|------|------|---------|------|
| 0000 | 0000 | PECSAV | | 0084 | 0054 | PECMBOC | | 0092 | 005C | PECFL0 | |
| 0064 | 0040 | PECSDC | | 0085 | 0055 | PECKDC1 | | 0093 | 005D | PECDS | (EQU) |
| 0072 | 0048 | PECSPM | | 0085 | 0055 | PECMDC | | 0093 | 005D | PECRHA5 | (EQU) |
| 0073 | 0049 | PECAPM | | 0086 | 0056 | PECKDC2 | | 0093 | 005D | PECRHA4 | (EQU) |
| 0074 | 004A | PECKCDC | | 0087 | 0057 | PECKOVRN | | 0093 | 005D | PECRHA3 | (EQU) |
| 0074 | 004A | PECMCDC | | 0087 | 0057 | PECMOVRN | | 0093 | 005D | PECRHA2 | (EQU) |
| 0075 | 004B | PECKATN | | 0088 | 0058 | PECKMAM | | 0093 | 005D | PECRHA1 | (EQU) |
| 0075 | 004B | PECMATN | | 0089 | 0059 | PECKNSND | | 0093 | 005D | PECRH | (EQU) |
| 0076 | 004C | PECKCC | | 0089 | 0059 | PECMNSND | | 0093 | 005D | PECAB | (EQU) |
| 0076 | 004C | PECMCC | | 0090 | 005A | PECSNS (EQU) | | 0093 | 005D | PECRR | (EQU) |
| 0077 | 004D | PECKNSTD | | 0090 | 005A | PECREM (EQU) | | 0093 | 005D | PECFL1 | |
| 0077 | 004D | PECMNSTD | | 0090 | 005A | PECIR (EQU) | | 0094 | 005E | PECPSD | |
| 0078 | 004E | PECKEC | | 0090 | 005A | PECFL2 | | 0096 | 0060 | PECCCW | |
| 0078 | 004E | PECMEC | | 0092 | 005C | PECDV (EQU) | | 0168 | 00A8 | PECRHA | |
| 0079 | 004F | PECKNRF1 | | 0092 | 005C | PECCU (EQU) | | 0176 | 00B0 | PECSAR | |
| 0080 | 0050 | PECKNRF2 | | 0092 | 005C | PECCH (EQU) | | 0184 | 00B8 | PECCPS | |
| 0081 | 0051 | PECKNRF3 | | 0092 | 005C | PECSA (EQU) | | 0184 | 00B8 | PECNCW | |
| 0082 | 0052 | PECKSC | | 0092 | 005C | PECAR (EQU) | | 0188 | 00BC | PECEPT | |
| 0083 | 0053 | PECKIR | | 0092 | 005C | PECSR (EQU) | | 0188 | 00BC | PECRCW | |
| 0083 | 0053 | PECMIR | | 0092 | 005C | PECOE (EQU) | | | | | |
| 0084 | 0054 | PECKBOC | | 0092 | 005C | PECRW (EQU) | | | | | |

## Alphabetical list of fields in CHAPEC

| FIELD | DEC | HEX | | FIELD | DEC | HEX | | FIELD | DEC | HEX | |
|---------|------|------|------|---------|------|------|------|---------|------|------|------|
| PECAB | 0093 | 005D | (EQU) | PECKIR | 0083 | 0053 | | PECPSD | 0094 | 005E | |
| PECAPM | 0073 | 0049 | | PECKMAM | 0088 | 0058 | | PECRCW | 0188 | 00BC | |
| PECAR | 0092 | 005C | (EQU) | PECKNRF1 | 0079 | 004F | | PECREM | 0090 | 005A | (EQU) |
| PECCCW | 0096 | 0060 | | PECKNRF2 | 0080 | 0050 | | PECRH | 0093 | 005D | (EQU) |
| PECCH | 0092 | 005C | (EQU) | PECKNRF3 | 0081 | 0051 | | PECRHA | 0168 | 00A8 | |
| PECCPS | 0184 | 00B8 | | PECKNSND | 0089 | 0059 | | PECRHA1 | 0093 | 005D | (EQU) |
| PECCU | 0092 | 005C | (EQU) | PECKNSTD | 0077 | 004D | | PECRHA2 | 0093 | 005D | (EQU) |
| PECDS | 0093 | 005D | (EQU) | PECKOVRN | 0087 | 0057 | | PECRHA3 | 0093 | 005D | (EQU) |
| PECDV | 0092 | 005C | (EQU) | PECKSC | 0082 | 0052 | | PECRHA4 | 0093 | 005D | (EQU) |
| PECEPT | 0188 | 00BC | | PECMATN | 0075 | 004B | | PECRHA5 | 0093 | 005D | (EQU) |
| PECFL0 | 0092 | 005C | | PECMBOC | 0084 | 0054 | | PECRR | 0093 | 005D | (EQU) |
| PECFL1 | 0093 | 005D | | PECMCC | 0076 | 004C | | PECRW | 0092 | 005C | (EQU) |
| PECFL2 | 0090 | 005A | | PECMCDC | 0074 | 004A | | PECSA | 0092 | 005C | (EQU) |
| PECIR | 0090 | 005A | (EQU) | PECMDC | 0085 | 0055 | | PECSAR | 0176 | 00B0 | |
| PECKATN | 0075 | 004B | | PECMEC | 0078 | 004E | | PECSAV | 0000 | 0000 | |
| PECKBOC | 0084 | 0054 | | PECMIR | 0083 | 0053 | | PECSDC | 0064 | 0040 | |
| PECKCC | 0076 | 004C | | PECMNSND | 0089 | 0059 | | PECSNS | 0090 | 005A | (EQU) |
| PECKCDC | 0074 | 004A | | PECMNSTD | 0077 | 004D | | PECSPM | 0072 | 0048 | |
| PECKDC1 | 0085 | 0055 | | PECMOVRN | 0087 | 0057 | | PECSR | 0092 | 005C | (EQU) |
| PECKDC2 | 0086 | 0056 | | PECNCW | 0184 | 00B8 | | | | | |
| PECKEC | 0078 | 004E | | PECOE | 0092 | 005C | (EQU) | | | | |

## Assembler listing of CHAPEC

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|----------|-------------|--------|------|------|---------|
| | 5F 00000 | CHAPEC | DSECT | | PAGING ERROR CONTROL BLOCK |
| 5F 00000 | | PECSAV | DS | 8D | CEAAM GENERAL REGISTER 0-15 |
| | | * | | | SAVE AREA |
| 5F 00040 | | PECSDC | DS | XL8 | SENSE DATA CELL |
| 5F 00048 | | PECSPM | DS | X | 'SAME PATH RETRY' MASTER |
| | | * | | | ERROR COUNTER |
| 5F 00049 | | PECAPM | DS | X | 'ALTERNATE PATH RETRY' |
| | | * | | | MASTER ERROR COUNTER |
| | | * | | 2301/2820 DRUM | RETRY COUNTERS |
| 5F 0004A | | PECMCDC | DS | X | CHANNEL CONTROL CHECK, |
| | | * | | | N429 |
| | | * | | | INTERFACE CONTROL CHECK OR |
| | | * | | | N429 |
| | | * | | | CHANNEL DATA CHECK |
| | | * | | | N429 |
| 5F 0004B | | PECMATN | DS | X | ATTENTION |

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|---|---|---|---|---|---|
| 5F 0004C | | PECMCC | DS | X | CHAINING CHECK |
| 5F 0004D | | PECMNSTD | DS | X | NO STATUS DATA PRESENT |
| 5F 0004E | | PECMEC | DS | X | UNIT CHECK-EQUIPMENT CHECK |
| 5F 0004F | | | DS | XL4 | NOT USED |
| 5F 00053 | | PECMIR | DS | X | UNIT CHECK-INTERVENTION |
| | | * | | | REQUIRED |
| 5F 00054 | | PECMBOC | DS | X | UNIT CHECK-BUS OUT CHECK |
| 5F 00055 | | PECMDC | DS | X | UNIT CHECK-DATA CHECK |
| 5F 00056 | | | DS | X | NOT USED |
| 5F 00057 | | PECMOVRN | DS | X | UNIT CHECK-OVERRUN |
| 5F 00058 | | | DS | X | RESERVED |
| | | * | | | N429 |
| 5F 00059 | | PECMNSND | DS | X | NO SENSE DATA AFTER UNIT |
| | | * | | | CHECK |
| | | * | | 2311/2841 AND 2314 DISK RETRY COUNTERS | |
| | 5F 0004A | | \|ORG\| | PECAPM+1 | |
| 5F 0004A | | PECKCDC | DS | X | CHANNEL CONTROL CHECK, |
| | | * | | | N429 |
| | | * | | | INTERFACE CONTROL CHECK OR |
| | | * | | | N429 |
| | | * | | | CHANNEL DATA CHECK |
| | | * | | | N429 |
| 5F 0004B | | PECKATN | DS | X | ATTENTION |
| 5F 0004C | | PECKCC | DS | X | CHAINING CHECK |
| 5F 0004D | | PECKNSTD | DS | X | NO STATUS DATA PRESENT |
| 5F 0004E | | PECKEC | DS | X | UNIT CHECK-EQUIPMENT CHECK |
| 5F 0004F | | PECKNRF1 | DS | X | UNIT CHECK-NO RECORD FOUND |
| | | * | | | (INCT TK) |
| 5F 00050 | | PECKNRF2 | DS | X | UNIT CHECK-NO RECORD FOUND |
| | | * | | | (MAM) |
| 5F 00051 | | PECKNRF3 | DS | X | UNIT CHECK-NO RECORD FOUND |
| | | * | | | (DIFF TK) |
| 5F 00052 | | PECKSC | DS | X | UNIT CHECK-SEEK CHECK |
| 5F 00053 | | PECKIR | DS | X | UNIT CHECK-INTERVENTION |
| | | * | | | REQUIRED |
| 5F 00054 | | PECKBOC | DS | X | UNIT CHECK-BUS OUT CHECK |
| 5F 00055 | | PECKDC1 | DS | X | UNIT CHECK-DATA CHECK |
| 5F 00056 | | PECKDC2 | DS | X | UNIT CHECK-DATA CHECK * 16 |
| 5F 00057 | | PECKOVRN | DS | X | UNIT CHECK-OVERRUN |
| 5F 00058 | | PECKMAM | DS | X | UNIT CHECK-MISSING ADDRESS |
| | | * | | | MARKER |
| 5F 00059 | | PECKNSND | DS | X | NO SENSE DATA AFTER UNIT |
| | | * | | | CHECK |
| | | * | | | FLAGS |
| | 5F 0005A | | \|ORG\| | PECAPM+17 | N429 |
| 5F 0005A | | PECFL2 | DS | X | FLAG FIELD 2 |
| | | * | | | N429 |
| | 5F 0005A | PECIR | EQU | PECFL2 | INTERVENTION REQUIRED |
| | | * | | | WAITING    N429 |
| | | * | | | FOR DEVICE END |
| | | * | | | N429 |
| | 00000080 | PECIRM | EQU | X'80' | INTERVENTION REQUIRED MASK |
| | | * | | | N429 |
| | 5F 0005A | PECREM | EQU | PECFL2 | REMOUNT OF 2314 TO SAME |
| | | * | | | N429 |
| | | * | | | ADDRESS REQUESTED |
| | | * | | | N429 |
| | 00000040 | PECREMM | EQU | X'40' | REMOUNT REQUESTED MASK |
| | | * | | | N429 |
| | 5F 0005A | PECSNS | EQU | PECFL2 | ERROR RECOVERY SENSE FLAG |
| | | * | | | N429 |
| | 00000020 | PECSNSM | EQU | X'20' | ERROR RECOVERY SENSE MASK |
| | | * | | | N429 |
| 5F 0005B | | | DS | X | RESERVED |
| | | * | | | N429 |
| 5F 0005C | | PECFL0 | DS | X | FLAG FIELD 0 |
| | 5F 0005C | PECRW | EQU | PECFL0 | RE-WRITE OPERATION AFTER |
| | | * | | | SUCCESSFUL READ |

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|---|---|---|---|---|---|
| | 00000080 | PECRWM | EQU | X'80' | PECRW MASK |
| | 5F 0005C | PECOE | EQU | PECFL0 | OUTBOARD ERROR INDICATOR |
| | 00000040 | PECOEM | EQU | X'40' | PECOE MASK |
| | 5F 0005C | PECSR | EQU | PECFL0 | CONTROL UNDER 'SAME PATH |
| | | * | | | RETRY' |
| | 00000020 | PECSRM | EQU | X'20' | PECSR MASK |
| | 5F 0005C | PECAR | EQU | PECFL0 | CONTROL UNDER 'ALTERNATE |
| | | * | | | PATH RETRY' |
| | 00000010 | PECARM | EQU | X'10' | PECAR MASK |
| | 5F 0005C | PECSA | EQU | PECFL0 | CONTROL UNDER 'STANDARD |
| | | * | | | AREA RETRY' |
| | 00000008 | PECSAM | EQU | X'08' | PECSA MASK |
| | 5F 0005C | PECCH | EQU | PECFL0 | MALFUNCTIONING CHANNEL |
| | | * | | | DETECTED |
| | 00000004 | PECCHM | EQU | X'04' | PECCH MASK |
| | 5F 0005C | PECCU | EQU | PECFL0 | MALFUNCTIONING DCU DETECTED |
| | 00000002 | PECCUM | EQU | X'02' | PECCU MASK |
| | 5F 0005C | PECDV | EQU | PECFL0 | MALFUNCTIONING DEVICE |
| | | * | | | DETECTED |
| | 00000001 | PECDVM | EQU | X'01' | PECDV MASK |
| 5F 0005D | | PECFL1 | DS | X | FLAG FIELD 1 |
| | 5F 0005D | PECRR | EQU | PECFL1 | RE-READ OPERATION AFTER |
| | | * | | | SUCCESSFUL READ |
| | 00000040 | PECRRM | EQU | X'40' | PECRR MASK |
| | 5F 0005D | PECAB | EQU | PECFL1 | ALTERNATE PATH BUSY |
| | 00000020 | PECABM | EQU | X'20' | PECAB MASK |
| | 5F 0005D | PECRH | EQU | PECFL1 | 'READ HOME ADDRESS' |
| | | * | | | OPERATION |
| | 00000004 | PECRHM | EQU | X'04' | PECRH MASK |
| | 5F 0005D | PECRHA1 | EQU | PECFL1 | READ HOME ADDRESS FOR NO |
| | | * | | | RECORD FOUND-CORRECT TK |
| | 00000005 | PECRHA1M | EQU | X'05' | PECRHA1 MASK |
| | 5F 0005D | PECRHA2 | EQU | PECFL1 | READ HOME ADDRESS FOR |
| | | * | | | NRF-MISSING ADDRESS MARKER1 |
| | 00000006 | PECRHA2M | EQU | X'06' | PECRHA2 MASK |
| | 5F 0005D | PECRHA3 | EQU | PECFL1 | READ HOME ADDRESS FOR |
| | | * | | | NRF-MISSING ADDRESS MARKER2 |
| | 00000007 | PECRHA3M | EQU | X'07' | PECRHA3 MASK |
| | 5F 0005D | PECRHA4 | EQU | PECFL1 | READ HOME ADDRESS FOR DATA |
| | | * | | | CHECK |
| | 0000000C | PECRHA4M | EQU | X'0C' | PECRHA4 MASK |
| | 5F 0005D | PECRHA5 | EQU | PECFL1 | READ HOME ADDRESS FOR |
| | | * | | | MISSING ADDRESS MARKER |
| | 0000000D | PECRHA5M | EQU | X'0D' | PECRHA5 MASK |
| | 5F 0005D | PECDS | EQU | PECFL1 | CURRENT AUXILIARY DEVICE |
| | | * | | | HAS BEEN SUPPRESSED |
| | 00000080 | PECDSM | EQU | X'80' | PECDS MASK |
| 5F 0005E | | PECPSD | DS | H | DISPLACEMEND TO PAGING |
| | | * | | | DEVICE ENTRY IN CHBPSD |
| 5F 00060 | | PECCCW | DS | 9D | CHANNEL PROGRAM AREA FOR |
| | | * | | | ERROR RETRY |
| 5F 000A8 | | PECRHA | DS | D | 'READ HOME ADDRESS' INPUT |
| | | * | | | AREA/WORK AREA |
| 5F 000B0 | | PECSAR | DS | D | SEEK ARGUEMENT AREA FOR |
| | | * | | | ERROR RETRY/WORK AREA |
| 5F 000B8 | | PECNCW | DS | X | NUMBER OF CCW'S IN FAILING |
| | | * | | | CHANNEL PROGRAM  SGMNT |
| | 5F 000B8 | | |ORG| | PECNCW | |
| 5F 000B8 | | PECCPS | DS | F | POINTER TO FAILING CHANNEL |
| | | * | | | PROGRAM SEGMENT |
| 5F 000BC | | PECRCW | DS | X | RELATIVE NUMBER OF FAILING |
| | | * | | | CCW WITHIN CHAN. PROG. |
| | 5F 000BC | | |ORG| | PECRCW | |
| 5F 000BC | | PECEPT | DS | F | POINTER TO:  DIBE(DRUM) / |
| | | * | | | PCBE(NON-DRUM DEV.) |

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## User Profile (CHAPFL), Character Translation Table (CHACTT) and Profile Character and Switch Table (CHAPCT)

The User Profile (CHAPFL), providing means for storing user profile information on SYSLIB or USERLIB, consists of three contiguous tables:
1. Profile Character and Switch Table (CHAPCT)
2. Character Translation Table (CHACTT)
3. Primary Dictionary (see section CHADEN)

CHAPFL describes the profile as it exists in external storage as the System Prototype Profile in SYSLIB, or as a User Profile (saved by the PROFILE command) in USERLIB.

CHAPCT resides in New Task Common, aligned on word boundaries.

CHACTT is used by GATE to translate characters and to determine functions during input. CHACTT resides in the GATE psect, and consists of 256 contiguous entries in the following form:

|        |          |                  |
|--------|----------|------------------|
| CTTTR  | (1 byte) | Translated value |
| CTTFN  | (1 byte) | Function code    |

The complete list of available function codes are shown below with their meanings:

| Function Code | Meaning                   |
|---------------|---------------------------|
| 0             | Translate                 |
| 4             | Backspace                 |
| 8             | End-of-block or new line  |
| C             | Cancel                    |
| 10            | Terminal null             |
| 14            | Null                      |

### CHAPFL Storage map

```
 DEC    HEX  _____
   0      0 |                                                               |
           |                                                               |
           |                          PFLPCT                               |
           |                                                               |
           |                     _____ |
  24     18 |_____|                                          |
           =                                      PFLCTT                    =
           |                                                               |
           |                     _____ |
 536     218 |_____|                                         |
           =                                      PFLOCT                    =
           |                                                               |
           |                 _____|
1048     418 |_____|      UNNAMED      |_____ |
           =                                   PFLPDC                       =
           |                              (Variable length)                 |
           |_____|
```
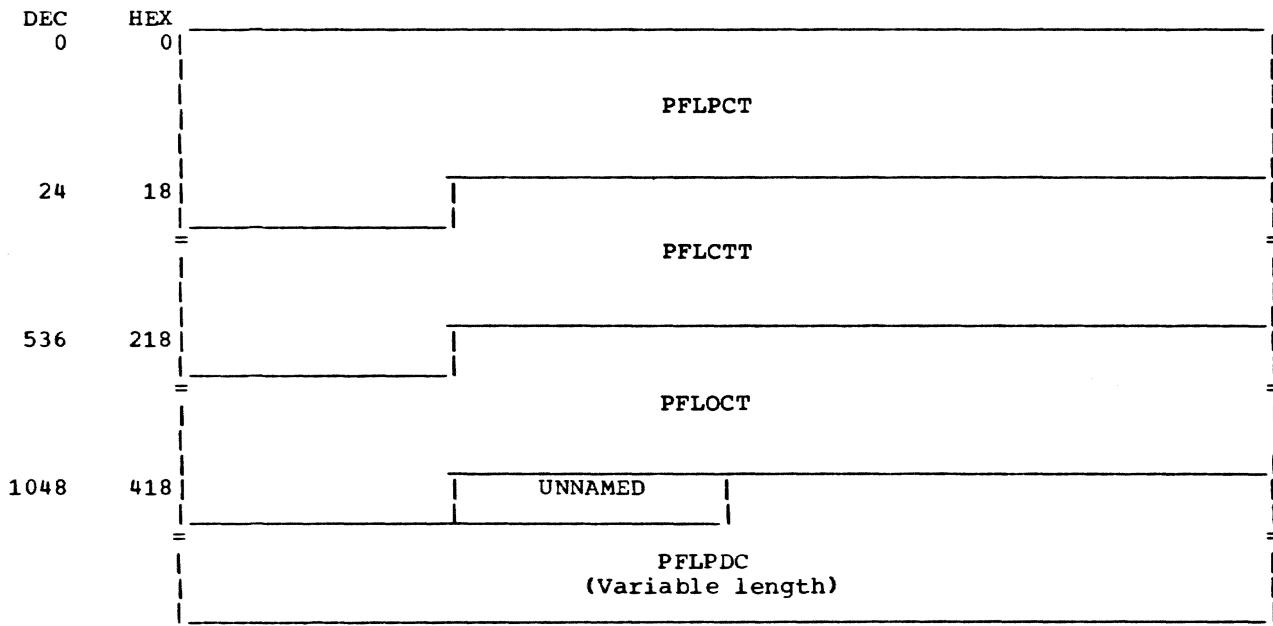
### Fields in CHAPFL -- by displacement

| DEC  | HEX  | FIELD  |       | DEC  | HEX  | FIELD  |       | DEC  | HEX  | FIELD  |       |
|------|------|--------|-------|------|------|--------|-------|------|------|--------|-------|
| 0000 | 0000 | PFLPCT | (EQU) | 0026 | 001A | PFLCTT | (EQU) | 0538 | 021A | PFLOCT | (EQU) |
|      |      |        |       |      |      |        |       | 1052 | 041C | PFLPDC | (EQU) |

## Alphabetical list of fields in CHAPFL

| FIELD | DEC | HEX | | FIELD | DEC | HEX | | FIELD | DEC | HEX | |
|-------|------|------|-------|-------|------|------|-------|--------|------|------|-------|
| PFLCTT | 0026 | 001A | (EQU) | PFLOCT | 0538 | 021A | (EQU) | PFLPCT | 0000 | 0000 | (EQU) |
| | | | | | | | | PFLPDC | 1052 | 041C | (EQU) |

## Assembler listing of CHAPFL

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|----------|-------------|--------|------|------|---------|
| | 60 00000 | CHAPFL | DSECT | | |
| | | * | USER PROFILE IS MAINTAINED EXTERNALLY AS ONE | | |
| | | * | CONTIGUOUS TABLE | | |
| | | * | COMPOSED OF 3 SUB TABLES IN THE ORDER LISTED | | |
| | | * | BELOW | | |
| | | * | | PROFILE CHARACTER AND SWITCH TABLE, LENGTH | |
| | | * | | = PCTLEN | |
| | | * | | CHARACTER TRANSLATION TABLE, LENGTH = 512 | |
| | | * | | BYTES | |
| | | * | | PRIMARY DICTIONARY, LENGTH VARIABLE. | |
| | 60 00000 | PFLPCT | EQU | * | ORIGIN OF CHAPCT TABLE |
| | 60 0001A | | \|ORG\| | PFLPCT+X'1A' | N366 |
| | 60 0001A | PFLCTT | EQU | * | ORIGIN OF CHACTT TABLE |
| | 60 0021A | | \|ORG\| | PFLCTT+X'200' | |
| | 60 0021A | PFLOCT | EQU | * | OUTPUT CHAR TRANSLATION TBL |
| | | * | | | N366 |
| | 60 0041A | | \|ORG\| | PFLOCT+X'200' | N366 |
| 60 0041C | | | DS | 0F | |
| | 60 0041C | PFLPDC | EQU | * | ORIGIN OF PRIMARY |
| | | * | | | DICTIONARY |

## CHACTT Storage map

```
DEC    HEX
  0      0 | CTTTR  | CTTFN  |                                    |
           |_____|_____|                                    |
         = |                                                      | =
           |                        ORG OVERLAP                   |
           |                                                      |
           |_____|
```

ORG  CHACTT

```
  0      0 |_____|
           |                                                      |
         = |                         UNNAMED                      | =
           |                                                      |
           |_____|
```
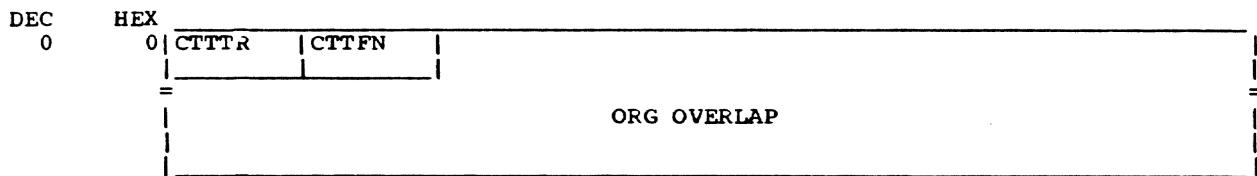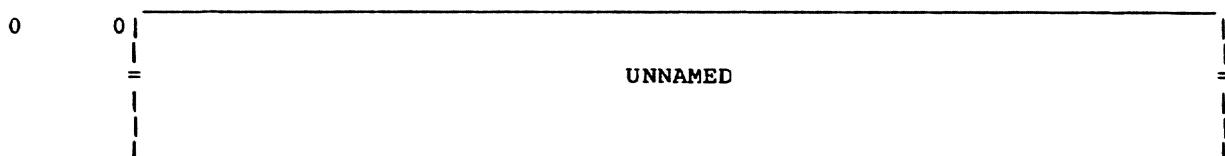
## Fields in CHACTT -- by displacement

| DEC | HEX | FIELD | DEC | HEX | FIELD | DEC | HEX | FIELD |
|------|------|-------|------|------|-------|-----|-----|-------|
| 0000 | 0000 | CTTTR | 0001 | 0001 | CTTFN | | | |

## Alphabetical list of fields in CHACTT

| FIELD | DEC | HEX | FIELD | DEC | HEX | FIELD | DEC | HEX |
|-------|------|------|-------|------|------|-------|-----|-----|
| CTTFN | 0001 | 0001 | CTTTR | 0000 | 0000 | | | |

## Assembler listing of CHACTT

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|----------|-------------|--------|------|------|---------|
| 1E 00000 |  | CHACTT | DSECT |  | ,                    CHARACTER |
|  |  | * |  |  | TRANSLATION TABLE |
| 1E 00000 |  | CTTTR | DS | CL1 | TRANSLATED VALUE |
| 1E 00001 |  | CTTFN | DS | XL1 | FUNCTION CODE |
|  |  | * |  |  | FUNCTION CODE VALUES |
|  | 00000000 | CTTTRN | EQU | X'0' | TRANSLATE FUNCTION |
|  | 00000004 | CTTBSP | EQU | X'4' | BACKSPACE FUNCTION |
|  | 00000008 | CTTEOB | EQU | X'8' | END OF BLOCK OR NEW LINE |
|  |  | * |  |  | FUNCTION |
|  | 0000000C | CTTCAN | EQU | X'C' | CANCEL FUNCTION |
|  | 00000010 | CTTTNL | EQU | X'10' | TERMINAL NULL FUNCTION |
|  | 00000014 | CTTNUL | EQU | X'14' | NULL FUNCTION |
| 1E 00000 |  |  | \|ORG\| | CHACTT |  |
| 1E 00000 |  |  | DS | 256CL2 |  |
|  | 00000200 | CTTLEN | EQU | *-CHACTT | LENGTH OF CHACTT TABLE |

## CHAPCT Storage map

```
DEC    HEX
  0      0 |_____PCTCTT_____|_____PCTOCT_____|
           |                            |                            |
  8      8 | PCTEB | PCTCN | PCTCL | PCTTR | PCTRCC | PCTSSM | PCTUSM | PCTPL |
           |_____|_____|_____|_____|_____|_____|_____|_____|
 16     10 |                            PCTPS                               |
           |_____|
 24     18 | PCTKC | PCTRS   |
           |_____|_____|
```
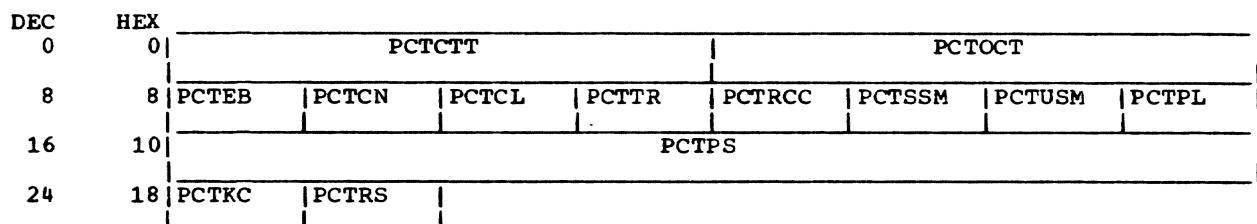
## Fields in CHAPCT -- by displacement

| DEC | HEX | FIELD | DEC | HEX | FIELD | DEC | HEX | FIELD |
|-----|-----|-------|-----|-----|-------|-----|-----|-------|
| 0000 | 0000 | PCTCTT | 0011 | 000B | PCTTR | 0016 | 0010 | PCTPS |
| 0004 | 0004 | PCTOCT | 0012 | 000C | PCTRCC | 0024 | 0018 | PCTKC |
| 0008 | 0008 | PCTEB | 0013 | 000D | PCTSSM | 0025 | 0019 | PCTRS |
| 0009 | 0009 | PCTCN | 0014 | 000E | PCTUSM | | | |
| 0010 | 000A | PCTCL | 0015 | 000F | PCTPL | | | |

## Alphabetical list of fields in CHAPCT

| FIELD | DEC | HEX | FIELD | DEC | HEX | FIELD | DEC | HEX |
|-------|-----|-----|-------|-----|-----|-------|-----|-----|
| PCTCL | 0010 | 000A | PCTOCT | 0004 | 0004 | PCTSSM | 0013 | 000D |
| PCTCN | 0009 | 0009 | PCTPL | 0015 | 000F | PCTTR | 0011 | 000B |
| PCTCTT | 0000 | 0000 | PCTPS | 0016 | 0010 | PCTUSM | 0014 | 000E |
| PCTEB | 0008 | 0008 | PCTRCC | 0012 | 000C | | | |
| PCTKC | 0024 | 0018 | PCTRS | 0025 | 0019 | | | |

## Assembler listing of CHAPCT

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|----------|-------------|--------|------|------|---------|
| | 5D 00000 | CHAPCT | DSECT | | , PROFILE CHAR |
| | | * | | | AND SWITCH TABLE |
| 5D 00000 | | PCTCTT | DS | A | POINTER TO CHAR TRANSLATION |
| | | * | | | TABLE |
| 5D 00004 | | PCTOCT | DS | A | OUTPUT CHAR TRANSLATION TBL |
| | | * | | | ADDRN366 |
| 5D 00008 | | PCTEB | DS | CL1 | SOURCE LIST EOB CHARACTER |
| | 00000026 | PCTEBM | EQU | X'26' | HEX 26 |
| 5D 00009 | | PCTCN | DS | CL1 | CONTROL LANGUAGE |
| | | * | | | CONTINUATION CHAR |
| | 00000060 | PCTCNM | EQU | C'-' | HEX 60 |
| 5D 0000A | | PCTCL | DS | CL1 | CONTROL LANGUAGE PREFIX |
| | | * | | | CHARACTER |
| | 0000006D | PCTCLM | EQU | C'_' | UNDERSCORE CHARACTER |
| | | * | | | N448 |
| 5D 0000B | | PCTTR | DS | CL1 | TRANSIENT PREFIX CHARACTER |
| | 0000004F | PCTTRM | EQU | C'|' | LOGICAL OR |
| | | * | | | CHARACTER(VERTICAL) N448 |
| 5D 0000C | | PCTRCC | DS | CL1 | RECORD CONCATENATION |
| | | * | | | CHARACTER N448 |
| | 0000007A | PCTRCCM | EQU | C':' | COLON |
| | | * | | | N448 |
| 5D 0000D | | PCTSSM | DS | XL1 | SYSTEM SCOPE MASK |
| 5D 0000E | | PCTUSM | DS | XL1 | USER SCOPE MASK |
| 5D 0000F | | PCTPL | DS | HL1 | LENGTH OF COMMAND PROMPT |
| | 00000002 | PCTPLM | EQU | 2 | TWO BYTES |
| 5D 00010 | | PCTPS | DS | CL8 | COMMAND PROMPT STRING |
| | 00006D16 | PCTPSM | EQU | X'6D16' | BACKSPACE |
| 5D 00018 | | PCTKC | DS | CL1 | SYSIN KEYBD/CARD RDR SWITCH |
| | 000000D2 | PCTKCK | EQU | C'K' | KEYBOARD ONLY |
| | 000000C5 | PCTKCE | EQU | C'E' | EITHER KEYBOARD OR CARD |
| | | * | | | READER |
| 5D 00019 | | PCTRS | DS | CL1 | CARRIAGE RETURN SUPPRESSION |
| | | * | | | CHAR |
| | 0000007A | PCTRSM | EQU | C':' | SUPPRESSION CHARACTER IS |
| | | * | | | COLON N448 |
| | 0000001A | PCTLEN | EQU | *-CHAPCT | LENGTH OF CHAPCT TABLE |

## Page Table (CHAPGT, and External Page Table (CHAXPT)

The Page Table (PGT) is a contiguous list of 2 byte entries containing the address and availability indicator of a core block assigned to a task's virtual storage. One page table exists for each segment assigned to virtual storage. The PGT (2 - 512 bytes) resides in core storage aligned on fullword boundaries.

The External Page Table (XPT) contains information concerning page table entries assigned to a task's virtual storage. The XPT (8 - 2048 bytes) resides in core storage, preceded by the Page Table, aligned on fullword boundaries.

### CHAPGT Storage map

```
DEC    HEX  _____
 0      0|     PGTCBA        |
         |_____|
```
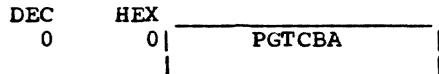
### Fields in CHAPGT -- by displacement

| DEC | HEX | FIELD | DEC | HEX | FIELD | | DEC | HEX | FIELD |
|------|------|--------|------|------|--------|------|------|------|------|
| 0000 | 0000 | PGTCBA | 0001 | 0001 | PGTPA | (EQU) | | | |

### Alphabetical list of fields in CHAPGT

| FIELD | DEC | HEX | FIELD | DEC | HEX | | FIELD | DEC | HEX |
|--------|------|------|--------|------|------|------|--------|------|------|
| PGTCBA | 0000 | 0000 | PGTPA | 0001 | 0001 | (EQU) | | | |

### Assembler listing of CHAPGT

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|----------|-------------|--------|------|------|---------|
| | 62 00000 | CHAPGT | DSECT | | PAGE TABLE ENTRY |
| 62 00000 | | | DS | 0H | |
| 62 00000 | | PGTCBA | DS | H | CORE BLOCK ADDRESS |
| | 62 00001 | PGTPA | EQU | PGTCBA+1 | PAGE AVAILABILITY FLAG |
| | 00000008 | PGTPAM | EQU | 8 | PAGE AVAILABILITY MASK |

CHAXPT Storage map

```
DEC   HEX  _____
  0     0|                                      |XPTF1  |XPTF2  |XPTPMC |XPTFLG |
         |                  XPTXL                |       |       |       |       |
         |_____|_____|_____|_____|_____|
```

Fields in CHAXPT -- by displacement

| DEC | HEX | FIELD | | DEC | HEX | FIELD | | DEC | HEX | FIELD | |
|------|------|-------|------|------|------|-------|------|------|------|-------|------|
| 0000 | 0000 | XPTXL | | 0004 | 0004 | XPTUP | (EQU) | 0005 | 0005 | XPTF2 | |
| 0004 | 0004 | XPTPU | (EQU) | 0004 | 0004 | XPTF1 | | 0006 | 0006 | XPTPMC | |
| 0004 | 0004 | XPTSP | (EQU) | 0005 | 0005 | XPTPC | (EQU) | 0007 | 0007 | XPTPP | (EQU) |
| 0004 | 0004 | XPTPA | (EQU) | 0005 | 0005 | XPTAX | (EQU) | 0007 | 0007 | XPTPRO | (EQU) |
| 0004 | 0004 | XPTCP | (EQU) | 0005 | 0005 | XPTBV | (EQU) | 0007 | 0007 | XPTPH | (EQU) |
| 0004 | 0004 | XPTTP | (EQU) | 0005 | 0005 | XPTIV | (EQU) | 0007 | 0007 | XPTFLG | |
| 0004 | 0004 | XPTPD | (EQU) | 0005 | 0005 | XPTTA | (EQU) | | | | |

Alphabetical list of fields in CHAXPT

| FIELD | DEC | HEX | | FIELD | DEC | HEX | | FIELD | DEC | HEX | |
|-------|------|------|------|-------|------|------|------|-------|------|------|------|
| XPTAX | 0005 | 0005 | (EQU) | XPTPA | 0004 | 0004 | (EQU) | XPTPU | 0004 | 0004 | (EQU) |
| XPTBV | 0005 | 0005 | (EQU) | XPTPC | 0005 | 0005 | (EQU) | XPTSP | 0004 | 0004 | (EQU) |
| XPTCP | 0004 | 0004 | (EQU) | XPTPD | 0004 | 0004 | (EQU) | XPTTA | 0005 | 0005 | (EQU) |
| XPTFLG | 0007 | 0007 | | XPTPH | 0007 | 0007 | (EQU) | XPTTP | 0004 | 0004 | (EQU) |
| XPTF1 | 0004 | 0004 | | XPTPMC | 0006 | 0006 | | XPTUP | 0004 | 0004 | (EQU) |
| XPTF2 | 0005 | 0005 | | XPTPP | 0007 | 0007 | (EQU) | XPTXL | 0000 | 0000 | |
| XPTIV | 0005 | 0005 | (EQU) | XPTPRO | 0007 | 0007 | (EQU) | | | | |

Assembler listing of CHAXPT

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|----------|-------------|--------|------|------|---------|
| | BA 00000 | CHAXPT | DSECT | | EXTERNAL      PAGE TABLE |
| | | * | | | ENTRY |
| BA 00000 | | | DS | 0F | |
| BA 00000 | | XPTXL | DS | F | EXTERNAL LOCATION OF PAGE |
| BA 00004 | | XPTF1 | DS | X | FLAG BYTE 1 |
| | BA 00004 | XPTUP | EQU | XPTF1 | UPDATE IN PLACE FLAG |
| | | * | | | * |
| | 00000080 | XPTUPM | EQU | X'80' | |
| | BA 00004 | XPTPD | EQU | XPTF1 | PREFERED PAGING DEVICE |
| | | * | | | 1=DRUM |
| | 00000040 | XPTPDM | EQU | X'40' | |
| | BA 00004 | XPTTP | EQU | XPTF1 | TYPE PROGRAM OR DATA |
| | | * | | | * |
| | 00000020 | XPTTPM | EQU | X'20' | |
| | BA 00004 | XPTCP | EQU | XPTF1 | CHANGED PAGE BIT FLAG |
| | 00000010 | XPTCPM | EQU | X'10' | CHANGED PAGE BIT MASK |
| | BA 00004 | XPTPA | EQU | XPTF1 | PAGE ASSIGNED |
| | | * | | | 1=ASSIGN |
| | 00000004 | XPTPAM | EQU | X'04' | |
| | BA 00004 | XPTSP | EQU | XPTF1 | SHARED PAGE FLAG |
| | 00000002 | XPTSPM | EQU | X'02' | |
| | BA 00004 | XPTPU | EQU | XPTF1 | PAGE UNPROCESSED BY LOADER |
| | | * | | | 1=UNPROCESSED |
| | 00000001 | XPTPUM | EQU | X'01' | |
| BA 00005 | | XPTF2 | DS | X | FLAG BYTE 2 |
| | BA 00005 | XPTTA | EQU | XPTF2 | TEMPORARY EXTERNAL ADDRESS |
| | 00000080 | XPTTAM | EQU | X'80' | |
| | BA 00005 | XPTIV | EQU | XPTF2 | IVM PAGE NON DELETEABLE |
| | | * | | | FLAG |
| | 00000040 | XPTIVM | EQU | X'40' | IVM PAGE NON DELETEABLE |
| | | * | | | MASK |
| | BA 00005 | XPTBV | EQU | XPTF2 | SETXP ALLOWED AGAINST IVM |
| | | * | | | PAGE |
| | 00000020 | XPTBVM | EQU | X'20' | SETXP ALLOWED AGAINST IVM |
| | | * | | | PAGE MASK |
| | BA 00005 | XPTAX | EQU | XPTF2 | AUXILIARY STORAGE FLAG |
| | | * | | | * |
| | 00000010 | XPTAXM | EQU | X'10' | |

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|----------|-------------|--------|------|------|---------|
|          | BA 00005    | XPTPC  | EQU  | XPTF2 | PROTECT CLASS |
|          |             | *      |      |       | 4 BITS |
| BA 00006 |             |        | DS   | 0H    | |
| BA 00006 |             | XPTPMC | DS   | XL1   | 2 BIT PAGE REFERENCE |
|          |             | *      |      |       | COUNTER |
|          | 00000002    | XPTPMC1 | EQU | X'02' | RESERVED FOR PARTIAL |
|          | 00000001    | XPTPMC2 | EQU | X'01' | MIGRATION FROM DRUM |
| BA 00007 |             | XPTFLG | DS   | X     | FLAG BYTE |
|          | BA 00007    | XPTPH  | EQU  | XPTFLG | PAGE HOLD COUNT FIELD |
|          | 000000F0    | XPTPHM | EQU  | X'F0' | PAGE HOLD COUNT |
|          | 00000008    | XPTPH1 | EQU  | X'08' | SVC PAGE HOLD FLAG |
|          | BA 00007    | XPTPRO | EQU  | XPTFLG | ENTRY PROCESSED FLAG |
|          |             | *      |      |       | (MT/T) |
|          | 00000004    | XPTPROM | EQU | X'04' | ENTRY PROCESSED MASK |
|          |             | *      |      |       | (MT/T) |
|          | BA 00007    | XPTPP  | EQU  | XPTFLG | PREPAGE FLAG |
|          | 00000002    | XPTPPM | EQU  | X'02' | PREPAGE MASK |

## Communications Bucket (CHAPLI)

The PL/I communications bucket maintains all user-supplied options for the PL/I Program Language Controller (PLC).
The 40-byte communications bucket is aligned on a fullword boundary.

### CHAPLI Storage map

```
DEC   HEX
  0     0| PLIFTM                    |PLISOD |PLILMN |PLIBRV |PLIERR |
         |_____
  8     8| PLIDDN                    |            PLILDN                  |
         |_____
 16    10| PLIMAC                    |            PLIMRG                  |
         |_____
 24    18| PLIPDS                    |PLIPRT |PLILDS |PLICON |PLILOD |
         |_____
 32    20|                    PLINAM                                      |
         |_____
 40    28| PLIEXP                    |            PLIXDS                  |
         |_____
```

### Fields in CHAPLI -- by displacement

| DEC | HEX | FIELD | | DEC | HEX | FIELD | DEC | HEX | FIELD |
|-----|-----|-------|---|-----|-----|-------|-----|-----|-------|
| 0000 | 0000 | PLIFTM | | 0008 | 0008 | PLIDDN | 0029 | 001D | PLILDS |
| 0003 | 0003 | PLIFTP | (EQU) | 0012 | 000C | PLILDN | 0030 | 001E | PLICON |
| 0004 | 0004 | PLISOD | | 0016 | 0010 | PLIMAC | 0031 | 001F | PLILOD |
| 0005 | 0005 | PLILMN | | 0020 | 0014 | PLIMRG | 0032 | 0020 | PLINAM |
| 0006 | 0006 | PLIBRV | | 0024 | 0018 | PLIPDS | 0040 | 0028 | PLIEXP |
| 0007 | 0007 | PLIERR | | 0028 | 001C | PLIPRT | 0044 | 002C | PLIXDS |

### Alphabetical list of fields in CHAPLI

| FIELD | DEC | HEX | FIELD | DEC | HEX | | FIELD | DEC | HEX |
|-------|-----|-----|-------|-----|-----|---|-------|-----|-----|
| PLIBRV | 0006 | 0006 | PLIFTP | 0003 | 0003 | (EQU) | PLIMRG | 0020 | 0014 |
| PLICON | 0030 | 001E | PLILDN | 0012 | 000C | | PLINAM | 0032 | 0020 |
| PLIDDN | 0008 | 0008 | PLILDS | 0029 | 001D | | PLIPDS | 0024 | 0018 |
| PLIERR | 0007 | 0007 | PLILMN | 0005 | 0005 | | PLIPRT | 0028 | 001C |
| PLIEXP | 0040 | 0028 | PLILOD | 0031 | 001F | | PLISOD | 0004 | 0004 |
| PLIFTM | 0000 | 0000 | PLIMAC | 0016 | 0010 | | PLIXDS | 0044 | 002C |

### Assembler listing of CHAPLI

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|----------|-------------|--------|------|------|---------|
| | 63 00000 | CHAPLI | DSECT | | DSECT FOR COMMUNICATION BUCKET |
| | | * | | | |
| 63 00000 | | PLIFTM | DS | F | |
| | 63 00003 | PLIFTP | EQU | PLIFTM+3 | FOOTPRINT OF PATH THROUGH PLC |
| | | * | | | |
| | 00000000 | PLIFT0 | EQU | X'00' | PLC NOT PREVIOUSLY INTERRUPTED |
| | | * | | | |
| | 00000004 | PLIFT1 | EQU | X'04' | EDITOR END REQUIRED |
| | 00000008 | PLIFT2 | EQU | X'08' | DATA SET CLEANUP REQUIRED |
| | 0000000C | PLIFT3 | EQU | X'0C' | PL/1 COMPILER INVOKED |
| | 00000010 | PLIFT4 | EQU | X'10' | DATA SET CLEANUP REQUIRED |
| | 00000014 | PLIFT5 | EQU | X'14' | ODC END REQUIRED |
| | 00000018 | PLIFT6 | EQU | X'18' | DATA SET CLEANUP REQUIRED |
| | 0000001C | PLIFT7 | EQU | X'1C' | CFBAK END RTN REQUIRED N480 |
| | | * | | | |
| | 00000020 | PLIFT8 | EQU | X'20' | DATA SET CLEANUP REQUIRED N480 |
| | | * | | | |
| | 00000024 | PLIFT9 | EQU | X'24' | PLC CALL COMPLETE N480 |
| | | * | | | |
| 63 00004 | | PLISOD | DS | XL1 | DIAGNOSTICS ON SYSOUT OPTION |
| | | * | | | |
| | 00000000 | PLISD1 | EQU | X'00' | DIAGNOSTICS ON SYSOUT |
| | 00000001 | PLISD2 | EQU | X'01' | NO DIAGNOSTICS |
| 63 00005 | | PLILMN | DS | CL1 | VALUE OF "LIMEN" |

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|---|---|---|---|---|---|
| | 000000C9 | PLILM1 | EQU | C'I' | INFORMATION MESSAGES |
| | 000000E6 | PLILM2 | EQU | C'W' | WARNING MESSAGES |
| | 000000D5 | PLILM3 | EQU | C'N' | ERROR MESSAGES |
| | 000000E7 | PLILM4 | EQU | C'X' | SERIOUS ERROR MESSAGES |
| | 000000E3 | PLILM5 | EQU | C'T' | TERMINAL ERROR MESSAGES |
| 63 00006 | | PLIBRV | DS | CL1 | VALUE OF "BREVITY" |
| | 000000D4 | PLIBR1 | EQU | C'M' | MESSAGE ID ONLY |
| | 000000E2 | PLIBR2 | EQU | C'S' | NORMAL MESSAGE TEXT |
| | 000000C5 | PLIBR3 | EQU | C'E' | EXTENDED MESSAGE TEXT |
| | 000000E3 | PLIBR4 | EQU | C'T' | STANDARD TEXT-NO MSG ID |
| | 000000E7 | PLIBR5 | EQU | C'X' | EXTENDED TEXT-NO MSG ID |
| 63 00007 | | PLIERR | DS | XL1 | ERROR LEVEL CODE |
| | 00000000 | PLIER0 | EQU | X'00' | NO ERRORS DETECTED |
| | 00000004 | PLIER1 | EQU | X'04' | TYPE 1 ERRORS |
| | 00000008 | PLIER2 | EQU | X'08' | TYPE 1 ERRORS - ERRORS |
| | 0000000C | PLIER3 | EQU | X'0C' | TYPE 2 ERRORS - SEVERE |
| | 00000010 | PLIER4 | EQU | X'10' | TYPE 3 ERRORS - TERMINAL |
| 63 00008 | | PLIDDN | DS | F | POINTER TO SOURCE DCB |
| 63 0000C | | PLILDN | DS | F | POINTER TO LISTING DCB |
| 63 00010 | | PLIMAC | DS | F | POINTER TO MACRO DATA SET |
| | | * | | | NAME |
| 63 00014 | | PLIMRG | DS | F | POINTER TO FIRST BLOCK OF |
| | | * | | | MERGE LIST |
| 63 00018 | | PLIPDS | DS | F | POINTER TO MERGE DATA SET |
| | | * | | | NAME |
| 63 0001C | | PLIPRT | DS | XL1 | PRINT OPTION |
| | 00000000 | PLIPR0 | EQU | X'00' | NO PRINT |
| | 00000041 | PLIPR1 | EQU | X'41' | PRINT - NO ERASE |
| | 00000061 | PLIPR2 | EQU | X'61' | PRINT WITH ERASE |
| 63 0001D | | PLILDS | DS | XL1 | LISTING DATA SET OPTION |
| | 00000000 | PLILS0 | EQU | X'00' | LISTING DATA SET |
| | 00000001 | PLILS1 | EQU | X'01' | LISTING ON SYSOUT |
| 63 0001E | | PLICON | DS | XL1 | CONTINUATION OPTION |
| | 00000000 | PLICN1 | EQU | X'00' | NO CONTINUATION |
| | 000000C3 | PLICN2 | EQU | X'C3' | CONTINUE COMPILATIONS |
| 63 0001F | | PLILOD | DS | XL1 | LOAD OPTION |
| | 00000000 | PLILD1 | EQU | X'00' | LOAD - CONVERSION REQUIRED |
| | 00000001 | PLILD2 | EQU | X'01' | NO LOAD - COMPILE ONLY |
| 63 00020 | | PLINAM | DS | CL8 | NAME OF CURRENT OBJECT |
| | | * | | | MODULE |
| 63 00028 | | PLIEXP | DS | A | POINTER TO EXPLICIT PARAM |
| | | * | | | LIST  N480 |
| 63 0002C | | PLIXDS | DS | A | POINTER TO XFERDS NAME |
| | | * | | | N480 |

Partitioned Organization Directory (CHAPOD), Member Descriptor (CHAPOM), and Alias
Descriptor (CHAPOE)

The Partitioned Organization Directory (POD) of a partitioned data set correlates
the names of data set members to their positions within the data set.  The POD Member
Descriptor (POM) describes the characteristics of each member of the partitioned data
set.  The POD Alias Descriptor (POE) chains alias names and links these names to data
set member entries.

The POD, including the POM and POE, remains in the user's virtual storage from
open time to close time.  At data set close time the POD is updated on the resident
device.  The POD is maintained by the virtual access method (VAM) section of data
management.

In virtual storage, aligned on doubleword boundaries, the POD occupies 268 bytes,
the POM from 27 to 1308 bytes, and the POE 16 bytes.

## CHAPOD Storage map

```
 DEC    HEX
  0      0 | PODW    | PODR   | PODRC  | PODIC  |    PODPG      |    PODNDP      |
           |         |        |        |        |              |                |
  8      8 |              PODLBP              |                                 |
           |                                                                    |
         = |                               PODHT                              =|
           |                                 |                                  |
           |                                 |_____|
           |                                 |                                  |
264     108|                                 |                                  |
           |_____|                                 |
```
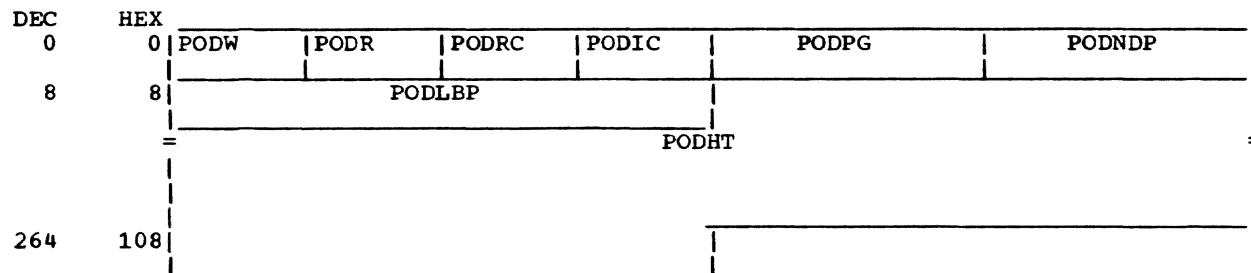
## Fields in CHAPOD -- by displacement

| DEC  | HEX  | FIELD   | DEC  | HEX  | FIELD  | DEC  | HEX  | FIELD  |
|------|------|---------|------|------|--------|------|------|--------|
| 0000 | 0000 | PODW    | 0003 | 0003 | PODIC  | 0008 | 0008 | PODLBP |
| 0000 | 0000 | PODINT  | 0004 | 0004 | PODPG  | 0012 | 000C | PODHT  |
| 0001 | 0001 | PODR    | 0004 | 0004 | PODSPA |      |      |        |
| 0002 | 0002 | PODRC   | 0006 | 0006 | PODNDP |      |      |        |

## Alphabetical list of fields in CHAPOD

| FIELD  | DEC  | HEX  | FIELD  | DEC  | HEX  | FIELD  | DEC  | HEX  |
|--------|------|------|--------|------|------|--------|------|------|
| PODHT  | 0012 | 000C | PODNDP | 0006 | 0006 | PODSPA | 0004 | 0004 |
| PODIC  | 0003 | 0003 | PODPG  | 0004 | 0004 | PODW   | 0000 | 0000 |
| PODINT | 0000 | 0000 | PODR   | 0001 | 0001 |        |      |      |
| PODLBP | 0008 | 0008 | PODRC  | 0002 | 0002 |        |      |      |

## Assembler listing of CHAPOD

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|----------|-------------|--------|------|------|---------|
| | 64 00000 | CHAPOD | DSECT | | PARTITIONED ORGANIZATION DIRECTORY |
| | | * | | | |
| 64 00000 | | | DS | 0D | |
| 64 00000 | | PODINT | DS | 0XL4 | INTERLOCK CONTROL WORD |
| 64 00000 | | PODW | DS | XL1 | WRITE INTERLOCK |
| 64 00001 | | PODR | DS | XL1 | READ  INTERLOCK |
| 64 00002 | | PODRC | DS | XL1 | READ  INTERLOCK COUNTER |
| 64 00003 | | PODIC | DS | XL1 | CONTROL BYTE FOR PODR AND |
| | | * | | | PODRC |
| 64 00004 | | PODSPA | DS | 0XL8 | SPACE CONTROL FIELD |
| 64 00004 | | PODPG | DS | XL2 | NUMBER OF PAGES IN POD |
| 64 00006 | | PODNDP | DS | XL2 | NUMBER OF PAGES IN THE |
| | | * | | | DATASET |
| 64 00008 | | PODLBP | DS | XL4 | LINKED BLOCK POINTER |
| 64 0000C | | PODHT | DS | 64XL4 | HASHING VALUE TABLE |

## CHAPOM Storage map

```
DEC   HEX  _____
  0    0 |                            POMNAM                                |
         |_____|
  8    8 |POMFLG |        POMHAS        |        POMFP        |    POMPG    |
         |_____|_____|_____|_____|
 16   10 |POMKL  |        POMIX        |POMOVP |POMPAD |       POMDP       |
         |_____|_____|_____|_____|_____|
 24   18 |      POMBU       |POMUSE   |
         |_____|_____|
```

## Fields in CHAPOM -- by displacement

| DEC | HEX | FIELD | DEC | HEX | FIELD | | DEC | HEX | FIELD | |
|------|------|--------|------|------|--------|-------|------|------|--------|-------|
| 0000 | 0000 | POMNAM | 0016 | 0010 | POMSEQ | (EQU) | 0022 | 0016 | POMBLP | (EQU) |
| 0008 | 0008 | POMFLG | 0016 | 0010 | POMKL | | 0022 | 0016 | POMDP | |
| 0009 | 0009 | POMHAS | 0017 | 0011 | POMIX | | 0024 | 0018 | POMBU | |
| 0012 | 000C | POMFP | 0020 | 0014 | POMOVP | | 0026 | 001A | POMUSE | |
| 0014 | 000E | POMPG | 0021 | 0015 | POMPAD | | | | | |

## Alphabetical list of fields in CHAPOM

| FIELD | DEC | HEX | | FIELD | DEC | HEX | FIELD | DEC | HEX | |
|--------|------|------|-------|--------|------|------|--------|------|------|-------|
| POMBLP | 0022 | 0016 | (EQU) | POMHAS | 0009 | 0009 | POMPAD | 0021 | 0015 | |
| POMBU | 0024 | 0018 | | POMIX | 0017 | 0011 | POMPG | 0014 | 000E | |
| POMDP | 0022 | 0016 | | POMKL | 0016 | 0010 | POMSEQ | 0016 | 0010 | (EQU) |
| POMFLG | 0008 | 0008 | | POMNAM | 0000 | 0000 | POMUSE | 0026 | 001A | |
| POMFP | 0012 | 000C | | POMOVP | 0020 | 0014 | | | | |

## Assembler listing of CHAPOM

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|----------|-------------|--------|------|------|---------|
| | 66 00000 | CHAPOM | DSECT | | LINKED BLOCK MEMBER DESCRIPTOR |
| | | * | | | |
| 66 00000 | | | DS | 0D | |
| 66 00000 | | POMNAM | DS | CL8 | MEMBER NAME |
| 66 00008 | | POMFLG | DS | XL1 | FLAGS |
| 66 00009 | | POMHAS | DS | XL3 | HASHING CHAIN POINTER |
| 66 0000C | | POMFP | DS | H | FIRST PAGE RELATIVE TO DATA SET |
| | | * | | | |
| 66 0000E | | POMPG | DS | H | NUMBER OF DATA PAGES IN MEMBER I6145 |
| | | * | | | |
| 66 00010 | | POMKL | DS | XL1 | KEY LENGTH |
| 66 00011 | | POMIX | DS | XL3 | MAX LOGICAL RECORD LENGTH (ISEQ) |
| | | * | | | |
| | 66 00010 | POMSEQ | EQU | POMKL | MAX LOGICAL RECORD LENGTH (SEQ) |
| | | * | | | |
| 66 00014 | | POMOVP | DS | XL1 | NUMBER CF OVERFLOW PAGES |
| 66 00015 | | POMPAD | DS | XL1 | PERCENT PAD |
| | 66 00016 | POMBLP | EQU | POMDP | NUMBER OF BYTES LAST PAGE (SEQ) |
| | | * | | | |
| 66 00018 | | POMBU | DS | H | NUMBER BYTES USER DATA |
| 66 0001A | | POMUSE | DS | CL1 | USER DATA |

## CHAPOE Storage map

```
DEC   HEX  _____
  0    0 |                            POENAM                                |
         |_____|
  8    8 |POEFLG |        POEHAS        |            POEMEM              |
         |_____|_____|_____|
```

## Fields in CHAPOE -- by displacement

| DEC  | HEX  | FIELD  | DEC  | HEX  | FIELD  | DEC  | HEX  | FIELD  |
|------|------|--------|------|------|--------|------|------|--------|
| 0000 | 0000 | POENAM | 0008 | 0008 | POEFLG | 0009 | 0009 | POEHAS |
|      |      |        |      |      |        | 0012 | 000C | POEMEM |

## Alphabetical list of fields in CHAPOE

| FIELD  | DEC  | HEX  | FIELD  | DEC  | HEX  | FIELD  | DEC  | HEX  |
|--------|------|------|--------|------|------|--------|------|------|
| POEFLG | 0008 | 0008 | POEHAS | 0009 | 0009 | POEMEM | 0012 | 000C |
|        |      |      |        |      |      | POENAM | 0000 | 0000 |

## Assembler listing of CHAPOE

| LOCATION | INSTRUCTION | SOURCE | INST  | OPER | COMMENT |
|----------|-------------|--------|-------|------|---------|
|          | 65 00000    | CHAPOE | DSECT |      | LINKED BLOCK ALIAS DESCRIPTOR |
|          |             | *      |       |      |         |
| 65 00000 |             |        | DS    | 0D   |         |
| 65 00000 |             | POENAM | DS    | CL8  | ALIAS NAME |
| 65 00008 |             | POEFLG | DS    | XL1  | FLAGS |
| 65 00009 |             | POEHAS | DS    | XL3  | POINTER TO NEXT HASHING SYNONYM |
|          |             | *      |       |      |         |
| 65 0000C |             | POEMEM | DS    | F    | POINTER TO MEMBER DESCRIPTOR |
|          |             | *      |       |      |         |

Page Table Page Header (CHAPPH), and Page Table Page Entry Header (CHAPTH)

The page table header describes a page table page (PTP); and indicates, using forward and backward pointers, the position in a chain of pages. The table controls the space available in the PTP by using the next available byte, by counting the total available bytes, by counting the number of page tables in a page table page, and by indicating the address of the first page table.

The page table page header is 16 bytes in length, aligned on fullword boundaries. The table resides in virtual storage.

The Page Table Page Entry Header (PTH) controls the assignment of space within a page table page entry. The PTH describes the contents of a page table entry, as follows:
- the size of the page table entry, including header.
- the number of unused bytes.
- the availability status.
- a pointer to the segment table entry (CHAAST).

The 16 byte PTH resides in core storage aligned on fullword boundaries.

## CHAPPH Storage map

| DEC | HEX | | | | |
|---|---|---|---|---|---|
| 0 | 0 | PPHFP | | PPHRP | |
| 8 | 8 | PPHNB | PPHNA | PPHNS | PPHFS |

## Fields in CHAPPH -- by displacement

| DEC | HEX | FIELD | DEC | HEX | FIELD | DEC | HEX | FIELD |
|---|---|---|---|---|---|---|---|---|
| 0000 | 0000 | PPHFP | 0008 | 0008 | PPHNB | 0012 | 000C | PPHNS |
| 0004 | 0004 | PPHRP | 0010 | 000A | PPHNA | 0014 | 000E | PPHFS |

## Alphabetical list of fields in CHAPPH

| FIELD | DEC | HEX | FIELD | DEC | HEX | FIELD | DEC | HEX |
|---|---|---|---|---|---|---|---|---|
| PPHFP | 0000 | 0000 | PPHNA | 0010 | 000A | PPHNS | 0012 | 000C |
| PPHFS | 0014 | 000E | PPHNB | 0008 | 0008 | PPHRP | 0004 | 0004 |

## Assembler listing of CHAPPH

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|---|---|---|---|---|---|
| | 67 00000 | CHAPPH | DSECT | | PAGE TABLE PAGE HEADER |
| 67 00000 | | | DS | 0F | |
| 67 00000 | | PPHFP<br>* | DS | F | FORWARD POINTER TO NEXT PTP IN CHAIN |
| 67 00004 | | PPHRP<br>* | DS | F | REVERSE POINTER TO PREV PTP IN CHAIN |
| 67 00008 | | | DS | 0H | |
| 67 00008 | | PPHNB<br>* | DS | H | LOC OF NEXT AVAILABLE BYTE IN PTP |
| 67 0000A | | PPHNA<br>* | DS | H | NUMBER OF BYTES AVAIL IN PTP |
| 67 0000C | | PPHNS<br>* | DS | H | NUMBER OF SEGMENTS IN THIS PTP |
| 67 0000E | | PPHFS<br>* | DS | H | LOC OF FIRST SEGMENT IN THIS PTP |

## CHAPTH Storage map

```
DEC   HEX
 0    0 |        PTHSN        |        PTHSS        |        PTHSU        |PTHID  |PTHFL  |
        |                     |                     |                     |       |       |
 8    8 |               PTHSP                       |            UNNAMED                 |
        |                     |                     |                     |               |
```

## Fields in CHAPTH -- by displacement

| DEC  | HEX  | FIELD |       | DEC  | HEX  | FIELD |       | DEC  | HEX  | FIELD |       |
|------|------|-------|-------|------|------|-------|-------|------|------|-------|-------|
| 0000 | 0000 | PTHSN |       | 0006 | 0006 | PTHID |       | 0007 | 0007 | PTHDMP | (EQU) |
| 0002 | 0002 | PTHSS |       | 0007 | 0007 | PTHSA | (EQU) | 0007 | 0007 | PTHFL |       |
| 0004 | 0004 | PTHSU |       | 0007 | 0007 | PTHPH | (EQU) | 0008 | 0008 | PTHSP |       |

## Alphabetical list of fields in CHAPTH

| FIELD  | DEC  | HEX  |       | FIELD | DEC  | HEX  |       | FIELD | DEC  | HEX  |
|--------|------|------|-------|-------|------|------|-------|-------|------|------|
| PTHDMP | 0007 | 0007 | (EQU) | PTHPH | 0007 | 0007 | (EQU) | PTHSP | 0008 | 0008 |
| PTHFL  | 0007 | 0007 |       | PTHSA | 0007 | 0007 | (EQU) | PTHSS | 0002 | 0002 |
| PTHID  | 0006 | 0006 |       | PTHSN | 0000 | 0000 |       | PTHSU | 0004 | 0004 |

## Assembler listing of CHAPTH

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|----------|-------------|--------|------|------|---------|
| 6A 00000 |             | CHAPTH | DSECT |      | PAGE TABLE HEADER FOR PTP |
|          |             | *      |      |      | ENTRY |
| 6A 00000 |             |        | DS   | 0F   |  |
| 6A 00000 |             | PTHSN  | DS   | H    | SEGMENT NUMBER |
| 6A 00002 |             | PTHSS  | DS   | H    | BLOCK SIZE INCLUDING HEADER |
| 6A 00004 |             | PTHSU  | DS   | H    | NUMBER OF UNUSED BYTES IN |
|          |             | *      |      |      | BLOCK |
| 6A 00006 |             | PTHID  | DS   | X    | TIME SLICE END ID OF LAST    N470 |
|          |             | *      |      |      | REFERENCED TIME SLICE    N470 |
|          |             | *      |      |      |  |
| 6A 00007 |             | PTHFL  | DS   | X    | FLAG BYTE    N470 |
|          |             | *      |      |      |  |
|          | 6A 00007    | PTHDMP | EQU  | PTHFL | DRUM PREFERENCE FLAG    N470 |
|          |             | *      |      |      |  |
|          | 00000004    | PTHDMPM | EQU | X'04' | DRUM PREFERENCE MASK    N470 |
|          |             | *      |      |      |  |
|          | 6A 00007    | PTHPH  | EQU  | PTHFL | PAGE HOLD FLAG    N470 |
|          |             | *      |      |      |  |
|          | 00000002    | PTHPHM | EQU  | X'02' | SOME PAGE IN 'PAGE HOLD' |
|          |             | *      |      |      | MASK    N470 |
|          | 6A 00007    | PTHSA  | EQU  | PTHFL | SEGMENT AVAILABILITY FLAG    N470 |
|          |             | *      |      |      |  |
|          | 00000001    | PTHSAM | EQU  | X'01' | 1 STATE MEANS BLOCK |
|          |             | *      |      |      | CONTENTS ARE ACTIVE |
| 6A 00008 |             | PTHSP  | DS   | F    | POINTER TO SEGMENT TABLE |
|          |             | *      |      |      | ENTRY |
| 6A 0000C |             |        | DS   | F    | UNUSED,FOR EXPANSION |

## Prefixed Storage Area (CHAPSA)

The Prefixed Storage Area (PSA) contains data and programs that are unique and private to each CPU.  While isolating one CPU from another, the PSA also functions as a logical extension of the general registers that make the supervisor program reenterable.

The PSA constitutes a page (4096 bytes) in core storage, aligned on a page boundary.  It is automatically addressed whenever the high-order 12 bits of the data or instruction address are all 0s.  These 12 high-order 0-bits in the original address are replaced with a 12-bit prefix value which is unique for each CPU, and predetermined by prefixing in the hardware.

Locations 0 through 127 of the PSA are reserved for status words, timer, interrupt indicators, etc.  Locations 128 through 327 are permanently assigned to hardware diagnostic logouts.  The CPU private working storage area (locations 328 through 455 and 512 through 551) is assigned to selected monitor programs.  Some of the private area in the CPU is used for temporary storage of general registers, allowing the associated programs to save the general registers, without requiring a base register for generation of the register save-area address.  Locations 440 through 455 are assigned to the inter-CPU communication routine, as the drop area for incoming messages from another CPU.

| HEX | DEC | |
|---|---|---|
| 0 | 0 | PSW AREA |
| 80 | 128 | CPU LOGOUT |
| 130 | 304 | CHANNEL LOGOUT |
| 148 | 328 | CPU PRIVATE WORKING STORAGE |
| 1C8 | 456 | CPU STATUS TABLE (CHACST) |
| 200 | 512 | CPU PRIVATE WORKING STORAGE (continued) |
| 228 | 552 | RECOVERY NUCLEUS RESIDENCE (CEAIR) |
| 880 | 2176 | INTER-CPU COMMUNICATION ROUTINE RESIDENCE (CEAIC) |
| BE8 | 3048 | DAMAGE REPORT (CHADMR) AND CPU PRIVATE WORKING STORAGE (continued) |
| C00 | 3072 | SERR BOOTSTRAP RESIDENCE (CMASA) |
| 1000 | 4096 | |

Note 1.  For installations with more than 2 CPUs, 16 bytes per CPU (in excess of 2) will be removed from the recovery nucleus residence area and reassigned to the CPU status table.

Note 2.  There is a PSA for each CPU in TSS.

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CHAPSA Storage map

| DEC | HEX | | | | | |
|---|---|---|---|---|---|---|
| 0 | 0 | PSAIPL | | | | |
| 8 | 8 | PSAG15 | | PSASFG | PSAIND | PSAEIC |
| 16 | 10 | PSASIC | PSAPIC | PSAMIC | | PSAIIC |
| 24 | 18 | PSAEOP | | | | |
| 32 | 20 | PSASOP | | | | |
| 40 | 28 | PSAPOP | | | | |
| 48 | 30 | PSAMOP | | | | |
| 56 | 38 | PSAIOP | | | | |
| 64 | 40 | PSACSW | | | | |
| 72 | 48 | PSACAW | | PSATSA | | |
| 80 | 50 | PSATIM | | PSATRV | | |
| 88 | 58 | PSAENP | | | | |
| 96 | 60 | PSASNP | | | | |
| 104 | 68 | PSAPNP | | | | |
| 112 | 70 | PSAMNP | | | | |
| 120 | 78 | PSAINP | | | | |
| 128 | 80 | PSACLO | | | | |
| 304 | 130 | PSAILO | | | | |
| 328 | 148 | PSAISS | | | | |
| 360 | 168 | PSACAS | | | | |
| 392 | 188 | PSATPT | | PSAQPT | | |
| 400 | 190 | PSADPT | | PSAPAT | | |
| 408 | 198 | PSATPW | | | | |

```
DEC   HEX
416   1A0 |----------------------------------------------------|
          |                                                    |
          |                      PSASCU                        |
432   1B0 |----------------------------------------------------|
          |                      PSACTL                        |
440   1B8 |----------------------------------------------------|
          |                      PSADAT                        |
448   1C0 |----------------|----------|----------|-------------|
          | PSAIMC | UNNAMED | PSACID | PSAILK |
456   1C8 |----------------------------------------------------|
          =                                                    =
          |                      PSACST                        |
          |                                                    |
          |                                                    |
512   200 |----------------------------------------------------|
          |                      PSAWTM                        |
520   208 |----------------------------------------------------|
          |                      PSAETM                        |
528   210 |----------------|----------|----------|-------------|
          |     PSAOTB     |   PSAPKB      |    UNNAMED        |
536   218 |----------------------------------------------------|
          |                      UNNAMED                       |
544   220 |----------------|-----------------------------------|
          |     PSASOA     |           PSASIP                  |
552   228 |----------------------------------------------------|
          =                                                    =
          |                      PSARE1                        |
          |                                                    |
          |                                                    |
2016  7E0 |-------------------------|--------------------------|
          |                         |                          |
          |-------------------------|                          |
          |                      PSAISV                        |
          |                                                    |
          |                                                    |
2048  800 |----------------------------------------------------|
          =                                                    =
          |                      PSAIC                         |
          |                                                    |
          |                                                    |
3072  C00 |----------------------------------------------------|
          =                                                    =
          |                      PSAERC                         |
          |                                                    |
3624  E28 |-------------------------|--------------------------|
          |                         |                          |
          |-------------------------|                          |
          |                      PSAEXS                        |
3640  E38 |----------------------------------------------------|
          =                                                    =
          |                      PSARE2                        |
          |                                                    |
          |                                                    |
          |----------------------------------------------------|
```

| DEC | HEX | FIELD | DEC | HEX | FIELD | DEC | HEX | FIELD | |
|------|------|--------|------|------|--------|------|------|--------|-----|
| 0000 | 0000 | PSAIPL | 0088 | 0058 | PSAENP | 0455 | 01C7 | PSAILK | |
| 0008 | 0008 | PSAG15 | 0096 | 0060 | PSASNP | 0456 | 01C8 | PSACST | |
| 0012 | 000C | PSASFG | 0104 | 0068 | PSAPNP | 0512 | 0200 | PSAWTM | |
| 0013 | 000D | PSAIND | 0112 | 0070 | PSAMNP | 0520 | 0208 | PSAETM | |
| 0014 | 000E | PSAEIC | 0120 | 0078 | PSAINP | 0528 | 0210 | PSAOTB | |
| 0016 | 0010 | PSASIC | 0128 | 0080 | PSACLO | 0532 | 0214 | PSAPKB | |
| 0018 | 0012 | PSAPIC | 0304 | 0130 | PSAILO | 0544 | 0220 | PSASOA | |
| 0020 | 0014 | PSAMIC | 0328 | 0148 | PSAISS | 0548 | 0224 | PSASIP | |
| 0022 | 0016 | PSAIIC | 0360 | 0168 | PSACAS | 0552 | 0228 | PSARE1 | |
| 0024 | 0018 | PSAEOP | 0392 | 0188 | PSATPT | 2020 | 07E4 | PSAISV | |
| 0032 | 0020 | PSASOP | 0396 | 018C | PSAQPT | 2048 | 0800 | PSAIC | |
| 0040 | 0028 | PSAPOP | 0400 | 0190 | PSADPT | 3048 | 0BE8 | PSADMR | (EQU) |
| 0048 | 0030 | PSAMOP | 0404 | 0194 | PSAPAT | 3064 | 0BF8 | PSAFIC | (EQU) |
| 0056 | 0038 | PSAIOP | 0408 | 0198 | PSATPW | 3068 | 0BFC | PSAFTM | (EQU) |
| 0064 | 0040 | PSACSW | 0416 | 01A0 | PSASCU | 3072 | 0C00 | PSAERC | |
| 0072 | 0048 | PSACAW | 0432 | 01B0 | PSACTL | 3628 | 0E2C | PSAEXS | |
| 0076 | 004C | PSATSA | 0440 | 01B8 | PSADAT | 3640 | 0E38 | PSARE2 | |
| 0080 | 0050 | PSATIM | 0452 | 01C4 | PSAIMC | | | | |
| 0084 | 0054 | PSATRV | 0454 | 01C6 | PSACID | | | | |

## Alphabetical list of fields in CHAPSA

| FIELD | DEC | HEX | | FIELD | DEC | HEX | FIELD | DEC | HEX |
|--------|------|------|-----|--------|------|------|--------|------|------|
| PSACAS | 0360 | 0168 | | PSAIC | 2048 | 0800 | PSAPOP | 0040 | 0028 |
| PSACAW | 0072 | 0048 | | PSAIIC | 0022 | 0016 | PSAQPT | 0396 | 018C |
| PSACID | 0454 | 01C6 | | PSAILK | 0455 | 01C7 | PSARE1 | 0552 | 0228 |
| PSACLO | 0128 | 0080 | | PSAILO | 0304 | 0130 | PSARE2 | 3640 | 0E38 |
| PSACST | 0456 | 01C8 | | PSAIMC | 0452 | 01C4 | PSASCU | 0416 | 01A0 |
| PSACSW | 0064 | 0040 | | PSAIND | 0013 | 000D | PSASFG | 0012 | 000C |
| PSACTL | 0432 | 01B0 | | PSAINP | 0120 | 0078 | PSASIC | 0016 | 0010 |
| PSADAT | 0440 | 01B8 | | PSAIOP | 0056 | 0038 | PSASIP | 0548 | 0224 |
| PSADMR | 3048 | 0BE8 (EQU) | | PSAIPL | 0000 | 0000 | PSASNP | 0096 | 0060 |
| PSADPT | 0400 | 0190 | | PSAISS | 0328 | 0148 | PSASOA | 0544 | 0220 |
| PSAEIC | 0014 | 000E | | PSAISV | 2020 | 07E4 | PSASOP | 0032 | 0020 |
| PSAENP | 0088 | 0058 | | PSAMIC | 0020 | 0014 | PSATIM | 0080 | 0050 |
| PSAEOP | 0024 | 0018 | | PSAMNP | 0112 | 0070 | PSATPT | 0392 | 0188 |
| PSAERC | 3072 | 0C00 | | PSAMOP | 0048 | 0030 | PSATPW | 0408 | 0198 |
| PSAETM | 0520 | 0208 | | PSAOTB | 0528 | 0210 | PSATRV | 0084 | 0054 |
| PSAEXS | 3628 | 0E2C | | PSAPAT | 0404 | 0194 | PSATSA | 0076 | 004C |
| PSAFIC | 3064 | 0BF8 (EQU) | | PSAPIC | 0018 | 0012 | PSAWTM | 0512 | 0200 |
| PSAFTM | 3068 | 0BFC (EQU) | | PSAPKB | 0532 | 0214 | | | |
| PSAG15 | 0008 | 0008 | | PSAPNP | 0104 | 0068 | | | |

## Assembler listing of CHAPSA

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|----------|-------------|--------|------|------|---------|
| | 68 00000 | CHAPSA | DSECT | | |
| | | ****** | | PREFIXED STORAGE AREA ****** | |
| 68 00000 | | | DS | 0D | |
| 68 00000 | | PSAIPL | DS | XL8 | IPL PSW |
| 68 00008 | | PSAG15 | DS | XL4 | GR15 TEMPORARY SAVE AREA |
| | | * | | | FOR RECOVERY NUCLEUS |
| 68 0000C | | PSASFG | DS | XL1 | SIPE FLAG BYTE |
| 68 0000D | | PSAIND | DS | XL1 | INDICATOR FOR DISPATCHER & |
| | | * | | | DEACTIVATOR |
| | | * | | | INTERRUPTION CODE AREA IN EXTENDED |
| | | * | | | PSW MODE (LOC 14-23) |
| 68 0000E | | PSAEIC | DS | XL2 | EXTERNAL INTERRUPTION |
| 68 00010 | | PSASIC | DS | XL2 | SVC INTERRUPTION |
| 68 00012 | | PSAPIC | DS | XL2 | PROGRAM INTERRUPTION |
| 68 00014 | | PSAMIC | DS | XL2 | MACHINE CHECK INTERRUPTION |
| 68 00016 | | PSAIIC | DS | XL2 | INPUT/OUTPUT INTERRUPTION |
| | | * | | | OLD PSW AREA |
| 68 00018 | | PSAEOP | DS | XL8 | EXTERNAL OLP PSW |
| 68 00020 | | PSASOP | DS | XL8 | SUPERVISER CALL OLD PSW |
| 68 00028 | | PSAPOP | DS | XL8 | PROGRAM OLD PSW |

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|----------|-------------|--------|------|------|---------|
| 68 00030 | | PSAMOP | DS | XL8 | MACHINE CHECK OLD PSW |
| 68 00038 | | PSAIOP | DS | XL8 | INPUT/OUTPUT OLD PSW |
| 68 00040 | | PSACSW | DS | XL8 | CHANNEL STATUS WORD |
| 68 00048 | | PSACAW | DS | XL4 | CHANNEL ADDRESS WORD |
| | | * | | | TIMER |
| 68 0004C | | PSATSA | DS | XL4 | TIMER SAVE AREA |
| 68 00050 | | PSATIM | DS | XL4 | TIMER |
| 68 00054 | | PSATRV | DS | XL4 | TIMER RESET VALUE |
| | | * | | | NEW PSW AREA |
| 68 00058 | | PSAENP | DS | XL8 | EXTERNAL NEW PSW |
| 68 00060 | | PSASNP | DS | XL8 | SUPERVISOR CALL NEW PSW |
| 68 00068 | | PSAPNP | DS | XL8 | PROGRAM NEW PSW |
| 68 00070 | | PSAMNP | DS | XL8 | MACHINE CHECK NEW PSW |
| 68 00078 | | PSAINP | DS | XL8 | INPUT/OUTPUT NEW PSW |
| | | * | | | CPU LOGOUT AREA (LOCATION 128 THRU |
| | | * | | | 303) |
| 68 00080 | | PSACLO | DS | 44XL4 | |
| | | * | | | CHANNEL LOGOUT AREA (LOCATION 304 |
| | | * | | | THRU 327) |
| 68 00130 | | PSAILO | DS | 6XL4 | |
| | | * | | | CPU PRIVATE WORKING STORAGE |
| 68 00148 | | PSAISS | DS | 8XL4 | INTERRUPT STACKER SAVE AREA |
| 68 00168 | | PSACAS | DS | 8XL4 | CORE ALLOCATION SAVE AREA |
| 68 00188 | | PSATPT | DS | XL4 | TSI POINTER |
| 68 0018C | | PSAQPT | DS | XL4 | GQE POINTER |
| 68 00190 | | PSADPT | DS | XL4 | DCB POINTER |
| 68 00194 | | PSAPAT | DS | XL4 | FLAG BYTE USED BY I/O PATH |
| 68 00198 | | PSATPW | DS | XL8 | TEMPORARY PSW USED BY |
| | | * | | | DISPATCHER |
| 68 001A0 | | PSASCU | DS | 2XL8 | SUPVR CORE ALLOC USER SAVE |
| | | * | | | AREA |
| 68 001B0 | | PSACTL | DS | XL8 | ECRG SAVE AREA USED BY SIO |
| | | * | | | DROP AREA (INTERCOMM) |
| 68 001B8 | | PSADAT | DS | 3XL4 | TEXT OF INTERCOMM MESSAGE |
| 68 001C4 | | PSAIMC | DS | XL1 | INTERCOMM MESSAGE CODE |
| 68 001C5 | | | DS | CL1 | UNUSED |
| 68 001C6 | | PSACID | DS | XL1 | IDENTITY OF SENDING CPU |
| 68 001C7 | | PSAILK | DS | XL1 | INTERCOMM LOCK BYTE |
| 68 001C8 | | PSACST | DS | 7XL8 | CPU STATUS TABLE |
| 68 00200 | | PSAWTM | DS | XL8 | WAIT TIME USED BY INTERRUPT |
| | | * | | | STACKER |
| 68 00208 | | PSAETM | DS | XL8 | ELAPSED TIMER |
| 68 00210 | | PSAOTB | DS | XL4 | OLD TIMER USED BY INTERRUPT |
| | | * | | | STACKER |
| 68 00214 | | PSAPKB | DS | XL2 | I/O ADDRESS OF 1052-7 |
| | | * | | | PRINTER KEYBOARD |
| 68 00216 | | | DS | XL2 | UNUSED |
| 68 00218 | | | DS | XL8 | USED BY STRATO |
| 68 00220 | | PSASOA | DS | XL4 | POINTER TO SERR OPERATING |
| | | * | | | AREA |
| 68 00224 | | PSASIP | DS | F | FOR PERFORMANCE |
| | | * | | | MEASUREMENTS USE |
| 68 00228 | | PSARE1 | DS | 367XL4 | RESERVED |
| | | * | | | M4285 |
| 68 007E4 | | PSAISV | DS | 7XL4 | INTERRUPT STACKER SAVE AREA |
| | | * | | | 2 M4285 |

```
*                                                    NSRB 406 *
****    SERR AREA                                    N 406 ****
*                                                    NSRB 406 *
```

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|----------|-------------|--------|------|------|---------|
| 68 00800 |          | PSAIC  | DS   | 256XL4    | INTER-COM RESIDENCE |
|          |          | *      |      |           | NSRB 406 * |
|          | 68 00BE8 | PSADMR | EQU  | PSAIC+1000 | SERR DAMAGE REPORT |
|          |          | *      |      |           | NSRB 406 * |
|          | 68 00BF8 | PSAFIC | EQU  | PSADMR+16 | MC INT. CODE FOR BAD CPU |
|          |          | *      |      |           | NSRB 406 * |
|          | 68 00BFC | PSAFTM | EQU  | PSADMR+20 | SAVED TIMER VALUE |
|          |          | *      |      |           | NSRB 406 * |
| 68 00C00 |          | PSAERC | DS   | 139XL4    | ERROR RECOVERY CONTROL AREA |
|          |          | *      |      |           | NSRB 406 * |
| *        |          |        |      |           | NSRB 406 * |
| ****     | END OF SERR AREA |  |      |           | N 406 **** |
| *        |          |        |      |           | NSRB 406 * |
| 68 00E2C |          | PSAEXS | DS   | 3XL4      | PSAEOP + PSAEIC SAVE AREA |
|          |          | *      |      |           | FOR INT STACKER    N 406 |
| 68 00E38 |          | PSARE2 | DS   | 114XL4    | UNASSIGNED |
|          |          | *      |      |           | NSRB 406 |

## Direct Access Paging Statistical Data Record (CHAPSD)

The Direct Access Paging Statistical Data Record (CHAPSD) maintains information for channel outboard failures on direct access paging devices.

The CHAPSD resides in core storage aligned on doubleword boundaries. The CHAPSD consists of a 8 byte header and one 80 byte statistical data record (SDR) entry for each paging device in the system.

### CHAPSD Storage map

```
DEC   HEX
  0    0 |          PSDLSD          |          PSDLWA          |
         |                          |                          |
  8    8 |  PSDSDA  | PSDFB |            UNNAMED               |
         |          |       |                                 |
 16   10 |                    PSDLSA                           |
         |                                                     |
 24   18 |   PSDLP    |   PSDEIC    |   PSDRET    |  UNNAMED    |
         |            |             |             |            |
 32   20 |                    PSDRTH                           |
         |                          |                          |
 40   28 |                          |           UNNAMED        |
         |                          |                          |
 48   30 |                    PSDTS                            |
         |                                                     |
 56   38 |                                                     |
         |                                                     |
         |                    PSDSDR                           |
         |                                                     |
         |                                                     |
         |                                                     |
```
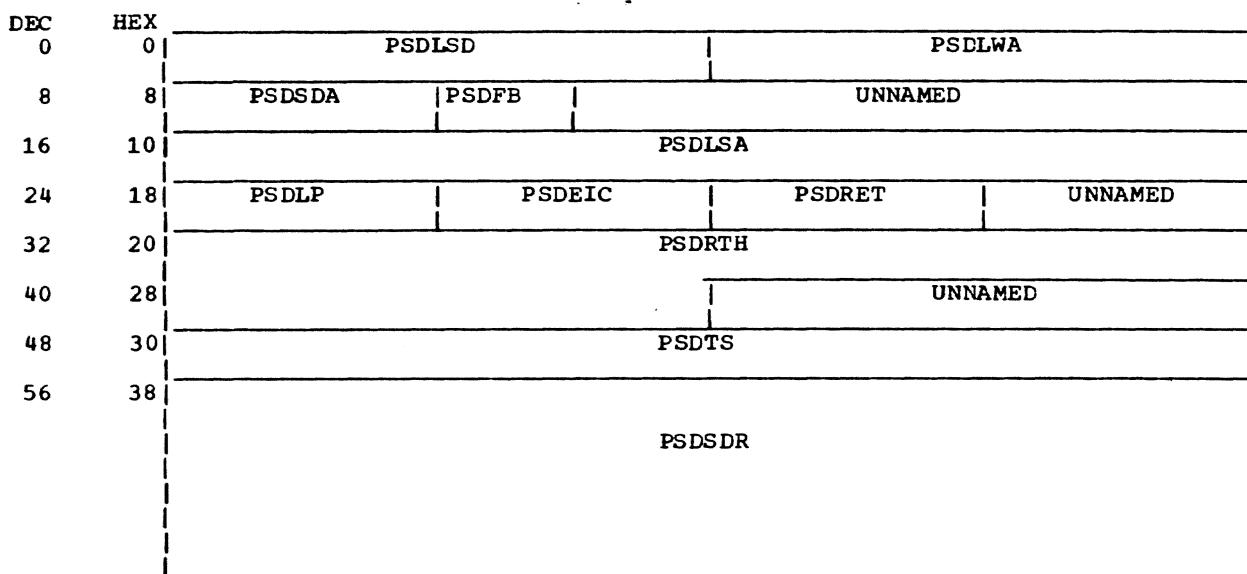
### Fields in CHAPSD -- by displacement

| DEC | HEX | FIELD | | DEC | HEX | FIELD | | DEC | HEX | FIELD |
|---|---|---|---|---|---|---|---|---|---|---|
| 0000 | 0000 | PSDLSD | | 0010 | 000A | PSDF1 | (EQU) | 0028 | 001C | PSDRET |
| 0004 | 0004 | PSDLWA | | 0010 | 000A | PSDFB | | 0032 | 0020 | PSDRTH |
| 0008 | 0008 | PSDSDA | | 0016 | 0010 | PSDLSA | | 0048 | 0030 | PSDTS |
| 0008 | 0008 | PSDHEND | | 0024 | 0018 | PSDLP | | 0056 | 0038 | PSDSDR |
| 0010 | 000A | PSDIR | (EQU) | 0026 | 001A | PSDEIC | | 0088 | 0058 | PSDEND |

### Alphabetical list of fields in CHAPSD

| FIELD | DEC | HEX | | FIELD | DEC | HEX | | FIELD | DEC | HEX |
|---|---|---|---|---|---|---|---|---|---|---|
| PSDEIC | 0026 | 001A | | PSDIR | 0010 | 000A | (EQU) | PSDRET | 0028 | 001C |
| PSDEND | 0088 | 0058 | | PSDLP | 0024 | 0018 | | PSDRTH | 0032 | 0020 |
| PSDFB | 0010 | 000A | | PSDLSA | 0016 | 0010 | | PSDSDA | 0008 | 0008 |
| PSDF1 | 0010 | 000A | (EQU) | PSDLSD | 0000 | 0000 | | PSDSDR | 0056 | 0038 |
| PSDHEND | 0008 | 0008 | | PSDLWA | 0004 | 0004 | | PSDTS | 0048 | 0030 |

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|---|---|---|---|---|---|
| 69 00000 | | CHAPSD | DSECT | | |
| | **** DIRECT ACCESS PAGING STATISTICAL DATA RECORD ***** | | | | |
| | | ******** HEADER ******** | | | |
| 69 00000 | | | DS | 0D | |
| 69 00000 | | PSDLSD | DS | F | LENGTH OF SDR ENTRY (80 |
| | | * | | | BYTES) |
| 69 00004 | | PSDLWA | DS | XL4 | LAST WORD ADDRESS |
| 69 00008 | | PSDHEND | DS | 0X | END OF PAGING STATISTICAL |
| | | * | | | DATA I5943 |
| | | * | | | RECORD TABLE HEADER |
| | | * | | | I5943 |
| | 00000008 | PSDHDSZ | EQU | PSDHEND-PSDLSD | PAGING STATISTICAL |
| | | * | | | DATA RECORD I5943 |
| | | * | | | TABLE HEADER SIZE |
| | | * | | | I5943 |
| | ******* SDR ENTRY (ONE ENTRY PER DEVICE) ******** | | | | |
| 69 00008 | | PSDSDA | DS | XL2 | SYMBOLIC DEVICE ADDRESS |
| 69 0000A | | PSDFB | DS | X | FLAG BYTE |
| | 69 0000A | PSDF1 | EQU | PSDFB | DEMOUNTABLE DEVICE |
| | | * | | | (1=DEMOUNTABLE) |
| | 00000080 | PSDF1M | EQU | X'80' | DEMOUNTABLE DEVICE MASK |
| | 69 0000A | PSDIR | EQU | PSDFB | IMMEDIATE REPORT FLAG |
| | | * | | | N392 |
| | 00000040 | PSDIRM | EQU | X'40' | IMMEDIATE REPORT MASK |
| | | * | | | N392 |
| 69 0000B | | | DS | 5C | SPARE |
| 69 00010 | | PSDLSA | DS | XL8 | LAST SEEK ADDRESS |
| 69 00018 | | PSDLP | DS | XL2 | PATH LAST USED |
| 69 0001A | | PSDEIC | DS | XL2 | TOTAL ERROR-INCIDENT COUNT |
| 69 0001C | | PSDRET | DS | XL2 | TOTAL RETRY COUNT |
| 69 0001E | | | DS | H | SPARE |
| 69 00020 | | PSDRTH | DS | 3XL4 | RETRY THRESHOLDS |
| 69 0002C | | | DS | F | SPARE |
| 69 00030 | | PSDTS | DS | 2F | DATE TIME STAMP OF FIRST |
| | | * | | | SDR ERROR |
| | | * | | | IN MICRO-SECONDS |
| 69 00038 | | PSDSDR | DS | 8XL4 | SDR BUCKETS (64 a 1/2 |
| | | * | | | BYTES) |
| 69 00058 | | PSDEND | DS | 0X | END OF PAGING STATISTICAL |
| | | * | | | DATA I5943 |
| | | * | | | RECORD TABLE ENTRY |
| | | * | | | I5943 |
| | 00000050 | PSDSZE | EQU | PSDEND-PSDSDA | PAGING STATISTICAL |
| | | * | | | DATA RECORD I5943 |
| | | * | | | TABLE ENTRY SIZE |
| | | * | | | I5943 |

## Public/Private Volume Table (CHAPVT)

The Public Volume Table identifies and locates all volumes. Two tables exist: a public table to identify and locate volumes in public storage; and a private table to identify and locate volumes in private virtual storage.

The public PVT is created at STARTUP-SYSGEN for all public data sets. At SYSGEN, the table is created, and the volume IDs are entered. At STARTUP, each volume is located; the device type code and the symbolic device address are entered.

A private PVT resides in private virtual storage for each private data set. The table is created by ADDCAT at OPEN from the volumes identified by the JFCB, Data Set Descriptor, or DSCB. Once built, the table resides in virtual storage, accepting no additions or deletions.

The public and private tables are identical, consisting of a 16-byte header and a variable number of 16-byte entries. Both tables reside in virtual storage, aligned on doubleword boundaries.

### CHAPVT Storage map

```
DEC    HEX   _____
  0      0 |                                                          |
           |                                                          |
           |                      PVTHDR                              |
           |                                                          |
 16     10 |----------------------------------------------------------|
           |                                                          |
           |                      PVTENT                              |
           |                                                          |
           |_____|
```

### ORG   PVTHDR

```
  0      0 |_____UNNAMED_____|
           |                          |              |                |
  8      8 |                          |   PVTMCT     |    PVTECT       |
           |_____|_____|_____|
```

### ORG   PVTENT

```
 16     10 |_____PVTVID_____|____PVTSDA_____|
           |                          |       |       |                |
 24     18 |        PVTDVC            |PVTFLG |UNNAMED|    PVTAVS       |
           |_____|_____|_____|_____|
```
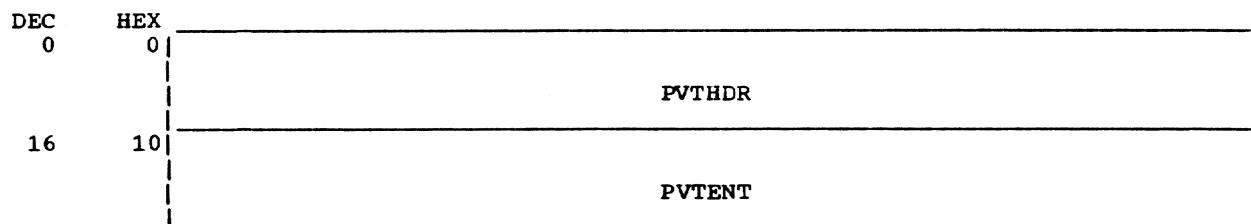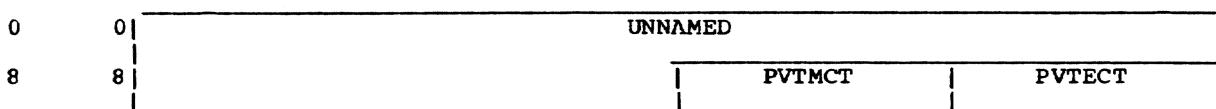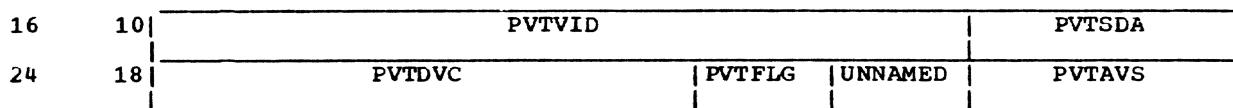
### Fields in CHAPVT -- by displacement

| DEC | HEX | FIELD | DEC | HEX | FIELD | DEC | HEX | FIELD | |
|---|---|---|---|---|---|---|---|---|---|
| 0000 | 0000 | PVTHDR | 0016 | 0010 | PVTENT | 0028 | 001C | PVTX80 | (EQU) |
| 0012 | 000C | PVTMCT | 0022 | 0016 | PVTSDA | 0030 | 001E | PVTAVS | |
| 0014 | 000E | PVTECT | 0024 | 0018 | PVTDVC | | | | |
| 0016 | 0010 | PVTVID | 0028 | 001C | PVTFLG | | | | |

### Alphabetical list of fields in CHAPVT

| FIELD | DEC | HEX | FIELD | DEC | HEX | FIELD | DEC | HEX | |
|---|---|---|---|---|---|---|---|---|---|
| PVTAVS | 0030 | 001E | PVTFLG | 0028 | 001C | PVTVID | 0016 | 0010 | |
| PVTDVC | 0024 | 0018 | PVTHDR | 0000 | 0000 | PVTX80 | 0028 | 001C | (EQU) |
| PVTECT | 0014 | 000E | PVTMCT | 0012 | 000C | | | | |
| PVTENT | 0016 | 0010 | PVTSDA | 0022 | 0016 | | | | |

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|---|---|---|---|---|---|
| | 6B 00000 | CHAPVT | DSECT | | VAM DATA SET VOLUME TABLE |
| 6B 00000 | | | DS | 0D | ALIGN TO DOUBLE WORD |
| 6B 00000 | | PVTHDR | DS | CL16 | VOLUME TABLE HEADER |
| | 6B 00000 | | \|ORG\| | PVTHDR | SUBFIELD ALIGNMENT |
| 6B 00000 | | | DS | CL12 | RESERVED |
| 6B 0000C | | PVTMCT | DS | CL2 | MAXIMUM VOLUME ENTRY COUNT |
| 6B 0000E | | PVTECT | DS | H | COUNT OF VOLUME ENTRIES |
| 6B 00010 | | PVTENT | DS | CL16 | VOLUME ENTRY. |
| | 6B 00010 | | \|ORG\| | PVTENT | SUBFIELD ALIGNMENT |
| 6B 00010 | | PVTVID | DS | CL6 | VOLUME ID |
| 6B 00016 | | PVTSDA | DS | H | SYMBOLIC DEVICE ADDR |
| 6B 00018 | | PVTDVC | DS | F | DEVICE CODE |
| 6B 0001C | | PVTFLG | DS | XL1 | FLAG BYTE |
| | 6B 0001C | PVTX80 | EQU | PVTFLG | RELOCATED PAGES FLAG |
| | 00000080 | PVTX80M | EQU | X'80' | RELOCATED PAGES MASK |
| 6B 0001D | | | DS | XL1 | UNUSED |
| 6B 0001E | | PVTAVS | DS | H | NUMBER OF AVAILABLE PAGES |
| | | * | | | ON VOLUME |

## Reply Checking Table (CHARET, CHADES, & CHARWD)

The Reply Checking Table contains all the allowable reply words that an operator can use when answering messages sent to him from the system.
The Reply Checking Table consists of:
1.  A table header (RET) indicating the number of code entries in the table.
2.  A reply code descriptor (DES); and,
3.  A reply checking word (RWD).

The Reply command, upon finding a reply check request, references the Reply Checking Table to locate the valid replies. A descriptor, located by the reply code number, points to the first valid reply word in the table, and also specifies how many reply words should be considered.

The Reply Checking Table occupies up to 2144 bytes of virtual storage, aligned on doubleword boundaries.

## CHARET Storage map

| DEC | HEX | |
|-----|-----|---|
| 0 | 0 | RETNUM \| RETUN1 |
| 8 | 8 | RETDES |
| 168 | A8 | RETRWD |
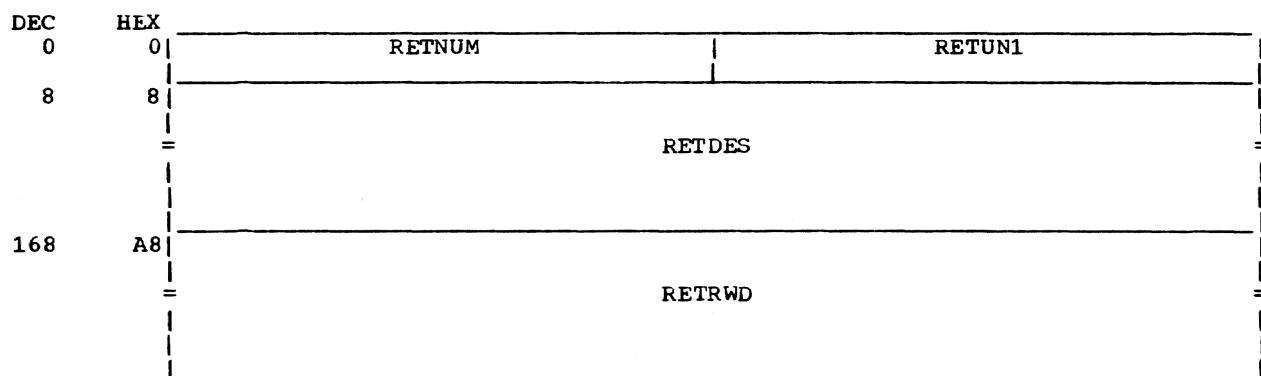
## Fields in CHARET -- by displacement

| DEC | HEX | FIELD | DEC | HEX | FIELD | DEC | HEX | FIELD |
|------|------|--------|------|------|--------|------|------|--------|
| 0000 | 0000 | RETNUM | 0004 | 0004 | RETUN1 | 0008 | 0008 | RETDES |
| | | | | | | 0168 | 00A8 | RETRWD |

## Alphabetical list of fields in CHARET

| FIELD | DEC | HEX | FIELD | DEC | HEX | FIELD | DEC | HEX |
|--------|------|------|--------|------|------|--------|------|------|
| RETDES | 0008 | 0008 | RETNUM | 0000 | 0000 | RETRWD | 0168 | 00A8 |
| | | | | | | RETUN1 | 0004 | 0004 |

## Assembler listing of CHARET

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|----------|-------------|--------|------|------|---------|
| | 6D 00000 | CHARET | DSECT | | REPLY CHECKING TABLE HEADER |
| 6D 00000 | | | DS | 0D | |
| 6D 00000 | | RETNUM | DS | F | MAXIMUM NUMBER OF REPLY |
| | | * | | | CODES |
| 6D 00004 | | RETUN1 | DS | F | UNUSED |
| 6D 00008 | | RETDES | DS | 20XL8 | REPLY CODE DESCRIPTOR |
| 6D 000A8 | | RETRWD | DS | 245CL8 | REPLY WORD ENTRY |
| | 6E 00000 | CHADES | DSECT | | REPLY CODE DESCRIPTOR |
| 6E 00000 | | | DS | 0D | |
| 6E 00000 | | DESWRD | DS | H | NUMBER OF REPLY WORDS FOR |
| | | * | | | CODE |
| 6E 00002 | | DESCOD | DS | H | REPLY CODE NUMBER |
| 6E 00004 | | DESPNT | DS | F | POINTER TO FIRST REPLY WORD |
| | 6F 00000 | CHARWD | DSECT | | REPLY WORD ENTRY |
| 6F 00000 | | | DS | 0D | |
| 6F 00000 | | RWDREP | DS | CL8 | REPLY WORD DELIMITED BY |
| | | * | | | COMMA |

## CHADES Storage map

```
DEC   HEX _____
  0     0|         DESWRD       |       DESCOD       |            DESPNT           |
        |_____|_____|_____|
```

## Fields in CHADES -- by displacement

| DEC | HEX | FIELD | DEC | HEX | FIELD | DEC | HEX | FIELD |
|-----|-----|-------|-----|-----|-------|-----|-----|-------|
| 0000 | 0000 | DESWRD | 0002 | 0002 | DESCOD | 0004 | 0004 | DESPNT |

## Alphabetical list of fields in CHADES

| FIELD | DEC | HEX | FIELD | DEC | HEX | FIELD | DEC | HEX |
|-------|-----|-----|-------|-----|-----|-------|-----|-----|
| DESCOD | 0002 | 0002 | DESPNT | 0004 | 0004 | DESWRD | 0000 | 0000 |


## CHARWD Storage map

```
DEC   HEX _____
  0     0|                              RWDREP                                   |
        |_____|
```

## Fields in CHARWD -- by displacement

| DEC | HEX | FIELD | DEC | HEX | FIELD | DEC | HEX | FIELD |
|-----|-----|-------|-----|-----|-------|-----|-----|-------|
| 0000 | 0000 | RWDREP | | | | | | |

## Alphabetical list of fields in CHARWD

| FIELD | DEC | HEX | FIELD | DEC | HEX | FIELD | DEC | HEX |
|-------|-----|-----|-------|-----|-----|-------|-----|-----|
| RWDREP | 0000 | 0000 | | | | | | |

Reletive External Storage Correspondence Table (CHARHD,CHADHD,CHAMHD,CHAEPE)

The RESTBL provides a correspondence between an open VAM data set and its external pages. The RESTBL maintains a list of external pages, vital information pertaining to the data set, and information concerning each DCB opened for use by the data set. The RESTBL is used to convert relative data set page numbers to external storage addresses, and to maintain the sharing of data set pages.

The RESTBL is a variable length table, write-protected from the user, and contained in virtual storage.

The RESTBL consists of four sections:

CHARHD    RESTBL Header
CHADHD    DCB Header
CHAMHD    Member Header
CHAEPE    External Page Entry

The four sections are fixed, but, except for the header, the number of these sections is variable. The RESTBL header is followed by the external page entries. The DCB headers and member headers originate at the end of the RESTBL and expand toward the external page entries.


RESTBL Header (CHARHD)

The 48 byte RESTBL HEADER contains control information for the RESTBL and the data set it describes. A RESTBL has only one header.

The fields in the RESTBL HEADER are as follows:

RHDNAP - a two byte relative address, of the next available external page entry, pointing to the next available unused entry assigned to the data set. To obtain the actual relative value, shift left two bits to multiply. The two low-order bits, being zero, are not carried.

RHDFEP - a two byte offset which, when added to the address of RESTBL, yields the address of the first external page entry assigned to the data set. To obtain the actual relative value, multiply this field by four. The two low-order bits, being zero, are not carried.

RHDDIR - (two bytes)
• The number of index sequential directory pages for an index sequential data set.
• The number of pages in the POD for a partitioned data set.

RHDOVF = RHDBYT - (two bytes)
• The number of overflow pages for an index sequential data set.


• The number of bytes used in the last data page for a sequential data set.

RHDODC - a two byte address, of the first DCB header in a chain. The actual relative address is obtained by multiplying the entry by eight. The three low-order bits, being zero, are not carried.

RHDADC - a two byte relative address, of the next available DCB header. The actual relative address is obtained by multiplying the entry by eight. The three low-order bits, being zero, are not carried.

RHDOMC - a two byte relative address, of the first member header. The actual relative location is obtained by multiplying the entry by eight. The three low-order bits, being zero, are not carried.

RHDAMC - a two byte relative address, of the next available member header. The actual relative address is obtained by multiplying the entry by eight. The three low-order bits, being zero, are not carried.

RHDPOD - the virtual storage address of the partitioned organization directory (POD) for partitioned data sets.

RESTBL External Page Entry (CHAEPE)

A four-byte field containing the address of the external device of a data page. The two high-order bits are used as flags indicating the condition of the data page. For shared data sets, the entry is preceded by a four byte interlock control word.

DCB Header (CHADHD)

Contains information necessary to associate a data set with a particular task; requires 64 bytes of storage.

Note 1.    DHDNDH - a two-byte relative address of the next DCB header for DCBs opened for the data set. The field is zeroed when no chain exists, or if this is the last DCB. To obtain the actual relative address, multiply the entry by four. The two low-order bits, being zero, are not carried.

Note 2.    DHDPDH - a two-byte relative address of the previous DCB header for the open DSBs. This entry is zeroed if it is the first entry of a chain. The actual

relative address is obtained by multiplying the entry by four. The two low-order bits, being zero, are not carried.

## Member Header (CHAMHD)

Contains information necessary to associate a member of a partitioned data set with the data set described by a RESTBL. A RESTBL may contain a maximum of 65K member headers. CHAMHD requires 32 bytes of storage.

Note 1.  MHDNMH - a two byte relative address of the next member header in the chain (zero, if this is the last member header). The actual relative address is obtained by multiplying the entry by eight. The three low-order bits, being zero, are not carried.

Note 2.  MHDPMH - a two byte relative address of the previous member header in the chain (zero, if this is the first). The actual relative address is obtained by multiplying the entry by eight. The three low-order bits, being zero, are not carried.

## CHARHD Storage map

| DEC | HEX | | | | | | |
|---|---|---|---|---|---|---|---|
| 0 | 0 | RHDINW | RHDINR | RHDINN | RHDINI | RHDNAP | RHDNEP |
| 8 | 8 | RHDFEP | | RHDDIR | | RHDDAT | RHDOVF |
| 16 | 10 | UNNAMED | RHDRPG | RHDTHD | | RHDFLG | RHDIN1 | RHDDCB |
| 24 | 18 | RHDODC | | RHDADC | | RHDOMC | RHDAMC |
| 32 | 20 | RHDPOD | | | | RHDTID | |
| 40 | 28 | RHDVTA | | | | RHDSPT | |
| 48 | 30 | RHDCPO | | | | UNNAMED | |
| 56 | 38 | RHDSAL | | RHDRFM | RHDKYL | RHDPAD | RHDRKP |
| 64 | 40 | RHDRCL | | | RHDDSO | | RHDCRD | RHDOPC |

ORG   RHDINR

| 1 | 1 | RHDTSLK |
|---|---|---|

## Fields in CHARHD -- by displacement

| DEC | HEX | FIELD | | DEC | HEX | FIELD | | DEC | HEX | FIELD | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0000 | 0000 | RHDINW | | 0020 | 0014 | RHDRCG | (EQU) | 0036 | 0024 | RHDTID | |
| 0000 | 0000 | RHDINT | | 0020 | 0014 | RHDDSC | (EQU) | 0040 | 0028 | RHDVTA | |
| 0001 | 0001 | RHDTSLK | | 0020 | 0014 | RHDPDI | (EQU) | 0044 | 002C | RHDSPT | |
| 0001 | 0001 | RHDINR | | 0020 | 0014 | RHDISD | (EQU) | 0048 | 0030 | RHDCPO | |
| 0002 | 0002 | RHDINN | | 0020 | 0014 | RHDSPR | (EQU) | 0056 | 0038 | RHDSAL | |
| 0003 | 0003 | RHDINI | | 0020 | 0014 | RHDISQ | (EQU) | 0059 | 003B | RHDRFM | |
| 0004 | 0004 | RHDNAP | | 0020 | 0014 | RHDPRT | (EQU) | 0060 | 003C | RHDKYL | |
| 0006 | 0006 | RHDNEP | | 0020 | 0014 | RHDSHR | (EQU) | 0061 | 003D | RHDPAD | |
| 0008 | 0008 | RHDFEP | | 0020 | 0014 | RHDFLG | | 0062 | 003E | RHDRKP | |
| 0010 | 000A | RHDDIR | | 0021 | 0015 | RHDIN1 | | 0064 | 0040 | RHDRCL | |
| 0012 | 000C | RHDDAT | | 0022 | 0016 | RHDDCB | | 0068 | 0044 | RHDDSO | |
| 0012 | 000C | RHDDTB | | 0024 | 0018 | RHDODC | | 0070 | 0046 | RHDREF | (EQU) |
| 0014 | 000E | RHDBYT | (EQU) | 0026 | 001A | RHDADC | | 0070 | 0046 | RHDCHG | (EQU) |
| 0014 | 000E | RHDOVF | | 0028 | 001C | RHDOMC | | 0070 | 0046 | RHDCRD | |
| 0017 | 0011 | RHDRPG | | 0030 | 001E | RHDAMC | | 0071 | 0047 | RHDOPC | |
| 0018 | 0012 | RHDTHD | | 0032 | 0020 | RHDPOD | | 0072 | 0048 | RHDEND | |

## Alphabetical list of fields in CHARHD

| FIELD | DEC | HEX | | FIELD | DEC | HEX | | FIELD | DEC | HEX | |
|-------|-----|-----|--|-------|-----|-----|--|-------|-----|-----|--|
| RHDADC | 0026 | 001A | | RHDINN | 0002 | 0002 | | RHDPOD | 0032 | 0020 | |
| RHDAMC | 0030 | 001E | | RHDINR | 0001 | 0001 | | RHDPRT | 0020 | 0014 | (EQU) |
| RHDBYT | 0014 | 000E | (EQU) | RHDINT | 0000 | 0000 | | RHDRCG | 0020 | 0014 | (EQU) |
| RHDCHG | 0070 | 0046 | (EQU) | RHDINW | 0000 | 0000 | | RHDRCL | 0064 | 0040 | |
| RHDCPO | 0048 | 0030 | | RHDIN1 | 0021 | 0015 | | RHDREF | 0070 | 0046 | (EQU) |
| RHDCRD | 0070 | 0046 | | RHDISD | 0020 | 0014 | (EQU) | RHDRFM | 0059 | 003B | |
| RHDDAT | 0012 | 000C | | RHDISQ | 0020 | 0014 | (EQU) | RHDRKP | 0062 | 003E | |
| RHDDCB | 0022 | 0016 | | RHDKYL | 0060 | 003C | | RHDRPG | 0017 | 0011 | |
| RHDDIR | 0010 | 000A | | RHDNAP | 0004 | 0004 | | RHDSAL | 0056 | 0038 | |
| RHDDSC | 0020 | 0014 | (EQU) | RHDNEP | 0006 | 0006 | | RHDSHR | 0020 | 0014 | (EQU) |
| RHDDSO | 0068 | 0044 | | RHDODC | 0024 | 0018 | | RHDSPR | 0020 | 0014 | (EQU) |
| RHDDTB | 0012 | 000C | | RHDOMC | 0028 | 001C | | RHDSPT | 0044 | 002C | |
| RHDEND | 0072 | 0048 | | RHDOPC | 0071 | 0047 | | RHDTHD | 0018 | 0012 | |
| RHDFEP | 0008 | 0008 | | RHDOVF | 0014 | 000E | | RHDTID | 0036 | 0024 | |
| RHDFLG | 0020 | 0014 | | RHDPAD | 0061 | 003D | | RHDTSLK | 0001 | 0001 | |
| RHDINI | 0003 | 0003 | | RHDPDI | 0020 | 0014 | (EQU) | RHDVTA | 0040 | 0028 | |

## Assembler listing of CHARHD

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|----------|-------------|--------|------|------|---------|
| | 70 00000 | CHARHD | DSECT | | RESTBL HEADER |
| 70 00000 | | RHDINT | DS | 0F | INTERLOCK CONTROL |
| 70 00000 | | RHDINW | DS | XL1 | WRITE INTERLOCK FLAG |
| 70 00001 | | RHDINR | DS | XL1 | READ   INTERLOCK FLAG |
| 70 00002 | | RHDINN | DS | XL1 | READ   INTERLOCK COUNT |
| 70 00003 | | RHDINI | DS | XL1 | READ   INTERLOCK CONTROL |
| | | * | | | FLAG |
| | 70 00001 | | \|ORG\| | RHDINR | |
| 70 00001 | | RHDTSLK | DS | XL3 | ADDRESS OF ROUTINE SETTING |
| | | * | | | LOCK |
| 70 00004 | | RHDNAP | DS | H | NEXT AVAILABLE PAGE ENTRY |
| 70 00006 | | RHDNEP | DS | H | NO. AVAIL. EXTERNAL PAGES |
| 70 00008 | | RHDFEP | DS | H | FIRST EXTERNAL PAGE ENTRY |
| 70 0000A | | RHDDIR | DS | H | NUMBER OF DIRECTORY PAGES |
| 70 0000C | | RHDDTB | DS | 0F | |
| 70 0000C | | RHDDAT | DS | H | NUMBER OF DATA PAGES |
| 70 0000E | | RHDOVF | DS | H | NUMBER OF OVERFLOW PAGES |
| | 70 0000E | RHDBYT | EQU | RHDOVF | BYTES IN LAST DATA PAGE |
| 70 00010 | | | DS | C | SPARE |
| 70 00011 | | RHDRPG | DS | XL1 | NO. OF RESTBL PAGES |
| 70 00012 | | RHDTHD | DS | H | LOCATION OF LAST HDR SPACE |
| 70 00014 | | RHDFLG | DS | XL1 | FLAGS |
| | 70 00014 | RHDSHR | EQU | RHDFLG | SHARED FLAG |
| | 00000080 | RHDSHRM | EQU | X'80' | SHARED MASK |
| | 70 00014 | RHDPRT | EQU | RHDFLG | PARTITIONED FLAG |
| | 00000040 | RHDPRTM | EQU | X'40' | PARTITIONED MASK |
| | 70 00014 | RHDISQ | EQU | RHDFLG | INDEX SEQUENTIAL FLAG |
| | 00000020 | RHDISQM | EQU | X'20' | INDEX SEQUENTIAL MASK |
| | 70 00014 | RHDSPR | EQU | RHDFLG | SPARE FLAG |
| | 00000010 | RHDSPRM | EQU | X'10' | SPARE MASK |
| | 70 00014 | RHDISD | EQU | RHDFLG | ISD INTEGRITY FLAG |
| | 00000008 | RHDISDM | EQU | X'08' | ISD INTEGRITY MASK |
| | 70 00014 | RHDPDI | EQU | RHDFLG | POD INTEGRITY FLAG |
| | 00000004 | RHDPDIM | EQU | X'04' | POD INTEGRITY MASK |
| | 70 00014 | RHDDSC | EQU | RHDFLG | DSCB INTEGRITY FLAG |
| | 00000002 | RHDDSCM | EQU | X'02' | DSCB INTEGRITY MASK |
| | 70 00014 | RHDRCG | EQU | RHDFLG | RECATALOG FLAG |
| | 00000001 | RHDRCGM | EQU | X'01' | RECATALOG MASK |
| 70 00015 | | RHDIN1 | DS | XL1 | INTERLOCK FOR FOLLOWING |
| | | * | | | FIELDS |
| 70 00016 | | RHDDCB | DS | H | NUMBER OF DCBS |
| 70 00018 | | RHDODC | DS | H | LOC OF FIRST DCB HEADER |
| 70 0001A | | RHDADC | DS | H | NEXT AVAIL. DCB HDR SPACE |
| 70 0001C | | RHDOMC | DS | H | LOC OF FIRST MEMBER HEADER |
| 70 0001E | | RHDAMC | DS | H | NEXT MEMBER HEADER SPACE |
| 70 00020 | | RHDPOD | DS | F | ADDRESS OF POD |

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|----------|-------------|--------|------|------|---------|
| 70 00024 | | RHDTID | DS | F | TASK ID WHICH SET RESTBL |
| | | * | | | LOCK |
| 70 00028 | | RHDVTA | DS | F | ADDRESS OF VOLUME TABLE |
| 70 0002C | | RHDSPT | DS | F | POINTER TO E DSCB OF DATA |
| | | * | | | SET |
| 70 00030 | | RHDCPO | DS | F | CURRENT PAGEOUT COUNT |
| 70 00034 | | | DS | F | RESERVED |
| 70 00038 | | RHDSAL | DS | XL3 | SECONDARY ALLOCATION(ESA) |
| 70 0003B | | RHDRFM | DS | XL1 | RECORD FORMAT |
| 70 0003C | | RHDKYL | DS | XL1 | KEY LENGTH |
| 70 0003D | | RHDPAD | DS | XL1 | VI PAD FACTOR |
| 70 0003E | | RHDRKP | DS | XL2 | RELATIVE KEY POSITION |
| 70 00040 | | RHDRCL | DS | F | RECORD LENGTH |
| 70 00044 | | RHDDSO | DS | XL2 | DATA SET |
| | | * | | | ORGANIZATION(DSORG) |
| 70 00046 | | RHDCRD | DS | XL1 | CHANGE/REFERENCE DATA FLAG |
| | | * | | | BYTE |
| | 70 00046 | RHDCHG | EQU | RHDCRD | CHANGE DATA FLAG |
| | 00000080 | RHDCHGM | EQU | X'80' | CHANGE DATE MASK |
| | 70 00046 | RHDREF | EQU | RHDCRD | REFERENCE DATE FLAG |
| | 00000040 | RHDREFM | EQU | X'40' | REFERENCE DATE MASK |
| 70 00047 | | RHDOPC | DS | XL1 | OPTION CODES |
| 70 00048 | | RHDEND | DS | 0X | END OF RESTBL HEADER |
| | | * | | | I6478 |
| | 00000048 | RHDLNGTH | EQU | RHDEND-CHARHD | LENGTH OF RESTBL |
| | | * | | | HEADER        I6478 |
| | 00000004 | RHDEPSZ | EQU | 4 | NON-SHARED EXT PAGE ENTRY |
| | | * | | | SIZE I6478 |
| | 00000008 | RHDSEPSZ | EQU | 8 | SHARED EXT PAGE ENTRY SIZE |
| | | * | | | I6478 |
| | 00000003 | RHDMODSZ | EQU | 3 | TWOS EXPONENT TO CONVERT |
| | | * | | | I6478 |
| | | * | | | RESTBL PTRS TO |
| | | * | | | DISPLACEMENTS   I6478 |

## CHADHD Storage map

| DEC | HEX | | | | | | |
|---|---|---|---|---|---|---|---|
| 0 | 0 | DHDDCB | | | DHDJFC | | |
| 8 | 8 | DHDTSK | | | DHDRES | | |
| 16 | 10 | DHDPOD | | | DHDLNK | | |
| 24 | 18 | DHDOPN | DHDPRO | DHDINT | DHDCOP | | |
| 32 | 20 | DHDISD | | | DHDCDP | | DHDNOP |
| 40 | 28 | DHDMRL | | | DHDNDH | | DHDPDH |
| 48 | 30 | DHDDUP | | | DHDSISD | | |
| 56 | 38 | DHDDXP | | | DHDOXP | | |

## Fields in CHADHD -- by displacement

| DEC | HEX | FIELD | | DEC | HEX | FIELD | | | DEC | HEX | FIELD | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0000 | 0000 | DHDDCB | | 0027 | 001B | DHDVRO | (EQU) | | 0040 | 0028 | DHDMRL | |
| 0004 | 0004 | DHDJFC | | 0028 | 001C | DHDFBP | (EQU) | | 0044 | 002C | DHDNDH | |
| 0008 | 0008 | DHDTSK | | 0028 | 001C | DHDCOP | | | 0046 | 002E | DHDPDH | |
| 0012 | 000C | DHDRES | | 0032 | 0020 | DHDNBP | (EQU) | | 0048 | 0030 | DHDDUP | |
| 0016 | 0010 | DHDPOD | | 0032 | 0020 | DHDISD | | | 0052 | 0034 | DHDSISD | |
| 0020 | 0014 | DHDLNK | | 0036 | 0024 | DHDFDP | (EQU) | | 0056 | 0038 | DHDDXP | |
| 0024 | 0018 | DHDOPN | | 0036 | 0024 | DHDCDP | | | 0060 | 003C | DHDCPR | (EQU) |
| 0025 | 0019 | DHDPRO | | 0038 | 0026 | DHDPCO | (EQU) | | 0060 | 003C | DHDOXP | |
| 0026 | 001A | DHDINT | | 0038 | 0026 | DHDNOP | | | 0064 | 0040 | DHDEND | |

## Alphabetical list of fields in CHADHD

| FIELD | DEC | HEX | | FIELD | DEC | HEX | | FIELD | DEC | HEX | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| DHDCDP | 0036 | 0024 | | DHDINT | 0026 | 001A | | DHDOXP | 0060 | 003C | |
| DHDCOP | 0028 | 001C | | DHDISD | 0032 | 0020 | | DHDPCO | 0038 | 0026 | (EQU) |
| DHDCPR | 0060 | 003C | (EQU) | DHDJFC | 0004 | 0004 | | DHDPDH | 0046 | 002E | |
| DHDDCB | 0000 | 0000 | | DHDLNK | 0020 | 0014 | | DHDPOD | 0016 | 0010 | |
| DHDDUP | 0048 | 0030 | | DHDMRL | 0040 | 0028 | | DHDPRO | 0025 | 0019 | |
| DHDDXP | 0056 | 0038 | | DHDNBP | 0032 | 0020 | (EQU) | DHDRES | 0012 | 000C | |
| DHDEND | 0064 | 0040 | | DHDNDH | 0044 | 002C | | DHDSISD | 0052 | 0034 | |
| DHDFBP | 0028 | 001C | (EQU) | DHDNOP | 0038 | 0026 | | DHDTSK | 0008 | 0008 | |
| DHDFDP | 0036 | 0024 | (EQU) | DHDOPN | 0024 | 0018 | | DHDVRO | 0027 | 001B | (EQU) |

## Assembler listing of CHADHD

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|---|---|---|---|---|---|
| 2A 00000 | | CHADHD | DSECT | | DCB HEADER |
| 2A 00000 | | DHDDCB | DS | F | DCB ADDRESS |
| 2A 00004 | | DHDJFC | DS | F | JFCB ADDRESS |
| 2A 00008 | | DHDTSK | DS | F | TASK ID |
| 2A 0000C | | DHDRES | DS | F | RESTBL ADDRESS |
| 2A 00010 | | DHDPOD | DS | F | POD ADDRESS |
| 2A 00014 | | DHDLNK | DS | F | LINK TO MEMBER/RESTBL |
| | | * | | | HEADER |
| 2A 00018 | | DHDOPN | DS | XL1 | OPEN OPTIONS |
| | 00000000 | DHDINP | EQU | X'00' | INPUT REQUEST |
| | 0000003C | DHDOUT | EQU | X'3C' | OUTPUT REQUEST |
| 2A 00019 | | DHDPRO | DS | XL1 | PROTECTION CLASS |
| 2A 0001A | | DHDINT | DS | H | INTERLOCK SUMMARY |
| | 2A 0001B | DHDVRO | EQU | DHDINT+1 | READ-ONLY ACCESS |
| | 00000080 | DHDVROM | EQU | X'80' | READ-ONLY ACCESS MASK |
| 2A 0001C | | DHDCOP | DS | F | LOC OF CURRENT OFLO PAGE |
| | 2A 0001C | DHDFBP | EQU | DHDCOP | LOC OF FIRST BUFFER PAGE |
| 2A 00020 | | DHDISD | DS | F | LOC OF IND SEQ DIRECTORY |
| | 2A 00020 | DHDNBP | EQU | DHDISD | NO. OF BUFFER PAGES |
| 2A 00024 | | DHDCDP | DS | H | CURRENT DATA PAGE |

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|---|---|---|---|---|---|
| | 2A 00024 | DHDFDP | EQU | DHDCDP | FIRST DATA PAGE CHECKED OUT |
| 2A 00026 | | DHDNOP | DS | H | CURRENT OVERFLOW PAGE |
| | 2A 00026 | DHDPCO | EQU | DHDNOP | NO. DATA PAGES CHECKED OUT |
| 2A 00028 | | DHDMRL | DS | F | MAX LOGICAL RECORD LENGTH |
| 2A 0002C | | DHDNDH | DS | H | NEXT DCB HEADER |
| 2A 0002E | | DHDPDH | DS | H | PREVIOUS DCB HEADER |
| 2A 00030 | | DHDDUP * | DS | F | ADDRESS OF DUPLEX COPY OF DS |
| 2A 00034 | | DHDSISD * | DS | F | ADDRESS SUPER INDEX SEQUENTIAL DIRECTORY |
| 2A 00038 | | DHDDXP * | DS | F | LAST DATA PAGE EXTERNAL ADDRESS |
| 2A 0003C | | DHDOXP * | DS | F | LAST OVERFLOW PAGE EXTERNAL ADDRESS |
| | 2A 0003C | DHDCPR * | EQU | DHDOXP | NO PAGES IN LAST PAGING REQUEST |
| 2A 00040 | | DHDEND * | DS | 0X | END OF DCB HEADER 16478 |
| | 00000040 | DHDLNGTH * | EQU | DHDEND-CHADHD | SIZE OF DCB HEADER 16478 |

CHAMHD Storage map

| DEC | HEX | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 0 | MHDNAM | | | | | | | | |
| 8 | 8 | MHDFEP | | MHDDIR | | MHDDAT | | | MHDOVF | |
| 16 | 10 | MHDW | MHDR | MHDN | MHDI | MHDFLG | MHDINT | | MHDUSE | |
| 24 | 18 | MHDVAL | | | | MHDNMH | | | MHDPMH | |

Fields in CHAMHD -- by displacement

| DEC | HEX | FIELD | | DEC | HEX | FIELD | | DEC | HEX | FIELD |
|---|---|---|---|---|---|---|---|---|---|---|
| 0000 | 0000 | MHDNAM | | 0016 | 0010 | MHDW | | 0022 | 0016 | MHDUSE |
| 0008 | 0008 | MHDFEP | | 0017 | 0011 | MHDR | | 0024 | 0018 | MHDVAL |
| 0010 | 000A | MHDDIR | | 0018 | 0012 | MHDN | | 0028 | 001C | MHDNMH |
| 0012 | 000C | MHDDAT | | 0019 | 0013 | MHDI | | 0030 | 001E | MHDPMH |
| 0014 | 000E | MHDBYT (EQU) | | 0020 | 0014 | MHDFLG | | 0032 | 0020 | MHDEND |
| 0014 | 000E | MHDOVF | | 0021 | 0015 | MHDINT | | | | |

Alphabetical list of fields in CHAMHD

| FIELD | DEC | HEX | | FIELD | DEC | HEX | | FIELD | DEC | HEX |
|---|---|---|---|---|---|---|---|---|---|---|
| MHDBYT | 0014 | 000E (EQU) | | MHDI | 0019 | 0013 | | MHDPMH | 0030 | 001E |
| MHDDAT | 0012 | 000C | | MHDINT | 0021 | 0015 | | MHDR | 0017 | 0011 |
| MHDDIR | 0010 | 000A | | MHDN | 0018 | 0012 | | MHDUSE | 0022 | 0016 |
| MHDEND | 0032 | 0020 | | MHDNAM | 0000 | 0000 | | MHDVAL | 0024 | 0018 |
| MHDFEP | 0008 | 0008 | | MHDNMH | 0028 | 001C | | MHDW | 0016 | 0010 |
| MHDFLG | 0020 | 0014 | | MHDOVF | 0014 | 000E | | | | |

## Assembler listing of CHAMHD

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|---|---|---|---|---|---|
| | 52 00000 | CHAMHD | DSECT | | MEMBER      HEADER |
| 52 00000 | | MHDNAM | DS | CL8 | MEMBER NAME |
| 52 00008 | | MHDFEP | DS | H | FIRST EXTERNAL PAGE |
| | | * | | | (OFFSET) |
| 52 0000A | | MHDDIR | DS | H | NUMBER OF DIRECTORY PAGES |
| 52 0000C | | MHDDAT | DS | H | NUMBER OF DATA PAGES |
| 52 0000E | | MHDOVF | DS | H | NUMBER OVERFLOW PAGES |
| | 52 0000E | MHDBYT | EQU | MHDOVF | BYTES USED LAST PAGES |
| 52 00010 | | MHDW | DS | XL1 | WRITE INTERLOCK |
| 52 00011 | | MHDR | DS | XL1 | READ   INTERLOCK |
| 52 00012 | | MHDN | DS | XL1 | READ   INTERLOCK COUNTER |
| 52 00013 | | MHDI | DS | XL1 | READ   INTERLOCK CONTROL |
| 52 00014 | | MHDFLG | DS | XL1 | FLAGS (SHARED,PART.,ETC) |
| 52 00015 | | MHDINT | DS | XL1 | INTERLOCK FOR FOLLOWING |
| | | * | | | FIELDS |
| 52 00016 | | MHDUSE | DS | H | NUMBER OF USERS |
| 52 00018 | | MHDVAL | DS | F | VALUE OF 1ST EXT PG ENTRY |
| 52 0001C | | MHDNMH | DS | H | NEXT MEMBER HEADER |
| 52 0001E | | MHDPMH | DS | H | PREVIOUS MEMBER HEADER |
| 52 00020 | | MHDEND | DS | 0X | END OF MEMBER HEADER |
| | | * | | | 16478 |
| | 00000020 | MHDLNGTH | EQU | MHDEND-CHAMHD | LENGTH OF MEMBER |
| | | * | | | HEADER          16478 |

## CHAEPE Storage map

| DEC | HEX | | | | | | |
|---|---|---|---|---|---|---|---|
| 0 | 0 | EPEINW | EPEINR | EPEINN | EPEINI | EPESDA | EPEEPN |

## Fields in CHAEPE -- by displacement

| DEC | HEX | FIELD | | DEC | HEX | FIELD | | | DEC | HEX | FIELD | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0000 | 0000 | EPEINW | | 0004 | 0004 | EPEFL1 | (EQU) | | 0004 | 0004 | EPEEPE | |
| 0000 | 0000 | EPEIN | | 0004 | 0004 | EPERVN | (EQU) | | 0006 | 0006 | EPEPNV | (EQU) |
| 0001 | 0001 | EPEINR | | 0004 | 0004 | EPEEDA | (EQU) | | 0006 | 0006 | EPEEPN | |
| 0002 | 0002 | EPEINN | | 0004 | 0004 | EPEFLG | (EQU) | | | | | |
| 0003 | 0003 | EPEINI | | 0004 | 0004 | EPESDA | | | | | | |

## Alphabetical list of fields in CHAEPE

| FIELD | DEC | HEX | | FIELD | DEC | HEX | | FIELD | DEC | HEX | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| EPEEDA | 0004 | 0004 | (EQU) | EPEIN | 0000 | 0000 | | EPEPNV | 0006 | 0006 | (EQU) |
| EPEEPE | 0004 | 0004 | | EPEINI | 0003 | 0003 | | EPERVN | 0004 | 0004 | (EQU) |
| EPEEPN | 0006 | 0006 | | EPEINN | 0002 | 0002 | | EPESDA | 0004 | 0004 | |
| EPEFLG | 0004 | 0004 | (EQU) | EPEINR | 0001 | 0001 | | | | | |
| EPEFL1 | 0004 | 0004 | (EQU) | EPEINW | 0000 | 0000 | | | | | |

## Assembler listing of CHAEPE

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|---|---|---|---|---|---|
| | 32 00000 | CHAEPE | DSECT | | RESTBL EXTERNAL PAGE |
| | | * | | | ENTRIES |
| 32 00000 | | EPEIN | DS | 0F | INTERLOCK CONTROL WORD |
| 32 00000 | | EPEINW | DS | XL1 | WRITE INTERLOCK |
| 32 00001 | | EPEINR | DS | XL1 | READ   INTERLOCK |
| 32 00002 | | EPEINN | DS | XL1 | READ   INTERLOCK COUNTER |
| 32 00003 | | EPEINI | DS | XL1 | READ   INTERLOCK CONTROL |
| 32 00004 | | EPEEPE | DS | 0F | EXTERNAL ADDR OF PAGE |

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|----------|-------------|--------|------|------|---------|
| 32 00004 |          | EPESDA | DS  | H        | SYMBOLIC DEVICE ADDRESS |
| 32 00006 |          | EPEEPN | DS  | H        | EXTERNAL PAGE NUMBER |
|          | 32 00004 | EPEFLG | EQU | EPESDA   | CONDITION FLAG |
|          | 32 00004 | EPEEDA | EQU | EPESDA   | EXTERNAL DEVICE CODE |
|          | 32 00004 | EPERVN | EQU | EPESDA   | RELATIVE VOLUME NUMBER. |
|          | 32 00006 | EPEPNV | EQU | EPEEPN   | PAGE NUMBER IN VOLUME. |
|          | 32 00004 | EPEFL1 | EQU | EPESDA   | ASSIGNMENT FLAG. |
|          | 000000C0 | EPEFLME | EQU | X'C0'   | PAGE IS IN ERROR |
|          | 00000080 | EPEFLM | EQU | X'80'    | ASSIGNED AND NOT USED |
|          | 00000040 | EPEFLMR | EQU | X'40'   | PAGE IS RELOCATED |
|          | 00000000 | EPEFLMA | EQU | X'00'   | ASSIGNED AND IN USE |

## RJE Retry Threshold Value Table (CHARJE)

CHARJE maintains SYSGEN parameters establishing the maximum number of retry attempts for error recovery on a 2780.  CHARJE occupies 12 bytes of storage.

### CHARJE Storage map

```
DEC   HEX  _____
  0     0 |RJE27010|RJE27011|RJE27012|RJE27013|RJE27014|RJE27015|RJE27016|RJE27017|
          |_____|_____|_____|_____|_____|_____|_____|_____|
  8     8|RJE27018|           UNNAMED           |
          |_____|_____|
```

### Fields in CHARJE -- by displacement

| DEC | HEX | FIELD | DEC | HEX | FIELD | DEC | HEX | FIELD |
|-----|-----|-------|-----|-----|-------|-----|-----|-------|
| 0000 | 0000 | RJE27010 | 0003 | 0003 | RJE27013 | 0006 | 0006 | RJE27016 |
| 0001 | 0001 | RJE27011 | 0004 | 0004 | RJE27014 | 0007 | 0007 | RJE27017 |
| 0002 | 0002 | RJE27012 | 0005 | 0005 | RJE27015 | 0008 | 0008 | RJE27018 |

### Alphabetical list of fields in CHARJE

| FIELD | DEC | HEX | FIELD | DEC | HEX | FIELD | DEC | HEX |
|-------|-----|-----|-------|-----|-----|-------|-----|-----|
| RJE27010 | 0000 | 0000 | RJE27013 | 0003 | 0003 | RJE27016 | 0006 | 0006 |
| RJE27011 | 0001 | 0001 | RJE27014 | 0004 | 0004 | RJE27017 | 0007 | 0007 |
| RJE27012 | 0002 | 0002 | RJE27015 | 0005 | 0005 | RJE27018 | 0008 | 0008 |

### Assembler listing of CHARJE

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|----------|-------------|--------|------|------|---------|
|          | 71 00000 | CHARJE | DSECT | | RJE RETRY THRESHOLD VALUES |
|          |          | * |  |  | FOR 2780 |
| 71 00000 |          | RJE27010 | DS | X | CHANNEL DATA CHECK |
| 71 00001 |          | RJE27011 | DS | X | UNIT CHECK/LOST DATA |
| 71 00002 |          | RJE27012 | DS | X | UNIT CHECK/TIME OUT |
| 71 00003 |          | RJE27013 | DS | X | UNIT CHECK/INTERVENTION |
|          |          | * |  |  | REQUIRED |
| 71 00004 |          | RJE27014 | DS | X | UNIT CHECK/BUS OUT CHECK |
| 71 00005 |          | RJE27015 | DS | X | UNIT CHECK/DATA CHECK |
| 71 00006 |          | RJE27016 | DS | X | UNIT CHECK/OVERRUN |
| 71 00007 |          | RJE27017 | DS | X | INCORRECT LENGTH |
| 71 00008 |          | RJE27018 | DS | X | 'SHOULD NOT OCCUR ERRORS' |
| 71 00009 |          |  | DS | 3X | UNUSED |

```
*  NOTE:   THE FORMAT FOR THIS BLOCK MUST BE
*  IDENTICAL TO THE
*            FORMAT OF THE 2701 RETRY THRESHOLDS IN
*            THE CHASDT DSECT.
*            BOTH MUST MATCH THE FORMAT OF THE RETRY
*            COUNTERS IN
*            THE IORCB DSECT AT IORRJCT WITH THE
*            EXCEPTION OF THE
*            'SHOULD NOT OCCUR ERRORS' FOR WHICH
*            THERE IS ONLY ONE VALUE.
```

<u>Reply Queue Entry (CHARQE)</u>

Each reply queue entry in the reply queue contains information for a message which requires an operator reply. This queue is periodically searched for overdue replies. Overdue replies, when found, will be processed so as not to delay the task that issued the message. CHARQE occupies 32 bytes of storage.

<u>CHARQE Storage map</u>

| DEC | HEX | | | | |
|---|---|---|---|---|---|
| 0 | 0 | RQELNG | RQERCD | RQECKN | RQELNK |
| 8 | 8 | RQESND | RQERNO | | RQEMEB |
| 16 | 10 | RQETIM | | | |
| 24 | 18 | RQEUID | | | |

<u>Fields in CHARQE -- by displacement</u>

| DEC | HEX | FIELD | DEC | HEX | FIELD | DEC | HEX | FIELD |
|---|---|---|---|---|---|---|---|---|
| 0000 | 0000 | RQELNG | 0004 | 0004 | RQELNK | 0012 | 000C | RQEMEB |
| 0002 | 0002 | RQERCD | 0008 | 0008 | RQESND | 0016 | 0010 | RQETIM |
| 0003 | 0003 | RQECKN | 0010 | 000A | RQERNO | 0024 | 0018 | RQEUID |

<u>Alphabetical list of fields in CHARQE</u>

| FIELD | DEC | HEX | FIELD | DEC | HEX | FIELD | DEC | HEX |
|---|---|---|---|---|---|---|---|---|
| RQECKN | 0003 | 0003 | RQEMEB | 0012 | 000C | RQESND | 0008 | 0008 |
| RQELNG | 0000 | 0000 | RQERCD | 0002 | 0002 | RQETIM | 0016 | 0010 |
| RQELNK | 0004 | 0004 | RQERNO | 0010 | 000A | RQEUID | 0024 | 0018 |

<u>Assembler listing of CHARQE</u>

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|---|---|---|---|---|---|
| | 72 00000 | CHARQE | DSECT | | |
| 72 00000 | | | DS | 0D | |
| 72 00000 | | RQELNG | DS | H | TEST LENGTH OF |
| | | * | | | MESSAGE=MCBLNG*8-16 |
| 72 00002 | | RQERCD | DS | XL1 | MEB RETURN CODE FROM MCBRCD |
| 72 00003 | | RQECKN | DS | XL1 | REPLY CHECKING NUMBER |
| 72 00004 | | RQELNK | DS | F | REPLY QUEUE LINK FIELD |
| 72 00008 | | RQESND | DS | H | SENDING TID - FRM MCBSND |
| 72 0000A | | RQERNO | DS | H | REPLY NUMBER - ASSIGNED BY |
| | | * | | | CZACA(A) |
| 72 0000C | | RQEMEB | DS | F | ADDRESS OF MEB - FROM |
| | | * | | | MCBMEB |
| 72 00010 | | RQETIM | DS | CL8 | LOG-IN TIME OR TIME OF LAST |
| | | * | | | PROMPT |
| 72 00018 | | RQEUID | DS | CL8 | USERID OF SENDER - FROM |
| | | * | | | OPHUID |
| | 00000020 | RQELEN | EQU | *-CHARQE | LENGTH OF DSECT |

Request Queue (CHARQU, CHASHD, & CHAENT)


    The Request Queue maintains ordered lists of pending requests (by device class
requested) for I/O devices in the system.
The Request Queue consists of the following:
1.  A table header (RQU).
2.  A number of subqueue headers (SHD).  Each of these subqueue headers describes
    the subqueue associated with one device class in the system.  These headers are
    ordered on the device class field and contain a pointer to the first queue entry
    for that device class.
3.  Subqueue entries (ENT).  Each subqueue entry contains a pointer to the next
    entry in the same subqueue, along with an indicator of the type of request and
    the requesting task ID.
    The Request Queue occupies a minimum of 824 bytes of virtual storage, aligned on
doubleword boundaries.


CHARQU Storage map

```
DEC     HEX   _____
 0       0 |                 RQUFAV                |       RQUNOD     |RQUBLK |RQULOK  |
           |_____|_____|_____|_____|
```

Fields in CHARQU -- by displacement

| DEC | HEX | FIELD | | DEC | HEX | FIELD | | DEC | HEX | FIELD |
|------|------|--------|---|------|------|--------|---|------|------|--------|
| 0000 | 0000 | RQUFAV | | 0004 | 0004 | RQUNOD | | 0006 | 0006 | RQUBLK |
| | | | | | | | | 0007 | 0007 | RQULOK |


Alphabetical list of fields in CHARQU

| FIELD | DEC | HEX | | FIELD | DEC | HEX | | FIELD | DEC | HEX |
|--------|------|------|---|--------|------|------|---|--------|------|------|
| RQUBLK | 0006 | 0006 | | RQUFAV | 0000 | 0000 | | RQULOK | 0007 | 0007 |
| | | | | | | | | RQUNOD | 0004 | 0004 |


Assembler listing of CHARQU

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|----------|-------------|--------|------|------|---------|
| | 73 00000 | CHARQU | DSECT | | REQUEST QUEUE |
| 73 00000 | | | DS | 0D | |
| 73 00000 | | RQUFAV | DS | F | ADDRESS OF THE FIRST |
| | | * | | | AVAILABLE ENTRY |
| 73 00004 | | RQUNOD | DS | H | NO OF SUBQUEUE HEADERS |
| 73 00006 | | RQUBLK | DS | CL1 | SPARE |
| 73 00007 | | RQULOK | DS | XL1 | TABLE LOCK BYTE |
| | 74 00000 | CHASHD | DSECT | | |
| 74 00000 | | | DS | 0D | |
| 74 00000 | | SHDLOC | DS | XL1 | SUBQUEUE LOCK BYTE |
| 74 00001 | | SHDNOQ | DS | XL1 | NO OF REQUESTS IN THE |
| | | * | | | SUBQUEUE |
| 74 00002 | | SHDSDA | DS | XL1 | NO OF THE SDA REQUESTS IN |
| | | * | | | THE SUBQUEUE |
| 74 00003 | | SHDNCV | DS | XL1 | NO OF CONVERSATIONAL |
| | | * | | | REQUESTS IN THE SUBQUEUE |
| 74 00004 | | SHDDTC | DS | H | DEVICE TYPE CODE-HEX |
| | 74 00004 | SHDCDR | EQU | SHDDTC | CARD READER FLAG |
| | 00000801 | SHDCDRM | EQU | X'0801' | CARD READER MASK |
| | 74 00004 | SHDCDP | EQU | SHDDTC | CARD PUNCH FLAG |
| | 00000802 | SHDCDPM | EQU | X'0802' | CARD PUNCH MASK |
| | 74 00004 | SHDPTR | EQU | SHDDTC | 1403 PRINTER FLAG |
| | 00000808 | SHDPTRM | EQU | X'0808' | 1403 PRINTER MASK |
| | 74 00004 | SHDD11 | EQU | SHDDTC | 2311 DISK FLAG |
| | 00002001 | SHDD11M | EQU | X'2001' | 2311 DISK MASK |
| | 74 00004 | SHDD14 | EQU | SHDDTC | 2314 DISK FLAG |
| | 00002008 | SHDD14M | EQU | X'2008' | 2314 DISK MASK |
| | 74 00004 | SHDDRU | EQU | SHDDTC | 2301 DRUM FLAG |
| | 00002002 | SHDDRUM | EQU | X'2002' | 2301 DRUM MASK |
| | 74 00004 | SHDDAC | EQU | SHDDTC | 2321 DATA CELL FLAG |
| | 00002003 | SHDDACM | EQU | X'2003' | 2321 DATA CELL MASK |
| | 74 00004 | SHDTPD | EQU | SHDDTC | 2400 TAPE DRIVE FLAG |

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|---|---|---|---|---|---|
|  | 00008001 | SHDTPDM | EQU | X'8001' | 2400 TAPE DRIVE MASK |
|  | 74 00004 | SHDD02 | EQU | SHDDTC | 2302 DRUM FLAG |
|  | 00002004 | SHDD02M | EQU | X'2004' | 2302 DRUM MASK |
| 74 00006 |  | SHDSP1 | DS | H | SPARE |
| 74 00008 |  | SHDSAD<br>* | DS | F | ADDRESS OF THE FIRST QUEUE<br>ENTRY |
| 74 0000C |  | SHDLST<br>* | DS | F | ADDRESS OF THE LAST QUEUE<br>ENTRY |
|  | 75 00000 | CHAENT | DSECT |  |  |
| 75 00000 |  |  | DS | 0D |  |
| 75 00000 |  | ENTNEX<br>* | DS | F | ADDRESS OF THE NEXT QUEUE<br>ENTRY |
| 75 00004 |  | ENTEFL | DS | XL1 | FLAG BYTE |
|  | 75 00004 | ENTEL | EQU | ENTEFL | MESSAGE SENT FLAG |
|  | 00000080 | ENTELM | EQU | X'80' |  |
|  | 75 00004 | ENTEO | EQU | ENTEFL | SDA FLAG |
|  | 00000040 | ENTEOM | EQU | X'40' |  |
|  | 75 00004 | ENTEC | EQU | ENTEFL | CONVERSATIONAL FLAG |
|  | 00000020 | ENTECM | EQU | X'20' |  |
| 75 00005 |  | ENTSPR | DS | XL1 | SPARE |
| 75 00006 |  | ENTTID | DS | H | TASK I D |
| 75 00008 |  | ENTBCK | DS | F | BACKWARD LINK |
| 75 0000C |  | ENTSDA | DS | F | SDAT ADDRESS |
|  | 75 0000C |  | \|ORG\| | *-4 |  |
| 75 0000C |  | ENTSDS<br>* | DS | H | SDASDA-SYMBOLIC DEVICE<br>ADDRESS |
| 75 0000E |  | ENTDEV<br>* | DS | XL1 | OPTIONAL FEATURES ON THE<br>DEVICE |
| 75 0000F |  | ENTSP<br>* | DS | XL1 | SPARE<br>DEVICE CODES FOR SHDDTC |

```
        * 0801=2540 CARD READER        2001=2311 DISK PACK
        * 0802=2540 CARD PUNCH         2002=2301 DRUM
        * 0808=1403 PRINTER            2003=2321 DATA CELL
        * 0810=2671 PERFORATED         2004=2302 DISK
        *                       TAPE READER        2008=2314
        *                       8001=2400 TAPE DRIVE
```

## CHASHD Storage map

| DEC | HEX | | | | | | |
|---|---|---|---|---|---|---|---|
| 0 | 0 | SHDLOC | SHDNOQ | SHDSDA | SHDNCV | SHDDTC | SHDSP1 |
| 8 | 8 | SHDSAD | | | | SHDLST | |

## Fields in CHASHD -- by displacement

| DEC | HEX | FIELD | | DEC | HEX | FIELD | | DEC | HEX | FIELD | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0000 | 0000 | SHDLOC | | 0004 | 0004 | SHDDAC | (EQU) | 0004 | 0004 | SHDCDR | (EQU) |
| 0001 | 0001 | SHDNOQ | | 0004 | 0004 | SHDDRU | (EQU) | 0004 | 0004 | SHDDTC | |
| 0002 | 0002 | SHDSDA | | 0004 | 0004 | SHDD14 | (EQU) | 0006 | 0006 | SHDSP1 | |
| 0003 | 0003 | SHDNCV | | 0004 | 0004 | SHDD11 | (EQU) | 0008 | 0008 | SHDSAD | |
| 0004 | 0004 | SHDD02 | (EQU) | 0004 | 0004 | SHDPTR | (EQU) | 0012 | 000C | SHDLST | |
| 0004 | 0004 | SHDTPD | (EQU) | 0004 | 0004 | SHDCDP | (EQU) | | | | |

## Alphabetical list of fields in CHASHD

| FIELD | DEC | HEX | | FIELD | DEC | HEX | | FIELD | DEC | HEX | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| SHDCDP | 0004 | 0004 | (EQU) | SHDD11 | 0004 | 0004 | (EQU) | SHDPTR | 0004 | 0004 | (EQU) |
| SHDCDR | 0004 | 0004 | (EQU) | SHDD14 | 0004 | 0004 | (EQU) | SHDSAD | 0008 | 0008 | |
| SHDDAC | 0004 | 0004 | (EQU) | SHDLOC | 0000 | 0000 | | SHDSDA | 0002 | 0002 | |
| SHDDRU | 0004 | 0004 | (EQU) | SHDLST | 0012 | 000C | | SHDSP1 | 0006 | 0006 | |
| SHDDTC | 0004 | 0004 | | SHDNCV | 0003 | 0003 | | SHDTPD | 0004 | 0004 | (EQU) |
| SHDD02 | 0004 | 0004 | (EQU) | SHDNOQ | 0001 | 0001 | | | | | |

## CHAENT Storage map

| DEC | HEX | | | | |
|---|---|---|---|---|---|
| 0 | 0 | ENTNEX | ENTEFL | ENTSPR | ENTTID |
| 8 | 8 | ENTBCK | | ENTSDA | |

ORG   *-4

| DEC | HEX | | | |
|---|---|---|---|---|
| 12 | C | ENTSDS | ENTDEV | ENTSP |

## Fields in CHAENT -- by displacement

| DEC | HEX | FIELD | | DEC | HEX | FIELD | DEC | HEX | FIELD |
|---|---|---|---|---|---|---|---|---|---|
| 0000 | 0000 | ENTNEX | | 0004 | 0004 | ENTEFL | 0012 | 000C | ENTSDS |
| 0004 | 0004 | ENTEC | (EQU) | 0005 | 0005 | ENTSPR | 0012 | 000C | ENTSDA |
| 0004 | 0004 | ENTEO | (EQU) | 0006 | 0006 | ENTTID | 0014 | 000E | ENTDEV |
| 0004 | 0004 | ENTEL | (EQU) | 0008 | 0008 | ENTBCK | 0015 | 000F | ENTSP |

## Alphabetical list of fields in CHAENT

| FIELD | DEC | HEX | | FIELD | DEC | HEX | | FIELD | DEC | HEX |
|---|---|---|---|---|---|---|---|---|---|---|
| ENTBCK | 0008 | 0008 | | ENTEL | 0004 | 0004 | (EQU) | ENTSDS | 0012 | 000C |
| ENTDEV | 0014 | 000E | | ENTEO | 0004 | 0004 | (EQU) | ENTSP | 0015 | 000F |
| ENTEC | 0004 | 0004 | (EQU) | ENTNEX | 0000 | 0000 | | ENTSPR | 0005 | 0005 |
| ENTEFL | 0004 | 0004 | | ENTSDA | 0012 | 000C | | ENTTID | 0006 | 0006 |

## Resident Shared-Page Index (CHARSP)

The Resident Shared-Page Index (RSPI) contains the status and control information required by the Resident Supervisor to maintain the shared-page tables.

The RSPI indicates the core storage location (if available), the intransit state, and the length of shared-page tables. In addition, the RSPI indicates the existence and identity of items in a GQE chain of TSIs waiting for an in-transit condition to end. One RSPI entry is assigned for each currently active shared-page table number.

The RSPI is used or set by ADSPG, Page Posting, Page Turning, and Timer Interrupt Processor.

Sixteen bytes of core storage are allocated to RSPI, aligned on word boundaries.

### CHARSP Storage map

```
DEC   HEX _____
  0     0 |RSPPTL   |          RSPPTO          |        RSPSPT       |RSPLOCK |RSPFL1  |
          |         |                          |                    |        |        |
  8     8 |              RSPGQE                 |RSPN   |RSPU    |        RSPLNG        |
          |_____|_____|_____|_____|
```

### Fields in CHARSP -- by displacement

| DEC | HEX | FIELD | | DEC | HEX | FIELD | | DEC | HEX | FIELD |
|------|------|--------|-----|------|------|--------|-------|------|------|--------|
| 0000 | 0000 | RSPPTL | | 0007 | 0007 | RSPOI | (EQU) | 0007 | 0007 | RSPFL1 |
| 0001 | 0001 | RSPPTO | | 0007 | 0007 | RSPII | (EQU) | 0008 | 0008 | RSPGQE |
| 0004 | 0004 | RSPSPT | | 0007 | 0007 | RSPAV | (EQU) | 0012 | 000C | RSPN |
| 0006 | 0006 | RSPLOCK | | 0007 | 0007 | RSPPS | (EQU) | 0013 | 000D | RSPU |
| 0007 | 0007 | RSPGI | (EQU) | 0007 | 0007 | RSPVA | (EQU) | 0014 | 000E | RSPLNG |

### Alphabetical list of fields in CHARSP

| FIELD | DEC | HEX | | FIELD | DEC | HEX | | FIELD | DEC | HEX | |
|--------|------|------|-------|--------|------|------|-------|--------|------|------|-------|
| RSPAV | 0007 | 0007 | (EQU) | RSPLNG | 0014 | 000E | | RSPPTL | 0000 | 0000 | |
| RSPFL1 | 0007 | 0007 | | RSPLOCK | 0006 | 0006 | | RSPPTO | 0001 | 0001 | |
| RSPGI | 0007 | 0007 | (EQU) | RSPN | 0012 | 000C | | RSPSPT | 0004 | 0004 | |
| RSPGQE | 0008 | 0008 | | RSPOI | 0007 | 0007 | (EQU) | RSPU | 0013 | 000D | |
| RSPII | 0007 | 0007 | (EQU) | RSPPS | 0007 | 0007 | (EQU) | RSPVA | 0007 | 0007 | (EQU) |

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|---|---|---|---|---|---|
| | 76 00000 | CHARSP | DSECT | | |
| 76 00000 | | | DS | 0F | |
| 76 00000 | | RSPPTL | DS | XL1 | SHARED PAGE TABLE LENGTH |
| 76 00001 | | RSPPTO | DS | XL3 | SHARED PAGE TABLE ORIGIN |
| 76 00004 | | | DS | 0H | |
| 76 00004 | | RSPSPT | DS | H | SHARED PAGE TABLE NUMBER |
| 76 00006 | | RSPLOCK | DS | XL1 | LOCK BYTE FOR SHARED PAGE |
| | | * | | | TABLE UPDATE |
| 76 00007 | | RSPFL1 | DS | XL1 | FIRST FLAG BYTE |
| | 76 00007 | RSPVA | EQU | RSPFL1 | VARIABLE SEGMENT FLAG |
| | 00000080 | RSPVAM | EQU | X'80' | VARIABLE SEGMENT MASK |
| | 76 00007 | RSPPS | EQU | RSPFL1 | PUBLIC PAGE TABLE FLAG |
| | 00000010 | RSPPSM | EQU | X'10' | PUBLIC PAGE TABLE MASK |
| | 76 00007 | RSPAV | EQU | RSPFL1 | SHARED PAGE TABLE |
| | | * | | | AVAILABILITY FLAG |
| | 00000008 | RSPAVM | EQU | X'08' | SHARED PAGE TABLE |
| | | * | | | AVAILABILITY MASK |
| | 76 00007 | RSPII | EQU | RSPFL1 | INCOMING IN-TRANSIT |
| | | * | | | CONDITION FLAG |
| | 00000004 | RSPIIM | EQU | X'04' | INCOMING IN-TRANSIT |
| | | * | | | CONDITION MASK |
| | 76 00007 | RSPOI | EQU | RSPFL1 | OUTGOING IN-TRANSIT |
| | | * | | | CONDITION FLAG |
| | 00000002 | RSPOIM | EQU | X'02' | OUTGOING IN-TRANSIT |
| | | * | | | CONDITION MASK |
| | 76 00007 | RSPGI | EQU | RSPFL1 | GQE CHAIN INDICATOR FLAG |
| | 00000001 | RSPGIM | EQU | X'01' | GQE CHAIN INDICATOR MASK |
| 76 00008 | | | DS | 0F | |
| 76 00008 | | RSPGQE | DS | F | GQE CHAIN |
| 76 0000C | | RSPN | DS | XL1 | IN-USE PAGE COUNT |
| 76 0000D | | RSPU | DS | XL1 | UNUSED PAGE COUNT |
| 76 0000E | | RSPLNG | DS | H | NUMBER OF BYTES ASSIGNED |
| | | * | | | THIS SPT |

## TSSS Real Symbol Table (CHARST)

The Real Symbol Table contains pointers to external symbols used in the TSSS Resident Support System (RSS) and in the Resident Supervisor, and is used for resolution of these symbols.

Each three-word entry contains a 2-word symbol name, and a 1-word address for that symbol. The last entry in the table is a two-word field of X'FFFFFFFFFFFFFFFF'.

The Real Symbol Table resides in virtual storage aligned on word boundaries.

### CHARST Storage map

```
DEC   HEX  _____
  0    0 |                              RSTSYMB                             |
         |_____|
  8    8 |           RSTADDR           |
         |_____|
```
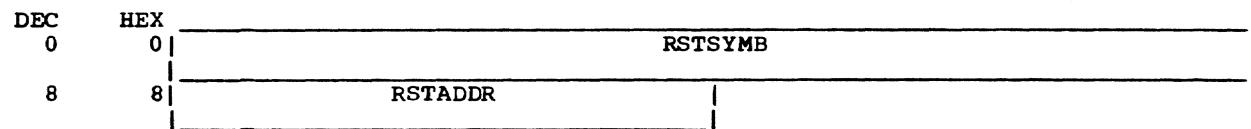
### Fields in CHARST -- by displacement

| DEC | HEX | FIELD | DEC | HEX | FIELD | DEC | HEX | FIELD |
|------|------|---------|------|------|---------|------|------|---------|
| 0000 | 0000 | RSTSYMB | 0008 | 0008 | RSTADDR | | | |

### Alphabetical list of fields in CHARST

| FIELD | DEC | HEX | FIELD | DEC | HEX | FIELD | DEC | HEX |
|---------|------|------|---------|------|------|---------|------|------|
| RSTADDR | 0008 | 0008 | RSTSYMB | 0000 | 0000 | | | |

### Assembler listing of CHARST

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|----------|-------------|--------|------|------|---------|
| | | * | | | REAL SYMBOL TABLE PROVIDED BY |
| | | * | | | STARTUP |
| | 77 00000 | CHARST | DSECT | | |
| 77 00000 | | RSTSYMB | DS | 2F | SYMBOL PORTION OF ENTRY |
| 77 00008 | | RSTADDR | DS | F | ADDRESS PORTION OF ENTRY |
| | | * | | | TWO FULL WORDSD |
| | | * | | | TWO FULL WORDS OF 'ALL BITS ON' |
| | | * | | | INDICATE THE END OF THE TABLE |
| | | * | | | X'FFFFFFFFFFFFFFFF' |

## Real-Time Interrupt-Pending Queue (CHARTI) Entry

The Real-Time Interrupt-Pending Queue (RTI) contains information necessary for creating a real-time interruption.  The variable length RTI consists of a string of 4-word RTI entries, aligned on doubleword boundaries.

### CHARTI Storage map

```
DEC   HEX  _____
  0    0|                             RTITIME                              |
       |  _____  |
  8    8|           RTITSI            |RTIFLAG |          RTIADCON         |
       |_____|_____|_____|
```

### Fields in CHARTI -- by displacement

| DEC | HEX | FIELD | DEC | HEX | FIELD | | DEC | HEX | FIELD |
|---|---|---|---|---|---|---|---|---|---|
| 0000 | 0000 | RTITIME | 0012 | 000C | RTIADP | (EQU) | 0012 | 000C | RTIFLAG |
| 0008 | 0008 | RTITSI | 0012 | 000C | RTICNCL | (EQU) | 0013 | 000D | RTIADCON |

### Alphabetical list of fields in CHARTI

| FIELD | DEC | HEX | | FIELD | DEC | HEX | | FIELD | DEC | HEX |
|---|---|---|---|---|---|---|---|---|---|---|
| RTIADCON | 0013 | 000D | | RTICNCL | 0012 | 000C | (EQU) | RTITIME | 0000 | 0000 |
| RTIADP | 0012 | 000C | (EQU) | RTIFLAG | 0012 | 000C | | RTITSI | 0008 | 0008 |

### Assembler listing of CHARTI

```
LOCATION  INSTRUCTION  SOURCE    INST   OPER     COMMENT
          78 00000     CHARTI    DSECT           REAL TIME INTERRUPT PENDING
                       *                         QUEUE ENTRY
          ****************************************************************************
          *           POINTERS AND COUNTS PERTAINING TO CHARTI ARE        *
          *           FOUND IN CHASYS (SYSRT1 THROUGH SYSRT6) AND ARE      *
          *           MAINTAINED BY SET REAL TIME INTERRUPT(CEAS7)AND CREATE *
          *           REAL TIME INTERRUPT (CEAKR).  INITIALLY, CEAS7 REQUESTS*
          *           64 BYTES OF CORE FOR CHARTI. FOUR FOUR-WORD ENTRIES   *
          *           ARE ARRANGED IN PHYSICAL SEQUENTIAL ORDER OF INCREASING*
          *           REAL TIME WITHIN THIS CORE BLOCK.  WHEN MORE SPACE IS  *
          *           NEEDED, LARGER CORE BLOCKS ARE OBTAINED IN MULTIPLES OF*
          *           64,THE EXISTING CORE BLOCK IS MOVED INTO THE LARGER ONE*
          *           AND THE NEW ENTRIES ARE ADDED, AND THE OLD CORE BLOCK  *
          *           SPACE IS RELEASED.                                   *
          ****************************************************************************
          78 00000                RTITIME   DS     D        TIME OF EXPECTED REAL-TIME
                       *                                    INTERRUPT
          78 00008                RTITSI    DS     F        ADDRESS OF TSI
          78 0000C                RTIFLAG   DS     XL1      FLAG BYTE
          78 0000D                RTIADCON  DS     XL3      ADDRESS OF ROUTINE FOR
                       *                                    WHICH
                       *                                    INTERRUPT IS INTENDED
             78 0000C             RTICNCL   EQU    RTIFLAG  CANCEL INTERRUPT REQUEST
                       *                                    FLAG
             00000001            RTICNCLM   EQU    X'01'    CANCEL INTERRUPT REQUEST
                       *                                    MASK
             78 0000C             RTIADP    EQU    RTIFLAG  ADCON PRESENT FLAG
             00000002             RTIADPM   EQU    X'02'    ADCON PRESENT MASK
```

## Symbolic-to-Actual Conversion Table (CHASAC)

The Symbolic-to-Actual Address Conversion Table (SAC) enables direct lookup for converting symbolic device addresses to actual device addresses. SAC occupies from 4 to 32,768 bytes of core storage, aligned on fullword boundaries.

### CHASAC Storage map

```
DEC   HEX _____
  0     0|       SACHDA        |      UNNAMED      |
         |_____|_____|
```

ORG   SACBEG

```
  0     0|SACDA  |           UNNAMED              |
         |_____|_____|
```

### Fields in CHASAC -- by displacement

| DEC  | HEX  | FIELD  | DEC  | HEX  | FIELD  | DEC  | HEX  | FIELD  |
|------|------|--------|------|------|--------|------|------|--------|
| 0000 | 0000 | SACDA  | 0000 | 0000 | SACHDA | 0000 | 0000 | SACBEG |
| 0000 | 0000 | SACDP  | 0000 | 0000 | SACHED |      |      |        |

### Alphabetical list of fields in CHASAC

| FIELD  | DEC  | HEX  | FIELD  | DEC  | HEX  | FIELD  | DEC  | HEX  |
|--------|------|------|--------|------|------|--------|------|------|
| SACBEG | 0000 | 0000 | SACDP  | 0000 | 0000 | SACHED | 0000 | 0000 |
| SACDA  | 0000 | 0000 | SACHDA | 0000 | 0000 |        |      |      |

### Assembler listing of CHASAC

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|----------|-------------|--------|------|------|---------|
|          | 79 00000    | CHASAC | DSECT |     | SYMBOLIC    TO ACTUAL |
|          |             | *      |      |      | ADDRESS CONVERSION TBL |
| 79 00000 |             | SACBEG | DS   | 0F   | ALIGN ON FULL WORD BOUNDARY |
| 79 00000 |             | SACHED | DS   | 0F   | HEADER |
| 79 00000 |             | SACHDA | DS   | H    | MAX SYMB DEV ADDR IN TABLE |
| 79 00002 |             |        | DS   | H    | NOT USED |
|          | 79 00000    |        | |ORG| | SACBEG |  |
| 79 00000 |             | SACDP  | DS   | 0F   | DEV GP TBL PTR (RTMOST 3 |
|          |             | *      |      |      | BYTES) |
| 79 00000 |             | SACDA  | DS   | C    | ACTUAL DEVICE ADDRESS |
| 79 00001 |             |        | DS   | 3C   | DEVICE GP TBL PTR |

```
                  * NOTE 1- THE FULL WORD SYMBOLIC DEVICE ENTRY
                  * (LABEL  SACDA) IS
                  *         REPEATED N TIMES WHERE N IS THE MAXIMUM
                  *         SYSTEM SYMBOLIC
                  *                   DEVICE ADDRESS.
```

## SERR Auxiliary Queue (CHASAQ)

The SERR Auxiliary Queue (SAQ) contains I/O status information required by Systems Error Routines (SERR). The SAQ, formed from pending I/O interruptions, describes the operational status of the I/O device(s) required by SERR (e.g., paging drum and/or operator's console). The status information is obtained from the Test I/O (TIO) procedure in the SERR Bootstrap module (CMASA).

The SAQ resides in real core storage, aligned on fullword boundaries. A 4 byte header is followed by reserved storage for at least six 44-byte entries.

### CHASAQ Storage map

```
DEC   HEX  _____
  0     0 |SAQLK   |SAQCTL  |     SAQLN     |SAQFLG  |UNNAMED |    SAQIC    |
          |        |        |               |        |        |             |
  8     8 |_____SAQCSW_____|
          |                                                             |
 16    10 |_____SAQSNS_____|
          |                                                             |
 24    18 |                                                             |
          |                                                             |
          |                         SAQCHL                              |
          |                           \                                 |
          |                                                             |
          |_____|
```

### ORG   SAQCSW

```
  8     8 |_____SAQTSI_____|                          |
          |                                  |                          |
          |                                                             |
          |                                                             |
          |                       SAQISP                                |
          |                                                             |
          |                                                             |
          |                                                             |
          |_____|
```

### Fields in CHASAQ -- by displacement

| DEC | HEX | FIELD | | DEC | HEX | FIELD | | DEC | HEX | FIELD |
|-----|-----|-------|---|-----|-----|-------|---|-----|-----|-------|
| 0000 | 0000 | SAQLK | | 0004 | 0004 | SAQFB | (EQU) | 0008 | 0008 | SAQCSW |
| 0001 | 0001 | SAQDA | (EQU) | 0004 | 0004 | SAQFA | (EQU) | 0012 | 000C | SAQISP |
| 0001 | 0001 | SAQCTL | | 0004 | 0004 | SAQFLG | | 0016 | 0010 | SAQSNS |
| 0002 | 0002 | SAQLN | | 0004 | 0004 | SAQSSO | (EQU) | 0024 | 0018 | SAQCHL |
| 0004 | 0004 | SAQFI | (EQU) | 0006 | 0006 | SAQIC | | | | |
| 0004 | 0004 | SAQFC | (EQU) | 0008 | 0008 | SAQTSI | | | | |

### Alphabetical list of fields in CHASAQ

| FIELD | DEC | HEX | | FIELD | DEC | HEX | | FIELD | DEC | HEX | |
|-------|-----|-----|---|-------|-----|-----|---|-------|-----|-----|---|
| SAQCHL | 0024 | 0018 | | SAQFC | 0004 | 0004 | (EQU) | SAQLN | 0002 | 0002 | |
| SAQCSW | 0008 | 0008 | | SAQFI | 0004 | 0004 | (EQU) | SAQSNS | 0016 | 0010 | |
| SAQCTL | 0001 | 0001 | | SAQFLG | 0004 | 0004 | | SAQSSO | 0004 | 0004 | (EQU) |
| SAQDA | 0001 | 0001 | (EQU) | SAQIC | 0006 | 0006 | | SAQTSI | 0008 | 0008 | |
| SAQFA | 0004 | 0004 | (EQU) | SAQISP | 0012 | 000C | | | | | |
| SAQFB | 0004 | 0004 | (EQU) | SAQLK | 0000 | 0000 | | | | | |

```
        LOCATION INSTRUCTION SOURCE    INST    OPER      COMMENT
                 7A 00000    CHASAQ    DSECT
                             ***********************
                             *      HEADER       *
                             ***********************
        7A 00000             SAQLK     DS      0D
        7A 00000             SAQLK     DS      XL1       LOCK BYTE - USED BY
                             *                           INTERRUPT STACKER
        7A 00001             SAQCTL    DS      XL1       CONTROL BYTE.
                 7A 00001    SAQDA     EQU     SAQCTL
                 00000080    SAQDAM    EQU     X'80'     DATA IN QUEUE FLAG, SET BY
                             *                           SERR
        7A 00002             SAQLN     DS      XL2       NUMBER OF QUEUE DATA
                             *                           SECTIONS. MINIMUM IS 6
                 7A 00004    SAQSSO    EQU     *         ORIGIN OF REPEATING SECTION
                             *****************************
                             *      QUEUE DATA SECTION      *
                             *****************************
        7A 00004             SAQFLG    DS      CL1       FLAG BYTE-CLEARED BY CEAJI
                 7A 00004    SAQFA     EQU     SAQFLG
                 00000080    SAQFAM    EQU     X'80'     PSA CSW PRESENT
                 7A 00004    SAQFB     EQU     SAQFLG
                 00000040    SAQFBM    EQU     X'40'     SENSE DATA PRESENT
                 7A 00004    SAQFC     EQU     SAQFLG
                 00000020    SAQFCM    EQU     X'20'     CHANNEL LOGOUT PRESENT
                 7A 00004    SAQFI     EQU     SAQFLG
                 00000010    SAQFIM    EQU     X'10'     QUEUE SPECIFIED PROG. INT
        7A 00005                       DS      CL1       SPARE REQUIRED FOR
                             *                           ALIGNMENT
        7A 00006             SAQIC     DS      XL2       INTERRUPT CODE
        7A 00008             SAQCSW    DS      XL8       CHANNEL STATUS WORD ENTRY
        7A 00010             SAQSNS    DS      XL8       SENSE DATA ENTRY
        7A 00018             SAQCHL    DS      XL24      CHANNEL LOG ENTRY
                 7A 00008              |ORG|   SAQCSW
        7A 00008             SAQTSI    DS      CL4       TSI POINTER
        7A 0000C             SAQISP    DS      CL36      NOT USED IF SAQFIM ON
                 0000002C    SAQLNG    EQU     *-SAQSSO  LENGTH OF SECTION
```

## System Activity and Resources Table (CHASAR)

The System Activity and Resources Table (SAR) is defined for the SERR routines. SAR occupies 80 bytes of shared virtual storage.

### CHASAR Storage map

```
DEC   HEX
  0     0 | SARLCK | SARACT | SARCUR | SARSPA |         SAREXC          |
  8     8 |          SARPRI          |               SARPUN            |
 16    10 |          SARTAP          |               SARRJE            |
 24    18 |          SARREM          |               SARNRM            |
 32    20 |          SARMCA          |               SARREP            |
 40    28 |          SARTTS          |               SARPUB            |
 48    30 |   SARCON   |   SARBAK    |   SARRDA    |     SARAPR        |
 56    38 |   SARARD   |   SARAPN    |   SARATP    |     SARADK        |
 64    40 |          SARAUD          |               SARAUP           |
 72    48 |                                                           |
          |                          SARTIM                           |
 88    58 |   SARCNL   |   SARBTL    |   SARRML    |     SARMAL        |
 96    60 |   SARMMA   |   SARMCN    |   SARMBT    |     SARMRM        |
104    68 |   SARCNC   | SARBAS |          SARSPA2                     |
```

### Fields in CHASAR -- by displacement

| DEC | HEX | FIELD | DEC | HEX | FIELD | DEC | HEX | FIELD |
|-----|-----|-------|-----|-----|-------|-----|-----|-------|
| 0000 | 0000 | SARLCK | 0040 | 0028 | SARTTS | 0088 | 0058 | SARCNL |
| 0001 | 0001 | SARACT | 0044 | 002C | SARPUB | 0090 | 005A | SARBTL |
| 0002 | 0002 | SARCUR | 0048 | 0030 | SARCON | 0092 | 005C | SARRML |
| 0003 | 0003 | SARSPA | 0050 | 0032 | SARBAK | 0094 | 005E | SARMAL |
| 0004 | 0004 | SAREXC | 0052 | 0034 | SARRDA | 0096 | 0060 | SARMMA |
| 0008 | 0008 | SARPRI | 0054 | 0036 | SARAPR | 0098 | 0062 | SARMCN |
| 0012 | 000C | SARPUN | 0056 | 0038 | SARARD | 0100 | 0064 | SARMBT |
| 0016 | 0010 | SARTAP | 0058 | 003A | SARAPN | 0102 | 0066 | SARMRM |
| 0020 | 0014 | SARRJE | 0060 | 003C | SARATP | 0104 | 0068 | SARCNC |
| 0024 | 0018 | SARREM | 0062 | 003E | SARADK | 0106 | 006A | SARBAS |
| 0028 | 001C | SARNRM | 0064 | 0040 | SARAUD | 0107 | 006B | SARSPA2 |
| 0032 | 0020 | SARMCA | 0068 | 0044 | SARAUP | 0112 | 0070 | SAREND (EQU) |
| 0036 | 0024 | SARREP | 0072 | 0048 | SARTIM | | | |

### Alphabetical list of fields in CHASAR

| FIELD | DEC | HEX | FIELD | DEC | HEX | | FIELD | DEC | HEX |
|-------|-----|-----|-------|-----|-----|---|-------|-----|-----|
| SARACT | 0001 | 0001 | SARCON | 0048 | 0030 | | SARPUB | 0044 | 002C |
| SARADK | 0062 | 003E | SARCUR | 0002 | 0002 | | SARPUN | 0012 | 000C |
| SARAPN | 0058 | 003A | SAREND | 0112 | 0070 | (EQU) | SARRDA | 0052 | 0034 |
| SARAPR | 0054 | 0036 | SAREXC | 0004 | 0004 | | SARREM | 0024 | 0018 |
| SARARD | 0056 | 0038 | SARLCK | 0000 | 0000 | | SARREP | 0036 | 0024 |
| SARATP | 0060 | 003C | SARMAL | 0094 | 005E | | SARRJE | 0020 | 0014 |
| SARAUD | 0064 | 0040 | SARMBT | 0100 | 0064 | | SARRML | 0092 | 005C |
| SARAUP | 0068 | 0044 | SARMCA | 0032 | 0020 | | SARSPA | 0003 | 0003 |
| SARBAK | 0050 | 0032 | SARMCN | 0098 | 0062 | | SARSPA2 | 0107 | 006B |
| SARBAS | 0106 | 006A | SARMMA | 0096 | 0060 | | SARTAP | 0016 | 0010 |
| SARBTL | 0090 | 005A | SARMRM | 0102 | 0066 | | SARTIM | 0072 | 0048 |
| SARCNC | 0104 | 0068 | SARNRM | 0028 | 001C | | SARTTS | 0040 | 0028 |
| SARCNL | 0088 | 0058 | SARPRI | 0008 | 0008 | | | | |

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|---|---|---|---|---|---|
| | 7B 00000 | CHASAR | DSECT | | |
| 7B 00000 | | SARLCK | DS | CL1 | LOCK BYTE |
| 7B 00001 | | SARACT * | DS | CL1 | SET TO 1 INDICATES SARD ACTIVE |
| 7B 00002 | | SARCUR * | DS | CL1 | SET TO 1 INDICATES SARD IS CURRENT |
| 7B 00003 | | SARSPA | DS | CL1 | RESERVED |
| 7B 00004 | | SAREXC * | DS | CL4 | NUM OF EXEC JOBS PENDING IN BWQ |
| 7B 00008 | | SARPRI * | DS | CL4 | NUM OF PRINT JOBS PENDING IN BWQ |
| 7B 0000C | | SARPUN * | DS | CL4 | NUM OF PUNCH JOBS PENDING IN BWQ |
| 7B 00010 | | SARTAP * | DS | CL4 | NUM OF TAPE JOBS PENDING IN BWQ |
| 7B 00014 | | SARRJE * | DS | CL4 | NUM OF RJE JOBS PENDING IN BWQ |
| 7B 00018 | | SARREM * | DS | CL4 | NUM OF TASKS RUNNING IN BACKGROUND |
| 7B 0001C | | SARNRM * | DS | FL4 | NUMBER OF BATCH TASKS IN EXECUTION            N38 |
| | | | | 6** | |
| 7B 00020 | | SARMCA * | DS | FL4 | COUNT OF ACTIVE MTT ADMINISTRATORS          N38 |
| | | | | 6** | |
| 7B 00024 | | SARREP * | DS | CL4 | NUM OF UNANSWERED REPLY MESSAGES |
| 7B 00028 | | SARTTS * | DS | CL4 | NUM OF PUB STOR PAGES IN TEMP USE |
| 7B 0002C | | SARPUB * | DS | CL4 | AMOUNT OF AVAILABLE PUB STOR PAGES |
| 7B 00030 | | SARCON | DS | CL2 | NUM OF CONV TASKS LOGGED ON |
| 7B 00032 | | SARBAK * | DS | CL2 | NUM OF NON-CONV TASKS LOGGED ON |
| 7B 00034 | | SARRDA | DS | CL2 | NUM OF ACTIVE RJE STATIONS |
| 7B 00036 | | SARAPR | DS | CL2 | NUM OF AVAILABLE PRINTERS |
| 7B 00038 | | SARARD | DS | CL2 | NUM OF AVAILABLE READERS |
| 7B 0003A | | SARAPN | DS | CL2 | NUM OF AVAILABLE PUNCHES |
| 7B 0003C | | SARATP | DS | CL2 | NUM OF AVAILABLE TAPES |
| 7B 0003E | | SARADK | DS | CL2 | NUM OF AVAILABLE DISKS |
| 7B 00040 | | SARAUD | DS | CL4 | NUM OF AVAILABLE DRUM PAGES |
| 7B 00044 | | SARAUP | DS | CL4 | NUM OF AVAILABLE DISK PAGES |
| 7B 00048 | | SARTIM * | DS | CL16 | CURRENT SARD TIME WHEN ACTIVE |
| 7B 00058 | | SARCNL * | DS | HL2 | NUMBER OF CONV. TASKS CURRENTLY ALLOWED         N38 |
| | | | | 6** | |
| 7B 0005A | | SARBTL * | DS | HL2 | NUMBER OF BATCH TASKS CURRENTLY ALLOWED         N38 |
| | | | | 6** | |
| 7B 0005C | | SARRML * | DS | HL2 | NUMBER OF REMOTE TASKS CURRENTLY ALLOWED         N38 |
| | | | | 6** | |
| 7B 0005E | | SARMAL * | DS | HL2 | NUMBER OF MTT ADMIN.TASKS CURRENTLY ALLOWED      N38 |
| | | | | 6** | |
| 7B 00060 | | SARMMA * | DS | HL2 | MAX.NUMBER OF MTT ADMIN.TASKS ALLOWED            N38 |
| | | | | 6** | |

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|---|---|---|---|---|---|
| 7B 00062 | | SARMCN<br>* | DS | HL2<br><br>6** | MAXIMUM NUMBER OF CONV.<br>TASKS ALLOWED                N38 |
| 7B 00064 | | SARMBT<br>* | DS | HL2<br><br>6** | MAXIMUM NUMBER OF BATCH<br>TASKS ALLOWED                N38 |
| 7B 00066 | | SARMRM<br>* | DS | HL2<br><br>6** | MAXIMUM NUMBER OF REMOTE<br>TASKS ALLOWED                N38 |
| 7B 00068 | | SARCNC<br>* | DS | HL2<br><br>6** | COUNT OF CURRENT<br>CONVERSATIONAL TASKS                N38 |
| 7B 0006A | | SARBAS<br>* | DS | XL1<br><br>6** | BULKIO SUPPRESS FLAG SET<br>X'01' TO SUPPRESS BIO   N38 |
| 7B 0006B | | SARSPA2<br>* | DS | XL5 | RESERVED<br>                 N386 |
| | 7B 00070 | SAREND | EQU | * | |
| | 00000070 | SARLEN | EQU | SAREND-CHASAR   LENGTH OF SARD TABLE | |

## System Accounting Table (CHASAT)

The System Accounting Table (SAT) contains accumulated CPU time used by an individual task. Records are maintained for individual charge numbers and user IDs. Entries are added and updated by the accounting routine.

An unfilled data set is defined at SYSGEN. Virtual storage contains the JFCB which is added to the task definition table upon initiation.

The SAT (24 bytes) resides on a system residence volume as a VISAM data set aligned on doubleword boundaries. The key is a combination of charge numbers and userid.

### CHASAT Storage map

```
DEC   HEX
  0     0 |_____SATCNO_____|
          |                                                      |
  8     8 |_____SATUID_____|
          |                                                      |
 16    10 |_____SATCPU_____|
          |_____|
```

### Fields in CHASAT -- by displacement

| DEC | HEX | FIELD | DEC | HEX | FIELD | DEC | HEX | FIELD |
|------|------|--------|------|------|--------|------|------|--------|
| 0000 | 0000 | SATCNO | 0008 | 0008 | SATUID | 0016 | 0010 | SATCPU |

### Alphabetical list of fields in CHASAT

| FIELD | DEC | HEX | FIELD | DEC | HEX | FIELD | DEC | HEX |
|--------|------|------|--------|------|------|--------|------|------|
| SATCNO | 0000 | 0000 | SATCPU | 0016 | 0010 | SATUID | 0008 | 0008 |

### Assembler listing of CHASAT

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|----------|-------------|--------|------|------|---------|
|          | 7C 00000    | CHASAT | DSECT |      | SYSTEM ACCOUNTING TABLE |
| 7C 00000 |             | SATCNO | DS   | 8C   | CHARGE NUMBER |
| 7C 00008 |             | SATUID | DS   | 8C   | USER IDENTIFICATION |
| 7C 00010 |             | SATCPU | DS   | D    | RUNNING COUNT OF CPU TIME |

## Screen Routines Common Area (CHASCA)

The Screen Routines Common Area (SCA) is a format of the common fields used by the EXHIBIT and the DISPLAY routines.
The SCA occupies 25 bytes of virutal storage, aligned on word boundaries.

### CHASCA Storage map

| DEC | HEX | | | | | |
|---|---|---|---|---|---|---|
| 0 | 0 | SCADCB | | SCAWRK | | |
| 8 | 8 | SCABUF | | SCANUM | | |
| 16 | 10 | SCAENT | | SCAFCT | SCACSW | SCALST |

### Fields in CHASCA -- by displacement

| DEC | HEX | FIELD | DEC | HEX | FIELD | DEC | HEX | FIELD |
|---|---|---|---|---|---|---|---|---|
| 0000 | 0000 | SCADCB | 0012 | 000C | SCANUM | 0022 | 0016 | SCACSW |
| 0004 | 0004 | SCAWRK | 0016 | 0010 | SCAENT | 0023 | 0017 | SCALST |
| 0008 | 0008 | SCABUF | 0020 | 0014 | SCAFCT | | | |

### Alphabetical list of fields in CHASCA

| FIELD | DEC | HEX | FIELD | DEC | HEX | FIELD | DEC | HEX |
|---|---|---|---|---|---|---|---|---|
| SCABUF | 0008 | 0008 | SCAENT | 0016 | 0010 | SCANUM | 0012 | 000C |
| SCACSW | 0022 | 0016 | SCAFCT | 0020 | 0014 | SCAWRK | 0004 | 0004 |
| SCADCB | 0000 | 0000 | SCALST | 0023 | 0017 | | | |

### Assembler listing of CHASCA

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|---|---|---|---|---|---|
| | 7D 00000 | CHASCA | DSECT | | |
| 7D 00000 | | SCADCB | DS | A | XXXX DCB ADDRESS |
| 7D 00004 | | SCAWRK | DS | A | WORK AREA ADDR FOR DISPLAY |
| | | * | | | ROUTINES |
| 7D 00008 | | SCABUF | DS | A | INTERNAL DISPLAY BUFFER |
| | | * | | | ADDRESS |
| 7D 0000C | | SCANUM | DS | F | RESERVED |
| 7D 00010 | | SCAENT | DS | A | ADDR OF ENTRY SAVE AREA |
| 7D 00014 | | SCAFCT | DS | H | RESERVED |
| 7D 00016 | | SCACSW | DS | X | COMMAND SYSTEM ENTRY SWITCH |
| 7D 00017 | | SCALST | DS | XL1 | RESERVED |

## SAM Communication Block (CHASCB)

The Sequential Access Method Communication Block (SCB) contains permanent processing data for any task that uses SAM modules. The SCB also functions as a communications pool for the following SAM modules: OPEN; CLOSE; EOV; Label Processors; DEB modification/construction routines; and shared routines. In addition, the SCB holds those parameter lists which are required as an interface with routines external to SAM.

The SCB is read only to user and occupies 240 bytes of virtual storage, aligned on word boundaries, in the PSECT of the SAM OPEN (CECWO), CLOSE (CECWC) and EOV (CECXE) routines.

### CHASCB Storage map

| DEC | HEX | | | | | | |
|-----|-----|---|---|---|---|---|---|
| 0 | 0 | SCBPRG | | SCBRS0 | | SCBERR | |
| 8 | 8 | SCBDCT | | | | SCBDET | |
| 16 | 10 | SCBDT | | | | SCBWKP | |
| 24 | 18 | SCBFM1 | | | | SCBFM3 | |
| 32 | 20 | SCBDSB | | | | SCBDCB | |
| 40 | 28 | SCBDEB | | | | SCBJFC | |
| 48 | 30 | SCBIOA | | | | SCBVCA | |
| 56 | 38 | SCBPSV | | | | SCBPSR | |
| 64 | 40 | SCBLVE | | | | SCBLVB | |
| 72 | 48 | SCBLVD | | | | SCBLIO | |
| 80 | 50 | SCBJFM | | | | SCBVMA | |
| 88 | 58 | SCBJFP | | | | SCBVPA | |
| 96 | 60 | SCBSDT | | | | SCBPAR | |
| 104 | 68 | SCBKEY | | | | SCBCHR | |
| 112 | 70 | SCBIOB | | | | SCBEXJ | |
| 120 | 78 | SCBEXD | | | | SCBGVJ | |
| 128 | 80 | SCBGVE | | | | SCBGTC | |
| 136 | 88 | SCBGTO | | | | SCBGT1 | |
| 144 | 90 | SCBGTI | | | | SCBGT2 | |
| 152 | 98 | SCBGOC | | | | SCBTML | |
| 160 | A0 | SCBTMO | | | | SCBTMT | |
| 168 | A8 | SCBRS1 | | | | SCBRS3 | |
| 176 | B0 | SCBRS4 | | | | SCBRS5 | |
| 184 | B8 | SCBVLM | | SCBVLP | SCBPOS | | SCBIOZ | |
| 192 | C0 | SCBF3Z | | SCBDBZ | SCBEXT | | SCBTP1 | SCBTP2 |
| 200 | C8 | SCBCNT | SCBNXM | SCBFLG | SCBRVS | | SCBTLN | |

```
DEC   HEX
208   D0 |_____SCBRS6_____|
         |                                                        |
216   D8 |_____SCBWK1_____|
         |                                                        |
224   E0 |_____SCBWK2_____|
         |                                                        |
232   E8 |_____SCBWK3_____|
```

ORG   SCBERR

```
  4    4                      |     SCBABN      |      SCBMSG       |
                              |_____|_____|
```

ORG   SCBGT1

```
140   8C                      |_____SCBWTO_____|
                              |                 |                  |
144   90 |_____SCBWTI_____|_____SCBWTZ_____|
```

Fields in CHASCB -- by displacement

| DEC | HEX | FIELD | DEC | HEX | FIELD | DEC | HEX | FIELD |
|-----|-----|-------|-----|-----|-------|-----|-----|-------|
| 0000 | 0000 | SCBPRG | 0088 | 0058 | SCBJFP | 0164 | 00A4 | SCBTMT |
| 0000 | 0000 | SCBBEG | 0092 | 005C | SCBVPA | 0168 | 00A8 | SCBRS1 |
| 0002 | 0002 | SCBRS0 | 0096 | 0060 | SCBSDT | 0172 | 00AC | SCBRS3 |
| 0004 | 0004 | SCBABN | 0096 | 0060 | SCBRET | 0176 | 00B0 | SCBRS4 |
| 0004 | 0004 | SCBERR | 0096 | 0060 | SCBOBT | 0180 | 00B4 | SCBRS5 |
| 0006 | 0006 | SCBMSG | 0100 | 0064 | SCBPAR | 0184 | 00B8 | SCBVLM |
| 0008 | 0008 | SCBDCT | 0104 | 0068 | SCBKEY | 0184 | 00B8 | SCBVAR |
| 0012 | 000C | SCBDET | 0108 | 006C | SCBCHR | 0186 | 00BA | SCBVLP |
| 0016 | 0010 | SCBDT | 0112 | 0070 | SCBIOB | 0188 | 00BC | SCBPOS |
| 0020 | 0014 | SCBWKP | 0116 | 0074 | SCBEXJ | 0190 | 00BE | SCBIOZ |
| 0024 | 0018 | SCBFM1 | 0116 | 0074 | SCBEXN | 0192 | 00C0 | SCBF3Z |
| 0028 | 001C | SCBFM3 | 0120 | 0078 | SCBEXD | 0194 | 00C2 | SCBDBZ |
| 0032 | 0020 | SCBDSB | 0124 | 007C | SCBGVJ | 0196 | 00C4 | SCBEXT |
| 0036 | 0024 | SCBDCB | 0124 | 007C | SCBGVB | 0198 | 00C6 | SCBTP1 |
| 0040 | 0028 | SCBDEB | 0128 | 0080 | SCBGVE | 0199 | 00C7 | SCBTP2 |
| 0044 | 002C | SCBJFC | 0132 | 0084 | SCBGTC | 0200 | 00C8 | SCBCNT |
| 0048 | 0030 | SCBIOA | 0132 | 0084 | SCBGAT | 0202 | 00CA | SCBNXM |
| 0052 | 0034 | SCBVCA | 0136 | 0088 | SCBGTO | 0203 | 00CB | SCBFLG |
| 0056 | 0038 | SCBPSV | 0140 | 008C | SCBWTO | 0204 | 00CC | SCBRVS |
| 0060 | 003C | SCBPSR | 0140 | 008C | SCBGT1 | 0206 | 00CE | SCBTLN |
| 0064 | 0040 | SCBLVE | 0144 | 0090 | SCBWTI | 0208 | 00D0 | SCBRS6 |
| 0064 | 0040 | SCBLVP | 0144 | 0090 | SCBGTI | 0216 | 00D8 | SCBWK1 |
| 0068 | 0044 | SCBLVB | 0148 | 0094 | SCBWTZ | 0216 | 00D8 | SCBWRK |
| 0072 | 0048 | SCBLVD | 0148 | 0094 | SCBGT2 | 0224 | 00E0 | SCBWK2 |
| 0076 | 004C | SCBLIO | 0152 | 0098 | SCBGOC | 0232 | 00E8 | SCBWK3 |
| 0080 | 0050 | SCBJFM | 0156 | 009C | SCBTML | 0240 | 00F0 | SCBEND   (EQU) |
| 0080 | 0050 | SCBBMP | 0156 | 009C | SCBTIM | | | |
| 0084 | 0054 | SCBVMA | 0160 | 00A0 | SCBTMO | | | |

Alphabetical list of fields in CHASCB

| FIELD | DEC | HEX | FIELD | DEC | HEX | | FIELD | DEC | HEX |
|-------|-----|-----|-------|-----|-----|---|-------|-----|-----|
| SCBABN | 0004 | 0004 | SCBEND | 0240 | 00F0 | (EQU) | SCBGTC | 0132 | 0084 |
| SCBBEG | 0000 | 0000 | SCBERR | 0004 | 0004 | | SCBGTI | 0144 | 0090 |
| SCBBMP | 0080 | 0050 | SCBEXD | 0120 | 0078 | | SCBGTO | 0136 | 0088 |
| SCBCHR | 0108 | 006C | SCBEXJ | 0116 | 0074 | | SCBGT1 | 0140 | 008C |
| SCBCNT | 0200 | 00C8 | SCBEXN | 0116 | 0074 | | SCBGT2 | 0148 | 0094 |
| SCBDBZ | 0194 | 00C2 | SCBEXT | 0196 | 00C4 | | SCBGVB | 0124 | 007C |
| SCBDCB | 0036 | 0024 | SCBFLG | 0203 | 00CB | | SCBGVE | 0128 | 0080 |
| SCBDCT | 0008 | 0008 | SCBFM1 | 0024 | 0018 | | SCBGVJ | 0124 | 007C |
| SCBDEB | 0040 | 0028 | SCBFM3 | 0028 | 001C | | SCBIOA | 0048 | 0030 |
| SCBDET | 0012 | 000C | SCBF3Z | 0192 | 00C0 | | SCBIOB | 0112 | 0070 |
| SCBDSB | 0032 | 0020 | SCBGAT | 0132 | 0084 | | SCBIOZ | 0190 | 00BE |
| SCBDT | 0016 | 0010 | SCBGOC | 0152 | 0098 | | SCBJFC | 0044 | 002C |

| FIELD | DEC | HEX | FIELD | DEC | HEX | FIELD | DEC | HEX |
|-------|------|------|-------|------|------|-------|------|------|
| SCBJFM | 0080 | 0050 | SCBRET | 0096 | 0060 | SCBVAR | 0184 | 00B8 |
| SCBJFP | 0088 | 0058 | SCBRS0 | 0002 | 0002 | SCBVCA | 0052 | 0034 |
| SCBKEY | 0104 | 0068 | SCBRS1 | 0168 | 00A8 | SCBVLM | 0184 | 00B8 |
| SCBLIO | 0076 | 004C | SCBRS3 | 0172 | 00AC | SCBVLP | 0186 | 00BA |
| SCBLVB | 0068 | 0044 | SCBRS4 | 0176 | 00B0 | SCBVMA | 0084 | 0054 |
| SCBLVD | 0072 | 0048 | SCBRS5 | 0180 | 00B4 | SCBVPA | 0092 | 005C |
| SCBLVE | 0064 | 0040 | SCBRS6 | 0208 | 00D0 | SCBWKP | 0020 | 0014 |
| SCBLVP | 0064 | 0040 | SCBRVS | 0204 | 00CC | SCBWK1 | 0216 | 00D8 |
| SCBMSG | 0006 | 0006 | SCBSDT | 0096 | 0060 | SCBWK2 | 0224 | 00E0 |
| SCBNXM | 0202 | 00CA | SCBTIM | 0156 | 009C | SCBWK3 | 0232 | 00E8 |
| SCBOBT | 0096 | 0060 | SCBTLN | 0206 | 00CE | SCBWRK | 0216 | 00D8 |
| SCBPAR | 0100 | 0064 | SCBTML | 0156 | 009C | SCBWTI | 0144 | 0090 |
| SCBPOS | 0188 | 00BC | SCBTMO | 0160 | 00A0 | SCBWTO | 0140 | 008C |
| SCBPRG | 0000 | 0000 | SCBTMT | 0164 | 00A4 | SCBWTZ | 0148 | 0094 |
| SCBPSR | 0060 | 003C | SCBTP1 | 0198 | 00C6 | | | |
| SCBPSV | 0056 | 0038 | SCBTP2 | 0199 | 00C7 | | | |

## Assembler listing of CHASCB

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|----------|-------------|--------|------|------|---------|
| | 7E 00000 | CHASCB | DSECT | | SAM COMMUNICATION BLOCK |
| 7E 00000 | | SCBBEG | DS | 0F | ALIGN TABLE ON WORD |
| | | * | | | BOUNDARY |
| 7E 00000 | | SCBPRG | DS | H | PROGRAM MODULE CODE |
| 7E 00002 | | SCBRS0 | DS | H | RESERVED |
| 7E 00004 | | SCBERR | DS | 1F | ERROR PARAMETERS FOR |
| | | * | | | MESSAGE WRITER |
| | 7E 00004 | | \|ORG\| | SCBERR | |
| 7E 00004 | | SCBABN | DS | H | ABEND CODE |
| 7E 00006 | | SCBMSG | DS | H | MESSAGE WRITER CODE |
| 7E 00008 | | SCBDCT | DS | F | PTR TO ACCESS METHOD DCB |
| 7E 0000C | | SCBDET | DS | F | PTR TO ACCESS METHOD DEB |
| 7E 00010 | | SCBDT | DS | F | PTR TO ACCESS METHOD DECB |
| 7E 00014 | | SCBWKP | DS | F | PTR TO SAM WORK PAGE |
| 7E 00018 | | SCBFM1 | DS | F | PTR TO A BUFFER FOR FORMAT |
| | | * | | | 1 DSCBS |
| 7E 0001C | | SCBFM3 | DS | F | PTR TO BUFFER OF FORMAT 3 |
| | | * | | | DSCBS |
| 7E 00020 | | SCBDSB | DS | F | PTR TO A CHAIN OF DSCBS |
| 7E 00024 | | SCBDCB | DS | F | PTR TO THE USERS DCB BEING |
| | | * | | | PROCESSED |
| 7E 00028 | | SCBDEB | DS | F | PTR TO THE USERS DEB BEING |
| | | * | | | PROCESSED |
| 7E 0002C | | SCBJFC | DS | F | PTR TO THE USERS JFCB |
| 7E 00030 | | SCBIOA | DS | F | PTR TO I/O BUFFER FOR |
| | | * | | | LABELS |
| 7E 00034 | | SCBVCA | DS | F | ADDR OF A VOL SER FLD IN |
| | | * | | | JFCB |
| 7E 00038 | | SCBPSV | DS | F | POSTING V--ADDRESS CONSTANT |
| 7E 0003C | | SCBPSR | DS | F | POSTING R--ADDRESS CONSTANT |
| 7E 00040 | | SCBLVP | DS | 0F | ADDR OF LVPRV PARAMETER |
| | | * | | | LIST |
| 7E 00040 | | SCBLVE | DS | F | PTR TO V AND R CONSTANT |
| | | * | | | LVPRV IS TO LINK |
| 7E 00044 | | SCBLVB | DS | F | PTR TO WHAT IS TO BE PLACED |
| | | * | | | IN GR 0-LVPRV |
| 7E 00048 | | SCBLVD | DS | F | PTR TO WHAT IS TO BE PLACED |
| | | * | | | IN GR 1-LVPRV |
| 7E 0004C | | SCBLIO | DS | F | I/O BUFFER POINTED TO BY |
| | | * | | | SCBLVB FOR LVPRV |
| 7E 00050 | | SCBBMP | DS | 0F | ADDR OF BUMP PARAMETER LIST |
| 7E 00050 | | SCBJFM | DS | F | PTR TO JFCB WHICH CONTAINS |
| | | * | | | MOUNTED VOL |
| 7E 00054 | | SCBVMA | DS | F | PTR TO VOL SER FIELD WHICH |
| | | * | | | CONTAINS MOUNT |
| 7E 00058 | | SCBJFP | DS | F | PTR TO JFCB WHICH WILL HAVE |
| | | * | | | VOL MOUNTED |
| 7E 0005C | | SCBVPA | DS | F | PTR TO VOL SER FIELD TO GET |

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|---|---|---|---|---|---|
| | | * | | | MOUNT |
| 7E 00060 | | SCBOBT | DS | 0F | ADDR OF OBTAIN PARAMETER |
| | | * | | | LIST |
| 7E 00060 | | SCBRET | DS | 0F | ADDR OF RETAIN PARAMETER |
| | | * | | | LIST |
| 7E 00060 | | SCBSDT | DS | F | PTR TO CHASDT WHICH HAS |
| | | * | | | DSCBS TO BE PROC |
| 7E 00064 | | SCBPAR | DS | F | PTR TO A PACKED PAR |
| | | * | | | AREA--(SCBTP1) |
| 7E 00068 | | SCBKEY | DS | F | PTR TO THE KEY USED BY |
| | | * | | | OBTAIN --FM-1-DSCB |
| 7E 0006C | | SCBCHR | DS | F | PTR TO CCHHR FOR RETAIN |
| 7E 00070 | | SCBIOB | DS | F | PTR TO I/O BUFFER FOR |
| | | * | | | OBTAIN/RETAIN |
| 7E 00074 | | SCBEXN | DS | 0F | ADDR OF EXTEND PARAMETER |
| | | * | | | LIST |
| 7E 00074 | | SCBEXJ | DS | F | PAR 1 OF EXTEND PAR |
| | | * | | | LIST--PTR TO JFCB |
| 7E 00078 | | SCBEXD | DS | F | PAR 2 OF EXTEND PAR |
| | | * | | | LIST--PTR TO SCBDSB |
| 7E 0007C | | SCBGVB | DS | 0F | ADDR OF GIVBKS PARAMETER |
| | | * | | | LIST |
| 7E 0007C | | SCBGVJ | DS | F | PTR TO JFCB |
| 7E 00080 | | SCBGVE | DS | F | PTR TO EXTENTS WITHIN DEB |
| | | * | | | BEING RETURNED |
| 7E 00084 | | SCBGAT | DS | 0F | ADDR OF GATE PARAMETER LIST |
| 7E 00084 | | SCBGTC | DS | F | GATE PAR 1 -- PTR TO GATE |
| | | * | | | OP CODE--SCBGOC |
| 7E 00088 | | SCBGTO | DS | F | GATE PAR 2 -- PTR TO OUTPUT |
| | | * | | | MESSAGE |
| 7E 0008C | | SCBGT1 | DS | F | GATE PAR 3 -- PTR TO SIZE |
| | | * | | | OF OUTPUT MESSG |
| 7E 00090 | | SCBGTI | DS | F | GATE PAR 4 -- PTR TO INPUT |
| | | * | | | MESSAGE |
| 7E 00094 | | SCBGT2 | DS | F | GATE PAR 5 -- PTR TO SIZE |
| | | * | | | OF INPUT MESSG |
| 7E 0008C | | | \|ORG\| | SCBGT1 | |
| 7E 0008C | | SCBWTO | DS | F | WTO PAR 1 -- PTR TO OUTPUT |
| | | * | | | MESSAGE |
| 7E 00090 | | SCBWTI | DS | F | WTO PAR 2 -- PTR TO INPUT |
| | | * | | | MESSAGE |
| 7E 00094 | | SCBWTZ | DS | F | WTO PAR 3 -- SIZE OF INPUT |
| | | * | | | MESSAGE |
| 7E 00098 | | SCBGOC | DS | F | OPERATION CODE FOR |
| | | * | | | GATE--PNTD TO BY GTC |
| | 00000001 | SCBGMR | EQU | X'01' | GATE OP CODE MASKS -- READ |
| | 00000002 | SCBGMW | EQU | X'02' | GATE OP CODE MASKS -- WRITE |
| | 00000003 | SCBGMA | EQU | X'03' | GATE OP CODE MASKS -- WAR |
| | 00000004 | SCBGMS | EQU | X'04' | GATE OP CODE MASKS -- WSR |
| 7E 0009C | | SCBTIM | DS | 0F | ADDR OF EBCBTIME PARAMETER |
| | | * | | | LIST |
| 7E 0009C | | SCBTML | DS | F | PTR TO OUTPUT MAP LENGTH |
| 7E 000A0 | | SCBTMO | DS | F | PTR TO OUTPUT MAP |
| 7E 000A4 | | SCBTMT | DS | F | PTR TO TIME TO BE |
| | | * | | | CONVERTED, OR ZERO |
| 7E 000A8 | | SCBRS1 | DS | F | RESERVED |
| 7E 000AC | | SCBRS3 | DS | F | RESERVED |
| 7E 000B0 | | SCBRS4 | DS | F | RESERVED |
| 7E 000B4 | | SCBRS5 | DS | F | RESERVED |
| 7E 000B8 | | SCBVAR | DS | 0CL32 | BEGINNING OF VARIABLE |
| | | * | | | SECTION OF TABLE |
| 7E 000B8 | | SCBVLM | DS | H | RELATIVE VOLUME SEQUENCE OF |
| | | * | | | MOUNTED VOL |
| 7E 000BA | | SCBVLP | DS | H | RELATIVE VOLUME SEQUENCE OF |
| | | * | | | VOL TO MOUNT |
| 7E 000BC | | SCBPOS | DS | H | TAPE POSITIONING PARAMETER |
| 7E 000BE | | SCBIOZ | DS | H | I/O LABEL BUFFER SIZE |
| 7E 000C0 | | SCBF3Z | DS | H | SIZE OF BUFFER POINTED TO |

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|----------|-------------|--------|------|------|---------|
| | | * | | | BY SCBFM3 |
| 7E 000C2 | | SCBDBZ | DS | H | SIZE OF DEB BEING PROCESSED |
| 7E 000C4 | | SCBEXT | DS | H | EXIT CODE USED FOR DCB EXIT |
| | | * | | | LIST SCAN |
| 7E 000C6 | | SCBTP1 | DS | X | TYPE CODE FOR OBTAIN |
| | 00000001 | SCBOF1 | EQU | X'01' | OBTAIN TYPE CODE FOR FM1 |
| | | * | | | DSCB'S |
| | 00000000 | SCBOF3 | EQU | X'00' | OBTAIN TYPE CODE FOR |
| | | * | | - | FM3,4+5 DSCB'S |
| | 00000005 | SCBOLB | EQU | X'05' | OBTAIN TYPE CODE FOR LABELS |
| 7E 000C7 | | SCBTP2 | DS | X | TYPE CODE FOR RETAIN |
| | 00000000 | SCBRDS | EQU | X'00' | RETAIN TYPE CODE FOR DSCB'S |
| | 00000001 | SCBRLB | EQU | X'01' | RETAIN TYPE CODE FOR LABELS |
| | 00000002 | SCBRFM | EQU | X'02' | RETAIN TYPE CODE FOR FILE |
| | | * | | | MARKS |
| 7E 000C8 | | SCBCNT | DS | H | COUNT FOR RETAIN |
| 7E 000CA | | SCBNXM | DS | X | REL SEQUENCE OF NEXT EXTENT |
| | | * | | | TO PROCESS |
| 7E 000CB | | SCBFLG | DS | X | FLAGS FOR INTER SAM MODULE |
| | | * | | | COMMUNICATION |
| | 00000080 | SCBRF1 | EQU | X'80' | REWRITE FM1 DSCB WITH INT |
| | | * | | | BIT OFF ONLY |
| | 00000040 | SCBOPN | EQU | X'40' | SCB INITIALIZED BY OPEN |
| | | * | | | -CZCWO- |
| | 00000020 | SCBEOV | EQU | X'20' | SCB INITIALIZED BY EOV |
| | | * | | | -CZCXE- |
| | 00000010 | SCBCLS | EQU | X'10' | SCB INITIALIZED BY CLOSE |
| | | * | | | -CZCWC- |
| | 00000008 | SCBPOM | EQU | X'08' | INDICATOR FOR CZCWP TO |
| | | * | | | RETURN TO CALLER ON ERROR |
| | 00000001 | SCBMUF | EQU | X'01' | USERS DEB IS TO BE MODIFIED |
| | 00000002 | SCBMTF | EQU | X'02' | TEMP DEB IS TO BE MODIFIED |
| 7E 000CC | | SCBRVS | DS | H | REL VOL SEQ TO CONVRT TO |
| | | * | | | ADDR PTR--SCBVCA |
| 7E 000CE | | SCBTLN | DS | H | LENGTH OF OUTPUT MAP |
| 7E 000D0 | | SCBRS6 | DS | 4H | RESERVED |
| 7E 000D8 | | SCBWRK | DS | 0DL3 | BEGINNING OF WORK AREA |
| 7E 000D8 | | SCBWK1 | DS | D | WORK AREA 1 |
| 7E 000E0 | | SCBWK2 | DS | D | WORK AREA 2 |
| 7E 000E8 | | SCBWK3 | DS | D | WORK AREA 3 |
| | 7E 000F0 | SCBEND | EQU | * | END OF BLOCK |
| | 000000F0 | SCBSZF | EQU | SCBEND-CHASCB | COMPLETE TABLE SIZE |
| | 00000020 | SCBSZV | EQU | SCBWRK-SCBVAR | SIZE OF VARIABLE |
| | | * | | | SECTION OF TABLE |
| | 00000018 | SCBSZW | EQU | SCBEND-SCBWRK | SIZE OF WORK AREA |
| | | * | | | SECTION OF TABLE |

## Selector Channel Table (CHASCH)

The Selector Channel Table (CHASCH) contains status information concerning the connection between a selector channel and its assigned control units.  CHASCH occupies from 4 to 128 bytes of core storage, aligned on word boundaries.

### CHASCH Storage map

```
DEC    HEX  _____
  0      0 |      SCHFLG       |      SCHCTD      |
           |_____|_____|
```

### Fields in CHASCH -- by displacement

| DEC | HEX | FIELD | | DEC | HEX | FIELD | | DEC | HEX | FIELD |
|------|------|------|------|------|------|------|------|------|------|------|
| 0000 | 0000 | SCHR | (EQU) | 0000 | 0000 | SCHP | (EQU) | 0000 | 0000 | SCHBEG |
| 0000 | 0000 | SCHE | (EQU) | 0000 | 0000 | SCHFLG | | 0002 | 0002 | SCHCTD |

### Alphabetical list of fields in CHASCH

| FIELD | DEC | HEX | | FIELD | DEC | HEX | | FIELD | DEC | HEX | |
|------|------|------|------|------|------|------|------|------|------|------|------|
| SCHBEG | 0000 | 0000 | | SCHE | 0000 | 0000 | (EQU) | SCHP | 0000 | 0000 | (EQU) |
| SCHCTD | 0002 | 0002 | | SCHFLG | 0000 | 0000 | | SCHR | 0000 | 0000 | (EQU) |

### Assembler listing of CHASCH

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|------|------|------|------|------|------|
| | 7F 00000 | CHASCH | DSECT | | SELECTOR CHANNEL (N) TABLE |
| | | * | | | (N = 0 TO 31) |
| 7F 00000 | | SCHBEG | DS | 0F | ALIGN TABLE ON WORD |
| | | * | | | BOUNDARY |
| 7F 00000 | | SCHFLG | DS | XL2 | FLAG FIELD |
| | 7F 00000 | SCHP | EQU | SCHFLG | PARTITIONED FLAG AREA |
| | 00000080 | SCHPM | EQU | X'80' | PARTITIONED MASK |
| | 7F 00000 | SCHE | EQU | SCHFLG | NONEXISTENT FLAG |
| | 00000040 | SCHEM | EQU | X'40' | NONEXISTENT FLAG MASK |
| | 7F 00000 | SCHR | EQU | SCHFLG | RESERVED FLAG |
| | 00000020 | SCHRM | EQU | X'20' | RESERVED MASK |
| | 000000C0 | SCHA | EQU | X'C0' | AVAILABILITY MASK |
| 7F 00002 | | SCHCTD | DS | H | CONTROL UNIT TABLE |
| | | * | | | DISPLACEMENT |

```
* NOTES: 1- TABLE NONEXISTENT IN CONFIGURATIONS WITH NO SELECTOR CHANS*
*        2- ENTRIES SEQUENTIAL. A SKIPPED UNIT RESERVES TABLE SPACE   *
*           AND ITS ENTRY IS FLAGGED AS NON-EXISTENT.                 *
*        3- SCH CANNOT ADDRESS TABLE ENTRIES ADDRESSED BY A CONTROL   *
*           UNIT ASSIGNED TO THE MULTIPLEXOR CHANNEL TABLE (CHAMCH).  *
```

## System Common (CHASCM)

System Common (SCM) contains those system values referenced by command language object modules in two or more tasks.

SCM, created by SYSGEN, has privileged protection and remains in the virtual storage of each active task from startup to shutdown time.

SCM occupies 136 bytes of virtual storage, aligned on doubleword boundaries.

### CHASCM Storage map

| DEC | HEX | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 0 | SCMMWT | | | | | | | |
| 8 | 8 | SCMLPR | | | | SCMPDC | | SCMCFM | |
| 16 | 10 | SCMCFM (CONT) | | | | SCMPFM | | | |
| 24 | 18 | SCMPFM (CONT) | SCMNCV | SCMREM | SCMNCP | SCMOCF | SCMBPR | SCMOMS | |
| 32 | 20 | SCMTAP | SCMTA1 | SCMTA2 | SCMTA3 | SCMDA | SCMDA1 | SCMDA2 | SCMPTN |
| 40 | 28 | SCMPUN | SCMRDN | SCMPRN | SCMDET | SCMTDN | SCMORG | SCMLAB | SCMPRV |
| 48 | 30 | SCMPSP | | SCMSSP | | SCMPSC | | SCMSSC | |
| 56 | 38 | SCMSST | | SCMUL1 | | | SCMUL2 | | |
| 64 | 40 | SCMMAV | | | SCMIT | SCMUN1 | | | |
| 72 | 48 | SCMTTS | | | SCMTPS | | | | |
| 80 | 50 | SCMUN3 | | | SCMAUX | | | | |
| 88 | 58 | SCMAUXLK | SCMIDP | SCMIPL | SCMATH | SCMDA3 | SCMFIR | SCMTIM | |
| 96 | 60 | SCMTIM (CONT) | | | | | UNNAMED | | |
| 104 | 68 | UNNAMED (CONT) | SCMMVD | SCMATV | | | | | |
| | | SCMSPA | | | | | | | |
| 120 | 78 | RESERVED | | | SCMDSC | | | | |
| 128 | 80 | SCMQST | | | | | | | |

### Fields in CHASCM -- by displacement

| DEC | HEX | FIELD | | DEC | HEX | FIELD | DEC | HEX | FIELD | |
|---|---|---|---|---|---|---|---|---|---|---|
| 0000 | 0000 | SCMMWT | | 0031 | 001F | SCMOMS | 0056 | 0038 | SCMSST | |
| 0008 | 0008 | SCMLF | (EQU) | 0032 | 0020 | SCMTAP | 0058 | 003A | SCMUL1 | |
| 0008 | 0008 | SCMLE | (EQU) | 0033 | 0021 | SCMTA1 | 0061 | 003D | SCMUL2 | |
| 0008 | 0008 | SCMLD | (EQU) | 0034 | 0022 | SCMTA2 | 0064 | 0040 | SCMMAV | |
| 0008 | 0008 | SCMLC | (EQU) | 0035 | 0023 | SCMTA3 | 0068 | 0044 | SCMITI | (EQU) |
| 0008 | 0008 | SCMLB | (EQU) | 0036 | 0024 | SCMDA | 0068 | 0044 | SCMIT | |
| 0008 | 0008 | SCMLA | (EQU) | 0037 | 0025 | SCMDA1 | 0069 | 0045 | SCMUN1 | |
| 0008 | 0008 | SCMLP0 | (EQU) | 0038 | 0026 | SCMDA2 | 0072 | 0048 | SCMTTS | |
| 0008 | 0008 | SCMLPR | | 0039 | 0027 | SCMPTN | 0076 | 004C | SCMTPS | |
| 0009 | 0009 | SCMLP1 | (EQU) | 0040 | 0028 | SCMPUN | 0080 | 0050 | SCMUN3 | |
| 0010 | 000A | SCMLT | (EQU) | 0041 | 0029 | SCMRDN | 0084 | 0054 | SCMAUX | |
| 0010 | 000A | SCMLP2 | (EQU) | 0042 | 002A | SCMPRN | 0088 | 0058 | SCMAUXLK | |
| 0011 | 000B | SCMLP3 | (EQU) | 0043 | 002B | SCMDET | 0089 | 0059 | SCMIDP | |
| 0012 | 000C | SCMPDC | | 0044 | 002C | SCMTDN | 0090 | 005A | SCMIPL | |
| 0014 | 000E | SCMCFM | | 0045 | 002D | SCMORG | 0091 | 005B | SCMATH | |
| 0020 | 0014 | SCMPFM | | 0046 | 002E | SCMLAB | 0092 | 005C | SCMDA3 | |
| 0026 | 001A | SCMNCV | | 0047 | 002F | SCMPRV | 0093 | 005D | SCMFIR | |
| 0027 | 001B | SCMREM | | 0048 | 0030 | SCMPSP | 0094 | 005E | SCMTIM | |
| 0028 | 001C | SCMNCP | | 0050 | 0032 | SCMSSP | 0106 | 006A | SCMLLER | (EQU) |
| 0029 | 001D | SCMOCF | | 0052 | 0034 | SCMPSC | 0106 | 006A | SCMALER | (EQU) |
| 0030 | 001E | SCMBPR | | 0054 | 0036 | SCMSSC | 0106 | 006A | SCMMV1 | (EQU) |

| DEC | HEX | FIELD | DEC | HEX | FIELD | DEC | HEX | FIELD |
|-----|-----|-------|-----|-----|-------|-----|-----|-------|
| 0106 | 006A | SCMMVD | 0109 | 006D | SCMSPA | 0128 | 0080 | SCMQST |
| 0107 | 006B | SCMATV | 0124 | 007C | SCMDSC | 0136 | 0088 | SCMBDY |

## Alphabetical list of fields in CHASCM

| FIELD | DEC | HEX | | FIELD | DEC | HEX | | FIELD | DEC | HEX |
|-------|-----|-----|-----|-------|-----|-----|-----|-------|-----|-----|
| SCMALER | 0106 | 006A | (EQU) | SCMLD | 0008 | 0008 | (EQU) | SCMPSC | 0052 | 0034 |
| SCMATH | 0091 | 005B | | SCMLE | 0008 | 0008 | (EQU) | SCMPSP | 0048 | 0030 |
| SCMATV | 0107 | 006B | | SCMLF | 0008 | 0008 | (EQU) | SCMPTN | 0039 | 0027 |
| SCMAUX | 0084 | 0054 | | SCMLLER | 0106 | 006A | (EQU) | SCMPUN | 0040 | 0028 |
| SCMAUXLK | 0088 | 0058 | | SCMLPR | 0008 | 0008 | | SCMQST | 0128 | 0080 |
| SCMBDY | 0136 | 0088 | | SCMLP0 | 0008 | 0008 | (EQU) | SCMRDN | 0041 | 0029 |
| SCMBPR | 0030 | 001E | | SCMLP1 | 0009 | 0009 | (EQU) | SCMREM | 0027 | 001B |
| SCMCFM | 0014 | 000E | | SCMLP2 | 0010 | 000A | (EQU) | SCMSPA | 0109 | 006D |
| SCMDA | 0036 | 0024 | | SCMLP3 | 0011 | 000B | (EQU) | SCMSSC | 0054 | 0036 |
| SCMDA1 | 0037 | 0025 | | SCMLT | 0010 | 000A | (EQU) | SCMSSP | 0050 | 0032 |
| SCMDA2 | 0038 | 0026 | | SCMMAV | 0064 | 0040 | | SCMSST | 0056 | 0038 |
| SCMDA3 | 0092 | 005C | | SCMMVD | 0106 | 006A | | SCMTAP | 0032 | 0020 |
| SCMDET | 0043 | 002B | | SCMMV1 | 0106 | 006A | (EQU) | SCMTA1 | 0033 | 0021 |
| SCMDSC | 0124 | 007C | | SCMMWT | 0000 | 0000 | | SCMTA2 | 0034 | 0022 |
| SCMFIR | 0093 | 005D | | SCMNCP | 0028 | 001C | | SCMTA3 | 0035 | 0023 |
| SCMIDP | 0089 | 0059 | | SCMNCV | 0026 | 001A | | SCMTDN | 0044 | 002C |
| SCMIPL | 0090 | 005A | | SCMOCF | 0029 | 001D | | SCMTIM | 0094 | 005E |
| SCMIT | 0068 | 0044 | | SCMOMS | 0031 | 001F | | SCMTPS | 0076 | 004C |
| SCMITI | 0068 | 0044 | (EQU) | SCMORG | 0045 | 002D | | SCMTTS | 0072 | 0048 |
| SCMLA | 0008 | 0008 | (EQU) | SCMPDC | 0012 | 000C | | SCMUL1 | 0058 | 003A |
| SCMLAB | 0046 | 002E | | SCMPFM | 0020 | 0014 | | SCMUL2 | 0061 | 003D |
| SCMLB | 0008 | 0008 | (EQU) | SCMPRN | 0042 | 002A | | SCMUN1 | 0069 | 0045 |
| SCMLC | 0008 | 0008 | (EQU) | SCMPRV | 0047 | 002F | | SCMUN3 | 0080 | 0050 |

## Assembler listing of CHASCM

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|----------|-------------|--------|------|------|---------|
| | 80 00000 | CHASCM | DSECT | | SYSTEM COMMON |
| 80 00000 | | SCMMWT | DS | D | MAXIMUM WAIT TIME FOR |
| | | * | | | OPERATOR REPLY |
| 80 00008 | | SCMLPR | DS | XL4 | INST. LEGITIMATE PRIVILEGE |
| | | * | | | CLASSES |
| | 80 00008 | SCMLP0 | EQU | SCMLPR | FIRST PRIVILEGE CLASS BYTE |
| | 80 00008 | SCMLA | EQU | SCMLP0 | CLASS A |
| | 00000080 | SCMLAM | EQU | X'80' | CLASS A MASK |
| | 80 00008 | SCMLB | EQU | SCMLP0 | CLASS B |
| | 00000040 | SCMLBM | EQU | X'40' | CLASS B MASK |
| | 80 00008 | SCMLC | EQU | SCMLP0 | CLASS C |
| | 00000020 | SCMLCM | EQU | X'20' | CLASS C MASK |
| | 80 00008 | SCMLD | EQU | SCMLP0 | CLASS D |
| | 00000010 | SCMLDM | EQU | X'10' | CLASS D MASK |
| | 80 00008 | SCMLE | EQU | SCMLP0 | CLASS E |
| | 00000008 | SCMLEM | EQU | X'08' | CLASS E MASK |
| | 80 00008 | SCMLF | EQU | SCMLP0 | CLASS F |
| | 00000004 | SCMLFM | EQU | X'04' | CLASS F MASK |
| | 80 00009 | SCMLP1 | EQU | SCMLPR+1 | SECOND PRIVILEGE CLASS BYTE |
| | 80 0000A | SCMLP2 | EQU | SCMLPR+2 | THIRD PRIVILEGE CLASS BYTE |
| | 80 0000A | SCMLT | EQU | SCMLP2 | CLASS T |
| | 00000010 | SCMLTM | EQU | X'10' | CLASS T MASK |
| | 80 0000B | SCMLP3 | EQU | SCMLPR+3 | FOURTH PRIVILEGE CLASS BYTE |
| 80 0000C | | SCMPDC | DS | H | NUMBER OF PUBLIC DEVICES IN |
| | | * | | | SYSTEM |
| 80 0000E | | SCMCFM | DS | 6C | INST. DEFAULT VALUE FOR |
| | | * | | | CARD FORMS |
| 80 00014 | | SCMPFM | DS | 6C | INST. DEFAULT VALUE FOR |
| | | * | | | PRINTER FORMS |
| 80 0001A | | SCMNCV | DS | XL1 | RESERVED |
| | | * | | | N386** |
| 80 0001B | | SCMREM | DS | XL1 | RESERVED |
| | | * | | | N386** |
| 80 0001C | | SCMNCP | DS | XL1 | NON-CONV. ORDER PRIORITY, |
| | | * | | | 0=BATCH 1=BULKIO |

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|---|---|---|---|---|---|
| 80 0001D | | SCMOCF | DS | C | OPERATOR OR INSTALLATION |
| | | * | | | DEFAULT |
| | | * | | | VALUE FOR CONFIRMATION |
| | | * | | | Y=YES N=NO |
| 80 0001E | | SCMBPR | DS | C | INST. BATCH MONITOR |
| | | * | | | INTERNAL PRIORITY |
| 80 0001F | | SCMOMS | DS | C | OPERATOR OR INSTALLATION |
| | | * | | | DEFAULT |
| | | * | | | VALUE FOR MESSAGE OPTION |
| | | * | | | M=FULL  C=CODE |
| 80 00020 | | SCMTAP | DS | XL1 | INST. DEFAULT TAPE FLAG, |
| | | * | | | 00=9 TRACK A0=7 TRACK |
| | | * | | | NO DATA CONVERSION E0=7 |
| | | * | | | TRACK DATA CONVERSION |
| 80 00021 | | SCMTA1 | DS | XL1 | NUMBER OF 7 TRACK TAPES |
| 80 00022 | | SCMTA2 | DS | XL1 | NUMBER OF 7 TRACK TAPES |
| | | * | | | DATA CONVERSION |
| 80 00023 | | SCMTA3 | DS | XL1 | NUMBER OF 9 TRACK TAPES |
| 80 00024 | | SCMDA | DS | XL1 | INST. DEFAULT DIRECT ACCESS |
| | | * | | | FLAG, 01=2311 04= |
| | | * | | | 2302 |
| 80 00025 | | SCMDA1 | DS | XL1 | NUMBER OF 2311 DIRECT |
| | | * | | | ACCESS DEVICES |
| 80 00026 | | SCMDA2 | DS | XL1 | NUMBER OF 2302 DIRECT |
| | | * | | | ACCESS DEVICES |
| 80 00027 | | SCMPTN | DS | XL1 | NUMBER OF PAPER TAPES |
| 80 00028 | | SCMPUN | DS | XL1 | NUMBER OF PUNCHES |
| 80 00029 | | SCMRDN | DS | XL1 | NUMBER OF READERS |
| 80 0002A | | SCMPRN | DS | XL1 | NUMBER OF PRINTERS |
| 80 0002B | | SCMDET | DS | XL1 | TOTAL NUMBER OF DEVICES |
| 80 0002C | | SCMTDN | DS | XL1 | INST. DEFAULT TAPE DENSITY |
| | | * | | | FLAG, 03=200 43=500 |
| | | * | | | 83=800 |
| 80 0002D | | SCMORG | DS | XL1 | INST. DEFAULT DATA SET |
| | | * | | | ORGANIZATION FLAG, |
| | | * | | | 01=SAM 02=TAM 03=GAM |
| | | * | | | 04=VAMI 05=VAMS 06=VAMP |
| 80 0002E | | SCMLAB | DS | XL1 | INST. DEFAULT LABEL TYPE |
| | | * | | | FLAG, 01=NONE(TAPE |
| | | * | | | ONLY) 02=STANDARD |
| | | * | | | 04=STANDARD AND USER |
| 80 0002F | | SCMPRV | DS | CL1 | INST. DEFAULT PRIVILEGE |
| | | * | | | CLASS, D=USER |
| 80 00030 | | SCMPSP | DS | H | INST. DEFAULT PRIMARY PAGE |
| | | * | | | SPACE ALLOCATION |
| 80 00032 | | SCMSSP | DS | H | INST. DEFAULT SECONDARY |
| | | * | | | PAGE SPACE ALLOCATION |
| 80 00034 | | SCMPSC | DS | H | INST. DEFAULT PRIMARY CYLD. |
| | | * | | | SPACE ALLOCATION |
| 80 00036 | | SCMSSC | DS | H | INST. DEFAULT SECONDARY |
| | | * | | | CYLD. SPACE ALLOCATION |
| 80 00038 | | SCMSST | DS | H | INST. DEFAULT SECONDARY |
| | | * | | | TRACK SPACE ALLOCATION |
| 80 0003A | | SCMUL1 | DS | 3C | USER LIBRARY PRIMARY PAGE |
| | | * | | | SPACE ALLOCATION |
| 80 0003D | | SCMUL2 | DS | 3C | USER LIBRARY SECONDARY PAGE |
| | | * | | | SPACE ALLOCATION |
| 80 00040 | | SCMMAV | DS | F | MAX AUX STORAGE AVAIL PLUS |
| | | * | | | DELTA |
| 80 00044 | | SCMIT | DS | XL1 | FLAG |
| | 80 00044 | SCMITI | EQU | SCMIT | INHIBIT TASK INITIATION |
| | | * | | | FLAG |
| | 00000080 | SCMITIM | EQU | X'80' | INHIBIT TASK INITIATION |
| | | * | | | MASK |
| 80 00045 | | SCMUN1 | DS | CL3 | UNUSED |
| 80 00048 | | SCMTTS | DS | F | TOTAL TEMPORARY STORAGE |
| | | * | | | ALLOCATION |
| 80 0004C | | SCMTPS | DS | F | TOTAL PERMANENT STORAGE |

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|----------|-------------|--------|------|------|---------|
| | | * | | | ALLOCATION |
| 80 00050 | | SCMUN3 | DS | F | UNUSED |
| 80 00054 | | SCMAUX | DS | F | PRESENT AUX STORAGE SPACE |
| | | * | | | AVAILABLE |
| 80 00058 | | SCMAUXLK | DS | XL1 | LOCK BYTE CONTROL FOR |
| | | * | | | SCMAUX |
| 80 00059 | | SCMIDP | DS | XL1 | INST. DEFAULT EXTERNAL |
| | | * | | | PRIORITY |
| 80 0005A | | SCMIPL | DS | XL1 | INST. DEFAULT PROMPT LIMIT |
| 80 0005B | | SCMATH | DS | CL1 | INST. DEFAULT |
| | | * | | | AUTHORIZATION, U=USER P=SYS PROG |
| 80 0005C | | SCMDA3 | DS | XL1 | NUMBER OF 2314 DIRECT |
| | | * | | | ACCESS DEVICES |
| 80 0005D | | SCMFIR | DS | C | FORTRAN INTERRUPT RECOVERY |
| 80 0005E | | SCMTIM | DS | XL8 | USER-ESTIMATED RUNNING TIME |
| 80 00066 | | | DS | XL4 | RESERVED |
| 80 0006A | | SCMMVD | DS | XL1 | MULTI-VOLUME FLAGS |
| | 80 0006A | SCMMV1 | EQU | SCMMVD | MULTI-VOLUME PUBLIC D.S. |
| | 00000080 | SCMMV1M | EQU | X'80' | NO MULTI-VOLUME PUBLIC D.S. |
| | 80 0006A | SCMALER | EQU | SCMMVD | BYPASS CHANGE MACRO FOR |
| | | * | | | FUTHER ABENDS |
| | 00000040 | SCMALERM | EQU | X'40' | MASK TO BYPASS CHANGE MACRO |
| | 80 0006A | SCMLLER | EQU | SCMMVD | BYPASS CHANGE MACRO FOR |
| | | * | | | FUTHER LOGOFFS |
| | 00000020 | SCMLLERM | EQU | X'20' | MASK TO BYPASS CHANGE MACRO |
| 80 0006B | | SCMATV | DS | XL2 | ACV THRESHOLD VALUE |
| 80 0006D | | SCMSPA | DS | XL12 | RESERVED |
| 80 0007C | | SCMDSC | DS | F | POINTER TO FORMAT E DSCB |
| | | * | | | FOR QKSTART |
| | | * | | | BITS 00-03   DSCB SLOT NUMBER |
| | | * | | | BITS 04-15   REL. VOL. NUMBER |
| | | * | | | BITS 16-31   REL. PAGE NUMBER |
| 80 00080 | | SCMQST | DS | D | DSNAME OF QKSTART TO BE |
| | | * | | | CATALOGED |
| 80 00088 | | SCMBDY | DS | 0X | END OF SYSTEM COMMON |
| | | * | | | I5943 |
| | 00000088 | SCMSZE | EQU | SCMBDY-SCMMWT | SYSTEM COMMON SIZE |
| | | * | | | I5943 |

Scan Table (CHASCN)


The Scan Table (SCANT), a resident control table, serves to locate all GQEs representing work-in-progress inside the supervisor. SCANT informs the supervisor concerning the storage location of the transient GQEs, at any time, by pointing to the first GQE in the GQE chain.

SCANT remains private to the Queue Scanner routine, which includes Enqueue, Dequeue, Set Suppress Flags, and Move GQE. The size of SCANT is primarily determined at system generation (SYSGEN) time and depends upon the installation configuration.

SCANT resides in core storage, aligned on doubleword boundaries, and contains one 16-byte entry for each I/O device or supervisor facility. The four-byte fields within each entry completely relate the supervisor queue processors to their facilities.

Note: One Scan Table entry is assigned for each I/O device or supervisor facility. The "processor pointer" field points to a unique processor for each entry with the exception of the I/O device entries. All I/O device processor SCANT entries point to the same processor program (since only one I/O device queue processor exists in the supervisor).

The functions of the flags are described below:

SCNFB1

Flag 0; Indicates work for processor remaining in the queue associated with this entry. Set by Interrupt Stacker or any processor via Enqueue or Move GQE routine. Reset by any processor via Dequeue routine.
SCNFQ (FQM EQU X'80') -- Queue flag.

Flags 1 through 7: Suppress Flags. Set by any processor via Set on Suppress Flag routine. Reset by any processor via Set Off Suppress Flag routine. Processor can not be activated if one or more flags are on. Meaning of each flag depends upon the processor associated with its table entry.
SCNF1 (F1M EQU X'40') -- I/O in progress.
SCNF2 (F2M EQU X'20') -- Path Busy.
SCNF3 (F3M EQU X'10')
SCNF4 (F4M EQU X'08')
SCNF5 (F5M EQU X'04')
SCNF6 (F6M EQU X'02')
SCNF7 (F7M EQU X'01')

SCNLOK: Processor Lock Byte. Set by Queue Scanner. Reset by processor via Dequeue or Set Suppress Flag routines. A CPU is currently assigned to process entries from this queue.

CHASCN Storage map

```
DEC    HEX _____
  0      0 | SCNFB1   | SCNIDX  | SCNDID  | SCNLOK  |            SCNPRO                 |
           |_____|_____|_____|_____|_____|
  8      8 |                SCNFQE                  |            SCNLQE                 |
           |_____|_____|
```

ORG   SCNPRO


```
  4      4                                  _____
                                           | SCNF3LOK|            UNNAMED            |
                                           |_____|_____|
```

Fields in CHASCN -- by displacement

| DEC | HEX | FIELD | | DEC | HEX | FIELD | | DEC | HEX | FIELD |
|------|------|--------|--------|------|------|--------|--------|------|------|--------|
| 0000 | 0000 | SCNF7 | (EQU) | 0000 | 0000 | SCNF1 | (EQU) | 0004 | 0004 | SCNF3LOK |
| 0000 | 0000 | SCNF6 | (EQU) | 0000 | 0000 | SCNFQ | (EQU) | 0004 | 0004 | SCNPRO |
| 0000 | 0000 | SCNF5 | (EQU) | 0000 | 0000 | SCNFB1 | | 0008 | 0008 | SCNFQE |
| 0000 | 0000 | SCNF4 | (EQU) | 0001 | 0001 | SCNIDX | | 0012 | 000C | SCNLQE |
| 0000 | 0000 | SCNF3 | (EQU) | 0002 | 0002 | SCNDID | | 0016 | 0010 | SCNBDY |
| 0000 | 0000 | SCNF2 | (EQU) | 0003 | 0003 | SCNLOK | | | | |

## Alphabetical list of fields in CHASCN

| FIELD | DEC | HEX | | FIELD | DEC | HEX | | FIELD | DEC | HEX | |
|-------|-----|-----|---|-------|-----|-----|---|-------|-----|-----|---|
| SCNBDY | 0016 | 0010 | | SCNF2 | 0000 | 0000 | (EQU) | SCNF7 | 0000 | 0000 | (EQU) |
| SCNDID | 0002 | 0002 | | SCNF3 | 0000 | 0000 | (EQU) | SCNIDX | 0001 | 0001 | |
| SCNFB1 | 0000 | 0000 | | SCNF3LOK | 0004 | 0004 | | SCNLOK | 0003 | 0003 | |
| SCNFQ | 0000 | 0000 | (EQU) | SCNF4 | 0000 | 0000 | (EQU) | SCNLQE | 0012 | 000C | |
| SCNFQE | 0008 | 0008 | | SCNF5 | 0000 | 0000 | (EQU) | SCNPRO | 0004 | 0004 | |
| SCNF1 | 0000 | 0000 | (EQU) | SCNF6 | 0000 | 0000 | (EQU) | | | | |

## Assembler listing of CHASCN

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|----------|-------------|--------|------|------|---------|
| | 81 00000 | CHASCN | DSECT | | SCAN TABLE |
| 81 00000 | | | DS | 0F | |
| 81 00000 | | SCNFB1 | DS | XL1 | FLAG BYTE NUMBER 1 |
| | 81 00000 | SCNFQ | EQU | SCNFB1 | QUEUE FLAG |
| | 00000080 | SCNFQM | EQU | X'80' | QUEUE MASK |
| | 0000007F | SCNFQMC | EQU | X'7F' | QUEUE MASK COMPLEMENT |
| | 81 00000 | SCNF1 | EQU | SCNFB1 | I/O IN PROGRESS |
| | 00000040 | SCNF1M | EQU | X'40' | |
| | 81 00000 | SCNF2 | EQU | SCNFB1 | RESERVED |
| | 00000020 | SCNF2M | EQU | X'20' | RESERVED |
| | 81 00000 | SCNF3 | EQU | SCNFB1 | -SUPPRESS FLAGS |
| | 00000010 | SCNF3M | EQU | X'10' | -MEANING OF EACH DEPENDS |
| | 81 00000 | SCNF4 | EQU | SCNFB1 | -UPON THE PROCESSOR |
| | 00000008 | SCNF4M | EQU | X'08' | -ASSOCIATED WITH ITS |
| | 81 00000 | SCNF5 | EQU | SCNFB1 | -TABLE ENTRY |
| | 00000004 | SCNF5M | EQU | X'04' | -PROCESSOR CANNOT BE |
| | 81 00000 | SCNF6 | EQU | SCNFB1 | -ACTIVATED IF ONE OR |
| | 00000002 | SCNF6M | EQU | X'02' | -MORE FLAGS ARE ON |
| | 81 00000 | SCNF7 | EQU | SCNFB1 | |
| | 00000001 | SCNF7M | EQU | X'01' | |
| 81 00001 | | SCNIDX | DS | XL1 | CHBSST DISK INDEX |
| 81 00002 | | SCNDID | DS | XL1 | DIG CODE |
| 81 00003 | | SCNLOK | DS | XL1 | LOCK BYTE |
| 81 00004 | | | DS | 0F | |
| 81 00004 | | SCNPRO | DS | F | PROCESSOR POINTER |
| | 81 00004 | | \|ORG\| | SCNPRO | REDEFINE FIELD |
| | | ● | | | M3532 |
| 81 00004 | | SCNF3LOK | DS | X | SCNF3 LOCK BYTE |
| | | ● | | | M3532 |
| 81 00005 | | | DS | AL3 | THREE BYTE FILL |
| | | ● | | | M3532 |
| 81 00008 | | SCNFQE | DS | F | FIRST QUEUE ENTRY |
| 81 0000C | | SCNLQE | DS | F | LAST QUEUE ENTRY |
| 81 00010 | | SCNBDY | DS | 0X | END OF SCAN TABLE |
| | | ● | | | I5943 |
| | 00000010 | SCNSZE | EQU | SCNBDY-SCNFB1 | SCAN TABLE SIZE |
| | | ● | | | I5943 |

Supervisor Core Control CHASCT)


The Supervisor Core Control (SCT) table indicates the availability of portions of pages (64 byte blocks), which can be temporarily allocated to the supervisor for bookkeeping operations, such as GQEs, PCBs, etc.

The SCT, a resident table, is privately maintained by the supervisor core control subroutine. Each table entry appears in the first block of each page currently used by SCT.

Note 1. The byte length for availability bits is variable and depends on block size. The block size is initially set at 24 bytes but can vary from 32 through 2048 bytes.

Note 2. The size of each table entry equals the block size.

Note 3. Flags field is currently unused.

CHASCT Storage map

| DEC | HEX | | | | | | |
|-----|-----|---|---|---|---|---|---|
| 0 | 0 | SCTFLK | | | SCTBLK | | |
| 8 | 8 | SCTIDE | | SCTZZZ1 | SCTFLG | SCTAVC | |
| 16 | 10 | SCTAV1 | | | SCTAV2 | | |

Fields in CHASCT -- by displacement

| DEC | HEX | FIELD | DEC | HEX | FIELD | DEC | HEX | FIELD |
|-----|-----|-------|-----|-----|-------|-----|-----|-------|
| 0000 | 0000 | SCTFLK | 0012 | 000C | SCTZZZ1 | 0016 | 0010 | SCTAV1 |
| 0004 | 0004 | SCTBLK | 0013 | 000D | SCTFLG | 0016 | 0010 | SCTAVB |
| 0008 | 0008 | SCTIDE | 0014 | 000E | SCTAVC | 0020 | 0014 | SCTAV2 |

Alphabetical list of fields in CHASCT

| FIELD | DEC | HEX | FIELD | DEC | HEX | FIELD | DEC | HEX |
|-------|-----|-----|-------|-----|-----|-------|-----|-----|
| SCTAVB | 0016 | 0010 | SCTAV2 | 0020 | 0014 | SCTFLK | 0000 | 0000 |
| SCTAVC | 0014 | 000E | SCTBLK | 0004 | 0004 | SCTIDE | 0008 | 0008 |
| SCTAV1 | 0016 | 0010 | SCTFLG | 0013 | 000D | SCTZZZ1 | 0012 | 000C |

Assembler listing of CHASCT

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|----------|-------------|--------|------|------|---------|
| | 82 00000 | CHASCT | DSECT | | SUPERVISOR CORE CONTROL TABLE |
| 82 00000 | | * | DS | 0F | |
| 82 00000 | | SCTFLK | DS | F | FORWARD LINK |
| 82 00004 | | SCTBLK | DS | F | BACKWARD LINK |
| 82 00008 | | SCTIDE | DS | F | SPVR CORE CONTROL PAGE IDENT |
| 82 0000C | | * SCTZZZ1 | DS | XL1 | UNUSED |
| 82 0000D | | SCTFLG | DS | XL1 | FLAGS |
| 82 0000E | | SCTAVC | DS | XL2 | COUNT OF AVAIL BLKS IN PAGE |
| 82 00010 | | SCTAVB | DS | 0F | AVAILABILITY BITS |
| 82 00010 | | SCTAV1 | DS | F | WORD 1 |
| 82 00014 | | SCTAV2 | DS | F | WORD 2 |

## Symbolic Device Allocation Table (CHASDA)

The Symbolic Device Allocation Table (SDA) provides information on the status and characteristics of each allocable I/O device in the system.
SDA resides in virtual storage, aligned on doubleword boundaries.

SDA has an 8 byte header and a variable number of 64 byte entries. The entries are contiguous and are initialized by Device Management. Each entry is divided into a 32 byte fixed format area and a 32 byte device dependent area.

### CHASDA Storage map

| DEC | HEX | | | | | | |
|-----|-----|---|---|---|---|---|---|
| 0 | 0 | SDAHPS | | | SDAHAL | | |
| 8 | 8 | SDALOC \| SDAFLA | SDASDA | | SDADEV | | |
| 16 | 10 | SDATID | SDAMRB | SDAUSC \| SDAFLB | SDADCE \| SDADM4 | | |
| 24 | 18 | SDAUID | | | | | |
| 32 | 20 | SDATAP | SDAVID | | | | |
| 40 | 28 | SDADM2 | SDANLC | SDALCS | SDATRL | | |
| 48 | 30 | SDAOHI \| SDAOHL | SDAOHK \| SDADFL | SDATOL | SDADPT \| SDADBT | | |
| 56 | 38 | SDAVTC | | SDAPLO \| SDADN | SDAGSC | | |
| 64 | 40 | SDAGSR | | SDANPS | | | |

ORG *-4

| DEC | HEX | | | | |
|-----|-----|---|---|---|---|
| 12 | C | SDADEA | SDADEB | SDADEC | SDADED |

ORG SDADM2

| DEC | HEX | |
|-----|-----|---|
| 40 | 28 | SDAPLM |

ORG SDADM2

| DEC | HEX | |
|-----|-----|---|
| 40 | 28 | SDASPC |

ORG SDALCS

| DEC | HEX | | |
|-----|-----|---|---|
| 44 | 2C | | SDAPST |
| 48 | 30 | SDAPID | |

ORG SDAVTC

| DEC | HEX | | |
|-----|-----|---|---|
| 56 | 38 | SDAPTO | SDAPVMA |

```
DEC      HEX

ORG   SDAPLO

 61       3D                                                    | SDAVLC |
                                                               |_____|

ORG   SDADN

 62       3E                                                   | SDAINV |
                                                               |_____|

ORG   *-4

 64       40|     SDAGSA      |      SDAGSB          |
           |_____|

ORG   SDAGSR

 64       40|              SDAPSM                     |
           |_____|

ORG   SDAPSM

 64       40|     SDADAM      |      SDAPAM          |
           |_____|

ORG   SDATAM

 40       28|                    SDAFORMN                               |
           |_____|
 48       30|              |          SDACARRG            |   SDACHTRN  |
           |_____|_____|_____|
 56       38| SDACHTRN(CONT) | SDADEN |        SDAURSKY                 |
           |_____|_____|_____|
 64       40|SDAURSKY|        SDAUCSKY              |SDAFOLD |
           |_____|_____|_____|
```

**Fields in CHASDA -- by displacement**

| DEC | HEX | FIELD | | DEC | HEX | FIELD | | DEC | HEX | FIELD | |
|-----|-----|-------|---|-----|-----|-------|---|-----|-----|-------|---|
| 0000 | 0000 | SDAHPS | | 0021 | 0015 | SDAAM | (EQU) | 0048 | 0030 | SDAPID | |
| 0004 | 0004 | SDAHAL | | 0021 | 0015 | SDAAX | (EQU) | 0048 | 0030 | SDAOHI | |
| 0008 | 0008 | SDALOC | | 0021 | 0015 | SDAFLB | | 0049 | 0031 | SDAOHL | |
| 0008 | 0008 | SDATEN | | 0022 | 0016 | SDAIOR | (EQU) | 0050 | 0032 | SDACARRG | |
| 0009 | 0009 | SDACE | (EQU) | 0022 | 0016 | SDAIREQ | (EQU) | 0050 | 0032 | SDAOHK | |
| 0009 | 0009 | SDAVV | (EQU) | 0022 | 0016 | SDADCE | | 0051 | 0033 | SDAX07 | (EQU) |
| 0009 | 0009 | SDASD | (EQU) | 0023 | 0017 | SDASF | (EQU) | 0051 | 0033 | SDAX06 | (EQU) |
| 0009 | 0009 | SDAPH | (EQU) | 0023 | 0017 | SDAPF | (EQU) | 0051 | 0033 | SDAX05 | (EQU) |
| 0009 | 0009 | SDAPR | (EQU) | 0023 | 0017 | SDADM4 | | 0051 | 0033 | SDADFL | |
| 0009 | 0009 | SDAAV | (EQU) | 0024 | 0018 | SDAUID | | 0052 | 0034 | SDATOL | |
| 0009 | 0009 | SDAFLA | | 0032 | 0020 | SDATAP | | 0054 | 0036 | SDACHTRN | |
| 0010 | 000A | SDASDA | | 0034 | 0022 | SDAVID | | 0054 | 0036 | SDADPT | |
| 0012 | 000C | SDADEA | | 0040 | 0028 | SDAFORMN | | 0055 | 0037 | SDADBT | |
| 0012 | 000C | SDADEV | | 0040 | 0028 | SDASPC | | 0056 | 0038 | SDAPTO | |
| 0013 | 000D | SDADEB | | 0040 | 0028 | SDAPLM | | 0056 | 0038 | SDAVTC | |
| 0014 | 000E | SDADEC | | 0040 | 0028 | SDADM2 | | 0058 | 003A | SDADEN | |
| 0015 | 000F | SDADED | | 0040 | 0028 | SDATM1 | | 0058 | 003A | SDAPVMA | |
| 0016 | 0010 | SDATID | | 0040 | 0028 | SDATAM | | 0059 | 003B | SDAURSKY | |
| 0018 | 0012 | SDAMRB | | 0041 | 0029 | SDATM2 | (EQU) | 0061 | 003D | SDAVLC | |
| 0020 | 0014 | SDAUSC | | 0042 | 002A | SDANLC | | 0061 | 003D | SDAPLO | |
| 0021 | 0015 | SDARNG | (EQU) | 0042 | 002A | SDATM3 | (EQU) | 0062 | 003E | SDAINV | |
| 0021 | 0015 | SDALAB | (EQU) | 0044 | 002C | SDAPST | | 0062 | 003E | SDADN | |
| 0021 | 0015 | SDAVT | (EQU) | 0044 | 002C | SDALCS | | 0063 | 003F | SDAGSC | |
| 0021 | 0015 | SDAPP | (EQU) | 0046 | 002E | SDATRL | | 0064 | 0040 | SDADAM | |

| DEC | HEX | FIELD | | DEC | HEX | FIELD | | DEC | HEX | FIELD | |
|------|------|---------|---|------|------|---------|---|------|------|--------|------|
| 0064 | 0040 | SDAPSM | | 0066 | 0042 | SDAPAM | | 0072 | 0048 | SDAND | |
| 0064 | 0040 | SDAGSA | | 0066 | 0042 | SDAGSB | | 0072 | 0048 | SDAEND | (EQU) |
| 0064 | 0040 | SDAGSR | | 0068 | 0044 | SDANPS | | | | | |
| 0065 | 0041 | SDAUCSKY | | 0071 | 0047 | SDAFOLD | | | | | |

## Alphabetical list of fields in CHASDA

| FIELD | DEC | HEX | | FIELD | DEC | HEX | | FIELD | DEC | HEX | |
|---------|------|------|-------|---------|------|------|-------|---------|------|------|-------|
| SDAAM | 0021 | 0015 | (EQU) | SDAGSR | 0064 | 0040 | | SDARNG | 0021 | 0015 | (EQU) |
| SDAAV | 0009 | 0009 | (EQU) | SDAHAL | 0004 | 0004 | | SDASD | 0009 | 0009 | (EQU) |
| SDAAX | 0021 | 0015 | (EQU) | SDAHPS | 0000 | 0000 | | SDASDA | 0010 | 000A | |
| SDACARRG | 0050 | 0032 | | SDAINV | 0062 | 003E | | SDASF | 0023 | 0017 | (EQU) |
| SDACE | 0009 | 0009 | (EQU) | SDAIOR | 0022 | 0016 | (EQU) | SDASPC | 0040 | 0028 | |
| SDACHTRN | 0054 | 0036 | | SDAIREQ | 0022 | 0016 | (EQU) | SDATAM | 0040 | 0028 | |
| SDADAM | 0064 | 0040 | | SDALAB | 0021 | 0015 | (EQU) | SDATAP | 0032 | 0020 | |
| SDADBT | 0055 | 0037 | | SDALCS | 0044 | 002C | | SDATEN | 0008 | 0008 | |
| SDADCE | 0022 | 0016 | | SDALOC | 0008 | 0008 | | SDATID | 0016 | 0010 | |
| SDADEA | 0012 | 000C | | SDAMRB | 0018 | 0012 | | SDATM1 | 0040 | 0028 | |
| SDADEB | 0013 | 000D | | SDAND | 0072 | 0048 | | SDATM2 | 0041 | 0029 | (EQU) |
| SDADEC | 0014 | 000E | | SDANLC | 0042 | 002A | | SDATM3 | 0042 | 002A | (EQU) |
| SDADED | 0015 | 000F | | SDANPS | 0068 | 0044 | | SDATOL | 0052 | 0034 | |
| SDADEN | 0058 | 003A | | SDAOHI | 0048 | 0030 | | SDATRL | 0046 | 002E | |
| SDADEV | 0012 | 000C | | SDAOHK | 0050 | 0032 | | SDAUCSKY | 0065 | 0041 | |
| SDADFL | 0051 | 0033 | | SDAOHL | 0049 | 0031 | | SDAUID | 0024 | 0018 | |
| SDADM2 | 0040 | 0028 | | SDAPAM | 0066 | 0042 | | SDAURSKY | 0059 | 003B | |
| SDADM4 | 0023 | 0017 | | SDAPF | 0023 | 0017 | (EQU) | SDAUSC | 0020 | 0014 | |
| SDADN | 0062 | 003E | | SDAPH | 0009 | 0009 | (EQU) | SDAVID | 0034 | 0022 | |
| SDADPT | 0054 | 0036 | | SDAPID | 0048 | 0030 | | SDAVLC | 0061 | 003D | |
| SDAEND | 0072 | 0048 | (EQU) | SDAPLM | 0040 | 0028 | | SDAVT | 0021 | 0015 | (EQU) |
| SDAFLA | 0009 | 0009 | | SDAPLO | 0061 | 003D | | SDAVTC | 0056 | 0038 | |
| SDAFLB | 0021 | 0015 | | SDAPP | 0021 | 0015 | (EQU) | SDAVV | 0009 | 0009 | (EQU) |
| SDAFOLD | 0071 | 0047 | | SDAPR | 0009 | 0009 | (EQU) | SDAX05 | 0051 | 0033 | (EQU) |
| SDAFORMN | 0040 | 0028 | | SDAPSM | 0064 | 0040 | | SDAX06 | 0051 | 0033 | (EQU) |
| SDAGSA | 0064 | 0040 | | SDAPST | 0044 | 002C | | SDAX07 | 0051 | 0033 | (EQU) |
| SDAGSB | 0066 | 0042 | | SDAPTO | 0056 | 0038 | | | | | |
| SDAGSC | 0063 | 003F | | SDAPVMA | 0058 | 003A | | | | | |

## Assembler listing of CHASDA

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|----------|-------------|--------|------|------|---------|
| | 83 00000 | CHASDA | DSECT | | SYMBOLIC DEVICE ALLOCATION TABLE |
| | | * | | | |
| 83 00000 | | | DS | 0D | ALIGN TO DOUBLE WORD BOUNDARY |
| | | * | | | |
| 83 00000 | | SDAHPS | DS | F | FIRST PUBLIC DEVICE |
| 83 00004 | | SDAHAL | DS | F | ADDRESS OF LAST ENTRY |
| 83 00008 | | | DS | 0D | ALIGN TO DOUBLE WORD BOUNDARY |
| | | * | | | |
| 83 00008 | | SDATEN | DS | 0CL64 | SDAT ENTRY |
| 83 00008 | | SDALOC | DS | XL1 | ENTRY LOCK BYTE X'FF' - IN USE |
| | | * | | | |
| 83 00009 | | SDAFLA | DS | XL1 | FIRST FLAG BYTE |
| | 83 00009 | SDAAV | EQU | SDAFLA | AVAILABLE FLAG 1=AVAILABLE |
| | 00000080 | SDAAVM | EQU | X'80' | |
| | 83 00009 | SDAPR | EQU | SDAFLA | PARTITIONED FLAG 1= PARTIONED |
| | | * | | | |
| | 00000040 | SDAPRM | EQU | X'40' | |
| | 83 00009 | SDAPH | EQU | SDAFLA | DETACHED FLAG 1=DETACHED |
| | 00000020 | SDAPHM | EQU | X'20' | |
| | 83 00009 | SDASD | EQU | SDAFLA | SYSTEM DEVICE FLAG |
| | 00000010 | SDASDM | EQU | X'10' | 1 = RESERVED |
| | 83 00009 | SDAVV | EQU | SDAFLA | VOLUME VERIFICATION FLAG |
| | 00000008 | SDAVVM | EQU | X'08' | 1 = VERIFIED |
| | 83 00009 | SDACE | EQU | SDAFLA | DEVICE HELD BY MAIN OPERATOR     N393 |
| | | * | | | |
| | 00000004 | SDACEM | EQU | X'04' | 1=HELD, SET BY HOLD AND |

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|---|---|---|---|---|---|
| | | * | | | N393 |
| | | * | | | RESET BY DROP |
| | | * | | | N393 |
| 83 0000A | | SDASDA | DS | H | SYMBOLIC DEVICE ADDRESS |
| 83 0000C | | | DS | 0F | |
| 83 0000C | | SDADEV | DS | XL4 | DEVICE CODE |
| | 83 0000C | |ORG| | *-4 | SUBFIELD ALIGNMENT |
| 83 0000C | | SDADEA | DS | XL1 | MODEL CODE |
| | 00000001 | SDAMCA | EQU | X'01' | 1050   TERMINAL SYSTEM MASK |
| | | * | | | - TAM |
| | 00000002 | SDAMCB | EQU | X'02' | 2741   TERMINAL MASK - TAM |
| | 00000003 | SDAMCC | EQU | X'03' | MOD   35 TTY MASK - TAM |
| | 00000004 | SDAMCD | EQU | X'04' | 1052 - MOD 7 TERMINAL MASK |
| | | * | | | - TAM |
| | 00000000 | SDAANT | EQU | X'00' | MODEL NOT A TERMINAL |
| 83 0000D | | SDADEB | DS | XL1 | DEVICE CLASS |
| | 00000001 | SDADCA | EQU | X'01' | DIAL LINE MASK - TAM |
| | 00000002 | SDADCB | EQU | X'02' | DEDICATED LINE MASK - TAM |
| | 00000004 | SDADCD | EQU | X'04' | AUTOMATIC CALL FEATURE - |
| | | * | | | TAM |
| | 00000008 | SDABUR | EQU | X'08' | DEVICE CLASS UNIT RECORD |
| | 00000020 | SDABDA | EQU | X'20' | DEVICE CLASS DIRECT ACCESS |
| | 00000080 | SDABMT | EQU | X'80' | DEVICE CLASS MAGNETIC TAPE |
| | 00000040 | SDARJE | EQU | X'40' | REMOTE JOB ENTRY DEVICE |
| 83 0000E | | SDADEC | DS | XL1 | UNIT TYPE |
| | 00000010 | SDAUT1 | EQU | X'10' | IBM TERMINAL CONTROL TYPE 1 |
| | | * | | | MASK - TAM |
| | 00000020 | SDAUT2 | EQU | X'20' | IBM TERMINAL CONTROL TYPE 2 |
| | | * | | | MASK - TAM |
| | 00000030 | SDAUT3 | EQU | X'30' | TELEGRAPH CONTROL TYPE 1 |
| | | * | | | MASK - TAM |
| | 00000040 | SDAUT4 | EQU | X'40' | TELEGRAPH CONTROL TYPE 2 |
| | | * | | | MASK - TAM |
| | 00000080 | SDAUT5 | EQU | X'80' | WORLD TRADE TERMINAL |
| | | * | | | CONTROL MASK - TAM |
| | 00000001 | SDAUTA | EQU | X'01' | 2702 TRANSMISSION CONTROL |
| | | * | | | MASK - TAM |
| | 00000002 | SDAUTB | EQU | X'02' | 2701 ON MULTIPLEXOR CHANNEL |
| | | * | | | - TAM |
| | 00000003 | SDAUTC | EQU | X'03' | MULTIPLEXOR CHANNEL MASK - |
| | | * | | | TAM (1052-7) |
| | 00000004 | SDAUTD | EQU | X'04' | SELECTOR CHANNEL MASK - TAM |
| | | * | | | (1052-7) |
| | 00000005 | SDAUTE | EQU | X'05' | 2701 ON SELECTOR CHANNEL |
| | 00000006 | SDAUTF | EQU | X'06' | 2703 TRANSMISSION CONTROL |
| | 00000001 | SDACRD | EQU | X'01' | 2540 OR 2780 CARD READER |
| | | * | | | I5650 |
| | 00000002 | SDACPN | EQU | X'02' | 2540 CARD PUNCH |
| | 00000008 | SDACPT | EQU | X'08' | 1403 OR 2780 PRINTER |
| | | * | | | I5650 |
| | 00000010 | SDAPPT | EQU | X'10' | 2671 PPT READER |
| | 00000001 | SDADA11 | EQU | X'01' | 2311 D/A |
| | 00000002 | SDADA01 | EQU | X'02' | 2301 D/A |
| | 00000003 | SDADA21 | EQU | X'03' | 2321 D/A |
| | 00000008 | SDADA14 | EQU | X'08' | 2314 D/A |
| | 00000001 | SDATAPE | EQU | X'01' | 2400 SERIES |
| 83 0000F | | SDADED | DS | XL1 | OPTIONAL FEATURES |
| | 00000010 | SDAOFA | EQU | X'10' | IBM LINE ADAPTER TYPE 1 - |
| | | * | | | TAM |
| | 00000020 | SDAOFB | EQU | X'20' | IBM LINE ADAPTER TYPE 2 - |
| | | * | | | TAM |
| | 00000030 | SDAOFC | EQU | X'30' | DATA SET LINE ADAPTER - TAM |
| | 00000040 | SDAOFD | EQU | X'40' | AUTOMATIC CALL ADAPTER - |
| | | * | | | TAM |
| | 00000050 | SDAOFE | EQU | X'50' | TELEGRAPH LINE ADAPTER - |
| | | * | | | TAM |
| | 00000000 | SDAOF1 | EQU | X'00' | SAD ZERO MASK - TAM |
| | 00000001 | SDAOF2 | EQU | X'01' | SAD ONE MASK - TAM |

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|---|---|---|---|---|---|
| | 00000002 | SDAOF3 | EQU | X'02' | SAD TWO MASK - TAM |
| | 00000003 | SDAOF4 | EQU | X'03' | SAD THREE MASK - TAM |
| | 00000040 | SDAPFR | EQU | X'40' | PUNCH FEED READ |
| | 00000080 | SDAOCI | EQU | X'80' | CARD IMAGE |
| | 00000080 | SDADUC | EQU | X'80' | UNIVERSAL CHARACTER SET - |
| | | * | | | (PTR) |
| | 00000080 | SDASCN | EQU | X'80' | SCAN - D/A |
| | 00000040 | SDATRV | EQU | X'40' | TRACK OVERFLOW - D/A |
| | 000000B0 | SDASTO | EQU | X'B0' | SCAN AND TRACK OVERFLOW - |
| | | * | | | D/A |
| | 000000E0 | SDATPW | EQU | X'E0' | 7-TRACK WITH DATA |
| | | * | | | CONVERSION |
| | 000000A0 | SDATPN | EQU | X'A0' | 7-TRACK WITHOUT DATA |
| | | * | | | CONVERSION |
| | 000000C0 | SDATR9 | EQU | X'C0' | 9-TRACK TAPE |
| | 00000080 | SDATP9 | EQU | X'80' | 9-TRACK TAPE |
| 83 00010 | | SDATID | DS | H | TASK ID |
| 83 00012 | | SDAMRB | DS | H | MAX NUMBER OF IORCB'S |
| 83 00014 | | SDAUSC | DS | XL1 | USER COUNT |
| 83 00015 | | SDAFLB | DS | XL1 | SECOND FLAG BYTE |
| | 83 00015 | SDAAX | EQU | SDAFLB | STORAGE FLAG 0=AUXILIARY |
| | 00000080 | SDAAXM | EQU | X'80' | 1 = EXTERNAL |
| | 83 00015 | SDAAM | EQU | SDAFLB | V/S FLAG 0=VAM; 1=SAM |
| | 00000040 | SDAAMM | EQU | X'40' | 1 = SAM |
| | 83 00015 | SDAPP | EQU | SDAFLB | PUBLIC AND PRIVATE |
| | 00000020 | SDAPPM | EQU | X'20' | 0 = PRIVATE) 1= PUBLIC |
| | 83 00015 | SDAVT | EQU | SDAFLB | LOW VTOC COUNT 1=COW |
| | 00000010 | SDAVTM | EQU | X'10' | |
| | 83 00015 | SDALAB | EQU | SDAFLB | LABELLED TAPE INDICATOR |
| | | * | | | N373** |
| | 00000008 | SDALABM | EQU | X'08' | LABELLED TAPE MASK |
| | | * | | | N373** |
| | 83 00015 | SDARNG | EQU | SDAFLB | FILE PROTECT RING IN FOR |
| | | * | | | WRITING N373** |
| | 00000004 | SDARNGM | EQU | X'04' | FILE PROTECT RING IN MASK |
| | | * | | | N373** |
| 83 00016 | | SDADCE | DS | X | KEYBOARD TYPE |
| | 00000001 | SDADC1 | EQU | X'01' | 1050 PTTC/8 (FOLDED) |
| | 00000002 | SDADC2 | EQU | X'02' | 2741 CORRESPONDENCE |
| | | * | | | (FOLDED) |
| | 00000003 | SDADC3 | EQU | X'03' | 2741 PTTC/B (FOLDED) |
| | 00000004 | SDADC4 | EQU | X'04' | TTY35 ASCII (FOLDED) |
| | 00000005 | SDADC5 | EQU | X'05' | 1052-7 EBCDIC |
| | 83 00016 | SDAIREQ | EQU | SDADCE | IOREQ FLAG BYTE |
| | 83 00016 | SDAIOR | EQU | SDAIREQ | IOREQ ALLOWED FLAG |
| | 00000008 | SDAIOM | EQU | X'08' | IOREQ ALLOWED MASK |
| 83 00017 | | SDADM4 | DS | XL1 | THIRD FLAG BYTE |
| | 83 00017 | SDAPF | EQU | SDADM4 | STATUS OF |
| | | * | | | V-CON,1#PRIVILEGED |
| | 00000080 | SDAPFM | EQU | X'80' | |
| | 83 00017 | SDASF | EQU | SDADM4 | ASYNC INTERRUPT SUPPRESS 1= |
| | | * | | | YES |
| | 00000040 | SDASFM | EQU | X'40' | |
| 83 00018 | | SDAUID | DS | CL8 | USER ID |
| 83 00020 | | SDATAP | DS | H | TAPE POSITION CODE |
| 83 00022 | | SDAVID | DS | XL6 | VOLUME ID |
| 83 00028 | | SDATAM | DS | 0CL3 | TAM WORK AREA |
| 83 00028 | | SDATM1 | DS | 0XL1 | TAM DCB COUNT |
| | 83 00029 | SDATM2 | EQU | SDATM1+1 | TAM ACTIVE IORCB COUNT |
| | 83 0002A | SDATM3 | EQU | SDATM1+2 | OPERATION CODE |
| | 00000001 | SDATM4 | EQU | X'01' | READ OP CODE |
| | 00000002 | SDATM5 | EQU | X'02' | WRITE OP CODE |
| 83 00028 | | SDADM2 | DS | CL2 | |
| 83 00028 | | | |ORG| | SDADM2 |
| 83 00028 | | SDAPLM | DS | XL2 | PAT TABLE LOCK BIT MASK |
| | | * | | | ONE BIT FOR EACH PAT PAGE |
| 83 00028 | | | |ORG| | SDADM2 |
| 83 00028 | | SDASPC | DS | H | TOTAL SPACE CAPACITY OF |

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|---|---|---|---|---|---|
| | | * | | | VOLUME |
| 83 0002A | | SDANLC | DS | H | NO OF LOGICAL |
| | | * | | | CYLINDERS/VOLUME |
| | | * | | | VOLUME |
| 83 0002C | | SDALCS | DS | H | NO OF TRACK/LOGICAL |
| | | * | | | CYLINDER |
| | | * | | | CYLINDERS |
| 83 0002E | | SDATRL | DS | H | NO OF AVAILABLE BYTES/TRACK |
| | | * | | | TRACK |
| 83 00030 | | SDAOHI | DS | XL1 | OVERHEAD FOR KEYED RECORD |
| 83 00031 | | SDAOHL | DS | XL1 | OVERHEAD FOR LAST KEYED |
| | | * | | | RECORD ON TRACK |
| | 83 0002C | | |ORG| | SDALCS | |
| 83 0002C | | SDAPST | DS | A | PSECT ADDR OF MODULE WHICH |
| | | * | | | N333.1 |
| | | * | | | REQUIRED LOCK SET |
| | | * | | | N333.1 |
| 83 00030 | | SDAPID | DS | XL2 | TASKID WHICH SET SDAPLO |
| | | * | | | LOCK   N333.1 |
| 83 00032 | | SDAOHK | DS | XL1 | OVERHEAD BYTES TO BE |
| | | * | | | SUBTRACTED IF NO KEY |
| 83 00033 | | SDADFL | DS | XL1 | FLAG FIELD |
| | 83 00033 | SDAX05 | EQU | SDADFL | CCHH IS USED AS IN 2301 |
| | 00000004 | SDAM05 | EQU | X'04' | |
| | 83 00033 | SDAX06 | EQU | SDADFL | CCHH IS USED AS IN 2321 |
| | 00000002 | SDAM06 | EQU | X'02' | |
| | 83 00033 | SDAX07 | EQU | SDADFL | TOLERANCE MUST BE APPLIED |
| | 00000001 | SDAM07 | EQU | X'01' | |
| 83 00034 | | SDATOL | DS | H | TOLERANCE/512 GIVES |
| | | * | | | EFFECTIVE |
| | | * | | | LENGTH OF RECORD |
| 83 00036 | | SDADPT | DS | XL1 | DSCB/TRACK |
| 83 00037 | | SDADBT | DS | XL1 | DIRECTORY BLOCKS/TRACK |
| 83 00038 | | SDAVTC | DS | XL5 | VTOC ADDRESS |
| | 83 00038 | | |ORG| | SDAVTC | |
| 83 00038 | | SDAPTO | DS | H | VOL. PG. NO. OF 1ST PG. OF |
| | | * | | | PAT TABLE |
| 83 0003A | | SDAPVMA | DS | XL3 | CONTAINS THE HI-ORDER 24 |
| | | * | | | BITS OF |
| | | * | | | THE 32-BIT V.M. ADDR. OF |
| | | * | | | PAT TABLE |
| 83 0003D | | SDAPLO | DS | XL1 | PAT TABLE LOCK BYTE |
| | 83 0003D | | |ORG| | SDAPLO | |
| 83 0003D | | SDAVLC | DS | XL1 | VTOC LOCK BYTE X'FF' - IN |
| | | * | | | USE |
| 83 0003E | | SDADN | DS | XL1 | TAPE DENSITY |
| | 00000003 | SDADN1 | EQU | X'03' | 200 BPI |
| | 00000043 | SDADN2 | EQU | X'43' | 556 BPI |
| | 00000083 | SDADN3 | EQU | X'83' | 800 BPI |
| | 83 0003E | | |ORG| | SDADN | REDEFINE FIELD |
| | | * | | | N472 |
| 83 0003E | | SDAINV | DS | X | FLAG BYTE |
| | | * | | | N472 |
| | 00000080 | SDAINVM | EQU | X'80' | INVALID PAT ON THIS VOLUME |
| | | * | | | N472 |
| 83 0003F | | SDAGSC | DS | XL1 | GROSS AVAILABLE FLAG X'FF' |
| | | * | | | IF |
| | | * | | | GSA AND GSB ARE VALID |
| 83 00040 | | SDAGSR | DS | F | FOR VAM-TOTAL NUMBER OF |
| | | * | | | AVAILABLE PAGES |
| | 83 00040 | | |ORG| | *-4 | FOR SAM-NUMBER OF COMPLETE |
| | | * | | | CYLINDERS |
| 83 00040 | | SDAGSA | DS | H | AVAILABLE |
| 83 00042 | | SDAGSB | DS | H | FOR SAM NUMBER OF  TRACKS |
| | | * | | | AVAILABLE |
| | | * | | | WITHIN INCOMPLETE CYLINDERS |
| | 83 00040 | | |ORG| | SDAGSR | |
| 83 00040 | | SDAPSM | DS | F | PAT SUMMARY MASK |

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|---|---|---|---|---|---|
| | | * | | | IF PAGE IS AVAILABLE   BIT=0 |
| | 83 00040 | | \|ORG\| | SDAPSM | |
| 83 00040 | | SDADAM | DS | H | DSCB AVAILABILITY MASK |
| 83 00042 | | SDAPAM | DS | H | PAGE AVAILABILITY MASK |
| | | * | | | WITHIN INCOMPLETE CYLINDERS |
| 83 00044 | | SDANPS | DS | F | POINTER TO NEXT PUBLIC |
| | | * | | | STORAGE |
| | | * | | | ENTRY. IF THIS ENTRY IS |
| | | * | | | NOT A |
| | | * | | | PUBLIC DEVICE OR IF THIS IS |
| | | * | | | THE LAST PUBLIC DEVICE, THIS |
| | | * | | | FIELD IS EQUAL TO ZERO. |
| | 83 00048 | SDAEND | EQU | * | |
| | 83 00028 | | \|ORG\| | SDATAM | REORIGIN FOR MSAM |
| 83 00028 | | SDAFORMN | DS | CL10 | PUNCH OR PRINT FORM NUMBER |
| 83 00032 | | SDACARRG | DS | CL4 | PRINTER CARRIAGE TAPE |
| | | * | | | NUMBER |
| 83 00036 | | SDACHTRN | DS | CL4 | PRINTER CHAIN/TRAIN |
| 83 0003A | | SDADEN | DS | CL1 | PRINT DENSITY |
| | 000000F6 | SDADEN6 | EQU | C'6' | 6 LINES/INCH |
| | 000000F8 | SDADEN8 | EQU | C'8' | 8 LINES/INCH |
| 83 0003B | | SDAURSKY | DS | CL6 | SYSURS DATA SET KEY |
| 83 00041 | | SDAUCSKY | DS | CL6 | SYSUCS DATA SET KEY |
| 83 00047 | | SDAFOLD | DS | CL1 | UCS FOLD OPTION |
| | 000000C6 | SDAFOLDF | EQU | C'F' | FOLDED |
| | 000000E4 | SDAFOLDU | EQU | C'U' | UNFOLDED |
| 83 00048 | | SDAND | DS | 0X | END OF SDAT ENTRY |
| | | * | | | I5943 |
| | 00000040 | SDASZE | EQU | SDAND-SDATEN | SDAT ENTRY SIZE |
| | | * | | | I5943 |
| | 00000048 | SDASIZ | EQU | SDAEND-SDAHPS | LENGTH OF SDAT TABLE |

\* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \*
```
*                              SDADEV DEVICE
*              SDADEA                        MODEL CODE
*              SDADEB                        DEVICE CLASSES
*              SDADEC                        UNIT TYPE
*              SDADED                        OPTIONAL FEATURES
*    SDADEA              SDADEB              SDADEC
*        SDADED
*    00                  08=UNIT             01=2540 READER
*    BIT 0=1 CARD IMAGE
*                        RECORD              02=2540 PUNCH
*                        BIT 0=1 CARD IMAGE
*                        BIT 1=1 PUNCH FEED
*                        READ
*                        08=1403 PRINTER     BIT 0=1
*                        UNIVERSAL
*                        10=2671 PPT READER NONE
*                        CHARACTER
*                        20=DIRECT       01=2311
*                        BIT 0=1 SCAN
*                        ACCESS          02=2301
*                            BIT 1=1 TRACK
*                        03=2321
*                        OVERFLOW
*                        08=2314
*                        80=MAGNETIC     01=2400 SERIES
*                        E0=7 TRACK WITH
*                        TAPE
*                            DATA CONVERSION
*                        A0=7 TRACK WITHOUT
*                        DATA CONVERSION
*                        00,C0,80=9 TRACK
```
\* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \*

Shared Data Set Table (CHASDS, CHASDM, & CHASDE)

The Shared Data Set Table (SDST), controls the use of shared data sets and shared data set members. The SDST consists of three sections. The first section, the control entry and hashing table (SDS), controls the available space in the SDST through links to data set entries, and deleted member entries. The second section of the SDST, the member entry (SDM), related members of the shared partitioned data set to shared pages. The third section, the data set entry (SDE), locates shared data sets and relates these data sets to shared pages.

The SDST occupies a minimum of 372 bytes of virtual storage, aligned on doubleword boundaries.

```
                    |                                       |
                    |<------------------4 bytes------------------>|
                    |                                       |
                    +----------------------------------------+
                    |                                        |
                    |       Control Entry (36 bytes)         |
                    |                                        |
                    +----------------------------------------+      CHASDS
                    |                                        |
                    |       Hashing Table (256 bytes)        |
                    |                                        |
                    +----------------------------------------+
                    |                                        |
                    |       Member Entry (28 bytes)          |      CHASDM
                    |                                        |
                    +----------------------------------------+
                    |                                        |
                    |       Data Set Entry (64 bytes)        |      CHASDE
                    |                                        |
                    L_____J
```
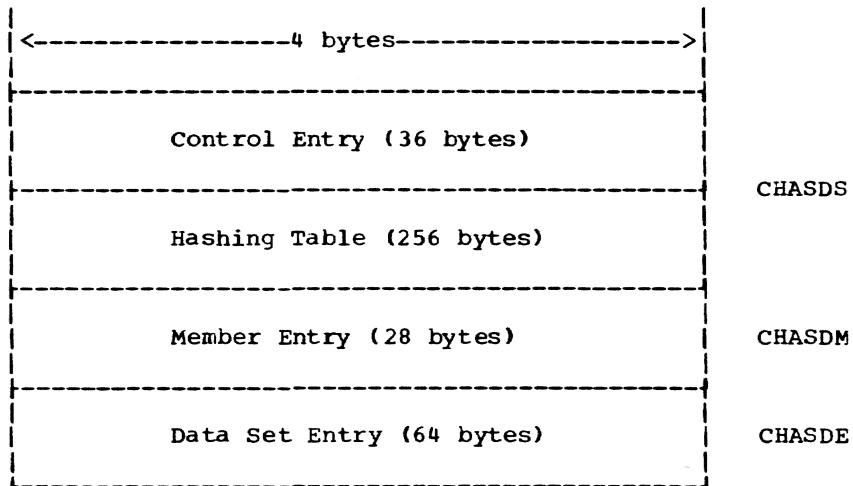
Shared Data Set Table (CHASDS, CHASDM, CHASDE)

CHASDS Storage map

| DEC | HEX | | | | |
|---|---|---|---|---|---|
| 0 | 0 | SDSINT | SDSLPN | SDSSPT | SDSAVA |
| 8 | 8 | SDSDE | | | SDSDME |
| 16 | 10 | SDSDSE | | | |
| = | | | | SDSHAS | = |
| 272 | 110 | | | SDSPLK | UNNAMED |
| 280 | 118 | | SDSPSN | | |
| 288 | 120 | | | | |

Fields in CHASDS -- by displacement

| DEC | HEX | FIELD | DEC | HEX | FIELD | DEC | HEX | FIELD |
|---|---|---|---|---|---|---|---|---|
| 0000 | 0000 | SDSINT | 0004 | 0004 | SDSAVA | 0020 | 0014 | SDSHAS |
| 0000 | 0000 | SDSCON | 0008 | 0008 | SDSDE | 0276 | 0114 | SDSPLK |
| 0001 | 0001 | SDSLPN | 0012 | 000C | SDSDME | 0280 | 0118 | SDSPSN |
| 0002 | 0002 | SDSSPT | 0016 | 0010 | SDSDSE | | | |

## Alphabetical list of fields in CHASDS

| FIELD | DEC | HEX | FIELD | DEC | HEX | FIELD | DEC | HEX |
|-------|------|------|--------|------|------|--------|------|------|
| SDSAVA | 0004 | 0004 | SDSDSE | 0016 | 0010 | SDSPLK | 0276 | 0114 |
| SDSCON | 0000 | 0000 | SDSHAS | 0020 | 0014 | SDSPSN | 0280 | 0118 |
| SDSDE | 0008 | 0008 | SDSINT | 0000 | 0000 | SDSSPT | 0002 | 0002 |
| SDSDME | 0012 | 000C | SDSLPN | 0001 | 0001 | | | |

## Assembler listing of CHASDS

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|----------|-------------|--------|------|------|---------|
| | 86 00000 | CHASDS | DSECT | | SHARED DATA SET TABLE |
| 86 00000 | | | DS | 0D | |
| 86 00000 | | SDSCON | DS | 0XL20 | SHARED DATA SET CONTROL |
| | | * | | | ENTRY |
| 86 00000 | | SDSINT | DS | XL1 | INTERLOCK CONTROL |
| 86 00001 | | SDSLPN | DS | XL1 | LAST RELATIVE PAGE NUMBER |
| 86 00002 | | SDSSPT | DS | XL2 | LAST ASSIGNED SPT NUMBER |
| 86 00004 | | SDSAVA | DS | XL4 | NEXT AVAILABLE SDST SPACE |
| 86 00008 | | SDSDE | DS | XL4 | FIRST DELETED DATA SET |
| | | * | | | ENTRY |
| 86 0000C | | SDSDME | DS | XL4 | FIRST DELETED MEMBER ENTRY |
| 86 00010 | | SDSDSE | DS | XL4 | FIRST DATA SET ENTRY |
| 86 00014 | | SDSHAS | DS | XL256 | MEMBER HASHING TABLE |
| 86 00114 | | SDSPLK | DS | XL2 | USERID OF TASK THAT HAS |
| | | * | | | LOCKED M4171 |
| | | * | | | THE SDST |
| | | * | | | M4171 |
| 86 00116 | | | DS | XL2 | RESERVED |
| | | * | | | M4171 |
| 86 00118 | | SDSPSN | DS | 3F | RESERVED |
| | | * | | | M4171 |

## CHASDM Storage map

```
DEC   HEX
  0     0 |_____SDMCHN_____|_____SDMNUR_____|_____SDMSPT_____|
  8     8 |_____SDMHPT_____|_____SDMLSD_____|
 16    10 |_____SDMNAM_____|
 24    18 |_____SDMFSB_____|
```

## ORG   SDMHPT

```
  8     8 |_____SDMNSP_____|_____SDMFSP_____|
```

## Fields in CHASDM -- by displacement

| DEC | HEX | FIELD | DEC | HEX | FIELD | DEC | HEX | FIELD | |
|------|------|--------|------|------|--------|------|------|--------|------|
| 0000 | 0000 | SDMCHN | 0008 | 0008 | SDMHPT | 0024 | 0018 | SDMCOD | (EQU) |
| 0004 | 0004 | SDMNUR | 0010 | 000A | SDMFSP | 0024 | 0018 | SDMFSB | |
| 0006 | 0006 | SDMSPT | 0012 | 000C | SDMLSD | | | | |
| 0008 | 0008 | SDMNSP | 0016 | 0010 | SDMNAM | | | | |

## Alphabetical list of fields in CHASDM

| FIELD | DEC | HEX | | FIELD | DEC | HEX | | FIELD | DEC | HEX |
|--------|------|------|------|--------|------|------|------|--------|------|------|
| SDMCHN | 0000 | 0000 | | SDMHPT | 0008 | 0008 | | SDMNUR | 0004 | 0004 |
| SDMCOD | 0024 | 0018 | (EQU) | SDMLSD | 0012 | 000C | | SDMSPT | 0006 | 0006 |
| SDMFSB | 0024 | 0018 | | SDMNAM | 0016 | 0010 | | | | |
| SDMFSP | 0010 | 000A | | SDMNSP | 0008 | 0008 | | | | |

## Assembler listing of CHASDM

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|----------|-------------|--------|------|------|---------|
| | 85 00000 | CHASDM | DSECT | | SHARED DATA SET MEMBER |
| | | * | | | ENTRY |
| 85 00000 | | | DS | 0D | |
| 85 00000 | | SDMCHN | DS | XL4 | MEMBER CHAIN ENTRY |
| 85 00004 | | SDMNUR | DS | XL2 | NUMBER USERS THIS MEMBER |
| 85 00006 | | SDMSPT | DS | XL2 | WHEN FFFF INDICATES TEMP |
| | | * | | | LOCK    M4171 |
| | | * | | | ON MEMBER. LATER IT |
| | | * | | | CONTAINS    M4171 |
| | | * | | | THE SHARED PAGE TABLE |
| | | * | | | NUMBER    M4171 |
| | | * | | | OF VMA ASSIGNED. |
| | | * | | | M4171 |
| 85 00008 | | SDMHPT | DS | 1F | POINTER TO HOST SDST IF |
| | | * | | | SYMBIONT ENTRY |
| | 85 00008 | | |ORG| | SDMHPT | |
| 85 00008 | | SDMNSP | DS | HL2 | NUMBER OF SPT PGS OF HOST |
| | | * | | | M4171 |
| 85 0000A | | SDMFSP | DS | XL2 | TASKID THAT BUILT MEMBER |
| | | * | | | M4171 |
| 85 0000C | | SDMLSD | DS | AL4 | LINK ADDR TO DATA SET ENTRY |
| | | * | | | M4171 |
| 85 00010 | | SDMNAM | DS | CL8 | MEMBER NAME |
| 85 00018 | | SDMFSB | DS | XL4 | BYTE ADDRESS RELATIVE TO |
| | | * | | | BEGINNING |
| | 85 00018 | SDMCOD | EQU | SDMFSB | HOST/SYMBIONT CODE (ONE |
| | | * | | | BYTE) |
| | 00000000 | SDMHST | EQU | X'00' | HOST CODE |
| | 00000001 | SDMSYM | EQU | X'01' | SYMBIONT CODE |
| | 00000002 | SDMPAK | EQU | X'02' | CSECT PACKING INDICATOR |
| | | * | | | M3234 |

CHASDE Storage map

```
DEC   HEX
  0    0 | _____SDECHN_____|SDEINW_|SDEINR_|SDEINN_|SDEINI_|
         |                            |       |       |       |       |
  8    8 |____SDENUR____|____SDESPT____|_____SDENSP_____|_____SDEFSP_____|
         |              |              |                |                |
 16   10 |                                                               |
         =                          - SDENAM                             =
         |                                                               |
         |                                                               |
 56   38 |                          |_____SDESPR_____|
         |_____|_____|
```
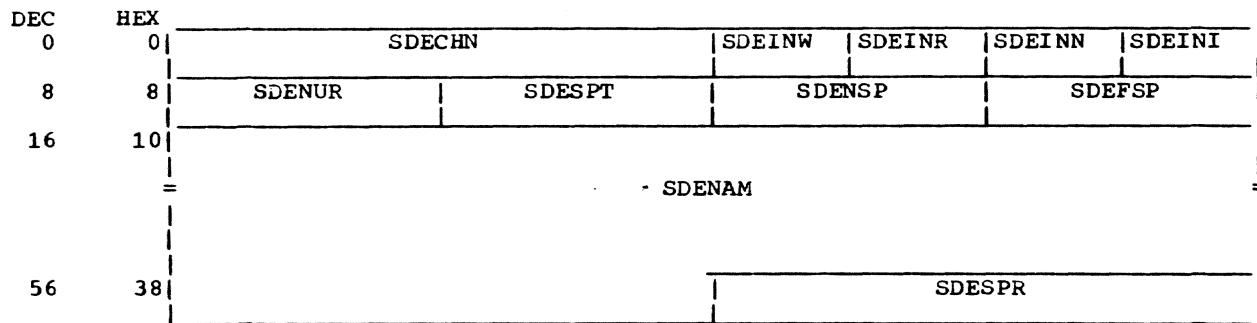
Fields in CHASDE -- by displacement

| DEC | HEX | FIELD | DEC | HEX | FIELD | DEC | HEX | FIELD |
|-----|-----|-------|-----|-----|-------|-----|-----|-------|
| 0000 | 0000 | SDECHN | 0007 | 0007 | SDEINI | 0014 | 000E | SDEFSP |
| 0004 | 0004 | SDEINW | 0008 | 0008 | SDENUR | 0016 | 0010 | SDENAM |
| 0005 | 0005 | SDEINR | 0010 | 000A | SDESPT | 0060 | 003C | SDESPR |
| 0006 | 0006 | SDEINN | 0012 | 000C | SDENSP | | | |

Alphabetical list of fields in CHASDE

| FIELD | DEC | HEX | FIELD | DEC | HEX | FIELD | DEC | HEX |
|-------|-----|-----|-------|-----|-----|-------|-----|-----|
| SDECHN | 0000 | 0000 | SDEINR | 0005 | 0005 | SDENUR | 0008 | 0008 |
| SDEFSP | 0014 | 000E | SDEINW | 0004 | 0004 | SDESPR | 0060 | 003C |
| SDEINI | 0007 | 0007 | SDENAM | 0016 | 0010 | SDESPT | 0010 | 000A |
| SDEINN | 0006 | 0006 | SDENSP | 0012 | 000C | | | |

Assembler listing of CHASDE

```
LOCATION  INSTRUCTION  SOURCE   INST    OPER    COMMENT
          84 00000     CHASDE   DSECT           SHARED DATA SET ENTRY
84 00000                        DS      0D
84 00000               SDECHN   DS      XL4     DATA SET ENTRY CHAIN
84 00004               SDEINW   DS      XL1     WRITE INTERLOCK FLAG
84 00005               SDEINR   DS      XL1     READ  INTERLOCK FLAG
84 00006               SDEINN   DS      XL1     READ  INTERLOCK COUNTER
84 00007               SDEINI   DS      XL1     READ  INTERLOCK CONTROL
                       *                        FLAG
84 00008               SDENUR   DS      XL2     NUMBER OF USERS THIS DATA
                       *                        SET
84 0000A               SDESPT   DS      XL2     WHEN FFFF INDICATES TEMP
                       *                        LOCK  M4171
                       *                        ON DATA SET ENTRY. IT
                       *                        NORMALLY M4171
                       *                        CONTAINS THE SPT OF VMA
                       *                        AREA    M4171
                       *                        DATA SET IS IN.
                       *                            M4171
84 0000C               SDENSP   DS      XL2     NUMBER OF SHARED PAGE
                       *                        ENTRIES
84 0000E               SDEFSP   DS      XL2     MAY HOLD USERID OR PRIV
                       *                        FLAG    M4171
                       * FOR PUBLIC DS ENTRY IF SDESPT=FFFF THEN
                       * SDEFSP=USERID - LOCKED  M4171
                       *                        IF SDESPT=SPT NO
                       *                        SDEFSP=USERID - UNLKD    M4171
                       * A NORMAL SHARED PUBLIC SET WHEN FINALLY FILLED
                       * CONTAINS AN       M4171
                       * SDESPT=SPT NO, SDENSP=NO OF SHARED PGS,
                       * SDEFSP=1ST SHARED PG   M4171
                       * FOR PRIVATE DS ENTRY  SDESPT=USERID AND
                       * SDEFSP=FFFF - NORMAL  M4171
84 00010               SDENAM   DS      CL44    DATA SET NAME
84 0003C               SDESPR   DS      CL4     SPARE
```

I/O Statistical Data Table (CHASDT)


The I/O Statistical Data Table (SDT) accumulates statistical data on outboard failures of task I/O devices.

The SDT contains one Statistical Data Record (SDR) entry for each task I/O device in the system. Each of these SDR entries consists of statistical data on outboard failures of the associated task symbolic I/O device. The SDR entries are sorted on the symbolic device address (SDTSDA) field.

The SDT consists of an 8 byte header and from 10 to 200 SDR entries (72 bytes each).

The SDT occupies from 728 to 14,000 bytes of virtual storage; the header and each SDR entry are aligned on doubleword boundaries.

Note 1. Since the retry threshold depends upon the type of error condition and device, each byte of the SDTRTH field is assigned to a specific error condition as its retry threshold for the device. The assignment of the retry threshold bytes is device dependent.

Note 2. SDR save area (SDTSDB) contains a 4 bit frequency counter for each bit of sense data. An SDR field is incremented by 1 each time its associated sense bit registers 1 in the summary sense data, on a VMSDR call. If an SDT field overflow occurs, the SDR entry of a symbolic I/O device is written on the drum for preservation recording.

CHASDT Storage map

| DEC | HEX | | | | | | |
|-----|-----|--------|--------|--------|--------|--------|--------|
| 0 | 0 | SDTLSD | SDTSP | SDTLCK | SDTLBA | | |
| 8 | 8 | SDTSDA | | SDTFB | UNNAMED | | |
| 16 | 10 | SDTLP | | SDTEIC | SDTRET | | UNNAMED |
| 24 | 18 | SDTRT0 | | | SDTRT1 | | |
| 32 | 20 | SDTRT2 | | | UNNAMED | | |
| 40 | 28 | SDTTS | | | | | |
| 48 | 30 | SDTSDB | | | | | |

ORG   SDTRT0

| | | | | | |
|----|-----|--------|--------|--------|--------|
| 24 | 18 | SDTDA0 | SDTDA1 | SDTDA2 | SDTDA3 |

ORG   SDTRT1

| | | | | | |
|----|-----|--------|--------|--------|--------|
| 28 | 1C | SDTDA4 | SDTDA5 | SDTDA6 | SDTDA7 |

ORG   SDTRT2

| | | | | | |
|----|-----|--------|--------|---------|---------|
| 32 | 20 | SDTDA8 | SDTDA9 | SDTDA10 | SDTDA11 |

## Fields in CHASDT -- by displacement

| DEC | HEX | FIELD | | DEC | HEX | FIELD | | DEC | HEX | FIELD | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0000 | 0000 | SDTLSD | | 0025 | 0019 | SDTT1 | (EQU) | 0028 | 001C | SDTT4 | (EQU) |
| 0002 | 0002 | SDTSP | | 0025 | 0019 | SDTPR1 | (EQU) | 0028 | 001C | SDTMT4 | (EQU) |
| 0003 | 0003 | SDTLCK | | 0025 | 0019 | SDTPT1 | (EQU) | 0028 | 001C | SDTRT1 | |
| 0004 | 0004 | SDTLBA | | 0025 | 0019 | SDTPU1 | (EQU) | 0029 | 001D | SDTDA5 | |
| 0008 | 0008 | SDTSDA | | 0025 | 0019 | SDTCR1 | (EQU) | 0029 | 001D | SDT27015 | (EQU) |
| 0008 | 0008 | SDTHBDY | | 0025 | 0019 | SDTMT1 | (EQU) | 0029 | 001D | SDTT5 | (EQU) |
| 0010 | 000A | SDTWTO | (EQU) | 0026 | 001A | SDTDA2 | | 0029 | 001D | SDTMT5 | (EQU) |
| 0010 | 000A | SDTFB | | 0026 | 001A | SDT27012 | (EQU) | 0030 | 001E | SDTDA6 | |
| 0016 | 0010 | SDTLP | | 0026 | 001A | SDTT2 | (EQU) | 0030 | 001E | SDTT6 | (EQU) |
| 0018 | 0012 | SDTEIC | | 0026 | 001A | SDTPR2 | (EQU) | 0031 | 001F | SDTDA7 | |
| 0020 | 0014 | SDTRET | | 0026 | 001A | SDTPU2 | (EQU) | 0031 | 001F | SDTT7 | (EQU) |
| 0024 | 0018 | SDTDA0 | | 0026 | 001A | SDTCR2 | (EQU) | 0032 | 0020 | SDTDA8 | |
| 0024 | 0018 | SDT27010 | (EQU) | 0026 | 001A | SDTMT2 | (EQU) | 0032 | 0020 | SDTT8 | (EQU) |
| 0024 | 0018 | SDTT0 | (EQU) | 0027 | 001B | SDTDA3 | | 0032 | 0020 | SDTRT2 | |
| 0024 | 0018 | SDTPR0 | (EQU) | 0027 | 001B | SDTPR3 | (EQU) | 0033 | 0021 | SDTDA9 | |
| 0024 | 0018 | SDTPT0 | (EQU) | 0027 | 001B | SDTPU3 | (EQU) | 0033 | 0021 | SDTT9 | (EQU) |
| 0024 | 0018 | SDTPU0 | (EQU) | 0027 | 001B | SDTCR3 | (EQU) | 0034 | 0022 | SDTDA10 | |
| 0024 | 0018 | SDTCR0 | (EQU) | 0027 | 001B | SDT27013 | (EQU) | 0034 | 0022 | SDTT10 | (EQU) |
| 0024 | 0018 | SDTMT0 | (EQU) | 0027 | 001B | SDTT3 | (EQU) | 0035 | 0023 | SDTDA11 | |
| 0024 | 0018 | SDTRT0 | (EQU) | 0027 | 001B | SDTMT3 | (EQU) | 0035 | 0023 | SDTT11 | (EQU) |
| 0024 | 0018 | SDTRTH | | 0028 | 001C | SDTDA4 | | 0040 | 0028 | SDTTS | |
| 0025 | 0019 | SDTDA1 | | 0028 | 001C | SDTPR4 | (EQU) | 0048 | 0030 | SDTSDB | |
| 0025 | 0019 | SDT27011 | (EQU) | 0028 | 001C | SDT27014 | (EQU) | 0080 | 0050 | SDTBDY | |

## Alphabetical list of fields in CHASDT

| FIELD | DEC | HEX | | FIELD | DEC | HEX | | FIELD | DEC | HEX | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| SDTBDY | 0080 | 0050 | | SDTLSD | 0000 | 0000 | | SDTSDA | 0008 | 0008 | |
| SDTCR0 | 0024 | 0018 | (EQU) | SDTMT0 | 0024 | 0018 | (EQU) | SDTSDB | 0048 | 0030 | |
| SDTCR1 | 0025 | 0019 | (EQU) | SDTMT1 | 0025 | 0019 | (EQU) | SDTSP | 0002 | 0002 | |
| SDTCR2 | 0026 | 001A | (EQU) | SDTMT2 | 0026 | 001A | (EQU) | SDTTS | 0040 | 0028 | |
| SDTCR3 | 0027 | 001B | (EQU) | SDTMT3 | 0027 | 001B | (EQU) | SDTT0 | 0024 | 0018 | (EQU) |
| SDTDA0 | 0024 | 0018 | | SDTMT4 | 0028 | 001C | (EQU) | SDTT1 | 0025 | 0019 | (EQU) |
| SDTDA1 | 0025 | 0019 | | SDTMT5 | 0029 | 001D | (EQU) | SDTT10 | 0034 | 0022 | (EQU) |
| SDTDA10 | 0034 | 0022 | | SDTPR0 | 0024 | 0018 | (EQU) | SDTT11 | 0035 | 0023 | (EQU) |
| SDTDA11 | 0035 | 0023 | | SDTPR1 | 0025 | 0019 | (EQU) | SDTT2 | 0026 | 001A | (EQU) |
| SDTDA2 | 0026 | 001A | | SDTPR2 | 0026 | 001A | (EQU) | SDTT3 | 0027 | 001B | (EQU) |
| SDTDA3 | 0027 | 001B | | SDTPR3 | 0027 | 001B | (EQU) | SDTT4 | 0028 | 001C | (EQU) |
| SDTDA4 | 0028 | 001C | | SDTPR4 | 0028 | 001C | (EQU) | SDTT5 | 0029 | 001D | (EQU) |
| SDTDA5 | 0029 | 001D | | SDTPT0 | 0024 | 0018 | (EQU) | SDTT6 | 0030 | 001E | (EQU) |
| SDTDA6 | 0030 | 001E | | SDTPT1 | 0025 | 0019 | (EQU) | SDTT7 | 0031 | 001F | (EQU) |
| SDTDA7 | 0031 | 001F | | SDTPU0 | 0024 | 0018 | (EQU) | SDTT8 | 0032 | 0020 | (EQU) |
| SDTDA8 | 0032 | 0020 | | SDTPU1 | 0025 | 0019 | (EQU) | SDTT9 | 0033 | 0021 | (EQU) |
| SDTDA9 | 0033 | 0021 | | SDTPU2 | 0026 | 001A | (EQU) | SDTWTO | 0010 | 000A | (EQU) |
| SDTEIC | 0018 | 0012 | | SDTPU3 | 0027 | 001B | (EQU) | SDT27010 | 0024 | 0018 | (EQU) |
| SDTFB | 0010 | 000A | | SDTRET | 0020 | 0014 | | SDT27011 | 0025 | 0019 | (EQU) |
| SDTHBDY | 0008 | 0008 | | SDTRTH | 0024 | 0018 | | SDT27012 | 0026 | 001A | (EQU) |
| SDTLBA | 0004 | 0004 | | SDTRT0 | 0024 | 0018 | | SDT27013 | 0027 | 001B | (EQU) |
| SDTLCK | 0003 | 0003 | | SDTRT1 | 0028 | 001C | | SDT27014 | 0028 | 001C | (EQU) |
| SDTLP | 0016 | 0010 | | SDTRT2 | 0032 | 0020 | | SDT27015 | 0029 | 001D | (EQU) |

## Assembler listing of CHASDT

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|---|---|---|---|---|---|
| | 87 00000 | CHASDT | DSECT | | |
| | | **** | I/O STATISTICAL | DATA TABLE | **** |
| 87 00000 | | | DS | 0D | |
| 87 00000 | | SDTLSD | DS | H | LENGTH OF SDR ENTRY(72 |
| | | * | | | BYTES) |
| 87 00002 | | SDTSP | DS | XL1 | SPARE |
| 87 00003 | | SDTLCK | DS | XL1 | TABLE LOCK BYTE |
| 87 00004 | | SDTLBA | DS | XL4 | LAST BYTE ADDRESS OF SDT |
| 87 00008 | | SDTHBDY | DS | 0X | END OF IO STATISTICAL DATA |
| | | * | | | I5943 |

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|---|---|---|---|---|---|
| | | * | | | TABLE HEADER |
| | | * | | | I5943 |
| | 00000008 | SDTHDSZ | EQU | SDTHBDY-SDTLSD | IO STATISTICAL DATA |
| | | * | | | TABLE        I5943 |
| | | * | | | HEADER SIZE |
| | | * | | | I5943 |
| 87 00008 | | SDTSDA | DS | XL2 | SYMBOLIC DEVICE ADDRESS |
| 87 0000A | | SDTFB | DS | XL2 | FLAG BYTES |
| | 87 0000A | SDTWTO | EQU | SDTFB | WRITE TO OPERATOR FLAF (1 |
| | | * | | | IF IMMEDIATE) |
| | 00000080 | SDTIRM | EQU | X'80' | |
| 87 0000C | | | DS | 2H | SPARE |
| 87 00010 | | SDTLP | DS | XL2 | PATH LAST USED (ACTUAL I/O |
| | | * | | | ADDRESS) |
| 87 00012 | | SDTEIC | DS | H | TOTAL ERROR INCIDENT COUNT |
| 87 00014 | | SDTRET | DS | H | TOTAL RETRY COUNT |
| 87 00016 | | | DS | H | SPARE |
| 87 00018 | | SDTRTH | DS | 0XL12 | ERROR RETRY THRESHOLDS |
| 87 00018 | | SDTRT0 | DS | XL4 | RETRY THRESHOLD BYTES 0-3 |
| | 87 00018 | | \|ORG\| | SDTRT0 | |
| 87 00018 | | SDTDA0 | DS | X | D/A "SEEK CHECK" RETRY |
| | | * | | | VALUE |
| | 87 00018 | SDTMT0 | EQU | SDTDA0 | MAG TAPE"DATA CHECK(WRITE)" |
| | | * | | | RETRY VALUE |
| | 87 00018 | SDTCR0 | EQU | SDTDA0 | CARD READER "CHAN DATA CK" |
| | | * | | | RETRY VALUE |
| | 87 00018 | SDTPU0 | EQU | SDTDA0 | CARD PUNCH "CHAN DATA CK" |
| | | * | | | RETRY VALUE |
| | 87 00018 | SDTPT0 | EQU | SDTDA0 | PAPER TPE"EQUIP CHECK"RETRY |
| | | * | | | VALUE |
| | 87 00018 | SDTPR0 | EQU | SDTDA0 | PRINTER "CHAN DATA CK" |
| | | * | | | RETRY VALUE |
| | 87 00018 | SDTT0 | EQU | SDTDA0 | TERM.'EQUIP CHECK' RETRY |
| | | * | | | VALUE |
| | 87 00018 | SDT27010 | EQU | SDTDA0 | CHANNEL/INTERFACE CONTROL |
| | | * | | | CHECK |
| 87 00019 | | SDTDA1 | DS | X | D/A "OVERRUN" RETRY VALUE |
| | 87 00019 | SDTMT1 | EQU | SDTDA1 | MAG TAPE "OVERRUN" RETRY |
| | | * | | | VALUE |
| | 87 00019 | SDTCR1 | EQU | SDTDA1 | CARD READER "BUS OUT CK" |
| | | * | | | RETRY VALUE |
| | 87 00019 | SDTPU1 | EQU | SDTDA1 | CARD PUNCH "BUS OUT CK" |
| | | * | | | RETRY VALUE |
| | 87 00019 | SDTPT1 | EQU | SDTDA1 | PAPER TAPE"BUS OUT |
| | | * | | | CHECK"RETRY VALUE |
| | 87 00019 | SDTPR1 | EQU | SDTDA1 | PRINTER "BUS OUT CK" RETRY |
| | | * | | | VALUE |
| | 87 00019 | SDTT1 | EQU | SDTDA1 | TERM.'BUS OUT CHECK' RETRY |
| | | * | | | VALUE |
| | 87 00019 | SDT27011 | EQU | SDTDA1 | CHANNEL DATA CHECK/BUS OUT |
| | | * | | | CHECK |
| 87 0001A | | SDTDA2 | DS | X | D/A"NO RECORD FOUND"RETRY |
| | | * | | | VALUE |
| | 87 0001A | SDTMT2 | EQU | SDTDA2 | MAG TAPE"DATA |
| | | * | | | CHK(CONTROL)"RETRY VALUE |
| | 87 0001A | SDTCR2 | EQU | SDTDA2 | CARD READER "EQUIPMENT CK" |
| | | * | | | RETRY VALUE |
| | 87 0001A | SDTPU2 | EQU | SDTDA2 | CARD PUNCH "EQUIPMENT CK" |
| | | * | | | RETRY VALUE |
| | 87 0001A | SDTPR2 | EQU | SDTDA2 | PRINTER "EQUIPMENT CK" |
| | | * | | | RETRY VALUE |
| | 87 0001A | SDTT2 | EQU | SDTDA2 | TERM.'COMMAND REJECT' RETRY |
| | | * | | | VALUE |
| | 87 0001A | SDT27012 | EQU | SDTDA2 | UC/LD, UC/TO, IL |
| 87 0001B | | SDTDA3 | DS | X | D/A"MISSING ADDRESS |
| | | * | | | MARKERS"RETRY VALUE |
| | 87 0001B | SDTMT3 | EQU | SDTDA3 | MAG TAPE"CHAINING CHK"RETRY |
| | | * | | | VALUE |

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|---|---|---|---|---|---|
| | 87 0001B | SDTT3 | EQU | SDTDA3 | TERM.'OVERRUN' RETRY VALUE |
| | 87 0001B | SDT27013 | EQU | SDTDA3 | UC/IR, UC/TO, UC/DT, UC/OV, IL |
| | | * | | | |
| | 87 0001B | SDTCR3 | EQU | SDTDA3 | CARD READER "DATA CHECK" RETRY VALUE |
| | | * | | | |
| | 87 0001B | SDTPU3 | EQU | SDTDA3 | CARD PUNCH "DATA CHECK" RETRY VALUE |
| | | * | | | |
| | 87 0001B | SDTPR3 | EQU | SDTDA3 | PRINTER "DATA CHECK" RETRY VALUE |
| | | * | | | |
| 87 0001C | | SDTRT1 | DS | XL4 | RETRY THRESHOLD BYTES 4-7 |
| | 87 0001C | | \|ORG\| | SDTRT1 | |
| 87 0001C | | SDTDA4 | DS | X | D/A "CHAINING CHK"RETRY VALUE |
| | | * | | | |
| | 87 0001C | SDTMT4 | EQU | SDTDA4 | MAG TAPE'DATA CHK RE-READ'RETRY VALUE |
| | | * | | | |
| | 87 0001C | SDTT4 | EQU | SDTDA4 | TERM.'INTERVENTION REQUIRED' RETRY VALUE |
| | | * | | | |
| | 87 0001C | SDT27014 | EQU | SDTDA4 | 'SHOULD NOT OCCUR' ERRORS |
| | 87 0001C | SDTPR4 | EQU | SDTDA4 | PRINTER "CODE GEN STORAGE P" RETRY VALUE |
| | | * | | | |
| 87 0001D | | SDTDA5 | DS | X | D/A 'DATA CHK' RETRY VALUE |
| | 87 0001D | SDTMT5 | EQU | SDTDA5 | MAG TAPE'BUS OUT CHECK'RETRY VALUE |
| | | * | | | |
| | 87 0001D | SDTT5 | EQU | SDTDA5 | TERM.'TIME OUT' RETRY VALUE |
| | 87 0001D | SDT27015 | EQU | SDTDA5 | '0' FOR ERRORS NOT RETRIED |
| 87 0001E | | SDTDA6 | DS | X | D/A'NO REC.FOUND OF MISS ADD MARK.'RETRY VALUE |
| | | * | | | |
| | 87 0001E | SDTT6 | EQU | SDTDA6 | TERM.'DATA CHECK' RETRY VALUE |
| | | * | | | |
| 87 0001F | | SDTDA7 | DS | X | D/A 'BUS OUT CHECK' RETRY VALUE |
| | | * | | | |
| | 87 0001F | SDTT7 | EQU | SDTDA7 | TERM.'RECEIVING CHECK' RETRY VALUE |
| | | * | | | |
| 87 00020 | | SDTRT2 | DS | XL4 | RETRY THRESHOLD BYTES 8-11 |
| | 87 00020 | | \|ORG\| | SDTRT2 | |
| 87 00020 | | SDTDA8 | DS | X | D/A'CHNL DATA CHK'RETRY VALUE |
| | | * | | | |
| | 87 00020 | SDTT8 | EQU | SDTDA8 | TERM.'ILLEGAL UNIT EXCEPTION' RETRY VALUE |
| | | * | | | |
| 87 00021 | | SDTDA9 | DS | X | UNUSED LABEL |
| | 87 00021 | SDTT9 | EQU | SDTDA9 | TERM.'INBOARD ERROR COUNT' RETRY VALUE |
| | | * | | | |
| 87 00022 | | SDTDA10 | DS | X | UNUSED LABEL |
| | 87 00022 | SDTT10 | EQU | SDTDA10 | TERM.'MASTER CONSECUTIVE ERROR COUNT' RETRY VALUE |
| | | * | | | |
| | | * | | | |
| 87 00023 | | SDTDA11 | DS | X | UNUSED LABEL |
| | 87 00023 | SDTT11 | EQU | SDTDA11 | TERM.'MACHINE CHECK RETRY' RETRY VALUE |
| | | * | | | |
| 87 00024 | | | DS | F | SPARE |
| 87 00028 | | SDTTS | DS | 2F | DATE TIME STAMP OF FIRST SDR ERROR IN MICRO-SECONDS |
| | | * | | | |
| | | * | | | |
| 87 00030 | | SDTSDB | DS | 8XL4 | SDR BUCKETS (64a 1/2 BYTES) |
| 87 00050 | | SDTBDY | DS | 0X | END OF IO STATISTICAL DATA I5943 TABLE ENTRY I5943 |
| | | * | | | |
| | | * | | | |
| | | * | | | |
| | 00000048 | SDTSZ | EQU | SDTBDY-SDTSDA | IO STATISTICAL DATA TABLE I5943 ENTRY SIZE I5943 |
| | | * | | | |
| | | * | | | |
| | | * | | | |

## OLTS Section Control Table (CHASKT)

Provides the OLTS section with all of the information required to perform the test.

### CHASKT Storage map

```
DEC   HEX  _____
  0    0|    SKTRND     |SKTSP1 |SKTOPT |       SKTRTE      |       SKTSP2          |
         |              |       |       |                  |                      |
  8    8|    SKTSYM     |    SKTFLG     |      SKTIDX      |       SKTDAD          |
         |_____|_____|_____|_____|
 16   10|         SKTCHR              |
         |_____|
```

### Fields in CHASKT -- by displacement

| DEC | HEX | FIELD | | DEC | HEX | FIELD | | DEC | HEX | FIELD | |
|------|------|--------|---|------|------|--------|---|------|------|--------|---|
| 0000 | 0000 | SKTRND | | 0006 | 0006 | SKTSP2 | | 0012 | 000C | SKTIDX | |
| 0000 | 0000 | SKTBEG | | 0008 | 0008 | SKTSYM | | 0014 | 000E | SKTDAD | |
| 0002 | 0002 | SKTSP1 | | 0010 | 000A | SKTLSB | (EQU) | 0016 | 0010 | SKTMODC | (EQU) |
| 0003 | 0003 | SKTERR | (EQU) | 0010 | 000A | SKTAFL | (EQU) | 0016 | 0010 | SKTCHR | |
| 0003 | 0003 | SKTLPE | (EQU) | 0010 | 000A | SKTTFL | (EQU) | 0017 | 0011 | SKTFEAT | (EQU) |
| 0003 | 0003 | SKTELP | (EQU) | 0010 | 000A | SKTPRV | (EQU) | 0018 | 0012 | SKTCLAS | (EQU) |
| 0003 | 0003 | SKTNEP | (EQU) | 0010 | 000A | SKTLDV | (EQU) | 0019 | 0013 | SKTTYPE | (EQU) |
| 0003 | 0003 | SKTNPR | (EQU) | 0010 | 000A | SKTSIN | (EQU) | 0020 | 0014 | SKTDE | |
| 0003 | 0003 | SKTOPT | | 0010 | 000A | SKTINH | (EQU) | | | | |
| 0004 | 0004 | SKTRTE | | 0010 | 000A | SKTFLG | | | | | |

### Alphabetical list of fields in CHASKT

| FIELD | DEC | HEX | | FIELD | DEC | HEX | | FIELD | DEC | HEX | |
|--------|------|------|---|--------|------|------|---|--------|------|------|---|
| SKTAFL | 0010 | 000A | (EQU) | SKTIDX | 0012 | 000C | | SKTRND | 0000 | 0000 | |
| SKTBEG | 0000 | 0000 | | SKTINH | 0010 | 000A | (EQU) | SKTRTE | 0004 | 0004 | |
| SKTCHR | 0016 | 0010 | | SKTLDV | 0010 | 000A | (EQU) | SKTSIN | 0010 | 000A | (EQU) |
| SKTCLAS | 0018 | 0012 | (EQU) | SKTLPE | 0003 | 0003 | (EQU) | SKTSP1 | 0002 | 0002 | |
| SKTDAD | 0014 | 000E | | SKTLSB | 0010 | 000A | (EQU) | SKTSP2 | 0006 | 0006 | |
| SKTDE | 0020 | 0014 | | SKTMODC | 0016 | 0010 | (EQU) | SKTSYM | 0008 | 0008 | |
| SKTELP | 0003 | 0003 | (EQU) | SKTNEP | 0003 | 0003 | (EQU) | SKTTFL | 0010 | 000A | (EQU) |
| SKTERR | 0003 | 0003 | (EQU) | SKTNPR | 0003 | 0003 | (EQU) | SKTTYPE | 0019 | 0013 | (EQU) |
| SKTFEAT | 0017 | 0011 | (EQU) | SKTOPT | 0003 | 0003 | | | | | |
| SKTFLG | 0010 | 000A | | SKTPRV | 0010 | 000A | (EQU) | | | | |

### Assembler listing of CHASKT

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|----------|-------------|--------|------|------|---------|
| | 8B 00000 | CHASKT | DSECT | | |
| | | * | | | OLTS SECTION CONTROL TABLE |
| 8B 00000 | | SKTBEG | DS | 0F | FULL WORD ALIGN |
| 8B 00000 | | SKTRND | DS | H | RANDOM NUMBER |
| 8B 00002 | | SKTSP1 | DS | XL1 | SPARE |
| 8B 00003 | | SKTOPT | DS | XL1 | JOBOOPTIONS |
| 8B 00004 | | SKTRTE | DS | XL2 | ROUTINE SELECTION |
| 8B 00006 | | SKTSP2 | DS | H | SPARE |
| | 00000008 | SKTDVCT | EQU | *-SKTBEG | DEFINE START OF DEVICE |
| | | * | | | TABLE |
| 8B 00008 | | SKTSYM | DS | XL2 | SYSTEM SYMBOLIC DEVICE NAME |
| 8B 0000A | | SKTFLG | DS | XL2 | FLAGS |
| 8B 0000C | | SKTIDX | DS | XL2 | INDEX INTO TERMINAL TABLE |
| 8B 0000E | | SKTDAD | DS | XL2 | PHYSICAL PATH TO DEVICE |
| 8B 00010 | | SKTCHR | DS | XL4 | DEVICE CHARACTERISTICS |
| 8B 00014 | | SKTDE | DS | 0C | DEVICE FIELD END |
| | 0000000C | SKTINC | EQU | SKTDE-SKTSYM | |
| | | * | | | BIT DEFINITIONS FOR JOB OPTION BYTE |
| 8B 00003 | | SKTNPR | EQU | SKTOPT | DEFINE BYTE LOCATION FOR NO |
| | | * | | | CONTROL PRINT FLAG |
| 8B 00003 | | SKTNEP | EQU | SKTOPT | DEFINE BYTE LOCATION FOR NO |

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|---|---|---|---|---|---|
| | | * | | | ERROR PRINT FLAG |
| | 8B 00003 | SKTELP | EQU | SKTOPT | DEFINE BYTE LOCATION FOR |
| | | * | | | ERROR LOOP FLAG |
| | 8B 00003 | SKTLPE | EQU | SKTOPT | DEFINE BYTE LOCATION FOR |
| | | * | | | JOB LOOP FLAG |
| | 8B 00003 | SKTERR | EQU | SKTOPT | DEFINE BYTE LOCATION FOR |
| | | * | | | ERROR DETECTED FLAG |
| | 00000008 | SKTNPRM | EQU | X'08' | DEFINE BIT POSITION FOR NO |
| | | * | | | CONTROL PRINT FLAG |
| | 00000004 | SKTNEPM | EQU | X'04' | DEFINE BIT POSITION FOR NO |
| | | * | | | ERROR PRINT FLAG |
| | 00000002 | SKTELPM | EQU | X'02' | DEFINE BIT POSITION FOR |
| | | * | | | ERROR LOOP FLAG |
| | 00000001 | SKTLPEM | EQU | X'01' | DEFINE BIT POSITION FOR JOB |
| | | * | | | LOOP FLAG |
| | 00000080 | SKTERRM | EQU | X'80' | DEFINE BIT POSITION FOR |
| | | * | | | ERROR DETECTED FLAG |
| | | * | | | SCT FLAG DEFINITION |
| | 8B 0000A | SKTINH | EQU | SKTFLG | DEFINE BYTE LOCATION FOR |
| | | * | | | 'NO WRITING' FLAG |
| | 8B 0000A | SKTSIN | EQU | SKTFLG | DEFINE BYTE LOCATION FOR |
| | | * | | | 'THIS IS SYSIN' FLAG |
| | 8B 0000A | SKTLDV | EQU | SKTFLG | DEFINE BYTE LOCATION FOR |
| | | * | | | LAST DVC IN SUBSYS FLAG |
| | 8B 0000A | SKTPRV | EQU | SKTFLG | DEFINE BYTE LOCATION FOR |
| | | * | | | PREVIOUSLY DEFINED FLAG |
| | 8B 0000A | SKTTFL | EQU | SKTFLG | DEFINE BYTE LOCATION FOR |
| | | * | | | TERMINAL FLAG |
| | 8B 0000A | SKTAFL | EQU | SKTFLG | DEFINE BYTE LOCATION FOR |
| | | * | | | PATH PRESENT FLAG |
| | 8B 0000A | SKTLSB | EQU | SKTFLG | DEFINE BYTE LOCATION FOR |
| | | * | | | LAST DVC LAST SUBS FLAG |
| | 00000040 | SKTINHM | EQU | X'40' | DEFINE BIT POSITION FOR 'NO |
| | | * | | | WRITING' FLAG |
| | 00000020 | SKTSINM | EQU | X'20' | DEFINE BIT POSITION FOR |
| | | * | | | 'THIS IS YSSIN' FLAG |
| | 00000010 | SKTLDVM | EQU | X'10' | DEFINE BIT POSITION FOR |
| | | * | | | LAST DVC IN SUBSYS FLAG |
| | 00000008 | SKTPRVM | EQU | X'08' | DEFINE BIT POSITION FOR |
| | | * | | | PREVIOUSLY DEFINED FLAG |
| | 00000004 | SKTTFLM | EQU | X'04' | |
| | 00000002 | SKTAFLM | EQU | X'02' | DEFINE BIT POSITION FOR |
| | | * | | | PATH PRESENT FLAG |
| | 00000001 | SKTLSBM | EQU | X'01' | DEFINE BIT POSITION FOR |
| | | * | | | LAST DVC LAST SUBSYS FLAG |
| | | * | | | DEVICE CHARACTERISTICS DEFINITIONS |
| | 8B 00010 | SKTMODC | EQU | SKTCHR+0 | DEFINE BYTE LOCATION FOR |
| | | * | | | MODEL CODE |
| | 8B 00011 | SKTFEAT | EQU | SKTCHR+1 | DEFINE BYTE LOCATION FOR |
| | | * | | | FEATURES |
| | 8B 00012 | SKTCLAS | EQU | SKTCHR+2 | DEFINE BYTE LOCATION FOR |
| | | * | | | DEVICE CLASS |
| | 8B 00013 | SKTTYPE | EQU | SKTCHR+3 | DEFINE BYTE LOCATION FOR |
| | | * | | | DEVICE TYPE |

## Source List (CHASLP, CHASLH, CHASLM)

The Source List contains data which is used by the command system controller to direct the activities of a task. The Source List consists of:
1. Source List Page Header (CHASLP)
2. Sublist Header (CHASLH)
3. Source List Markers (CHASLM)

There is one CHASLP, for each page in the Source List, which points to the sublists on that page. Each sublist is headed by one CHASLH, and contains a variable length string of Source List Markers (CHASLM). -
The Source List resides in virtual storage.

### CHASLP Storage map

```
DEC    HEX  _____
  0      0 |              SLPNXT             |              SLPCSL            |
         | |_____|_____|
  8      8 |              SLPGIP             |     SLPAVL     |
         | |_____|_____|
```

### Fields in CHASLP -- by displacement

| DEC | HEX | FIELD | DEC | HEX | FIELD | DEC | HEX | FIELD |
|------|------|--------|------|------|--------|------|------|--------|
| 0000 | 0000 | SLPNXT | 0004 | 0004 | SLPCSL | 0008 | 0008 | SLPGIP |
| | | | | | | 0012 | 000C | SLPAVL |

### Alphabetical list of fields in CHASLP

| FIELD | DEC | HEX | FIELD | DEC | HEX | FIELD | DEC | HEX |
|--------|------|------|--------|------|------|--------|------|------|
| SLPAVL | 0012 | 000C | SLPCSL | 0004 | 0004 | SLPGIP | 0008 | 0008 |
| | | | | | | SLPNXT | 0000 | 0000 |

### Assembler listing of CHASLP

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|----------|-------------|--------|------|------|---------|
| | 8E 00000 | CHASLP | DSECT | | , SOURCE LIST |
| | | * | | | PAGE HEADER. |
| 8E 00000 | | SLPNXT | DS | A | POINTER TO NEXT PAGE. |
| 8E 00004 | | SLPCSL | DS | A | POINTER TO CURRENT SUBLIST. |
| 8E 00008 | | SLPGIP | DS | A | POINTER TO CURRENT G |
| | | * | | | SUBLIST. |
| 8E 0000C | | SLPAVL | DS | H | AVAILABLE BYTES ON CURRENT |
| | | * | | | PAGE |

## CHASLH Storage map

```
DEC   HEX
  0     0 |_____|
          |                                                         |
          =                         SLHSAV                          =
          |                                                         |
 80    50 |_____|
          |                         SLHNAM                          |
 88    58 |_____|
          |                                                         |
          |                         SLHRES                          |
104    68 |_____SLHCSA_____|_____SLHEND_____|
          |                            |                           |
112    70 |_____SLHGEN_____|               |
          |_____|_____|
```
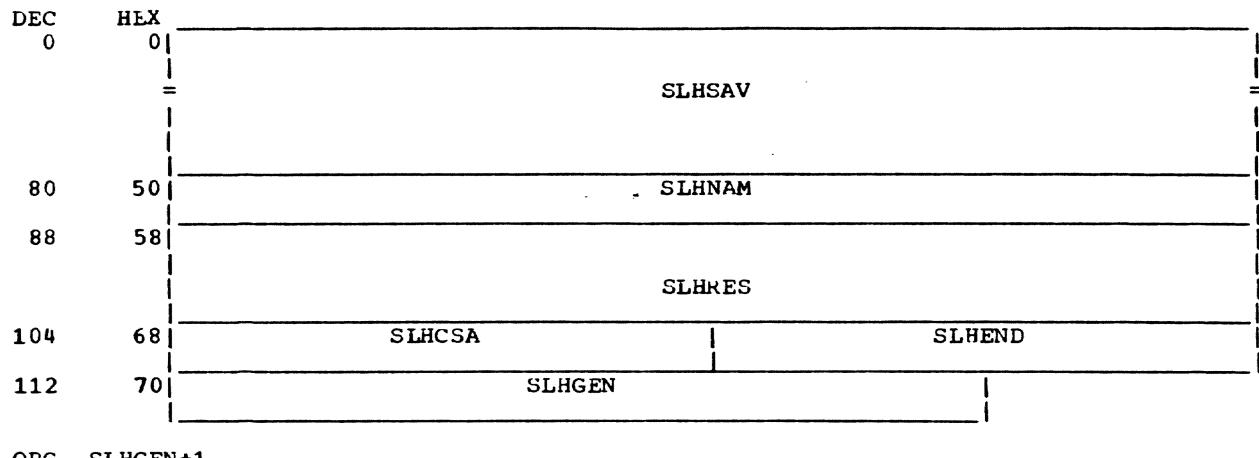
ORG   SLHGEN+1

```
113    71          |SLHTYP  |SLHPTR  |
                   |_____|_____|
```

### Fields in CHASLH -- by displacement

| DEC | HEX | FIELD | DEC | HEX | FIELD | DEC | HEX | FIELD | |
|-----|-----|-------|-----|-----|-------|-----|-----|-------|---|
| 0000 | 0000 | SLHSAV | 0104 | 0068 | SLHCSA | 0113 | 0071 | SLHTYP | |
| 0080 | 0050 | SLHNAM | 0108 | 006C | SLHEND | 0114 | 0072 | SLHPTR | |
| 0088 | 0058 | SLHRES | 0112 | 0070 | SLHGEN | 0118 | 0076 | SLHALL | (EQU) |

### Alphabetical list of fields in CHASLH

| FIELD | DEC | HEX | | FIELD | DEC | HEX | FIELD | DEC | HEX |
|-------|-----|-----|---|-------|-----|-----|-------|-----|-----|
| SLHALL | 0118 | 0076 | (EQU) | SLHGEN | 0112 | 0070 | SLHRES | 0088 | 0058 |
| SLHCSA | 0104 | 0068 | | SLHNAM | 0080 | 0050 | SLHSAV | 0000 | 0000 |
| SLHEND | 0108 | 006C | | SLHPTR | 0114 | 0072 | SLHTYP | 0113 | 0071 |

### Assembler listing of CHASLH

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|----------|-------------|--------|------|------|---------|
| | 8C 00000 | CHASLH | DSECT | | ,                     SUBLIST HEADER. |
| | | * | | | |
| 8C 00000 | | SLHSAV | DS | 20A | REGISTER SAVE AREA |
| 8C 00050 | | SLHNAM | DS | CL8 | CURRENT MODULE NAME |
| 8C 00058 | | SLHRES | DS | 4A | COMMUNICATION AREA |
| 8C 00068 | | SLHCSA | DS | A | CURRENT STARTING ADDRESS. |
| 8C 0006C | | SLHEND | DS | A | END POINTER. |
| 8C 00070 | | SLHGEN | DS | CL6 | GENERATION MARKER. |
| | 8C 00076 | SLHALL | EQU | * | SUBLIST TEXT BEGINNING |
| | 8C 00071 | | ORG | SLHGEN+1 | |
| 8C 00071 | | SLHTYP | DS | CL1 | MARKER TYPE FIELD |
| 8C 00072 | | SLHPTR | DS | CL1 | MARKER POINTER FIELD |

## CHASLM Storage map

```
DEC   HEX
  0     0 |_____|
          |SLMEB    |SLMTY    |              SLMADD                |
          |_____|_____|_____|
```

## Fields in CHASLM -- by displacement

| DEC | HEX | FIELD | DEC | HEX | FIELD | DEC | HEX | FIELD |
|------|------|-------|------|------|-------|------|------|-------|
| 0000 | 0000 | SLMEB | 0001 | 0001 | SLMTY | 0002 | 0002 | SLMADD |

## Alphabetical list of fields in CHASLM

| FIELD | DEC | HEX | FIELD | DEC | HEX | FIELD | DEC | HEX |
|-------|------|------|-------|------|------|-------|------|------|
| SLMADD | 0002 | 0002 | SLMEB | 0000 | 0000 | SLMTY | 0001 | 0001 |

## Assembler listing of CHASLM

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|----------|-------------|--------|------|------|---------|
| | 8D 00000 | CHASLM | DSECT | | ,                        SOURCE LIST |
| | | * | | | MARKER. |
| 8D 00000 | | SLMEB | DS | CL1 | EOB CHARACTER POSITION. |
| | 00000026 | SLMEBM | EQU | X'26' | EOB HEX VALUE |
| 8D 00001 | | SLMTY | DS | CL1 | MARKER TYPE POSITION. |
| | 000000C7 | SLMTYG | EQU | C'G' | G MARKER. |
| | 000000E3 | SLMTYT | EQU | C'T' | T MARKER. |
| | 000000E4 | SLMTYU | EQU | C'U' | U MARKER. |
| | 000000C5 | SLMTYE | EQU | C'E' | E MARKER. |
| | 000000D7 | SLMTYP | EQU | C'P' | P MARKER. |
| | 000000E2 | SLMTYS | EQU | C'S' | S MARKER. |
| 8D 00002 | | SLMADD | DS | XL4 | MARKER ADDRESS |

## Symbolic Library Index (CHASLX)

The Symbolic Library Index (SLX) is used by the symbolic library search routine to retrieve information (a macro definition, for example) from the symbolic library.

The SLX consists of a header and as many index entries as there are parcels and aliases in the associated library. The entries appear in ascending order corresponding to the EBCDIC collating sequence of the parcel names.

The SLX occupies from 21 to 1,048,675 bytes of virtual storage, aligned on word boundaries.

### CHASLX Storage map

```
DEC   HEX
  0     0 |_____
         |     SLXDMY      |       SLXNLN      |           SLXLEN          |
         |                 |                   |                           |
  8     8 |_____
         |         SLXSSP                      |           SLXRLN          |
         |                                     |                           |
 16    10 |_____
         |     SLXRLN  (CONT)                  |
         |_____|
```

### Fields in CHASLX -- by displacement

| DEC | HEX | FIELD | DEC | HEX | FIELD | DEC | HEX | FIELD |
|-----|-----|-------|-----|-----|-------|-----|-----|-------|
| 0000 | 0000 | SLXDMY | 0008 | 0008 | SLXSSP | 0020 | 0014 | SLXNAMA |
| 0002 | 0002 | SLXNLN | 0012 | 000C | SLXRLN | | | |
| 0004 | 0004 | SLXLEN | 0012 | 000C | SLXNAM | | | |

### Alphabetical list of fields in CHASLX

| FIELD | DEC | HEX | FIELD | DEC | HEX | FIELD | DEC | HEX |
|-------|-----|-----|-------|-----|-----|-------|-----|-----|
| SLXDMY | 0000 | 0000 | SLXNAMA | 0020 | 0014 | SLXSSP | 0008 | 0008 |
| SLXLEN | 0004 | 0004 | SLXNLN | 0002 | 0002 | | | |
| SLXNAM | 0012 | 000C | SLXRLN | 0012 | 000C | | | |

### Assembler listing of CHASLX

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|----------|-------------|--------|------|------|---------|
| | | * CHASLX | MACRO | AND COPY | LIBRARY INDEX DSECT |
| | 8F 00000 | CHASLX | DSECT | | |
| | | * | | | INDEX HEADER |
| 8F 00000 | | SLXDMY | DS | H | NOT USED |
| 8F 00002 | | SLXNLN | DS | H | PARCEL NAME LENGTH |
| 8F 00004 | | SLXLEN | DS | F | INDEX LENGTH |
| 8F 00008 | | SLXSSP | DS | F | BINARY SEARCH STARTING |
| | | * | | | POINT |
| | | * | | | INDEX ENTRY |
| 8F 0000C | | SLXNAM | DS | 0C | PARCEL NAME (VARIABLE |
| | | * | | | LENGTH) |
| 8F 0000C | | SLXRLN | DS | CL8 | RETRIEVAL LINE NO (INDEXED) |
| 8F 00014 | | SLXNAMA | DS | 0C | NEXT PARCEL NAME |

## Scan Master Control Table (CHASMC and CHASME)

The Scan Master Control Table (STMCT) provides data to facilitate the Queue Scanner's search of the Scan Table (CHASCN).

SCTMCT consists of a set of Device Interaction Groups (DIGs). A DIG is a subset of entries in the Scan Table containing one queue processor, or a collection of I/O devices having a common device controller(s). CHASMC is a header, having information concerning the DIG entries in the table. The fields for each DIG are defined by a separate DSECT (CHASME).

The STMCT resides in core storage, aligned on a doubleword boundary. CHASMC is 16 bytes, as is each CHASME in the chain.

### CHASMC Storage map

```
DEC     HEX _____
  0       0| SMCMLB  |UNNAMED |    SMCMCT     |     SMCDCT    |      SMCCMF          |
           |         |        |               |              |                     |
           |_____|_____|_____|_____|_____|
  8       8|                            UNNAMED                                    |
           |                                                                       |
           |_____|
```

### Fields in CHASMC -- by displacement

| DEC | HEX | FIELD | DEC | HEX | FIELD | DEC | HEX | FIELD |
|------|------|------|------|------|------|------|------|------|
| 0000 | 0000 | SMCMLB | 0004 | 0004 | SMCDCT | 0016 | 0010 | SMCEND |
| 0002 | 0002 | SMCMCT | 0006 | 0006 | SMCCMF | | | |

### Alphabetical list of fields in CHASMC

| FIELD | DEC | HEX | FIELD | DEC | HEX | FIELD | DEC | HEX |
|------|------|------|------|------|------|------|------|------|
| SMCCMF | 0006 | 0006 | SMCEND | 0016 | 0010 | SMCMLB | 0000 | 0000 |
| SMCDCT | 0004 | 0004 | SMCMCT | 0002 | 0002 | | | |

### Assembler listing of CHASMC

```
        LOCATION  INSTRUCTION  SOURCE   INST   OPER        COMMENT
                  90 00000     CHASMC   DSECT              SCAN MASTER CONTROL TABLE
        90 00000                        DS     0D
        90 00000               SMCMLB   DS     CL1         MASTER LOCK BYTE
        90 00001                        DS     CL1         SPARE
        90 00002               SMCMCT   DS     H           MASTER COUNT OF GQE'S
        90 00004               SMCDCT   DS     H           COUNT OF DIGS
        90 00006               SMCCMF   DS     H           MASTER COUNT OF MATCHED
                               *                             FACILITIES
        90 00006                        DS     2F          UNUSED
        90 00010               SMCEND   DS     0X          END OF SCAN MASTER CONTROL
                               *                             I5943
                               *                           TABLE HEADER
                               *                             I5943
                  00000010     SMCSZ    EQU    SMCEND-SMCMLB  SCAN MASTER CONTROL
                               *                           TABLE        I5943
                               *                           HEADER SIZE
                               *                             I5943
                  91 00000     CHASME   DSECT
        91 00000                        DS     0D          DSECT FOR ONE DIG ENTRY
        91 00000               SMEDLB   DS     CL1         DIG LOCK BYTE
        91 00001               SMEBFG   DS     XL1         FLAG BYTE
                  00000080     SMEBFM   EQU    X'80'       BUSY FLAG MASK
                  0000007F     SMEBFMC  EQU    X'7F'       BUSY FLAG COMPLEMENT
        91 00002               SMECMF   DS     H           COUNT OF MATCHED FACILITIES
        91 00004               SMEFEA   DS     F           FIRST ENTRY ADDRESS
        91 00008               SMECEA   DS     F           CURRENT ENTRY ADDRESS
        91 0000C               SMELEA   DS     F           LAST ENTRY ADDRESS
        91 00010               SMEEND   DS     0X          END OF DIG ENTRY
                               *                             I5943
                  00000010     SMESZ    EQU    SMEEND-SMEDLB  DIG ENTRY SIZE
                               *                             I5943
```

CHASME Storage map

```
 DEC    HEX
   0      0|SMEDLB  |SMEBFG  |    SMECMF      |            SMEFEA                |
          |        |        |                |                                  |
   8      8|              SMECEA             |            SMELEA                |
          |                                  |                                  |
```

Fields in CHASME -- by displacement

| DEC | HEX | FIELD | DEC | HEX | FIELD | DEC | HEX | FIELD |
|---|---|---|---|---|---|---|---|---|
| 0000 | 0000 | SMEDLB | 0004 | 0004 | SMEFEA | 0016 | 0010 | SMEEND |
| 0001 | 0001 | SMEBFG | 0008 | 0008 | SMECEA | | | |
| 0002 | 0002 | SMECMF | 0012 | 000C | SMELEA | | | |

Alphabetical list of fields in CHASME

| FIELD | DEC | HEX | FIELD | DEC | HEX | FIELD | DEC | HEX |
|---|---|---|---|---|---|---|---|---|
| SMEBFG | 0001 | 0001 | SMEDLB | 0000 | 0000 | SMELEA | 0012 | 000C |
| SMECEA | 0008 | 0008 | SMEEND | 0016 | 0010 | | | |
| SMECMF | 0002 | 0002 | SMEFEA | 0004 | 0004 | | | |

System Operator ID Table (CHASOT) and CHASOT Entry (CHASID)

The System Operators ID Table (SOT) and the CHASOT Entries (SID) identify the main operator in the system.

SOT resides in shared virtual storage, with privileged access. The main operator control program (MOCP) has read-only access to SOT.

The SOT resides in virtual storage aligned on word boundaries.

## CHASOT Storage map

| DEC | HEX | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 0 | 0 | SOTLNG | | SOTBCK | | | SOTUID | |
| 8 | 8 | SOTUID (CONT) | | | SOTDES | SOTLOG | SOTTID | |
| 16 | 10 | SOTSIN | | | | | | |

## Fields in CHASOT -- by displacement

| DEC | HEX | FIELD | DEC | HEX | FIELD | DEC | HEX | FIELD |
|---|---|---|---|---|---|---|---|---|
| 0000 | 0000 | SOTLNG | 0012 | 000C | SOTDES | 0016 | 0010 | SOTSIN |
| 0002 | 0002 | SOTBCK | 0013 | 000D | SOTLOG | | | |
| 0004 | 0004 | SOTUID | 0014 | 000E | SOTTID | | | |

## Alphabetical list of fields in CHASOT

| FIELD | DEC | HEX | FIELD | DEC | HEX | FIELD | DEC | HEX |
|---|---|---|---|---|---|---|---|---|
| SOTBCK | 0002 | 0002 | SOTLOG | 0013 | 000D | SOTUID | 0004 | 0004 |
| SOTDES | 0012 | 000C | SOTSIN | 0016 | 0010 | | | |
| SOTLNG | 0000 | 0000 | SOTTID | 0014 | 000E | | | |

## Assembler listing of CHASOT

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|---|---|---|---|---|---|
| | 92 00000 | CHASOT | DSECT | | SYSTEM OPERATOR ID TABLE |
| 92 00000 | | | DS | 0F | |
| 92 00000 | | SOTLNG | DS | H | NUMBER OF TABLE |
| | | * | | | ENTRIES-BINARY |
| 92 00002 | | SOTBCK | DS | H | SYMBOLIC DEVICE ADDRESS OF |
| | | * | | | BACKUP TER |
| | | * | | | MINAL |
| 92 00004 | | SOTUID | DS | CL8 | USER IDENTIFICATION-EBCDIC |
| 92 0000C | | SOTDES | DS | XL1 | DESTINATION FLAG-BINARY |
| | 00000000 | SOTDM | EQU | X'00' | #0 MAIN |
| | 00000001 | SOTD1 | EQU | X'01' | #1 TAPE |
| | 00000002 | SOTD2 | EQU | X'02' | #2 DISC |
| | 00000004 | SOTD3 | EQU | X'04' | #4 UNIT RECORD EQUIPMENT |
| 92 0000D | | SOTLOG | DS | XL1 | LOGON FLAG-BINARY |
| | | * | | | #0 NOT LOGGED ON #1 LOGGED ON |
| 92 0000E | | SOTTID | DS | H | TASKID-BINARY |
| 92 00010 | | SOTSIN | DS | H | CONSOLE SYMBOLIC DEVICE |
| | | * | | | ADDRESS |

## CHASID Storage map

```
DEC    HEX _____
  0      0 |                              SIDUID                                |
           |_____|
  8      8 | SIDDES  | SIDLOG |        SIDTID        |         SIDSIN        |
           |_____|_____|_____|_____|
```

## Fields in CHASID -- by displacement

| DEC  | HEX  | FIELD  |       | DEC  | HEX  | FIELD  |       | DEC  | HEX  | FIELD  |
|------|------|--------|-------|------|------|--------|-------|------|------|--------|
| 0000 | 0000 | SIDUID |       | 0008 | 0008 | SIDD0  | (EQU) | 0012 | 000C | SIDSIN |
| 0008 | 0008 | SIDD4  | (EQU) | 0008 | 0008 | SIDDES |       | 0014 | 000E | SIDEND |
| 0008 | 0008 | SIDD2  | (EQU) | 0009 | 0009 | SIDLOG |       |      |      |        |
| 0008 | 0008 | SIDD1  | (EQU) | 0010 | 000A | SIDTID |       |      |      |        |

## Alphabetical list of fields in CHASID

| FIELD  | DEC  | HEX  |       | FIELD  | DEC  | HEX  |       | FIELD  | DEC  | HEX  |
|--------|------|------|-------|--------|------|------|-------|--------|------|------|
| SIDDES | 0008 | 0008 |       | SIDD4  | 0008 | 0008 | (EQU) | SIDTID | 0010 | 000A |
| SIDD0  | 0008 | 0008 | (EQU) | SIDEND | 0014 | 000E |       | SIDUID | 0000 | 0000 |
| SIDD1  | 0008 | 0008 | (EQU) | SIDLOG | 0009 | 0009 |       |        |      |      |
| SIDD2  | 0008 | 0008 | (EQU) | SIDSIN | 0012 | 000C |       |        |      |      |

## Assembler listing of CHASID

| LOCATION | INSTRUCTION | SOURCE | INST  | OPER        | COMMENT |
|----------|-------------|--------|-------|-------------|---------|
|          | 8A 00000    | CHASID | DSECT |             | DSECT FOR TABLE ENTRY |
| 8A 00000 |             |        | DS    | 0D          | ALLIGN TO DOUBLE WORD BOUNDRY |
|          |             | *      |       |             |         |
| 8A 00000 |             | SIDUID | DS    | CL8         | USER ID - PADDED WITH ZEROS |
| 8A 00008 |             | SIDDES | DS    | XL1         | DESTINATION FLAG - BINARY |
|          | 8A 00008    | SIDD0  | EQU   | SIDDES      | MAIN SYSTEM OPERATOR |
|          | 00000000    | SIDD0M | EQU   | X'00'       |         |
|          | 8A 00008    | SIDD1  | EQU   | SIDDES      | TAPE SUB-OPERATOR |
|          | 00000001    | SIDD1M | EQU   | X'01'       |         |
|          | 8A 00008    | SIDD2  | EQU   | SIDDES      | DISK SUB-OPERATOR |
|          | 00000002    | SIDD2M | EQU   | X'02'       |         |
|          | 8A 00008    | SIDD4  | EQU   | SIDDES      | UNIT RECORD SUB-OPERATOR |
|          | 00000004    | SIDD4M | EQU   | X'04'       |         |
| 8A 00009 |             | SIDLOG | DS    | XL1         | LOGON FLAG - BINARY |
|          |             | *      |       |             | 1 = LOGGED ON |
| 8A 0000A |             | SIDTID | DS    | H           | TASK ID - BINARY |
| 8A 0000C |             | SIDSIN | DS    | H           | TERMINAL SYMBOLIC DEVICE ADDRESS |
|          |             | *      |       |             |         |
| 8A 0000E |             | SIDEND | DS    | 0X          | END OF TABLE ENTRY |
|          |             | *      |       |             | I5943 |
|          | 0000000E    | SIDSZE | EQU   | SIDEND-SIDUID | TABLE ENTRY SIZE |
|          |             | *      |       |             | I5943 |

## SERR/Reconfiguration Path Table (CHASPP)

The SERR/Reconfiguration Path Table (SPP) lists one entry for each path to the paging drum(s) containing the SERR and reconfiguration modules.
SPP entries are contiguous in core storage and aligned on word boundaries.

## CHASPP Storage map

```
DEC   HEX  _____
  0     0| SPPLOK  |SPPAP1 |      SPPATH         |
         |         |       |                     |
         |_____|_____|_____|
```

## Fields in CHASPP -- by displacement

| DEC | HEX | FIELD | DEC | HEX | FIELD | DEC | HEX | FIELD |
|------|------|--------|------|------|--------|------|------|--------|
| 0000 | 0000 | SPPLOK | 0001 | 0001 | SPPAP1 | 0002 | 0002 | SPPATH |

## Alphabetical list of fields in CHASPP

| FIELD | DEC | HEX | FIELD | DEC | HEX | FIELD | DEC | HEX |
|--------|------|------|--------|------|------|--------|------|------|
| SPPAP1 | 0001 | 0001 | SPPATH | 0002 | 0002 | SPPLOK | 0000 | 0000 |

## Assembler listing of CHASPP

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|----------|-------------|--------|------|------|---------|
|          | 93 00000    | CHASPP | DSECT |      |         |
| 93 00000 |             |        | DS   | 0F   |         |
| 93 00000 |             | SPPLOK | DS   | C    | LOCK BYTE |
| 93 00001 |             | SPPAP1 | DS   | C    | SDA+1 OF DRUM |
| 93 00002 |             | SPPATH | DS   | H    | PATH ADDRESS |
|          | 00000004    | SPPSZE | EQU  | *-SPPLOK | SIZE OF TABLE ENTRY |

<u>Shared Page Table (CHASPT) and External Shared Page Table (CHAXSP)</u>

    The Shared Page Table (SPT) contains a list of entries representing shared pages.
The SPT is identical to the page table (CHAPGT).  The 2-byte SPT resides in core
storage aligned on halfword boundaries.
    The External Shared Page Table (XSPT) contains control information required by the
Supervisor for proper paging of shared virtual storage pages.  The XSPT must immedi-
ately follow its SPT.  The XSPT (12-3072 bytes) resides in core storage aligned on
fullword boundaries.

<u>CHASPT Storage map</u>

```
DEC   HEX  _____
 0     0|     SPTCBA        |
        |_____|
```
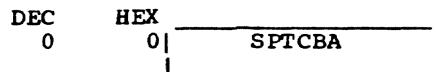
<u>Fields in CHASPT -- by displacement</u>

| DEC | HEX | FIELD | DEC | HEX | FIELD | | DEC | HEX | FIELD |
|-----|-----|-------|-----|-----|-------|-------|-----|-----|-------|
| 0000 | 0000 | SPTCBA | 0001 | 0001 | SPTPA | (EQU) | | | |

<u>Alphabetical list of fields in CHASPT</u>

| FIELD | DEC | HEX | FIELD | DEC | HEX | | FIELD | DEC | HEX |
|-------|-----|-----|-------|-----|-----|-------|-------|-----|-----|
| SPTCBA | 0000 | 0000 | SPTPA | 0001 | 0001 | (EQU) | | | |

<u>Assembler listing of CHASPT</u>

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|----------|-------------|--------|------|------|---------|
| | 94 00000 | CHASPT | DSECT | | SHARED PAGE TABLE ENTRY |
| 94 00000 | | | DS | 0H | |
| 94 00000 | | SPTCBA | DS | H | 12 BIT CORE BLOCK ADDRESS |
| | 94 00001 | SPTPA | EQU | SPTCBA+1 | PAGE AVAILABILITY FLAG |
| | 00000008 | SPTPAM | EQU | 8 | PAGE AVAILABILITY MASK |

## CHAXSP Storage map

```
DEC   HEX  _____
 0     0  |                XSPXL              |XSPF1 |XSPF2 |UNNAMED |XSPFLG |
          |_____|_____|_____|_____|_____|
 8     8  |                XSPGQE             |
          |_____|
```

## Fields in CHAXSP -- by displacement

| DEC | HEX | FIELD | | | DEC | HEX | FIELD | | | DEC | HEX | FIELD | |
|------|------|-------|--|--|------|------|-------|--|--|------|------|-------|--|
| 0000 | 0000 | XSPXL | | | 0004 | 0004 | XSPUP | (EQU) | | 0007 | 0007 | XSPGQ | (EQU) |
| 0004 | 0004 | XSPPU | (EQU) | | 0004 | 0004 | XSPF1 | | | 0007 | 0007 | XSPIO | (EQU) |
| 0004 | 0004 | XSPSP | (EQU) | | 0005 | 0005 | XSPPC | (EQU) | | 0007 | 0007 | XSPII | (EQU) |
| 0004 | 0004 | XSPPA | (EQU) | | 0005 | 0005 | XSPAX | (EQU) | | 0007 | 0007 | XSPPH | (EQU) |
| 0004 | 0004 | XSPRS | (EQU) | | 0005 | 0005 | XSPBV | (EQU) | | 0007 | 0007 | XSPFLG | |
| 0004 | 0004 | XSPCP | (EQU) | | 0005 | 0005 | XSPIV | (EQU) | | 0008 | 0008 | XSPGQE | |
| 0004 | 0004 | XSPTP | (EQU) | | 0005 | 0005 | XSPTA | (EQU) | | | | | |
| 0004 | 0004 | XSPPD | (EQU) | | 0005 | 0005 | XSPF2 | | | | | | |

## Alphabetical list of fields in CHAXSP

| FIELD | DEC | HEX | | FIELD | DEC | HEX | | FIELD | DEC | HEX | |
|-------|------|------|--|-------|------|------|--|-------|------|------|--|
| XSPAX | 0005 | 0005 | (EQU) | XSPII | 0007 | 0007 | (EQU) | XSPRS | 0004 | 0004 | (EQU) |
| XSPBV | 0005 | 0005 | (EQU) | XSPIO | 0007 | 0007 | (EQU) | XSPSP | 0004 | 0004 | (EQU) |
| XSPCP | 0004 | 0004 | (EQU) | XSPIV | 0005 | 0005 | (EQU) | XSPTA | 0005 | 0005 | (EQU) |
| XSPFLG | 0007 | 0007 | | XSPPA | 0004 | 0004 | (EQU) | XSPTP | 0004 | 0004 | (EQU) |
| XSPF1 | 0004 | 0004 | | XSPPC | 0005 | 0005 | (EQU) | XSPUP | 0004 | 0004 | (EQU) |
| XSPF2 | 0005 | 0005 | | XSPPD | 0004 | 0004 | (EQU) | XSPXL | 0000 | 0000 | |
| XSPGQ | 0007 | 0007 | (EQU) | XSPPH | 0007 | 0007 | (EQU) | | | | |
| XSPGQE | 0008 | 0008 | | XSPPU | 0004 | 0004 | (EQU) | | | | |

## Assembler listing of CHAXSP

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|----------|-------------|--------|------|------|---------|
| | BB 00000 | CHAXSP | DSECT | | EXTERNAL        SHARED PAGE TABLE |
| | | * | | | |
| BB 00000 | | | DS | 0F | |
| BB 00000 | | XSPXL | DS | F | EXTERNAL LOCATION OF PAGE |
| BB 00004 | | XSPF1 | DS | XL1 | FLAG BYTE 1 |
| | BB 00004 | XSPUP | EQU | XSPF1 | UPDATE IN PLACE FLAG |
| | 00000080 | XSPUPM | EQU | X'80' | |
| | BB 00004 | XSPPD | EQU | XSPF1 | PREFERED PAGING DEVICE 1=DRUM |
| | | * | | | |
| | 00000040 | XSPPDM | EQU | X'40' | |
| | BB 00004 | XSPTP | EQU | XSPF1 | TYPE PROGRAM OR DATA |
| | | * | | | * |
| | 00000020 | XSPTPM | EQU | X'20' | |
| | BB 00004 | XSPCP | EQU | XSPF1 | CHANGED PAGE BIT FLAG |
| | 00000010 | XSPCPM | EQU | X'10' | CHANGED PAGE BIT MASK |
| | BB 00004 | XSPRS | EQU | XSPF1 | RSS PAGE FLAG |
| | 00000008 | XSPRSM | EQU | X'08' | RSS PAGE MASK |
| | BB 00004 | XSPPA | EQU | XSPF1 | PAGE ASSIGNED 1=ASSIGN |
| | | * | | | |
| | 00000004 | XSPPAM | EQU | X'04' | |
| | BB 00004 | XSPSP | EQU | XSPF1 | SHARED PAGE FLAG |
| | 00000002 | XSPSPM | EQU | X'02' | |
| | BB 00004 | XSPPU | EQU | XSPF1 | PAGE UNPROCESSED BY LOADER 1=UNPROCESSED |
| | | * | | | |
| | 00000001 | XSPPUM | EQU | X'01' | |
| BB 00005 | | XSPF2 | DS | XL1 | FLAG BYTE 2 |
| | BB 00005 | XSPTA | EQU | XSPF2 | TEMPORARY EXTERNAL ADDRESS |
| | 00000080 | XSPTAM | EQU | X'80' | |
| | BB 00005 | XSPIV | EQU | XSPF2 | IVM PAGE NON DELETEABLE FLAG |
| | | * | | | |
| | 00000040 | XSPIVM | EQU | X'40' | IVM PAGE NON DELETEABLE MASK |
| | | * | | | |
| | BB 00005 | XSPBV | EQU | XSPF2 | SETXP ALLOWED AGAINST IVM PAGE |
| | | * | | | |

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|----------|-------------|--------|------|------|---------|
|  | 00000020 | XSPBVM | EQU | X'20' | SETXP ALLOWED AGAINST PAGE |
|  |  | * |  |  | MASK |
|  | BB 00005 | XSPAX | EQU | XSPF2 | AUXILIARY STORAGE FLAG |
|  |  | * |  |  | * |
|  | 00000010 | XSPAXM | EQU | X'10' |  |
|  | BB 00005 | XSPPC | EQU | XSPF2 | PROTECT CLASS |
|  |  | * |  |  | 4 BITS |
| BB 00006 |  |  | DS | X | RESERVED |
|  |  | * |  |  | N405.1 |
| BB 00007 |  | XSPFLG | DS | XL1 | FLAG BYTE |
|  | BB 00007 | XSPPH | EQU | XSPFLG | PAGE HOLD COUNT FIELD |
|  | 000000F0 | XSPPHM | EQU | X'F0' |  |
|  | 00000008 | XSPPH1 | EQU | X'08' | SVC PAGE HOLD FLAG |
|  |  | * |  |  | N405.1 |
|  | BB 00007 | XSPII | EQU | XSPFLG | INCOMING IN-TRANSIT FLAG |
|  | 00000004 | XSPIIM | EQU | X'04' | INCOMING IN-TRANSIT MASK |
|  | BB 00007 | XSPIO | EQU | XSPFLG | OUTGOING IN-TRANSIT FLAG |
|  | 00000002 | XSPIOM | EQU | X'02' | OUTGOING IN-TRANSIT MASK |
|  | BB 00007 | XSPGQ | EQU | XSPFLG | GQE CHAIN FLAG |
|  | 00000001 | XSPGQM | EQU | X'01' | GQE CHAIN MASK |
| BB 00008 |  |  | DS | 0F |  |
| BB 00008 |  | XSPGQE | DS | F | GQE CHAIN POINTER |

## System Statistics Table (CHASST)

CHASST maintains system statistics information which is collected and stored by the STATSAVE macro instruction.  The collection of these statistics permits measurements of TSS while the system is in operation.
The 664-byte CHASST is aligned on word boundaries.

### CHASST Storage map

| DEC | HEX | | |
|---|---|---|---|
| 0 | 0 | SSTLHT | SSTLH1 |
| 8 | 8 | SSTLH2 | SSTLH3 |
| 16 | 10 | SSTZET | |
| 24 | 18 | SSTPLT | SSTQLT |
| 32 | 20 | SSTLCT | SSTTWT |
| 40 | 28 | SSTTST | SSTALT |
| 48 | 30 | SSTMIP | SSTDCP |
| 56 | 38 | SSTCCP | SSTSCP |
| 64 | 40 | SSTPCP | SSTXCP |
| 72 | 48 | SSTAWT | UNNAMED |

### ORG   SSTLHT

| DEC | HEX | | |
|---|---|---|---|
| 0 | 0 | SSTDRRS | SSTDRRP |
| 8 | 8 | SSTDRWS | SSTDRWP |

### ORG   SSTLHT

| DEC | HEX | | |
|---|---|---|---|
| 0 | 0 | SSTDSRS | SSTDSRP |
| 8 | 8 | SSTDSWS | SSTDSWP |

### Fields in CHASST -- by displacement

| DEC | HEX | FIELD | DEC | HEX | FIELD | DEC | HEX | FIELD |
|---|---|---|---|---|---|---|---|---|
| 0000 | 0000 | SSTDSRS | 0012 | 000C | SSTDSWP | 0044 | 002C | SSTALT |
| 0000 | 0000 | SSTDRRS | 0012 | 000C | SSTDRWP | 0048 | 0030 | SSTMIP |
| 0000 | 0000 | SSTLHT | 0012 | 000C | SSTLH3 | 0052 | 0034 | SSTDCP |
| 0004 | 0004 | SSTDSRP | 0016 | 0010 | SSTZET | 0056 | 0038 | SSTCCP |
| 0004 | 0004 | SSTDRRP | 0024 | 0018 | SSTPLT | 0060 | 003C | SSTSCP |
| 0004 | 0004 | SSTLH1 | 0028 | 001C | SSTQLT | 0064 | 0040 | SSTPCP |
| 0008 | 0008 | SSTDSWS | 0032 | 0020 | SSTLCT | 0068 | 0044 | SSTXCP |
| 0008 | 0008 | SSTDRWS | 0036 | 0024 | SSTTWT | 0072 | 0048 | SSTAWT |
| 0008 | 0008 | SSTLH2 | 0040 | 0028 | SSTTST | 0080 | 0050 | SSTLST |

Alphabetical list of fields in CHASST

| FIELD | DEC | HEX | FIELD | DEC | HEX | FIELD | DEC | HEX |
|---|---|---|---|---|---|---|---|---|
| SSTALT | 0044 | 002C | SSTDSRS | 0000 | 0000 | SSTMIP | 0048 | 0030 |
| SSTAWT | 0072 | 0048 | SSTDSWP | 0012 | 000C | SSTPCP | 0064 | 0040 |
| SSTCCP | 0056 | 0038 | SSTDSWS | 0008 | 0008 | SSTPLT | 0024 | 0018 |
| SSTDCP | 0052 | 0034 | SSTLCT | 0032 | 0020 | SSTQLT | 0028 | 001C |
| SSTDRRP | 0004 | 0004 | SSTLHT | 0000 | 0000 | SSTSCP | 0060 | 003C |
| SSTDRRS | 0000 | 0000 | SSTLH1 | 0004 | 0004 | SSTTST | 0040 | 0028 |
| SSTDRWP | 0012 | 000C | SSTLH2· | 0008 | 0008 | SSTTWT | 0036 | 0024 |
| SSTDRWS | 0008 | 0008 | SSTLH3 | 0012 | 000C | SSTXCP | 0068 | 0044 |
| SSTDSRP | 0004 | 0004 | SSTLST | 0080 | 0050 | SSTZET | 0016 | 0010 |

Assembler listing of CHASST

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|---|---|---|---|---|---|
| | 95 00000 | CHASST | DSECT | | SYSTEM STATISTICS TABLE |
| 95 00000 | | SSTLHT | DS | F | SST TOTAL LENGTH-BYTES |
| 95 00004 | | SSTLH1 | DS | F | SST AREA 1-BYTES |
| 95 00008 | | SSTLH2 | DS | F | SST AREA 2-BYTES |
| 95 0000C | | SSTLH3 | DS | F | SST AREA 3-BYTES |
| 95 00010 | | SSTZET | DS | D | ZERO SST PSAETM TIME |
| 95 00018 | | SSTPLT | DS | F | NR. TSE-PAGE LIMIT |
| 95 0001C | | SSTQLT | DS | F | NR. TSE-QUANTA LIMIT |
| 95 00020 | | SSTLCT | DS | F | NR. TSE-LO-CORE |
| 95 00024 | | SSTTWT | DS | F | NR. TSE-TWAIT |
| 95 00028 | | SSTTST | DS | F | NR. TSE-TSEND SVC |
| 95 0002C | | SSTALT | DS | F | NR TSE-ALL |
| | | * | | | SSTALT INCLUDES TYPES OF TSES |
| | | * | | | NOT INDIVIDUALLY SUMMARIZED IN |
| | | * | | | SST |
| 95 00030 | | SSTMIP | DS | F | NR MIGRATED PAGES |
| 95 00034 | | SSTDCP | DS | F | NR DELETED CORE PAGES |
| 95 00038 | | SSTCCP | DS | F | NR CREATED CORE PAGES |
| 95 0003C | | SSTSCP | DS | F | NR RECLAIMED SHARED PAGES |
| 95 00040 | | SSTPCP | DS | F | NR RECLAIMED PRIVATE PAGES |
| 95 00044 | | SSTXCP | DS | F | NR RELOCATION EXCEPTIONS |
| 95 00048 | | SSTAWT | DS | F | NR. TSE-AWAIT |
| | 00000010 | SSTLEN | EQU | 16 | TABLE ENTRY LENGTH=16 BYTES |
| | 95 00000 | | \|ORG\| | SSTLHT | |
| 95 00000 | | SSTDRRS | DS | F | NR DRUM READS SHARED |
| 95 00004 | | SSTDRRP | DS | F | NR DRUM READS PRIVATE |
| 95 00008 | | SSTDRWS | DS | F | NR DRUM WRITES AHARED |
| 95 0000C | | SSTDRWP | DS | F | NR DRUM WRITES PRIVATE |
| | 95 00000 | | \|ORG\| | SSTLHT | |
| 95 00000 | | SSTDSRS | DS | F | NR DISK READS SHARED |
| 95 00004 | | SSTDSRP | DS | F | NR DISK READS PRIVATE |
| 95 00008 | | SSTDSWS | DS | F | NR DISK WRITES SHARED |
| 95 0000C | | SSTDSWP | DS | F | NR DISK WRITES PRIVATE |
| | 95 0004C | | \|ORG\| | | |
| 95 0004C | | | DS | F | |
| 95 00050 | | SSTLST | DS | 0F | |
| | 00000050 | SSTFSL | EQU | SSTLST-CHASST | |

### Station Identification and Features (CHASTA)

CHASTA contains information about the hardware features of an RJE work station, and about which funtional options requested at the work station.

#### CHASTA Storage map

```
DEC   HEX _____
  0     0|                              STANAM                             |
         |_____|
  8     8|STATYP |        STARS1        |                                 |
         |_____|_____|_____|
         |                              STAFET                            |
 24    18|_____|
         |                        |                                        |
         |_____|                                        |
         |                              STAFUN                             |
         |_____|
```

#### ORG STAFET

```
 12     C _____|STAMRF  |STATAB  |STAPUN  |STARES2 |
                                              |_____|_____|_____|_____|
 16    10|                              STARES3                                   |
         |_____|
 24    18|                        |                                               |
         |_____|                                               |
```

#### ORG STAFUN

```
 26    1A _____|STABRK  |STAREC  |_____|
                                  |_____|_____|                                |
         |                              STARES4                                       |
         |_____|
```
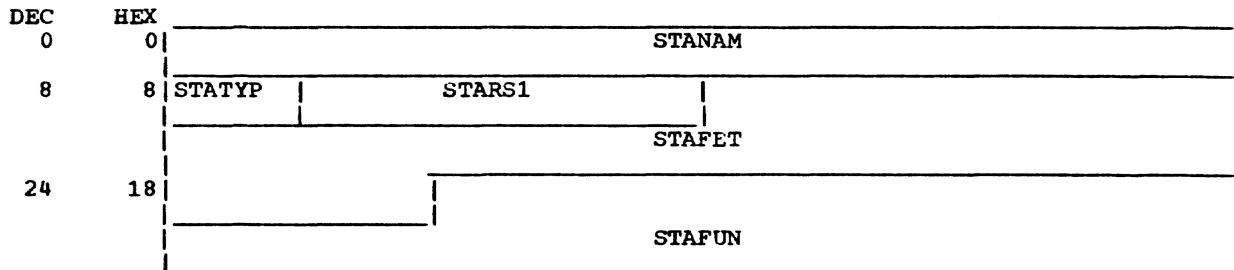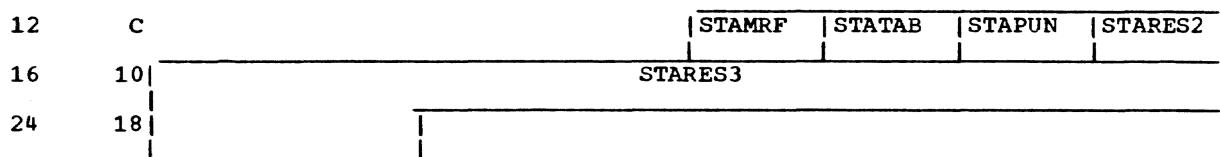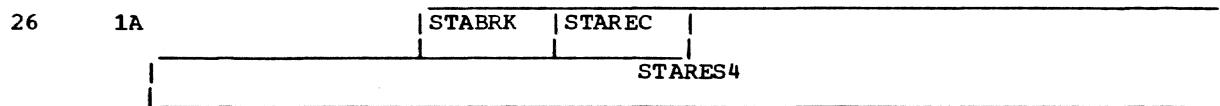
#### Fields in CHASTA -- by displacement

| DEC | HEX | FIELD | DEC | HEX | FIELD | DEC | HEX | FIELD |
|---|---|---|---|---|---|---|---|---|
| 0000 | 0000 | STANAM | 0012 | 000C | STAFET | 0026 | 001A | STABRK |
| 0000 | 0000 | STAORG | 0013 | 000D | STATAB | 0026 | 001A | STAFUN |
| 0008 | 0008 | STATYP | 0014 | 000E | STAPUN | 0027 | 001B | STAREC |
| 0009 | 0009 | STARS1 | 0015 | 000F | STARES2 | 0028 | 001C | STARES4 |
| 0012 | 000C | STAMRF | 0016 | 0010 | STARES3 | | | |

#### Alphabetical list of fields in CHASTA

| FIELD | DEC | HEX | FIELD | DEC | HEX | FIELD | DEC | HEX |
|---|---|---|---|---|---|---|---|---|
| STABRK | 0026 | 001A | STAORG | 0000 | 0000 | STARES4 | 0028 | 001C |
| STAFET | 0012 | 000C | STAPUN | 0014 | 000E | STARS1 | 0009 | 0009 |
| STAFUN | 0026 | 001A | STAREC | 0027 | 001B | STATAB | 0013 | 000D |
| STAMRF | 0012 | 000C | STARES2 | 0015 | 000F | STATYP | 0008 | 0008 |
| STANAM | 0000 | 0000 | STARES3 | 0016 | 0010 | | | |

```
          LOCATION  INSTRUCTION   SOURCE   INST   OPER      COMMENT
                    96 00000      CHASTA   DSECT            NSRB 412.2
          ********************************************************************
          *           CHASTA - DSECT FOR STATION ID'S AND THEIR FEATURES      *
          ********************************************************************
          96 00000                STAORG   DS     0D        START OF STATION DSECT
          96 00000                STANAM   DS     CL8       STATION NAME OR KEY
          96 00008                STATYP   DS     X         STATION TYPE (CODE)
                    00000001      STA278   EQU    X'01'     INDICATES 2780
          96 00009                STARS1   DS     XL3       RESERVED
          96 0000C                STAFET   DS     14X       STATION FEATURES
                    96 0000C               |ORG|  STAFET
          96 0000C                STAMRF   DS     XL1       MULTIPLE RECORD FEATURE
                                  *                         FLAG
                    00000001      STAMRFM  EQU    X'01'     MULTIPLE RECORD FEATURE
                                  *                         MASK
          96 0000D                STATAB   DS     XL1       2780 TABBING INDICATOR
                    00000001      STATABM  EQU    X'01'     2780 TABBING PRESENT
          96 0000E                STAPUN   DS     XL1       2780 PUNCH INDICATOR
                    00000001      STAPUNM  EQU    X'01'     2780 PUNCH PRESENT
          96 0000F                STARES2  DS     XL1       RESERVED
          96 00010                STARES3  DS     XL10      RESERVED
          96 0001A                STAFUN   DS     14X       FUNCTIONAL REQUESTS
                    96 0001A               |ORG|  STAFUN
          96 0001A                STABRK   DS     XL1       PRINT BREAK CHARS DESIRED
                    00000001      STABRKM  EQU    X'01'     BREAK CHARS DESIRED
          96 0001B                STAREC   DS     XL1       RECIEVE FROM OTHER STATIONS
                    00000001      STARECM  EQU    X'01'     YES
          96 0001C                STARES4  DS     3XL4      RESERVED
                    00000028      STALEN   EQU    *-STAORG  LENGTH OF STATION FEATURE
                                  *                         DSECT
```

Schedule Table Entry (CHASTE)

The Schedule Table Entry (STE) contains all scheduling parameters established by the system administrator at SYSGEN/STARTUP. Each STE controls the priority of a task and the time allowed a task before time slice end.
The 28-byte STE resides in read-only core storage, aligned on word boundaries.

CHASTE Storage map

| DEC | HEX | | | | | | | | |
|-----|-----|---|---|---|---|---|---|---|---|
| 0 | 0 | STELEVEL | STEPRIOR | STETSVAL | | STEQUANT | STEDELTA | STEMRQ | |
| 8 | 8 | STEMAXCR | | STEMAXRD | | STEST | STEPULSE | STEAWTEX | |
| 16 | 10 | STETSEND | STEMPRE | STEAWAIT | STETWAIT | STEFLAGS | STEHLCK | STELCHL | STEWLCK |
| 24 | 18 | STECWO | STELCF | STEMBS | STENSL | STEDSH | | STERESV | |

Fields in CHASTE -- by displacement

| DEC | HEX | FIELD | | DEC | HEX | FIELD | | | DEC | HEX | FIELD |
|-----|-----|-------|---|-----|-----|-------|---|---|-----|-----|-------|
| 0000 | 0000 | STELEVEL | | 0014 | 000E | STEAWTEX | | | 0021 | 0015 | STEHLCK |
| 0001 | 0001 | STEPRIOR | | 0016 | 0010 | STETSEND | | | 0022 | 0016 | STELCHL |
| 0002 | 0002 | STETSVAL | | 0017 | 0011 | STEMPRE | | | 0023 | 0017 | STEWLCK |
| 0004 | 0004 | STEQUANT | | 0018 | 0012 | STEAWAIT | | | 0024 | 0018 | STECWO |
| 0005 | 0005 | STEDELTA | | 0019 | 0013 | STETWAIT | | | 0025 | 0019 | STELCF |
| 0006 | 0006 | STEMRQ | | 0020 | 0014 | STESDTR | (EQU) | | 0026 | 001A | STEMBS |
| 0008 | 0008 | STEMAXCR | | 0020 | 0014 | STESRI | (EQU) | | 0027 | 001B | STENSL |
| 0010 | 000A | STEMAXRD | | 0020 | 0014 | STEPRMPT | (EQU) | | 0028 | 001C | STEDSH |
| 0012 | 000C | STEST | | 0020 | 0014 | STERCMP | (EQU) | | 0030 | 001E | STERESV |
| 0013 | 000D | STEPULSE | | 0020 | 0014 | STEFLAGS | | | | | |

Alphabetical list of fields in CHASTE

| FIELD | DEC | HEX | | FIELD | DEC | HEX | | FIELD | DEC | HEX | |
|-------|-----|-----|---|-------|-----|-----|---|-------|-----|-----|---|
| STEAWAIT | 0018 | 0012 | | STEMAXCR | 0008 | 0008 | | STERCMP | 0020 | 0014 | (EQU) |
| STEAWTEX | 0014 | 000E | | STEMAXRD | 0010 | 000A | | STERESV | 0030 | 001E | |
| STECWO | 0024 | 0018 | | STEMBS | 0026 | 001A | | STESDTR | 0020 | 0014 | (EQU) |
| STEDELTA | 0005 | 0005 | | STEMPRE | 0017 | 0011 | | STESRI | 0020 | 0014 | (EQU) |
| STEDSH | 0028 | 001C | | STEMRQ | 0006 | 0006 | | STEST | 0012 | 000C | |
| STEFLAGS | 0020 | 0014 | | STENSL | 0027 | 001B | | STETSEND | 0016 | 0010 | |
| STEHLCK | 0021 | 0015 | | STEPRIOR | 0001 | 0001 | | STETSVAL | 0002 | 0002 | |
| STELCF | 0025 | 0019 | | STEPRMPT | 0020 | 0014 | (EQU) | STETWAIT | 0019 | 0013 | |
| STELCHL | 0022 | 0016 | | STEPULSE | 0013 | 000D | | STEWLCK | 0023 | 0017 | |
| STELEVEL | 0000 | 0000 | | STEQUANT | 0004 | 0004 | | | | | |

Assembler listing of CHASTE

```
LOCATION  INSTRUCTION  SOURCE    INST   OPER    COMMENT
          97 00000     CHASTE    DSECT          SCHEDULE TABLE ENTRY
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *
*   THE SCHEDULE TABLE ENTRY CONTROLS THE PRIORITY OF A TASK AND, ONCE *
*   IT GETS CONTROL, THE AMOUNT OF TIME IT CAN RUN BEFORE REACHING     *
*   TIME SLICE END.                                                    *
*   FIELDS IN THE SCHEDULE TABLE ENTRY ALSO CONTROL THE DETERMINATION  *
*   OF THE NEXT ENTRY TO BE USED WHEN ANY OF SEVERAL STIMULI OCCUR.    *
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *
97 00000                STELEVEL DS   XL1     RELATIVE ENTRY NUMBER IN
                        *                      SCHED
97 00001                STEPRIOR DS   XL1     THIS FIELD GOVERNS
                        *                      ALLOCATION
*                                     CPU RESOURCES TO COMPETING TASKS  *
97 00002                STETSVAL DS   H       LENGTH OF THE TIME SLICE IN
                        *                                              *
*                                     UNITS OF 3.33... MILLISECONDS    *
97 00004                STEQUANT DS   XL1     THE NUMBER OF TIME SLICES A
                        *                                              *
*                                     TASK IS TO BE GIVEN BEFORE       *
```

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|----------|-------------|--------|------|------|---------|
| | | * | | TIME SLICE END OCCURS. | * |
| 97 00005 | | STEDELTA | DS | X | RELATIVE LENGTH OF THE |
| | | * | | | INTERVAL |
| | | * | | | WHICH TASK SHOULD BE |
| | | * | | | SCHEDULED TO |
| | | * | | | RECEIVE TIME SLICE, IN |
| | | * | | | UNITS OF |
| | | * | | | 853.3 MILLISECONDS.(256 |
| | | * | | | TIMES UNIT) |
| 97 00006 | | STEMRQ | DS | HL2 | MAXIMUM RELOCATION/Q |
| 97 00008 | | STEMAXCR | DS | HL2 | THE MAXIMUM NUMBER OF PAGES |
| | | * | | | * |
| * | | | | ALLOWED IN CORE FOR THIS TASK | * |
| * | | | | DURING A TIME SLICE. | * |
| 97 0000A | | STEMAXRD | DS | H | MAXIMUM NUMBER OF DISK |
| | | * | | | READS OR WRITES |
| | | * | | | A TASK MAY PERFORM DURING |
| | | * | | | ONE TIME SLICE |
| 97 0000C | | STEST | DS | XL1 | SCAN THRESHOLD |
| 97 0000D | | STEPULSE | DS | XL1 | THE SCHEDULE TABLE ENTRY TO |
| | | * | | | BE * |
| * | | | | USED WHEN A PULSE CONDITION | * |
| * | | | | OCCURS ON A PULSE STE SVC. | * |
| 97 0000E | | STEAWTEX | DS | H | MAX TIME,IN UNITS 3.33 |
| | | * | | | MILLISEC |
| * | | | | THAT A TASK ISSUING AWAIT IS ALLOWED | * |
| * | | | | TO REMAIN IN DISP. LIST BEFORE BEING | * |
| * | | | | FORCED TO TIME SLICE END | * |
| 97 00010 | | STETSEND | DS | XL1 | SCHEDULE TABLE ENTRY TO BE |
| * | | | | USED WHEN TIME SLICE END OCCURS | * |
| 97 00011 | | STEMPRE | DS | XL1 | SCHEDULE TABLE ENTRY TO BE |
| * | | | | USED |
| * | | | | IF A TASK IS FORCED TO TIME SLICE | * |
| * | | | | END BECAUSE OF MAX PAGE READS. | * |
| 97 00012 | | STEAWAIT | DS | XL1 | THE SCHEDULE TABLE ENTRY TO |
| | | * | | | BE |
| * | | | | USED WHEN A TASK LEAVES AWAIT | * |
| * | | | | STATUS | * |
| 97 00013 | | STETWAIT | DS | XL1 | THE SCHEDULE TABLE ENTRY TO |
| | | * | | | BE * |
| * | | | | USED WHEN A TASK LEAVES TWAIT | * |
| * | | | | STATUS. | * |
| 97 00014 | | STEFLAGS | DS | XL1 | FLAG BYTE |
| | 97 00014 | STERCMP | EQU | STEFLAGS | IF THE FLAG IS ON, |
| | | * | | | SCHEDULED |
| | 00000080 | STERCMPM | EQU | X'80' | STA TIME IS COMPUTED AS |
| | | * | | | PRESENT |
| * | | | | TIME THE DELTA TO RUN WHEN THE TASK LEAVES | * |
| * | | | | THE INACTIVE LIST. IF FLAG IS OFF, | * |
| * | | | | THE SCHEDULED START TIME IS COMPUTED | * |
| * | | | | AS SCHEDULED START TIME PLUS THE | * |
| * | | | | DELTA-TO-RUN PLUS THE TIME IN THE | * |
| * | | | | INACTIVE LIST,AT EXIT INACTIVE LIST. | * |
| | 97 00014 | STEPRMPT | EQU | STEFLAGS | PRE-EMPT FLAG |
| | 00000040 | STEPRMPM | EQU | X'40' | PRE-EMPT MASK |
| | 97 00014 | STESRI | EQU | STEFLAGS | STEAL REQUEST FLAG |
| | 00000020 | STESRIM | EQU | X'20' | STEAL REQUEST MASK |
| | 97 00014 | STESDTR | EQU | STEFLAGS | STEDELTA SHOULD BE |
| | | * | | | SUBTRACTED |
| | 00000010 | STESDTRM | EQU | X'10' | FROM THE SCHEDULED START |
| | | * | | | TIME |
| | | * | | | CALCULATION FOR THE TASK |
| | | * | | | BEING |
| | | * | | | PLACED INTO THE ELIGIBLE |
| | | * | | | LIST |
| | | * | | | RATHER THAN ADDED. |
| 97 00015 | | STEHLCK | DS | XL1 | HOLDING INTERLOCK CHANGE |
| | | * | | | LEVEL |

(Listing of CHASTE continued from page 397)

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|---|---|---|---|---|---|
| 97 00016 | | STELCHL<br>* | DS | XL1 | LO CORE/HOLDING INTERLOCK<br>LEVEL |
| 97 00017 | | STEWLCK<br>* | DS | XL1 | WAITING ON INTERLOCK CHANGE<br>LVL |
| 97 00018 | | STECWO<br>* | DS | XL1 | CONVERSATIONAL WR ONLY EXIT<br>HUB |
| 97 00019 | | STELCF | DS | XL1 | LOW CORE FTSE EXIT HUB |
| 97 0001A | | STEMBS<br>*<br>* | DS | HL1 | MAXIMUM BEHIND SCHEDULE<br>TIME    N488<br>IN UNITS OF 6.7 SECONDS<br>      N488 |
| 97 0001B | | STENSL | DS | XL1 | NEXT STEALING LEVEL |
| 97 0001C | | STEDSH<br>* | DS | H | NUMBER OF DRUM PAGES FOR<br>FAIR SHARE |
| 97 0001E | | STERESV | DS | XL2 | RESERVED           N470.2 |
| | 00000020 | STESIZE<br>* | EQU | *-CHASTE | SIZE OF SCHEDULE TABLE<br>ENTRY |

* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *

## Stack Entry Table (CHASTK)

CHASTK contains the status of interrupted user programs. The registers and PSW as they were at the time of the user interruption are saved in this table if the user causes another user program to be invoked instead of immediately resuming the interrupted program.

### CHASTK Storage map

```
DEC   HEX
  0    0 |_____|_____|
         |           STKPRV               |           STKAET               |
  8    8 |_____|_____|
         |           STKSAV               |           STKPRG               |
 16   10 |_____|_____|_____|_____|
         |         STKPRG   (CONT)         |STKFL1|STKATN|     STKFL2       |
 24   18 |_____|_____|
         |           STKRCN               |                                |
       = |_____|_____| =
         |                           STKLS1                                 |
         |                                |_____|
         |                                |                                 |
144   90 |_____|                                 |
         |_____|
```

### Fields in CHASTK -- by displacement

| DEC | HEX | FIELD | | DEC | HEX | FIELD | | DEC | HEX | FIELD |
|-----|-----|-------|---|-----|-----|-------|---|-----|-----|-------|
| 0000 | 0000 | STKPRV | | 0020 | 0014 | STKEND | (EQU) | 0021 | 0015 | STKATN |
| 0004 | 0004 | STKAET | | 0020 | 0014 | STKSCN | (EQU) | 0022 | 0016 | STKFL2 |
| 0008 | 0008 | STKSAV | | 0020 | 0014 | STKUST | (EQU) | 0024 | 0018 | STKRCN |
| 0012 | 000C | STKPRG | | 0020 | 0014 | STKLPC | (EQU) | 0028 | 001C | STKLS1 |
| 0020 | 0014 | STKVMM | (EQU) | 0020 | 0014 | STKACT | (EQU) | | | |
| 0020 | 0014 | STKPSH | (EQU) | 0020 | 0014 | STKFL1 | | | | |

### Alphabetical list of fields in CHASTK

| FIELD | DEC | HEX | | FIELD | DEC | HEX | | FIELD | DEC | HEX | |
|-------|-----|-----|---|-------|-----|-----|---|-------|-----|-----|---|
| STKACT | 0020 | 0014 | (EQU) | STKLPC | 0020 | 0014 | (EQU) | STKSAV | 0008 | 0008 | |
| STKAET | 0004 | 0004 | | STKLS1 | 0028 | 001C | | STKSCN | 0020 | 0014 | (EQU) |
| STKATN | 0021 | 0015 | | STKPRG | 0012 | 000C | | STKUST | 0020 | 0014 | (EQU) |
| STKEND | 0020 | 0014 | (EQU) | STKPRV | 0000 | 0000 | | STKVMM | 0020 | 0014 | (EQU) |
| STKFL1 | 0020 | 0014 | | STKPSH | 0020 | 0014 | (EQU) | | | | |
| STKFL2 | 0022 | 0016 | | STKRCN | 0024 | 0018 | | | | | |

### Assembler listing of CHASTK

```
LOCATION INSTRUCTION SOURCE    INST   OPER      COMMENT
         98 00000    CHASTK    DSECT            STACK ENTRY DSECT
                     *                          N369.2
************************************************************************
· *                          NSRB 369.2                               *
 *   THIS DSECT COVERS A SYSTEM TABLE IN WHICH IS SAVED THE STATUS    *
 *   (REGISTERS ANS PSW) OF INTERRUPTED USER PROGRAMS. STATUS IS SAVED *
 *   IF THE USER CAUSES ANOTHER USER PROGRAM TO BE INVOKED INSTEAD OF  *
 *   IMMEDIATELY RESUMING THE HALTED PROGRAM.                         *
************************************************************************
         98 00000             STKPRV    DS    A    SAVE AREA POINTER TO CZAMZ1
                              *                    CALLER
                              *                    WHICH INITIATED PROGRAM
         98 00004             STKAET    DS    A    ADDRESS OF AETD ISSUED BY
                              *                    PROGRAM
         98 00008             STKSAV    DS    A    CURRENT SOURCE LIST
                              *                    ADDRESS(SLPCSL)
                              *                    WHEN PROGRAM WAS INITIATED
         98 0000C             STKPRG    DS    CL8  NAME BY WHICH PROGRAM WAS
                              *                    INVOKED
         98 00014             STKFL1    DS    X    FLAGS
```

(Listing of CHASTK continued from page 399)

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|---|---|---|---|---|---|
| | 98 00014 | STKACT | EQU | STKFL1 | LEVEL ACTIVE FLAG |
| | 00000080 | STKACTM | EQU | X'80' | 1=IN USE AND NOT CANCELLED |
| | 98 00014 | STKLPC | EQU | STKFL1 | LPC FLAG |
| | 00000040 | STKLPCM | EQU | X'40' | 1=LEVEL IS LPC OR LPC |
| | | * | | | ROUTINE |
| | 98 00014 | STKUST | EQU | STKFL1 | USATT FLAG |
| | 00000020 | STKUSTM | EQU | X'20' | 1=USATT ACTIVE ON THIS |
| | | * | | | LEVEL |
| | 98 00014 | STKSCN | EQU | STKFL1 | LPC SCAN ROUTINE FLAG |
| | 00000010 | STKSCNM | EQU | X'10' | 1=PROGRAM IS LPC SCAN |
| | | * | | | ROUTINE |
| | 98 00014 | STKEND | EQU | STKFL1 | LPC END ROUTINE FLAG |
| | 00000008 | STKENDM | EQU | X'08' | 1=PROGRAM IS AN LPC END |
| | | * | | | ROUTINE |
| | 98 00014 | STKPSH | EQU | STKFL1 | PUSH COMMAND FLAG |
| | 00000004 | STKPSHM | EQU | X'04' | 1=ENTRY CREATED BY PUSH |
| | | * | | | COMMAND |
| | 98 00014 | STKVMM | EQU | STKFL1 | RESERVED FLAG |
| | | * | | | I6353 |
| | 00000020 | STKVMMM | EQU | X'20' | RESERVED MASK |
| | | * | | | I6353 |
| 98 00015 | | STKATN | DS | HL1 | AETD LEVEL(ATTENTION COUNT) |
| | | * | | | WHEN |
| | | * | | | THIS ENTRY WAS CREATED |
| 98 00016 | | STKFL2 | DS | XL2 | RESERVED |
| | | * | | | I6717 |
| 98 00018 | | STKRCN | DS | A | RCON VALUE OF STACK ENTRY |
| | | * | | | I6468 |
| 98 0001C | | STKLS1 | DS | XL120 | ISALS1 WHEN THIS ENTRY WAS |
| | | * | | | CREATED |
| | 00000094 | STKLEN | EQU | *-CHASTK | ENTRY LENGTH |

## System Table (CHASYS)

The System Table (SYS) maintains information used for accessing the task status index chain, and Resident Shared Page Index. SYS contains the time-of-day clock, low core thresholds, number of tasks within the wall and in each level, interruption information, and data used in time slice and calculations. Pointers to queues and to other system control blocks, and paging counts can also be found in the System table.

### CHASYS Storage map

| DEC | HEX | | | | | | | | |
|-----|-----|---|---|---|---|---|---|---|---|
| 0 | 0 | SYSPEC | | | | SYSLOW | | SYSHI | |
| 8 | 8 | SYSFLI | RESERVED | | | SYSRSP | | | |
| 16 | 10 | SYSSPC | | SYSZZZ1 | SYSZZZ2 | SYSKEL | | | |
| 24 | 18 | SYSFW | | | | SYSRT | | | |
| 32 | 20 | SYSECB | | SYSPDDLK | UNNAMED | SYSXPG | | SYSMGPTP | |
| 40 | 28 | SYSPSW | | | | | | | |
| 48 | 30 | SYSTOD | | | | | | | |
| 56 | 38 | SYSYMD | | | | | | | |
| 64 | 40 | SYSFIT | | | | SYSLIT | | | |
| 72 | 48 | SYSLT | | | | SYSPWP | | | |
| 80 | 50 | SYSRT1 | | | | SYSRT2 | | | |
| 88 | 58 | SYSRT3 | | | | SYSRT4 | | SYSRT5 | |
| 96 | 60 | SYSRT6 | | SYSPTN | | SYSTCT | | SYSTLM | |
| 104 | 68 | SYSTID | | SYSZZZ3 | SYSTSILK | SYSXMC | SYSTIMLK | SYSBUF | |
| 112 | 70 | SYSTSIAD | SYSSSKLK | SYSF2L | SYSCNT | SYSSFS | | SYSSCT | SYSSTL |
| 120 | 78 | SYSCCS | | | | | | | |
| 152 | 98 | SYSPLS | | | | | | | |
| 160 | A0 | SYSPLR | | | | | | | |
| 168 | A8 | SYSSPP | | | | SYSSRP | | | |
| 176 | B0 | SYSODP | | | | SYSDPP | | | |
| 184 | B8 | SYSSPL | SYSSRL | SYSODL | SYSDPL | SYSSRA | | SYSODA | |
| 192 | C0 | SYSRSV | | | | SYSRSC | | SYSMSK | SYSAMW |
| 200 | C8 | SYSMWX | | SYSMWT | | SYSSHALK | SYSZZZ6 | SYSCCL | SYSITL |
| 208 | D0 | SYSTWA | | SYSPCB | | SYSIAX | | SYSFSV | |
| 216 | D8 | SYSMXD | | SYSMND | | SYSFL2 | SYSNWK | SYSSCN | UNNAMED |

CHASYS 401

(CHASYS continued from page 401)

| DEC | HEX | | | | | | |
|-----|-----|---|---|---|---|---|---|
| 224 | E0 | SYSTKSP | SYSTKTK | SYSTSKLK | SYSFL3 | SYSTKID | SYSDATA |
| 232 | E8 | SYSXTS | | SYSMC | SYSILK | SYSPSL | SYSPSC |
| 240 | F0 | SYSCCAIV | | | SYSRSS | RESERVED | |
| 248 | F8 | SYSRCT | | | RESERVED | | |
| 256 | 100 | SYSRS1 | | | | | |
| 264 | 108 | SYSRS2 | | | | | |
| 272 | 110 | SYSRS3 | | | | | |
| 280 | 118 | SYSRS4 | | | | | |
| 288 | 120 | SYSRS5 | | | | | |
| 296 | 128 | SYSRS6 | | | | | |
| 304 | 130 | SYSRPP | | SYSRFL | | SYSRCB | |
| 312 | 138 | SYSRCS | | | | | |
| 320 | 140 | SYSRPS | | | | | |
| 328 | 148 | SYSRIO2 | | | | | |
| 352 | 160 | SYSAST | | SYSAPT | | SYSAAC | |
| 360 | 168 | UNNAMED | | SYSSHP | | SYSMXS | SYSMNS |
| 368 | 170 | SYSSCH | | | SYSLSST | | |
| 376 | 178 | SYSNTSI | | | SYSIDL | | |
| 384 | 180 | SYSCTP | | | SYSDLY | | |
| 392 | 188 | SYSDTRL | SYSTSEM | SYSPMT | SYSTCR | SYSTSILG | |
| 400 | 190 | SYSTIMLG | | | SYSTSIAG | | |
| 408 | 198 | SYSF2G | | | SYSSHALG | | |
| 416 | 1A0 | SYSTKSG | | | SYSTKTG | | |
| 424 | 1A8 | SYSTSKLG | | | SYSPT1 | | |
| 432 | 1B0 | SYSPT2 | | | SYSPT3 | | |
| 440 | 1B8 | SYSELG | | | SYSINA | | |
| 448 | 1C0 | SYSVMB | | | SYSBLK | SYSBLK2 | |
| 456 | 1C8 | SYSPF | UNNAMED | SYSLOQ | | SYSDIP | |
| 464 | 1D0 | UNNAMED | | | | | |

(CHASYS continued from page 402)

```
DEC   HEX
472   1D8 |                                                              |
          =                        RESERVED                              =
          |                                                              |
4096  1000|          SYSPEB            |            SYSUC                |
4104  1008|   SYSSYM    |   SYSPTH     |    SYSSLT    | SYSLOW1 | SYSLOW2 |
4112  1010| SYSHI1 | SYSHI2 |            RESERVED                        |
4120  1018| SYSKEY |      SYSDAD       | SYSSTD | SYSSTC |    SYSRCN      |
4128  1020|                         SYSSCP                               |
4136  1028| SYSD0 | SYSD1 | SYSD2 | SYSD3 | SYSD4 | SYSD5 | SYSD6 | SYSD7|
4144  1030| SYS89LK | SYSRTCT |   UNNAMED   |                            |
          |                         UNNAMED                              |
4168  1048|          SYSLOG           | SYSZZZ9 | SYSN1 |   RESERVED      |
4176  1050|    SYSBIN    |   SYSCYL    |    SYSHED    | SYSREC | SYSFLG   |
4184  1058|         SYSPCIOR          |          SYSGQE                  |
4192  1060|                                                              |
          =                         UNNAMED                              =
          |                                                              |
4320  10E0|   SYSBINR    |   SYSCYLR   |    SYSHEDR   | SYSRECR | SYSFLGR |
4328  10E8|         SYSPCIR           |          SYSGQER                 |
4336  10F0|                                                              |
          =                         UNNAMED                              =
          |                                                              |
4464  1170|                        SYSSEEK1                              |
4472  1178|                        SYSSRCH1                              |
4480  1180|                        SYSTIC1                               |
4488  1188|                        SYSRWR1                               |
4496  1190|                                                              |
          =                         UNNAMED                              =
          |                                                              |
4752  1290|                        SYSNOP1                               |
4760  1298|                        SYSSEEK2                              |
4768  12A0|                        SYSSRCH2                              |
```

(CHASYS continued from page 403)

```
DEC    HEX  _____
4776   12A8|                         SYSTIC2                         |
           |_____|
4784   12B0|                         SYSRW2                          |
           |_____|
4792   12B8|                                                         |
           =                         UNNAMED                       =
           |                                                         |
           |_____|
5048   13B8|                         SYSNOP2                         |
           |_____|
```

ORG  SYSZZZ2

```
19    13                              _____
                                     |SYSRAN   |
                                     |_____|
```

Fields in CHASYS -- by displacement

| DEC | HEX | FIELD | | DEC | HEX | FIELD | | DEC | HEX | FIELD | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0000 | 0000 | SYSPEC | | 0115 | 0073 | SYSCNT | | 0235 | 00EB | SYSILK | |
| 0004 | 0004 | SYSLOW | | 0116 | 0074 | SYSSFS | | 0236 | 00EC | SYSPSL | |
| 0006 | 0006 | SYSHI | | 0118 | 0076 | SYSSCT | | 0238 | 00EE | SYSPSC | |
| 0008 | 0008 | SYSSMG | (EQU) | 0119 | 0077 | SYSSTL | | 0240 | 00F0 | SYSCCAIV | |
| 0008 | 0008 | SYSLC | (EQU) | 0120 | 0078 | SYSCCS | | 0244 | 00F4 | SYSRSS | |
| 0008 | 0008 | SYSWE | (EQU) | 0152 | 0098 | SYSPLS | | 0248 | 00F8 | SYSRCT | |
| 0008 | 0008 | SYSWA | (EQU) | 0160 | 00A0 | SYSPLR | | 0256 | 0100 | SYSRS1 | |
| 0008 | 0008 | SYSTI | (EQU) | 0168 | 00A8 | SYSSPP | | 0264 | 0108 | SYSRS2 | |
| 0008 | 0008 | SYSPC | (EQU) | 0172 | 00AC | SYSRAS | (EQU) | 0272 | 0110 | SYSRS3 | |
| 0008 | 0008 | SYSPS | (EQU) | 0172 | 00AC | SYSSRP | | 0280 | 0118 | SYSRS4 | |
| 0008 | 0008 | SYSFLI | | 0176 | 00B0 | SYSODP | | 0288 | 0120 | SYSRS5 | |
| 0012 | 000C | SYSRSP | | 0180 | 00B4 | SYSDPP | | 0296 | 0128 | SYSRS6 | |
| 0016 | 0010 | SYSSPC | | 0184 | 00B8 | SYSSPL | | 0304 | 0130 | SYSRPP | |
| 0018 | 0012 | SYSZZZ1 | | 0185 | 00B9 | SYSSRL | | 0304 | 0130 | SYSRIO | |
| 0019 | 0013 | SYSRAN | | 0186 | 00BA | SYSODL | | 0306 | 0132 | SYSSR | (EQU) |
| 0019 | 0013 | SYSZZZ2 | | 0187 | 00BB | SYSDPL | | 0306 | 0132 | SYSSE | (EQU) |
| 0020 | 0014 | SYSKEL | | 0188 | 00BC | SYSSRA | | 0306 | 0132 | SYSAR | (EQU) |
| 0024 | 0018 | SYSFW | | 0190 | 00BE | SYSODA | | 0306 | 0132 | SYSIR | (EQU) |
| 0028 | 001C | SYSRT | | 0192 | 00C0 | SYSRSV | | 0306 | 0132 | SYSAI | (EQU) |
| 0032 | 0020 | SYSECB | | 0196 | 00C4 | SYSRSC | | 0306 | 0132 | SYSII | (EQU) |
| 0034 | 0022 | SYSPDDLK | | 0198 | 00C6 | SYSMSK | | 0306 | 0132 | SYSRFL | |
| 0036 | 0024 | SYSXPG | | 0199 | 00C7 | SYSAMW | | 0308 | 0134 | SYSRCB | |
| 0038 | 0026 | SYSMGPTP | | 0200 | 00C8 | SYSMWX | | 0312 | 0138 | SYSRCS | |
| 0040 | 0028 | SYSPSW | | 0202 | 00CA | SYSMWT | | 0320 | 0140 | SYSRPS | |
| 0048 | 0030 | SYSTOD | | 0204 | 00CC | SYSSHALK | | 0328 | 0148 | SYSRIO2 | |
| 0056 | 0038 | SYSMD | | 0205 | 00CD | SYSZZZ6 | | 0352 | 0160 | SYSAST | |
| 0064 | 0040 | SYSFIT | | 0206 | 00CE | SYSCCL | | 0354 | 0162 | SYSAPT | |
| 0068 | 0044 | SYSLIT | | 0207 | 00CF | SYSITL | | 0356 | 0164 | SYSAAC | |
| 0072 | 0048 | SYSLT | | 0208 | 00D0 | SYSTWA | | 0362 | 016A | SYSSHP | |
| 0076 | 004C | SYSPWP | | 0210 | 00D2 | SYSPCB | | 0364 | 016C | SYSMXS | |
| 0080 | 0050 | SYSRT1 | | 0212 | 00D4 | SYSIAX | | 0366 | 016E | SYSMNS | |
| 0084 | 0054 | SYSRT2 | | 0214 | 00D6 | SYSFSV | | 0368 | 0170 | SYSSCH | |
| 0088 | 0058 | SYSRT3 | | 0216 | 00D8 | SYSMXD | | 0372 | 0174 | SYSLSST | |
| 0092 | 005C | SYSRT4 | | 0218 | 00DA | SYSMND | | 0376 | 0178 | SYSNTSI | |
| 0094 | 005E | SYSRT5 | | 0220 | 00DC | SYSLOCO | (EQU) | 0380 | 017C | SYSIDL | |
| 0096 | 0060 | SYSRT6 | | 0220 | 00DC | SYSRCRD | (EQU) | 0384 | 0180 | SYSCTP | |
| 0098 | 0062 | SYSPTN | | 0220 | 00DC | SYSFL2 | | 0388 | 0184 | SYSDLY | |
| 0100 | 0064 | SYSTCT | | 0221 | 00DD | SYSNWK | | 0392 | 0188 | SYSDTRL | |
| 0102 | 0066 | SYSTLM | | 0222 | 00DE | SYSSCN | | 0393 | 0189 | SYSTSEM | |
| 0104 | 0068 | SYSTID | | 0224 | 00E0 | SYSTKSP | | 0394 | 018A | SYSPMT | |
| 0106 | 006A | SYSZZZ3 | | 0225 | 00E1 | SYSTKTK | | 0395 | 018B | SYSTCR | |
| 0107 | 006B | SYSTSILK | | 0226 | 00E2 | SYSTSKLK | | 0396 | 018C | SYSTSILG | |
| 0108 | 006C | SYSXMC | | 0227 | 00E3 | SYSASM | (EQU) | 0400 | 0190 | SYSTIMLG | |
| 0109 | 006D | SYSTIMLK | | 0227 | 00E3 | SYSFL3 | | 0404 | 0194 | SYSTSIAG | |
| 0110 | 006E | SYSBUF | | 0228 | 00E4 | SYSTKID | | 0408 | 0198 | SYSF2G | |
| 0112 | 0070 | SYSTSIAD | | 0230 | 00E6 | SYSDATA | | 0412 | 019C | SYSSHALG | |
| 0113 | 0071 | SYSSSKLK | | 0232 | 00E8 | SYSXTS | | 0416 | 01A0 | SYSTKSG | |
| 0114 | 0072 | SYSF2L | | 0234 | 00EA | SYSMC | | 0420 | 01A4 | SYSTKTG | |

| DEC | HEX | FIELD | | DEC | HEX | FIELD | | DEC | HEX | FIELD | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0424 | 01A8 | SYSTSKLG | | 4136 | 1028 | SYSD0 | | 4176 | 1050 | SYSBIN | |
| 0428 | 01AC | SYSPT1 | | 4136 | 1028 | SYSSDA | | 4176 | 1050 | SYSARG | |
| 0432 | 01B0 | SYSPT2 | | 4137 | 1029 | SYSD1 | | 4178 | 1052 | SYSCYL | |
| 0436 | 01B4 | SYSPT3 | | 4138 | 102A | SYSD2 | | 4180 | 1054 | SYSHED | |
| 0440 | 01B8 | SYSELG | | 4139 | 102B | SYSD3 | | 4182 | 1056 | SYSREC | |
| 0444 | 01BC | SYSINA | | 4140 | 102C | SYSD4 | | 4183 | 1057 | SYSACT | (EQU) |
| 0448 | 01C0 | SYSVMB | | 4141 | 102D | SYSD5 | | 4183 | 1057 | SYSFLG1 | (EQU) |
| 0452 | 01C4 | SYSBLK | | 4142 | 102E | SYSD6 | | 4183 | 1057 | SYSFLG | |
| 0454 | 01C6 | SYSBLK2 | | 4143 | 102F | SYSD7 | | 4184 | 1058 | SYSPCIOR | |
| 0456 | 01C8 | SYSLP | (EQU) | 4144 | 1030 | SYS89LK | | 4188 | 105C | SYSGQE | |
| 0456 | 01C8 | SYSPF | | 4145 | 1031 | SYSRTCT | | 4320 | 10E0 | SYSBINR | |
| 0456 | 01C8 | SYSPDD | | 4168 | 1048 | SYSLOG | | 4320 | 10E0 | SYSARGR | |
| 0458 | 01CA | SYSLOQ | | 4172 | 104C | SYSSIX | (EQU) | 4322 | 10E2 | SYSCYLR | |
| 0460 | 01CC | SYSDIP | | 4172 | 104C | SYSFVE | (EQU) | 4324 | 10E4 | SYSHEDR | |
| 4096 | 1000 | SYSPEB | | 4172 | 104C | SYSFOR | (EQU) | 4326 | 10E6 | SYSRECR | |
| 4096 | 1000 | SYSDIC | | 4172 | 104C | SYSTHR | (EQU) | 4327 | 10E7 | SYSACR | (EQU) |
| 4100 | 1004 | SYSUC | | 4172 | 104C | SYSTWO | (EQU) | 4327 | 10E7 | SYSFLGS | (EQU) |
| 4104 | 1008 | SYSSYM | | 4172 | 104C | SYSONE | (EQU) | 4327 | 10E7 | SYSFLGR | |
| 4106 | 100A | SYSPTH | | 4172 | 104C | SYSTON | (EQU) | 4328 | 10E8 | SYSPCIR | |
| 4108 | 100C | SYSSLT | | 4172 | 104C | SYSOON | (EQU) | 4332 | 10EC | SYSGQER | |
| 4110 | 100E | SYSLOW1 | | 4172 | 104C | SYSLK | (EQU) | 4464 | 1170 | SYSSEEK1 | |
| 4111 | 100F | SYSLOW2 | | 4172 | 104C | SYSZZZ9 | | 4472 | 1178 | SYSSRCH1 | |
| 4112 | 1010 | SYSHI1 | | 4173 | 104D | SYSRAC | (EQU) | 4480 | 1180 | SYSTIC1 | |
| 4113 | 1011 | SYSHI2 | | 4173 | 104D | SYSBY | (EQU) | 4488 | 1188 | SYSRWR1 | |
| 4120 | 1018 | SYSKEY | | 4173 | 104D | SYSPE | (EQU) | 4752 | 1290 | SYSNOP1 | |
| 4120 | 1018 | SYSCSW | | 4173 | 104D | SYSSFL | (EQU) | 4760 | 1298 | SYSSEEK2 | |
| 4121 | 1019 | SYSDAD | | 4173 | 104D | SYSDR | (EQU) | 4768 | 12A0 | SYSSRCH2 | |
| 4124 | 101C | SYSSTD | | 4173 | 104D | SYSPCI | (EQU) | 4776 | 12A8 | SYSTIC2 | |
| 4125 | 101D | SYSSTC | | 4173 | 104D | SYSWC | (EQU) | 4784 | 12B0 | SYSRW2 | |
| 4126 | 101E | SYSRCN | | 4173 | 104D | SYSSN | (EQU) | 5048 | 13B8 | SYSNOP2 | |
| 4128 | 1020 | SYSSCP | | 4173 | 104D | SYSN1 | | | | | |

## Alphabetical list of fields in CHASYS

| FIELD | DEC | HEX | | FIELD | DEC | HEX | | FIELD | DEC | HEX | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| SYSAAC | 0356 | 0164 | | SYSD0 | 4136 | 1028 | | SYSILK | 0235 | 00EB | |
| SYSACR | 4327 | 10E7 | (EQU) | SYSD1 | 4137 | 1029 | | SYSINA | 0444 | 01BC | |
| SYSACT | 4183 | 1057 | (EQU) | SYSD2 | 4138 | 102A | | SYSIR | 0306 | 0132 | (EQU) |
| SYSAI | 0306 | 0132 | (EQU) | SYSD3 | 4139 | 102B | | SYSITL | 0207 | 00CF | |
| SYSAMW | 0199 | 00C7 | | SYSD4 | 4140 | 102C | | SYSKEL | 0020 | 0014 | |
| SYSAPT | 0354 | 0162 | | SYSD5 | 4141 | 102D | | SYSKEY | 4120 | 1018 | |
| SYSAR | 0306 | 0132 | (EQU) | SYSD6 | 4142 | 102E | | SYSLC | 0008 | 0008 | (EQU) |
| SYSARG | 4176 | 1050 | | SYSD7 | 4143 | 102F | | SYSLIT | 0068 | 0044 | |
| SYSARGR | 4320 | 10E0 | | SYSECB | 0032 | 0020 | | SYSLK | 4172 | 104C | (EQU) |
| SYSASM | 0227 | 00E3 | (EQU) | SYSELG | 0440 | 01B8 | | SYSLOCO | 0220 | 00DC | (EQU) |
| SYSAST | 0352 | 0160 | | SYSFIT | 0064 | 0040 | | SYSLOG | 4168 | 1048 | |
| SYSBIN | 4176 | 1050 | | SYSFLG | 4183 | 1057 | | SYSLOQ | 0458 | 01CA | |
| SYSBINR | 4320 | 10E0 | | SYSFLGR | 4327 | 10E7 | | SYSLOW | 0004 | 0004 | |
| SYSBLK | 0452 | 01C4 | | SYSFLGS | 4327 | 10E7 | (EQU) | SYSLOW1 | 4110 | 100E | |
| SYSBLK2 | 0454 | 01C6 | | SYSFLG1 | 4183 | 1057 | (EQU) | SYSLOW2 | 4111 | 100F | |
| SYSBUF | 0110 | 006E | | SYSFLI | 0008 | 0008 | | SYSLP | 0456 | 01C8 | (EQU) |
| SYSBY | 4173 | 104D | (EQU) | SYSFL2 | 0220 | 00DC | | SYSLSST | 0372 | 0174 | |
| SYSCCAIV | 0240 | 00F0 | | SYSFL3 | 0227 | 00E3 | | SYSLT | 0072 | 0048 | |
| SYSCCL | 0206 | 00CE | | SYSFOR | 4172 | 104C | (EQU) | SYSMC | 0234 | 00EA | |
| SYSCCS | 0120 | 0078 | | SYSFSV | 0214 | 00D6 | | SYSMGPTP | 0038 | 0026 | |
| SYSCNT | 0115 | 0073 | | SYSFVE | 4172 | 104C | (EQU) | SYSMND | 0218 | 00DA | |
| SYSCSW | 4120 | 1018 | | SYSFW | 0024 | 0018 | | SYSMNS | 0366 | 016E | |
| SYSCTP | 0384 | 0180 | | SYSF2G | 0408 | 0198 | | SYSMSK | 0198 | 00C6 | |
| SYSCYL | 4178 | 1052 | | SYSF2L | 0114 | 0072 | | SYSMWT | 0202 | 00CA | |
| SYSCYLR | 4322 | 10E2 | | SYSGQE | 4188 | 105C | | SYSMWX | 0200 | 00C8 | |
| SYSDAD | 4121 | 1019 | | SYSGQER | 4332 | 10EC | | SYSMXD | 0216 | 00D8 | |
| SYSDATA | 0230 | 00E6 | | SYSHED | 4180 | 1054 | | SYSMXS | 0364 | 016C | |
| SYSDIC | 4096 | 1000 | | SYSHEDR | 4324 | 10E4 | | SYSNOP1 | 4752 | 1290 | |
| SYSDIP | 0460 | 01CC | | SYSHI | 0006 | 0006 | | SYSNOP2 | 5048 | 13B8 | |
| SYSDLY | 0388 | 0184 | | SYSHI1 | 4112 | 1010 | | SYSNTSI | 0376 | 0178 | |
| SYSDPL | 0187 | 00BB | | SYSHI2 | 4113 | 1011 | | SYSNWK | 0221 | 00DD | |
| SYSDPP | 0180 | 00B4 | | SYSIAX | 0212 | 00D4 | | SYSN1 | 4173 | 104D | |
| SYSDR | 4173 | 104D | (EQU) | SYSIDL | 0380 | 017C | | SYSODA | 0190 | 00BE | |
| SYSDTRL | 0392 | 0188 | | SYSII | 0306 | 0132 | (EQU) | SYSODL | 0186 | 00BA | |

(Continued from page 405)

| FIELD | DEC | HEX | | FIELD | DEC | HEX | | FIELD | DEC | HEX | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| SYSODP | 0176 | 00B0 | | SYSRSV | 0192 | 00C0 | | SYSSSKLK | 0113 | 0071 | |
| SYSONE | 4172 | 104C | (EQU) | SYSRS1 | 0256 | 0100 | | SYSSTL | 0119 | 0077 | |
| SYSOON | 4172 | 104C | (EQU) | SYSRS2 | 0264 | 0108 | | SYSSYM | 4104 | 1008 | |
| SYSPC | 0008 | 0008 | (EQU) | SYSRS3 | 0272 | 0110 | | SYSTCR | 0395 | 018B | |
| SYSPCB | 0210 | 00D2 | | SYSRS4 | 0280 | 0118 | | SYSTCT | 0100 | 0064 | |
| SYSPCI | 4173 | 104D | (EQU) | SYSRS5 | 0288 | 0120 | | SYSTHR | 4172 | 104C | (EQU) |
| SYSPCIOR | 4184 | 1058 | | SYSRS6 | 0296 | 0128 | | SYSTI | 0008 | 0008 | (EQU) |
| SYSPCIR | 4328 | 10E8 | | SYSRT | 0028 | 001C | | SYSTIC1 | 4480 | 1180 | |
| SYSPDD | 0456 | 01C8 | | SYSRTCT | 4145 | 1031 | | SYSTIC2 | 4776 | 12A8 | |
| SYSPDDLK | 0034 | 0022 | | SYSRT1 | 0080 | 0050 | | SYSTID | 0104 | 0068 | |
| SYSPE | 4173 | 104D | (EQU) | SYSRT2 | 0084 | 0054 | | SYSTIMLG | 0400 | 0190 | |
| SYSPEB | 4096 | 1000 | | SYSRT3 | 0088 | 0058 | | SYSTIMLK | 0109 | 006D | |
| SYSPEC | 0000 | 0000 | | SYSRT4 | 0092 | 005C | | SYSTKID | 0228 | 00E4 | |
| SYSPF | 0456 | 01C8 | | SYSRT5 | 0094 | 005E | | SYSTKSG | 0416 | 01A0 | |
| SYSPLR | 0160 | 00A0 | | SYSRT6 | 0096 | 0060 | | SYSTKSP | 0224 | 00E0 | |
| SYSPLS | 0152 | 0098 | | SYSRWR1 | 4488 | 1188 | | SYSTKTG | 0420 | 01A4 | |
| SYSPMT | 0394 | 018A | | SYSRW2 | 4784 | 12B0 | | SYSTKTK | 0225 | 00E1 | |
| SYSPS | 0008 | 0008 | (EQU) | SYSSCH | 0368 | 0170 | | SYSTLM | 0102 | 0066 | |
| SYSPSC | 0238 | 00EE | | SYSSCN | 0222 | 00DE | | SYSTOD | 0048 | 0030 | |
| SYSPSL | 0236 | 00EC | | SYSSCP | 4128 | 1020 | | SYSTON | 4172 | 104C | (EQU) |
| SYSPSW | 0040 | 0028 | | SYSSCT | 0118 | 0076 | | SYSTSEM | 0393 | 0189 | |
| SYSPTH | 4106 | 100A | | SYSSDA | 4136 | 1028 | | SYSTSIAD | 0112 | 0070 | |
| SYSPTN | 0098 | 0062 | | SYSSE | 0306 | 0132 | (EQU) | SYSTSIAG | 0404 | 0194 | |
| SYSPT1 | 0428 | 01AC | | SYSSEEK1 | 4464 | 1170 | | SYSTSILG | 0396 | 018C | |
| SYSPT2 | 0432 | 01B0 | | SYSSEEK2 | 4760 | 1298 | | SYSTSILK | 0107 | 006B | |
| SYSPT3 | 0436 | 01B4 | | SYSSFL | 4173 | 104D | (EQU) | SYSTSKLG | 0424 | 01A8 | |
| SYSPWP | 0076 | 004C | | SYSSFS | 0116 | 0074 | | SYSTSKLK | 0226 | 00E2 | |
| SYSRAC | 4173 | 104D | (EQU) | SYSSHALG | 0412 | 019C | | SYSTWA | 0208 | 00D0 | |
| SYSRAN | 0019 | 0013 | | SYSSHALK | 0204 | 00CC | | SYSTWO | 4172 | 104C | (EQU) |
| SYSRAS | 0172 | 00AC | (EQU) | SYSSHP | 0362 | 016A | | SYSUC | 4100 | 1004 | |
| SYSRCB | 0308 | 0134 | | SYSSIX | 4172 | 104C | (EQU) | SYSVMB | 0448 | 01C0 | |
| SYSRCN | 4126 | 101E | | SYSSLT | 4108 | 100C | | SYSWA | 0008 | 0008 | (EQU) |
| SYSRCRD | 0220 | 00DC | (EQU) | SYSSMG | 0008 | 0008 | (EQU) | SYSWC | 4173 | 104D | (EQU) |
| SYSRCS | 0312 | 0138 | | SYSSN | 4173 | 104D | (EQU) | SYSWE | 0008 | 0008 | (EQU) |
| SYSRCT | 0248 | 00F8 | | SYSSPC | 0016 | 0010 | | SYSXMC | 0108 | 006C | |
| SYSREC | 4182 | 1056 | | SYSSPL | 0184 | 00B8 | | SYSXPG | 0036 | 0024 | |
| SYSRECR | 4326 | 10E6 | | SYSSPP | 0168 | 00A8 | | SYSXTS | 0232 | 00E8 | |
| SYSRFL | 0306 | 0132 | | SYSSR | 0306 | 0132 | (EQU) | SYSYMD | 0056 | 0038 | |
| SYSRIO | 0304 | 0130 | | SYSSRA | 0188 | 00BC | | SYSZZZ1 | 0018 | 0012 | |
| SYSRIO2 | 0328 | 0148 | | SYSSRCH1 | 4472 | 1178 | | SYSZZZ2 | 0019 | 0013 | |
| SYSRPP | 0304 | 0130 | | SYSSRCH2 | 4768 | 12A0 | | SYSZZZ3 | 0106 | 006A | |
| SYSRPS | 0320 | 0140 | | SYSSRL | 0185 | 00B9 | | SYSZZZ6 | 0205 | 00CD | |
| SYSRSC | 0196 | 00C4 | | SYSSRP | 0172 | 00AC | | SYSZZZ9 | 4172 | 104C | |
| SYSRSP | 0012 | 000C | | SYSSTC | 4125 | 101D | | SYS89LK | 4144 | 1030 | |
| SYSRSS | 0244 | 00F4 | | SYSSTD | 4124 | 101C | | | | | |

## Assembler listing of CHASYS

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|---|---|---|---|---|---|
| | 99 00000 | CHASYS | DSECT | | SYSTEM      TABLE |
| 99 00000 | | SYSPEC | DS | F | PTR TO START DISPATCHABLE & |
| | | * | | | ACTIVE LIST |
| 99 00004 | | SYSLOW | DS | H | LOW CORE THRESHOLD (LOW) |
| 99 00006 | | SYSHI | DS | H | LOW CORE THRESHOLD (HIGH) |
| 99 00008 | | SYSFLI | DS | XL1 | FLAGS |
| | 99 00008 | SYSPS | EQU | SYSFLI | PUBLIC SEGMENT INDICATOR |
| | 00000080 | SYSPSM | EQU | X'80' | |
| | 99 00008 | SYSPC | EQU | SYSFLI | PACKING INDICATOR |
| | 00000040 | SYSPCM | EQU | X'40' | |
| | 99 00008 | SYSTI | EQU | SYSFLI | TASK INITIATION INHIBITION |
| | 00000020 | SYSTIM | EQU | X'20' | |
| | 99 00008 | SYSWA | EQU | SYSFLI | WRITE CHECK OPTION FOR |
| | | * | | | PAGING TO AUX. |
| | 00000010 | SYSWAM | EQU | X'10' | |
| | 99 00008 | SYSWE | EQU | SYSFLI | WRITE CHECK OPTION FOR |
| | | * | | | PAGING TO EXT |
| | 00000008 | SYSWEM | EQU | X'08' | |
| | 99 00008 | SYSLC | EQU | SYSFLI | LOW CORE INDICATOR |

(Listing of CHASYS continued from page 406)

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|----------|-------------|--------|------|------|---------|
| | 00000002 | SYSLCM | EQU | X'02' | |
| | 99 00008 | SYSSMG | EQU | SYSFLI | SHARED PAGE MIGRATION FLAG |
| | 00000001 | SYSSMGM | EQU | X'01' | SHARED PAGE MIGRATION MASK |
| 99 0000C | | | DS | 0F | |
| 99 0000C | | SYSRSP | DS | F | RSPI POINTER |
| 99 00010 | | SYSSPC | DS | H | RSPI COUNT |
| 99 00012 | | SYSZZZ1 | DS | XL1 | FOR STATISTICAL GATHERING |
| | | * | | | PURPOSES |
| 99 00013 | | SYSZZZ2 | DS | XL1 | UNUSED |
| | 99 00013 | | \|ORG\| | SYSZZZ2 | |
| 99 00013 | | SYSRAN | DS | X | CURRENT REL APPLICATION |
| | | * | | | NUMBER   N386 |
| 99 00014 | | SYSKEL | DS | F | AUX/EXT LOCATION OF |
| | | * | | | SKELETON XTSI |
| 99 00018 | | SYSFW | DS | F | PTR TO START OF ELIGIBLE |
| | | * | | | LIST |
| 99 0001C | | SYSRT | DS | F | RUN TIME TO DATE |
| 99 00020 | | SYSECB | DS | H | ESTIMATED CORE BLOCKS |
| | | * | | | AVAILABLE |
| 99 00022 | | SYSPDDLK | DS | X | LOCK ON SYSTEM PDD COUNT |
| | | * | | | M4138 |
| 99 00023 | | | DS | X | RESERVED |
| | | * | | | N470 |
| 99 00024 | | SYSXPG | DS | H | COUNT TO TRIGGER XTSI |
| | | * | | | PAGING   N470 |
| 99 00026 | | SYSMGPTP | DS | H | COUNT OF PAGE TABLE PAGES |
| | | * | | | FOR   N470 |
| | | * | | | MIGRATION |
| | | * | | | N470 |
| 99 00028 | | | DS | 0D | |
| 99 00028 | | SYSPSW | DS | D | LOW CORE PSW SAVE AREA |
| 99 00030 | | SYSTOD | DS | D | TIME-OF-DAY CLOCK |
| 99 00038 | | SYSYMD | DS | D | DAY-MONTH-YEAR IN SERIAL |
| | | * | | | DAYS |
| 99 00040 | | SYSFIT | DS | F | POINTER TO FIRST INACTIVE |
| | | * | | | TSI |
| 99 00044 | | SYSLIT | DS | F | POINTER TO LAST INACTIVE |
| | | * | | | TSI |
| 99 00048 | | SYSLT | DS | F | PTR TO END OF ACTIVE LIST |
| 99 0004C | | SYSPWP | DS | F | NUMBER OF PAGE WRITES |
| | | * | | | PENDING |
| 99 00050 | | SYSRT1 | DS | F | STARTING ADDRESS OF REAL |
| | | * | | | TIME INTERVAL |
| | | * | | | QUEUE CORE BLOCK |
| 99 00054 | | SYSRT2 | DS | F | START ADDRESS OF FIRST |
| | | * | | | VALID ENTRY |
| | | * | | | IN REAL TIME INTERVAL |
| | | * | | | PENDING QUEUE |
| 99 00058 | | SYSRT3 | DS | F | ADDRESS PAST LAST ENTRY IN |
| | | * | | | REAL TIME |
| | | * | | | INTERVAL PENDING QUEUE |
| 99 0005C | | SYSRT4 | DS | H | TOTAL NUMBER BYTES IN |
| | | * | | | CURRENT REAL TIME |
| | | * | | | INTERVAL QUEUE CORE BLOCK |
| 99 0005E | | SYSRT5 | DS | H | NUMBER OF BYTES USED IN |
| | | * | | | CURRENT REAL |
| | | * | | | TIME INTERVAL PENDING QUEUE |
| 99 00060 | | SYSRT6 | DS | H | NUMBER BYTES RELEASED FROM |
| | | * | | | CURRENT REAL- |
| | | * | | | TIME INTERVAL QUEUE CORE |
| | | * | | | BLOCK |
| 99 00062 | | SYSPTN | DS | H | NEXT AVAILABLE SHARED PAGE |
| | | * | | | TABLE NUMBER |
| 99 00064 | | SYSTCT | DS | H | SYSTEM TSI COUNT |
| 99 00066 | | SYSTLM | DS | H | SYSTEM TSI LIMIT |
| 99 00068 | | SYSTID | DS | H | LAST TASK ID NUMBER |
| | | * | | | ASSIGNED |
| 99 0006A | | SYSZZZ3 | DS | XL1 | UNUSED |

(Listing of CHASYS continued from page 407)

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|----------|-------------|--------|------|------|---------|
| 99 0006B | | SYSTSILK | DS | XL1 | LOCK BYTE FOR SCHEDULING |
| | | * | | | ALGORITHM |
| 99 0006C | | SYSXMC | DS | XL1 | EXTERNAL MACHINE CHECK BYTE |
| 99 0006D | | SYSTIMLK | DS | XL1 | REAL TIME LOCK BYTE |
| 99 0006E | | SYSBUF | DS | H | BUFFER SIZE ON DRUM |
| 99 00070 | | SYSTSIAD | DS | XL1 | ACTIVATE/DEACTIVATE |
| | | * | | | ROUTINES LOCKBYTE |
| 99 00071 | | SYSSSKLK | DS | X | LOCK FOR SSK INSTRUCTIONS |
| | | * | | | I7128 |
| 99 00072 | | SYSF2L | DS | XL1 | LOCK FOR F2 COUNT |
| 99 00073 | | SYSCNT | DS | XL1 | F2 PENDING COUNT |
| 99 00074 | | SYSSFS | DS | H | SUM OF SPECIFIED FAIR SHARE |
| | | * | | | VALUES FOR SPECIAL TASKS |
| | | * | | | (MT/T) |
| 99 00076 | | SYSSCT | DS | XL1 | NUMBER OF SPECIAL TASKS |
| | | * | | | WITH |
| | | * | | | SPECIFIED FAIR SHARE |
| | | * | | | VALUES    (MT/T) |
| 99 00077 | | SYSSTL | DS | XL1 | ACTUAL MAXIMUM SCHEDULE |
| | | * | | | TABLE LEVEL(MT/T) |
| 99 00078 | | | DS | 0D | ALIGN TO A DOUBLE WORD |
| | | * | | | BOUNDARY |
| 99 00078 | | SYSCCS | DS | 8F | CONFIGURATION CONSOLE |
| | | * | | | SWITCH SETTINGS |
| 99 00098 | | SYSPLS | DS | D | PAGE LOC OF SERR |
| 99 000A0 | | SYSPLR | DS | D | PAGE LOC OF RECONFIGURATION |
| 99 000A8 | | SYSSPP | DS | F | POINTER TO SERR/RECON PATH |
| | | * | | | TBL |
| 99 000AC | | SYSSRP | DS | F | POINTER TO SYS RES PATH |
| | | * | | | TABLE |
| | 99 000AC | SYSRAS | EQU | SYSSRP | STATUS OF IPL VOLUME |
| | 00000080 | SYSRASM | EQU | X'80' | *    1=IPL VOLUME REMOVED |
| | | * | | | AFTER STARTUP |
| | | * | | | *    0=IPL VOLUME MOUNTED |
| 99 000B0 | | SYSODP | DS | F | POINTER TO OPER DEV PATH |
| | | * | | | TBL |
| 99 000B4 | | SYSDPP | DS | F | POINTER TO PAGING DRUM ADDR |
| | | * | | | TBL |
| 99 000B8 | | SYSSPL | DS | XL1 | LENGTH OF SERR/RECON PATH |
| | | * | | | TBL |
| 99 000B9 | | SYSSRL | DS | XL1 | LENGTH OF SYS RES PATH TBL |
| 99 000BA | | SYSODL | DS | XL1 | LENGTH OF OPER DEV PATH TBL |
| 99 000BB | | SYSDPL | DS | XL1 | LENGTH OF PAGING DRUM ADDR |
| | | * | | | TBL |
| 99 000BC | | SYSSRA | DS | H | SYS RES DEV ADDR |
| 99 000BE | | SYSODA | DS | H | OPER DEV ADDR |
| 99 000C0 | | | DS | 0F | ALIGN TO A FULL WORD |
| | | * | | | BOUNDARY |
| 99 000C0 | | SYSRSV | DS | F | POINTER TO SUPERVISOR |
| | | * | | | CORE'S RESERVE LIST. |
| 99 000C4 | | SYSRSC | DS | H | COUNT OF PAGES IN ABOVE |
| | | * | | | LIST. |
| 99 000C6 | | SYSMSK | DS | XL1 | SYSTEM MASK |
| | 00000080 | SYSMSKM | EQU | X'80' | MAJOR OR MINOR ERROR FLAG |
| 99 000C7 | | SYSAMW | DS | XL1 | ASCII, MACH CK MASKS. |
| | | * | | | WAIT/PROB STATE |
| 99 000C8 | | | DS | 0F | ALIGN TO A FULL WORD |
| | | * | | | BOUNDARY |
| 99 000C8 | | SYSMWX | DS | H | MAXIMUM SHARED PAGES TO |
| | | * | | | PURGE |
| 99 000CA | | SYSMWT | DS | H | SCAN SHARED PAGES THRESHOLD |
| 99 000CC | | SYSSHALK | DS | XL1 | LOCK BYTE FOR SHARED PAGE |
| | | * | | | TABLE CHAINS |
| 99 000CD | | SYSZZZ6 | DS | XL1 | UNUSED |
| 99 000CE | | SYSCCL | DS | XL1 | CONFIGURATION CONSOLE LOCK |
| 99 000CF | | SYSITL | DS | XL1 | INITIAL TASK LEVEL |
| 99 000D0 | | | DS | 0F | ALIGN TO A FULL WORD |
| | | * | | | BOUNDARY |
| 99 000D0 | | SYSTWA | DS | H | AVERAGE CORE USED FOR |

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|---|---|---|---|---|---|
| | | * | | | MIGRATION |
| 99 000D2 | | SYSPCB | DS | H | NUMBER OF PCB'S TO |
| | | * | | | MIGRATION |
| 99 000D4 | | SYSIAX | DS | H | MAXIMUM PAGES PER CYLINDER |
| 99 000D6 | | SYSFSV | DS | H | FAIR SHARE VALUE, PARTIAL |
| | | * | | | DRUM MIGRATION |
| 99 000D8 | | SYSMXD | DS | H | UPPER SHARED PAGE DRUM |
| | | * | | | THRESHOLD |
| 99 000DA | | SYSMND | DS | H | LOWER SHARED PAGE DRUM |
| | | * | | | THRESHOLD |
| 99 000DC | | SYSFL2 | DS | XL1 | FLAGS |
| | 99 000DC | SYSRCRD | EQU | SYSFL2 | UNUSED |
| | 00000080 | SYSRCRDM | EQU | X'80' | |
| | 99 000DC | SYSLOCO | EQU | SYSFL2 | LOW CORE FLAG |
| | | * | | | N447S |
| | 00000010 | SYSLOCOM | EQU | X'10' | LOW CORE MASK |
| | | * | | | N447S |
| 99 000DD | | SYSNWK | DS | XL1 | NO INT SCHED WORK FLAG |
| | 00000080 | SYSNWKM | EQU | X'80' | NO INT SCHED WORK MASK |
| 99 000DE | | SYSSCN | DS | XL1 | SCAN FLAG FOR WRITE SHARED |
| | | * | | | PAGES |
| | 00000040 | SYSSCNM | EQU | X'40' | ON=SCAN ONLY; OFF= PURGE |
| | | * | | | ALSO |
| 99 000DF | | | DS | XL1 | UNUSED |
| 99 000E0 | | | DS | 0F | ALLIGN TO A FULL WORD |
| | | * | | | BOUNDARY |
| 99 000E0 | | SYSTKSP | DS | XL1 | TASK TO SUPERVISOR LOCK |
| 99 000E1 | | SYSTKTK | DS | XL1 | TASK TO TASK LOCK BYTE |
| 99 000E2 | | SYSTSKLK | DS | XL1 | LOCK ON SYSTEM TSI COUNT |
| 99 000E3 | | SYSFL3 | DS | XL1 | FLAG BYTE |
| | 99 000E3 | SYSASM | EQU | SYSFL3 | AUXILIARY SHUTDOWN MESSAGE |
| | | * | | | FLAG |
| | 00000080 | SYSASMM | EQU | X'80' | AUXILIARY SHUTDOWN MESSAGE |
| | | * | | | MASK |
| 99 000E4 | | SYSTKID | DS | H | TASK ID FOR DRAM |
| 99 000E6 | | SYSDATA | DS | H | NO. OF ENTRIES TO EXPAND |
| | | * | | | PAGE TABLE |
| 99 000E8 | | SYSXTS | DS | H | XTSI SIZE LIMIT |
| 99 000EA | | SYSMC | DS | XL1 | MIGRATION COUNT |
| 99 000EB | | SYSILK | DS | XL1 | CPU INTERCOMMUNICATION LOCK |
| | | * | | | BYTE |
| 99 000EC | | SYSPSL | DS | H | MAX. NO. OF PUBLIC SEGMENTS |
| | | * | | | ALLOWED |
| 99 000EE | | SYSPSC | DS | H | COUNT OF PUBLIC SEGMENTS |
| 99 000F0 | | SYSCCAIV | DS | F | INTERRUPTION TIMER VALUE |
| 99 000F4 | | SYSRSS | DS | C | RSS ACTIVE |
| | 00000080 | SYSRSM | EQU | X'80' | RSS ACTIVE MASK |
| 99 000F8 | | SYSRCT | DS | F | RSS COMMUNICATION TABLE |
| | | * | | | ADDR |
| 99 00100 | | SYSRS1 | DS | D | LPSW TO ENTER RSS VIA |
| | | * | | | PROGRAM INT |
| 99 00108 | | SYSRS2 | DS | D | LPSW TO ENTER RSS VIA SVC |
| | | * | | | INT |
| 99 00110 | | SYSRS3 | DS | D | LPSW TO ENTER RSS VIA INT |
| | | * | | | KEY. |
| 99 00118 | | SYSRS4 | DS | D | LPSW TO ENTER RSS VIA I/O |
| | | * | | | INT. |
| 99 00120 | | SYSRS5 | DS | D | LPSW TO ENTER RSS VIA |
| | | * | | | CHANNEL INT PROC |
| 99 00128 | | SYSRS6 | DS | D | LPSW TO ENTER RSS VIA Q GQE |
| | | * | | | ON TSI |
| 99 00130 | | SYSRIO | DS | 0D | RSS I/O DEVICE TABLE ENTRY |
| 99 00130 | | SYSRPP | DS | H | PHYSICAL PATH |
| 99 00132 | | SYSRFL | DS | H | FLAGS |
| | 000000C0 | SYSRFM | EQU | X'C0' | I/O OR ATTENTION INTERRUPT |
| | | * | | | EXPECTED MASK |
| | 99 00132 | SYSII | EQU | SYSRFL | I/O INTERRUPT EXPECTED |
| | 00000080 | SYSIIF | EQU | X'80' | I/O INTERRUPT EXPECTED MASK |

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|---|---|---|---|---|---|
| | 99 00132 | SYSAI | EQU | SYSRFL | ATTENTION INTERRUPT EXPECTED |
| | 00000040 | SYSAIF * | EQU | X'40' | ATTENTION INTERRUPT EXPECTED MASK |
| | 99 00132 | SYSIR | EQU | SYSRFL | I/O INTERRUPT RECEIVED |
| | 00000020 | SYSIRM | EQU | X'20' | I/O INTERRUPT RECEIVED MASK |
| | 99 00132 | SYSAR | EQU | SYSRFL | ATTENTION INTERRUPT RECEIVED |
| | 00000010 | SYSARM * | EQU | X'10' | ATTENTION INTERRUPT RECEIVED MASK |
| | 99 00132 | SYSSE | EQU | SYSRFL | CSW STORED ON SIO EXPECTED |
| | 00000008 | SYSSEM * | EQU | X'08' | CSW STORED ON SIO EXPECTED MASK |
| | 99 00132 | SYSSR | EQU | SYSRFL | CSW STORED ON SIO RECEIVED |
| | 00000004 | SYSSRM * | EQU | X'04' | CSW STORED ON SIO RECEIVED MASK |
| 99 00134 | | SYSRCB | DS | F | POINTER TO SIORCB |
| 99 00138 | | SYSRCS | DS | D | CSW |
| 99 00140 | | SYSRPS | DS | D | PSW |
| 99 00148 | | SYSRIO2 | DS | 3D | SECOND RSS I/O DEVICE ENTRY |
| 99 00160 | | SYSAST * | DS | H | AUXILIARY STOP THRESHOLD PARAMETER |
| 99 00162 | | SYSAPT * | DS | H | AUXILIARY PRIMARY THRESHOLD PARAMETER |
| 99 00164 | | SYSAAC * | DS | F | ASSIGNED AUXILIARY COUNT FIELD |
| 99 00168 | | | DS | H | UNUSED |
| 99 0016A | | SYSSHP * | DS | H | COUNT OF SHARED PAGES IN CORE |
| 99 0016C | | SYSMXS * | DS | H | MAXIMUM NUMBER OF SHARED PAGES |
| 99 0016E | | SYSMNS * | DS | H | MINIMUM NUMBER OF SHARED PAGES |
| 99 00170 | | SYSSCH | DS | F | SVC CHARGE VALUE |
| 99 00174 | | SYSLSST * | DS | F | LOWEST SST AHEAD OF SCHEDULED SST VALUE |
| 99 00178 | | SYSNTSI | DS | F | NEXT ELIGIBLE TASK TO CHECK |
| 99 0017C | | SYSIDL | DS | F | IDLE TIMER SETTING |
| 99 00180 | | SYSCTP | DS | F | CHANGE TASK SCHEDULE ENTRY |
| 99 00184 | | SYSDLY | DS | F | TSEND DELAY TIME |
| 99 00188 | | SYSDTRL | DS | XL1 | DELTA LENGTH |
| 99 00189 | | SYSTSEM | DS | XL1 | TSE MAXIMUM COUNT |
| 99 0018A | | SYSPMT * | DS | XL1 | COUNT OF PERMITTED TSI'S IN DISP. LIST |
| 99 0018B | | SYSTCR * | DS | XL1 | TASK CORE REQUIREMENT(INITIAL VALUE=64) |
| 99 0018C | | SYSTSILG * | DS | F | ROUTINE TO LAST ACCESS SYSTSILK |
| 99 00190 | | SYSTIMLG * | DS | F | ROUTINE TO LAST ACCESS SYSTIMLK |
| 99 00194 | | SYSTSIAG * | DS | F | ROUTINE TO LAST ACCESS SYSTSIAD |
| 99 00198 | | SYSF2G * | DS | F | ROUTINE TO LAST ACCESS SYSF2L |
| 99 0019C | | SYSSHALG * | DS | F | ROUTINE TO LAST ACCESS SYSSHALK |
| 99 001A0 | | SYSTKSG * | DS | F | ROUTINE TO LAST ACCESS SYSTKSP |
| 99 001A4 | | SYSTKTG * | DS | F | ROUTINE TO LAST ACCESS SYSTKTK |
| 99 001A8 | | SYSTSKLG * | DS | F | ROUTINE TO LAST ACCESS SYSTSKLK |
| 99 001AC | | SYSPT1 * | DS | F | POINTER TO FIXED AREA OF CHASST |
| 99 001B0 | | SYSPT2 * | DS | F | POINTER TO DRUM AREA OF CHASST |
| 99 001B4 | | SYSPT3 * | DS | F | POINTER TO DISK AREA OF CHASST |

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|---|---|---|---|---|---|
| 99 001B8 | | SYSELG | DS | F | NUMBER OF ELIGIBLE TASKS |
| 99 001BC | | SYSINA | DS | F | NUMBER OF INACTIVE TASKS |
| 99 001C0 | | SYSVMB | DS | F | NUMBER OF TIME IN TICKS |
| 99 001C4 | | SYSBLK | DS | H | MAX PAGES BLOCKED TO DRUM |
| 99 001C6 | | SYSBLK2 | DS | H | MAX PAGES BLOCKED TO DRUM |
| | | * | | | AND DISK |
| | 000001C8 | SYSIZE | EQU | *-CHASYS | SIZE OF FIXED LENGTH |
| | | * | | | SECTION OF TABLE |
| 99 001C8 | | SYSPDD | DS | 0D | DOUBLE WORD ALIGNMENT |
| | | * | | | ***** (SEE NOTE 1) ***** |
| 99 001C8 | | SYSPF | DS | XL1 - | PAGING DRUM DIRECTORY FLAGS |
| | 99 001C8 | SYSLP | EQU | SYSPF | LAST PDD ENTRY FLAG |
| | 00000080 | SYSLPM | EQU | X'80' | LAST PDD ENTRY MASK |
| 99 001C9 | | | DS | C | UNUSED |
| 99 001CA | | SYSLOQ | DS | H | LOCATION ON QUEUE VALUE |
| 99 001CC | | SYSDIP | DS | F | POINTER TO DRUM INTERFACE |
| | | * | | | CONTROL BLOCK |
| 99 001D0 | | | DS | D | DRUM QUEUE PROCESSOR ENTRY |
| | 99 01000 | | \|ORG\| | CHASYS+4096 | |
| 99 01000 | | SYSDIC | DS | 0D | DOUBLE WORD ALIGNMENT |
| 99 01000 | | SYSPEB | DS | F | POINTER TO PAGING ERROR |
| | | * | | | CONTROL BLOCK |
| 99 01004 | | SYSUC | DS | F | TOTAL COUNT OF UNPROCESSED |
| | | * | | | OPERATIONS |
| 99 01008 | | SYSSYM | DS | H | DRUM SYMBOLIC DEVICE |
| | | * | | | ADDRESS |
| 99 0100A | | SYSPTH | DS | H | LAST PATH USED TO ADDRESS |
| | | * | | | DRUM |
| 99 0100C | | SYSSLT | DS | H | DICB SLOT MASK |
| 99 0100E | | SYSLOW1 | DS | XL1 | LOWEST SLOT USED-CHAIN 1 |
| 99 0100F | | SYSLOW2 | DS | XL1 | LOWEST SLOT USED-CHAIN 2 |
| 99 01010 | | SYSHI1 | DS | XL1 | HIGHEST SLOT USED-CHAIN 1 |
| 99 01011 | | SYSHI2 | DS | XL1 | HIGHEST SLOT USED-CHAIN 2 |
| 99 01018 | | SYSCSW | DS | 0D | CHANNEL STATUS WORD |
| 99 01018 | | SYSKEY | DS | XL1 | KEY FIELD |
| 99 01019 | | SYSDAD | DS | 3C | COMMAND ADDRESS |
| 99 0101C | | SYSSTD | DS | XL1 | DEVICE STATUS |
| 99 0101D | | SYSSTC | DS | XL1 | CHANNEL STATUS |
| 99 0101E | | SYSRCN | DS | H | BYTE COUNT |
| 99 01020 | | SYSSCP | DS | D | PAGING DRUM SENSE CHANNEL |
| | | * | | | PROGRAM |
| 99 01028 | | SYSSDA | DS | 0D | SENSE DATA AREA |
| 99 01028 | | SYSD0 | DS | XL1 | SENSE BYTE ONE |
| 99 01029 | | SYSD1 | DS | XL1 | SENSE BYTE TWO |
| 99 0102A | | SYSD2 | DS | XL1 | SENSE BYTE THREE |
| 99 0102B | | SYSD3 | DS | XL1 | SENSE BYTE FOUR |
| 99 0102C | | SYSD4 | DS | XL1 | SENSE BYTE FIVE |
| 99 0102D | | SYSD5 | DS | XL1 | SENSE BYTE SIX |
| 99 0102E | | SYSD6 | DS | XL1 | SENSE BYTE SEVEN |
| 99 0102F | | SYSD7 | DS | XL1 | SENSE BYTE EIGHT |
| 99 01030 | | SYS89LK | DS | XL1 | LOCK BYTE PROHIBITS |
| | | * | | | INTERACTION BETWEEN |
| | | * | | | CEAA8 AND CEAA9 FOR A |
| | | * | | | PARTICULAR DRUM |
| 99 01031 | | SYSRTCT | DS | X | SIO RETRY COUNT |
| | | * | | | M4244 |
| 99 01032 | | · | DS | XL2 | RESERVED |
| | | * | | | M4244 |
| 99 01034 | | | DS | 5F | UNUSED |
| 99 01048 | | SYSLOG | DS | F | POINTER TO CHANNEL LOGOUT |
| | | * | | | GQE |
| 99 0104C | | SYSZZZ9 | DS | XL1 | UNUSED |
| | 99 0104C | SYSLK | EQU | SYSZZZ9 | CURRENT CHAIN STATUS |
| | 99 0104C | SYSOON | EQU | SYSLK | CHAIN 1 CAN BE WORKED ON |
| | 00000080 | SYSOONM | EQU | X'80' | |
| | 99 0104C | SYSTON | EQU | SYSLK | CHAIN 2 CAN BE WORKED ON |
| | 00000040 | SYSTONM | EQU | X'40' | |
| | 99 0104C | SYSONE | EQU | SYSLK | CHAIN 1 HAS BEEN POSTED |

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|---|---|---|---|---|---|
| | 00000020 | SYSONEM | EQU | X'20' | |
| 99 0104C | | SYSTWO | EQU | SYSLK | CHAIN 2 HAS BEEN POSTED |
| | 00000010 | SYSTWOM | EQU | X'10' | |
| 99 0104C | | SYSTHR | EQU | SYSLK | 1 IS LINKED TO 2 |
| | 00000008 | SYSTHRM | EQU | X'08' | |
| 99 0104C | | SYSFOR | EQU | SYSLK | 2 IS LINKED TO 1 |
| | 00000004 | SYSFORM | EQU | X'04' | |
| 99 0104C | | SYSFVE | EQU | SYSLK | CHAIN 1 IS RUNNING |
| | 00000002 | SYSFVEM | EQU | X'02' | |
| 99 0104C | | SYSSIX | EQU | SYSLK | CHAIN 2 IS RUNNING |
| | 00000001 | SYSSIXM | EQU | X'01' | |
| 99 0104D | | SYSN1 | DS | XL1 | |
| 99 0104D | | SYSSN | EQU | SYSN1 | WAITING ON SENSE OPERATION |
| | 00000080 | SYSSNM | EQU | X'80' | |
| 99 0104D | | SYSWC | EQU | SYSN1 | WRITE CHECK OPTION SELECTED |
| | 00000040 | SYSWCM | EQU | X'40' | |
| 99 0104D | | SYSPCI | EQU | SYSN1 | PCI PENDING |
| | 00000020 | SYSPCIM | EQU | X'20' | |
| 99 0104D | | SYSDR | EQU | SYSN1 | UNUSED |
| | 00000010 | SYSDRM | EQU | X'10' | |
| 99 0104D | | SYSSFL | EQU | SYSN1 | SENSE FAIL FLAG |
| | 00000008 | SYSSFLM | EQU | X'08' | SENSE FAIL MASK |
| 99 0104D | | SYSPE | EQU | SYSN1 | PAGING ERROR RECOVERY IN |
| | * | | | | PROGRESS |
| | 00000004 | SYSPEM | EQU | X'04' | |
| 99 0104D | | SYSBY | EQU | SYSN1 | ERROR RECOVERY ALTERNATE |
| | * | | | | PATH BUSY |
| | 00000002 | SYSBYM | EQU | X'02' | |
| 99 0104D | | SYSRAC | EQU | SYSN1 | REACTIVATION FLAG |
| | 00000001 | SYSRACM | EQU | X'01' | REACTIVATION MASK |
| | * | | | | CHAIN SEEK ARGUMENTS |
| 99 01050 | | SYSARG | DS | 0D | |
| 99 01050 | | SYSBIN | DS | H | BB |
| 99 01052 | | SYSCYL | DS | H | CC |
| 99 01054 | | SYSHED | DS | H | HH |
| 99 01056 | | SYSREC | DS | C | R |
| 99 01057 | | SYSFLG | DS | XL1 | FLAGS |
| 99 01057 | | SYSFLG1 | EQU | SYSFLG | DRAM OPERATION |
| | 00000080 | SYSFLGM | EQU | X'80' | |
| 99 01057 | | SYSACT | EQU | SYSFLG | THIS ARG IS ACTIVE |
| | 00000040 | SYSACTM | EQU | X'40' | |
| 99 01058 | | SYSPCIOR | DS | F | PCB/IORCB ADDRESS |
| 99 0105C | | SYSGQE | DS | F | GQE ADDRESS |
| 99 01060 | | | DS | 16D | REMAINING SEEK ARGUMENTS |
| 99 010E0 | | SYSARGR | DS | 0D | |
| 99 010E0 | | SYSBINR | DS | H | BB |
| 99 010E2 | | SYSCYLR | DS | H | CC |
| 99 010E4 | | SYSHEDR | DS | H | HH |
| 99 010E6 | | SYSRECR | DS | C | R |
| 99 010E7 | | SYSFLGR | DS | XL1 | FLAGS |
| 99 010E7 | | SYSFLGS | EQU | SYSFLGR | DRAM OPERATION |
| | 00000080 | SYSFLGSM | EQU | X'80' | |
| 99 010E7 | | SYSACR | EQU | SYSFLGR | THIS ARG IS ACTIVE |
| | 00000040 | SYSACRM | EQU | X'40' | |
| 99 010E8 | | SYSPCIR | DS | F | PCB/IORCB ADDRESS |
| 99 010EC | | SYSGQER | DS | F | GQE ADDRESS |
| 99 010F0 | | | DS | 16D | REMAINING SEEK ARGUMENTS |
| | * | | | | CHAIN CHANNEL PROGRAMS |
| 99 01170 | | SYSSEEK1 | DS | D | SEEK CCW-CHAIN 1 |
| 99 01178 | | SYSSRCH1 | DS | D | SEARCH CCW-CHAIN 1 |
| 99 01180 | | SYSTIC1 | DS | D | TIC CCW-CHAIN 1 |
| 99 01188 | | SYSRWR1 | DS | D | READ/WRITE CCW-CHAIN 1 |
| 99 01190 | | | DS | 32D | 8 CCW PROGRAMS AS ABOVE |
| 99 01290 | | SYSNOP1 | DS | D | TIC/NOP CCW BETWEEN CHAIN 1 |
| | * | | | | AND 2 |
| 99 01298 | | SYSSEEK2 | DS | D | SEEK CCW-CHAIN 2 |
| 99 012A0 | | SYSSRCH2 | DS | D | SEARCH CCW-CHAIN 2 |
| 99 012A8 | | SYSTIC2 | DS | D | TIC CCW-CHAIN 2 |

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|----------|-------------|--------|------|------|---------|
| 99 012B0 | | SYSRW2 | DS | D | READ/WRITE CCW-CHAIN 2 |
| 99 012B8 | | | DS | 32D | 8 CCW PROGRAMS AS ABOVE |
| 99 013B8 | | SYSNOP2 | DS | D | TIC/NOP CCW BETWEEN CHAIN 2 |
| | | * | | | AND 1 |
| | | * NOTE 1- | | | THE PAGING DRUM DIRECTORY SECTION OF |
| | | * CHASYS | | | (LABELS SYSPF |
| | | * | | | TO SYSDIP) IS VARIABLE IN LENGTH.   THERE |
| | | * | | | WILL BE ONE 16 |
| | | * | | | BYTE ENTRY FOR EACH PAGING DRUM IN THE |
| | | * | | | SYSTEM CONFIGURATION - |
| | | * | | | 8 BYTES FOR THE INTERRUPT PROCESSOR AND |
| | | * | | | 8 BYTES FOR THE QUEUE PROCESSOR |

## TBLOCKS (CHATBD,CHATBC,CHATBS,CHATBO)

TBLOCKS are built by the LOCFQN function of LOCATE in reply to the ERASE,
DELETE,DSS?,PC?,UPTDUSER, and QUIT commands.

TBD is the main TBLOCK; one TBD is created for each dataset. Continuations
of TBD are placed in TBCs, sharing information is contained in TBSs, and dataset
owner sharing information is returned in TBOs.

All TBLOCKS occupy 96 bytes of virtual storage, aligned on doubleword
boundaries.

### TBLOCK Data Set Descriptor (CHATBD)

The TBLOCK Data Set Descriptor (TBD) describes the sharing status, access status,
device type, and volume number of a data set.

The TBD is created by the LOCFQN function of LOCATE. LOCFQN obtains the infor-
mation used in TBD from the catalog entry of the dataset. For a dataset residing
on more than one private volume, LOCFQN creates a chain of continuation blocks
(TBCs), as many as required.

### TBLOCK Continuation (CHATBC)

The TBLOCK continuation (CHATBC) supplements the sharing status and volume
information for a dataset by the TBLOCK dataset descriptors.

One TBC, capable of describing seven private volumes, is created if a dataset resides
on more than two private volumes; the first two private volumes being described in the TBD.
If the dataset contains more than nine private volumes, LOCFQN creates two or more TBCs and
joins them with pointers to form a chain. The LOCFQN routine obtains the infor-
mation used in a TBC from the dataset catalog entry.

### TBLOCK Sharers (CHATBS)

The TBLOCK Sharers (TBS) lists the users who may share a data set, and specifies
their sharing level and access status.

The TBS is created by the LOCFQN routine when a data set with sharers is being
processed. If a data set has many sharers, LOCFQN may create two or more TBSs and
join them together with pointers to form a chain. At the end of the chain
TDBASH (or TBDASH if there is no chain) contains X'FFFFFFFF'.

### TBLOCK Owner Table (CHATBO)

CHATBO contains the fully qualified name of the datset owner as established
during SHARE command processing.' If the processing of the owner's catalog is
inhibited by the input option or if the search into the owner's catalog is
unsuccessful, the reason for the error is returned in the TBO.

### CHATBD Storage map

```
DEC    HEX  _____
  0     0 |                TBDADS              |              TBDASH           |
          |                                    |                               |
  8     8 |TBDDES  |                       TBDDSI                              |
          |        |_____|          _____|
 16    10 |                        |                                           |
          |_____|                                          |
          |                              TBDDSM                                |
          |                                                                    |
          |                                                                    |
          |                                                                    |
          |                                                                    |
          |                                            |          TBDDSC       |
 48    30 |                                            |_____|
          |                                            |                       |
 56    38 |TBDDSC  |TBDCNT  |TBDORG  |   UNNAMED   |TBDACC  |    TBDOWN         |
          |_____|_____|_____|_____|_____|_____|
```
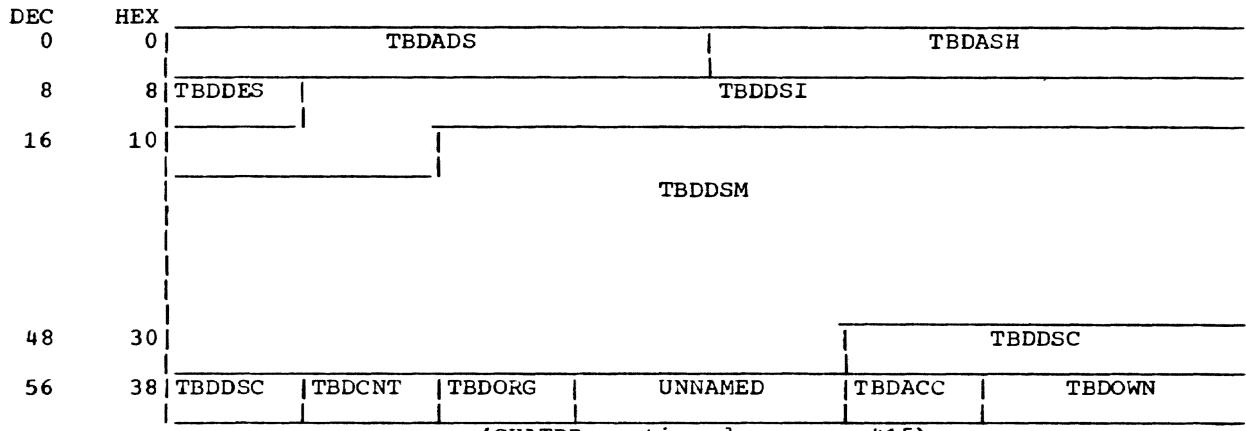
| DEC | HEX | | | | |
|---|---|---|---|---|---|
| 64 | 40 | TBDOWN (CONT) | | TBDVON | TBDDVF |
| 72 | 48 | TBDDVF (CONT) | TBDVIF | | |
| 80 | 50 | TBDVIF | TBDFSF | TBDDVL | TBDVIL |
| 88 | 58 | TBDVIL (CONT) | | TBDFSL | TBDFLL |

## Fields in CHATBD -- by displacement

| DEC | HEX | FIELD | | DEC | HEX | FIELD | | DEC | HEX | FIELD | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0000 | 0000 | TBDADS | | 0057 | 0039 | TBDCNT | | 0083 | 0053 | TBDDVL | |
| 0004 | 0004 | TBDASH | | 0058 | 003A | TBDORG | | 0083 | 0053 | TBDVOL | |
| 0008 | 0008 | TBD05 | (EQU) | 0061 | 003D | TBD14 | (EQU) | 0087 | 0057 | TBDVIL | |
| 0008 | 0008 | TBD03 | (EQU) | 0061 | 003D | TBD13 | (EQU) | 0093 | 005D | TBDFSL | |
| 0008 | 0008 | TBD02 | (EQU) | 0061 | 003D | TBD12 | (EQU) | 0095 | 005F | TBDF8 | (EQU) |
| 0008 | 0008 | TBD01 | (EQU) | 0061 | 003D | TBDACC | | 0095 | 005F | TBDF7 | (EQU) |
| 0008 | 0008 | TBDDES | | 0062 | 003E | TBDOWN | | 0095 | 005F | TBDF5 | (EQU) |
| 0008 | 0008 | TBDFLG | | 0070 | 0046 | TBDVON | | 0095 | 005F | TBDF4 | (EQU) |
| 0009 | 0009 | TBDDSI | | 0071 | 0047 | TBDDVF | | 0095 | 005F | TBDF3 | (EQU) |
| 0009 | 0009 | TBDDSN | | 0071 | 0047 | TBDVOF | | 0095 | 005F | TBDF2 | (EQU) |
| 0018 | 0012 | TBDDSM | | 0075 | 004B | TBDVIF | | 0095 | 005F | TBDF1 | (EQU) |
| 0053 | 0035 | TBDDSC | | 0081 | 0051 | TBDFSF | | 0095 | 005F | TBDFLL | |

## Alphabetical list of fields in CHATBD

| FIELD | DEC | HEX | | FIELD | DEC | HEX | | FIELD | DEC | HEX | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| TBDACC | 0061 | 003D | | TBDFLL | 0095 | 005F | | TBDVIF | 0075 | 004B | |
| TBDADS | 0000 | 0000 | | TBDFSF | 0081 | 0051 | | TBDVIL | 0087 | 0057 | |
| TBDASH | 0004 | 0004 | | TBDFSL | 0093 | 005D | | TBDVOF | 0071 | 0047 | |
| TBDCNT | 0057 | 0039 | | TBDF1 | 0095 | 005F | (EQU) | TBDVOL | 0083 | 0053 | |
| TBDDES | 0008 | 0008 | | TBDF2 | 0095 | 005F | (EQU) | TBDVON | 0070 | 0046 | |
| TBDDSC | 0053 | 0035 | | TBDF3 | 0095 | 005F | (EQU) | TBD01 | 0008 | 0008 | (EQU) |
| TBDDSI | 0009 | 0009 | | TBDF4 | 0095 | 005F | (EQU) | TBD02 | 0008 | 0008 | (EQU) |
| TBDDSM | 0018 | 0012 | | TBDF5 | 0095 | 005F | (EQU) | TBD03 | 0008 | 0008 | (EQU) |
| TBDDSN | 0009 | 0009 | | TBDF7 | 0095 | 005F | (EQU) | TBD05 | 0008 | 0008 | (EQU) |
| TBDDVF | 0071 | 0047 | | TBDF8 | 0095 | 005F | (EQU) | TBD12 | 0061 | 003D | (EQU) |
| TBDDVL | 0083 | 0053 | | TBDORG | 0058 | 003A | | TBD13 | 0061 | 003D | (EQU) |
| TBDFLG | 0008 | 0008 | | TBDOWN | 0062 | 003E | | TBD14 | 0061 | 003D | (EQU) |

## Assembler listing of CHATBD

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|---|---|---|---|---|---|
| | 9B 00000 | CHATBD | DSECT | | TBLOCK DATA SET DESCRIPTOR |
| 9B 00000 | | | DS | 0D | |
| 9B 00000 | | | DS | 0XL96 | |
| 9B 00000 | | TBDADS | DS | XL4 | POINTER TO NEXT CHATBD OR |
| | | * | | | CHATBC |
| 9B 00004 | | TBDASH | DS | A | ADDR OF CHATBS OR CHATBO |
| | | * | | | N466 |
| 9B 00008 | | TBDFLG | DS | 0XL1 | FLAG |
| 9B 00008 | | TBDDES | DS | XL1 | |
| | 9B 00008 | TBD01 | EQU | TBDFLG | TBLOCK DSD |
| | 9B 00008 | TBD02 | EQU | TBDFLG | TBLOCK CONTINUATION DSD |
| | 9B 00008 | TBD03 | EQU | TBDFLG | TBLOCK SHARING LIST |
| | 9B 00008 | TBD05 | EQU | TBDFLG | TBLOCK OWNER FLAG |
| | | * | | | N466 |
| | 00000010 | TBD01M | EQU | X'10' | DSD MASK |
| | 00000020 | TBD02M | EQU | X'20' | CONTINUATION DSD MASK |
| | 00000080 | TBD03M | EQU | X'80' | SHARING LIST MASK |
| | 00000008 | TBD05M | EQU | X'08' | TBLOCK OWNER MASK |
| | | * | | | N466 |
| 9B 00009 | | TBDDSN | DS | 0CL44 | DATA SET NAME |
| 9B 00009 | | TBDDSI | DS | CL9 | DATA SET USER-ID AND DELIM |
| 9B 00012 | | TBDDSM | DS | CL35 | DATA SET QUALIFIERS |
| 9B 00035 | | TBDDSC | DS | CL4 | FORMAT "E" DSCB POINTER |
| 9B 00039 | | TBDCNT | DS | XL1 | INDEX SHARING LEVEL |
| 9B 0003A | | TBDORG | DS | X | DSORG FLAG |

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|---|---|---|---|---|---|
| | | * | | | N466 |
| | 00000001 | TBDSAM | EQU | X'01' | SAM MASK |
| | | * | | | N466 |
| | 00000004 | TBDVIM | EQU | X'04' | VISAM MASK |
| | | * | | | N466 |
| | 00000005 | TBDVSM | EQU | X'05' | VSAM MASK |
| | | * | | | N466 |
| | 00000006 | TBDVPM | EQU | X'06' | VPAM MASK |
| | | * | | | N466 |
| 9B 0003B | | | DS | 2X | RESERVED |
| | | * | | | N466 |
| 9B 0003D | | TBDACC | DS | XL1 | ACCESS |
| | 9B 0003D | TBD12 | EQU | TBDACC | READ ONLY ACC |
| | 9B 0003D | TBD13 | EQU | TBDACC | READ WRITE ACC |
| | 9B 0003D | TBD14 | EQU | TBDACC | UNLIMITED ACC |
| | 00000000 | TBD12M | EQU | X'00' | READ ONLY ACC MASK |
| | 00000001 | TBD13M | EQU | X'01' | READ WRITE ACC MASK |
| | 00000002 | TBD14M | EQU | X'02' | UNLIMITED ACC MASK |
| 9B 0003E | | TBDOWN | DS | CL8 | OWNER ID IF SHARED |
| | | * | | | N466 |
| 9B 00046 | | TBDVON | DS | XL1 | NUMBER OF VOLUMES ON WHICH |
| | | * | | | DS RESIDES |
| 9B 00047 | | TBDVOF | DS | 0CL12 | FIRST VOLUME FIELD |
| 9B 00047 | | TBDDVF | DS | XL4 | FIRST DEVICE CODE |
| 9B 0004B | | TBDVIF | DS | CL6 | FIRST VOLUME ID |
| 9B 00051 | | TBDFSF | DS | XL2 | FIRST FILE SEQUENCE NUMBER |
| 9B 00053 | | TBDVOL | DS | 0CL12 | LAST VOLUME FIELD |
| 9B 00053 | | TBDDVL | DS | XL4 | LAST DEVICE CODE |
| 9B 00057 | | TBDVIL | DS | CL6 | LAST VOLUME ID |
| 9B 0005D | | TBDFSL | DS | XL2 | LAST FILE SEQUENCE NUMBER |
| 9B 0005F | | TBDFLL | DS | XL1 | FLAG FIELD |
| | 9B 0005F | TBDF1 | EQU | TBDFLL | PUBLIC VOLUME |
| | 9B 0005F | TBDF2 | EQU | TBDFLL | BULKIO PENDING |
| | 9B 0005F | TBDF3 | EQU | TBDFLL | ERASE AFTER BULKIO PENDING |
| | 9B 0005F | TBDF4 | EQU | TBDFLL | EMPTY INDEX |
| | 9B 0005F | TBDF5 | EQU | TBDFLL | TEMP. DATA SET FLAG |
| | 9B 0005F | TBDF7 | EQU | TBDFLL | SAM ORGANIZATION |
| | 9B 0005F | TBDF8 | EQU | TBDFLL | DELETE SHARED DS |
| | 00000080 | TBDF1M | EQU | X'80' | PUBLIC VOLUME MASK |
| | 00000040 | TBDF2M | EQU | X'40' | BULKIO PENDING MASK |
| | 00000020 | TBDF3M | EQU | X'20' | ERASE AFTER BULKIO PENDING |
| | | * | | | MASK |
| | 00000010 | TBDF4M | EQU | X'10' | EMPTY INDEX MASK |
| | 00000008 | TBDF5M | EQU | X'08' | TEMP. DATA SET MASK |
| | 00000002 | TBDF7M | EQU | X'02' | SAM ORGANIZATION MASK |
| | 00000001 | TBDF8M | EQU | X'01' | DELETE SHARED DS MASK |

## CHATBC Storage map



```
  DEC   HEX
    0     0 | -------- TBCADS -------- | -------- UNNAMED -------- |
    8     8 | TBCDES |     TBCDVF      |        TBCVIF            |
   16    10 |   TBCVIF (CONT)  |    TBCFSF    |                   |
           |                    TBCVO2                            |
   32    20 |          |        TBCVO3                            |
   40    28 |                            |                        |
           |                    TBCVO4                            |
   56    38 |          |        TBCVO5                            |
   64    40 |                            |                        |
           |                    TBCVO6                            |
   80    50 |          |        TBCVO7                            |
   88    58 |                            |     UNNAMED             |
```
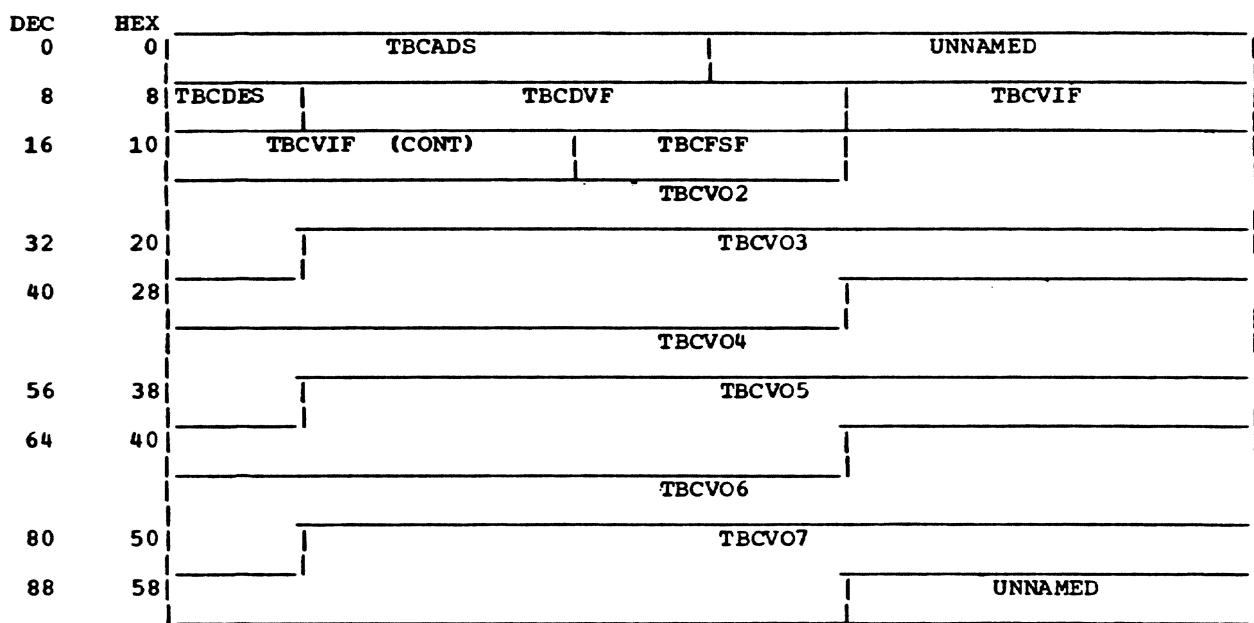
### Fields in CHATBC -- by displacement

| DEC  | HEX  | FIELD  |       | DEC  | HEX  | FIELD  | DEC  | HEX  | FIELD  |
|------|------|--------|-------|------|------|--------|------|------|--------|
| 0000 | 0000 | TBCADS |       | 0008 | 0008 | TBCFLG | 0033 | 0021 | TBCVO3 |
| 0008 | 0008 | TBC05  | (EQU) | 0009 | 0009 | TBCDVF | 0045 | 002D | TBCVO4 |
| 0008 | 0008 | TBC03  | (EQU) | 0009 | 0009 | TBCVOF | 0057 | 0039 | TBCVO5 |
| 0008 | 0008 | TBC02  | (EQU) | 0013 | 000D | TBCVIF | 0069 | 0045 | TBCVO6 |
| 0008 | 0008 | TBC01  | (EQU) | 0019 | 0013 | TBCFSF | 0081 | 0051 | TBCVO7 |
| 0008 | 0008 | TBCDES |       | 0021 | 0015 | TBCVO2 |      |      |        |

### Alphabetical list of fields in CHATBC

| FIELD  | DEC  | HEX  |  | FIELD  | DEC  | HEX  | FIELD  | DEC  | HEX  |       |
|--------|------|------|--|--------|------|------|--------|------|------|-------|
| TBCADS | 0000 | 0000 |  | TBCVOF | 0009 | 0009 | TBCVO7 | 0081 | 0051 |       |
| TBCDES | 0008 | 0008 |  | TBCVO2 | 0021 | 0015 | TBC01  | 0008 | 0008 | (EQU) |
| TBCDVF | 0009 | 0009 |  | TBCVO3 | 0033 | 0021 | TBC02  | 0008 | 0008 | (EQU) |
| TBCFLG | 0008 | 0008 |  | TBCVO4 | 0045 | 002D | TBC03  | 0008 | 0008 | (EQU) |
| TBCFSF | 0019 | 0013 |  | TBCVO5 | 0057 | 0039 | TBC05  | 0008 | 0008 | (EQU) |
| TBCVIF | 0013 | 000D |  | TBCVO6 | 0069 | 0045 |        |      |      |       |

### Assembler listing of CHATBC

| LOCATION | INSTRUCTION | SOURCE | INST  | OPER   | COMMENT |
|----------|-------------|--------|-------|--------|---------|
|          | 9A 00000    | CHATBC | DSECT |        | TBLOCK CONTINUATION |
| 9A 00000 |             |        | DS    | 0D     | |
| 9A 00000 |             |        | DS    | 0XL96  | |
| 9A 00000 |             | TBCADS | DS    | F      | POINTER TO NEXT CHATBC OR CHATBD |
| 9A 00004 |             |        | DS    | XL4    | UNUSED |
| 9A 00008 |             | TBCFLG | DS    | 0XL1   | FLAG |
| 9A 00008 |             | TBCDES | DS    | XL1    | DESCRIBES THIS TBLOCK |
|          | 9A 00008    | TBC01  | EQU   | TBCFLG | TBLOCK DSD |
|          | 9A 00008    | TBC02  | EQU   | TBCFLG | TBLOCK CONTINUATION DSD |
|          | 9A 00008    | TBC03  | EQU   | TBCFLG | TBLOCK SHARING LIST |
|          | 9A 00008    | TBC05  | EQU   | TBCFLG | TBLOCK OWNER FLAG  N466 |
|          | 00000010    | TBC01M | EQU   | X'10'  | DSD MASK |
|          | 00000020    | TBC02M | EQU   | X'20'  | CONTINUATION MASK |
|          | 00000080    | TBC03M | EQU   | X'80'  | SHARING LIST MASK |
|          | 00000008    | TBC05M | EQU   | X'08'  | TBLOCK OWNER MASK  N466 |

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|----------|-------------|--------|------|------|---------|
| 9A 00009 | | TBCVOF | DS | 0CL12 | FIRST VOLUME FIELD |
| 9A 00009 | | TBCDVF | DS | XL4 | FIRST DEVICE CODE |
| 9A 0000D | | TBCVIF | DS | CL6 | FIRST VOLUME ID |
| 9A 00013 | | TBCFSF | DS | XL2 | FIRST FILE SEQUENCE NUMBER |
| 9A 00015 | | TBCVO2 | DS | CL12 | SECOND VOLUME FIELD |
| 9A 00021 | | TBCVO3 | DS | CL12 | THIRD VOLUME FIELD |
| 9A 0002D | | TBCVO4 | DS | CL12 | FOURTH VOLUME FIELD |
| 9A 00039 | | TBCVO5 | DS | CL12 | FIFTH VOLUME FIELD |
| 9A 00045 | | TBCVO6 | DS | CL12 | SIXTH VOLUME FIELD |
| 9A 00051 | | TBCVO7 | DS | CL12 | SEVENTH VOLUME FIELD |
| 9A 0005D | | | DS | CL3 | SPARE |

## CHATBS Storage map

| DEC | HEX | | | |
|-----|-----|---|---|---|
| 0 | 0 | TBSASH | TBSSHN | UNNAMED |
| 8 | 8 | TBSDES | TBSUID | |
| 16 | 10 | TBSUID TBSACC TBSLVL | TBSSH2 | |
| 24 | 18 | | | |
| 32 | 20 | TBSSH3 | | |
| | | TBSSH4 | | |
| 48 | 30 | TBSSH5 | | |
| 56 | 38 | TBSSH6 | | |
| 64 | 40 | | | |
| 72 | 48 | TBSSH7 | | |
| | | TBSSH8 | | |
| 88 | 58 | UNNAMED | | |
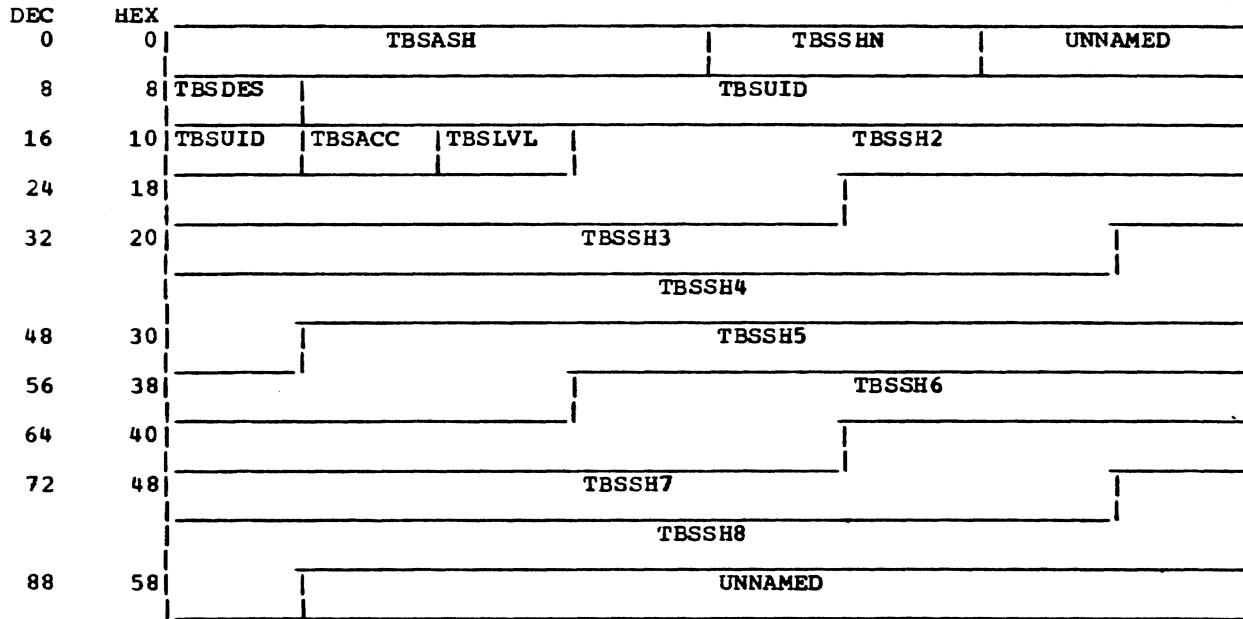
## Fields in CHATBS -- by displacement

| DEC | HEX | FIELD | | DEC | HEX | FIELD | | DEC | HEX | FIELD |
|------|------|--------|---|------|------|--------|---|------|------|--------|
| 0000 | 0000 | TBSASH | | 0009 | 0009 | TBSUID | | 0029 | 001D | TBSSH3 |
| 0004 | 0004 | TBSSHN | | 0009 | 0009 | TBSSH1 | | 0039 | 0027 | TBSSH4 |
| 0008 | 0008 | TBS05 (EQU) | | 0017 | 0011 | TBS14 (EQU) | | 0049 | 0031 | TBSSH5 |
| 0008 | 0008 | TBS03 (EQU) | | 0017 | 0011 | TBS13 (EQU) | | 0059 | 003B | TBSSH6 |
| 0008 | 0008 | TBS02 (EQU) | | 0017 | 0011 | TBS12 (EQU) | | 0069 | 0045 | TBSSH7 |
| 0008 | 0008 | TBS01 (EQU) | | 0017 | 0011 | TBSACC | | 0079 | 004F | TBSSH8 |
| 0008 | 0008 | TBSDES | | 0018 | 0012 | TBSLVL | | | | |
| 0008 | 0008 | TBSFLG | | 0019 | 0013 | TBSSH2 | | | | |

## Alphabetical list of fields in CHATBS

| FIELD | DEC | HEX | | FIELD | DEC | HEX | | FIELD | DEC | HEX | |
|--------|------|------|---|--------|------|------|---|--------|------|------|---|
| TBSACC | 0017 | 0011 | | TBSSH3 | 0029 | 001D | | TBS02 | 0008 | 0008 | (EQU) |
| TBSASH | 0000 | 0000 | | TBSSH4 | 0039 | 0027 | | TBS03 | 0008 | 0008 | (EQU) |
| TBSDES | 0008 | 0008 | | TBSSH5 | 0049 | 0031 | | TBS05 | 0008 | 0008 | (EQU) |
| TBSFLG | 0008 | 0008 | | TBSSH6 | 0059 | 003B | | TBS12 | 0017 | 0011 | (EQU) |
| TBSLVL | 0018 | 0012 | | TBSSH7 | 0069 | 0045 | | TBS13 | 0017 | 0011 | (EQU) |
| TBSSHN | 0004 | 0004 | | TBSSH8 | 0079 | 004F | | TBS14 | 0017 | 0011 | (EQU) |
| TBSSH1 | 0009 | 0009 | | TBSUID | 0009 | 0009 | | | | | |
| TBSSH2 | 0019 | 0013 | | TBS01 | 0008 | 0008 | (EQU) | | | | |

## Assembler listing of CHATBS

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|---|---|---|---|---|---|
| | 9D 00000 | CHATBS | DSECT | | TBLOCK SHARERS |
| 9D 00000 | | | DS | 0D | |
| 9D 00000 | | | DS | 0CL96 | |
| 9D 00000 | | TBSASH | DS | CL4 | ADDRESS OF NEXT CHATBS |
| 9D 00004 | | TBSSHN | DS | CL2 | NUMBER OF SHARERS FOR THIS |
| | | • | | | CHATBS |
| 9D 00006 | | | DS | CL2 | SPARE |
| 9D 00008 | | TBSFLG | DS | 0CL1 | FLAG |
| 9D 00008 | | TBSDES | DS | XL1 | DESCRIBES THIS TBLOCK |
| | 9D 00008 | TBS01 | EQU | TBSFLG | TBLOCK DSD |
| | 9D 00008 | TBS02 | EQU | TBSFLG | TBLOCK CONTINUATION DSD |
| | 9D 00008 | TBS03 | EQU | TBSFLG | TBLOCK SHARING LIST |
| | 9D 00008 | TBS05 | EQU | TBSFLG | TBLOCK OWNER FLAG |
| | | • | | | N466 |
| | 00000010 | TBS01M | EQU | X'10' | DSD MASK |
| | 00000020 | TBS02M | EQU | X'20' | CONTINUATION DSD MASK |
| | 00000080 | TBS03M | EQU | X'80' | SHARING LIST MASK |
| | 00000008 | TBS05M | EQU | X'08' | TBLOCK OWNER MASK |
| | | • | | | N466 |
| 9D 00009 | | TBSSH1 | DS | 0CL10 | FIRST SHARER FIELD |
| 9D 00009 | | TBSUID | DS | CL8 | SHARER ID |
| 9D 00011 | | TBSACC | DS | CL1 | SHARER ACCESS |
| | 9D 00011 | TBS12 | EQU | TBSACC | READ ONLY ACC |
| | 9D 00011 | TBS13 | EQU | TBSACC | READ WRITE ACC |
| | 9D 00011 | TBS14 | EQU | TBSACC | UNLIMITED ACC |
| | 00000000 | TBS12M | EQU | X'00' | READ ONLY ACC MASK |
| | 00000001 | TBS13M | EQU | X'01' | READ WRITE ACC MASK |
| | 00000002 | TBS14M | EQU | X'02' | UNLIMITED ACC MASK |
| 9D 00012 | | TBSLVL | DS | CL1 | LEVEL OF SHARING |
| 9D 00013 | | TBSSH2 | DS | CL10 | SECOND SHARER FIELD |
| 9D 0001D | | TBSSH3 | DS | CL10 | THIRD SHARER FIELD |
| 9D 00027 | | TBSSH4 | DS | CL10 | FOURTH SHARER FIELD |
| 9D 00031 | | TBSSH5 | DS | CL10 | FIFTH SHARER FIELD |
| 9D 0003B | | TBSSH6 | DS | CL10 | SIXTH SHARER FIELD |
| 9D 00045 | | TBSSH7 | DS | CL10 | SEVENTH SHARER FIELD |
| 9D 0004F | | TBSSH8 | DS | CL10 | EIGHTH SHARER FIELD |
| 9D 00059 | | | DS | CL7 | SPARE |

## CHATBO Storage map



CHATBO 419
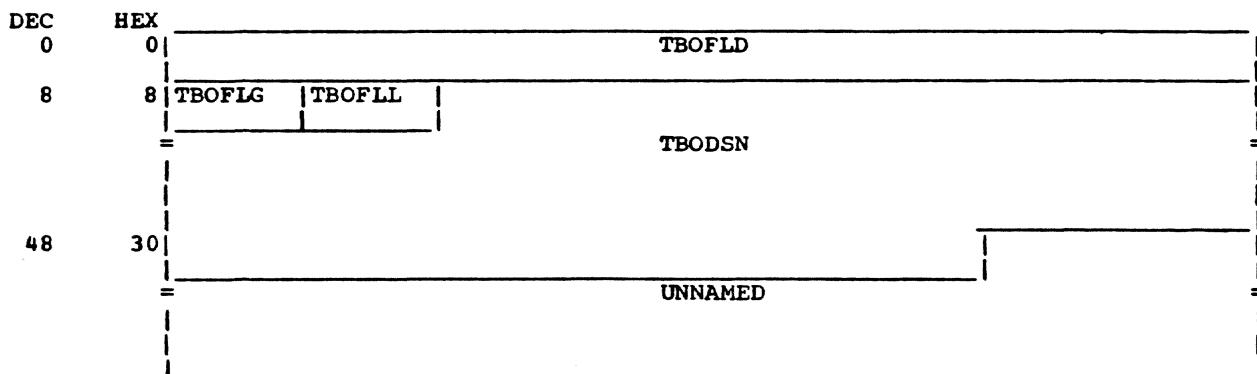
| DEC | HEX | FIELD | | DEC | HEX | FIELD | | DEC | HEX | FIELD | |
|------|------|--------|------|------|------|--------|------|------|------|--------|------|
| 0000 | 0000 | TBOFLD | | 0008 | 0008 | TBO01 | (EQU) | 0009 | 0009 | TBOF1 | (EQU) |
| 0008 | 0008 | TBO05 | (EQU) | 0008 | 0008 | TBOFLG | | 0009 | 0009 | TBOFLL | |
| 0008 | 0008 | TBO04 | (EQU) | 0009 | 0009 | TBOF4 | (EQU) | 0010 | 000A | TBODSN | |
| 0008 | 0008 | TBO03 | (EQU) | 0009 | 0009 | TBOF3 | (EQU) | | | | |
| 0008 | 0008 | TBO02 | (EQU) | 0009 | 0009 | TBOF2 | (EQU) | | | | |

## Alphabetical list of fields in CHATBO

| FIELD | DEC | HEX | | FIELD | DEC | HEX | | FIELD | DEC | HEX | |
|--------|------|------|------|--------|------|------|------|--------|------|------|------|
| TBODSN | 0010 | 000A | | TBOF2 | 0009 | 0009 | (EQU) | TBO03 | 0008 | 0008 | (EQU) |
| TBOFLD | 0000 | 0000 | | TBOF3 | 0009 | 0009 | (EQU) | TBO04 | 0008 | 0008 | (EQU) |
| TBOFLG | 0008 | 0008 | | TBOF4 | 0009 | 0009 | (EQU) | TBO05 | 0008 | 0008 | (EQU) |
| TBOFLL | 0009 | 0009 | | TBO01 | 0008 | 0008 | (EQU) | | | | |
| TBOF1 | 0009 | 0009 | (EQU) | TBO02 | 0008 | 0008 | (EQU) | | | | |

## Assembler listing of CHATBO

```
LOCATION  INSTRUCTION  SOURCE   INST   OPER      COMMENT
9C 00000               CHATBO   DSECT            TBLOCK OWNER DSECT
****************************************************************************
*                             NSRB 466                                    *
* THIS DSECT CONTAINS THE FULLY QUALIFIED NAME OF THE DATASET OWNER       *
* AS ESTABLISHED AT 'SHARE' TIME, IF THE PROCESSING OF THE OWNERS         *
* CATALOG IS INHIBITED BY THE THE INPUT OPTION OR THE SEARCH INTO THE     *
* OWNER'S CATALOG IS UNSUCCESSFUL. THE REASON FOR THE ERROR IS ALSO       *
* GIVEN.                                                                  *
****************************************************************************
9C 00000                        DS     0D
9C 00000               TBOFLD   DS     8X        RESERVED
9C 00008               TBOFLG   DS     X         FLAG TO DESCRIBE THIS BLOCK
          9C 00008     TBO01    EQU    TBOFLG    TBLOCK DSD FLAG
          00000010     TBO01M   EQU    X'10'     TBLOCK DSD MASK
          9C 00008     TBO02    EQU    TBOFLG    TBLOCK CONTINUATION DSD
                       *                         FLAG
          00000020     TBO02M   EQU    X'20'     TBLOCK CONTINUATION DSD
                       *                         MASK
          9C 00008     TBO03    EQU    TBOFLG    TBLOCK SHARERS MASK
          00000080     TBO03M   EQU    X'80'     TBLOCK SHARERS FLAG
          9C 00008     TBO04    EQU    TBOFLG    TBLOCK VOLUME FLAG
          00000040     TBO04M   EQU    X'40'     TBLOCK VOLUME MASK
          9C 00008     TBO05    EQU    TBOFLG    TBLOCK OWNER FLAG
          00000008     TBO05M   EQU    X'08'     TBLOCK OWNER MASK
9C 00009               TBOFLL   DS     X         FLAG TO DESCRIBE
                       *                         UNSUCCESSFUL SEARCH
                       *                         INTO THE OWNER'S CATALOG.
                       *                         NO FLAG IS
                       *                         SET IF OWNER'S CATALOG NOT
                       *                         PROCESSED
          9C 00009     TBOF1    EQU    TBOFLL    OWNER ID NOT JOINED FLAG
          00000001     TBOF1M   EQU    X'01'     OWNER ID NOT JOINED MASK
          9C 00009     TBOF2    EQU    TBOFLL    OWNER DSNAME NONEXISTANT
                       *                         FLAG
          00000002     TBOF2M   EQU    X'02'     OWNER DSNAME NONEXISTANT
                       *                         MASK
          9C 00009     TBOF3    EQU    TBOFLL    SHARER ACCESS NOT
                       *                         AUTHORIZED FLAG
          00000004     TBOF3M   EQU    X'04'     SHARER ACCESS NOT
                       *                         AUTHORIZED MASK
          9C 00009     TBOF4    EQU    TBOFLL    RESERVED FLAG
          00000008     TBOF4M   EQU    X'08'     RESERVED MASK
9C 0000A               TBODSN   DS     CL44      OWNER FULLY QUALIFIED
                       *                         DSNAME AS
                       *                         EXTRACTED FROM SHARING
                       *                         DESCRIPTOR
9C 00036                        DS     42X       RESERVED
```

## Task Common (CHATCM)

Task Common (TCM) provides a single area for those system values referenced in a single task by multiple Command Language object modules.
TCM resides in virtual storage aligned on fullword boundaries.

### CHATCM Storage map

| DEC | HEX | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 0 | TCMCOV | TCMCOF | TCMOPT | TCMLVL | TCMPRV | | | |
| 8 | 8 | TCMUID | | | | | | | |
| 16 | 10 | TCMPWD | | | | | | | |
| 24 | 18 | TCMCNO | | | | | | | |
| 32 | 20 | TCMSIN | | TCMSOT | | TCMTID | | TCMUN1 | TCMEXP |
| 40 | 28 | TCMPNT | TCMUN3 | TCMLOK | TCMRUN | TCMLFP | TCMATT | TCMLOD | TCMTMT |
| 48 | 30 | TCMLNG | | | | TCMDDN | | | |
| 56 | 38 | TCMVLU | | | | TCMTDT | | | |
| 64 | 40 | TCMINP | | | | | | | |
| 1560 | 618 | | | | TCMGRD | TCMSFG | TCMAUD | | |
| 1568 | 620 | TCMDC1 | | | | | | | |

### ORG TCMDC1

| DEC | HEX | | | | | |
|---|---|---|---|---|---|---|
| 1568 | 620 | TCMDCU | | | | |
| 1768 | 6E8 | TCMBSN | | | TCMBSM | |
| 1776 | 6F0 | TCMFIR | TCMABN | TCMMTT | TCMSPA | TCMABV |
| 1784 | 6F8 | TCMABR | | | TCMTOS | |
| 1792 | 700 | TCMTOS (CONT) | | | TCMSTA | |
| 1800 | 708 | TCMSTA (CONT) | | | TCMTCT | |
| 1808 | 710 | TCMAUX | | | TCMCXD | |
| 1816 | 718 | TCMAST | | | TCMLST | |

## Fields in CHATCM -- by displacement

| DEC | HEX | FIELD | | DEC | HEX | FIELD | | DEC | HEX | FIELD | |
|-----|-----|-------|---|-----|-----|-------|---|-----|-----|-------|---|
| 0000 | 0000 | TCMCV1 | (EQU) | 0038 | 0026 | TCMDMR1 | (EQU) | 0052 | 0034 | TCMDDN | |
| 0000 | 0000 | TCMCOV | | 0038 | 0026 | TCMDMR | (EQU) | 0056 | 0038 | TCMVLU | |
| 0001 | 0001 | TCMCF1 | (EQU) | 0038 | 0026 | TCMBACK | (EQU) | 0060 | 003C | TCMTDT | |
| 0001 | 0001 | TCMCOF | | 0038 | 0026 | TCMACR | (EQU) | 0064 | 0040 | TCMINP | |
| 0002 | 0002 | TCMOP2 | (EQU) | 0038 | 0026 | TCMBPW | (EQU) | 1564 | 061C | TCMGD2 | (EQU) |
| 0002 | 0002 | TCMOP1 | (EQU) | 0038 | 0026 | TCMUN1 | | 1564 | 061C | TCMGD1 | (EQU) |
| 0002 | 0002 | TCMOPT | | 0039 | 0027 | TCMEXP4 | (EQU) | 1564 | 061C | TCMGRD | |
| 0003 | 0003 | TCMLV2 | (EQU) | 0039 | 0027 | TCMEXP3 | (EQU) | 1565 | 061D | TCMSF2 | (EQU) |
| 0003 | 0003 | TCMLV1 | (EQU) | 0039 | 0027 | TCMEXP2 | (EQU) | 1565 | 061D | TCMSF1 | (EQU) |
| 0003 | 0003 | TCMLVL | | 0039 | 0027 | TCMEXP1 | | 1565 | 061D | TCMSFG | |
| 0004 | 0004 | TCMPF | (EQU) | 0039 | 0027 | TCMEXP | | 1566 | 061E | TCMAUD | |
| 0004 | 0004 | TCMPE | (EQU) | 0040 | 0028 | TCMPN1 | (EQU) | 1568 | 0620 | TCMDCU | |
| 0004 | 0004 | TCMPD | (EQU) | 0040 | 0028 | TCMPNT | | 1568 | 0620 | TCMDC1 | |
| 0004 | 0004 | TCMPC | (EQU) | 0041 | 0029 | TCMUN3 | | 1768 | 06E8 | TCMBSN | |
| 0004 | 0004 | TCMPB | (EQU) | 0042 | 002A | TCMOK1 | (EQU) | 1772 | 06EC | TCMBSM | |
| 0004 | 0004 | TCMPA | (EQU) | 0042 | 002A | TCMLOK | | 1776 | 06F0 | TCMFIR | |
| 0004 | 0004 | TCMPR0 | (EQU) | 0043 | 002B | TCMRN1 | (EQU) | 1777 | 06F1 | TCMABN | |
| 0004 | 0004 | TCMPRV | | 0043 | 002B | TCMRUN | | 1778 | 06F2 | TCMMTT | |
| 0005 | 0005 | TCMPR1 | (EQU) | 0044 | 002C | TCMLP1 | (EQU) | 1779 | 06F3 | TCMSPA | |
| 0006 | 0006 | TCMPT | (EQU) | 0044 | 002C | TCMLFP | | 1780 | 06F4 | TCMABV | |
| 0006 | 0006 | TCMPR2 | (EQU) | 0045 | 002D | TCMMT2 | (EQU) | 1784 | 06F8 | TCMABR | |
| 0007 | 0007 | TCMPR3 | (EQU) | 0045 | 002D | TCMMT1 | (EQU) | 1788 | 06FC | TCMTOS | |
| 0008 | 0008 | TCMUID | | 0045 | 002D | TCMATT | | 1796 | 0704 | TCMSTA | |
| 0016 | 0010 | TCMPWD | | 0046 | 002E | TCMLD1 | (EQU) | 1804 | 070C | TCMTCT | |
| 0024 | 0018 | TCMCNO | | 0046 | 002E | TCMLOD | | 1808 | 0710 | TCMAUX | |
| 0032 | 0020 | TCMSIN | | 0047 | 002F | TCMTM2 | (EQU) | 1812 | 0714 | TCMCXD | |
| 0034 | 0022 | TCMSOT | | 0047 | 002F | TCMTM1 | (EQU) | 1816 | 0718 | TCMAST | |
| 0036 | 0024 | TCMTID | | 0047 | 002F | TCMTMT | | 1820 | 071C | TCMLST | |
| 0038 | 0026 | TCMABS | (EQU) | 0048 | 0030 | TCMLNG | | | | | |

## Alphabetical list of fields in CHATCM

| FIELD | DEC | HEX | | FIELD | DEC | HEX | | FIELD | DEC | HEX | |
|-------|-----|-----|---|-------|-----|-----|---|-------|-----|-----|---|
| TCMABN | 1777 | 06F1 | | TCMFIR | 1776 | 06F0 | | TCMPN1 | 0040 | 0028 | (EQU) |
| TCMABR | 1784 | 06F8 | | TCMGD1 | 1564 | 061C | (EQU) | TCMPRV | 0004 | 0004 | |
| TCMABS | 0038 | 0026 | (EQU) | TCMGD2 | 1564 | 061C | (EQU) | TCMPR0 | 0004 | 0004 | (EQU) |
| TCMABV | 1780 | 06F4 | | TCMGRD | 1564 | 061C | | TCMPR1 | 0005 | 0005 | (EQU) |
| TCMACR | 0038 | 0026 | (EQU) | TCMINP | 0064 | 0040 | | TCMPR2 | 0006 | 0006 | (EQU) |
| TCMAST | 1816 | 0718 | | TCMLD1 | 0046 | 002E | (EQU) | TCMPR3 | 0007 | 0007 | (EQU) |
| TCMATT | 0045 | 002D | | TCMLFP | 0044 | 002C | | TCMPT | 0006 | 0006 | (EQU) |
| TCMAUD | 1566 | 061E | | TCMLNG | 0048 | 0030 | | TCMPWD | 0016 | 0010 | |
| TCMAUX | 1808 | 0710 | | TCMLOD | 0046 | 002E | | TCMRN1 | 0043 | 002B | (EQU) |
| TCMBACK | 0038 | 0026 | (EQU) | TCMLOK | 0042 | 002A | | TCMRUN | 0043 | 002B | |
| TCMBPW | 0038 | 0026 | (EQU) | TCMLP1 | 0044 | 002C | (EQU) | TCMSFG | 1565 | 061D | |
| TCMBSM | 1772 | 06EC | | TCMLST | 1820 | 071C | | TCMSF1 | 1565 | 061D | (EQU) |
| TCMBSN | 1768 | 06E8 | | TCMLVL | 0003 | 0003 | | TCMSF2 | 1565 | 061D | (EQU) |
| TCMCF1 | 0001 | 0001 | (EQU) | TCMLV1 | 0003 | 0003 | (EQU) | TCMSIN | 0032 | 0020 | |
| TCMCNO | 0024 | 0018 | | TCMLV2 | 0003 | 0003 | (EQU) | TCMSOT | 0034 | 0022 | |
| TCMCOF | 0001 | 0001 | | TCMMTT | 1778 | 06F2 | | TCMSPA | 1779 | 06F3 | |
| TCMCOV | 0000 | 0000 | | TCMMT1 | 0045 | 002D | (EQU) | TCMSTA | 1796 | 0704 | |
| TCMCV1 | 0000 | 0000 | (EQU) | TCMMT2 | 0045 | 002D | (EQU) | TCMTCT | 1804 | 070C | |
| TCMCXD | 1812 | 0714 | | TCMOK1 | 0042 | 002A | (EQU) | TCMTDT | 0060 | 003C | |
| TCMDCU | 1568 | 0620 | | TCMOPT | 0002 | 0002 | | TCMTID | 0036 | 0024 | |
| TCMDC1 | 1568 | 0620 | | TCMOP1 | 0002 | 0002 | (EQU) | TCMTMT | 0047 | 002F | |
| TCMDDN | 0052 | 0034 | | TCMOP2 | 0002 | 0002 | (EQU) | TCMTM1 | 0047 | 002F | (EQU) |
| TCMDMR | 0038 | 0026 | (EQU) | TCMPA | 0004 | 0004 | (EQU) | TCMTM2 | 0047 | 002F | (EQU) |
| TCMDMR1 | 0038 | 0026 | (EQU) | TCMPB | 0004 | 0004 | (EQU) | TCMTOS | 1788 | 06FC | |
| TCMEXP | 0039 | 0027 | | TCMPC | 0004 | 0004 | (EQU) | TCMUID | 0008 | 0008 | |
| TCMEXP1 | 0039 | 0027 | (EQU) | TCMPD | 0004 | 0004 | (EQU) | TCMUN1 | 0038 | 0026 | |
| TCMEXP2 | 0039 | 0027 | (EQU) | TCMPE | 0004 | 0004 | (EQU) | TCMUN3 | 0041 | 0029 | |
| TCMEXP3 | 0039 | 0027 | (EQU) | TCMPF | 0004 | 0004 | (EQU) | TCMVLU | 0056 | 0038 | |
| TCMEXP4 | 0039 | 0027 | (EQU) | TCMPNT | 0040 | 0028 | | | | | |

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|---|---|---|---|---|---|
| | 9E 00000 | CHATCM | DSECT | | TASK COMMON |
| 9E 00000 | | TCMCOV | DS | XL1 | CONVERSATIONAL FLAG - |
| | | * | | | BINARY |
| | 9E 00000 | TCMCV1 | EQU | TCMCOV | TASK IS CONVERSATIONAL FLAG |
| | 00000001 | TCMCV1M | EQU | X'01' | TASK IS CONVERSATIONAL MASK |
| 9E 00001 | | TCMCOF | DS | XL1 | CONFIRMATION FLAG - BINARY |
| | 9E 00001 | TCMCF1 | EQU | TCMCOF | CONFIRMATION=YES FLAG |
| | 00000001 | TCMCF1M | EQU | X'01' | CONFIRMATION=YES MASK |
| 9E 00002 | | TCMOPT | DS | XL1 | MESSAGE OPTION FLAG - |
| | | * | | | BINARY |
| | 9E 00002 | TCMOP1 | EQU | TCMOPT | TEXT OPTION FLAG |
| | 00000000 | TCMOP1M | EQU | X'00' | TEXT OPTION MASK |
| | 9E 00002 | TCMOP2 | EQU | TCMOPT | CODE OPTION FLAG |
| | 00000001 | TCMOP2M | EQU | X'01' | CODE OPTION MASK |
| 9E 00003 | | TCMLVL | DS | XL1 | NON-CONVERSATIONAL LEVEL |
| | | * | | | FLAG-BINARY |
| | 9E 00003 | TCMLV1 | EQU | TCMLVL | NON BULKIO FLAG |
| | 00000000 | TCMLV1M | EQU | X'00' | NON BULKIO MASK |
| | 9E 00003 | TCMLV2 | EQU | TCMLVL | BULKIO FLAG |
| | 00000008 | TCMLV2M | EQU | X'08' | BULKIO MASK |
| 9E 00004 | | TCMPRV | DS | XL4 | TASK COMMAND PRIVILEGE |
| | | * | | | CLASS-BITS |
| | 9E 00004 | TCMPR0 | EQU | TCMPRV | FIRST CLASS BYTE |
| | 9E 00004 | TCMPA | EQU | TCMPR0 | CLASS A |
| | 00000080 | TCMPAM | EQU | X'80' | |
| | 9E 00004 | TCMPB | EQU | TCMPR0 | CLASS B |
| | 00000040 | TCMPBM | EQU | X'40' | |
| | 9E 00004 | TCMPC | EQU | TCMPR0 | CLASS C |
| | 00000020 | TCMPCM | EQU | X'20' | |
| | 9E 00004 | TCMPD | EQU | TCMPR0 | CLASS D |
| | 00000010 | TCMPDM | EQU | X'10' | |
| | 9E 00004 | TCMPE | EQU | TCMPR0 | CLASS E |
| | 00000008 | TCMPEM | EQU | X'08' | |
| | 9E 00004 | TCMPF | EQU | TCMPR0 | CLASS F |
| | 00000004 | TCMPFM | EQU | X'04' | |
| | 9E 00005 | TCMPR1 | EQU | TCMPRV+1 | SECOND CLASS BYTE |
| | 9E 00006 | TCMPR2 | EQU | TCMPRV+2 | THIRD CLASS BYTE |
| | 9E 00006 | TCMPT | EQU | TCMPR2 | CLASS T |
| | 00000010 | TCMPTM | EQU | X'10' | CLASS T MASK |
| | 9E 00007 | TCMPR3 | EQU | TCMPRV+3 | FOURTH CLASS BYTE |
| 9E 00008 | | TCMUID | DS | CL8 | USER IDENTIFICATION - |
| | | * | | | EBCDIC |
| 9E 00010 | | TCMPWD | DS | CL8 | PASSWORD - EBCDIC |
| 9E 00018 | | TCMCNO | DS | CL8 | CHARGE NUMBER - EBCDIC |
| 9E 0C020 | | TCMSIN | DS | H | SYSIN  BINARY |
| 9E 00022 | | TCMSOT | DS | H | SYSOUT BINARY |
| 9E 00024 | | TCMTID | DS | H | TASK IDENTIFICATION - |
| | | * | | | BINARY |
| 9E 00026 | | TCMUN1 | DS | XL1 | |
| | 9E 00026 | TCMBPW | EQU | TCMUN1 | PRINT SYSOUT FLAG |
| | 00000080 | TCMBPWM | EQU | X'80' | PRINT SYSOUT MASK |
| | 9E 00026 | TCMACR | EQU | TCMUN1 | ACCOUNTING SUBROUTINE HAS |
| | | * | | | BEEN            M02362 |
| | 00000002 | TCMACRM | EQU | X'02' | ENTERED WHEN ON |
| | | * | | | M02362 |
| | 9E 00026 | TCMBACK | EQU | TCMUN1 | BACK TASK |
| | | * | | | I05594 |
| | 00000008 | TCMBACKM | EQU | X'08' | BACK TASK MASK |
| | | * | | | I05594 |
| | 9E 00026 | TCMDMR | EQU | TCMUN1 | |
| | 9E 00026 | TCMDMR1 | EQU | TCMDMR | ABEND IN PROGRESS FLAG |
| | 00000010 | TCMDMR1M | EQU | X'10' | ABEND IN PROGRESS MASK |
| | 9E 00026 | TCMABS | EQU | TCMUN1 | ABEND FLAG TO INITIALIZE |
| | | * | | | USEACT |
| | 00000001 | TCMABSM | EQU | X'01' | ABEND MASK TO INITIALIZE |
| | | * | | | USEACT |
| 9E 00027 | | TCMEXP | DS | XL1 | EXPRESS MODE FLAG |
| | 9E 00027 | TCMEXP1 | EQU | TCMEXP | EXPRESS MODE 1ST PASS FLAG |

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|---|---|---|---|---|---|
| | 00000080 | TCMEXP1M | EQU | X'80' | EXPRESS MODE 1ST PASS MASK |
| | 9E 00027 | TCMEXP2 * | EQU | TCMEXP | EXPRESS MODE NOT 1ST PASS FLAG |
| | 00000040 | TCMEXP2M * | EQU | X'40' | EXPRESS MODE NOT 1ST PASS MASK |
| | 9E 00027 | TCMEXP3 * | EQU | TCMEXP | ABEND CC = 2 IN EXPRESS BATCH FLAG |
| | 00000020 | TCMEXP3M * | EQU | X'20' | ABEND CC = 2 IN EXPRESS BATCH MASK |
| | 9E 00027 | TCMEXP4 * | EQU | TCMEXP | EXPRESS BATCH SYNAD FLAG M3895 |
| | 00000010 | TCMEXP4M * | EQU | X'10' | EXPRESS BATCH SYNAD MASK M3895 |
| 9E 00028 | | TCMPNT * | DS | XL1 | NON- CONVERSATIONAL PRINT FLAG - BIN. |
| | 9E 00028 | TCMPN1 | EQU | TCMPNT | PRINT SYSOUT FLAG |
| | 00000001 | TCMPN1M | EQU | X'01' | PRINT SYSOUT MASK |
| 9E 00029 | | TCMUN3 * | DS | X | FLAGS I6503 |
| | 00000001 | TCMSOP * | EQU | X'01' | SYSOUT PRINTED FLAG I6503 |
| 9E 0002A | | TCMLOK | DS | XL1 | LOGON OK FLAG - BINARY |
| | 9E 0002A | TCMOK1 | EQU | TCMLOK | TASK LOGGED ON FLAG |
| | 00000001 | TCMOK1M | EQU | X'01' | TASK LOGGED ON MASK |
| 9E 0002B | | TCMRUN | DS | XL1 | RUN FLAG |
| | 9E 0002B | TCMRN1 | EQU | TCMRUN | USER PROGRAM FLAG |
| | 00000001 | TCMRN1M | EQU | X'01' | USER PROGRAM MASK |
| 9E 0002C | | TCMLFP | DS | XL1 | LEFT PAREN SWITCH FLAG |
| | 9E 0002C | TCMLP1 | EQU | TCMLFP | IS LEFT PAREN FLAG |
| | 00000001 | TCMLP1M | EQU | X'01' | IS LEFT PAREN FLAG |
| 9E 0002D | | TCMATT * | DS | XL1 | ATTENTION INTERRUPT FLAG. SET BY THE DIRECTOR. |
| | 9E 0002D | TCMMT1 * | EQU | TCMATT | SYSTEM CONTROLS ATTENTION INTERRUPT FLAG |
| | 00000000 | TCMMT1M * | EQU | X'00' | SYSTEM CONTROLS ATTENTION INTERRUPT MASK |
| | 9E 0002D | TCMMT2 * | EQU | TCMATT | USER CONTROLS OWN ATTENTION INT FLAG |
| | 00000001 | TCMMT2M * | EQU | X'01' | USER CONTROLS OWN ATTENTION INT MASK |
| 9E 0002E | | TCMLOD | DS | XL1 | LOAD FLAG - BINARY |
| | 9E 0002E | TCMLD1 * | EQU | TCMLOD | MODULE LOADED BUT NOT RUN FLAG |
| | 00000001 | TCMLD1M * | EQU | X'01' | MODULE LOADED BUT NOT RUN MASK |
| 9E 0002F | | TCMTMT | DS | XL1 | TERMINAL COMPONENT FLAG |
| | 9E 0002F | TCMTM1 | EQU | TCMTMT | TYPEWRITE FLAG |
| | 00000000 | TCMTM1M | EQU | X'00' | TYPEWRITER MASK |
| | 9E 0002F | TCMTM2 | EQU | TCMTMT | CARD READER FLAG |
| | 00000001 | TCMTM2M | EQU | X'01' | CARD READER MASK |
| 9E 00030 | | TCMLNG * | DS | F | MAX. CHARACTER LINE LENGTH - BINARY |
| 9E 00034 | | TCMDDN * | DS | F | GENERATED DDNAME COUNTER - BINARY |
| 9E 00038 | | TCMVLU * | DS | A | ADDR. OF USER TABLE ENTRY IN SHARED VM |
| 9E 0003C | | TCMTDT * | DS | F | TASK DEFINITION TABLE POINTER - ADCON |
| 9E 00040 | | TCMINP | DS | 1500CL1 | COMMAND INPUT AREA |
| 9E 0061C | | TCMGRD | DS | XL1 | RECORD LENGTH TYPE |
| | 9E 0061C | TCMGD1 | EQU | TCMGRD | RECORD LENGTH VARIABLE FLAG |
| | 00000000 | TCMGD1M | EQU | X'00' | RECORD LENGTH VARIABLE MASK |
| | 9E 0061C | TCMGD2 | EQU | TCMGRD | RECORD LENGTH FIXED FLAG |
| | 00000001 | TCMGD2M | EQU | X'01' | RECORD LENGTH FIXED MASK |
| 9E 0061D | | TCMSFG | DS | XL1 | SHUTDOWN FLAG |
| | 9E 0061D | TCMSF1 | EQU | TCMSFG | SHUTDOWN IN PROGRESS FLAG |
| | 00000001 | TCMSF1M | EQU | X'01' | SHUTDOWN IN PROGRESS MASK |
| | 9E 0061D | TCMSF2 | EQU | TCMSFG | TASK HAS ABENDED FLAG |

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|---|---|---|---|---|---|
| | | * | | | I6385 |
| | 00000002 | TCMSF2M | EQU | X'02' | TASK HAS ABENDED MASK |
| | | * | | | I6385 |
| 9E 0061E | | TCMAUD | DS | AL2 | OFFSET IN CHAAUL OF THIS |
| | | * | | | TASK |
| 9E 00620 | | | DS | 0F | ALLIGNMENT FOR USER TABLE |
| | | * | | | DCB |
| 9E 00620 | | TCMDC1 | DS | 368CL1 | RESERVE SPACE FOR USER |
| | | * | | | TABLE DCB |
| | 9E 00620 | | \|ORG\| | TCMDC1 | |
| | | * | | | USER TABLE DCB |
| | | TCMDCU | DCB | DSORG=VI,DDNAME=SYSUSE,LRECL=256,RKP=8,KEYLEN= | |
| 9E 00620 | | TCMDCU | DS | 0D | DOUBLE WORD ALIGNMENT |
| 9E 00620 | | | DC | AL1(113) | DSORG                  BYTE |
| | | * | | | 0 |
| 9E 00621 | | | DC | FL1'0' | BYTE    1 |
| 9E 00622 | | | DC | FL2'0' | MACRF NOT SPECIFIED    BYTES |
| | | * | | | 2-3 |
| 9E 00624 | | | DC | A(0) | EXLIST |
| | | * | | | BYTES 4-7 |
| 9E 00628 | | | DC | CL8'SYSUSE' | DDNAME |
| | | * | | | BYTES 8-15 |
| 9E 00630 | | | DC | A(0) | SYNAD NOT SPECIFIED BYTES |
| | | * | | | 16-19 |
| 9E 00634 | | | DC | A(0) | SYNAD NOT SPECIFIED BYTES |
| | | * | | | 20-23 |
| 9E 00638 | | | DC | A(0) | EODAD NOT SPECIFIED BYTES |
| | | * | | | 24-27 |
| 9E 0063C | | | DC | A(0) | EODAD NOT SPECIFIED BYTES |
| | | * | | | 28-31 |
| 9E 00640 | | | DC | AL2(0) | BUFL                   BYTES |
| | | * | | | 32-33 |
| 9E 00642 | | | DC | AL1(0) | DEVD                   BYTE |
| | | * | | | 34 |
| 9E 00643 | | | DC | FL1'0' | BUFNO NOT SPECIFIED BYTE |
| | | * | | | 35 |
| 9E 00644 | | | DC | F'0' | BUFCB NOT SPECIFIED BYTES |
| | | * | | | 36-39 |
| 9E 00648 | | | DC | FL1'0' | BFTEK=S OR NOT SPEC BYTE |
| | | * | | | 40 |
| 9E 00649 | | | DC | FL1'0' | NCP NOT SPECIFIED     BYTE |
| | | * | | | 41 |
| 9E 0064A | | | DC | AL1(0) | RECFM                 BYTE |
| | | * | | | 42 |
| 9E 0064B | | | DC | AL1(4) | OPTCD (PKP=0,PAD=0) BYTE 43 |
| 9E 0064C | | | DC | A(256) | LRECL                 BYTES |
| | | * | | | 44-47 |
| 9E 00650 | | | DC | FL2'0' | BLKSIZE NOT SPEC.    BYTES |
| | | * | | | 48-49 |
| 9E 00652 | | | DC | AL1(8) | KEYLEN                BYTE |
| | | * | | | 50 |
| 9E 00653 | | | DC | FL1'0' | DEVICE DEP. PARAM 2 NOT |
| | | * | | | SPEC. BYTE  51 |
| 9E 00654 | | | DC | FL1'0' | EROPT NOT SPECIFIED BYTE |
| | | * | | | 52 |
| 9E 00655 | | | DC | FL1'0' | PAD NOT SPECIFIED    BYTE |
| | | * | | | 53 |
| 9E 00656 | | | DC | AL2(8) | RKP                   BYTES |
| | | * | | | 54-55 |
| 9E 00658 | | | DC | 3F'0' | BYTES 56-67 |
| 9E 00664 | | | DC | C'*%*%' | DCB I. D.            BYTES |
| | | * | | | 68-71 |
| 9E 00668 | | | DC | 3F'0' | BYTES 72-83 |
| 9E 00674 | | | DC | X'FFFFFFFF' | IMSK |
| | | * | | | BYTES 84 |
| 9E 00678 | | | DC | 4D'0' | |
| 9E 00698 | | | DC | X'0' | RETRY NOT SPECIFIED |
| 9E 00699 | | | DC | X'0' | NO POCKET SPECIFIED |

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|----------|-------------|--------|------|------|---------|
| 9E 0069A | | | DC | X'00' | INHMSG NOT SPECIFIED |
| | | * | | | BYTE 122 |
| 9E 0069B | | | DC | X'0' | NO COMBINE |
| 9E 0069C | | | DC | F'0' | |
| 9E 006A0 | | | DC | 7D'0' | |
| 9E 006D8 | | | DC | F'0' | |
| 9E 006DC | | | DC | CL1'0' | FORMTYP NOT SPECIFIED |
| | | * | | | BYTE 188 |
| 9E 006DD | | | DC | 3X'00' | |
| 9E 006E0 | | | DC | F'0' | |
| 9E 006E4 | | | DC | X'00' | RJE NOT SPECIFIED |
| | | * | | | BYTE 196 |
| 9E 006E5 | | | DC | 3X'00' | |
| 9E 006E8 | | TCMBSN | DS | CL4 | NON CONVERSATIONAL TASKS |
| | | * | | | BATCH SEQUENCE NUMBER |
| 9E 006EC | | TCMBSM | DS | CL4 | BSN ASSGND CMD/MACRO ISSUED |
| | | * | | | I5525 |
| 9E 006F0 | | TCMFIR | DS | CL1 | FORTRAN INTERRUPT RECOVERY |
| 9E 006F1 | | TCMABN | DS | CL1 | |
| | 00000001 | TCMSAR | EQU | X'01' | SPECIAL PURPOSE ABEND |
| 9E 006F2 | | TCMMTT | DS | CL1 | MTT APPLICATION TASK FLAG |
| | | * | | | N386** |
| | 00000001 | TCMMTTM | EQU | X'01' | MTT APPLICATION TASK MASK |
| | | * | | | N386** |
| 9E 006F3 | | TCMSPA | DS | XL1 | RESERVED |
| | | * | | | N386 |
| 9E 006F4 | | TCMABV | DS | CL4 | VCON OF SPECIAL PURPOSE |
| 9E 006F8 | | TCMABR | DS | CL4 | RCON-ABEND ROUTINE |
| 9E 006FC | | TCMTOS | DS | 2F | SIGN-ON TIME--MICROSECONDS |
| | | * | | | SINCE 3/1/00 |
| 9E 00704 | | TCMSTA | DS | CL8 | RJE STATION IDENTIFICATION |
| 9E 0070C | | TCMTCT | DS | F | TCT POINTER FOR TASK |
| | | * | | | (RTAM) |
| 9E 00710 | | TCMAUX | DS | F | AMT OF AUX STORAGE ASSIGNED |
| | | * | | | TO TASK |
| 9E 00714 | | TCMCXD | DS | F | LENGTH OF CURRENT PRV TABLE |
| | | * | | | N480 |
| 9E 00718 | | TCMAST | DS | A | ADDR OF AVAILABLE SLOT |
| | | * | | | TABLE   N480 |
| 9E 0071C | | TCMLST | DS | F | LENGTH OF AVAILABLE SLOT |
| | | * | | | TABLE   N480 |

## Terminal Control Table (CHATCT)

Two types of TCT exist in TSS: system TCTs contain an entry for each task attached to the system, and are used by RTAM to locate a task which is ready to use TSS/360; application TCTs contain data describing the activity of each terminal attached to an MTT task, and are used by RTAM to regulate the processing of all attached tasks. CHATCT occupies one full page of storage.

### CHATCT Storage map

| DEC | HEX | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 0 | 0 | TCTLCK | TCTSTS | TCTMLN | | TCTVMA | | |
| 8 | 8 | TCTTIO | | | | TCTRLN | TCTFL1 | TCTFL2 |
| 16 | 10 | TCTCOL | | | | | | |
| 24 | 18 | TCTTDE | | | TCTDTY | TCTWFD | | |
| 32 | 20 | TCTPDA | | TCTSDA | | TCTBUF | | |
| 40 | 28 | TCTCNT | TCTUSE | TCTFL4 | UNNAMED | TCTTSI | | |
| 48 | 30 | RESERVED | | | | | | |
| 4080 | FF0 | TCTFPV | | | | TCTBPV | | |
| 4088 | FF8 | TCTABC | | TCTLOC | TCTATS | UNNAMED | | |

### ORG  TCTCOL

| 16 | 10 | TCTWTC | TCTCWT | TCTRDC | TCTCRD |
|---|---|---|---|---|---|

### ORG  TCTWFD

| 29 | 1D | | TCTWSV | TCTWWK | TCTWRS |
|---|---|---|---|---|---|

### Fields in CHATCT -- by displacement

| DEC | HEX | FIELD | | DEC | HEX | FIELD | | DEC | HEX | FIELD | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0000 | 0000 | TCTLCK | | 0020 | 0014 | TCTRDC | | 0040 | 0028 | TCTCNT | |
| 0001 | 0001 | TCTSTS | | 0023 | 0017 | TCTCRD | | 0041 | 0029 | TCTTTY | (EQU) |
| 0002 | 0002 | TCTMLN | | 0024 | 0018 | TCTTDE | | 0041 | 0029 | TCTUSE | |
| 0004 | 0004 | TCTVMA | | 0028 | 001C | TCTDTY | | 0042 | 002A | TCTCK | (EQU) |
| 0008 | 0008 | TCTTIO | | 0029 | 001D | TCTWSV | | 0042 | 002A | TCTFL4 | |
| 0012 | 000C | TCTRLN | | 0029 | 001D | TCTWFD | | 0044 | 002C | TCTTSI | |
| 0014 | 000E | TCTFL1 | | 0030 | 001E | TCTWWK | | 4080 | 0FF0 | TCTFPV | |
| 0015 | 000F | TCTFL2 | | 0031 | 001F | TCTWRS | | 4084 | 0FF4 | TCTBPV | |
| 0016 | 0010 | TCTWTC | | 0032 | 0020 | TCTPDA | | 4088 | 0FF8 | TCTABC | |
| 0016 | 0010 | TCTCOL | | 0034 | 0022 | TCTSDA | | 4090 | 0FFA | TCTLOC | |
| 0019 | 0013 | TCTCWT | | 0036 | 0024 | TCTBUF | | 4091 | 0FFB | TCTATS | |

## Alphabetical list of fields in CHATCT

| FIELD | DEC | HEX | | FIELD | DEC | HEX | | FIELD | DEC | HEX | |
|-------|-----|-----|---|-------|-----|-----|---|-------|-----|-----|---|
| TCTABC | 4088 | OFF8 | | TCTFL2 | 0015 | 000F | | TCTTDE | 0024 | 0018 | |
| TCTATS | 4091 | OFFB | | TCTFL4 | 0042 | 002A | | TCTTIO | 0008 | 0008 | |
| TCTBPV | 4084 | OFF4 | | TCTFPV | 4080 | OFF0 | | TCTTSI | 0044 | 002C | |
| TCTBUF | 0036 | 0024 | | TCTLCK | 0000 | 0000 | | TCTTTY | 0041 | 0029 | (EQU) |
| TCTCK | 0042 | 002A | (EQU) | TCTLOC | 4090 | OFFA | | TCTUSE | 0041 | 0029 | |
| TCTCNT | 0040 | 0028 | | TCTMLN | 0002 | 0002 | | TCTVMA | 0004 | 0004 | |
| TCTCOL | 0016 | 0010 | | TCTPDA | 0032 | 0020 | | TCTWFD | 0029 | 001D | |
| TCTCRD | 0023 | 0017 | | TCTRDC | 0020 | 0014 | | TCTWRS | 0031 | 001F | |
| TCTCWT | 0019 | 0013 | | TCTRLN | 0012 | 000C | | TCTWSV | 0029 | 001D | |
| TCTDTY | 0028 | 001C | | TCTSDA | 0034 | 0022 | | TCTWTC | 0016 | 0010 | |
| TCTFL1 | 0014 | 000E | | TCTSTS | 0001 | 0001 | | TCTWWK | 0030 | 001E | |

## Assembler listing of CHATCT

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|----------|-------------|--------|------|------|---------|
| | 9F 00000 | CHATCT | DSECT | | |
| 9F 00000 | | TCTLCK | DS | X | LOCK BYTE |
| 9F 00001 | | TCTSTS | DS | X | STATUS BYTE -(SET BY TCS ROUT) |
| | | * | | | |
| | 00000080 | TCTCMP | EQU | X'80' | PREPARE CCW INDICATOR BIT |
| | 00000040 | TCTRDR | EQU | X'40' | READ REQUIRED BIT |
| | 00000020 | TCTBFO | EQU | X'20' | BUFFER OVERFLOW |
| | 00000010 | TCTPCI | EQU | X'10' | PCI BIT |
| | 00000008 | TCTDAT | EQU | X'08' | TWO PAGE DATA AREA |
| | 00000004 | TCTSPP | EQU | X'04' | SUPERVISOR PAGE FOR WRITE DATA |
| | | * | | | |
| | 00000002 | TCTCNP | EQU | X'02' | COMPLETE IO BIT |
| | 00000001 | TCTHIO | EQU | X'01' | HALT I/O FLAG |
| 9F 00002 | | TCTMLN | DS | H | MESSAGE LENGTH IN AND OUT |
| 9F 00004 | | TCTVMA | DS | F | VM ADDRESS OF BUFFER |
| 9F 00008 | | TCTTIO | DS | F | REAL CORE ADDRESS -FIRST TIOCB |
| | | * | | | |
| 9F 0000C | | TCTRLN | DS | H | RELATIVE LINE NUMBER |
| 9F 0000E | | TCTFL1 | DS | X | FLAG BYTE 1 -(SET BY MACRO SVC) |
| | | * | | | |
| | 00000080 | TCTFRD | EQU | X'80' | READ OPERATION |
| | 00000040 | TCTFWT | EQU | X'40' | WRITE OPERATION |
| | 00000020 | TCTFWR | EQU | X'20' | WRITE/RESPONSE OPERATION |
| | 00000010 | TCTFCL | EQU | X'10' | CLEAR OPERATION |
| | 00000008 | TCTFFR | EQU | X'08' | FREE OPERATION |
| 9F 0000F | | TCTFL2 | DS | X | FLAG BYTE 2 -(SET BY MACRO SVC) |
| | | * | | | |
| | 00000080 | TCTFIR | EQU | X'80' | INTERRUPT REQUIRED ON TASK |
| | 00000040 | TCTFTI | EQU | X'40' | TRANSLATE ON IN MESSAGES |
| | 00000020 | TCTFTO | EQU | X'20' | TRANSLATE ON OUT MESSAGES |
| | 00000010 | TCTFBK | EQU | X'10' | BREAK TO BE ISSUED |
| 9F 00010 | | TCTCOL | DS | D | CONTROL CHARACTERS |
| | 9F 00010 | | \|ORG\| | TCTCOL | |
| 9F 00010 | | TCTWTC | DS | 3X | WRITE CONTROL |
| 9F 00013 | | TCTCWT | DS | X | COMPONENT WRITE CONTROL |
| 9F 00014 | | TCTRDC | DS | 3X | READ CONTROL |
| 9F 00017 | | TCTCRD | DS | X | COMPONENT READ CONTROL |
| 9F 00018 | | TCTTDE | DS | F | REAL CORE ADDRESS OF TDE ENTRY |
| | | * | | | |
| 9F 0001C | | TCTDTY | DS | X | DEVICE TYPE |
| | 00000000 | TCTDT0 | EQU | X'00' | SLOT AVAILABLE MASK |
| | 00000001 | TCTDT1 | EQU | X'01' | 1050 PTTC/8 |
| | 00000002 | TCTDT2 | EQU | X'02' | 2741 CORRESPONDENCE |
| | 00000003 | TCTDT3 | EQU | X'03' | 2741 PTTC/8 |
| | 00000004 | TCTDT4 | EQU | X'04' | TTY35 ASCII |
| | 00000005 | TCTDT5 | EQU | X'05' | 1052-7 |
| 9F 0001D | | TCTWFD | DS | 3X | WORK FIELD |
| | 9F 0001D | | \|ORG\| | TCTWFD | |
| 9F 0001D | | TCTWSV | DS | X | SAVE BYTE |
| 9F 0001E | | TCTWWK | DS | X | WORK BYTE |
| | 00000080 | TCTWW1 | EQU | X'80' | MESSAGE IN |

(Listing of CHATCT continued from page 428)

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|---|---|---|---|---|---|
| | 00000040 | TCTWW2 | EQU | X'40' | MESSAGE OUT |
| | 00000020 | TCTWW3 | EQU | X'20' | ATTENTION |
| | 00000010 | TCTWW4 | EQU | X'10' | INITIAL CONNECTION |
| | 00000008 | TCTWW5 | EQU | X'08' | UNRECOVERABLE ERROR |
| | 00000004 | TCTWW6 | EQU | X'04' | NEG POLLING RESPONSE |
| | 00000002 | TCTWW7 | EQU | X'02' | BUFFER OVERFLOW FLAG |
| | 00000001 | TCTWW8 | EQU | X'01' | REISSUE I/O FOR VSS |
| | 00000028 | TCTWW9 | EQU | X'28' | SOLID IO FAILURE WITH INT |
| | | * | | | REQ |
| 9F 0001F | | TCTWRS | DS | X | RESET BYTE |
| 9F 00020 | | TCTPDA | DS | H | PHYSICAL DEVICE ADDRESS |
| 9F 00022 | | TCTSDA | DS | H | SYMBOLIC DEVICE ADDRESS |
| 9F 00024 | | TCTBUF | DS | F | REAL BUFFER ADDRESS |
| 9F 00028 | | TCTCNT | DS | X | RETRY COUNTER |
| | 00000004 | TCTMAX | EQU | X'04' | MAX COUNT |
| | 00000000 | TCTZER | EQU | X'00' | ZERO COUNT |
| 9F 00029 | | TCTUSE | DS | X | CONTROL BYTE |
| | 00000080 | TCTTSS | EQU | X'80' | TCT IS FOR TSS USE |
| | 9F 00029 | TCTTTY | EQU | TCTUSE | LINE FEED SUPPRESS FLAG |
| | 00000040 | TCTTTYM | EQU | X'40' | LINE FEED SUPPRESS MASK |
| | 00000020 | TCTHLD | EQU | X'20' | TERMINAL HELD; TASK BEING |
| | | * | | | N393 |
| | | * | | | ABENDED (1=HELD), SET BY |
| | | * | | | ABEND   N393 |
| | 00000010 | TCTDED | EQU | X'10' | RETRY ON INTERVENTION |
| | | * | | | REQUIRED |
| | | * | | | FOR DEDICATED LINES |
| | 00000008 | TCTPWRT | EQU | X'08' | PREVIOUS OPERATION WRITE |
| | | * | | | FOR 1050 N383 |
| 9F 0002A | | TCTFL4 | DS | X | FOURTH FLAG BYTE |
| | | * | | | N445.2 |
| | 9F 0002A | TCTCK | EQU | TCTFL4 | CKALOC ISSUED FOR TERMINAL |
| | | * | | | N445.2 |
| | 00000080 | TCTCKM | EQU | X'80' | CKALOC ISSUED MASK |
| | | * | | | N445.2 |
| 9F 0002B | | | DS | X | RESERVED |
| | | * | | | N445.2 |
| 9F 0002C | | TCTTSI | DS | F | TSI POINTER |
| | 00000030 | TCTLGH | EQU | *-TCTLCK | LENGTH OF ENTRY |
| | 9F 00FF0 | | |ORG| | TCTLCK+4080 |
| | 00000FEF | TCTMLG | EQU | *-TCTLCK-1 | LENGTH OF TABLE |
| 9F 00FF0 | | TCTFPV | DS | F | TCT FORWARD POINTER |
| 9F 00FF4 | | TCTBPV | DS | F | TCT BACKWARD POINTER |
| 9F 00FF8 | | TCTABC | DS | H | UNUSED |
| 9F 00FFA | | TCTLOC | DS | X | LOCK BYTE |
| 9F 00FFB | | TCTATS | DS | X | ACTIVE SLOT |
| | 00000055 | TCTMAT | EQU | (TCTMLG+1)/TCTLGH | NUMBER OF ENTRIES |
| 9F 00FFC | | | DS | F | UNUSED |

## Terminal Device Table (CHATDE)

CHATDE is a resident table which contains one entry for each terminal using RTAM. Each entry contains STARTUP/SYSGEN information for one symbolic Terminal Device. Each CHATDE entry occupies 24 bytes of storage.

### CHATDE Storage map

| DEC | HEX | | | | | |
|-----|-----|---|---|---|---|---|
| 0 | 0 | TDEFTD | | | TDELTD | |
| 8 | 8 | TDESDA | TDESTA | TDELCD | TDEDEV | |
| 16 | 10 | TDELOCK | TDESIOCT | TDESTA2 | UNNAMED | TDECNT |

### ORG TDEDEV

| DEC | HEX | | | | TDEDEA | TDEDEB | TDEDEC | TDEDED |
|-----|-----|---|---|---|--------|--------|--------|--------|
| 12 | C | | | | TDEDEA | TDEDEB | TDEDEC | TDEDED |

### Fields in CHATDE -- by displacement

| DEC | HEX | FIELD | DEC | HEX | FIELD | DEC | HEX | FIELD |
|-----|-----|-------|-----|-----|-------|-----|-----|-------|
| 0000 | 0000 | TDEFTD | 0012 | 000C | TDEDEA | 0016 | 0010 | TDELOCK |
| 0004 | 0004 | TDELTD | 0012 | 000C | TDEDEV | 0017 | 0011 | TDESIOCT |
| 0008 | 0008 | TDESDA | 0013 | 000D | TDEDEB | 0018 | 0012 | TDESTA2 |
| 0010 | 000A | TDESTA | 0014 | 000E | TDEDEC | 0020 | 0014 | TDECNT |
| 0011 | 000B | TDELCD | 0015 | 000F | TDEDED | | | |

### Alphabetical list of fields in CHATDE

| FIELD | DEC | HEX | FIELD | DEC | HEX | FIELD | DEC | HEX |
|-------|-----|-----|-------|-----|-----|-------|-----|-----|
| TDECNT | 0020 | 0014 | TDEDEV | 0012 | 000C | TDESDA | 0008 | 0008 |
| TDEDEA | 0012 | 000C | TDEFTD | 0000 | 0000 | TDESIOCT | 0017 | 0011 |
| TDEDEB | 0013 | 000D | TDELCD | 0011 | 000B | TDESTA | 0010 | 000A |
| TDEDEC | 0014 | 000E | TDELOCK | 0016 | 0010 | TDESTA2 | 0018 | 0012 |
| TDEDED | 0015 | 000F | TDELTD | 0004 | 0004 | | | |

### Assembler listing of CHATDE

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|----------|-------------|--------|------|------|---------|
| | A0 00000 | CHATDE | DSECT | | |
| A0 00000 | | TDEFTD | DS | F | FIRST TERMINAL DEVICE POINTER |
| | | * | | | |
| A0 00004 | | TDELTD | DS | F | LAST TERMINAL DEVICE POINTER |
| | | * | | | |
| A0 00008 | | TDESDA | DS | H | SYMBOLIC DEVICE ADDRESS |
| A0 0000A | | TDESTA | DS | X | TERMINAL STATUS BYTE |
| | 00000080 | TDEST1 | EQU | X'80' | INITIAL INTERRUPT |
| | 00000040 | TDEST2 | EQU | X'40' | TERMINAL TYPE |
| | 00000020 | TDEST3 | EQU | X'20' | INITIAL READ OPERATION |
| | 00000010 | TDEST4 | EQU | X'10' | LINE CODE AND DESTENATION |
| | 00000008 | TDEST5 | EQU | X'08' | HIO FOR TIMER ISSUED M3660 |
| | | * | | | |
| | 00000004 | TDEST6 | EQU | X'04' | EXIT TO QUEUE SCANNER |
| | 00000002 | TDEST7 | EQU | X'02' | TERMINAL HELD BY OPERATOR N393 |
| | | * | | | (1=HELD) SET OR RESET BY HOLD N393 |
| | | * | | | AND DROP VIA SETTDE MACRO N393 |
| | | * | | | |
| | 00000001 | TDEST8 | EQU | X'01' | PATHFINDING MASK |
| A0 0000B | | TDELCD | DS | X | LINE CODE |
| | 00000001 | TDELC1 | EQU | X'01' | 1050 PTTC/8 (FOLDED) |
| | 00000002 | TDELC2 | EQU | X'02' | 2741 CORRESPONDENCE |
| | 00000003 | TDELC3 | EQU | X'03' | 2741 PTTC/8 (FOLDED) |
| | 00000004 | TDELC4 | EQU | X'04' | TTY35 ASCII (FOLDED) |

(Listing of CHATDE continued from page 430)

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|---|---|---|---|---|---|
| | 00000005 | TDELC5 | EQU | X'05' | 1052-7 |
| A0 0000C | | TDEDEV | DS | F | DEVICE CODE |
| | A0 0000C | | \|ORG\| | TDEDEV | |
| A0 0000C | | TDEDEA | DS | X | MODEL CODE |
| | 00000001 | TDEMCA | EQU | X'01' | 1050 TERMINAL |
| | 00000002 | TDEMCB | EQU | X'02' | 2741 TERMINAL |
| | 00000003 | TDEMCC | EQU | X'03' | TTY35 TERMINAL |
| | 00000004 | TDEMCD | EQU | X'04' | 1052 MOD-7 TERMINAL |
| A0 0000D | | TDEDEB | DS | X | DEVICE CLASS |
| | 00000001 | TDEDCA | EQU | X'01' | DIAL LINE |
| | 00000002 | TDEDCB | EQU | X'02' | DEDICATED LINE |
| | 00000004 | TDEDCD | EQU | X'04' | AUTOMATIC CALL FEATURE |
| | 00000008 | TDEBUR | EQU | X'08' | DEVICE CLASS UNIT RECORD |
| | 00000020 | TDEBDA | EQU | X'20' | DEVICE CLASS DIRECT ACCESS |
| | 00000080 | TDEBMT | EQU | X'80' | DEVICE CLASS MAGNETIC TAPE |
| A0 0000E | | TDEDEC | DS | X | UNIT TYPE |
| | 00000010 | TDEUT1 | EQU | X'10' | IBM TERMINAL CONTROL TYPE 1 |
| | 00000020 | TDEUT2 | EQU | X'20' | IBM TERMINAL CONTROL TYPE 2 |
| | 00000030 | TDEUT3 | EQU | X'30' | TELEGRAPH CONTROL TYPE 1 |
| | 00000040 | TDEUT4 | EQU | X'40' | TELEGRAPH CONTROL TYPE 2 |
| | 00000080 | TDEUT5 | EQU | X'80' | WORLD TRADE TERMINAL |
| | | * | | | CONTROL |
| | 00000001 | TDEUTA | EQU | X'01' | 2702 TRANSMISSION CONTROL |
| | 00000002 | TDEUTB | EQU | X'02' | 2701 ON MULTIPLEXOR CHANNEL |
| | 00000003 | TDEUTC | EQU | X'03' | MULTIPLEXOR CHANNEL MASK |
| | 00000004 | TDEUTD | EQU | X'04' | SELECTOR CHANNEL |
| | 00000005 | TDEUTE | EQU | X'05' | 2701 ON SELECTOR CHANNEL |
| | 00000006 | TDEUTF | EQU | X'06' | 2703 TRANSMISSION CONTROL |
| | 00000001 | TDECRD | EQU | X'01' | 2540 CARD READER |
| | 00000002 | TDECPN | EQU | X'02' | 2540 CARD PUNCH |
| | 00000008 | TDECPT | EQU | X'08' | 1403 PRINTER |
| | 00000010 | TDEPPT | EQU | X'10' | 2671 PPT READER |
| | 00000001 | TDEDA11 | EQU | X'01' | 2311 D/A |
| | 00000002 | TDEDA01 | EQU | X'02' | 2301 D/A |
| | 00000003 | TDEDA21 | EQU | X'03' | 2321 D/A |
| | 00000008 | TDEDA14 | EQU | X'08' | 2314 D/A |
| | 00000001 | TDETAPE | EQU | X'01' | 2400 SERIES |
| A0 0000F | | TDEDED | DS | X | OPTIONAL FEATURES |
| | 00000010 | TDEOFA | EQU | X'10' | IBM LINE ADAPTER TYPE 1 |
| | 00000020 | TDEOFB | EQU | X'20' | IBM LINE ADAPTER TYPE 2 |
| | 00000030 | TDEOFC | EQU | X'30' | DATA SET LINE ADAPTER |
| | 00000040 | TDEOFD | EQU | X'40' | AUTOMATIC CALL ADAPTER |
| | 00000050 | TDEOFE | EQU | X'50' | TELEGRAPH LINE ADAPTER |
| | 00000000 | TDEOF1 | EQU | X'00' | SAD ZERO |
| | 00000001 | TDEOF2 | EQU | X'01' | SAD ONE |
| | 00000002 | TDEOF3 | EQU | X'02' | SAD TWO |
| | 00000003 | TDEOF4 | EQU | X'03' | SAD THREE |
| | 00000040 | TDEPFR | EQU | X'40' | PUNCH FEED READ |
| | 00000080 | TDEOCI | EQU | X'80' | CARD IMAGE |
| | 00000080 | TDEDUC | EQU | X'80' | UNIVERSAL CHARACTER SET |
| | 00000080 | TDESCN | EQU | X'80' | SCAN |
| | 00000040 | TDETRV | EQU | X'40' | TRACK OVERFLOW |
| | 000000B0 | TDESTO | EQU | X'B0' | SCAN AND TRACK OVERFLOW |
| | 000000E0 | TDETPW | EQU | X'E0' | 7-TRACK WITH DATA |
| | | * | | | CONVERSION |
| | 000000A0 | TDETPN | EQU | X'A0' | 7-TRACK WITHOUT DATA |
| | | * | | | CONVERSION |
| | 000000C0 | TDETR9 | EQU | X'C0' | 9-TRACK TAPE |
| | 00000080 | TDETP9 | EQU | X'80' | 9-TRACK TAPE |
| A0 00010 | | TDELOCK | DS | X | INDIVIDUAL TERMINAL LOCK |
| | | * | | | M3660 |
| A0 00011 | | TDESIOCT | DS | X | ENABLE/PREPARE COUNT |
| | | * | | | M3302 |
| | 00000003 | TDESIOCM | EQU | X'03' | MAX ENABLE/PREPARE |
| | | * | | | M3302 |
| A0 00012 | | TDESTA2 | DS | X | TDE FLAG BYTE TWO |
| | A0 00012 | TDEATM | EQU | TDESTA2 | ATTENTION TIMER FLAG |
| | 00000080 | TDEATMM | EQU | X'80' | 1=ATTENTION TIMER RUNNING |

(Listing of CHATDE continued from Page 431)

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|---|---|---|---|---|---|
| AO 00012 | | TDEFRT | EQU | TDESTA2 | FREEQ FLAG |
| | 00000040 | TDEFRTM | EQU | X'40' | 1=FREEQ DURING ATTN. TIMEOUT |
| | | * | | | M4335 |
| AO 00013 | | | DS | X | RESERVED |
| AO 00014 | | TDECNT | DS | F | ERROR COUNTS |

```
*         BITS  USE            INDEX VALUE                                *
*         0-5   INITIAL ERR INDEX    0                                    *
*         6-7   LOST DATA            2                                    *
*         8-9   DATA CHECK           4                                    *
*         10-11 INTERVENTION REQD    6                                    *
*         12-13 TIME OUT             8                                    *
*         14-15 OVERRUN              A                                    *
*         16-17 BUS-OUT CHECK        C                                    *
*         18-19 UNIT EX. DATA OUT    E                                    *
*         20-21 UNUSED               10                                   *
          00000010  TDELGH  EQU   *-TDESDA  LENGTH OF TDE ENTRY
```

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## Task Data Definition Table (CHATDT)

The Task Data Definition Table (TDT) describes the characteristics and current
status of all the data sets associated with a task.

The TDT, residing in a protected area of a task's virtual storage, is located by a
pointer at a fixed address in segment 0, page 0. The TDT consists of a 16 byte head-
er and a variable number of job file control block (JFCB) entries.

Sixteen bytes of virtual storage are allocated to the TDT header while each JFCB
occupies 240 bytes of virtual storage, both aligned on doubleword boundaries. In
addition, a 32 byte appendage to the volume field of the JFCB is required for more
than three volume serials. This appendage is also aligned on doubleword boundaries.

### CHATDT Storage map

| DEC | HEX | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 0 | TDTJ10 | | | | TDTF10 | | | |
| 8 | 8 | TDTPL1 | | | | TDTTT1 | | | |
| 16 | 10 | TDTDDN | | | | | | | |
| 24 | 18 | TDTDS1 | | | | | | | |
| 56 | 38 | | | | TDTDS2 | | | | |
| 96 | 60 | | | | | | | | TDTDSV |
| 104 | 68 | TDTDSR | | | | | | | |
| 112 | 70 | TDTDSM | | | | | | | |
| 120 | 78 | TDTDEV | | | | TDTUAF | | | |
| 128 | 80 | TDTSP0 | TDTSP1 | | TDTSP2 | | TDTSP3 | | |
| 136 | 88 | TDTARL | | | TDTVNO | | | TDTVSQ | |
| 144 | 90 | TDTCDT | | | TDTEDT | | | TDTOPN | |
| 152 | 98 | TDTVPY | TDTREF | TDTFSQ | | TDTCFL | TDTAQL | TDTSHC | TDTLAB |
| 160 | A0 | TDTDEB | | | TDTDSP | | | TDTPAR | TDTDCI |
| 168 | A8 | TDTPVS | | | TDTLLK | | | | |
| 176 | B0 | TDTTLK | | | TDTCNC | | | | |
| 184 | B8 | TDTCC1 | | | TDTBLK | | | TDTSDA | |
| 192 | C0 | TDTDSO | | TDTMAC | | TDTBFL | | TDTDVD | TDTBFN |
| 200 | C8 | TDTBTK | TDTNCP | TDTRFM | TDTOCD | TDTLRL | | | |
| 208 | D0 | TDTBSZ | | TDTOP1 | TDTOP2 | TDTERO | TDTPAD | TDTRKP | |
| 216 | D8 | TDTIMK | | | UNNAMED | | | TDTRES | |

```
DEC   HEX
224   E0 | TDTVF1        |              TDTID1                    |
232   E8 |
         |                       TDTID2                          |
248   F8 |         TDTAPN          |          TDTAPP               |
256   100| TDTAV1       |              TDTAI1                     |
264   108|
         |                       TDTAI2                          |
280   118|         TDTAP1          |          TDTAP2              |
```

ORG   TDTDEV

```
120    78| TDTMDL  |TDTDVT  |TDTUNT  |TDTFEA  |
```

ORG   TDTUAF

```
124    7C                              |              TDTDSC              |
```

ORG   TDTARL

```
136    88|         TDTDUP             |
```

ORG   TDTDSP

```
164    A4                     | TDTDP1 |TDTDS  |
```

ORG   TDTVF1+1

```
225    E1            |TDTLFN |
```

ORG   TDTID1

```
226    E2         |     TDTSMA       |          TDTSDI            |
```

Fields in CHATDT -- by displacement

| DEC | HEX | FIELD | DEC | HEX | FIELD | DEC | HEX | FIELD | |
|-----|-----|-------|-----|-----|-------|-----|-----|-------|---|
| 0000 | 0000 | TDTJ10 | 0123 | 007B | TDTFEA | 0152 | 0098 | TDTVPY | |
| 0004 | 0004 | TDTF10 | 0124 | 007C | TDTDSC | 0153 | 0099 | TDTREF | |
| 0008 | 0008 | TDTPL1 | 0124 | 007C | TDTUAF | 0154 | 009A | TDTFSQ | |
| 0012 | 000C | TDTTT1 | 0128 | 0080 | TDTSP0 | 0156 | 009C | TDTCFL | |
| 0016 | 0010 | TDTDDN | 0129 | 0081 | TDTSP1 | 0157 | 009D | TDTARO | (EQU) |
| 0024 | 0018 | TDTDS1 | 0132 | 0084 | TDTSP2 | 0157 | 009D | TDTARW | (EQU) |
| 0059 | 003B | TDTDS2 | 0133 | 0085 | TDTSP3 | 0157 | 009D | TDTAU | (EQU) |
| 0103 | 0067 | TDTDSV | 0136 | 0088 | TDTDUP | 0157 | 009D | TDTDAC | (EQU) |
| 0104 | 0068 | TDTDSR | 0136 | 0088 | TDTARL | 0157 | 009D | TDTDAL | (EQU) |
| 0112 | 0070 | TDTDSM | 0140 | 008C | TDTVNO | 0157 | 009D | TDTNDF | (EQU) |
| 0120 | 0078 | TDTMDL | 0142 | 008E | TDTVSQ | 0157 | 009D | TDTTDS | (EQU) |
| 0120 | 0078 | TDTDEV | 0144 | 0090 | TDTCDT | 0157 | 009D | TDTPDS | (EQU) |
| 0121 | 0079 | TDTDVT | 0147 | 0093 | TDTEDT | 0157 | 009D | TDTAQL | |
| 0122 | 007A | TDTUNT | 0150 | 0096 | TDTOPN | 0158 | 009E | TDTSHC | |

| DEC | HEX | FIELD | | DEC | HEX | FIELD | | DEC | HEX | FIELD | |
|------|------|--------|-------|------|------|--------|-------|------|------|--------|-------|
| 0159 | 009F | TDTRPS2 | (EQU) | 0192 | 00C0 | TDTDCB | | 0224 | 00E0 | TDTVF1 | |
| 0159 | 009F | TDTRPS1 | (EQU) | 0194 | 00C2 | TDTMAC | | 0224 | 00E0 | TDTVOL | |
| 0159 | 009F | TDTRPS | (EQU) | 0196 | 00C4 | TDTBFL | | 0225 | 00E1 | TDTLFN | |
| 0159 | 009F | TDTAUL | (EQU) | 0198 | 00C6 | TDTDVD | | 0225 | 00E1 | TDTV9 | (EQU) |
| 0159 | 009F | TDTAL | (EQU) | 0199 | 00C7 | TDTBFN | | 0225 | 00E1 | TDTV8 | (EQU) |
| 0159 | 009F | TDTSU | (EQU) | 0200 | 00C8 | TDTBTK | | 0226 | 00E2 | TDTSMA | |
| 0159 | 009F | TDTSL | (EQU) | 0201 | 00C9 | TDTNCP | | 0226 | 00E2 | TDTID1 | |
| 0159 | 009F | TDTNL | (EQU) | 0202 | 00CA | TDTRFM | | 0228 | 00E4 | TDTSDI | |
| 0159 | 009F | TDTLAB | | 0203 | 00CB | TDTOCD | | 0232 | 00E8 | TDTID2 | |
| 0160 | 00A0 | TDTDEB | | 0204 | 00CC | TDTLRL | | 0248 | 00F8 | TDTAPN | |
| 0164 | 00A4 | TDTDP1 | | 0208 | 00D0 | TDTBSZ | | 0252 | 00FC | TDTAPP | |
| 0164 | 00A4 | TDTDSP | | 0210 | 00D2 | TDTOP1 | | 0256 | 0100 | TDTA7 | (EQU) |
| 0165 | 00A5 | TDTDS | | 0211 | 00D3 | TDTOP2 | | 0256 | 0100 | TDTA6 | (EQU) |
| 0165 | 00A5 | TDTRCT | (EQU) | 0212 | 00D4 | TDTERO | | 0256 | 0100 | TDTA5 | (EQU) |
| 0166 | 00A6 | TDTSDE | (EQU) | 0213 | 00D5 | TDTBOF | (EQU) | 0256 | 0100 | TDTA4 | (EQU) |
| 0166 | 00A6 | TDTVRO | (EQU) | 0213 | 00D5 | TDTPAD | | 0256 | 0100 | TDTA3 | (EQU) |
| 0166 | 00A6 | TDTPAR | | 0214 | 00D6 | TDTRKP | | 0256 | 0100 | TDTA2 | (EQU) |
| 0167 | 00A7 | TDTDCS | (EQU) | 0216 | 00D8 | TDTVTA | (EQU) | 0256 | 0100 | TDTA1 | (EQU) |
| 0167 | 00A7 | TDTNDC | (EQU) | 0216 | 00D8 | TDTIMK | | 0256 | 0100 | TDTA0 | (EQU) |
| 0167 | 00A7 | TDTDCI | | 0222 | 00DE | TDTRES | | 0256 | 0100 | TDTAV1 | |
| 0168 | 00A8 | TDTPVS | | 0224 | 00E0 | TDTV7 | (EQU) | 0257 | 0101 | TDTA9 | (EQU) |
| 0172 | 00AC | TDTLLK | | 0224 | 00E0 | TDTV6 | (EQU) | 0257 | 0101 | TDTA8 | (EQU) |
| 0176 | 00B0 | TDTTLK | | 0224 | 00E0 | TDTV5 | (EQU) | 0258 | 0102 | TDTAI1 | |
| 0180 | 00B4 | TDTCNC | | 0224 | 00E0 | TDTV4 | (EQU) | 0260 | 0104 | TDTAD1 | (EQU) |
| 0184 | 00B8 | TDTCC1 | | 0224 | 00E0 | TDTV3 | (EQU) | 0264 | 0108 | TDTAI2 | |
| 0188 | 00BC | TDTBLK | | 0224 | 00E0 | TDTV2 | (EQU) | 0280 | 0118 | TDTAP1 | |
| 0190 | 00BE | TDTSDA | | 0224 | 00E0 | TDTV1 | (EQU) | 0284 | 011C | TDTAP2 | |
| 0192 | 00C0 | TDTDSO | | 0224 | 00E0 | TDTV0 | (EQU) | | | | |

## Alphabetical list of fields in CHATDT

| FIELD | DEC | HEX | | FIELD | DEC | HEX | | FIELD | DEC | HEX | |
|--------|------|------|-------|--------|------|------|-------|--------|------|------|-------|
| TDTAD1 | 0260 | 0104 | (EQU) | TDTDCB | 0192 | 00C0 | | TDTNL | 0159 | 009F | (EQU) |
| TDTAI1 | 0258 | 0102 | | TDTDCI | 0167 | 00A7 | | TDTOCD | 0203 | 00CB | |
| TDTAI2 | 0264 | 0108 | | TDTDCS | 0167 | 00A7 | (EQU) | TDTOPN | 0150 | 0096 | |
| TDTAL | 0159 | 009F | (EQU) | TDTDDN | 0016 | 0010 | | TDTOP1 | 0210 | 00D2 | |
| TDTAPN | 0248 | 00F8 | | TDTDEB | 0160 | 00A0 | | TDTOP2 | 0211 | 00D3 | |
| TDTAPP | 0252 | 00FC | | TDTDEV | 0120 | 0078 | | TDTPAD | 0213 | 00D5 | |
| TDTAP1 | 0280 | 0118 | | TDTDP1 | 0164 | 00A4 | | TDTPAR | 0166 | 00A6 | |
| TDTAP2 | 0284 | 011C | | TDTDS | 0165 | 00A5 | | TDTPDS | 0157 | 009D | (EQU) |
| TDTAQL | 0157 | 009D | | TDTDSC | 0124 | 007C | | TDTPL1 | 0008 | 0008 | |
| TDTARL | 0136 | 0088 | | TDTDSM | 0112 | 0070 | | TDTPVS | 0168 | 00A8 | |
| TDTARO | 0157 | 009D | (EQU) | TDTDSO | 0192 | 00C0 | | TDTRCT | 0165 | 00A5 | (EQU) |
| TDTARW | 0157 | 009D | (EQU) | TDTDSP | 0164 | 00A4 | | TDTREF | 0153 | 0099 | |
| TDTAU | 0157 | 009D | (EQU) | TDTDSR | 0104 | 0068 | | TDTRES | 0222 | 00DE | |
| TDTAUL | 0159 | 009F | (EQU) | TDTDSV | 0103 | 0067 | | TDTRFM | 0202 | 00CA | |
| TDTAV1 | 0256 | 0100 | | TDTDS1 | 0024 | 0018 | | TDTRKP | 0214 | 00D6 | |
| TDTA0 | 0256 | 0100 | (EQU) | TDTDS2 | 0059 | 003B | | TDTRPS | 0159 | 009F | (EQU) |
| TDTA1 | 0256 | 0100 | (EQU) | TDTDUP | 0136 | 0088 | | TDTRPS1 | 0159 | 009F | (EQU) |
| TDTA2 | 0256 | 0100 | (EQU) | TDTDVD | 0198 | 00C6 | | TDTRPS2 | 0159 | 009F | (EQU) |
| TDTA3 | 0256 | 0100 | (EQU) | TDTDVT | 0121 | 0079 | | TDTSDA | 0190 | 00BE | |
| TDTA4 | 0256 | 0100 | (EQU) | TDTEDT | 0147 | 0093 | | TDTSDE | 0166 | 00A6 | (EQU) |
| TDTA5 | 0256 | 0100 | (EQU) | TDTERO | 0212 | 00D4 | | TDTSDI | 0228 | 00E4 | |
| TDTA6 | 0256 | 0100 | (EQU) | TDTFEA | 0123 | 007B | | TDTSHC | 0158 | 009E | |
| TDTA7 | 0256 | 0100 | (EQU) | TDTFSQ | 0154 | 009A | | TDTSL | 0159 | 009F | (EQU) |
| TDTA8 | 0257 | 0101 | (EQU) | TDTF10 | 0004 | 0004 | | TDTSMA | 0226 | 00E2 | |
| TDTA9 | 0257 | 0101 | (EQU) | TDTID1 | 0226 | 00E2 | | TDTSP0 | 0128 | 0080 | |
| TDTBFL | 0196 | 00C4 | | TDTID2 | 0232 | 00E8 | | TDTSP1 | 0129 | 0081 | |
| TDTBFN | 0199 | 00C7 | | TDTIMK | 0216 | 00D8 | | TDTSP2 | 0132 | 0084 | |
| TDTBLK | 0188 | 00BC | | TDTJ10 | 0000 | 0000 | | TDTSP3 | 0133 | 0085 | |
| TDTBOF | 0213 | 00D5 | (EQU) | TDTLAB | 0159 | 009F | | TDTSU | 0159 | 009F | (EQU) |
| TDTBSZ | 0208 | 00D0 | | TDTLFN | 0225 | 00E1 | | TDTTDS | 0157 | 009D | (EQU) |
| TDTBTK | 0200 | 00C8 | | TDTLLK | 0172 | 00AC | | TDTTLK | 0176 | 00B0 | |
| TDTCC1 | 0184 | 00B8 | | TDTLRL | 0204 | 00CC | | TDTTT1 | 0012 | 000C | |
| TDTCDT | 0144 | 0090 | | TDTMAC | 0194 | 00C2 | | TDTUAF | 0124 | 007C | |
| TDTCFL | 0156 | 009C | | TDTMDL | 0120 | 0078 | | TDTUNT | 0122 | 007A | |
| TDTCNC | 0180 | 00B4 | | TDTNCP | 0201 | 00C9 | | TDTVF1 | 0224 | 00E0 | |
| TDTDAC | 0157 | 009D | (EQU) | TDTNDC | 0167 | 00A7 | (EQU) | TDTVNO | 0140 | 008C | |
| TDTDAL | 0157 | 009D | (EQU) | TDTNDF | 0157 | 009D | (EQU) | TDTVOL | 0224 | 00E0 | |

| FIELD | DEC | HEX | | FIELD | DEC | HEX | | FIELD | DEC | HEX | |
|-------|-----|-----|--|-------|-----|-----|--|-------|-----|-----|--|
| TDTVPY | 0152 | 0098 | | TDTV1 | 0224 | 00E0 | (EQU) | TDTV6 | 0224 | 00E0 | (EQU) |
| TDTVRO | 0166 | 00A6 | (EQU) | TDTV2 | 0224 | 00E0 | (EQU) | TDTV7 | 0224 | 00E0 | (EQU) |
| TDTVSQ | 0142 | 008E | | TDTV3 | 0224 | 00E0 | (EQU) | TDTV8 | 0225 | 00E1 | (EQU) |
| TDTVTA | 0216 | 00D8 | (EQU) | TDTV4 | 0224 | 00E0 | (EQU) | TDTV9 | 0225 | 00E1 | (EQU) |
| TDTV0 | 0224 | 00E0 | (EQU) | TDTV5 | 0224 | 00E0 | (EQU) | | | | |

## Assembler listing of CHATDT

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|----------|-------------|--------|------|------|---------|
| | A2 00000 | CHATDT | DSECT | | TASK DATA DEFINITION TABLE |
| | | * TO ADDRESS HEADER ... | | | SET USING TO CHATDT |
| | | * TO ADDRESS A JFCB ... | | | SET USING TO TDTDDN |
| A2 00000 | | | DS | 0D | ALIGN TO DOUBLEWORD |
| | | * | | | BOUNDARY |
| A2 00000 | | TDTJ10 | DS | F | POINTER TO LAST ENTERED |
| | | * | | | JFCB (BINARY) |
| A2 00004 | | TDTF10 | DS | F | POINTER TO NEXT FREE MEMORY |
| | | * | | | AREA (BINARY) |
| A2 00008 | | TDTPL1 | DS | F | POINTER TO LAST ENTERED |
| | | * | | | JFCB IN PROG. LIBRARY |
| | | * | | | LIST (BINARY) |
| A2 0000C | | TDTTT1 | DS | F | POINTER TO LAST ENTERED |
| | | * | | | JFCB IN TEMP. TAB (BINARY) |
| A2 00010 | | TDTDDN | DS | CL8 | DDNAME (EBCDIC) |
| A2 00018 | | TDTDS1 | DS | CL35 | DSNAME IN DD OR CATALOG |
| A2 0003B | | TDTDS2 | DS | CL44 | DSNAME IN DSCB OR HEADER |
| | | * | | | LABEL |
| | | * | | | (USERID.DSNAME) (EBCDIC) |
| A2 00067 | | TDTDSV | DS | XL1 | VAM OR SAM INDICATOR |
| | | * | | | 01=SAM    04=VAMI    07=RX IOREQ |
| | | * | | | 02=TAM    05=VAMS |
| | | * | | | 06=PARTITIONED |
| A2 00068 | | TDTDSR | DS | CL8 | ABSOLUTE GENERATION NUMBER |
| | | * | | | (EBCDIC) |
| A2 00070 | | TDTDSM | DS | CL8 | MEMBER NAME,PARTITIONED DS |
| | | * | | | (EBCDIC) |
| A2 00078 | | TDTDEV | DS | F | DEVICE CODE |
| | A2 00078 | | |ORG| | TDTDEV | REDEFINE DEVICE FIELD |
| | | * | | | I6453 |
| A2 00078 | | TDTMDL | DS | X | DEVICE MODEL |
| | | * | | | I6453 |
| | 00000000 | TDTMD1 | EQU | 0 | DEVICE OTHER TAHN A |
| | | * | | | TERMINAL    I6453 |
| A2 00079 | | TDTDVT | DS | X | TYPE OF DEVICE |
| | | * | | | I6453 |
| | 00000080 | TDTDTP | EQU | X'80' | MAGNETIC TAPE |
| | | * | | | I6453 |
| | 00000020 | TDTDDA | EQU | X'20' | DIRECT ACCESS |
| | | * | | | I6453 |
| A2 0007A | | TDTUNT | DS | X | UNIT TYPE |
| | | * | | | I6453 |
| A2 0007B | | TDTFEA | DS | X | OPTIONAL FEATURES |
| | | * | | | I6453 |
| | 00000020 | TDTO7 | EQU | X'20' | 7 TRACK COMPATIBILITY |
| | | * | | | I6453 |
| A2 0007C | | TDTUAF | DS | F | UNIT AFFINITY FLAG,POINTER |
| | | * | | | TO DDNAME(BINARY),0 IF |
| | | * | | | NO UNIT AFFINITY |
| | A2 0007C | | |ORG| | TDTUAF | |
| A2 0007C | | TDTDSC | DS | F | POINTER TO FORMAT E DSCB |
| | | * | | | BITS 0-3 = DSCB NUMBER |
| | | * | | | BITS 4-15 = REL VOL. NO. |
| | | * | | | BITS 16-31 = REL PG. NO. |
| A2 00080 | | TDTSP0 | DS | XL1 | SPACE ALLOCATION TYPE-HEX |
| | | * | | | CODES |
| | | * | | | 00=PAGE          02=TRACK |
| | | * | | | 01=CYLINDER      03=RECORD |
| A2 00081 | | TDTSP1 | DS | XL3 | PRIMARY SPACE ALLOCATION |

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|---|---|---|---|---|---|
| A2 00084 | | TDTSP2 | DS | XL1 | SPACE RELEASE FLAG  01= NO |
| | | * | | | RELEASE |
| A2 00085 | | TDTSP3 | DS | XL3 | SECONDARY SPACE ALLOCATION |
| A2 00088 | | TDTARL | DS | F | AVERAGE RECORD LENGTH |
| | A2 00088 | | |ORG| | TDTARL | |
| A2 00088 | | TDTDUP | DS | F | POINTER TO JFCB OF OTHER |
| | | * | | | COPY OF DUPLEXED DATA SET. |
| | | * | | | IF DATA SET IS NOT DUPLEXED, TDTDUP = |
| | | * | | | ALL ZEROES. |
| A2 0008C | | TDTVNO | DS | H | COUNT OF NUMBER OF VOLUMES |
| | | * | | | SPECIFIED |
| A2 0008E | | TDTVSQ | DS | H | VOLUME SEQUENCE NUMBER |
| A2 00090 | | TDTCDT | DS | XL3 | DS CREATION DATE (YDD) |
| | | * | | | Y=YEAR (0-99),DD=DAY (1-366) |
| | | * | | | DISCONTINUOUS BINARY |
| A2 00093 | | TDTEDT | DS | XL3 | DS EXPIRATION DATE(YDD) |
| | | * | | | DISCONTINUOUS BINARY |
| A2 00096 | | TDTOPN | DS | H | NUMBER OF DCBS OPEN FOR |
| | | * | | | THIS DS |
| A2 00098 | | TDTVPY | DS | XL1 | PRIVILEGE FLAG 1=PRIVILEGED |
| | | * | | | ACCESS |
| A2 00099 | | TDTREF | DS | XL1 | REFERENCE FLAG 1=DS OPENED |
| A2 0009A | | TDTFSQ | DS | H | FILE SEQUENCE NUMBER (TAPE |
| | | * | | | ONLY) BINARY |
| A2 0009C | | TDTCFL | DS | XL1 | CATALOG FLAG 1=CATALOGED DS |
| A2 0009D | | TDTAQL | DS | XL1 | ACCESS QUALIFIER |
| | | * | | | 00=UNLIMITED |
| | | * | | | 01=READ/WRITE |
| | | * | | | 02=READ ONLY |
| | A2 0009D | TDTPDS | EQU | TDTAQL | PERMANENT DATA SET FLAG |
| | 00000000 | TDTPDSM | EQU | X'00' | PERMANENT DATA SET MASK |
| | A2 0009D | TDTTDS | EQU | TDTAQL | TEMPORARY DATA SET FLAG |
| | 00000080 | TDTTDSM | EQU | X'80' | TEMPORARY DATA SET MASK |
| | A2 0009D | TDTNDF | EQU | TDTAQL | NO DELETION FLAG |
| | 00000000 | TDTNDFM | EQU | X'00' | NO DELETION MASK |
| | A2 0009D | TDTDAL | EQU | TDTAQL | DELETE AT LOGOFF FLAG |
| | 00000004 | TDTDALM | EQU | X'04' | DELETE AT LOGOFF MASK |
| | A2 0009D | TDTDAC | EQU | TDTAQL | DELETE AT CLOSE FLAG |
| | 00000008 | TDTDACM | EQU | X'08' | DELETE AT CLOSE MASK |
| | A2 0009D | TDTAU | EQU | TDTAQL | ACCESS-UNLIMITED FLAG |
| | 00000000 | TDTAUM | EQU | X'00' | ACCESS-UNLIMITED MASK |
| | A2 0009D | TDTARW | EQU | TDTAQL | ACCESS-READ/WRITE FLAG |
| | 00000001 | TDTARWM | EQU | X'01' | ACCESS-READ/WRITE MASK |
| | A2 0009D | TDTARO | EQU | TDTAQL | ACCESS-READ ONLY FLAG |
| | 00000002 | TDTAROM | EQU | X'02' | ACCESS-READ ONLY MASK |
| A2 0009E | | TDTSHC | DS | XL1 | SHARING FLAG(CATALOGED DS) |
| | | * | | | HEX-00=PRIVATE,01=SHARED |
| A2 0009F | | TDTLAB | DS | XL1 | LABEL TYPE |
| | A2 0009F | TDTNL | EQU | TDTLAB | NO LABELS(TAPE ONLY) FLAG |
| | 00000001 | TDTNLM | EQU | X'01' | NO LABELS(TAPE ONLY) MASK |
| | A2 0009F | TDTSL | EQU | TDTLAB | STANDARD LABELS       FLAG |
| | 00000002 | TDTSLM | EQU | X'02' | STANDARD LABELS       MASK |
| | A2 0009F | TDTSU | EQU | TDTLAB | STANDARD & USER LABELS FLAG |
| | 00000004 | TDTSUM | EQU | X'04' | STANDARD & USER LABELS MASK |
| | A2 0009F | TDTAL | EQU | TDTLAB | ASCII STANDARD LABEL FLAG |
| | 00000012 | TDTALM | EQU | X'12' | ASCII STANDARD LABEL MASK |
| | A2 0009F | TDTAUL | EQU | TDTLAB | ASCII STANDARD & USER LABEL |
| | | * | | | FLAG |
| | 00000014 | TDTAULM | EQU | X'14' | ASCII STANDARD & USER LABEL |
| | | * | | | MASK |
| | A2 0009F | TDTRPS | EQU | TDTLAB | RPS INPUT DATA SET FLAG |
| | 00000080 | TDTRPSM | EQU | X'80' | RPS INPUT DATA SET MASK |
| | A2 0009F | TDTRPS1 | EQU | TDTLAB | RPS IDS CHANGE DSCB FLAG |
| | 00000040 | TDTRPSD | EQU | X'40' | RPS IDS CHANGE DSCB MASK |
| | A2 0009F | TDTRPS2 | EQU | TDTLAB | RPS IDS VOL TABLE IN JFCB |
| | | * | | | FLAG |
| | 00000020 | TDTRPSV | EQU | X'20' | RPS IDS VOL TABLE IN JFCB |
| | | * | | | MASK |

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|---|---|---|---|---|---|
| A2 000A0 | | TDTDEB | DS | F | RESTABLE-VAM-OR DEB-SAM- |
| | | * | | | POINTER |
| A2 000A4 | | TDTDSP | DS | H | DISPOSITION |
| | A2 000A4 | |ORG| | | TDTDSP | |
| A2 000A4 | | TDTDP1 | DS | XL1 | DISPOSITION FLAG 1 |
| | 00000000 | TDTDP1N | EQU | X'00' | DISPOSITION = NEW |
| | 00000001 | TDTDP1L | EQU | X'01' | DISPOSITION = OLD |
| | 00000002 | TDTDP1M | EQU | X'02' | DISPOSITION = MODIFY |
| A2 000A5 | | TDTDS | DS | XL1 | DISPOSITION FLAG 2 |
| | A2 000A5 | TDTRCT | EQU | TDTDS | RECATALOG DATA SET FLAG |
| | 00000001 | TDTRCTM | EQU | X'01' | RECATALOG DATA SET MASK |
| A2 000A6 | | TDTPAR | DS | XL1 | TAPE PARITY INDICATOR |
| | A2 000A6 | TDTVRO | EQU | TDTPAR | VAM READ-ONLY ACCESS |
| | 00000080 | TDTVROM | EQU | X'80' | READ-ONLY ACCESS MASK |
| | A2 000A6 | TDTSDE | EQU | TDTPAR | SDST ENTRY UPDATED/CREATED |
| | | * | | | FLG I6536 |
| | 00000001 | TDTSDEM | EQU | X'01' | SDST ENTRY UPDATED/CREATED |
| | | * | | | MSK I6536 |
| A2 000A7 | | TDTDCI | DS | XL1 | DUPLEX COPY INDICATOR |
| | A2 000A7 | TDTNDC | EQU | TDTDCI | DS IS NOT DUPLEXED OR, |
| | 00000000 | TDTNDCM | EQU | X'00' | DS IS THE PRIMARY COPY |
| | A2 000A7 | TDTDCS | EQU | TDTDCI | DATA SET IS DUPLEXED, |
| | 00000001 | TDTDCSM | EQU | X'01' | AND IS THE SECONDARY COPY |
| A2 000A8 | | TDTPVS | DS | F | PREVIOUS JFCB ADDRESS |
| A2 000AC | | TDTLLK | DS | F | LIBRARY LINK |
| A2 000B0 | | TDTTLK | DS | F | TEMPORARY TABULATION LINK |
| | | * | | | (BINARY) |
| A2 000B4 | | TDTCNC | DS | F | CONCATENATION LINK, FORWARD |
| A2 000B8 | | TDTCC1 | DS | F | CONCATENATION LINK, |
| | | * | | | BACKWARD |
| A2 000BC | | TDTBLK | DS | H | COUNT OF MODULES LOADED |
| | | * | | | FROM LIBRARY |
| A2 000BE | | TDTSDA | DS | H | SYMBOLIC DEVICE ADDRESS |
| A2 000C0 | | TDTDCB | DS | 0XL32 | DATA CONTROL BLOCK |
| A2 000C0 | | TDTDSO | DS | XL2 | DSORG |
| A2 000C2 | | TDTMAC | DS | XL2 | MACRF |
| A2 000C4 | | TDTBFL | DS | XL2 | BUFL |
| A2 000C6 | | TDTDVD | DS | XL1 | DEVD |
| A2 000C7 | | TDTBFN | DS | XL1 | BUFNO |
| A2 000C8 | | TDTBTK | DS | XL1 | BFTEK |
| A2 000C9 | | TDTNCP | DS | XL1 | NCP |
| A2 000CA | | TDTRFM | DS | XL1 | RECFM |
| | 000000C4 | TDTRFMD | EQU | C'D' | RECORD FORMAT=VARIABLE |
| | | * | | | (ASCII) |
| | 000000C6 | TDTRFMF | EQU | C'F' | RECORD FORMAT = FIXED |
| | 000000E5 | TDTRFMV | EQU | C'V' | RECORD FORMAT = VARIABLE |
| | 000000E4 | TDTRFMU | EQU | C'U' | RECORD FORMAT = UNDEFINED |
| A2 000CB | | TDTOCD | DS | XL1 | OPTCD |
| | 00000020 | TDTOCDA | EQU | X'20' | ASCII TAPE REQUEST |
| A2 000CC | | TDTLRL | DS | F | LRECL |
| A2 000D0 | | TDTBSZ | DS | XL2 | BLKSIZE |
| A2 000D2 | | TDTOP1 | DS | XL1 | KEYLEN,PRTSP,STACK,DEN,CODE |
| A2 000D3 | | TDTOP2 | DS | XL1 | MODE,TRTCH |
| A2 000D4 | | TDTERO | DS | XL1 | EROPT |
| A2 000D5 | | TDTPAD | DS | XL1 | PAD |
| | A2 000D5 | TDTBOF | EQU | TDTPAD | BUFFER OFFSET |
| A2 000D6 | | TDTRKP | DS | XL2 | RKP |
| A2 000D8 | | TDTIMK | DS | F | IMSK DEFAULT=FFFFFFFF |
| | A2 000D8 | TDTVTA | EQU | TDTIMK | (PUBLIC/PRIVATE) VOLUME |
| | | * | | | TABLE POINTER |
| A2 000DC | | | DS | XL2 | RESERVED |
| | | * | | | I5759 |
| A2 000DE | | TDTRES | DS | H | RESERVED |
| A2 000E0 | | TDTVOL | DS | 0CL32 | |
| A2 000E0 | | TDTVF1 | DS | XL2 | VOLUME FLAG |
| | A2 000E0 | TDTV0 | EQU | TDTVF1 | VOLUME MOUNTED FLAG |
| | 00000080 | TDTV0M | EQU | X'80' | VOLUME MOUNTED MASK |
| | A2 000E0 | TDTV1 | EQU | TDTVF1 | PRIVATE - PUBLIC FLAG |

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|---|---|---|---|---|---|
| | 00000040 | TDTV1M | EQU | X'40' | PUBLIC MASK |
| A2 000E0 | | TDTV2 | EQU | TDTVF1 | ORIGINAL DS VOLUME FLAG |
| | 00000020 | TDTV2M | EQU | X'20' | ORIGINAL DS VOLUME MASK |
| A2 000E0 | | TDTV3 | EQU | TDTVF1 | POST PROCESS DS FLAG |
| | 00000010 | TDTV3M | EQU | X'10' | POST PROCESS DS MASK |
| A2 000E0 | | TDTV4 | EQU | TDTVF1 | NOT USED |
| | 00000008 | TDTV4M | EQU | X'08' | |
| A2 000E0 | | TDTV5 | EQU | TDTVF1 | NOT USED |
| | 00000004 | TDTV5M | EQU | X'04' | |
| A2 000E0 | | TDTV6 | EQU | TDTVF1 | VOLUME CHAIN FIELD |
| | * | | | | INDICATOR |
| | 00000002 | TDTV6M | EQU | X'02' | VOLUME CHAIN FIELD MASK |
| A2 000E0 | | TDTV7 | EQU | TDTVF1 | NULL/VALID INDICATOR |
| | 00000001 | TDTV7M | EQU | X'01' | VALID MASK |
| A2 000E1 | | TDTV8 | EQU | TDTVF1+1 | DSNAME NOT FOUND IN VTOC |
| | 00000080 | TDTV8M | EQU | X'80' | DSNAME NOT FOUND IN VTOC |
| | * | | | | MASK |
| A2 000E1 | | TDTV9 | EQU | TDTVF1+1 | 1=UNSUCCESSFUL OPERATION |
| | * | | | | DUE TO SYSTEM FAILURE |
| | 00000040 | TDTV9M | EQU | X'40' | NOTE-WHEN BOTH FLAGS ARE |
| | * | | | | ON,NEW NAME SPECIFIED |
| | * | | | ‡ | FOR A RENAME OPERATION IS |
| | * | | | | NOT UNIQUE. |
| A2 000E1 | | | |ORG| | TDTVF1+1 | I5759 |
| A2 000E1 | | TDTLFN | DS | AL1 | TAPE LOGICAL FILE SEQ |
| | * | | | | NUMBER    I5759 |
| A2 000E2 | | TDTID1 | DS | XL6 | VOLUME SERIAL-IF NOT |
| | * | | | | MOUNTED |
| A2 000E2 | | | |ORG| | TDTID1 | |
| A2 000E2 | | TDTSMA | DS | XL2 | SYMBOLIC DEVICE ADDRESS IF |
| | * | | | | MOUNTED |
| A2 000E4 | | TDTSDI | DS | F | SDAT POINTER |
| A2 000E8 | | TDTID2 | DS | 4F | 2ND AND 3RD VOLUMES |
| A2 000F8 | | TDTAPN | DS | F | CHAIN FLAG-SAME AS TDTV6 |
| | * | | | | AND V7 |
| A2 000FC | | TDTAPP | DS | F | CHAIN ADDRESS-CHAIN OF |
| | * | | | | ADDITIONAL VOLUME ID'S |
| | * | | DSECT | | APPENDAGE TO |
| | * | | VOL FLAG | | |
| A2 00100 | | TDTAV1 | DS | XL2 | VOLUME FLAG |
| A2 00100 | | TDTA0 | EQU | TDTAV1 | VOLUME MOUNTED FLAG |
| | 00000080 | TDTA0M | EQU | X'80' | VOLUME MOUNTED MASK |
| A2 00100 | | TDTA1 | EQU | TDTAV1 | PRIVATE/PUBLIC FLAG |
| | 00000040 | TDTA1M | EQU | X'40' | PUBLIC MASK |
| A2 00100 | | TDTA2 | EQU | TDTAV1 | ORIGINAL DS VOL FLAG |
| | 00000020 | TDTA2M | EQU | X'20' | ORIGINAL DS VOL MASK |
| A2 00100 | | TDTA3 | EQU | TDTAV1 | DS VOLUME FLAG |
| | 00000010 | TDTA3M | EQU | X'10' | DS VOLUME MASK |
| A2 00100 | | TDTA4 | EQU | TDTAV1 | NOT USED |
| | 00000008 | TDTA4M | EQU | X'08' | |
| A2 00100 | | TDTA5 | EQU | TDTAV1 | NOT USED |
| | 00000004 | TDTA5M | EQU | X'04' | |
| A2 00100 | | TDTA6 | EQU | TDTAV1 | VOLUME CHAIN FIELD |
| | * | | | | INDICATOR |
| | 00000002 | TDTA6M | EQU | X'02' | VOLUME CHAIN FIELD MASK |
| A2 00100 | | TDTA7 | EQU | TDTAV1 | NULL/VALID INDICATOR |
| | 00000001 | TDTA7M | EQU | X'01' | VALID MASK |
| A2 00101 | | TDTA8 | EQU | TDTAV1+1 | 1=DSNAME NOT FOUND IN VTOC |
| | 00000080 | TDTA8M | EQU | X'80' | |
| A2 00101 | | TDTA9 | EQU | TDTAV1+1 | 1=UNSUCCESSFUL OPERATION |
| | * | | | | DUE TO SYSTEM FAILURE |
| | 00000040 | TDTA9M | EQU | X'40' | NOTE:WHEN BOTH FLAGS ARE |
| | * | | | | ON,NEW NAME SPECIFIED |
| | * | | | | FOR A RENAME OPERATION IS |
| | * | | | | NOT UNIQUE. |
| A2 00102 | | TDTAI1 | DS | XL6 | VOLUME SERIAL NUMBER |
| A2 00104 | | TDTAD1 | EQU | TDTAI1+2 | SDAT POINTER |
| A2 00108 | | TDTAI2 | DS | 4F | 2ND AND 3RD VOLUMES |

```
LOCATION  INSTRUCTION  SOURCE   INST  OPER     COMMENT
A2 00118               TDTAP1   DS    F        CHAIN FLAG
A2 0011C               TDTAP2   DS    F        CHAIN ADDRESS
                       * THE DEVICE CODE,TDTDEV,IS DEFINED AS FOLLOWS
                       * BYTE 0                BYTE 1              BYTE 2
                       *           BYTE 3
                       * MODEL                 DEVICE              UNIT
                       *           OPT FEATURES
                       * X'01'=TERMINAL        X'00'               X'00'
                       *           X'00'
                       * X'00'=OTHER           X'80'=TAPE          X'01'=2400
                       *           X'A0'=7TRACK
                       *                       NO DATA CONV
                       *                       X'E0'=7TRACK
                       *                       WITH DATA CONV
                       *                       X'00'=9TRACK
                       *                       X'20'=DIR. ACCESS
                       *                       X'01'=2311
                       *                       X'04'=2302          X'00'
                       *                       X'08'=2314
                       *                       X'08'=UNIT RECORD
                       *                       X'01'=CARD READER X'00'
                       *                       X'02'=CARD PUNCH
                       *                       X'08'=PRINTER
                       *                       X'10'=PAPER TAPE
```

## Task Dictionary Table (CHATDY, CHATDH, CHAMAP, and CHAPGH)

The Task Dictionary Table (TDY) contains information required by the dynamic loader to load and unload the linked program modules in a particular task.

TDY consists of a Table Header (CHATDH), hash tables for system (CHASHT) and user (CHAUHT), a Memory Map Table (CHAMAP), and one Program Module Dictionary (PMD) for each module loaded during the task, and PMD group header (CHAPGH).

TDY resides in virtual storage aligned on word boundaries, and is initialized by STARTUP and maintained by the Dynamic Loader.

TDH, used by the Dynamic Loader to loacte various tables, occupies 28 bytes of virtual storage, aligned on word boundaries.

MAP entries are contained in a linked list and terminated by a MAP entry with a null link. A single linked available space list is superimposed upon the MAP table. A control link heads the table which is terminated by a "physical table bottom" flag word of all zeroes. Links to locations within MAP are word-oriented, relative to MAP origin. A MAP entry occupies 8 bytes of virtual storage.

CHATDY contains nested DSECTs, each of which is shown below in a separate storage map.

### CHATDY Storage map

| DEC | HEX | | | | |
|---|---|---|---|---|---|
| 0 | 0 | TDYLNP | | TDYBCH | |
| 8 | 8 | TDYPCH | | TDYNCS | TDYFGS |
| 16 | 10 | TDYJFC | | TDYLDC | |
| 24 | 18 | TDYLPA | | TDYLPL | |
| 32 | 20 | TDYLTA | | TDYLTL | |
| 40 | 28 | TDYLIA | | TDYLIL | |
| 48 | 30 | TDYSWI | | TDYMSN | |
| 56 | 38 | UNNAMED | | | |

### Fields in CHATDY -- by displacement

| DEC | HEX | FIELD | | DEC | HEX | FIELD | DEC | HEX | FIELD |
|---|---|---|---|---|---|---|---|---|---|
| 0000 | 0000 | TDYLNP | | 0016 | 0010 | TDYJFC | 0040 | 0028 | TDYLIA |
| 0004 | 0004 | TDYBCH | | 0020 | 0014 | TDYLDC | 0044 | 002C | TDYLIL |
| 0008 | 0008 | TDYPCH | | 0024 | 0018 | TDYLPA | 0048 | 0030 | TDYSWI |
| 0012 | 000C | TDYNCS | | 0028 | 001C | TDYLPL | 0052 | 0034 | TDYMSN |
| 0014 | 000E | TDYLDL | (EQU) | 0032 | 0020 | TDYLTA | | | |
| 0014 | 000E | TDYFGS | | 0036 | 0024 | TDYLTL | | | |

### Alphabetical list of fields in CHATDY

| FIELD | DEC | HEX | | FIELD | DEC | HEX | | FIELD | DEC | HEX |
|---|---|---|---|---|---|---|---|---|---|---|
| TDYBCH | 0004 | 0004 | | TDYLIL | 0044 | 002C | | TDYMSN | 0052 | 0034 |
| TDYFGS | 0014 | 000E | | TDYLNP | 0000 | 0000 | | TDYNCS | 0012 | 000C |
| TDYJFC | 0016 | 0010 | | TDYLPA | 0024 | 0018 | | TDYPCH | 0008 | 0008 |
| TDYLDC | 0020 | 0014 | | TDYLPL | 0028 | 001C | | TDYSWI | 0048 | 0030 |
| TDYLDL | 0014 | 000E | (EQU) | TDYLTA | 0032 | 0020 | | | | |
| TDYLIA | 0040 | 0028 | | TDYLTL | 0036 | 0024 | | | | |

### Assembler listing of CHATDY

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|---|---|---|---|---|---|
| | A3 00000 | CHATDY | DSECT | | TDY ENTRY STRUCTURE |
| ************************************************************************************ | | | | | |
| | ● | | | | PMD PREFACE DSECT |
| ************************************************************************************ | | | | | |
| | ● | | | | PMD PREFACE BEGINS HERE |
| A3 00000 | | TDYLNP | DS | F | LINK TO NEXT PMD PREFACE |
| A3 00004 | | TDYBCH | DS | F | BABY CHAIN HEAD |
| A3 00008 | | TDYPCH | DS | F | PAPA CHAIN HEAD |
| A3 0000C | | TDYNCS | DS | H | MUT COUNT(NO. EXPLICIT |
| | ● | | | | CALLS ON THIS MODULE) |
| A3 0000E | | TDYFGS | DS | H | PMD FLAGS |

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|---|---|---|---|---|---|
| A3 0000E | | TDYLDL | EQU | TDYFGS | HIGH ORDER BYTE OF FLAG |
| | | * | | | FIELD |
| | 00000080 | TDYLDLM | EQU | X'80' | LOADED BY DYNAMIC |
| | | * | | | LOADER--MASK |
| | 00000001 | TDYFGP | EQU | X'01' | PUBLIC IF 1 |
| | 00000002 | TDYFGC | EQU | X'02' | DELETION CANDIDATE IF 1 |
| A3 00010 | | TDYJFC | DS | F | POINTER TO JFCB FOR LIBRARY |
| A3 00014 | | TDYLDC | DS | F | DCB ADDRESS FOR LIBRARY |
| | | *USER INFORMATION FOR MODULE IS STORED HERE | | | |
| A3 00018 | | TDYLPA | DS | F | PMD RETRIEVAL ADDRESS(WILL |
| | | * | | | BE 0) |
| A3 0001C | | TDYLPL | DS | F | PMD LENGTH IN BYTES |
| A3 00020 | | TDYLTA | DS | F | TEXT RETRIEVAL |
| | | * | | | ADDRESS(RELATIVE TO LPA) |
| A3 00024 | | TDYLTL | DS | F | TEXT LENGTH IN BYTES |
| A3 00028 | | TDYLIA | DS | F | ISD RETRIEVAL |
| | | * | | | ADDRESS(RELATIVE TO LPA) |
| A3 0002C | | TDYLIL | DS | F | ISD LENGTH IN BYTES |
| A3 00030 | | TDYSWI | DS | F | SYSLIB SWITCH-1 IF SYSLIB |
| A3 00034 | | TDYMSN | DS | F | MODULE SEQUENCE NUMBER |
| A3 00038 | | | DS | F | RESERVED |
| | 0000003C | TDYPSZ | EQU | *-CHATDY | SIZE OF PMD PREFACE |

```
*********************************************************************
                         *                      PMD BODY DSECT
*********************************************************************
```

| | | | | | |
|---|---|---|---|---|---|
| A4 00000 | | TDYPMD | DSECT | | PMD ITSELF BEGINS HERE |
| A4 00000 | | TDYPML | DS | F | PMD LENGTH IN BYTES |
| A4 00004 | | TDYDIA | DS | C | DIAGNOSTIC CODE |
| A4 00005 | | TDYPCS | DS | XL1 | PCS COMMUNICATION INDICATOR |
| | 00000001 | TDYVHX | EQU | X'01' | ON IF VERSION ID IS HEX |
| | | * | | | CREATION DATE |
| | | * | | | OFF IF ALPHAMERIC |
| | 00000002 | TDYFMP | EQU | X'02' | FORTRAN MAIN PROGRAM MODULE |
| | 00000004 | TDYFMD | EQU | X'04' | FORTRAN MODULE |
| | 00000010 | TDYUNL | EQU | X'10' | CALL PCS BEFORE UNLOAD |
| | 00000020 | TDYLEM | EQU | X'20' | MODULE PRODUCED BY LINK ED. |
| | 00000040 | TDYISD | EQU | X'40' | MODULE HAS ISD |
| | 00000080 | TDYMMI | EQU | X'80' | MODULE MODIFICATION |
| | | * | | | INDICATOR |
| | | * | | | RESERVED FOR INTERNAL IBM |
| | | * | | | USE |
| A4 00006 | | TDYPMH | DS | H | PMD HEADING LENGTH IN BYTES |
| A4 00008 | | TDYIDF | DS | F | ID FOR DECK PUNCHOUT |
| A4 0000C | | TDYMID | DS | CL8 | VERSION ID |
| A4 00014 | | TDYNRF | DS | H | NUMBER REFS FOR SEP |
| A4 00016 | | TDYNMD | DS | H | NUMBER MODS FOR SEP |
| | | *DEF FOR STANDARD ENTRY POINT(SEP) BEGINS HERE | | | |
| A4 00018 | | TDYSDF | DS | 0F | SEP DEF |
| A4 00018 | | TDYSNM | DS | CL8 | MODULE NAME |
| A4 00020 | | TDYSEP | DS | F | SEP DEF VALUE(SEP) |
| A4 00024 | | TDYSRD | DS | F | SEP R-VALUE DISPLACEMENT |
| A4 00028 | | TDYSCL | DS | F | SEP CSD LINK |
| A4 0002C | | | DS | F | RESERVED |
| A4 00030 | | TDYSSL | DS | F | SEP SEARCH LINK |
| | 00000034 | TDYPBH | EQU | *-TDYPMD | SIZE OF PMD HEADING |
| | | * | | | EXCLUSIVE OF REFS AND |
| | | * | | | MODIFIERS |
| | | *REF(S) AND MODIFIER(S) FOR STANDARD ENTRY POINT | | | |
| | | *BEGIN HERE | | | |

```
*********************************************************************
                         *                      CSD DSECT
*********************************************************************
```

| | | | | | |
|---|---|---|---|---|---|
| A5 00000 | | TDYCSD | DSECT | | CSD ENTRY STRUCTURE |
| A5 00000 | | TDYCLN | DS | F | CSD LENGTH IN BYTES |
| A5 00004 | | TDYCTL | DS | F | CONTROL SECTION TEXT LENGTH |
| A5 00008 | | TDYCFP | DS | F | PG NO. IN MODULE TEXT OF CS |
| | | * | | | 1ST PAGE |

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|---|---|---|---|---|---|
| A5 0000C | | TDYCID | DS | CL8 | CREATION DATE ELAPSED |
| | | * | | | MICROSECONDS SINCE |
| | | * | | | MAR. 1, 1900 |
| A5 00014 | | TDYCLK | DS | F | ADDRESS THIS PMD PREFACE |
| A5 00018 | | TDYCQR | DS | H | COUNT OF CXDREFS AND QREFS |
| | | * | | | N443.2 |
| | A5 00018 | TDYCCR | EQU | TDYCQR | BIT 0     0=NO CXDREF |
| | | * | | | PRESENT N443.2 |
| | 00000080 | TDYCCRM | EQU | X'80' | 1=CXDREF PRESENT     N443.2 |
| | | * | | | BIT 1      RESERVED |
| | | * | | | N443.2 |
| | | * | | | BIT 2-15  NO. OF QREFS. |
| | | * | | | N443.2 |
| A5 0001A | | TDYCUS | DS | H | USER COUNT(NO. REFS INTO |
| | | * | | | THIS CS) |
| A5 0001C | | TDYCRD | DS | H | NO. RELOCATABLE DEFS |
| A5 0001E | | TDYCAD | DS | H | NO. ABSOLUTE DEFS |
| A5 00020 | | TDYCCD | DS | H | NO. COMPLEX DEFS |
| A5 00022 | | TDYCRF | DS | H | NO. REFS IN REF TABLE |
| A5 00024 | | TDYCAT | DS | XL2 | ATTRIBUTES OF CONTROL |
| | | * | | | SECTION |
| | | * | | | FLAGS |
| | A5 00024 | TDYCAT1 | EQU | TDYCAT | FLAGS SET BY DYNAMIC LOADER |
| | 00000080 | TDYPNM | EQU | X'80' | PUBLIC NAME FLAG |
| | 00000040 | TDYCPR | EQU | X'40' | CSD HAS BEEN ALLOCATED |
| | | * | | | STORAGE |
| | 00000020 | TDYAPR | EQU | X'20' | 'PCSA' CALLED FOR THIS CSD |
| | 00000010 | TDYCON | EQU | X'10' | PUBLIC STORAGE ASSIGNED BY |
| | | * | | | CONNECT |
| | 00000002 | TDYPCR | EQU | X'02' | PCS FLAG-COMMON CSECT |
| | | * | | | REJECTED     M2588 |
| | 00000001 | TDYQFLG | EQU | X'01' | TDYCQR VALIDITY FLAG |
| | | * | | | N443.2 |
| | | * | | | 0=IGNORE TDYCQR FIELD |
| | | * | | | N443.2 |
| | | * | | | 1=TDYCQR IS VALID |
| | | * | | | N443.2 |
| | | * | | | CSECT ATTRIBUTES |
| | A5 00025 | TDYCAT2 | EQU | TDYCAT+1 | ATTRIBUTES SET BY LANGUAGE |
| | | * | | | PROCESSOR |
| | 00000002 | TDYFXL | EQU | X'02' | 'FIXED-LENGTH' IS BIT OFF, |
| | | * | | | V/L = ON |
| | 00000004 | TDYRDO | EQU | X'04' | 'READ-ONLY' IS BIT ON |
| | 00000008 | TDYPUB | EQU | X'08' | 'PUBLIC' IS BIT ON |
| | 00000010 | TDYPRO | EQU | X'10' | 'PSECT' IS BIT ON |
| | 00000020 | TDYCOM | EQU | X'20' | 'COMMON' IS BIT ON |
| | 00000040 | TDYPVG | EQU | X'40' | 'PRIVILEGED' IS BIT ON |
| | 00000080 | TDYSYS | EQU | X'80' | 'SYSTEM' IS BIT ON |
| | 0000000C | TDYPBRO | EQU | TDYPUB+TDYRDO | PUBLIC,READ ONLY MASK |
| | 0000004C | TDYPROV | EQU | TDYPBRO+TDYPVG | PRIV/PUB,READ ONLY |
| | | * | | | MASK |
| | 000000C0 | TDYPVSY | EQU | TDYPVG+TDYSYS | PRIVILEGED,SYSTEM MASK |
| | 00008000 | TDYPUN | EQU | X'8000' | PUBLIC NAME IS BIT ON |
| A5 00026 | | TDYCVM | DS | H | NO. PAGES OF TEXT IN |
| | | * | | | VIRTUAL MEMORY |
| | 00000028 | TDYCSZ | EQU | *-TDYCSD | SIZE OF CSD HEADING |
| | | *DEF FOR CSECT | NAME | BEGINS | HERE |
| A5 00028 | | TDYCDF | DS | 0F | CSECT NAME DEF |
| A5 00028 | | TDYCNM | DS | CL8 | CS NAME |
| A5 00030 | | TDYCBV | DS | F | CS BASE |
| A5 00034 | | TDYCRV | DS | F | CS R-VAL DISPLACEMENT |
| A5 00038 | | TDYCDC | DS | F | CSD LINK |
| A5 0003C | | | DS | F | RESERVED |
| A5 00040 | | TDYCBS | DS | F | SEARCH LINK |

**********************************************************************

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|----------|-------------|--------|------|------|---------|
| | | * | | | DEF DSECT |

```
***********************************************************************
            A6 00000    TDYDEF    DSECT           DEF ENTRY STRUCTURE
A6 00000                TDYDNM    DS      CL8     DEF NAME
A6 00008                TDYDVL    DS      F       DEF VALUE
A6 0000C                TDYDRD    DS      F       R-VALUE DISPLACEMENT
A6 00010                TDYDCS    DS      F       CSD ADDRESS
A6 00014                          DS      F       RESERVED
A6 00018                TDYDSL    DS      F       DEF SEARCH LINK
            0000001C    TDYDSZ    EQU     *-TDYDEF SIZE OF DEF

***********************************************************************
                        *                         REF DSECT
***********************************************************************
            A7 00000    TDYREF    DSECT           REF ENTRY STRUCTURE
A7 00000                TDYRNM    DS      CL8     REF NAME
A7 00008                TDYRVL    DS      F       VALUE OF REF
A7 0000C                TDYRRV    DS      F       R-VALUE OF REF
A7 00010                TDYRCS    DS      F       DEFINING CSD ADDRESS
A7 00014                          DS      F       RESERVED
            00000018    TDYRSZ    EQU     *-TDYREF SIZE OF REF
                        *                         N443.2
            A7 00000              |ORG|   TDYRNM  QREF STRUCTURE
                        *                         N443.2
A7 00000                TDYQNM    DS      CL8     QREF NAME, DEFINED BY PL/I
                        *                         OR N443.2
                        *                         A 'DXD' ASSEMBLER
                        *                         N443.2
                        *                         INSTRUCTION
                        *                         N443.2
A7 00008                TDYQVL    DS      A       QREF VALUE - A DISPLACEMENT
                        *                         N443.2
                        *                         SET BY DYNAMIC LOADER
                        *                         N443.2
A7 0000C                TDYQLN    DS      0F      QREF ALIGNMENT AND LENGTH
                        *                         N443.2
A7 0000C                TDYQAL    DS      X       ALIGNMENT FOR QREF
                        *                         N443.2
            00000000    TDYQALBM  EQU     X'00'   BYTE ALIGNMENT
                        *                         N443.2
            00000001    TDYQALHM  EQU     X'01'   HALFWORD ALIGNMENT
                        *                         N443.2
            00000002    TDYQALFM  EQU     X'02'   FULLWORD ALIGNMENT
                        *                         N443.2
            00000003    TDYQALDM  EQU     X'03'   DOUBLEWORD ALIGNMENT
                        *                         N443.2
A7 0000D                TDYQLG    DS      XL3     LENGTH OF QREF-DEFINED AREA
                        *                         N443.2
A7 00010                TDYQLF    DS      A       A(QREF WITH DIFFERENT NAME)
                        *                         N443.2
A7 00014                TDYQLS    DS      A       A(QREF WITH SAME NAME)
                        *                         N443.2
                        *                         N443.2
            A7 00000              |ORG|   TDYRNM  CXDREF STRUCTURE
                        *                         N443.2
A7 00000                          DS      2F      RESERVED
                        *                         N443.2
A7 00008                TDYCXD    DS      F       CUMULATIVE EXTERNAL DUMMY
                        *                         N443.2
                        *                         SECTION BYTE LENGTH, SET
                        *                         N443.2
                        *                         BY LOADER AFTER PROCESS-
                        *                         N443.2
                        *                         ING QREFS
                        *                         N443.2
A7 0000C                          DS      2F      RESERVED
                        *                         N443.2
A7 00014                TDYCRL    DS      A       A(NEXT CXDREF)
```

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|----------|-------------|--------|------|------|---------|
| | | * | | | N443.2 |

```
*********************************************************************************
*       TDYRLD---RLD POINTER DSECT                                              *
*********************************************************************************
          A8 00000      TDYRLD   DSECT            MODIFIER POINTER
A8 00000                TDYNMP   DS     H         NUMBER OF MODIFIERS FOR
                *                                  PAGE
A8 00002                TDYLFM   DS     H         LOCATION OF FIRST MODIFIER
                *                                  FOR THIS PAGE
*********************************************************************************
*       TDYMDF---RLD MODIFIER                                                   *
*********************************************************************************
          A9 00000      TDYMDF   DSECT            MODIFIER
A9 00000                TDYMRN   DS     H         ORDINAL NUMBER OF REFERENCE
                *                                  USED IN MODIFICATION
          A9 00000      TDYMEL   EQU    TDYMRN    FIRST 2 BITS-LENGTH OF
                *                                  ADCON TO BE MODIFIED
A9 00002                TDYBYT   DS     H         DISPLACEMENT OF ADCON TO BE
                *                                  MODIFIED
          A9 00002      TDYMFT   EQU    TDYBYT    OPERATION PERFORMED IN
                *                                  MODIFICATION
*********************************************************************************
*       TDYVMP---VIRTUAL MEMORY PAGE TABLE DSECT                                *
*********************************************************************************
          AA 00000      TDYVMPT  DSECT
AA 00000                TDYVMP   DS     H         VIRTUAL MEMORY PAGE TABLE
                *                                  ENTRY
```

## TDYPMD Storage map

| DEC | HEX | | | | | | |
|-----|-----|---|---|---|---|---|---|
| 0 | 0 | TDYPML | | TDYDIA | TDYPCS | | TDYPMH |
| 8 | 8 | TDYIDF | | | TDYMID | | |
| 16 | 10 | TDYMID (CONT) | | | TDYNRF | | TDYNMD |
| 24 | 18 | TDYSNM | | | | | |
| 32 | 20 | TDYSEP | | | TDYSRD | | |
| 40 | 28 | TDYSCL | | | UNNAMED | | |
| 48 | 30 | TDYSSL | | | | | |

## Fields in TDYPMD -- by displacement

| DEC | HEX | FIELD | DEC | HEX | FIELD | DEC | HEX | FIELD |
|-----|-----|-------|-----|-----|-------|-----|-----|-------|
| 0000 | 0000 | TDYPML | 0012 | 000C | TDYMID | 0032 | 0020 | TDYSEP |
| 0004 | 0004 | TDYDIA | 0020 | 0014 | TDYNRF | 0036 | 0024 | TDYSRD |
| 0005 | 0005 | TDYPCS | 0022 | 0016 | TDYNMD | 0040 | 0028 | TDYSCL |
| 0006 | 0006 | TDYPMH | 0024 | 0018 | TDYSNM | 0048 | 0030 | TDYSSL |
| 0008 | 0008 | TDYIDF | 0024 | 0018 | TDYSDF | | | |

## Alphabetical list of fields in TDYPMD

| FIELD | DEC | HEX | FIELD | DEC | HEX | FIELD | DEC | HEX |
|-------|-----|-----|-------|-----|-----|-------|-----|-----|
| TDYDIA | 0004 | 0004 | TDYPCS | 0005 | 0005 | TDYSEP | 0032 | 0020 |
| TDYIDF | 0008 | 0008 | TDYPMH | 0006 | 0006 | TDYSNM | 0024 | 0018 |
| TDYMID | 0012 | 000C | TDYPML | 0000 | 0000 | TDYSRD | 0036 | 0024 |
| TDYNMD | 0022 | 0016 | TDYSCL | 0040 | 0028 | TDYSSL | 0048 | 0030 |
| TDYNRF | 0020 | 0014 | TDYSDF | 0024 | 0018 | | | |

## TDYCSD Storage map

```
DEC   HEX
  0    0 | TDYCLN                        | TDYCTL                 |
  8    8 | TDYCFP                        | TDYCID                 |
 16   10 | TDYCID  (CONT)                | TDYCLK                 |
 24   18 | TDYCQR      | TDYCUS          | TDYCRD      | TDYCAD   |
 32   20 | TDYCCD      | TDYCRF          | TDYCAT      | TDYCVM   |
 40   28 | TDYCNM                                                |
 48   30 | TDYCBV                        | TDYCRV                 |
 56   38 | TDYCDC                        | UNNAMED                |
 64   40 | TDYCBS                        |
```

### Fields in TDYCSD -- by displacement

| DEC | HEX | FIELD | | DEC | HEX | FIELD | | DEC | HEX | FIELD |
|---|---|---|---|---|---|---|---|---|---|---|
| 0000 | 0000 | TDYCLN | | 0028 | 001C | TDYCRD | | 0040 | 0028 | TDYCNM |
| 0004 | 0004 | TDYCTL | | 0030 | 001E | TDYCAD | | 0040 | 0028 | TDYCDF |
| 0008 | 0008 | TDYCFP | | 0032 | 0020 | TDYCCD | | 0048 | 0030 | TDYCBV |
| 0012 | 000C | TDYCID | | 0034 | 0022 | TDYCRF | | 0052 | 0034 | TDYCRV |
| 0020 | 0014 | TDYCLK | | 0036 | 0024 | TDYCAT1 (EQU) | | 0056 | 0038 | TDYCDC |
| 0024 | 0018 | TDYCCR (EQU) | | 0036 | 0024 | TDYCAT | | 0064 | 0040 | TDYCBS |
| 0024 | 0018 | TDYCQR | | 0037 | 0025 | TDYCAT2 (EQU) | | | | |
| 0026 | 001A | TDYCUS | | 0038 | 0026 | TDYCVM | | | | |

### Alphabetical list of fields in TDYCSD

| FIELD | DEC | HEX | | FIELD | DEC | HEX | | FIELD | DEC | HEX |
|---|---|---|---|---|---|---|---|---|---|---|
| TDYCAD | 0030 | 001E | | TDYCDC | 0056 | 0038 | | TDYCRD | 0028 | 001C |
| TDYCAT | 0036 | 0024 | | TDYCDF | 0040 | 0028 | | TDYCRF | 0034 | 0022 |
| TDYCAT1 | 0036 | 0024 (EQU) | | TDYCFP | 0008 | 0008 | | TDYCRV | 0052 | 0034 |
| TDYCAT2 | 0037 | 0025 (EQU) | | TDYCID | 0012 | 000C | | TDYCTL | 0004 | 0004 |
| TDYCBS | 0064 | 0040 | | TDYCLK | 0020 | 0014 | | TDYCUS | 0026 | 001A |
| TDYCBV | 0048 | 0030 | | TDYCLN | 0000 | 0000 | | TDYCVM | 0038 | 0026 |
| TDYCCD | 0032 | 0020 | | TDYCNM | 0040 | 0028 | | | | |
| TDYCCR | 0024 | 0018 (EQU) | | TDYCQR | 0024 | 0018 | | | | |

## TDYDEF Storage map

```
DEC   HEX
  0    0 | TDYDNM                                                |
  8    8 | TDYDVL                        | TDYDRD                 |
 16   10 | TDYDCS                        | UNNAMED                |
 24   18 | TDYDSL                        |
```

### Fields in TDYDEF -- by displacement

| DEC | HEX | FIELD | | DEC | HEX | FIELD | | DEC | HEX | FIELD |
|---|---|---|---|---|---|---|---|---|---|---|
| 0000 | 0000 | TDYDNM | | 0012 | 000C | TDYDRD | | 0024 | 0018 | TDYDSL |
| 0008 | 0008 | TDYDVL | | 0016 | 0010 | TDYDCS | | | | |

### Alphabetical list of fields in TDYDEF

| FIELD | DEC | HEX | | FIELD | DEC | HEX | | FIELD | DEC | HEX |
|---|---|---|---|---|---|---|---|---|---|---|
| TDYDCS | 0016 | 0010 | | TDYDRD | 0012 | 000C | | TDYDVL | 0008 | 0008 |
| TDYDNM | 0000 | 0000 | | TDYDSL | 0024 | 0018 | | | | |

## TDYREF Storage map

```
DEC   HEX  _____
  0     0 |                            TDYRNM                               |
          |_____|
  8     8 |           TDYRVL             |              TDYRRV              |
          |_____|_____|
 16    10 |           TDYRCS             |              UNNAMED            |
          |_____|_____|
```

### ORG   TDYRNM

```
  0     0 |_____|
          |                            TDYQNM                               |
          |_____|
  8     8 |           TDYQVL          |TDYQAL |          TDYQLG            |
          |_____|_____|_____|
 16    10 |           TDYQLF            |              TDYQLS             |
          |_____|_____|
```

### ORG   TDYRNM

```
  0     0 |_____|
          |                            UNNAMED                              |
          |_____|
  8     8 |           TDYCXD            |              UNNAMED            |
          |_____|_____|
 16    10 |        UNNAMED (CONT)       |              TDYCRL            |
          |_____|_____|
```

### Fields in TDYREF -- by displacement

| DEC  | HEX  | FIELD  | DEC  | HEX  | FIELD  | DEC  | HEX  | FIELD  |
|------|------|--------|------|------|--------|------|------|--------|
| 0000 | 0000 | TDYQNM | 0012 | 000C | TDYQAL | 0016 | 0010 | TDYRCS |
| 0000 | 0000 | TDYRNM | 0012 | 000C | TDYQLN | 0020 | 0014 | TDYCRL |
| 0008 | 0008 | TDYCXD | 0012 | 000C | TDYRRV | 0020 | 0014 | TDYQLS |
| 0008 | 0008 | TDYQVL | 0013 | 000D | TDYQLG |      |      |        |
| 0008 | 0008 | TDYRVL | 0016 | 0010 | TDYQLF |      |      |        |

### Alphabetical list of fields in TDYREF

| FIELD  | DEC  | HEX  | FIELD  | DEC  | HEX  | FIELD  | DEC  | HEX  |
|--------|------|------|--------|------|------|--------|------|------|
| TDYCRL | 0020 | 0014 | TDYQLN | 0012 | 000C | TDYRNM | 0000 | 0000 |
| TDYCXD | 0008 | 0008 | TDYQLS | 0020 | 0014 | TDYRRV | 0012 | 000C |
| TDYQAL | 0012 | 000C | TDYQNM | 0000 | 0000 | TDYRVL | 0008 | 0008 |
| TDYQLF | 0016 | 0010 | TDYQVL | 0008 | 0008 |        |      |      |
| TDYQLG | 0013 | 000D | TDYRCS | 0016 | 0010 |        |      |      |

## TDYRLD Storage map

```
DEC   HEX  _____
  0     0 |           |                  |
          |  TDYNMP   |     TDYLFM       |
          |_____|_____|
```

### Fields in TDYRLD -- by displacement

| DEC  | HEX  | FIELD  | DEC  | HEX  | FIELD  |
|------|------|--------|------|------|--------|
| 0000 | 0000 | TDYNMP | 0002 | 0002 | TDYLFM |

### Alphabetical list of fields in TDYRLD

| FIELD  | DEC  | HEX  | FIELD  | DEC  | HEX  |
|--------|------|------|--------|------|------|
| TDYLFM | 0002 | 0002 | TDYNMP | 0000 | 0000 |

## TDYMDF Storage map

```
DEC   HEX  _____
 0     0|        TDYMRN        |        TDYBYT        |
        |_____|_____|
```

## Fields in TDYMDF -- by displacement

| DEC | HEX | FIELD | | DEC | HEX | FIELD | DEC | HEX | FIELD | |
|------|------|--------|------|------|------|--------|------|------|--------|------|
| 0000 | 0000 | TDYMEL | (EQU) | 0000 | 0000 | TDYMRN | 0002 | 0002 | TDYMFT | (EQU) |
| | | | | | | | 0002 | 0002 | TDYBYT | |

## Alphabetical list of fields in TDYMDF

| FIELD | DEC | HEX | | FIELD | DEC | HEX | | FIELD | DEC | HEX | |
|--------|------|------|--|--------|------|------|------|--------|------|------|------|
| TDYBYT | 0002 | 0002 | | TDYMEL | 0000 | 0000 | (EQU) | TDYMFT | 0002 | 0002 | (EQU) |
| | | | | | | | | TDYMRN | 0000 | 0000 | |


## TDYVMP Storage map

```
DEC   HEX  _____
 0     0|       TDYVMP        |
        |_____|
```
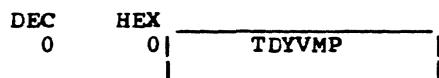
## Fields in TDYVMP -- by displacement

| DEC | HEX | FIELD |
|------|------|--------|
| 0000 | 0000 | TDYVMP |


## Alphabetical list of fields in TDYVMP

| FIELD | DEC | HEX |
|--------|------|------|
| TDYVMP | 0000 | 0000 |


CHATDY 446.2

## CHATDH Storage map

| DEC | HEX | | |
|---|---|---|---|
| 0 | 0 | TDHPMG | TDHLHT |
| 8 | 8 | TDHPSH | TDHPUH |
| 16 | 10 | TDHPMP | TDHLMP |
| 24 | 18 | TDHCME | TDHIVMP |

## Fields in CHATDH -- by displacement

| DEC | HEX | FIELD | DEC | HEX | FIELD | DEC | HEX | FIELD |
|---|---|---|---|---|---|---|---|---|
| 0000 | 0000 | TDHPMG | 0012 | 000C | TDHPUH | 0024 | 0018 | TDHCME |
| 0004 | 0004 | TDHLHT | 0016 | 0010 | TDHPMP | 0028 | 001C | TDHIVMP |
| 0008 | 0008 | TDHPSH | 0020 | 0014 | TDHLMP | | | |

## Alphabetical list of fields in CHATDH

| FIELD | DEC | HEX | FIELD | DEC | HEX | FIELD | DEC | HEX |
|---|---|---|---|---|---|---|---|---|
| TDHCME | 0024 | 0018 | TDHLMP | 0020 | 0014 | TDHPSH | 0008 | 0008 |
| TDHIVMP | 0028 | 001C | TDHPMG | 0000 | 0000 | TDHPUH | 0012 | 000C |
| TDHLHT | 0004 | 0004 | TDHPMP | 0016 | 0010 | | | |

## Assembler listing of CHATDH

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|---|---|---|---|---|---|
| | A1 00000 | CHATDH | DSECT | | TDY HEADING STRUCTURE |
| A1 00000 | | TDHPMG | DS | F | LINK TO PMD GROUP (VM ADD.) |
| A1 00004 | | TDHLHT | DS | F | HASH DIVISOR |
| A1 00008 | | TDHPSH | DS | F | ADDR. OF PRIVILEGED SYSTEM |
| | | * | | | HASH TABLE. ADD HASH |
| | | * | | TABLE LENGTH (TDHHTL) TO GET ADDR. OF |
| | | * | | NONPRIVILEGED |
| | | * | | | SYSTEM HASH TABLE. |
| A1 0000C | | TDHPUH | DS | F | ADDRESS OF USER HASH TABLE |
| A1 00010 | | TDHPMP | DS | F | ADDRESS OF MAP ORIGIN |
| A1 00014 | | TDHLMP | DS | F | MAXIMUM LENGTH OF MAP |
| A1 00018 | | TDHCME | DS | F | COUNT OF VALID MAP ENTRIES |
| A1 0001C | | TDHIVMP | DS | F | VM ADDR OF NEXT TO LAST PMD |
| | | * | | | GRP IN TDY |
| | 00000020 | TDHSIZ | EQU | *-CHATDH | SIZE OF HEADER |
| | 000001FD | TDHHTL | EQU | 509 | HASH TABLE LENGTH |
| | 000001FD | TDHHDV | EQU | 509 | VALUE OF HASH DIVISOR |

## CHAMAP Storage map

| DEC | HEX | | |
|---|---|---|---|
| 0 | 0 | MAPBCS | MAPCSD |

## Fields in CHAMAP -- by displacement

| DEC | HEX | FIELD | DEC | HEX | FIELD | DEC | HEX | FIELD |
|---|---|---|---|---|---|---|---|---|
| 0000 | 0000 | MAPBCS | 0004 | 0004 | MAPCSD | | | |

## Alphabetical list of fields in CHAMAP

| FIELD | DEC | HEX | FIELD | DEC | HEX | FIELD | DEC | HEX |
|-------|------|------|-------|------|------|-------|-----|-----|
| MAPBCS | 0000 | 0000 | MAPCSD | 0004 | 0004 | | | |

## Assembler listing of CHAMAP

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|----------|-------------|--------|------|------|---------|
| | 4D 00000 | CHAMAP | DSECT | | MAP ENTRY STRUCTURE |
| | | * | | | ** 9-30-66 R. GILINSKY |
| **************************************************************************** |
| | | * | | | MAP ENTRY DSECT |
| **************************************************************************** |
| 4D 00000 | | MAPBCS | DS | F | VM ADD ORIGIN OF CSECT |
| 4D 00004 | | MAPCSD | DS | F | VM ADDRESS OF CSD |

## CHAPGH Storage map

| DEC | HEX | | |
|-----|-----|---|---|
| 0 | 0 | PGHNGH | PGHPGH |
| 8 | 8 | PGHLPM | PGHEGR |

## Fields in CHAPGH -- by displacement

| DEC | HEX | FIELD | DEC | HEX | FIELD | DEC | HEX | FIELD |
|------|------|-------|------|------|-------|------|------|-------|
| 0000 | 0000 | PGHNGH | 0004 | 0004 | PGHPGH | 0008 | 0008 | PGHLPM |
| | | | | | | 0012 | 000C | PGHEGR |

## Alphabetical list of fields in CHAPGH

| FIELD | DEC | HEX | FIELD | DEC | HEX | FIELD | DEC | HEX |
|-------|------|------|-------|------|------|-------|------|------|
| PGHEGR | 0012 | 000C | PGHLPM | 0008 | 0008 | PGHNGH | 0000 | 0000 |
| | | | | | | PGHPGH | 0004 | 0004 |

## Assembler listing of CHAPGH

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|----------|-------------|--------|------|------|---------|
| | 61 00000 | CHAPGH | DSECT | | PMD GROUP HEADER |
| 61 00000 | | PGHNGH | DS | F | POINTER TO NEXT PMD GROUP |
| | | * | | | HEADER |
| 61 00004 | | PGHPGH | DS | F | POINTER TO PREVIOUS GROUP |
| | | * | | | HEADER |
| 61 00008 | | PGHLPM | DS | F | POINTER TO LAST PMD IN THIS |
| | | * | | | GROUP |
| 61 0000C | | PGHEGR | DS | F | POINTER TO END OF GROUP |
| | 00000010 | PGHGSZ | EQU | *-CHAPGH | GROUP HEADER SIZE |

## Terminal Interrupt Information DSECT (CHATII)

CHATII contains interrupt information (message text) which is passed from real core to virtual storage. CHATII occupies 12 bytes of storage.

### CHATII Storage map

```
DEC   HEX  _____
  0    0 |       TIIRLN       |      TIIMLN       |         TIIVMA          |
         |                    |                   |                         |
         |_____|_____|_____|
  8    8 |TIIWWK   |TIIDTY   |     TIISDA        |
         |         |         |                   |
         |_____|_____|_____|
```

### Fields in CHATII -- by displacement

| DEC | HEX | FIELD | DEC | HEX | FIELD | DEC | HEX | FIELD |
|------|------|--------|------|------|--------|------|------|--------|
| 0000 | 0000 | TIIRLN | 0004 | 0004 | TIIVMA | 0009 | 0009 | TIIDTY |
| 0002 | 0002 | TIIMLN | 0008 | 0008 | TIIWWK | 0010 | 000A | TIISDA |

### Alphabetical list of fields in CHATII

| FIELD | DEC | HEX | FIELD | DEC | HEX | FIELD | DEC | HEX |
|--------|------|------|--------|------|------|--------|------|------|
| TIIDTY | 0009 | 0009 | TIIRLN | 0000 | 0000 | TIIVMA | 0004 | 0004 |
| TIIMLN | 0002 | 0002 | TIISDA | 0010 | 000A | TIIWWK | 0008 | 0008 |

### Assembler listing of CHATII

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|----------|-------------|--------|------|------|---------|
|          | AB 00000    | CHATII | DSECT |     | TERMINAL INTERRUPT INFORMATION DSECT (TII) |
|          |             | *      |      |      |         |
| AB 00000 |             |        | DS   | 0D   | ALIGN ON DOUBLE WORD |
| AB 00000 |             | TIIRLN | DS   | H    | RELATIVE LINE NUMBER FROM TCT BEGINNING |
|          |             | *      |      |      |         |
| AB 00002 |             | TIIMLN | DS   | H    | MESSAGE LENGTH |
| AB 00004 |             | TIIVMA | DS   | F    | VM ADDRESS OF MESSAGE |
| AB 00008 |             | TIIWWK | DS   | X    | CAUSE OF INTERRUPT |
|          | 00000080    | TIIWW1 | EQU  | X'80' | MESSAGE IN |
|          | 00000040    | TIIWW2 | EQU  | X'40' | MESSAGE OUT |
|          | 00000020    | TIIWW3 | EQU  | X'20' | ATTENTION |
|          | 00000010    | TIIWW4 | EQU  | X'10' | INITIAL CONNECTION |
|          | 00000008    | TIIWW5 | EQU  | X'08' | UNRECOVERABLE ERROR |
|          | 00000004    | TIIWW6 | EQU  | X'04' | NEGATIVE POLLING RESPONSE |
|          | 00000002    | TIIWW7 | EQU  | X'02' | BUFFER OVERFLOW FLAG |
| AB 00009 |             | TIIDTY | DS   | X    | DEVICE TYPE |
|          | 00000001    | TIIDT1 | EQU  | X'01' | 1050 PTTC/8 |
|          | 00000002    | TIIDT2 | EQU  | X'02' | 2741 CORRESPONDENCE |
|          | 00000003    | TIIDT3 | EQU  | X'03' | 2741 PTTC/8 |
|          | 00000004    | TIIDT4 | EQU  | X'04' | TTY35 ASCII |
|          | 00000005    | TIIDT5 | EQU  | X'05' | 1052-7 |
| AB 0000A |             | TIISDA | DS   | XL2  | SYMBOLIC DEVICE ADDRESS |

## Terminal I/O Control Block (CHATIO)

The Terminal I/O Control Block contains channel programs, and related control information for terminal I/O.   CHATIO occupies 64 bytes of storage.

### CHATIO Storage map

| DEC | HEX | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 0 | 0 | TIOFPT | | | | TIORPT | | |
| 8 | 8 | TIORSD | | TIORTY | TIORCA | TIOFB | UNNAMED | UNNAMED | UNNAMED |
| 16 | 10 | UNNAMED | TIOFL1 | UNNAMED | | TIOMCB | | |
| 24 | 18 | TIOCOD | TIOCAD | | TIOCF1 | UNNAMED | TIOCNT | |
| 32 | 20 | UNNAMED | | | | | | | |
| 40 | 28 | UNNAMED | | | | | | | |
| 48 | 30 | UNNAMED | | | | | | | |
| 56 | 38 | UNNAMED | | | | | | | |

### ORG  CHATIO+46

| DEC | HEX | | | | |
|---|---|---|---|---|---|
| 46 | 2E | | | | TIODSP |
| 48 | 30 | TIOCSW | | | |
| 56 | 38 | TIOSI | UNNAMED | TIOTDA | TIOTDE |

### Fields in CHATIO -- by displacement

| DEC | HEX | FIELD | | DEC | HEX | FIELD | | DEC | HEX | FIELD | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0000 | 0000 | TIOFPT | | 0020 | 0014 | TIOMCB | | 0056 | 0038 | TIOSI | |
| 0004 | 0004 | TIORPT | | 0024 | 0018 | TIOCOD | | 0056 | 0038 | TIOCR | (EQU) |
| 0008 | 0008 | TIORSD | | 0024 | 0018 | TIOCCW | | 0056 | 0038 | TIOIR | (EQU) |
| 0010 | 000A | TIORTY | | 0025 | 0019 | TIOCAD | | 0056 | 0038 | TIOBO | (EQU) |
| 0011 | 000B | TIORCA | | 0028 | 001C | TIOPCI | (EQU) | 0056 | 0038 | TIOEC | (EQU) |
| 0012 | 000C | TIOFB | | 0028 | 001C | TIOSKIP | (EQU) | 0056 | 0038 | TIODC | (EQU) |
| 0017 | 0011 | TIOTMR | (EQU) | 0028 | 001C | TIOSLI | (EQU) | 0056 | 0038 | TIOOR | (EQU) |
| 0017 | 0011 | TIOUXC | (EQU) | 0028 | 001C | TIOCC | (EQU) | 0056 | 0038 | TIOLD | (EQU) |
| 0017 | 0011 | TIOHSI | (EQU) | 0028 | 001C | TIOCD | (EQU) | 0056 | 0038 | TIOTO | (EQU) |
| 0017 | 0011 | TIOSNS | (EQU) | 0028 | 001C | TIOCF1 | | 0058 | 003A | TIOTDA | |
| 0017 | 0011 | TIOHIO | (EQU) | 0030 | 001E | TIOCNT | | 0060 | 003C | TIOTDE | |
| 0017 | 0011 | TIOSIO | (EQU) | 0046 | 002E | TIODSP | | 0060 | 003C | TIOERR | (EQU) |
| 0017 | 0011 | TIOFL1 | | 0048 | 0030 | TIOCSW | | | | | |
| 0020 | 0014 | TIORTC | (EQU) | 0052 | 0034 | TIOST | (EQU) | | | | |

### Alphabetical list of fields in CHATIO

| FIELD | DEC | HEX | | FIELD | DEC | HEX | | FIELD | DEC | HEX | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| TIOBO | 0056 | 0038 | (EQU) | TIOFB | 0012 | 000C | | TIORTY | 0010 | 000A | |
| TIOCAD | 0025 | 0019 | | TIOFL1 | 0017 | 0011 | | TIOSI | 0056 | 0038 | |
| TIOCC | 0028 | 001C | (EQU) | TIOFPT | 0000 | 0000 | | TIOSIO | 0017 | 0011 | (EQU) |
| TIOCCW | 0024 | 0018 | | TIOHIO | 0017 | 0011 | (EQU) | TIOSKIP | 0028 | 001C | (EQU) |
| TIOCD | 0028 | 001C | (EQU) | TIOHSI | 0017 | 0011 | (EQU) | TIOSLI | 0028 | 001C | (EQU) |
| TIOCF1 | 0028 | 001C | | TIOIR | 0056 | 0038 | (EQU) | TIOSNS | 0017 | 0011 | (EQU) |
| TIOCNT | 0030 | 001E | | TIOLD | 0056 | 0038 | (EQU) | TIOST | 0052 | 0034 | (EQU) |
| TIOCOD | 0024 | 0018 | | TIOMCB | 0020 | 0014 | | TIOTDA | 0058 | 003A | |
| TIOCR | 0056 | 0038 | (EQU) | TIOOR | 0056 | 0038 | (EQU) | TIOTDE | 0060 | 003C | |
| TIOCSW | 0048 | 0030 | | TIOPCI | 0028 | 001C | (EQU) | TIOTMR | 0017 | 0011 | (EQU) |
| TIODC | 0056 | 0038 | (EQU) | TIORCA | 0011 | 000B | | TIOTO | 0056 | 0038 | (EQU) |
| TIODSP | 0046 | 002E | | TIORPT | 0004 | 0004 | | TIOUXC | 0017 | 0011 | (EQU) |
| TIOEC | 0056 | 0038 | (EQU) | TIORSD | 0008 | 0008 | | | | | |
| TIOERR | 0060 | 003C | (EQU) | TIORTC | 0020 | 0014 | (EQU) | | | | |

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|---|---|---|---|---|---|
| | AC 00000 | CHATIO | DSECT | | TERMINAL I/O CONTROL |
| | | * | | | BLOCK(TIOCB) |
| AC 00000 | | | DS | 0D | |
| AC 00000 | | TIOFPT | DS | F | FORWARD POINTER |
| AC 00004 | | TIORPT | DS | F | REVERSE POINTER |
| AC 00008 | | TIORSD | DS | H | RESIDUAL COUNT FROM ERROR |
| | | * | | | CSW |
| AC 0000A | | TIORTY | DS | XL1 | RETRY COUNT FOR ERROR |
| | | * | | | RECOVERY PROCEDURES |
| AC 0000B | | TIORCA | DS | XL1 | RELATIVE COMMAND ADDRESS OF |
| | | * | | | ERROR CCW |
| AC 0000C | | TIOFB | DS | XL1 | FUNCTION BYTE FOR CCW 1 |
| | 00000001 | TIODO | EQU | X'01' | DATA OUT FUNCTION CODE |
| | 00000002 | TIODI | EQU | X'02' | DATA IN FUNCTION CODE |
| | 00000004 | TIOWA | EQU | X'04' | WRITE ADDRESSING FUNCTION |
| | | * | | | CODE |
| | 00000008 | TIOWP | EQU | X'08' | WRITE POLLING FUNCTION CODE |
| | 00000010 | TIORP | EQU | X'10' | RESPONSE POLLING FUNCTION |
| | | * | | | CODE |
| | 00000020 | TIORA | EQU | X'20' | RESPONSE ADDRESSING |
| | | * | | | FUNCTION CODE |
| | 00000040 | TIOCL | EQU | X'40' | CONTROL FUNCTION CODE |
| | 00000080 | TIOTC | EQU | X'80' | TIC FUNCTION CODE |
| AC 0000D | | | DS | XL1 | FUNCTION BYTE FOR CCW 2 |
| AC 0000E | | | DS | XL1 | FUNCTION BYTE FOR CCW 3 |
| AC 0000F | | | DS | XL1 | FUNCTION BYTE FOR CCW 4 |
| AC 00010 | | | DS | XL1 | FUNCTION BYTE FOR CCW 5 |
| AC 00011 | | TIOFL1 | DS | XL1 | FLAG BYTE |
| | AC 00011 | TIOSIO | EQU | TIOFL1 | START I/O |
| | 00000080 | TIOSIOM | EQU | X'80' | 1=START I/O HAS BEEN ISSUED |
| | AC 00011 | TIOHIO | EQU | TIOFL1 | HALT I/O |
| | 00000040 | TIOHIOM | EQU | X'40' | 1=HALT I/O HAS BEEN ISSUED |
| | AC 00011 | TIOSNS | EQU | TIOFL1 | SENSE |
| | 00000020 | TIOSNSM | EQU | X'20' | 1=SENSE HAS BEEN ISSUED |
| | AC 00011 | TIOHSI | EQU | TIOFL1 | |
| | 00000010 | TIOHSIM | EQU | X'10' | |
| | AC 00011 | TIOUXC | EQU | TIOFL1 | UNIT EXCEPTION AND UNIT |
| | | * | | | CHECK FLAG |
| | 00000008 | TIOUXCM | EQU | X'08' | 1=UNIT EXCEPTION AND CHECK |
| | | * | | | OCCURED TOGETHER |
| | AC 00011 | TIOTMR | EQU | TIOFL1 | TIMER ISSUED FLAG |
| | 00000004 | TIOTMRM | EQU | X'04' | 1=TIMER ISSUED |
| AC 00012 | | | DS | XL2 | RESERVED FOR FUTURE USE |
| AC 00014 | | TIOMCB | DS | F | MCB POINTER |
| AC 00018 | | TIOCCW | DS | 0D | CCW 1 |
| AC 00018 | | TIOCOD | DS | XL1 | COMMAND CODE - OPERATION TO |
| | | * | | | BE DONE |
| | 00000001 | TIOCD1 | EQU | X'01' | WRITE |
| | 00000002 | TIOCD2 | EQU | X'02' | READ |
| | 00000004 | TIOCD3 | EQU | X'04' | SENSE |
| | 0000000D | TIOCD4 | EQU | X'0D' | BREAK |
| | 00000006 | TIOCD5 | EQU | X'06' | PREPARE |
| | 0000000A | TIOCD6 | EQU | X'0A' | INHIBIT |
| | 00000013 | TIOCD7 | EQU | X'13' | SADZER |
| | 00000017 | TIOCD8 | EQU | X'17' | SADONE |
| | 0000001B | TIOCD9 | EQU | X'1B' | SADTWO |
| | 0000001F | TIOCDA | EQU | X'1F' | SADTHREE |
| | 00000027 | TIOCDB | EQU | X'27' | ENABLE |
| | 0000002F | TIOCDC | EQU | X'2F' | DISABLE |
| | 00000003 | TIOCDD | EQU | X'03' | NO-OP |
| | 00000008 | TIOCDE | EQU | X'08' | TIC |
| AC 00019 | | TIOCAD | DS | XL3 | DATA ADDRESS - CORE ADDRESS |
| | | * | | | FOR DATA |
| AC 0001C | | TIOCF1 | DS | XL1 | FLAG BYTE 1 |
| | AC 0001C | TIOCD | EQU | TIOCF1 | CHAIN-DATA(CD)FLAG |
| | 00000080 | TIOCDM | EQU | X'80' | CD=1 - CHAINING OF DATA |
| | AC 0001C | TIOCC | EQU | TIOCF1 | CHAIN-COMMAND(CC)FLAG |
| | 00000040 | TIOCCM | EQU | X'40' | CC=1 AND CD=0 - CHAINNING |

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| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|---|---|---|---|---|---|
| | | * | | | COMMANDS |
| | AC 0001C | TIOSLI | EQU | TIOCF1 | |
| | | * | | | SUPPRESS-LENGTH-INDICATION(SLI)FLA |
| | 00000020 | TIOSLIM | EQU | X'20' | CONTROLS SIGNALING OF |
| | | * | | | INCORRECT LENGTH |
| | | * | | | NOTE:  SEE SYSTEM/360 |
| | | * | | | PRINCIPALS OF |
| | | * | | | OPERATION FOR DETAILS |
| | AC 0001C | TIOSKIP | EQU | TIOCF1 | SKIP(SKIP)FLAG |
| | 00000010 | TIOSKIPM | EQU | X'10' | SKIP=1 - NO TRANSFER OF |
| | | * | | | DATA TO STORAGE |
| | AC 0001C | TIOPCI | EQU | TIOCF1 | |
| | | * | | | PROGRAMMED-CONTROLLED-INTERRUPT(PCI)F |
| | 00000008 | TIOPCIM | EQU | X'08' | PCI=1 - CAUSE INTERRUPT |
| | | * | | | WHEN CCW BECOMES ACTIV |
| | | * BITS 37 THROUGH 39 OF THE CCE MUST BE ZERO | | | | |
| AC 0001D | | | DS | XL1 | UNUSED IN THE CCW |
| AC 0001E | | TIOCNT | DS | H | COUNT OF STORAGE BYTES |
| | | * | | | ASSOCIATED WITH CCW |
| AC 00020 | | | DS | D | CCW 2 |
| AC 00028 | | | DS | D | CCW 3 |
| AC 00030 | | | DS | D | CCW 4 |
| AC 00038 | | | DS | D | CCW 5 |
| | AC 0002E | | |ORG| | CHATIO+46 | AREA TO SAVE INFO ON SENSE |
| AC 0002E | | TIODSP | DS | H | DISPLACEMENT TO LAST DATA |
| | | * | | | IN CHARACTER |
| AC 00030 | | TIOCSW | DS | D | CSW FOR ERROR CAUSING SENSE |
| | AC 00034 | TIOST | EQU | TIOCSW+4 | STATUS PORTION FROM CSW |
| AC 00038 | | TIOSI | DS | XL1 | SENSE INFORMATION BYTE |
| | AC 00038 | TIOTO | EQU | TIOSI | TIMEOUT |
| | 00000001 | TIOTOM | EQU | X'01' | 1=TIMEOUT OCCURED |
| | AC 00038 | TIOLD | EQU | TIOSI | LOST DATA |
| | 00000002 | TIOLDM | EQU | X'02' | 1=DATA HAS BEEN LOST |
| | AC 00038 | TIOOR | EQU | TIOSI | OVERRUN |
| | 00000004 | TIOORM | EQU | X'04' | 1=CHANNEL FAILED TO RESPOND |
| | | * | | | ON TIME |
| | AC 00038 | TIODC | EQU | TIOSI | DATA CHECK |
| | 00000008 | TIODCM | EQU | X'08' | 1=DATA ERROR OTHER THAN |
| | | * | | | BUS-OUT |
| | AC 00038 | TIOEC | EQU | TIOSI | EQUIPMENT CHECK |
| | 00000010 | TIOECM | EQU | X'10' | 1=EQUIPMENT MALFUNCTION |
| | AC 00038 | TIOBO | EQU | TIOSI | BUS-OUT CHECK |
| | 00000020 | TIOBOM | EQU | X'20' | 1=INVALID PARITY DETECTED |
| | AC 00038 | TIOIR | EQU | TIOSI | INTERVENTION REQUIRED |
| | 00000040 | TIOIRM | EQU | X'40' | 1=NO EXECUTION INTERVENTION |
| | | * | | | NEEDED AT DEVICE |
| | AC 00038 | TIOCR | EQU | TIOSI | COMMAND REJECT |
| | 00000080 | TIOCRM | EQU | X'80' | 1=DEVICE DETECTED |
| | | * | | | PROGRAMMING ERROR |
| AC 00039 | | | DS | XL1 | UNUSED |
| AC 0003A | | TIOTDA | DS | H | TEMPORARY PHYSICAL DEVICE |
| | | * | | | ADDRESS |
| AC 0003C | | TIOTDE | DS | F | TEMPORARY TDE ENTRY POINTER |
| | AC 0003C | TIOERR | EQU | TIOTDE | ON SENSE CONTAINS PTR TO |
| | | * | | | ERROR TIOCB |
| | 00000040 | TIOLGH | EQU | *-TIOFPT | |
| | AC 00014 | TIORTC | EQU | TIOMCB | TEMP |
| | | * | | | **************************** |

## Terminal Access Operational Status Table (CHATOS)

The Terminal Access (TAM) Operational Status Table (TOS) provides intercommunication between TAM read/write and TAM posting, and also provides work and save areas relative to each section.
The TOS occupies one page (4096 bytes) of virtual storage, aligned on page boundaries.
The TOS page, connected to a user-opened DCB, is obtained by TAM OPEN for each DCB opened and remains active until the DCB is closed.

### CHATOS Storage map

| DEC | HEX | | | | | |
|-----|-----|---|---|---|---|---|
| 0 | 0 | TOSIOR | | | | |
| 1920 | 780 | TOSCCW | | | | |
| 3520 | DC0 | TOSLF | | | | |
| 3720 | E88 | TOSEB | | TOSTN | | |
| 3728 | E90 | TOSWL | | TOSR1 | UNNAMED | |
| 3736 | E98 | TOSDD | | TOSOT | TOSSQC | TOSTEM1 |
| 3744 | EA0 | TOSEOL | | TOSSBZ | TOSP50 | TOSP55 |
| 3752 | EA8 | TOSRSC | | | | |
| | | TOSRS1 | | | | |
| 3816 | EE8 | | | TOSRS2 | | |
| 3824 | EF0 | TOSRS3 | | TOSRS4 | | |
| 3832 | EF8 | TOSRSF | TOSRS6 | TOSRS7 | TOSRS8 | |
| 3840 | F00 | TOSRS9 | TOSRS0 | TOSRSA | TOSRSB | |
| 3848 | F08 | TOSRSE | | | | |
| 3872 | F20 | | | | RESERVED | |
| 3880 | F28 | TOSPS1 | | | | |

| DEC | HEX | | | |
|---|---|---|---|---|
| 3944 | F68 | TOSRCD | | |
| 4016 | FB0 | | | |
| | | ORG OVERLAP | | |
| 4040 | FC8 | TOSPS2 | TOSPS4 | TOSPS5 |
| 4048 | FD0 | TOSPS6 | TOSPS7 | |
| 4056 | FD8 | TOSP60 / TOSPP3 / TOSPP4 | TOSP45 / TO$PCW | TOSBFL |
| 4064 | FE0 | TOSEMCD / TOSTEM2 / TOSRV2 | TOSRSV | |
| 4072 | FE8 | TOSSLN / RESERVED | TOSFCCW | |
| 4080 | FF0 | TOSSDT | | |
| 4088 | FF8 | TOSRV3 | | |

ORG   TOSDD

| 3736 | E98 | TOSD1 | TOSD2 |
|---|---|---|---|

ORG   TOSD1

| 3736 | E98 | TOSDT | TOSDC | TOSAT | TOSAA |
|---|---|---|---|---|---|

ORG   TOSOT

| 3740 | E9C | TOSOB | TOSFA |
|---|---|---|---|

ORG   TOSRSF

| 3832 | EF8 | TOSSF1 | TOSFS2 |
|---|---|---|---|

ORG   TOSRCD

| DEC | HEX | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 3944 | F68 | TOSRC1 | TOSRC2 | TOSRC3 | TOSRC4 | TOSRC5 | TOSRC6 | TOSRC7 | TOSRC8 |
| 3952 | F70 | TOSRC9 | TOSRCA | TOSTOF | RESERVED | | | | |
| 3960 | F78 | TOSRCS | | | | | | | |
| 3968 | F80 | TOSRSN | TOSRSD | TOSRDT | TOSRCH | TOSRLF | TOSRWB | | |
| 3976 | F88 | TOSE08 | TOSE00 | TOSE10 | TOSE01 | TOSE02 | TOSE03 | TOSE04 | |
| 3984 | F90 | TOSE05 | TOSE06 | TOSE07 | TOSS3C | | | | |
| | | TOSTEM3 | | | | | | | |

# Fields in CHATOS -- by displacement

| DEC | HEX | FIELD | |
|---|---|---|---|
| 0000 | 0000 | TOSIOR | |
| 1920 | 0780 | TOSCCW | |
| 3520 | 0DC0 | TOSER3 | (EQU) |
| 3520 | 0DC0 | TOSER2 | (EQU) |
| 3520 | 0DC0 | TOSER1 | (EQU) |
| 3520 | 0DC0 | TOSCO | (EQU) |
| 3520 | 0DC0 | TOSPS | (EQU) |
| 3520 | 0DC0 | TOSAR | (EQU) |
| 3520 | 0DC0 | TOSWP | (EQU) |
| 3520 | 0DC0 | TOSWA | (EQU) |
| 3520 | 0DC0 | TOSRE | (EQU) |
| 3520 | 0DC0 | TOSWO | (EQU) |
| 3520 | 0DC0 | TOSDI | (EQU) |
| 3520 | 0DC0 | TOSDO | (EQU) |
| 3520 | 0DC0 | TOSEC | (EQU) |
| 3520 | 0DC0 | TOSDL | (EQU) |
| 3520 | 0DC0 | TOSLF | |
| 3720 | 0E88 | TOSEB | |
| 3724 | 0E8C | TOSTN | |
| 3728 | 0E90 | TOSWL | |
| 3732 | 0E94 | TOSR1 | |
| 3736 | 0E98 | TOSDT | |
| 3736 | 0E98 | TOSD1 | |
| 3736 | 0E98 | TOST4 | (EQU) |
| 3736 | 0E98 | TOST3 | (EQU) |
| 3736 | 0E98 | TOST2 | (EQU) |
| 3736 | 0E98 | TOST1 | (EQU) |
| 3736 | 0E98 | TOSDD | |
| 3737 | 0E99 | TOSDC | |
| 3737 | 0E99 | TOSC2 | (EQU) |
| 3737 | 0E99 | TOSC1 | (EQU) |
| 3738 | 0E9A | TOSAT | |
| 3738 | 0E9A | TOSD2 | |
| 3738 | 0E9A | TOSU4 | (EQU) |
| 3738 | 0E9A | TOSU3 | (EQU) |
| 3738 | 0E9A | TOSU2 | (EQU) |
| 3738 | 0E9A | TOSU1 | (EQU) |
| 3738 | 0E9A | TOSUT | (EQU) |
| 3738 | 0E9A | TOSA5 | (EQU) |
| 3738 | 0E9A | TOSA4 | (EQU) |
| 3738 | 0E9A | TOSA3 | (EQU) |
| 3738 | 0E9A | TOSA2 | (EQU) |
| 3738 | 0E9A | TOSA1 | (EQU) |
| 3739 | 0E9B | TOSAA | |
| 3740 | 0E9C | TOSOB | |
| 3740 | 0E9C | TOSOA | (EQU) |
| 3740 | 0E9C | TOSO9 | (EQU) |
| 3740 | 0E9C | TOSO8 | (EQU) |
| 3740 | 0E9C | TOSO7 | (EQU) |
| 3740 | 0E9C | TOSO6 | (EQU) |
| 3740 | 0E9C | TOSO5 | (EQU) |
| 3740 | 0E9C | TOSO4 | (EQU) |
| 3740 | 0E9C | TOSO3 | (EQU) |
| 3740 | 0E9C | TOSO2 | (EQU) |
| 3740 | 0E9C | TOSO1 | (EQU) |
| 3740 | 0E9C | TOSW7 | (EQU) |

| DEC | HEX | FIELD | |
|---|---|---|---|
| 3740 | 0E9C | TOSW6 | (EQU) |
| 3740 | 0E9C | TOSR5 | (EQU) |
| 3740 | 0E9C | TOSW5 | (EQU) |
| 3740 | 0E9C | TOSR4 | (EQU) |
| 3740 | 0E9C | TOSW4 | (EQU) |
| 3740 | 0E9C | TOSR3 | (EQU) |
| 3740 | 0E9C | TOSW3 | (EQU) |
| 3740 | 0E9C | TOSW2 | (EQU) |
| 3740 | 0E9C | TOSR0 | (EQU) |
| 3740 | 0E9C | TOSRI | (EQU) |
| 3740 | 0E9C | TOSW1 | (EQU) |
| 3740 | 0E9C | TOSOT | (EQU) |
| 3741 | 0E9D | TOSFA | |
| 3741 | 0E9D | TOSSA | (EQU) |
| 3741 | 0E9D | TOSSL | (EQU) |
| 3742 | 0E9E | TOSSQC | |
| 3743 | 0E9F | TOSTEM1 | |
| 3744 | 0EA0 | TOSEOL | |
| 3748 | 0EA4 | TOSSBZ | |
| 3750 | 0EA6 | TOSP50 | |
| 3751 | 0EA7 | TOSP55 | |
| 3752 | 0EA8 | TOSRSC | |
| 3756 | 0EAC | TOSRS1 | |
| 3820 | 0EEC | TOSRS2 | |
| 3824 | 0EF0 | TOSRS3 | |
| 3828 | 0EF4 | TOSRS4 | |
| 3832 | 0EF8 | TOSSF1 | |
| 3832 | 0EF8 | TOSF20 | |
| 3832 | 0EF8 | TOSF21 | |
| 3832 | 0EF8 | TOSF19 | (EQU) |
| 3832 | 0EF8 | TOSF18 | (EQU) |
| 3832 | 0EF8 | TOSF17 | (EQU) |
| 3832 | 0EF8 | TOSF16 | (EQU) |
| 3832 | 0EF8 | TOSF13 | (EQU) |
| 3832 | 0EF8 | TOSF12 | (EQU) |
| 3832 | 0EF8 | TOSF11 | (EQU) |
| 3832 | 0EF8 | TOSF10 | (EQU) |
| 3832 | 0EF8 | TOSRSF | (EQU) |
| 3833 | 0EF9 | TOSFS2 | |
| 3834 | 0EFA | TOSRS6 | |
| 3836 | 0EFC | TOSRS7 | |
| 3838 | 0EFE | TOSRS8 | |
| 3840 | 0F00 | TOSRS9 | |
| 3842 | 0F02 | TOSRS0 | |
| 3844 | 0F04 | TOSRSA | |
| 3846 | 0F06 | TOSRSB | |
| 3848 | 0F08 | TOSRSE | |
| 3880 | 0F28 | TOSPS1 | |
| 3944 | 0F68 | TOSRC1 | |
| 3944 | 0F68 | TOSRCD | |
| 3945 | 0F69 | TOSRC2 | |
| 3946 | 0F6A | TOSRC3 | |
| 3947 | 0F6B | TOSRC4 | |
| 3948 | 0F6C | TOSRC5 | |
| 3949 | 0F6D | TOSRC6 | |
| 3950 | 0F6E | TOSRC7 | |

| DEC | HEX | FIELD | |
|---|---|---|---|
| 3951 | 0F6F | TOSRC8 | |
| 3952 | 0F70 | TOSRC9 | |
| 3953 | 0F71 | TOSRCA | |
| 3954 | 0F72 | TOSTOF | |
| 3954 | 0F72 | TOSTO | (EQU) |
| 3960 | 0F78 | TOSRCS | |
| 3968 | 0F80 | TOSRSN | |
| 3969 | 0F81 | TOSRSD | |
| 3971 | 0F83 | TOSRDT | |
| 3972 | 0F84 | TOSRCH | |
| 3973 | 0F85 | TOSRLF | |
| 3974 | 0F86 | TOSRWE | |
| 3976 | 0F88 | TOSE08 | |
| 3978 | 0F8A | TOSE00 | |
| 3979 | 0F8B | TOSE10 | |
| 3980 | 0F8C | TOSE01 | |
| 3981 | 0F8D | TOSE02 | |
| 3982 | 0F8E | TOSE03 | |
| 3983 | 0F8F | TOSE04 | |
| 3984 | 0F90 | TOSE05 | |
| 3985 | 0F91 | TOSE06 | |
| 3986 | 0F92 | TOSE07 | |
| 3987 | 0F93 | TOSS3C | |
| 3988 | 0F94 | TOSTEM3 | |
| 4040 | 0FC8 | TOSPS2 | |
| 4044 | 0FCC | TOSPS4 | |
| 4046 | 0FCE | TOSPS5 | |
| 4048 | 0FD0 | TOSPS6 | |
| 4052 | 0FD4 | TOSPS7 | |
| 4056 | 0FD8 | TOSP60 | |
| 4058 | 0FDA | TOSP37 | (EQU) |
| 4058 | 0FDA | TOSP36 | (EQU) |
| 4058 | 0FDA | TOSP35 | (EQU) |
| 4058 | 0FDA | TOSP34 | (EQU) |
| 4058 | 0FDA | TOSP33 | (EQU) |
| 4058 | 0FDA | TOSP32 | (EQU) |
| 4058 | 0FDA | TOSP31 | (EQU) |
| 4058 | 0FDA | TOSP30 | (EQU) |
| 4058 | 0FDA | TOSPP3 | |
| 4059 | 0FDB | TOSP44 | (EQU) |
| 4059 | 0FDB | TOSP43 | (EQU) |
| 4059 | 0FDB | TOSP42 | (EQU) |
| 4059 | 0FDB | TOSP41 | (EQU) |
| 4059 | 0FDB | TOSPP4 | |
| 4060 | 0FDC | TOSP45 | |
| 4061 | 0FDD | TOSPCW | |
| 4062 | 0FDE | TOSBFL | |
| 4064 | 0FE0 | TOSEMCD | |
| 4065 | 0FE1 | TOSTEM2 | |
| 4066 | 0FE2 | TOSRV2 | |
| 4068 | 0FE4 | TOSRSV | |
| 4072 | 0FE8 | TOSSLN | |
| 4076 | 0FEC | TOSFCCW | |
| 4080 | 0FF0 | TOSSDT | |
| 4084 | 0FF4 | TOSRV3 | |

## Alphabetical list of fields in CHATOS

| FIELD | DEC | HEX | | FIELD | DEC | HEX | | FIELD | DEC | HEX | |
|-------|-----|-----|---|-------|-----|-----|---|-------|-----|-----|---|
| TOSAA | 3739 | 0E9B | | TOSO1 | 3740 | 0E9C | (EQU) | TOSRSE | 3848 | 0F08 | |
| TOSAR | 3520 | 0DC0 | (EQU) | TOSO2 | 3740 | 0E9C | (EQU) | TOSRSF | 3832 | 0EF8 | |
| TOSAT | 3738 | 0E9A | | TOSO3 | 3740 | 0E9C | (EQU) | TOSRSN | 3968 | 0F80 | |
| TOSA1 | 3738 | 0E9A | (EQU) | TOSO4 | 3740 | 0E9C | (EQU) | TOSRSV | 4068 | 0FE4 | |
| TOSA2 | 3738 | 0E9A | (EQU) | TOSO5 | 3740 | 0E9C | (EQU) | TOSRS0 | 3842 | 0F02 | |
| TOSA3 | 3738 | 0E9A | (EQU) | TOSO6 | 3740 | 0E9C | (EQU) | TOSRS1 | 3756 | 0EAC | |
| TOSA4 | 3738 | 0E9A | (EQU) | TOSO7 | 3740 | 0E9C | (EQU) | TOSRS2 | 3820 | 0EEC | |
| TOSA5 | 3738 | 0E9A | (EQU) | TOSO8 | 3740 | 0E9C | (EQU) | TOSRS3 | 3824 | 0EF0 | |
| TOSBFL | 4062 | 0FDE | | TOSO9 | 3740 | 0E9C | (EQU) | TOSRS4 | 3828 | 0EF4 | |
| TOSCCW | 1920 | 0780 | | TOSPCW | 4061 | 0FDD | | TOSRS6 | 3834 | 0EFA | |
| TOSCO | 3520 | 0DC0 | (EQU) | TOSPP3 | 4058 | 0FDA | | TOSRS7 | 3836 | 0EFC | |
| TOSC1 | 3737 | 0E99 | (EQU) | TOSPP4 | 4059 | 0FDB | | TOSRS8 | 3838 | 0EFE | |
| TOSC2 | 3737 | 0E99 | (EQU) | TOSPS | 3520 | 0DC0 | (EQU) | TOSRS9 | 3840 | 0F00 | |
| TOSDC | 3737 | 0E99 | | TOSPS1 | 3880 | 0F28 | | TOSRV2 | 4066 | 0FE2 | |
| TOSDD | 3736 | 0E98 | | TOSPS2 | 4040 | 0FC8 | | TOSRV3 | 4084 | 0FF4 | |
| TOSDI | 3520 | 0DC0 | (EQU) | TOSPS4 | 4044 | 0FCC | | TOSRWE | 3974 | 0F86 | |
| TOSDL | 3520 | 0DC0 | (EQU) | TOSPS5 | 4046 | 0FCE | | TOSR0 | 3740 | 0E9C | (EQU) |
| TOSDO | 3520 | 0DC0 | (EQU) | TOSPS6 | 4048 | 0FD0 | | TOSR1 | 3732 | 0E94 | |
| TOSDT | 3736 | 0E98 | | TOSPS7 | 4052 | 0FD4 | | TOSR3 | 3740 | 0E9C | (EQU) |
| TOSD1 | 3736 | 0E98 | | TOSP30 | 4058 | 0FDA | (EQU) | TOSR4 | 3740 | 0E9C | (EQU) |
| TOSD2 | 3738 | 0E9A | | TOSP31 | 4058 | 0FDA | (EQU) | TOSR5 | 3740 | 0E9C | (EQU) |
| TOSEB | 3720 | 0E88 | | TOSP32 | 4058 | 0FDA | (EQU) | TOSSA | 3741 | 0E9D | (EQU) |
| TOSEC | 3520 | 0DC0 | (EQU) | TOSP33 | 4058 | 0FDA | (EQU) | TOSSBZ | 3748 | 0EA4 | |
| TOSEMCD | 4064 | 0FE0 | | TOSP34 | 4058 | 0FDA | (EQU) | TOSSDT | 4080 | 0FF0 | |
| TOSEOL | 3744 | 0EA0 | | TOSP35 | 4058 | 0FDA | (EQU) | TOSSF1 | 3832 | 0EF8 | |
| TOSER1 | 3520 | 0DC0 | (EQU) | TOSP36 | 4058 | 0FDA | (EQU) | TOSSL | 3741 | 0E9D | (EQU) |
| TOSER2 | 3520 | 0DC0 | (EQU) | TOSP37 | 4058 | 0FDA | (EQU) | TOSSLN | 4072 | 0FE8 | |
| TOSER3 | 3520 | 0DC0 | (EQU) | TOSP41 | 4059 | 0FDB | (EQU) | TOSSQC | 3742 | 0E9E | |
| TOSE00 | 3978 | 0F8A | | TOSP42 | 4059 | 0FDB | (EQU) | TOSS3C | 3987 | 0F93 | |
| TOSE01 | 3980 | 0F8C | | TOSP43 | 4059 | 0FDB | (EQU) | TOSTEM1 | 3743 | 0E9F | |
| TOSE02 | 3981 | 0F8D | | TOSP44 | 4059 | 0FDB | (EQU) | TOSTEM2 | 4065 | 0FE1 | |
| TOSE03 | 3982 | 0F8E | | TOSP45 | 4060 | 0FDC | | TOSTEM3 | 3988 | 0F94 | |
| TOSE04 | 3983 | 0F8F | | TOSP50 | 3750 | 0EA6 | | TOSTN | 3724 | 0E8C | |
| TOSE05 | 3984 | 0F90 | | TOSP55 | 3751 | 0EA7 | | TOSTO | 3954 | 0F72 | (EQU) |
| TOSE06 | 3985 | 0F91 | | TOSP60 | 4056 | 0FD8 | | TOSTOF | 3954 | 0F72 | |
| TOSE07 | 3986 | 0F92 | | TOSRCA | 3953 | 0F71 | | TOST1 | 3736 | 0E98 | (EQU) |
| TOSE08 | 3976 | 0F88 | | TOSRCD | 3944 | 0F68 | | TOST2 | 3736 | 0E98 | (EQU) |
| TOSE10 | 3979 | 0F8B | | TOSRCH | 3972 | 0F84 | | TOST3 | 3736 | 0E98 | (EQU) |
| TOSFA | 3741 | 0E9D | | TOSRCS | 3960 | 0F78 | | TOST4 | 3736 | 0E98 | (EQU) |
| TOSFCCW | 4076 | 0FEC | | TOSRC1 | 3944 | 0F68 | | TOSUT | 3738 | 0E9A | (EQU) |
| TOSFS2 | 3833 | 0EF9 | | TOSRC2 | 3945 | 0F69 | | TOSU1 | 3738 | 0E9A | (EQU) |
| TOSF10 | 3832 | 0EF8 | (EQU) | TOSRC3 | 3946 | 0F6A | | TOSU2 | 3738 | 0E9A | (EQU) |
| TOSF11 | 3832 | 0EF8 | (EQU) | TOSRC4 | 3947 | 0F6B | | TOSU3 | 3738 | 0E9A | (EQU) |
| TOSF12 | 3832 | 0EF8 | (EQU) | TOSRC5 | 3948 | 0F6C | | TOSU4 | 3738 | 0E9A | (EQU) |
| TOSF13 | 3832 | 0EF8 | (EQU) | TOSRC6 | 3949 | 0F6D | | TOSWA | 3520 | 0DC0 | (EQU) |
| TOSF16 | 3832 | 0EF8 | (EQU) | TOSRC7 | 3950 | 0F6E | | TOSWL | 3728 | 0E90 | |
| TOSF17 | 3832 | 0EF8 | (EQU) | TOSRC8 | 3951 | 0F6F | | TOSWO | 3520 | 0DC0 | (EQU) |
| TOSF18 | 3832 | 0EF8 | (EQU) | TOSRC9 | 3952 | 0F70 | | TOSWP | 3520 | 0DC0 | (EQU) |
| TOSF19 | 3832 | 0EF8 | (EQU) | TOSRDT | 3971 | 0F83 | | TOSW1 | 3740 | 0E9C | (EQU) |
| TOSF20 | 3832 | 0EF8 | (EQU) | TOSRE | 3520 | 0DC0 | (EQU) | TOSW2 | 3740 | 0E9C | (EQU) |
| TOSF21 | 3832 | 0EF8 | (EQU) | TOSRI | 3740 | 0E9C | (EQU) | TOSW3 | 3740 | 0E9C | (EQU) |
| TOSIOR | 0000 | 0000 | | TOSRLF | 3973 | 0F85 | | TOSW4 | 3740 | 0E9C | (EQU) |
| TOSLF | 3520 | 0DC0 | | TOSRSA | 3844 | 0F04 | | TOSW5 | 3740 | 0E9C | (EQU) |
| TOSOA | 3740 | 0E9C | (EQU) | TOSRSB | 3846 | 0F06 | | TOSW6 | 3740 | 0E9C | (EQU) |
| TOSOB | 3740 | 0E9C | | TOSRSC | 3752 | 0EA8 | | TOSW7 | 3740 | 0E9C | (EQU) |
| TOSOT | 3740 | 0E9C | | TOSRSD | 3969 | 0F81 | | | | | |

Assembler listing of CHATOS

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|---|---|---|---|---|---|
| | AD 00000 | CHATOS | DSECT | | |
| AD 00000 | | | DS | 0D | ALIGN ON DBL WORD BOUNDARY |
| AD 00000 | | TOSIOR | DS | 240D | AREA USED TO CREATE CHAIOR |
| AD 00780 | | TOSCCW | DS | 200D | CCW BUILD AREA |
| AD 00DC0 | | TOSLF | DS | XL200 | LOGICAL FUNCTION BYTES |
| | AD 00DC0 | TOSDL | EQU | TOSLF | LOGICAL FUNCTION CODE DIAL |
| | 00000002 | TOSDLM | EQU | X'02' | LOGICAL FUNCTION CODE DIAL MA |
| | AD 00DC0 | TOSEC | EQU | TOSLF | LOGICAL FUNCTION CODE END CON |
| | 00000004 | TOSECM | EQU | X'04' | LOGICAL FUNCTION CODE END CON |
| | AD 00DC0 | TOSDO | EQU | TOSLF | LOGICAL FUNCTION CODE DATA OU |
| | 00000006 | TOSDOM | EQU | X'06' | LOGICAL FUNCTION CODE DATA OU |
| | AD 00DC0 | TOSDI | EQU | TOSLF | LOGICAL FUNCTION CODE DATA IN |
| | 00000008 | TOSDIM | EQU | X'08' | LOGICAL FUNCTION CODE DATA IN |
| | AD 00DC0 | TOSWO | EQU | TOSLF | LOGICAL FUNCTION CODE WRITE E |
| | 0000000A | TOSWOM | EQU | X'0A' | LOGICAL FUNCTION CODE WRITE E |
| | AD 00DC0 | TOSRE | EQU | TOSLF | LOGICAL FUNCTION CODE READ ER |
| | 0000000C | TOSREM | EQU | X'0C' | LOGICAL FUNCTION CODE READ ER |
| | AD 00DC0 | TOSWA | EQU | TOSLF | LOGICAL FUNCTION CODE WRITE A |
| | 0000000E | TOSWAM | EQU | X'0E' | LOGICAL FUNCTION CODE WRITE A |
| | AD 00DC0 | TOSWP | EQU | TOSLF | LOGICAL FUNCTION CODE WRITE P |
| | 00000010 | TOSWPM | EQU | X'10' | LOGICAL FUNCTION CODE WRITE P |
| | AD 00DC0 | TOSAR | EQU | TOSLF | LOGICAL FUNCTION CODE ADDRESS |
| | 00000012 | TOSASM | EQU | X'12' | LOGICAL FUNCTION CODE ADDRESS |
| | AD 00DC0 | TOSPS | EQU | TOSLF | LOGICAL FUNCTION CODE POLLING |
| | 00000014 | TOSPSM | EQU | X'14' | LOGICAL FUNCTION CODE POLLING |
| | AD 00DC0 | TOSCO | EQU | TOSLF | LOGICAL FUNCTION CODE CONTROL |
| | 0000001C | TOSCOM | EQU | X'1C' | LOGICAL FUNCTION CODE CONTROL |
| | AD 00DC0 | TOSER1 | EQU | TOSLF | LOG. FUNCT CODE WRITE ERR MESAG |
| | 00000016 | TOSER1M | EQU | X'16' | LOG. FUNCT CODE WRITE ERR MESAG |
| | AD 00DC0 | TOSER2 | EQU | TOSLF | LOG. FUNCT CODE ERROR TIC |
| | 00000018 | TOSER2M | EQU | X'18' | LOG. FUNCT CODE ERROR TIC |
| | AD 00DC0 | TOSER3 | EQU | TOSLF | LOG. FUNCT CODE NEG RESPONSE |
| | 0000001A | TOSER3M | EQU | X'1A' | LOG. FUNCT CODE NEG RESPONSE |
| AD 00E88 | | TOSEB | DS | F | ADDRESS OF DECB |
| AD 00E8C | | TOSTN | DS | F | ADDRESS OF TRANSLATE TABLE |
| AD 00E90 | | TOSWL | DS | F | REMAINING DATA OUT COUNT |
| AD 00E94 | | TOSR1 | DS | CL1 | NOT USED AT PRESENT |
| AD 00E95 | | | DS | CL3 | NOT USED AT PRESENT |
| AD 00E98 | | TOSDD | DS | F | DEVICE TYPE DATA |
| | AD 00E98 | | |ORG| | TOSDD | |
| AD 00E98 | | | DS | 0H | |
| AD 00E98 | | TOSD1 | DS | XL2 | MODEL CODE AND DEVICE CLASS |
| AD 00E9A | | TOSD2 | DS | H | UNIT TYPE AND UNIT ADDRESS |

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|---|---|---|---|---|---|
| AD 00E98 | | | \|ORG\| | TOSD1 | |
| AD 00E98 | | TOSDT | DS | XL1 | DEVICE TYPE CODE |
| | AD 00E98 | TOST1 | EQU | TOSDT | 1050 TERMINAL |
| | 00000001 | TOS1T | EQU | X'01' | 1050 TERMINAL CODE |
| | AD 00E98 | TOST2 | EQU | TOSDT | 2741 TERMINAL |
| | 00000002 | TOS2M | EQU | X'02' | 2741 TERMINAL CODE |
| | AD 00E98 | TOST3 | EQU | TOSDT | MOD 35 TTY |
| | 00000003 | TOS3M | EQU | X'03' | MOD 35 TTY MASK |
| | AD 00E98 | TOST4 | EQU | TOSDT | 1052 TERMINAL |
| | 00000004 | TOS4M | EQU | X'04' | 1052 TERMINAL CODE |
| | 00000002 | TOSTS2 | EQU | X'02' | COUNT FOR SHIFTING TERM |
| | | * | | | TYPE |
| AD 00E99 | | TOSDC | DS | XL1 | DEVICE CLASS |
| | AD 00E99 | TOSC1 | EQU | TOSDC | DIAL LINE |
| | 00000001 | TOSM1 | EQU | X'01' | DIAL LINE CODE |
| | AD 00E99 | TOSC2 | EQU | TOSDC | DEDICATED LINE |
| | 00000002 | TOSM2 | EQU | X'02' | DEDICATED LINE CODE |
| AD 00E9A | | TOSAT | DS | XL1 | UNIT ADAPTOR TYPE |
| | AD 00E9A | TOSA1 | EQU | TOSAT | IBM TERMINAL ADAPTOR/TYPE 1 |
| | 00000010 | TOS1A | EQU | X'10' | IBM TERMINAL ADAPTOR/TYPE 1 |
| | | * | | | CO |
| | AD 00E9A | TOSA2 | EQU | TOSAT | IBM TERMINAL ADAPTOR/TYPE 2 |
| | 00000020 | TOS2A | EQU | X'20' | IBM TERMINAL ADAPTOR/TYPE 2 |
| | | * | | | CO |
| | AD 00E9A | TOSA3 | EQU | TOSAT | IBM TELEGRAPH ADAPTOR TYPE |
| | | * | | | 1 |
| | 00000030 | TOS3A | EQU | X'30' | IBM TELEGRAPH ADAPTOR TYPE |
| | | * | | | 1 C |
| | AD 00E9A | TOSA4 | EQU | TOSAT | IBM TELEGRAPH ADAPTOR TYPE |
| | | * | | | 2 |
| | 00000040 | TOS4A | EQU | X'40' | IBM TELEGRAPH ADAPTOR TYPE |
| | | * | | | 2 C |
| | AD 00E9A | TOSA5 | EQU | TOSAT | IBM TERMINAL ADAPTOR TYPE 3 |
| | 00000080 | TOS5A | EQU | X'80' | IBM TERMINAL ADAPTOR TYPE 3 |
| | | * | | | CO |
| | AD 00E9A | TOSUT | EQU | TOSAT | DEVICE CONTROL UNIT OR |
| | | * | | | CHANNEL |
| | AD 00E9A | TOSU1 | EQU | TOSUT | 2702 CONTROL UNIT |
| | 00000001 | TOS1U | EQU | X'01' | 2702 CONTROL UNIT CODE |
| | AD 00E9A | TOSU2 | EQU | TOSUT | 2701 CONTROL UNIT |
| | 00000002 | TOS2U | EQU | X'02' | 2701 CONTROL UNIT CODE |
| | AD 00E9A | TOSU3 | EQU | TOSUT | MULTIPLEXOR CHANNEL |
| | 00000003 | TOS3U | EQU | X'03' | MULTIPLEXOR CHANNEL CODE |
| | AD 00E9A | TOSU4 | EQU | TOSUT | SELECTOR CHANNEL |
| | 00000004 | TOS4U | EQU | X'04' | SELECTOR CHANNEL CODE |
| | 0000000F | TOSCUM | EQU | X'0F' | CONTROL UNIT MASK |
| | 00000002 | TOSCS2 | EQU | X'02' | COUNT FOR SHIFT UNIT ADAP |
| | | * | | | TYPE |
| AD 00E9B | | TOSAA | DS | CL1 | ADAPTOR ADDRESS |
| AD 00E9C | | | DS | 0H | |
| AD 00E9C | | TOSOT | DS | XL2 | OPTION TYPE |
| AD 00E9C | | | \|ORG\| | TOSOT | |
| AD 00E9C | | TOSOB | DS | XL1 | OPTION BYTE |
| | AD 00E9C | TOSW1 | EQU | TOSOB | WRITE INITIAL /DIAL |
| | 00000008 | TOS1W | EQU | X'08' | WRITE INITIAL /DIAL MASK |
| | AD 00E9C | TOSRI | EQU | TOSOB | READ INITIAL/DIAL |
| | 00000002 | TOSIR | EQU | X'02' | READ INITIAL/DIAL MASK |
| | AD 00E9C | TOSRO | EQU | TOSOB | READ INITIAL |
| | 00000004 | TOS2R | EQU | X'04' | READ INITIAL MASK |
| | AD 00E9C | TOSW2 | EQU | TOSOB | WRITE INITIAL |
| | 0000000A | TOS2W | EQU | X'0A' | WRITE INITIAL MASK |
| | AD 00E9C | TOSW3 | EQU | TOSOB | WRITE CONTINUE |
| | 0000000C | TOS3W | EQU | X'0C' | WRITE CONTINUE MASK |
| | AD 00E9C | TOSR3 | EQU | TOSOB | READ CONTINUE |
| | 00000006 | TOS3R | EQU | X'06' | READ CONTINUE MASK |
| | AD 00E9C | TOSW4 | EQU | TOSOB | WRITE INITIAL/DIAL/REPEAT |
| | 00000009 | TOS4W | EQU | X'09' | WRITE INITIAL/DIAL/REPEAT |
| | | * | | | MASK |

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|---|---|---|---|---|---|
| | AD 00E9C | TOSR4 | EQU | TOSOB | READ INITIAL/DIAL/REPEAT |
| | 00000003 | TOS4R | EQU | X'03' | READ INITIAL/DIAL/REPEAT MASK |
| | AD 00E9C | TOSW5 | EQU | TOSOB | WRITE INITIAL/REPEAT |
| | 0000000B | TOS5W | EQU | X'0B' | WRITE INITIAL/REPEAT MASK |
| | AD 00E9C | TOSR5 | EQU | TOSOB | READ INITIAL/REPEAT |
| | 00000005 | TOS5R | EQU | X'05' | READ INITIAL/REPEAT MASK |
| | AD 00E9C | TOSW6 | EQU | TOSOB | WRITE WITH RESPONSE |
| | 0000000E | TOS6W | EQU | X'0E' | WRITE WITH RESPONSE MASK |
| | AD 00E9C | TOSW7 | EQU | TOSOB | WRITE WITH RESPONSE/REPEAT |
| | 0000000F | TOS7W | EQU | X'0F' | WRITE WITH RESPONSE/REPEAT MASK |
| | AD 00E9C | TOSO1 | EQU | TOSOB | DISABLE |
| | 00000065 | TOS10 | EQU | X'65' | DISABLE MASK |
| | AD 00E9C | TOSO2 | EQU | TOSOB | ENABLE |
| | 00000066 | TOS24 | EQU | X'66' | ENABLE MASK |
| | AD 00E9C | TOSO3 | EQU | TOSOB | PREPARE |
| | 00000068 | TOS30 | EQU | X'68' | PREPARE MASK |
| | AD 00E9C | TOSO4 | EQU | TOSOB | SADZERO |
| | 0000006C | TOS40 | EQU | X'6C' | SADZERO MASK |
| | AD 00E9C | TOSO5 | EQU | TOSOB | SADONE |
| | 00000069 | TOS50 | EQU | X'69' | SADONE MASK |
| | AD 00E9C | TOSO6 | EQU | TOSOB | SADTWO |
| | 0000006A | TOS60 | EQU | X'6A' | SADTWO MASK |
| | AD 00E9C | TOSO7 | EQU | TOSOB | SADTHREE |
| | 0000006B | TOS70 | EQU | X'6B' | SADTHREE MASK |
| | AD 00E9C | TOSO8 | EQU | TOSOB | AUTOWRAP |
| | 00000064 | TOS80 | EQU | X'64' | AUTOWRAP MASK |
| | AD 00E9C | TOSO9 | EQU | TOSOB | INHIBIT |
| | 00000067 | TOS90 | EQU | X'67' | INHIBIT MASK |
| | AD 00E9C | TOSOA | EQU | TOSOB | BREAK |
| | 0000006D | TOSAO | EQU | X'6D' | BREAK MASK |
| AD 00E9D | | TOSFA | DS | XL1 | USER BUFFER FLAGS |
| | AD 00E9D | TOSSL | EQU | TOSFA | USER BUFFER LENGTH FLAG |
| | 00000080 | TOSLS | EQU | X'80' | USER BUFFER LENGTH FLAG MASK |
| | 00000020 | TOSLC | EQU | X'20' | CONVERSATIONAL MODE FLAG |
| | AD 00E9D | TOSSA | EQU | TOSFA | USER BUFFER AREA FLAG |
| | 00000040 | TOSAS | EQU | X'40' | USER BUFFER AREA FLAG MASK |
| AD 00E9E | | TOSSQC | DS | XL1 | NO.OF CHARS.IN END OF LINE SEQ. |
| AD 00E9F | | TOSTEM1 | DS | CL1 | UNUSED |
| AD 00EA0 | | TOSEOL | DS | F | EOL SEQUENCE CHARACTERS |
| AD 00EA4 | | TOSSBZ | DS | H | STANDARD INPUT BUFFER SIZE |
| AD 00EA6 | | TOSP50 | DS | CL1 | COPY OF IORCL |
| AD 00EA7 | | TOSP55 | DS | CL1 | COPY OF IORLN |
| AD 00EA8 | | TOSRSC | DS | F | SDAT ADDRESS |
| AD 00EAC | | TOSRS1 | DS | 16F | READ/WRITE REGISTER SAVE AREA |
| AD 00EEC | | TOSRS2 | DS | F | TERMINAL CHANNEL PROGRAM GENER |
| AD 00EF0 | | TOSRS3 | DS | F | ADDRESS OF TRANSLATE AND TEST |
| AD 00EF4 | | TOSRS4 | DS | F | ADDRESS OF CALLING PROGRAM REG |
| AD 00EF8 | | TOSRSF | DS | H | READ/WRITE FLAG AREA |
| | AD 00EF8 | | \|ORG\| | TOSRSF | |
| AD 00EF8 | | TOSSF1 | DS | XL1 | READ/WRITE FLAG BYTE 1 |
| | AD 00EF8 | TOSF10 | EQU | TOSSF1 | POSTING ENTRY FLAG |
| | 00000080 | TOSM10 | EQU | X'80' | POSTING ENTRY MASK |
| | 0000007F | TOSM15 | EQU | X'7F' | POSTING ENTRY MASK OFF |
| | AD 00EF8 | TOSF11 | EQU | TOSSF1 | WRITE HALT INDICATOR ENDOF MSG |
| | 00000040 | TOSM11 | EQU | X'40' | WRITE HALT MASK |
| | AD 00EF8 | TOSF12 | EQU | TOSSF1 | READ HALT INDICATOR MAX CCW LI |
| | 00000020 | TOSM12 | EQU | X'20' | READ HALT MASK |
| | AD 00EF8 | TOSF13 | EQU | TOSSF1 | BYPASS CHARACTER DETECTED |

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|----------|-------------|--------|------|------|---------|
| | | * | | | IN O |
| | 00000010 | TOSM13 | EQU | X'10' | BYPASS MASK |
| | 000000EF | TOSM14 | EQU | X'EF' | BYPASS MASK |
| | AD 00EF8 | TOSF16 | EQU | TOSSF1 | IORCB COMPLETE FLAG |
| | 00000001 | TOSM16 | EQU | X'01' | IORCB COMPLETE MASK |
| | AD 00EF8 | TOSF17 | EQU | TOSSF1 | WRITE HALT FLAG |
| | 000000BF | TOSM17 | EQU | X'BF' | WRITE HALT MASK OFF |
| | AD 00EF8 | TOSF18 | EQU | TOSSF1 | IORCB COMPLETE INDICATOR |
| | 000000FE | TOSM18 | EQU | X'FE' | IORCB MASK OFF |
| | AD 00EF8 | TOSF19 | EQU | TOSSF1 | SUPPRESS LINEATION FLAG |
| | 00000002 | TOSM19 | EQU | X'02' | SUPRESS LINEATION MASK |
| | AD 00EF8 | TOSF21 | EQU | TOSSF1 | NEW LINE INDICATOR FLAG |
| | 00000004 | TOSM21 | EQU | X'04' | NEW LINE INDICATOR MASK |
| | 000000FB | TOSM22 | EQU | X'FB' | MASK FOR NEW LINE FLAG OFF |
| | AD 00EF8 | TOSF20 | EQU | TOSSF1 | LINEATION FLAG OFF |
| | 000000FD | TOSM20 | EQU | X'FD' | LINEATION FLAG OFF MASK |
| AD 00EF9 | | TOSFS2 | DS | XL1 | READ/WRITE FLAG BYTE 2 |
| AD 00EFA | | TOSRS6 | DS | H | CONTINUATION DISPLACEMENT |
| AD 00EFC | | TOSRS7 | DS | H | CHANNEL PROGRAM GENERATOR |
| | | * | | | DISP |
| AD 00EFE | | TOSRS8 | DS | H | CONTINUATION WORK AREA |
| AD 00F00 | | TOSRS9 | DS | H | CPG DISPLACEMENT STORE AREA |
| AD 00F02 | | TOSRS0 | DS | H | REMAINING PRINT LINE COUNT |
| AD 00F04 | | TOSRSA | DS | H | DIAL DIGIT COUNT |
| AD 00F06 | | TOSRSB | DS | H | RESERVED |
| AD 00F08 | | TOSRSE | DS | 15H | UNUSED |
| AD 00F28 | | TOSPS1 | DS | 16F | POSTING REGISTER SAVE AREA |
| AD 00F68 | | TOSRCD | DS | 9D | INTERNAL ERROR RECORDING |
| | | * | | | AREA |
| | AD 00F68 | | \|ORG\| | TOSRCD | |
| AD 00F68 | | TOSRC1 | DS | XL1 | EQUIPMENT CHECK COUNT |
| | 00000003 | TOSC1M | EQU | X'03' | MAX COUNT EQUIPMENT CHECK |
| AD 00F69 | | TOSRC2 | DS | XL1 | BUS OUT CHECK COUNT |
| | 00000003 | TOSC2M | EQU | X'03' | MAX COUNT BUS OUT |
| AD 00F6A | | TOSRC3 | DS | XL1 | COMMAND REJECT COUNT |
| | 00000003 | TOSC3M | EQU | X'03' | MAX COUNT COMMAND REJECT |
| AD 00F6B | | TOSRC4 | DS | XL1 | OVERRUN COUNT |
| | 00000003 | TOSC4M | EQU | X'03' | MAX COUNT OVERRUN |
| AD 00F6C | | TOSRC5 | DS | XL1 | INTERVENTION REQUIRED |
| | 00000003 | TOSC5M | EQU | X'03' | MAX COUNT INTERVENTION |
| | | * | | | REQUIRE |
| AD 00F6D | | TOSRC6 | DS | XL1 | TIME OUT COUNT |
| | 00000003 | TOSC6M | EQU | X'03' | MAX COUNT TIMEOUT |
| AD 00F6E | | TOSRC7 | DS | XL1 | DATA CHECK COUNT |
| | 00000003 | TOSC7M | EQU | X'03' | MAX COUNT DATA CHECK |
| AD 00F6F | | TOSRC8 | DS | XL1 | RECEIVING CHECK |
| | 00000003 | TOSC8M | EQU | X'03' | MAX COUNT RECEIVING COUNT |
| AD 00F70 | | TOSRC9 | DS | XL1 | MASTER ERROR COUNT |
| | | * | | | CONSECUTIVE |
| | 0000000A | TOSC9M | EQU | X'0A' | MAX CONSECUTIVE ERROR COUNT |
| AD 00F71 | | TOSRCA | DS | XL1 | ILLEGAL UNIT EXCEPTION |
| | | * | | | COUNT |
| | 00000003 | TOSCAM | EQU | X'03' | MAX COUNT ILL UNIT |
| | | * | | | EXCEPTION |
| AD 00F72 | | TOSTOF | DS | XL1 | TAM OPEN COMMUNICATION BYTE |
| | AD 00F72 | TOSTO | EQU | TOSTOF | 2741/1050 TIME OUT TEST |
| | 00000080 | TOSTOM | EQU | X'80' | TIME OUT TEST IN PROGRESS |
| | | * | | | MASK |
| AD 00F78 | | | DS | 0D | |
| AD 00F78 | | TOSRCS | DS | XL8 | RECORD CSW |
| AD 00F80 | | TOSRSN | DS | XL1 | RECORD SENSE BYTE |
| AD 00F81 | | TOSRSD | DS | CL2 | RECORD SYMBOLIC DEVICE |
| | | * | | | ADDRES |
| AD 00F83 | | TOSRDT | DS | XL1 | RECORD DEVICE TYPE |
| AD 00F84 | | TOSRCH | DS | XL1 | RECORD CHANL OR DCU TYPE |
| AD 00F85 | | TOSRLF | DS | XL1 | RECORD LOGICAL FUNCTION |
| AD 00F86 | | TOSRWE | DS | XL2 | RECORD COMPLETE WITHOUT |
| | | * | | | ERROR |

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|---|---|---|---|---|---|
| AD 00F88 | | TOSE08 ∗ | DS | XL2 | REL.ADDRESS OF INTERRUPTED CSW |
| AD 00F8A | | TOSE00 | DS | XL1 | ZERO RETRY COUNT BYTE 2 |
| AD 00F8B | | TOSE10 | DS | XL1 | ZERO RETRY COUNT BYTE 1 |
| AD 00F8C | | TOSE01 | DS | XL1 | INCORRECT LENGTH RETRY COUNT |
| AD 00F8D | | TOSE02 | DS | XL1 | PROGRAM CHECK RETRY COUNT |
| AD 00F8E | | TOSE03 ∗ | DS | XL1 | PROTECTION CHECK RETRY COUNT |
| AD 00F8F | | TOSE04 ∗ | DS | XL1 | CHANNEL DATA CHECK RETRY COUNT |
| AD 00F90 | | TOSE05 ∗ | DS | XL1 | CHANNEL CONTROL CHK RETRY COUNT |
| AD 00F91 | | TOSE06 ∗ | DS | XL1 | INTERFACE CNTRL CHK RETRY COUNT |
| AD 00F92 | | TOSE07 | DS | XL1 | CHAINING CHECK RETRY COUNT |
| | 00000003 | TOSE09 | EQU | X'03' | MAX INBOARD ERROR COUNT |
| AD 00F93 | | TOSS3C | DS | XL1 | |
| | 00000003 | TOSS3M ∗ | EQU | X'03' | STATUS THREE RETRY COUNTER MASK |
| AD 00F94 | | | DS | 0F | |
| AD 00F94 | | TOSTEM3 | DS | XL52 | DATA EXTENT BLOCK |
| AD 00FC8 | | TOSPS2 ∗ | DS | F | ADDRESS OF CALLING PROGRAM REG |
| AD 00FCC | | TOSPS4 | DS | XL2 | ACCUM.DATA-IN COUNT |
| AD 00FCE | | TOSPS5 | DS | XL2 | INCR. DATA-IN CHAR COUNT |
| AD 00FD0 | | TOSPS6 ∗ | DS | F | ADDRESS OF USER INPUT BUFFER |
| AD 00FD4 | | TOSPS7 ∗ | DS | F | NEXT FREE LOCATION IN USER INP |
| AD 00FD8 | | TOSP60 ∗ | DS | H | ADDR PORTION OF LAST ERROR TIC |
| AD 00FDA | | TOSPP3 ∗ | DS | XL1 | INTERNAL POSTING FLAGS BYTE 1 |
| | AD 00FDA | TOSP30 | EQU | TOSPP3 | UNUSED |
| | AD 00FDA | TOSP31 | EQU | TOSPP3 | UNIT EXCEPTION INTERRUPT |
| | 00000040 | TOS31M ∗ | EQU | X'40' | UNIT EXCEPTION INTERRUPT MASK |
| | AD 00FDA | TOSP32 | EQU | TOSPP3 | MASTER EXCEPTION INTERRUPT |
| | 00000020 | TOS32M ∗ | EQU | X'20' | MASTER EXCEPTION INTERRUPT FLA |
| | 00000057 | TOS32R | EQU | X'57' | RESET MASTER EXCEPTION MASK |
| | AD 00FDA | TOSP33 | EQU | TOSPP3 | INPUT MESSAGE COMPLETE |
| | 00000010 | TOS33M | EQU | X'10' | |
| | AD 00FDA | TOSP34 | EQU | TOSPP3 | ABORT |
| | 00000008 | TOS34M | EQU | X'08' | ABORT MASK |
| | AD 00FDA | TOSP35 | EQU | TOSPP3 | ATTENTION ON READ |
| | 00000004 | TOS35M | EQU | X'04' | ATTENTION ON READ MASK |
| | AD 00FDA | TOSP36 | EQU | TOSPP3 | ATTENTION ON WRITE |
| | 00000002 | TOS36M | EQU | X'02' | ATTENTION ON WRITE MASK |
| | AD 00FDA | TOSP37 | EQU | TOSPP3 | USER BUFFER SET |
| | 00000001 | TOS37M | EQU | X'01' | USER BUFFER SET MASK |
| AD 00FDB | | TOSPP4 ∗ | DS | XL1 | INTERNAL POSTING FLAGS BYTE 2 |
| | AD 00FDB | TOSP41 | EQU | TOSPP4 | STATUS 1 FLAG |
| | 00000080 | TOS41M | EQU | X'80' | STATUS 1 MASK |
| | AD 00FDB | TOSP42 | EQU | TOSPP4 | STATUS 2 FLAG |
| | 00000040 | TOS42M | EQU | X'40' | STATUS 2 MASK |
| | AD 00FDB | TOSP43 | EQU | TOSPP4 | RECOVERY IN PROGRESS |

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|----------|-------------|--------|------|------|---------|
| | 00000020 | TOS43M | EQU | X'20' | RECOVERY IN PROGRESS MASK |
| AD 00FDB | | TOSP44 | EQU | TOSPP4 | STATUS THREE FLAG |
| | 00000010 | TOS44M | EQU | X'10' | STATUS THREE MASK |
| AD 00FDC | | TOSP45 | DS | XL1 | ERROR MESSAGE CODE |
| AD 00FDD | | TOSPCW | DS | XL1 | PROCESSED CCW COUNT |
| AD 00FDE | | TOSBFL | DS | H | DCB BUFFER LENGTH SAVE |
| AD 00FE0 | | TOSEMCD | DS | XL1 | ERROR MESSAGE CODE FOR |
| | | • | | | OPERATOR |
| AD 00FE1 | | TOSTEM2 | DS | CL1 | ERROR SAVE AREA |
| AD 00FE2 | | TOSRV2 | DS | 1H | UNUSED |
| AD 00FE4 | | TOSRSV | DS | 1F | SAVE AREA FOR REG 14 |
| AD 00FE8 | | TOSSLN | DS | 1H | SAVE USER BUFFER LENGTH |
| AD 00FEC | | TOSFCCW | DS | 1F | V.M. ADDRESS OF FAILING CCW |
| AD 00FF0 | | TOSSDT | DS | 1F | ADDRESS OF SDT ENTRY |
| AD 00FF4 | | TOSRV3 | DS | 11C | UNUSED |

## Text Editor Transaction Table (CHATRN)

The Text Editor Transaction Table (CHATRN) is set by the Text Editor in response to user commands.  The table is also used by language processors to detect changes to the source data set.
CHATRN resides in virtual storage, aligned on word boundaries.

### CHATRN Storage map

```
DEC   HEX
  0     0|        TRNDCB          |            TRNNAM              |
         |                        |                               |
  8     8|      TRNNAM   (CONT)   |   TRNRGL    |TRNPRO  |TRNLKL   |
         |                        |             |        |         |
 16    10|                                                        |
         =                         TRNREG                         =
         |                                                        |
         |                                                  |     |
256    100|                                                 |     |
         =                         TRNLKY                         =
         |                                                        |
         |                                             |          |
504    1F8|                                            |  TRNN2M  |
         |                                             |          |
512    200|      TRNN2M   (CONT)   |         TRNINC              |
         |                        |                               |
520    208|      TRNINC   (CONT)   |         TRNDINC             |
         |                        |                               |
528    210|   TRNDINC (CONT)   |RESERVED|      TRNSCAN            |
         |                    |        |                          |
536    218|      TRNSCAN  (CONT)   |         TRNADD              |
         |                        |                               |
544    220|        TRNDDL         |         TRNNLK              |
         |                        |                               |
552    228|        TRNNXT         |         TRNLIL              |
```

### Fields in CHATRN -- by displacement

| DEC | HEX | FIELD | | DEC | HEX | FIELD | | DEC | HEX | FIELD | |
|------|------|--------|---|------|------|--------|---|------|------|--------|---|
| 0000 | 0000 | TRNDCB | | 0510 | 01FE | TRNN2M | | 0552 | 0228 | TRNNXT | |
| 0004 | 0004 | TRNNAM | | 0517 | 0205 | TRNINC | | 0552 | 0228 | TRNLST | (EQU) |
| 0012 | 000C | TRNRGL | | 0524 | 020C | TRNDINC | | 0556 | 022C | TRNLIL | |
| 0014 | 000E | TRNPRO | | 0532 | 0214 | TRNSCAN | | 0560 | 0230 | TRNLIN | (EQU) |
| 0015 | 000F | TRNLKL | | 0540 | 021C | TRNADD | | 0560 | 0230 | TRNKEY | (EQU) |
| 0016 | 0010 | TRNREG | | 0544 | 0220 | TRNDDL | | | | | |
| 0263 | 0107 | TRNLKY | | 0548 | 0224 | TRNNLK | | | | | |

### Alphabetical list of fields in CHATRN

| FIELD | DEC | HEX | | FIELD | DEC | HEX | | FIELD | DEC | HEX |
|--------|------|------|---|--------|------|------|---|--------|------|------|
| TRNADD | 0540 | 021C | | TRNLIN | 0560 | 0230 | (EQU) | TRNN2M | 0510 | 01FE |
| TRNDCB | 0000 | 0000 | | TRNLKL | 0015 | 000F | | TRNPRO | 0014 | 000E |
| TRNDDL | 0544 | 0220 | | TRNLKY | 0263 | 0107 | | TRNREG | 0016 | 0010 |
| TRNDINC | 0524 | 020C | | TRNLST | 0552 | 0228 | (EQU) | TRNRGL | 0012 | 000C |
| TRNINC | 0517 | 0205 | | TRNNAM | 0004 | 0004 | | TRNSCAN | 0532 | 0214 |
| TRNKEY | 0560 | 0230 | (EQU) | TRNNLK | 0548 | 0224 | | | | |
| TRNLIL | 0556 | 022C | | TRNNXT | 0552 | 0228 | | | | |

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|----------|-------------|--------|------|------|---------|
| | AE 00000 | CHATRN | DSECT | | |
| | | * | LINE EDITOR TRANSACTION TABLE - CHATRN | | |
| | | * | THIS TABLE IS SET BY THE LINE EDITOR IN RESPONSE | | |
| | | * | TO USER COMMANDS | | |
| | | * | AND IS USED BY LANGUAGE PROCESSORS TO DETECT | | |
| | | * | CHANGES TO THE | | |
| | | * | | | SOURCE DATA SET. |
| AE 00000 | | TRNDCB | DS | A | ADDRESS OF DCB FOR DATA SET, |
| | | * | | | BEING EDITED |
| AE 00004 | | TRNNAM | DS | CL8 | PROCESSOR NAME |
| AE 0000C | | | DS | 0H | |
| AE 0000C | | TRNRGL | DS | XL2 | REGION NAME LENGTH BYTES |
| AE 0000E | | TRNPRO | DS | XL1 | TRANSACTIONS PROCESSED |
| | | * | | | SWITCH |
| AE 0000F | | TRNLKL | DS | XL1 | LAST KEY LENGTH |
| AE 00010 | | TRNREG | DS | CL247 | CURRENT KEY |
| AE 00107 | | TRNLKY | DS | CL247 | LAST KEY IN DATA SET |
| AE 001FE | | TRNN2M | DS | CL7 | CURRENT MAXIMUM FOR N2 |
| AE 00205 | | TRNINC | DS | CL7 | CURRENT INCREMENT |
| AE 0020C | | TRNDINC | DS | CL7 | DEFAULT INCREMENT |
| | | * | | | N365 |
| AE 00214 | | TRNSCAN | DS | 2A | LPC SCAN ROUTINE |
| | | * | | | N365 |
| AE 0021C | | TRNADD | DS | A | POINTER TO HEAD OF ADDITION |
| | | * | | | LIST |
| AE 00220 | | TRNDDL | DS | A | POINTER TO HEAD OF DELETION |
| | | * | | | LIST |
| AE 00224 | | TRNNLK | DS | A | NEXT AVAILABLE ENTRY SPACE |
| | | * | ADDITION AND DELETION LIST FORMATS-THESE ARE | | |
| | | * | LINKED LISTS OF VARIABLE | | |
| | | * | | | LENGTH ENTRIES |
| | AE 00228 | TRNLST | EQU | * | |
| AE 00228 | | TRNNXT | DS | A | POINTER TO NEXT ENTRY OR |
| | | * | | | END FLAG (ZERO) |
| AE 0022C | | TRNLIL | DS | A | LENGTH OF RECORD IN BYTES |
| | AE 00230 | TRNKEY | EQU | * | KEY STARTS HERE |
| | AE 00230 | TRNLIN | EQU | * | LINE IMAGE STARTS AFTER KEY |

## Task Symbolic Device List (CHATSD)

The Task Symbolic Device list (TSD) contains information required by resident routines to identify and control devices assigned to a task.

An entry is posted to the task's TSD when a device is allocated to the task by device management. If an entry for the device already exists, then a counter in the existing entry is increased by one. This process is reversed at device release time and when the counter reads zero the entry is removed from the TSD.

All I/O requests are checked against the TSD; if the addressed device has no TSD entry for the task, the I/O request will be rejected by the Supervisor.

The TSD maintains queue discipline whenever dequeuing procedures are activated. The correct TSD entry is used as a focal point around which a series of Supervisor processors can interlock their various operations. This interlock guarantees an orderly return of all of the task stacked I/O requests to a device, when the initial request in the stack for that task cannot be executed successfully.

The TSD consists of one or more 64-byte blocks with each block chained to the subsequent block in the table. The first block is located by the task's TSI, and the chain address in the last block is all zeros.

### CHATSD Storage map

| DEC | HEX | | | | |
|---|---|---|---|---|---|
| 0 | 0 | TSDFL | TSDZZZ1 | TSDDA | TSDE2 |
| 8 | 8 | TSDE3 | | | TSDE4 |
| 16 | 10 | TSDE5 | | | TSDE6 |
| 24 | 18 | TSDE7 | | | TSDE8 |
| 32 | 20 | TSDE9 | | | TSDE10 |
| 40 | 28 | TSDE11 | | | TSDE12 |
| 48 | 30 | TSDE13 | | | TSDE14 |
| 56 | 38 | TSDE15 | | | TSDCA |

### Fields in CHATSD -- by displacement

| DEC | HEX | FIELD | | DEC | HEX | FIELD | | DEC | HEX | FIELD |
|---|---|---|---|---|---|---|---|---|---|---|
| 0000 | 0000 | TSDAC | (EQU) | 0002 | 0002 | TSDDA | | 0032 | 0020 | TSDE9 |
| 0000 | 0000 | TSDPR | (EQU) | 0004 | 0004 | TSDE2 | | 0036 | 0024 | TSDE10 |
| 0000 | 0000 | TSDRI | (EQU) | 0008 | 0008 | TSDE3 | | 0040 | 0028 | TSDE11 |
| 0000 | 0000 | TSDIU | (EQU) | 0012 | 000C | TSDE4 | | 0044 | 002C | TSDE12 |
| 0000 | 0000 | TSDFL | | 0016 | 0010 | TSDE5 | | 0048 | 0030 | TSDE13 |
| 0000 | 0000 | TSDE1 | | 0020 | 0014 | TSDE6 | | 0052 | 0034 | TSDE14 |
| 0000 | 0000 | TSDBEG | | 0024 | 0018 | TSDE7 | | 0056 | 0038 | TSDE15 |
| 0001 | 0001 | TSDZZZ1 | | 0028 | 001C | TSDE8 | | 0060 | 003C | TSDCA |

### Alphabetical list of fields in CHATSD

| FIELD | DEC | HEX | | FIELD | DEC | HEX | | FIELD | DEC | HEX | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| TSDAC | 0000 | 0000 | (EQU) | TSDE13 | 0048 | 0030 | | TSDE7 | 0024 | 0018 | |
| TSDBEG | 0000 | 0000 | | TSDE14 | 0052 | 0034 | | TSDE8 | 0028 | 001C | |
| TSDCA | 0060 | 003C | | TSDE15 | 0056 | 0038 | | TSDE9 | 0032 | 0020 | |
| TSDDA | 0002 | 0002 | | TSDE2 | 0004 | 0004 | | TSDFL | 0000 | 0000 | |
| TSDE1 | 0000 | 0000 | | TSDE3 | 0008 | 0008 | | TSDIU | 0000 | 0000 | (EQU) |
| TSDE10 | 0036 | 0024 | | TSDE4 | 0012 | 000C | | TSDPR | 0000 | 0000 | (EQU) |
| TSDE11 | 0040 | 0028 | | TSDE5 | 0016 | 0010 | | TSDRI | 0000 | 0000 | (EQU) |
| TSDE12 | 0044 | 002C | | TSDE6 | 0020 | 0014 | | TSDZZZ1 | 0001 | 0001 | |

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|---|---|---|---|---|---|
| | AF 00000 | CHATSD | DSECT | | TASK SYMBOLIC DEVICE LIST |
| | | ♦ | | | (TSDL) |
| AF 00000 | | TSDBEG | DS | 0F | ALIGN ON FULL WORD BOUNDARY |
| AF 00000 | | TSDE1 | DS | 0F | TSDL ENTRY 1 |
| AF 00000 | | TSDFL | DS | CL1 | FLAGS |
| | AF 00000 | TSDIU | EQU | TSDFL | ENTRY IS IN USE |
| | 00000080 | TSDIUM | EQU | X'80' | |
| | AF 00000 | TSDRI | EQU | TSDFL | REJECT I/O REQUESTS |
| | 00000040 | TSDRIM | EQU | X'40' | |
| | AF 00000 | TSDPR | EQU | TSDFL | IO ACTIVE FLAG |
| | | ♦ | | | N405.2 |
| | 00000020 | TSDPRM | EQU | X'20' | IO ACTIVE MASK |
| | | ♦ | | | N405.2 |
| | AF 00000 | TSDAC | EQU | TSDFL | DEVICE ALLOCATION COUNT |
| | 0000000F | TSDACM | EQU | X'0F' | DEVICE ALLOCATION COUNT |
| | | ♦ | | | MASK |
| AF 00001 | | TSDZZZ1 | DS | XL1 | UNUSED |
| AF 00002 | | TSDDA | DS | H | SYSTEM SYMBOLIC DEVICE |
| | | ♦ | | | ADDRESS |
| AF 00004 | | TSDE2 | DS | F | TSDL ENTRY 2 |
| AF 00008 | | TSDE3 | DS | F | TSDL ENTRY 3 |
| AF 0000C | | TSDE4 | DS | F | TSDL ENTRY 4 |
| AF 00010 | | TSDE5 | DS | F | TSDL ENTRY 5 |
| AF 00014 | | TSDE6 | DS | F | TSDL ENTRY 6 |
| AF 00018 | | TSDE7 | DS | F | TSDL ENTRY 7 |
| AF 0001C | | TSDE8 | DS | F | TSDL ENTRY 8 |
| AF 00020 | | TSDE9 | DS | F | TSDL ENTRY 9 |
| AF 00024 | | TSDE10 | DS | F | TSDL ENTRY 10 |
| AF 00028 | | TSDE11 | DS | F | TSDL ENTRY 11 |
| AF 0002C | | TSDE12 | DS | F | TSDL ENTRY 12 |
| AF 00030 | | TSDE13 | DS | F | TSDL ENTRY 13 |
| AF 00034 | | TSDE14 | DS | F | TSDL ENTRY 14 |
| AF 00038 | | TSDE15 | DS | F | TSDL ENTRY 15 |
| AF 0003C | | TSDCA | DS | F | TSDL CHAIN ADDRESS |

## Task Status Index (CHATSI) and Extended Task Status Index (CHAXTS)

The Task Status Index (TSI) contains the data required by the Resident Supervisor for the execution of a task.

The chain of TSIs, which is unlimited in extent, is located by a pointer in the System Table (CHASYS).

An extended Task Status Index (XTSI) is referenced by each TSI. The XTSI contains limited information describing the state of the task. The fixed-length area of the XTSI provides the save area for register contents during a task interrupt, as well as save areas for the PSW, interrupt code, etc. This fixed area of the XTSI also contains control data affecting both the task and the Resident Supervisor handling of the task.

The TSI occupies 128 bytes of core storage, aligned on word boundaries. The fixed area of the XTSI occupies 340 bytes of core storage and must begin on a page boundary since XTSI pages are subject to paging.

### CHATSI Storage map

| DEC | HEX | | | | | | | | |
|-----|-----|---|---|---|---|---|---|---|---|
| 0 | 0 | TSIFPT | | | | TSINX | | TSIPMF | |
| 8 | 8 | TSIXXL | | | | TSILOC | | | |
| 16 | 10 | TSIUID | | | | | | | |
| 24 | 18 | TSISIN | | TSISOT | | TSITDP | | | |
| 32 | 20 | TSIRPOST | | | | TSITSN | | | |
| 40 | 28 | TSITIC | TSIIPC | TSIISC | TSIIXC | TSIIAC | TSIITC | TSIIIC | TSIIVC |
| 48 | 30 | TSITIP | | | | | | | |
| 56 | 38 | TSILOCG | | | | TSIMTSCB | | | |
| 64 | 40 | TSIBLK | | TSISWPCT | | TSISPT | | | |
| 72 | 48 | TSISST | | | | TSIVTP | | | |
| 80 | 50 | TSISTE | | TSISDA | | TSIF1 | TSIVSS | TSIRSF | TSIMGR |
| 88 | 58 | TSIADP | | TSIARF | | TSIAAF | | TSICP | |
| 96 | 60 | TSILOCK | TSIFLG | TSIF2 | TSIF3 | TSIF4 | TSIBSN | TSICPR | |
| 104 | 68 | TSIMGSCN | | | | TSIDCT | | TSITSC | TSIQCT |
| 112 | 70 | TSIGQP | | | | TSITID | | TSIXPR | |
| 120 | 78 | TSIPTS | | TSISIB | RESERVED | TSIRVP | | | |

### ORG TSITIP

| DEC | HEX | | |
|-----|-----|---|---|
| 48 | 30 | TSIFPQ | TSILPQ |

### Fields in CHATSI -- by displacement

| DEC | HEX | FIELD | | DEC | HEX | FIELD | | DEC | HEX | FIELD |
|-----|-----|-------|---|-----|-----|-------|---|-----|-----|-------|
| 0000 | 0000 | TSIFPT | | 0006 | 0006 | TSIPMF | | 0024 | 0018 | TSISIN |
| 0004 | 0004 | TSINX | | 0007 | 0007 | TSIKI | (EQU) | 0026 | 001A | TSISOT |
| 0006 | 0006 | TSIJI | (EQU) | 0007 | 0007 | TSIKT | (EQU) | 0028 | 001C | TSITDP |
| 0006 | 0006 | TSIJT | (EQU) | 0007 | 0007 | TSIKA | (EQU) | 0032 | 0020 | TSIRPOST |
| 0006 | 0006 | TSIJA | (EQU) | 0007 | 0007 | TSIKX | (EQU) | 0036 | 0024 | TSITSN |
| 0006 | 0006 | TSIJX | (EQU) | 0007 | 0007 | TSIIAP | (EQU) | 0040 | 0028 | TSITIC |
| 0006 | 0006 | TSIJS | (EQU) | 0008 | 0008 | TSIXXL | | 0041 | 0029 | TSIIPC |
| 0006 | 0006 | TSIJP | (EQU) | 0012 | 000C | TSILOC | | 0042 | 002A | TSIISC |
| 0006 | 0006 | TSIJV | (EQU) | 0016 | 0010 | TSIUID | | 0043 | 002B | TSIIXC |

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| DEC | HEX | FIELD | | DEC | HEX | FIELD | | DEC | HEX | FIELD | |
|------|------|---------|-------|------|------|---------|-------|------|------|---------|-------|
| 0044 | 002C | TSIIAC | | 0086 | 0056 | TSIHLCK | (EQU) | 0099 | 0063 | TSIUT | (EQU) |
| 0045 | 002D | TSIITC | | 0086 | 0056 | TSIRSF | | | | TSITSE | (EQU) |
| 0046 | 002E | TSIIIC | | 0087 | 0057 | TSISCNF | (EQU) | 0099 | 0063 | TSIET | (EQU) |
| 0047 | 002F | TSIIVC | | 0087 | 0057 | TSIMGRF | (EQU) | 0099 | 0063 | TSIITI | (EQU) |
| 0048 | 0030 | TSIFPQ | | 0087 | 0057 | TSIMTT | (EQU) | 0099 | 0063 | TSICMP | (EQU) |
| 0048 | 0030 | TSITIP | | 0087 | 0057 | TSIMG | (EQU) | 0099 | 0063 | TSICQ | (EQU) |
| 0052 | 0034 | TSILPQ | | 0087 | 0057 | TSIDS | (EQU) | 0099 | 0063 | TSIF3 | |
| 0056 | 0038 | TSILOCG | | 0087 | 0057 | TSIMGR | | 0100 | 0064 | TSIMB | (EQU) |
| 0060 | 003C | TSIMTSCB | | 0088 | 0058 | TSIADP | | 0100 | 0064 | TSIP2 | (EQU) |
| 0064 | 0040 | TSIBLK | | 0090 | 005A | TSIARF | | 0100 | 0064 | TSIUP | (EQU) |
| 0066 | 0042 | TSISWPCT | | 0092 | 005C | TSIAAF | | 0100 | 0064 | TSISP | (EQU) |
| 0068 | 0044 | TSISPT | | 0094 | 005E | TSICP | | 0100 | 0064 | TSIPP | (EQU) |
| 0072 | 0048 | TSISST | | 0096 | 0060 | TSILOCK | | 0100 | 0064 | TSIOP | (EQU) |
| 0076 | 004C | TSIVTP | | 0097 | 0061 | TSIPW | (EQU) | 0100 | 0064 | TSIF4 | |
| 0080 | 0050 | TSISTE | | 0097 | 0061 | TSIEX | (EQU) | 0101 | 0065 | TSIDPSS | (EQU) |
| 0082 | 0052 | TSISDA | | 0097 | 0061 | TSITS | (EQU) | 0101 | 0065 | TSIBSN | |
| 0084 | 0054 | TSINTSE | (EQU) | 0097 | 0061 | TSIRD | (EQU) | 0102 | 0066 | TSICPR | |
| 0084 | 0054 | TSIMPRE | (EQU) | 0097 | 0061 | TSIDL | (EQU) | 0104 | 0068 | TSIMGSCN | |
| 0084 | 0054 | TSIAW | (EQU) | 0097 | 0061 | TSIINPR | (EQU) | 0108 | 006C | TSIDCT | |
| 0084 | 0054 | TSIF1 | | 0097 | 0061 | TSIFLG | | 0110 | 006E | TSITSC | |
| 0085 | 0055 | TSIAST | (EQU) | 0098 | 0062 | TSIEB | (EQU) | 0111 | 006F | TSIQCT | |
| 0085 | 0055 | TSIAWM1 | (EQU) | 0098 | 0062 | TSIXT | (EQU) | 0112 | 0070 | TSIGQP | |
| 0085 | 0055 | TSIVU | (EQU) | 0098 | 0062 | TSICV | (EQU) | 0116 | 0074 | TSITID | |
| 0085 | 0055 | TSIVT | (EQU) | 0098 | 0062 | TSIAT | (EQU) | 0118 | 0076 | TSIXPR | |
| 0085 | 0055 | TSIVS | (EQU) | 0098 | 0062 | TSIATTN | (EQU) | 0120 | 0078 | TSIPTS | |
| 0085 | 0055 | TSIVSS | | 0098 | 0062 | TSINW | (EQU) | 0122 | 007A | TSISIB | |
| 0086 | 0056 | TSITSVC | (EQU) | 0098 | 0062 | TSIF2 | | 0124 | 007C | TSIRVP | |
| 0086 | 0056 | TSILCF | (EQU) | 0099 | 0063 | TSIRT | (EQU) | | | | |
| 0086 | 0056 | TSIWLCK | (EQU) | | | | | | | | |

## Alphabetical list of fields in CHATSI

| FIELD | DEC | HEX | | FIELD | DEC | HEX | | FIELD | DEC | HEX | |
|-------|------|------|-------|-------|------|------|-------|-------|------|------|-------|
| TSIAAF | 0092 | 005C | | TSIITC | 0045 | 002D | | TSIQCT | 0111 | 006F | |
| TSIADP | 0088 | 0058 | | TSIITI | 0099 | 0063 | (EQU) | TSIRD | 0097 | 0061 | (EQU) |
| TSIARF | 0090 | 005A | | TSIIVC | 0047 | 002F | | TSIRPOST | 0032 | 0020 | |
| TSIAST | 0085 | 0055 | (EQU) | TSIIXC | 0043 | 002B | | TSIRSF | 0086 | 0056 | |
| TSIAT | 0098 | 0062 | (EQU) | TSIJA | 0006 | 0006 | (EQU) | TSIRT | 0099 | 0063 | (EQU) |
| TSIATTN | 0098 | 0062 | (EQU) | TSIJI | 0006 | 0006 | (EQU) | TSIRVP | 0124 | 007C | |
| TSIAW | 0084 | 0054 | (EQU) | TSIJP | 0006 | 0006 | (EQU) | TSISCNF | 0087 | 0057 | (EQU) |
| TSIAWM1 | 0085 | 0055 | (EQU) | TSIJS | 0006 | 0006 | (EQU) | TSISDA | 0082 | 0052 | |
| TSIBLK | 0064 | 0040 | | TSIJT | 0006 | 0006 | (EQU) | TSISIB | 0122 | 007A | |
| TSIBSN | 0101 | 0065 | | TSIJV | 0006 | 0006 | (EQU) | TSISIN | 0024 | 0018 | |
| TSICMP | 0099 | 0063 | (EQU) | TSIJX | 0006 | 0006 | (EQU) | TSISOT | 0026 | 001A | |
| TSICP | 0094 | 005E | | TSIKA | 0007 | 0007 | (EQU) | TSISP | 0100 | 0064 | (EQU) |
| TSICPR | 0102 | 0066 | | TSIKI | 0007 | 0007 | (EQU) | TSISPT | 0068 | 0044 | |
| TSICQ | 0099 | 0063 | (EQU) | TSIKT | 0007 | 0007 | (EQU) | TSISST | 0072 | 0048 | |
| TSICV | 0098 | 0062 | (EQU) | TSIKX | 0007 | 0007 | (EQU) | TSISTE | 0080 | 0050 | |
| TSIDCT | 0108 | 006C | | TSILCF | 0086 | 0056 | (EQU) | TSISWPCT | 0066 | 0042 | |
| TSIDL | 0097 | 0061 | (EQU) | TSILOC | 0012 | 000C | | TSITDP | 0028 | 001C | |
| TSIDPSS | 0101 | 0065 | (EQU) | TSILOCG | 0056 | 0038 | | TSITIC | 0040 | 0028 | |
| TSIDS | 0087 | 0057 | (EQU) | TSILOCK | 0096 | 0060 | | TSITID | 0116 | 0074 | |
| TSIEB | 0098 | 0062 | (EQU) | TSILPQ | 0052 | 0034 | | TSITIP | 0048 | 0030 | |
| TSIET | 0099 | 0063 | (EQU) | TSIMB | 0100 | 0064 | | TSITS | 0097 | 0061 | (EQU) |
| TSIEX | 0097 | 0061 | (EQU) | TSIMG | 0087 | 0057 | (EQU) | TSITSC | 0110 | 006E | |
| TSIFLG | 0097 | 0061 | | TSIMGR | 0087 | 0057 | | TSITSE | 0099 | 0063 | (EQU) |
| TSIFPQ | 0048 | 0030 | | TSIMGRF | 0087 | 0057 | (EQU) | TSITSN | 0036 | 0024 | |
| TSIFPT | 0000 | 0000 | | TSIMGSCN | 0104 | 0068 | | TSITSVC | 0086 | 0056 | (EQU) |
| TSIF1 | 0084 | 0054 | | TSIMPRE | 0084 | 0054 | (EQU) | TSIUID | 0016 | 0010 | |
| TSIF2 | 0098 | 0062 | | TSIMTSCB | 0060 | 003C | | TSIUP | 0100 | 0064 | (EQU) |
| TSIF3 | 0099 | 0063 | | TSIMTT | 0087 | 0057 | (EQU) | TSIUT | 0099 | 0063 | (EQU) |
| TSIF4 | 0100 | 0064 | | TSINTSE | 0084 | 0054 | (EQU) | TSIVS | 0085 | 0055 | (EQU) |
| TSIGQP | 0112 | 0070 | | TSINW | 0098 | 0062 | (EQU) | TSIVSS | 0085 | 0055 | |
| TSIHLCK | 0086 | 0056 | (EQU) | TSINX | 0004 | 0004 | | TSIVT | 0085 | 0055 | (EQU) |
| TSIIAC | 0044 | 002C | | TSIOP | 0100 | 0064 | (EQU) | TSIV | 0076 | 004C | |
| TSIIAP | 0007 | 0007 | (EQU) | TSIPMF | 0006 | 0006 | | TSIVU | 0085 | 0055 | (EQU) |
| TSIIIC | 0046 | 002E | | TSIPP | 0100 | 0064 | (EQU) | TSIWLCK | 0086 | 0056 | (EQU) |
| TSIINPR | 0097 | 0061 | (EQU) | TSIPTS | 0120 | 0078 | | TSIXPR | 0118 | 0076 | |
| TSIIPC | 0041 | 0029 | | TSIPW | 0097 | 0061 | (EQU) | TSIXT | 0098 | 0062 | (EQU) |
| TSIISC | 0042 | 002A | | TSIP2 | 0100 | 0064 | (EQU) | TSIXXL | 0008 | 0008 | |

Assembler listing of CHATSI

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|---|---|---|---|---|---|
| | BO 00000 | CHATSI | DSECT | | TASK STATUS INDEX |
| | | • | | | THIS DSECT IS RESTRICTED TO |
| | | • | | | A FIXED LENGTH OF 128 BYTES |
| BO 00000 | | | DS | 0F | |
| BO 00000 | | TSIFPT | DS | F | FORWARD POINTER TO NEXT TSI |
| BO 00004 | | TSINX | DS | H | NUMBER OF XTSI PAGES |
| BO 00006 | | | DS | 0H | |
| BO 00006 | | TSIPMF | DS | XL2 | PENDING AND MASK FLAGS |
| | BO 00006 | TSIJV | EQU | TSIPMF | VSS INTERRUPT PENDING FLAG |
| | 00000040 | TSIJVM | EQU | X'40' | VSS INTERRUPT PENDING MASK |
| | BO 00006 | TSIJP | EQU | TSIPMF | TASK PROGRAM INTERRUPT |
| | | • | | | PENDING FLAG |
| | 00000020 | TSIJPM | EQU | X'20' | TASK PROGRAM INTERRUPT |
| | | • | | | PENDING MASK |
| | BO 00006 | TSIJS | EQU | TSIPMF | TASK SVC INTERRUPT PENDING |
| | | • | | | FLAG |
| | 00000010 | TSIJSM | EQU | X'10' | TASK SVC INTERRUPT PENDING |
| | | • | | | MASK |
| | BO 00006 | TSIJX | EQU | TSIPMF | TASK EXTERNAL INTERRUPT |
| | | • | | | PENDING FLAG |
| | 00000008 | TSIJXM | EQU | X'08' | TASK EXTERNAL INTERRUPT |
| | | • | | | PENDING MASK |
| | BO 00006 | TSIJA | EQU | TSIPMF | TASK ASYNCHRONOUS INTERRUPT |
| | | • | | | PENDING FLAG |
| | 00000004 | TSIJAM | EQU | X'04' | TASK ASYNCHRONOUS INTERRUPT |
| | | • | | | PENDING MASK |
| | BO 00006 | TSIJT | EQU | TSIPMF | TASK TIMER INTERRUPT |
| | | • | | | PENDING FLAG |
| | 00000002 | TSIJTM | EQU | X'02' | TASK TIMER INTERRUPT |
| | | • | | | PENDING MASK |
| | BO 00006 | TSIJI | EQU | TSIPMF | TASK SYNCHRONOUS I/O |
| | | • | | | INTERRUPT PENDING FLAG |
| | 00000001 | TSIJIM | EQU | X'01' | TASK SYNCHRONOUS I/O |
| | | • | | | INTERRUPT PENDING MASK |
| | BO 00007 | TSIIAP | EQU | TSIPMF+1 | ASYNC PROG INTRPT FLAG |
| | | • | | | I3472 |
| | 00000010 | TSIIAPM | EQU | X'10' | PROG INTRPT ENABLED |
| | | • | | | I3472 |
| | BO 00007 | TSIKX | EQU | TSIPMF+1 | TASK EXTERNAL INTERRUPT |
| | | • | | | MASK FLAG |
| | 00000008 | TSIKXM | EQU | X'08' | TASK EXTERNAL INTERRUPT |
| | | • | | | MASK MASK |
| | BO 00007 | TSIKA | EQU | TSIPMF+1 | TASK ASYNCHRONOUS INTERRUPT |
| | | • | | | MASK FLAG |
| | 00000004 | TSIKAM | EQU | X'04' | TASK ASYNCHRONOUS INTERRUPT |
| | | • | | | MASK MASK |
| | BO 00007 | TSIKT | EQU | TSIPMF+1 | TASK TIMER INTERRUPT MASK |
| | | • | | | FLAG |
| | 00000002 | TSIKTM | EQU | X'02' | TASK TIMER INTERRUPT MASK |
| | | • | | | MASK |
| | BO 00007 | TSIKI | EQU | TSIPMF+1 | TASK SYNCHRONOUS I/O |
| | | • | | | INTERRUPT MASK FLAG |
| | 00000001 | TSIKIM | EQU | X'01' | TASK SYNCHRONOUS I/O |
| | | • | | | INTERRUPT MASK MASK |
| BO 00008 | | | DS | 0F | |
| BO 00008 | | TSIXXL | DS | F | EXTERNAL LOCATION OF FIRST |
| | | • | | | XTSI PAGE |
| BO 0000C | | TSILOC | DS | F | INTERNAL LOCATION OF FIRST |
| | | • | | | XTSI PAGE |
| BO 00010 | | | DS | 0D | |
| BO 00010 | | TSIUID | DS | CL8 | USER IDENTIFICATION |
| BO 00018 | | TSISIN | DS | H | SYSIN |
| BO 0001A | | TSISOT | DS | H | SYSOUT |
| BO 0001C | | TSITDP | DS | F | TASK DEVICE LIST POINTER |
| BO 00020 | | TSIRPOST | DS | F | POINTER TO PAGE REPOSTING |
| | | • | | | GQE |
| BO 00024 | | TSITSN | DS | F | TIME SLICE END GQE POINTER |
| | | • | | | FOR SECOND SCAN |

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|---|---|---|---|---|---|
| BO 00028 | | TSITIC | DS | XL1 | TASK INTERRUPT COUNTS |
| BO 00029 | | TSIIPC * | DS | XL1 | COUNT OF TASK PROGRAM INTERRUPTS |
| BO 0002A | | TSIISC * | DS | XL1 | COUNT OF TASK SVC INTERRUPTS |
| BO 0002B | | TSIIXC * | DS | XL1 | COUNT OF TASK EXTERNAL INTERRUPTS |
| BO 0002C | | TSIIAC * | DS | XL1 | COUNT OF TASK ASYNCHRONOUS INTERRUPTS |
| BO 0002D | | TSIITC * | DS | XL1 | COUNT OF TASK TIMER INTERRUPTS |
| BO 0002E | | TSIIC * | DS | XL1 | COUNT OF TASK INPUT/OUTPUT INTERRUPTS |
| BO 0002F | | TSIIVC * | DS | XL1 | COUNT OF VSS ACTIVE INTERRUPTS |
| BO 00030 | | TSITIP * | DS | D | POINTERS TO TASK INTERRUPT QUEUE ENTRIES |
| | BO 00030 | | ORG | TSITIP | |
| BO 00030 | | TSIFPQ | DS | F | FIRST INTERRUPT QUEUE ENTRY |
| BO 00034 | | TSILPQ | DS | F | LAST INTERRUPT QUEUE ENTRY |
| BO 00038 | | TSILOCG * | DS | F | ROUTINE TO LAST ACCESS TSILOCK |
| BO 0003C | | TSIMTSCB * | DS | F | ADDRESS OF MTSCB FOR SPECIAL TASK(MT/T) |
| BO 00040 | | TSIBLK | DS | H | BLOCK PAGING COUNT |
| BO 00042 | | TSISWPCT * | DS | HL2 | STEAL WRITES PENDING COUNT (MT/T) |
| BO 00044 | | TSISPT * | DS | F | SPT PAGE AND DISP FOR LOCK WAIT LOCKS* |
| BO 00048 | | TSISST | DS | F | SCHEDULED START TIME |
| BO 0004C | | TSIVTP | DS | F | VSS ALTERNATE TSI POINTER |
| BO 00050 | | TSISTE | DS | H | CURRENT SCHED TABLE INDEX |
| BO 00052 | | TSISDA * | DS | H | SYMBOLIC DEVICE ADDRESS OF TSP TERMINAL |
| BO 00054 | | TSIF1 | DS | XL1 | FLAG BYTE |
| | BO 00054 | TSIAW | EQU | TSIF1 | AWAIT FLAG |
| | 00000001 | TSIAWM * | EQU | X'01' | AWAIT MASK AWAIT MASK ALSO USED WHEN WISH RESCHEDULER |
| | | * | | | TO TRANSFER A TASK TO INACTIVE |
| | | * | | | LIST(SECONDARY |
| | | * | | | USAGE) CALLER TO RESCHED MUST TURN AWAIT |
| | | * | | FLAG | |
| | | * | | | OFF WHEN RETURNING |
| | BO 00054 | TSIMPRE * | EQU | TSIF1 | MAX PAGE READS EXCEEDED FLAG |
| | 00000080 | TSIMPREM * | EQU | X'80' | MAX PAGE READS EXCEEDED MASK |
| | BO 00054 | TSINTSE | EQU | TSIF1 | NORMAL TSE FLAG |
| | 00000040 | TSINTSEM | EQU | X'40' | NORMAL TSE MASK |
| BO 00055 | | TSIVSS * | DS | XL1 | VIRTUAL MEMORY SUPERVISOR SUPPORT FLAG |
| | BO 00055 | TSIVS | EQU | TSIVSS | VSS ACTIVE FLAG |
| | 00000080 | TSIVSM | EQU | X'80' | VSS ACTIVE MASK |
| | BO 00055 | TSIVT | EQU | TSIVSS | TSP CONNECTED FLAG |
| | 00000040 | TSIVTM | EQU | X'40' | TSP CONNECTED MASK |
| | BO 00055 | TSIVU | EQU | TSIVSS | SEPARATE TSP TERMINAL FLAG |
| | 00000020 | TSIVUM | EQU | X'20' | SEPARATE TSP TERMINAL MASK |
| | BO 00055 | TSIAWM1 * | EQU | TSIVSS | AUXILIARY WARNING MESSAGE FLAG |
| | 00000010 | TSIAWMM * | EQU | X'10' | AUXILIARY WARNING MESSAGE MASK |
| | BO 00055 | TSIAST | EQU | TSIVSS | AUX SPACE TERMINATION FLAG |
| | 00000008 | TSIASTM | EQU | X'08' | AUX SPACE TERMINATION MASK |
| BO 00056 | | TSIRSF | DS | XL1 | RESCHEDULING FLAGS |
| | BO 00056 | TSIHLCK | EQU | TSIRSF | HOLDING INTERLOCK FLAG |
| | 00000080 | TSIHLCKM | EQU | X'80' | HOLDING INTERLOCK MASK |
| | BO 00056 | TSIWLCK | EQU | TSIRSF | WAITING ON INTERLOCK FLAG |
| | 00000040 | TSIWLCKM * | EQU | X'40' | WAITING ON INTERLOCK FLAG MASK |

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|----------|-------------|--------|------|------|---------|
| | B0 00056 | TSILCF | EQU | TSIRSF | LO CORE FTSE FLAG |
| | 00000020 | TSILCFM | EQU | X'20' | LO CORE FTSE FLAG MASK |
| | B0 00056 | TSITSVC | EQU | TSIRSF | TSEND SVC FLAG |
| | 00000010 | TSITSVCM | EQU | X'10' | TSEND SVC FLAG MASK |
| B0 00057 | | TSIMGR | DS | XL1 | MIGRATION FLAGS |
| | B0 00057 | TSIDS | EQU | TSIMGR | TWAIT FLAG |
| | 00000080 | TSIDSM | EQU | X'80' | TWAIT MASK |
| | B0 00057 | TSIMG | EQU | TSIMGR | ANY TASK IN MIGRATION |
| | 00000020 | TSIMGM | EQU | X'20' | IN MIGRATION IF ON |
| | B0 00057 | TSIMTT * | EQU | TSIMGR | SPECIAL TASK FLAG (MT/T) |
| | 00000010 | TSIMTTM * | EQU | X'10' | SPECIAL TASK MASK (MT/T) |
| | B0 00057 | TSIMGRF * | EQU | TSIMGR | MIGRATION REQUESTED FLAG (MT/T) |
| | 00000008 | TSIMGRFM * | EQU | X'08' | MIGRATION REQUESTED MASK (MT/T) |
| | B0 00057 | TSISCNF * | EQU | TSIMGR | SCAN FLAG (MT/T) |
| | 00000004 | TSISCNFM * | EQU | X'04' | SCAN MASK (MT/T) |
| B0 00058 | | TSIADP | DS | H | AUXILIARY DISK PAGE COUNT |
| B0 0005A | | TSIARF | DS | H | AUXILIARY REQUIREMNET FIELD |
| B0 0005C | | TSIAAF * | DS | H | ASSIGNED AUXILIARY COUNT FIELD |
| B0 0005E | | TSICP * | DS | HL2 | PAGING REQUESTS PENDING COUNT |
| B0 00060 | | TSILOCK | DS | XL1 | LOCK BYTE |
| B0 00061 | | TSIFLG | DS | XL1 | |
| | B0 00061 | TSIINPR | EQU | TSIFLG | |
| | 00000020 | TSIINPRM | EQU | X'20' | IN PROCESS FLAG |
| | 000000DF | TSIINPRC | EQU | X'DF' | IN PROCESS FLAG COMPLEMENT |
| | B0 00061 | TSIDL | EQU | TSIFLG | DELAY FLAG |
| | 00000010 | TSIDLM | EQU | X'10' | DELAY MASK |
| | B0 00061 | TSIRD | EQU | TSIFLG | READY FLAG |
| | 00000008 | TSIRDM | EQU | X'08' | READY MASK |
| | B0 00061 | TSITS | EQU | TSIFLG | TIME SLICE END FLAG |
| | 00000004 | TSITSM | EQU | X'04' | TIME SLICE END MASK |
| | B0 00061 | TSIEX | EQU | TSIFLG | IN EXECUTION FLAG |
| | 00000002 | TSIEXM | EQU | X'02' | IN EXECUTION MASK |
| | B0 00061 | TSIPW | EQU | TSIFLG | PAGE WAIT FLAG |
| | 00000001 | TSIPWM | EQU | X'01' | PAGE WAIT MASK |
| B0 00062 | | TSIF2 | DS | XL1 | FLAG BYTE |
| | B0 00062 | TSINW | EQU | TSIF2 | IN THE WALL FLAG |
| | 00000080 | TSINWM | EQU | X'80' | IN THE WALL MASK |
| | 0000007F | TSINWC | EQU | X'7F' | IN THE WALL COMPLEMENT |
| | B0 00062 | TSIATTN * | EQU | TSIF2 | EXPRESS DISPATCH FLAG I6950 |
| | 00000040 | TSIATTNM * | EQU | X'40' | EXPRESS DISPATCH MASK I6950 |
| | B0 00062 | TSIAT | EQU | TSIF2 | INACTIVE TASK FLAG |
| | 00000008 | TSIATM | EQU | X'08' | INACTIVE TASK MASK |
| | B0 00062 | TSICV | EQU | TSIF2 | CONVERSATIONAL TASK FLAG |
| | 00000004 | TSICVM | EQU | X'04' | CONVERSATIONAL TASK MASK |
| | B0 00062 | TSIXT | EQU | TSIF2 | XTSI OUT FLAG |
| | 00000002 | TSIXTM | EQU | X'02' | XTSI OUT MASK |
| | B0 00062 | TSIEB * | EQU | TSIF2 | EXECUTE BOUND FLAG N487 |
| | 00000001 | TSIEBM * | EQU | X'01' | EXECUTE BOUND MASK N487 |
| B0 00063 | | TSIF3 | DS | XL1 | FLAG BYTE |
| | B0 00063 | TSICQ | EQU | TSIF3 | COMP. QUANTUM FLAG |
| | 00000080 | TSICQM | EQU | X'80' | COMP. QUANTUM MASK |
| | B0 00063 | TSICMP | EQU | TSIF3 | COMP. PRI FLAG |
| | 00000040 | TSICMX | EQU | X'40' | COMP. PRI MASK |
| | B0 00063 | TSIITI | EQU | TSIF3 | RESERVED |
| | 00000010 | TSIITIM | EQU | X'10' | RESERVED |
| | B0 00063 | TSIET | EQU | TSIF3 | END OF TIME SLICE FLAG |

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|---|---|---|---|---|---|
| | 00000008 | TSIETM | EQU | X'08' | END OF TIME SLICE MASK |
| BO 00063 | | TSITSE | EQU | TSIF3 | REAL TIME SLICE END FLAG |
| | 00000004 | TSITSEM | EQU | X'04' | REAL TIME SLICE END MASK |
| BO 00063 | | TSIUT | EQU | TSIF3 | USER TIME REQUIRED FLAG |
| | 00000002 | TSIUTM | EQU | X'02' | USER TIME REQUIRED MASK |
| BO 00063 | | TSIRT | EQU | TSIF3 | REAL TIME INTRPT PENDING |
| | | * | | | FLAG   I6292 |
| | 00000001 | TSIRTM | EQU | X'01' | REAL TIME INTRPT PENDING |
| | | * | | | MASK   I6292 |
| | | * TSIF4 IS REFERENCED BY THE XTRCT AND SETUP MACROS | | | |
| BO 00064 | | TSIF4 | DS | XL1 | PRIORITY FLAGS |
| BO 00064 | | TSIOP | EQU | TSIF4 | SYSTEM OPERATOR     PRIORITY |
| | | * | | | FLAG |
| | 00000000 | TSIOPM | EQU | X'00' | SYSTEM OPERATOR     PRIORITY |
| | | * | | | MASK |
| BO 00064 | | TSIPP | EQU | TSIF4 | SYSTEM PROGRAMMER PRIORITY |
| | | * | | | FLAG |
| | 00000080 | TSIPPM | EQU | X'80' | SYSTEM PROGRAMMER PRIORITY |
| | | * | | | MASK |
| BO 00064 | | TSISP | EQU | TSIF4 | SERVICE ROUTINE     PRIORITY |
| | | * | | | FLAG |
| | 000000C0 | TSISPM | EQU | X'C0' | SERVICE ROUTINE     PRIORITY |
| | | * | | | MASK |
| BO 00064 | | TSIUP | EQU | TSIF4 | USER               PRIORITY |
| | | * | | | FLAG |
| | 000000E0 | TSIUPM | EQU | X'E0' | USER               PRIORITY |
| | | * | | | MASK |
| BO 00064 | | TSIP2 | EQU | TSIF4 | PRIVILEGED         PRIORITY |
| | | * | | | FLAG |
| | 00000020 | TSIP2M | EQU | X'20' | PRIVILEGED         PRIORITY |
| | | * | | | MASK |
| BO 00064 | | TSIMB | EQU | TSIF4 | INTER-TASK MESSAGE |
| | | * | | | ACCEPTANCE FLAG |
| | 00000002 | TSIMBM | EQU | X'02' | INTER-TASK MESSAGE |
| | | * | | | ACCEPTANCE MASK |
| BO 00065 | | TSIBSN | DS | XL1 | FLAG BYTE |
| BO 00065 | | TSIDPSS | EQU | TSIBSN | DELETE PAGE SECOND SCAN |
| | | * | | | TABLE |
| | 00000020 | TSIDPSSM | EQU | X'20' | DELETE PAGE SECOND SCAN |
| | | * | | | MASK |
| BO 00066 | | TSICPR | DS | H | DISK OPERATIONS COUNTER |
| BO 00068 | | | DS | 0F | |
| BO 00068 | | TSIMGSCN | DS | A | POINTER TO MIGRATION GQES |
| | | * | | | N470 |
| BO 0006C | | TSIDCT | DS | H | COUNT OF TASK'S PAGES ON |
| | | * | | | DRUM |
| BO 0006E | | TSITSC | DS | XL1 | CONSECUTIVE TSE COUNTER |
| BO 0006F | | TSIQCT | DS | XL1 | QUANTUM COUNTER |
| BO 00070 | | | DS | 0F | |
| BO 00070 | | TSIGQP | DS | F | MASTER GQE POINTER PAGEOUT |
| BO 00074 | | TSITID | DS | H | TASK IDENTIFICATION |
| BO 00076 | | TSIXPR | DS | H | TASK EXTERNAL PRIORITY |
| BO 00078 | | TSIPTS | DS | H | PAGES USED LAST TIME SLICE |
| BO 0007A | | TSISIB | DS | C | *** PROGRAMMING SUPPORT *** |
| BO 0007C | | | DS | 0F | |
| BO 0007C | | TSIRVP | DS | F | REVERSE POINTER |

## CHAXTS Storage map

| DEC | HEX | | | | |
|-----|-----|---|---|---|---|
| 0 | 0 | UNNAMED | XTSUPM | UNNAMED | XTSUIC |
| 8 | 8 | UNNAMED | | | |
| 16 | 10 | XTSCRS | | | |
| 80 | 50 | XTSGRS | | | |
| 144 | 90 | XTSFRS | | | |
| 176 | B0 | XTSCTI | | XTSUTI | |
| 184 | B8 | XTSLTS | | XTSATI | |
| 192 | C0 | XTSETI | | XTSTSI | |
| 200 | C8 | XTSNPG | XTSBYA | XTSPCT | XTSIC |
| 208 | D0 | XTSDMY | XTSF1 | XTSTSECT | XTSDLCT | XTSPTF |
| 216 | D8 | XTSPTL | | XTSSTX0 | |
| 224 | E0 | XTSSTX1 | | XTSSTX2 | |
| 232 | E8 | XTSSTX3 | | XTSASI0 | |
| 240 | F0 | XTSASX0 | | XTSASI1 | |
| 248 | F8 | XTSASX1 | | XTSASI2 | |
| 256 | 100 | XTSASX2 | | XTSASI3 | |
| 264 | 108 | XTSASX3 | | XTSASI4 | |
| 272 | 110 | XTSASX4 | | XTSASI5 | |
| 280 | 118 | XTSASX5 | | XTSASI6 | |
| 288 | 120 | XTSASX6 | | XTSASI7 | |
| 296 | 128 | XTSASX7 | XTSSTP | XTSASP | XTSSTR | XTSASR |
| 304 | 130 | XTSF2 | XTSSTQ | UNNAMED | XTSPRQ | RESERVED |
| 312 | 138 | XTSATS | | XTSPOA | |

(CHAXTS continued from page 473)

| DEC | HEX | | | | |
|---|---|---|---|---|---|
| 320 | 140 | XTSPOE | | XTSPIA | |
| 328 | 148 | XTSPIE | | XTSMAS | XTSTWC |
| 336 | 150 | XTSAWC | | XTSID | |

## Fields in CHAXTS -- by displacement

| DEC | HEX | FIELD | | DEC | HEX | FIELD | | DEC | HEX | FIELD | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0000 | 0000 | XTSUPS | | 0128 | 0080 | XTSGCS | (EQU) | 0248 | 00F8 | XTSASX1 | |
| 0002 | 0002 | XTSUPM | | 0132 | 0084 | XTSGDS | (EQU) | 0252 | 00FC | XTSASI2 | |
| 0004 | 0004 | XTSUIC | | 0136 | 0088 | XTSGES | (EQU) | 0256 | 0100 | XTSASX2 | |
| 0016 | 0010 | XTSC0S | (EQU) | 0140 | 008C | XTSGFS | (EQU) | 0260 | 0104 | XTSASI3 | |
| 0016 | 0010 | XTSCRS | | 0144 | 0090 | XTSF0S | (EQU) | 0264 | 0108 | XTSASX3 | |
| 0020 | 0014 | XTSC1S | (EQU) | 0144 | 0090 | XTSFRS | | 0268 | 010C | XTSASI4 | |
| 0024 | 0018 | XTSC2S | (EQU) | 0152 | 0098 | XTSF2S | (EQU) | 0272 | 0110 | XTSASX4 | |
| 0028 | 001C | XTSC3S | (EQU) | 0160 | 00A0 | XTSF4S | (EQU) | 0276 | 0114 | XTSASI5 | |
| 0032 | 0020 | XTSC4S | (EQU) | 0168 | 00A8 | XTSF6S | (EQU) | 0280 | 0118 | XTSASX5 | |
| 0036 | 0024 | XTSC5S | (EQU) | 0176 | 00B0 | XTSCTI | | 0284 | 011C | XTSASI6 | |
| 0040 | 0028 | XTSC6S | (EQU) | 0180 | 00B4 | XTSUTI | | 0288 | 0120 | XTSASX6 | |
| 0044 | 002C | XTSC7S | (EQU) | 0184 | 00B8 | XTSLTS | | 0292 | 0124 | XTSASI7 | |
| 0048 | 0030 | XTSC8S | (EQU) | 0188 | 00BC | XTSATI | | 0296 | 0128 | XTSASX7 | |
| 0052 | 0034 | XTSC9S | (EQU) | 0192 | 00C0 | XTSETI | | 0300 | 012C | XTSSTP | |
| 0056 | 0038 | XTSCAS | (EQU) | 0196 | 00C4 | XTSTSI | | 0301 | 012D | XTSASP | |
| 0060 | 003C | XTSCBS | (EQU) | 0200 | 00C8 | XTSNPG | | 0302 | 012E | XTSSTR | |
| 0064 | 0040 | XTSCCS | (EQU) | 0202 | 00CA | XTSBYA | | 0303 | 012F | XTSASR | |
| 0068 | 0044 | XTSCDS | (EQU) | 0204 | 00CC | XTSPCT | | 0304 | 0130 | XTSTA0 | (EQU) |
| 0072 | 0048 | XTSCES | (EQU) | 0206 | 00CE | XTSIC | | 0304 | 0130 | XTSTA1 | (EQU) |
| 0076 | 004C | XTSCFS | (EQU) | 0208 | 00D0 | XTSDMY | | 0304 | 0130 | XTSTA2 | (EQU) |
| 0080 | 0050 | XTSG0S | (EQU) | 0209 | 00D1 | XTSTX | (EQU) | 0304 | 0130 | XTSTA | (EQU) |
| 0080 | 0050 | XTSGRS | | 0209 | 00D1 | XTSF1 | | 0304 | 0130 | XTSF2 | |
| 0084 | 0054 | XTSG1S | (EQU) | 0210 | 00D2 | XTSTSECT | | 0305 | 0131 | XTSSTQ | |
| 0088 | 0058 | XTSG2S | (EQU) | 0211 | 00D3 | XTSDLCT | | 0308 | 0134 | XTSPRQ | |
| 0092 | 005C | XTSG3S | (EQU) | 0212 | 00D4 | XTSPTF | | 0312 | 0138 | XTSATS | |
| 0096 | 0060 | XTSG4S | (EQU) | 0216 | 00D8 | XTSPTL | | 0316 | 013C | XTSPOA | |
| 0100 | 0064 | XTSG5S | (EQU) | 0220 | 00DC | XTSSTX0 | | 0320 | 0140 | XTSPOE | |
| 0104 | 0068 | XTSG6S | (EQU) | 0224 | 00E0 | XTSSTX1 | | 0324 | 0144 | XTSPIA | |
| 0108 | 006C | XTSG7S | (EQU) | 0228 | 00E4 | XTSSTX2 | | 0328 | 0148 | XTSPIE | |
| 0112 | 0070 | XTSG8S | (EQU) | 0232 | 00E8 | XTSSTX3 | | 0332 | 014C | XTSMAS | |
| 0116 | 0074 | XTSG9S | (EQU) | 0236 | 00EC | XTSASI0 | | 0334 | 014E | XTSTWC | |
| 0120 | 0078 | XTSGAS | (EQU) | 0240 | 00F0 | XTSASX0 | | 0336 | 0150 | XTSAWC | |
| 0124 | 007C | XTSGBS | (EQU) | 0244 | 00F4 | XTSASI1 | | 0340 | 0154 | XTSID | |

## Alphabetical list of fields in CHAXTS

| FIELD | DEC | HEX | | FIELD | DEC | HEX | | FIELD | DEC | HEX | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| XTSASI0 | 0236 | 00EC | | XTSCBS | 0060 | 003C | (EQU) | XTSF2 | 0304 | 0130 | |
| XTSASI1 | 0244 | 00F4 | | XTSCCS | 0064 | 0040 | (EQU) | XTSF2S | 0152 | 0098 | (EQU) |
| XTSASI2 | 0252 | 00FC | | XTSCDS | 0068 | 0044 | (EQU) | XTSF4S | 0160 | 00A0 | (EQU) |
| XTSASI3 | 0260 | 0104 | | XTSCES | 0072 | 0048 | (EQU) | XTSF6S | 0168 | 00A8 | (EQU) |
| XTSASI4 | 0268 | 010C | | XTSCFS | 0076 | 004C | (EQU) | XTSGAS | 0120 | 0078 | (EQU) |
| XTSASI5 | 0276 | 0114 | | XTSCRS | 0016 | 0010 | | XTSGBS | 0124 | 007C | (EQU) |
| XTSASI6 | 0284 | 011C | | XTSCTI | 0176 | 00B0 | | XTSGCS | 0128 | 0080 | (EQU) |
| XTSASI7 | 0292 | 0124 | | XTSC0S | 0016 | 0010 | (EQU) | XTSGDS | 0132 | 0084 | (EQU) |
| XTSASP | 0301 | 012D | | XTSC1S | 0020 | 0014 | (EQU) | XTSGES | 0136 | 0088 | (EQU) |
| XTSASR | 0303 | 012F | | XTSC2S | 0024 | 0018 | (EQU) | XTSGFS | 0140 | 008C | (EQU) |
| XTSASX0 | 0240 | 00F0 | | XTSC3S | 0028 | 001C | (EQU) | XTSGRS | 0080 | 0050 | |
| XTSASX1 | 0248 | 00F8 | | XTSC4S | 0032 | 0020 | (EQU) | XTSG0S | 0080 | 0050 | (EQU) |
| XTSASX2 | 0256 | 0100 | | XTSC5S | 0036 | 0024 | (EQU) | XTSG1S | 0084 | 0054 | (EQU) |
| XTSASX3 | 0264 | 0108 | | XTSC6S | 0040 | 0028 | (EQU) | XTSG2S | 0088 | 0058 | (EQU) |
| XTSASX4 | 0272 | 0110 | | XTSC7S | 0044 | 002C | (EQU) | XTSG3S | 0092 | 005C | (EQU) |
| XTSASX5 | 0280 | 0118 | | XTSC8S | 0048 | 0030 | (EQU) | XTSG4S | 0096 | 0060 | (EQU) |
| XTSASX6 | 0288 | 0120 | | XTSC9S | 0052 | 0034 | (EQU) | XTSG5S | 0100 | 0064 | (EQU) |
| XTSASX7 | 0296 | 0128 | | XTSDLCT | 0211 | 00D3 | | XTSG6S | 0104 | 0068 | (EQU) |
| XTSATI | 0188 | 00BC | | XTSDMY | 0208 | 00D0 | | XTSG7S | 0108 | 006C | (EQU) |
| XTSATS | 0312 | 0138 | | XTSETI | 0192 | 00C0 | | XTSG8S | 0112 | 0070 | (EQU) |
| XTSAWC | 0336 | 0150 | | XTSFRS | 0144 | 0090 | | XTSG9S | 0116 | 0074 | (EQU) |
| XTSBYA | 0202 | 00CA | | XTSF0S | 0144 | 0090 | (EQU) | XTSIC | 0206 | 00CE | |
| XTSCAS | 0056 | 0038 | (EQU) | XTSF1 | 0209 | 00D1 | | XTSID | 0340 | 0154 | |

| FIELD | DEC | HEX | | FIELD | DEC | HEX | | FIELD | DEC | HEX | |
|-------|-----|-----|--|-------|-----|-----|--|-------|-----|-----|--|
| XTSLTS | 0184 | 00B8 | | XTSPTL | 0216 | 00D8 | | XTSTA1 | 0304 | 0130 | (EQU) |
| XTSMAS | 0332 | 014C | | XTSSTP | 0300 | 012C | | XTSTA2 | 0304 | 0130 | (EQU) |
| XTSNPG | 0200 | 00C8 | | XTSSTQ | 0305 | 0131 | | XTSTSECT | 0210 | 00D2 | |
| XTSPCT | 0204 | 00CC | | XTSSTR | 0302 | 012E | | XTSTSI | 0196 | 00C4 | |
| XTSPIA | 0324 | 0144 | | XTSSTX0 | 0220 | 00DC | | XTSTWC | 0334 | 014E | |
| XTSPIE | 0328 | 0148 | | XTSSTX1 | 0224 | 00E0 | | XTSTX | 0209 | 00D1 | (EQU) |
| XTSPOA | 0316 | 013C | | XTSSTX2 | 0228 | 00E4 | | XTSUIC | 0004 | 0004 | |
| XTSPOE | 0320 | 0140 | | XTSSTX3 | 0232 | 00E8 | | XTSUPM | 0002 | 0002 | |
| XTSPRQ | 0308 | 0134 | | XTSTA⁻ | 0304 | 0130 | (EQU) | XTSUPS | 0000 | 0000 | |
| XTSPTF | 0212 | 00D4 | | XTSTA0 | 0304 | 0130 | (EQU) | XTSUTI | 0180 | 00B4 | |

## Assembler listing of CHAXTS

| LOCATION | | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|----------|--|-------------|--------|------|------|---------|
| BC 00000 | | | CHAXTS | DSECT | | FORMAT OF EXTENDED TSI |
| | | | * | | | (XTSI) |
| BC 00000 | | | XTSUPS | DS | 0D | |
| BC 00000 | | | | DS | H | |
| BC 00002 | | | XTSUPM | DS | XL1 | USER PROGRAM MASK |
| BC 00003 | | | | DS | C | |
| BC 00004 | | | XTSUIC | DS | F | INSTRUCTION COUNTER |
| BC 00008 | | | | DS | D | UNUSED |
| BC 00010 | | | XTSCRS | DS | 16F | CONTROL REGISTER SAVE AREA |
| | BC 00010 | | XTSC0S | EQU | XTSCRS+0 | |
| | BC 00014 | | XTSC1S | EQU | XTSCRS+4 | FLAG FOR ADD PAGES |
| | BC 00018 | | XTSC2S | EQU | XTSCRS+8 | |
| | BC 0001C | | XTSC3S | EQU | XTSCRS+12 | |
| | BC 00020 | | XTSC4S | EQU | XTSCRS+16 | |
| | BC 00024 | | XTSC5S | EQU | XTSCRS+20 | |
| | BC 00028 | | XTSC6S | EQU | XTSCRS+24 | |
| | BC 0002C | | XTSC7S | EQU | XTSCRS+28 | |
| | BC 00030 | | XTSC8S | EQU | XTSCRS+32 | |
| | BC 00034 | | XTSC9S | EQU | XTSCRS+36 | |
| | BC 00038 | | XTSCAS | EQU | XTSCRS+40 | |
| | BC 0003C | | XTSCBS | EQU | XTSCRS+44 | |
| | BC 00040 | | XTSCCS | EQU | XTSCRS+48 | |
| | BC 00044 | | XTSCDS | EQU | XTSCRS+52 | |
| | BC 00048 | | XTSCES | EQU | XTSCRS+56 | |
| | BC 0004C | | XTSCFS | EQU | XTSCRS+60 | |
| BC 00050 | | | XTSGRS | DS | 16F | GENERAL PURPOSE REGISTER |
| | | | * | | | SAVE AREA |
| | BC 00050 | | XTSG0S | EQU | XTSGRS+0 | |
| | BC 00054 | | XTSG1S | EQU | XTSGRS+4 | |
| | BC 00058 | | XTSG2S | EQU | XTSGRS+8 | |
| | BC 0005C | | XTSG3S | EQU | XTSGRS+12 | |
| | BC 00060 | | XTSG4S | EQU | XTSGRS+16 | |
| | BC 00064 | | XTSG5S | EQU | XTSGRS+20 | |
| | BC 00068 | | XTSG6S | EQU | XTSGRS+24 | |
| | BC 0006C | | XTSG7S | EQU | XTSGRS+28 | |
| | BC 00070 | | XTSG8S | EQU | XTSGRS+32 | |
| | BC 00074 | | XTSG9S | EQU | XTSGRS+36 | |
| | BC 00078 | | XTSGAS | EQU | XTSGRS+40 | |
| | BC 0007C | | XTSGBS | EQU | XTSGRS+44 | |
| | BC 00080 | | XTSGCS | EQU | XTSGRS+48 | |
| | BC 00084 | | XTSGDS | EQU | XTSGRS+52 | |
| | BC 00088 | | XTSGES | EQU | XTSGRS+56 | |
| | BC 0008C | | XTSGFS | EQU | XTSGRS+60 | |
| BC 00090 | | | | DS | 0D | |
| BC 00090 | | | XTSFRS | DS | 4D | FLOATING POINT REGISTER |
| | | | * | | | SAVE AREA |
| | BC 00090 | | XTSF0S | EQU | XTSFRS+0 | |
| | BC 00098 | | XTSF2S | EQU | XTSFRS+8 | |
| | BC 000A0 | | XTSF4S | EQU | XTSFRS+16 | |
| | BC 000A8 | | XTSF6S | EQU | XTSFRS+24 | |
| BC 000B0 | | | XTSCTI | DS | F | CURRENT TIMER VALUE |
| BC 000B4 | | | XTSUTI | DS | F | USER TIMER VALUE |
| BC 000B8 | | | XTSLTS | DS | F | LAST TIME-SLICE VALUE |
| BC 000BC | | | XTSATI | DS | F | ACCUMULATED TIME |

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|----------|-------------|--------|------|------|---------|
| BC 000C0 | | XTSETI | DS | F | ESTIMATED TIME |
| BC 000C4 | | XTSTSI | DS | F | POINTER TO TSI |
| BC 000C8 | | XTSNPG • | DS | H | NUMBER OF PAGES THIS TIME-SLICE |
| BC 000CA | | XTSBYA • | DS | H | BYTES AVAILABLE IN FIRST XTSI PAGE |
| BC 000CC | | XTSPCT | DS | H | PAGE COUNT IN XTSI |
| BC 000CE | | XTSIC | DS | H | TASK INTERRUPT CODE |
| BC 000D0 | | XTSDMY • | DS | XL1 | NUMBER DUMMY PAGE TABLE ENTRIES EXISTING |
| BC 000D1 | | XTSF1 | DS | XL1 | FLAGS |
| | BC 000D1 | XTSTX | EQU | XTSF1 | XTSI HAS AUX. STORAGE FLAG |
| | 00000080 | XTSTXM | EQU | X'80' | XTSI HAS AUX. STORAGE MASK |
| BC 000D2 | | | DS | 0H | |
| BC 000D2 | | XTSTSECT | DS | XL1 | TSE COUNT |
| BC 000D3 | | XTSDLCT | DS | XL1 | DELAY COUNT |
| BC 000D4 | | XTSPTF | DS | F | FIRST PTP IN CHAIN |
| BC 000D8 | | XTSPTL | DS | F | LAST PTP IN CHAIN |
| BC 000DC | | XTSSTX0 • | DS | F | EXT LOC OF ST PAGE 0(1ST PHYSICAL ST PG) |
| BC 000E0 | | XTSSTX1 | DS | F | EXT LOC OF ST PAGE 1 |
| BC 000E4 | | XTSSTX2 | DS | F | EXT LOC OF ST PAGE 2 |
| BC 000E8 | | XTSSTX3 | DS | F | EXT LOC OF ST PAGE 3 |
| BC 000EC | | XTSASI0 | DS | F | INTERNAL LOC OF AST PAGE 0 |
| BC 000F0 | | XTSASX0 | DS | F | EXTERNAL LOC OF AST PAGE 0 |
| BC 000F4 | | XTSASI1 | DS | F | INTERNAL LOC OF AST PAGE 1 |
| BC 000F8 | | XTSASX1 | DS | F | EXTERNAL LOC OF AST PAGE 1 |
| BC 000FC | | XTSASI2 | DS | F | INTERNAL LOC OF AST PAGE 2 |
| BC 00100 | | XTSASX2 | DS | F | EXTERNAL LOC OF AST PAGE 2 |
| BC 00104 | | XTSASI3 | DS | F | INTERNAL LOC OF AST PAGE 3 |
| BC 00108 | | XTSASX3 | DS | F | EXTERNAL LOC OF AST PAGE 3 |
| BC 0010C | | XTSASI4 | DS | F | INTERNAL LOC OF AST PAGE 4 |
| BC 00110 | | XTSASX4 | DS | F | EXTERNAL LOC OF AST PAGE 4 |
| BC 00114 | | XTSASI5 | DS | F | INTERNAL LOC OF AST PAGE 5 |
| BC 00118 | | XTSASX5 | DS | F | EXTERNAL LOC OF AST PAGE 5 |
| BC 0011C | | XTSASI6 | DS | F | INTERNAL LOC OF AST PAGE 6 |
| BC 00120 | | XTSASX6 | DS | F | EXTERNAL LOC OF AST PAGE 6 |
| BC 00124 | | XTSASI7 | DS | F | INTERNAL LOC OF AST PAGE 7 |
| BC 00128 | | XTSASX7 | DS | F | EXTERNAL LOC OF AST PAGE 7 |
| BC 0012C | | XTSSTP | DS | XL1 | ST PAGE COUNT |
| BC 0012D | | XTSASP | DS | XL1 | AST PAGE COUNT |
| BC 0012E | | XTSSTR | DS | XL1 | ST PAGE READS DONE |
| BC 0012F | | XTSASR | DS | XL1 | AST PAGE READS DONE |
| BC 00130 | | XTSF2 | DS | XL1 | FLAG BYTE |
| | BC 00130 | XTSTA | EQU | XTSF2 | XTSI STATE FLAG |
| | 00000003 | XTSTAM | EQU | X'03' | XTSI STATE MASK |
| | BC 00130 | XTSTA2 • | EQU | XTSF2 | XTSI STATE 2 FLAG-ST AND AST OUT |
| | 00000002 | XTSTA2M • | EQU | X'02' | XTSI STATE 2 MASK    OF 1ST XTSI PAGE |
| | BC 00130 | XTSTA1 • | EQU | XTSF2 | XTSI STATE 1 FLAG-AST ONLY OUT |
| | 00000001 | XTSTA1M • | EQU | X'01' | XTSI STATE 1 MASK    OF 1ST XTSI PAGE |
| | BC 00130 | XTSTA0 • | EQU | XTSF2 | XTSI STATE 0 FLAG-ST AND AST IN |
| | 00000000 | XTSTA0M • | EQU | X'00' | XTSI STATE 0 MASK        1ST XTSI PAGE |
| BC 00131 | | XTSSTQ • | DS | XL1 | PAGE STEALING COUNT      M4734 |
| BC 00132 | | | DS | H | UNUSED |
| BC 00134 | | XTSPRQ • | DS | HL2 | PAGE RELOCATION INTERRUPTS/Q COUNTER |
| BC 00138 | | | DS. | 0D | |
| BC 00138 | | XTSATS • | DS | F | ACCOUNTING NUMBER OF TIME-SLICES |
| BC 0013C | | XTSPOA • | DS | F | ACCOUNTING AUXILIARY PAGE-OUTS |
| BC 00140 | | XTSPOE • | DS | F | ACCOUNTING EXTERNAL PAGE-OUTS |

(Listing of CHAXTS continued from page 476)

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|----------|-------------|--------|------|------|---------|
| BC 00144 | | XTSPIA | DS | F | ACCOUNTING AUXILIARY |
| | | * | | | PAGE-INS |
| BC 00148 | | XTSPIE | DS | F | ACCOUNTING EXTERNAL |
| | | * | | | PAGE-INS |
| BC 0014C | | XTSMAS | DS | H | MAXIMUM AUXILIARY OCCUPIED |
| BC 0014E | | XTSTWC | DS | H | TWAIT COUNT |
| BC 00150 | | XTSAWC | DS | F | AWAIT COUNT |
| BC 00154 | | XTSID | DS | X | TIME SLICE END IDENTIFIER |
| | | * | | | N470 |
| | 00000155 | XTSFLEN | EQU | *-XTSUPS | FIXED LENGTH OF XTSI |
| | 00000180 | XTSSORG | EQU | 64*((XTSFLEN+63)/64) | TO COMPUTE |
| | | * | | | ORIGIN OF SEGMENT TABLE |

User Catalog Table (CHAUCT)


CHAUCT references the system dataset SYSSCVT which contains the user catalog (USERCAT) addresses for each USERID. SYSSCVT is a VISAM dataset -- the USERID is the key and each record is 16 bytes long (8 bytes for the USERID, 4 bytes for the DSCB address, a 1 byte flag, and 3 reserved bytes).

CHAUCT Storage map

```
DEC   HEX  _____
  0    0 |                          UCTUID                            |
         |_____|
  8    8 |           UCTDSCB          |UCTSYNC |        UCTSPR         |
         |_____|_____|_____ |
```

Fields in CHAUCT -- by displacement

| DEC | HEX | FIELD | DEC | HEX | FIELD | DEC | HEX | FIELD |
|-----|-----|-------|-----|-----|-------|-----|-----|-------|
| 0000 | 0000 | UCTUID | 0008 | 0008 | UCTDSCB | 0012 | 000C | UCTSYNC |
|  |  |  |  |  |  | 0013 | 000D | UCTSPR |

Alphabetical list of fields in CHAUCT

| FIELD | DEC | HEX | FIELD | DEC | HEX | FIELD | DEC | HEX |
|-------|-----|-----|-------|-----|-----|-------|-----|-----|
| UCTDSCB | 0008 | 0008 | UCTSPR | 0013 | 000D | UCTSYNC | 0012 | 000C |
|  |  |  |  |  |  | UCTUID | 0000 | 0000 |

Assembler listing of CHAUCT

```
LOCATION  INSTRUCTION  SOURCE   INST    OPER      COMMENT
    B1 00000           CHAUCT   DSECT             NSRB 423
*************************************************************************
* THIS DSECT IS USED TO REFERENCE THE SYSTEM DATASET 'SYSSCVT' WHICH  *
* CONTAINS THE USER CATALOG ADDRESSES FOR EACH USERID. THIS IS A      *
* VISAM DATASET - THE USERID IS THE KEY AND EACH RECORD IS 16 BYTES   *
* LONG CONTAINING AN 8 BYTE USERID, A 4 BYTE DSCB ADDRESS, A 1 BYTE   *
* FLAG AND 3 RESERVED BYTES.                                          *
*************************************************************************
    B1 00000           UCTUID   DS      CL8       USERID
    B1 00008           UCTDSCB  DS      A         DSCB ADDR OF USERCAT
    B1 0000C           UCTSYNC  DS      XL1       SYNC INDICATOR
           00000001    UCTSYNCM EQU     X'01'     SYNC MASK
                       *                          1 = SYNC DONE
                       *                          0 = SYNC NOT DONE
           00000002    UCTRCRM  EQU     X'02'     RCR RATION FLAG
                       *                          1 = EXCEEDED
                       *                          0 = OK
    B1 0000D           UCTSPR   DS      XL3       RESERVED
```

## Option 4 UFLOW Macro Table (CHAUFN)

CHAUFN defines entries returned by the UFLOW macro, option 4. The user-provided buffer, which may not cross a page boundary, receives the program name and unique number of each MTT task, with its count of users, the MTT administrator's limit, and the limit imposed by the FLOW command. The list in the buffer is stopped by eight bytes of X'FF'.

### CHAUFN Storage map

| DEC | HEX | | | | |
|-----|-----|---|---|---|---|
| 0 | 0 | UFNAME | | | |
| 8 | 8 | UFNRAN | UFNUSE | UFNLMT | UFNMAX |

### Fields in CHAUFN -- by displacement

| DEC | HEX | FIELD | DEC | HEX | FIELD | DEC | HEX | FIELD |
|------|------|--------|------|------|--------|------|------|--------|
| 0000 | 0000 | UFNAME | 0010 | 000A | UFNUSE | 0014 | 000E | UFNMAX |
| 0008 | 0008 | UFNRAN | 0012 | 000C | UFNLMT | | | |

### Alphabetical list of fields in CHAUFN

| FIELD | DEC | HEX | FIELD | DEC | HEX | FIELD | DEC | HEX |
|--------|------|------|--------|------|------|--------|------|------|
| UFNAME | 0000 | 0000 | UFNMAX | 0014 | 000E | UFNUSE | 0010 | 000A |
| UFNLMT | 0012 | 000C | UFNRAN | 0008 | 0008 | | | |

### Assembler listing of CHAUFN

```
LOCATION  INSTRUCTION  SOURCE   INST  OPER      COMMENT
          B2 00000     CHAUFN   DSECT           NSRB 386
**************************************************************************
*      CHAUFN COVERS THE ENTRIES RETURNED BY THE UFLOW MACRO,OPTION 4. *
*      THE USER-PROVIDED BUFFER, WHICH MAY NOT CROSS A PAGE BOUNDARY,  *
*      RECEIVES THE PROGRAM NAME AND UNIQUE NUMBER OF EACH MTT TASK,   *
*      WITH ITS COUNT OF USERS, THE MTT ADMINISTRATOR'S LIMIT (MAX),   *
*      AND THE LIMIT IMPOSED BY THE FLOW COMMAND.                      *
*      THE LIST IN THE BUFFER IS STOPPED BY 8 BYTES OF X'FF'           *
**************************************************************************
B2 00000               UFNAME   DS    CL8       APPLICATION NAME
B2 00008               UFNRAN   DS    H         RELATIVE APPLICATION NUMBER
B2 0000A               UFNUSE   DS    H         CURRENT NUMBER OF MTT USERS
B2 0000C               UFNLMT   DS    H         MTT USER LIMIT
B2 0000E               UFNMAX   DS    H         MAXIMUM NUMBER OF MTT USERS
```

## User Limit Table Entry (CHAULT)

The User Limit Table, a VISAM member of TSS*****.SYSLIB, contains entries (CHAULT) for each user limits category. When a user is joined, his user limits type is used as a key to access the appropriate table entry.
The 64-byte CHAULT resides in virtual storage, aligned on word boundaries.

### CHAULT Storage map

| DEC | HEX | | |
|-----|-----|---|---|
| 0 | 0 | ULTCAT | ULTCCP |
| 8 | 8 | ULTCCT | ULTCTC |
| 16 | 10 | ULTMAV | ULTTP |
| 24 | 18 | ULTPP | ULTDEV1 |
| 32 | 20 | ULTDEV2 | ULTDEV3 |
| 40 | 28 | ULTDEV4 | |
| | | ULTSPR | |

### Fields in CHAULT -- by displacement

| DEC | HEX | FIELD | DEC | HEX | FIELD | DEC | HEX | FIELD |
|-----|-----|-------|-----|-----|-------|-----|-----|-------|
| 0000 | 0000 | ULTCAT | 0016 | 0010 | ULTMAV | 0032 | 0020 | ULTDEV2 |
| 0004 | 0004 | ULTCCP | 0020 | 0014 | ULTTP | 0036 | 0024 | ULTDEV3 |
| 0008 | 0008 | ULTCCT | 0024 | 0018 | ULTPP | 0040 | 0028 | ULTDEV4 |
| 0012 | 000C | ULTCTC | 0028 | 001C | ULTDEV1 | 0044 | 002C | ULTSPR |

### Alphabetical list of fields in CHAULT

| FIELD | DEC | HEX | FIELD | DEC | HEX | FIELD | DEC | HEX |
|-------|-----|-----|-------|-----|-----|-------|-----|-----|
| ULTCAT | 0000 | 0000 | ULTDEV1 | 0028 | 001C | ULTMAV | 0016 | 0010 |
| ULTCCP | 0004 | 0004 | ULTDEV2 | 0032 | 0020 | ULTPP | 0024 | 0018 |
| ULTCCT | 0008 | 0008 | ULTDEV3 | 0036 | 0024 | ULTSPR | 0044 | 002C |
| ULTCTC | 0012 | 000C | ULTDEV4 | 0040 | 0028 | ULTTP | 0020 | 0014 |

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|----------|-------------|--------|------|------|---------|
| B3 00000 | | CHAULT | DSECT | | |

**********************************************************************
*                     * USER LIMITS TABLE *           *
*       THIS DSECT DESCRIBES THE LAYOUT OF AN ENTRY IN THE USER      *
*   LIMITS TABLE.    EACH ENTRY IS A FIXED LENGTH OF 64 BYTS.    THESE    *
*   ENTRIES WILL EXIST IN A VISAM DATA SET.    AT LOGON TIME THE APPRO-   *
*   PRIATE LIMITS ENTRY IS MOVED INTO THE USER'S USER TABLE ENTRY.      *

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|----------|-------------|--------|------|------|---------|
| B3 00000 | | | DS | 0D | |
| B3 00000 | | ULTCAT | DS | F | LIMITS CATEGORY -KEY- |
| B3 00004 | | ULTCCP | DS | F | MAX RATION OF CPU TIME |
| B3 00008 | | ULTCCT | DS | F | CONNECT TIME |
| B3 0000C | | ULTCTC | DS | F | MAX TASK COUNT |
| B3 00010 | | ULTMAV | DS | F | MAX AUXILLARY STORAGE |
| B3 00014 | | ULTTP | DS | F | MAXIMUM TEMPORARY PAGES |
| B3 00018 | | ULTPP | DS | F | MAXIMUM PERMANENT PAGES |
| B3 0001C | | ULTDEV1 | DS | F | DEVICE TYPE 1 DIRECT ACCESS |
| | | * | | | DEVICE |
| B3 00020 | | ULTDEV2 | DS | F | DEVICE TYPE 2 MAGNETIC TAPE |
| | | * | | | DRIVES |
| B3 00024 | | ULTDEV3 | DS | F | DEVICE TYPE 3 HIGH SPEED |
| | | * | | | PRINTERS |
| B3 00028 | | ULTDEV4 | DS | F | DEVICE TYPE 4 |
| | | * | | | READER-PUNCHES |
| B3 0002C | | ULTSPR | DS | 5F | SPARE |
| | 00000040 | ULTLEN | EQU | *-CHAULT | LENGTH OF ENTRY |

**********************************************************************

## User Table (CHAUSE)

The User Table contains a list of all legal TSS/360 users with their credentials.

The User Table, a VAM index sequential data set, contains one entry for each user joined to the system. The entries, tabulated in USERID sequence, are variable in length to a maximum of 256 bytes. Except for the system operator and the system manager, user entries are added by the JOIN command and removed by the QUIT command. The entries for the system operator and manager are created at system generation. The User Table resides on a system resident volume and, thus, is maintained without change between system SHUTDOWN and subsequent system START UP.

The User Table occupies a maximum of 25,600 bytes of virtual storage, aligned on doubleword boundaries.

### CHAUSE Storage map

| DEC | HEX | | | | | | |
|-----|-----|---|---|---|---|---|---|
| 0 | 0 | USESIZ | | USELID | | USERJE | USELK |
| 8 | 8 | USERID | | | | | |
| 16 | 10 | USEPAS | | | | | |
| 24 | 18 | USEPRV | | USESTI | USEATH | USEACT | USEQIT |
| 32 | 20 | USECNT | USETSK | | USEP2 | | |
| 40 | 28 | USECHG | | | | | |
| 48 | 30 | USEPRO | | | | | |
| 56 | 38 | USEINS | | | | | |
| 88 | 58 | USETLC | | | | | |
| 96 | 60 | USESP3 | | USESP4 | | | |
| 104 | 68 | USEP | | | | | |
| 112 | 70 | USEP01 | | USEP02 | | | |
| 120 | 78 | USEP03 | | USEP04 | | | |
| 128 | 80 | USEP05 | | USEP06 | | | |
| 136 | 88 | USEBI | | USEBO | | | |
| 144 | 90 | USEA01 | | USEA02 | | | |
| 152 | 98 | USEA03 | | USEA04 | | | |
| 160 | A0 | USEA05 | | USEA06 | | | |
| 168 | A8 | USEA07 | | USEA08 | | | |
| 176 | B0 | USEA09 | | USEA10 | | | |
| 184 | B8 | USEA11 | | | | | |
| 192 | C0 | USEULT | | USER01 | | | |

| DEC | HEX | | |
|-----|-----|---|---|
| 200 | C8 | USER02 | USER03 |
| 208 | D0 | USER04 | USER05 |
| 216 | D8 | USER06 | USER07 |
| 224 | E0 | USER08 | USER09 |
| 232 | E8 | USER10 | USER11 |
| 240 | F0 | USEUN4 | |

## Fields in CHAUSE -- by displacement

| DEC | HEX | FIELD | | DEC | HEX | FIELD | | DEC | HEX | FIELD |
|-----|-----|-------|---|-----|-----|-------|---|-----|-----|-------|
| 0000 | 0000 | USESIZ | | 0031 | 001F | USEBA | (EQU) | 0152 | 0098 | USEA03 |
| 0004 | 0004 | USELID | | 0031 | 001F | USEQB | (EQU) | 0156 | 009C | USEA04 |
| 0006 | 0006 | USERJE | | 0031 | 001F | USEQIT | | 0160 | 00A0 | USEA05 |
| 0007 | 0007 | USELK | | 0032 | 0020 | USECNT | | 0164 | 00A4 | USEA06 |
| 0008 | 0008 | USERID | | 0034 | 0022 | USETSK | | 0168 | 00A8 | USEA07 |
| 0016 | 0010 | USEPAS | | 0036 | 0024 | USEP2 | | 0172 | 00AC | USEA08 |
| 0024 | 0018 | USEPF | (EQU) | 0040 | 0028 | USECHG | | 0176 | 00B0 | USEA09 |
| 0024 | 0018 | USEPE | (EQU) | 0048 | 0030 | USEPRO | | 0180 | 00B4 | USEA10 |
| 0024 | 0018 | USEPD | (EQU) | 0056 | 0038 | USEINS | | 0184 | 00B8 | USEA11 |
| 0024 | 0018 | USEPC | (EQU) | 0088 | 0058 | USETLC | | 0192 | 00C0 | USEULT |
| 0024 | 0018 | USEPB | (EQU) | 0096 | 0060 | USESP3 | | 0196 | 00C4 | USER01 |
| 0024 | 0018 | USEPA | (EQU) | 0100 | 0064 | USESP4 | | 0200 | 00C8 | USER02 |
| 0024 | 0018 | USEPROX | (EQU) | 0104 | 0068 | USEP | | 0204 | 00CC | USER03 |
| 0024 | 0018 | USEPRV | | 0112 | 0070 | USEP01 | | 0208 | 00D0 | USER04 |
| 0025 | 0019 | USEPR1 | (EQU) | 0116 | 0074 | USEP02 | | 0212 | 00D4 | USER05 |
| 0026 | 001A | USEPR2 | (EQU) | 0120 | 0078 | USEP03 | | 0216 | 00D8 | USER06 |
| 0026 | 001A | USEPT | (EQU) | 0124 | 007C | USEP04 | | 0220 | 00DC | USER07 |
| 0027 | 001B | USEPR3 | (EQU) | 0128 | 0080 | USEP05 | | 0224 | 00E0 | USER08 |
| 0028 | 001C | USEPRI | (EQU) | 0132 | 0084 | USEP06 | | 0228 | 00E4 | USER09 |
| 0028 | 001C | USESTI | | 0136 | 0088 | USEBI | | 0232 | 00E8 | USER10 |
| 0029 | 001D | USEATH | | 0140 | 008C | USEBO | | 0236 | 00EC | USER11 |
| 0030 | 001E | USEACT | | 0144 | 0090 | USEA01 | | 0240 | 00F0 | USEUN4 |
| 0031 | 001F | USEADC | (EQU) | 0148 | 0094 | USEA02 | | | | |

## Alphabetical list of fields in CHAUSE

| FIELD | DEC | HEX | | FIELD | DEC | HEX | | FIELD | DEC | HEX |
|-------|-----|-----|---|-------|-----|-----|---|-------|-----|-----|
| USEACT | 0030 | 001E | | USEPA | 0024 | 0018 | (EQU) | USEQIT | 0031 | 001F |
| USEADC | 0031 | 001F | (EQU) | USEPAS | 0016 | 0010 | | USERID | 0008 | 0008 |
| USEATH | 0029 | 001D | | USEPB | 0024 | 0018 | (EQU) | USERJE | 0006 | 0006 |
| USEA01 | 0144 | 0090 | | USEPC | 0024 | 0018 | (EQU) | USER01 | 0196 | 00C4 |
| USEA02 | 0148 | 0094 | | USEPD | 0024 | 0018 | (EQU) | USER02 | 0200 | 00C8 |
| USEA03 | 0152 | 0098 | | USEPE | 0024 | 0018 | (EQU) | USER03 | 0204 | 00CC |
| USEA04 | 0156 | 009C | | USEPF | 0024 | 0018 | (EQU) | USER04 | 0208 | 00D0 |
| USEA05 | 0160 | 00A0 | | USEPRI | 0028 | 001C | (EQU) | USER05 | 0212 | 00D4 |
| USEA06 | 0164 | 00A4 | | USEPRO | 0048 | 0030 | | USER06 | 0216 | 00D8 |
| USEA07 | 0168 | 00A8 | | USEPROX | 0024 | 0018 | (EQU) | USER07 | 0220 | 00DC |
| USEA08 | 0172 | 00AC | | USEPRV | 0024 | 0018 | | USER08 | 0224 | 00E0 |
| USEA09 | 0176 | 00B0 | | USEPR1 | 0025 | 0019 | (EQU) | USER09 | 0228 | 00E4 |
| USEA10 | 0180 | 00B4 | | USEPR2 | 0026 | 001A | (EQU) | USER10 | 0232 | 00E8 |
| USEA11 | 0184 | 00B8 | | USEPR3 | 0027 | 001B | (EQU) | USER11 | 0236 | 00EC |
| USEBA | 0031 | 001F | (EQU) | USEPT | 0026 | 001A | (EQU) | USESIZ | 0000 | 0000 |
| USEBI | 0136 | 0088 | | USEP01 | 0112 | 0070 | | USESP3 | 0096 | 0060 |
| USEBO | 0140 | 008C | | USEP02 | 0116 | 0074 | | USESP4 | 0100 | 0064 |
| USECHG | 0040 | 0028 | | USEP03 | 0120 | 0078 | | USESTI | 0028 | 001C |
| USECNT | 0032 | 0020 | | USEP04 | 0124 | 007C | | USETLC | 0088 | 0058 |
| USEINS | 0056 | 0038 | | USEP05 | 0128 | 0080 | | USETSK | 0034 | 0022 |
| USELID | 0004 | 0004 | | USEP06 | 0132 | 0084 | | USEULT | 0192 | 00C0 |
| USELK | 0007 | 0007 | | USEP2 | 0036 | 0024 | | USEUN4 | 0240 | 00F0 |
| USEP | 0104 | 0068 | | USEQB | 0031 | 001F | (EQU) | | | |

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|---|---|---|---|---|---|
| | B4 00000 | CHAUSE | DSECT | | USER TABLE DATA SET |
| B4 00000 | | | DS | 0D | |
| | 00000001 | USEPGS | EQU | 1 | NUMBER OF PAGES REQUIRED |
| | | * | | | FOR TABLE ENTRY |
| B4 00000 | | USESIZ | DS | A(USELEN) | LENGTH OF USER ENTRY |
| B4 00004 | | USELID | DS | H | TID OF LOCK SETTER |
| B4 00006 | | USERJE | DS | XL1 | SPECIAL RJE PRIVILEGES |
| | 000000E8 | USERJEM | EQU | C'Y' | IF Y,USER ALLOWED TO ISSUE |
| | | * | | | PRINT |
| | | * | | | REQUESTS FOR ANY RJE STATION |
| | 00000032 | USELKCNT | EQU | 50 | |
| B4 00007 | | USELK | DS | XL1 | LOCK BYTE |
| B4 00008 | | USERID | DS | CL8 | USERID - EBCDIC |
| B4 00010 | | USEPAS | DS | CL8 | PASSWORD - EBCDIC |
| B4 00018 | | USEPRV | DS | XL4 | PRIVILEGE |
| | | * | | | CLASSIFICATION-BINARY |
| | B4 0001A | USEPT | EQU | USEPRV+2 | CLASS T |
| | 00000010 | USEPTM | EQU | X'10' | CLASS T MASK |
| | B4 00018 | USEPROX | EQU | USEPRV | FIRST CLASS BYTE |
| | B4 00018 | USEPA | EQU | USEPROX | CLASS A FLAG |
| | 00000080 | USEPAM | EQU | X'80' | CLASS A MASK |
| | B4 00018 | USEPB | EQU | USEPROX | CLASS B FLAG |
| | 00000040 | USEPBM | EQU | X'40' | CLASS B MASK |
| | B4 00018 | USEPC | EQU | USEPROX | CLASS C FLAG |
| | 00000020 | USEPCM | EQU | X'20' | CLASS C MASK |
| | B4 00018 | USEPD | EQU | USEPROX | CLASS D FLAG |
| | 00000010 | USEPDM | EQU | X'10' | CLASS D MASK |
| | B4 00018 | USEPE | EQU | USEPROX | CLASS E FLAG |
| | 00000008 | USEPEM | EQU | X'08' | CLASS E MASK |
| | B4 00018 | USEPF | EQU | USEPROX | CLASS F FLAG |
| | 00000004 | USEPFM | EQU | X'04' | CLASS F MASK |
| | B4 00019 | USEPR1 | EQU | USEPRV+1 | SECOND CLASS BYTE |
| | B4 0001A | USEPR2 | EQU | USEPRV+2 | THIRD CLASS BYTE |
| | B4 0001B | USEPR3 | EQU | USEPRV+3 | FOURTH CLASS BYTE |
| B4 0001C | | USESTI | DS | FL1 | SCHEDULE TABLE INDEX |
| | B4 0001C | USEPRI | EQU | USESTI | COMPATIBILITY WITHOUT TDS |
| B4 0001D | | USEATH | DS | CL1 | AUTHORIZATION CODE - EBCDIC |
| B4 0001E | | USEACT | DS | XL1 | ACTIVITY FLAG -BINARY |
| | 00000001 | USEACTM | EQU | X'01' | TASK ACTIVE AND |
| | | * | | | CONVERSATIONAL |
| B4 0001F | | USEQIT | DS | XL1 | QUIT FLAG - BINARY |
| | B4 0001F | USEQB | EQU | USEQIT | USER QUIT FLAG |
| | 00000001 | USEQBM | EQU | X'01' | USER QUIT MASK |
| | B4 0001F | USEBA | EQU | USEQIT | BATCH WORK ALLOWED FLAG |
| | 00000002 | USEBAM | EQU | X'02' | BATCH WORK ALLOWED MASK |
| | B4 0001F | USEADC | EQU | USEQIT | USER ACTIVE FLAG |
| | | * | | | N478 |
| | 00000008 | USEADCM | EQU | X'08' | USER ACTIVE MASK |
| | | * | | | N478 |
| B4 00020 | | USECNT | DS | H | NUMBER OF ACTIVE TASKS FOR |
| | | * | | | THIS USER |
| B4 00022 | | USETSK | DS | H | TASKID FOR CONVERSATIONAL |
| | | * | | | TASK |
| B4 00024 | | USEP2 | DS | F | UNUSED |
| B4 00028 | | USECHG | DS | CL8 | CHARGE NUMBER |
| B4 00030 | | USEPRO | DS | CL8 | PROFILE NAME |
| B4 00038 | | USEINS | DS | CL32 | INSTALLATION |
| B4 00058 | | USETLC | DS | 2F | TIME LAST |
| | | * | | | CHANGED-MICROSECONDS |
| B4 00060 | | USESP3 | DS | F | SPARE |
| B4 00064 | | USESP4 | DS | F | SPARE |
| B4 00068 | | USEP | DS | 2F | PRODUCT    RESERVED FIELDS |
| B4 00070 | | USEP01 | DS | F | PRODUCT 1 TEMPORARY PAGES |
| B4 00074 | | USEP02 | DS | F | PRODUCT 2 PERMANENT PAGES |
| B4 00078 | | USEP03 | DS | F | PRODUCT 3 DIRECT ACCESS |
| | | * | | | DRIVES |
| B4 0007C | | USEP04 | DS | F | PRODUCT 4 MAGNETIC TAPE |
| | | * | | | DRIVES |

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|---|---|---|---|---|---|
| B4 00080 | | USEP05 | DS | F | PRODUCT 5 HIGH SPEED PRINTERS |
| B4 00084 | | USEP06 | DS | F | PRODUCT 6 READER PUNCHES |
| | 00000018 | USEPND | EQU | *-USEP01 | LENGTH OF PRODUCT FIELD |
| B4 00088 | | USEBI | DS | F | BULKIO RECORDS IN |
| B4 0008C | | USEBO | DS | F | BULKIO RECORDS OUT |
| B4 00090 | | USEA01 | DS | F | ALLOCATION 1   CPU TIME ACCUMULATIVE |
| B4 00094 | | USEA02 | DS | F | ALLOCATION 2   CONNECT TIME ACCUMULATIVE |
| B4 00098 | | USEA03 | DS | F | ALLOCATION 3   RESERVED |
| B4 0009C | | USEA04 | DS | F | ALLOCATION 4   RESERVED |
| B4 000A0 | | USEA05 | DS | F | ALLOCATION 5   TEMPORARY PAGES |
| B4 000A4 | | USEA06 | DS | F | ALLOCATION 6   PERMANENT PAGES |
| B4 000A8 | | USEA07 | DS | F | ALLOCATION 7   DIRECT ACCESS DRIVES |
| B4 000AC | | USEA08 | DS | F | ALLOCATION 8   MAGNETIC TAPE DRIVES |
| B4 000B0 | | USEA09 | DS | F | ALLOCATION 9   HIGH SPEED PRINTER |
| B4 000B4 | | USEA10 | DS | F | ALLOCATION 10 READER-PUNCHES |
| B4 000B8 | | USEA11 | DS | 2F | RESERVED |
| B4 000C0 | | USEULT | DS | F | USER LIMITS TABLE KEY CATAGORY |
| B4 000C4 | | USER01 | DS | F | RATION 1   CPU TIME/BILLING PERIOD |
| B4 000C8 | | USER02 | DS | F | RATION 2   CONNECT TIME/BILLING PERIOD |
| B4 000CC | | USER03 | DS | F | RATION 3   TASK COUNT |
| B4 000D0 | | USER04 | DS | F | RATION 4   MAXIMUM AUXILIARY STORAGE |
| B4 000D4 | | USER05 | DS | F | RATION 5   TEMPORARY PAGES |
| B4 000D8 | | USER06 | DS | F | RATION 6   PERMANENT PAGES |
| B4 000DC | | USER07 | DS | F | RATION 7   DIRECT ACCESS DRIVES |
| B4 000E0 | | USER08 | DS | F | RATION 8   MAGNETIC TAPE DRIVES |
| B4 000E4 | | USER09 | DS | F | RATION 9   HIGH SPEED PRINTERS |
| B4 000E8 | | USER10 | DS | F | RATION 10 READER/PUNCHES |
| B4 000EC | | USER11 | DS | F | RATION 11 RESERVED |
| B4 000F0 | | USEUN4 | DS | 4F | RESERVED |
| | 00000100 | USELEN | EQU | *-CHAUSE | LENGTH OF ENTRY |

## Virtual Program Status Word (CHAVPS)

The Virtual Program Status Word (VPSW), as used by a task operating in virtual storage, is analogous to the Program Status Word (PSW) which the Supervisor operates upon. The VPSW describes the task status at the moment that the machine is stopped by an interrupt. The reason for machine stoppage is indicated by the VPSW and the interrupt code. The types of interrupts that a task can receive are listed, in their order of interrupt processing priority, as follows:
1. Program
2. Service Call
3. External
4. Asynchronous
5. Timer
6. Input/Output

The resident and task monitors operate on the VPSWs which, in turn, furnish data to the LVPSW SVC processor and Task Interrupt Control.

The VPSW occupies 8 bytes of virtual storage, aligned on double word boundaries, in segment zero, page zero of the Interrupt Storage Area (ISA). The old-VPSWs (bytes 2000 to 2047) are located in the non-protected portion of the page where they are accessible to the object program. The new VPSWs (bytes 2048 to 2095) reside in the protected portion of the page where they are write-protected against change by non-privileged routines. The current-VPSW (bytes 2104 to 2111) is also contained in the protected portion of the page. This is a duplicate of the latest new-VPSW saved by the Resident Supervisor.

The LVPSW macro is provided to privileged programs for starting a task under control of a particular VPSW.

### CHAVPS Storage map

```
DEC   HEX _____
  0     0 |VPSPT   |VPSCP  |      VPSIN      |          VPSIC             |
          |_____|_____|_____|_____|
```

### Fields in CHAVPS -- by displacement

| DEC | HEX | FIELD | | DEC | HEX | FIELD | | DEC | HEX | FIELD | |
|------|------|-------|------|------|------|-------|------|------|------|-------|------|
| 0000 | 0000 | VPSII | (EQU) | 0000 | 0000 | VPSPT | | 0001 | 0001 | VPSCC | (EQU) |
| 0000 | 0000 | VPSTI | (EQU) | 0000 | 0000 | VPSOP | | 0001 | 0001 | VPSLC | (EQU) |
| 0000 | 0000 | VPSAI | (EQU) | 0001 | 0001 | VPSSF | (EQU) | 0001 | 0001 | VPSCP | |
| 0000 | 0000 | VPSXI | (EQU) | 0001 | 0001 | VPSEU | (EQU) | 0002 | 0002 | VPSIN | |
| 0000 | 0000 | VPSPI | (EQU) | 0001 | 0001 | VPSDO | (EQU) | 0004 | 0004 | VPSIC | |
| 0000 | 0000 | VPSRE | (EQU) | 0001 | 0001 | VPSFO | (EQU) | | | | |
| 0000 | 0000 | VPSPS | (EQU) | 0001 | 0001 | VPSPM | (EQU) | | | | |

### Alphabetical list of fields in CHAVPS

| FIELD | DEC | HEX | | FIELD | DEC | HEX | | FIELD | DEC | HEX | |
|-------|------|------|------|-------|------|------|------|-------|------|------|------|
| VPSAI | 0000 | 0000 | (EQU) | VPSII | 0000 | 0000 | (EQU) | VPSPT | 0000 | 0000 | |
| VPSCC | 0001 | 0001 | (EQU) | VPSIN | 0002 | 0002 | | VPSRE | 0000 | 0000 | (EQU) |
| VPSCP | 0001 | 0001 | | VPSLC | 0001 | 0001 | (EQU) | VPSSF | 0001 | 0001 | (EQU) |
| VPSDO | 0001 | 0001 | (EQU) | VPSOP | 0000 | 0000 | | VPSTI | 0000 | 0000 | (EQU) |
| VPSEU | 0001 | 0001 | (EQU) | VPSPI | 0000 | 0000 | (EQU) | VPSXI | 0000 | 0000 | (EQU) |
| VPSFO | 0001 | 0001 | (EQU) | VPSPM | 0001 | 0001 | (EQU) | | | | |
| VPSIC | 0004 | 0004 | | VPSPS | 0000 | 0000 | (EQU) | | | | |

## Assembler listing of CHAVPS

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|---|---|---|---|---|---|
|  | B5 00000 | CHAVPS | DSECT |  | VIRTUAL PROGRAM STATUS WORD (VPSW) |
|  |  | * |  |  |  |
| B5 00000 |  | VPSOP | DS | 0D | OLD-VPSW PROGRAM INTERRUPT |
| B5 00000 |  | VPSPT | DS | XL1 | PRIVILEGE STATUS AND TASK MASK |
|  |  | * |  |  |  |
|  | B5 00000 | VPSPS | EQU | VPSPT | PRIVILEGE STATUS |
|  | 00000080 | VPSPSM | EQU | X'80' |  |
|  | B5 00000 | VPSRE | EQU | VPSPT | RESERVED |
|  | 00000020 | VPSREM | EQU | X'20' | RESERVED MASK |
|  | B5 00000 | VPSPI | EQU | VPSPT | ASYNCHRONOUS PROG. INT. BIT (PI) |
|  |  | * |  |  |  |
|  | 00000010 | VPSPIM | EQU | X'10' | ASYNCHRONOUS PROG. INT. MASK |
|  |  | * |  |  |  |
|  | B5 00000 | VPSXI | EQU | VPSPT | EXTERNAL INTERRUPT MASK |
|  | 00000008 | VPSXIM | EQU | X'08' |  |
|  | B5 00000 | VPSAI | EQU | VPSPT | ASYNCHRONOUS INTERRUPT MASK |
|  | 00000004 | VPSAIM | EQU | X'04' |  |
|  | B5 00000 | VPSTI | EQU | VPSPT | TIMER INTERRUPT MASK |
|  | 00000002 | VPSTIM | EQU | X'02' |  |
|  | B5 00000 | VPSII | EQU | VPSPT | I/O INTERRUPT MASK |
|  | 00000001 | VPSIIM | EQU | X'01' |  |
| B5 00001 |  | VPSCP | DS | XL1 | ILC,CC,AND PROGRAM MASK |
|  | B5 00001 | VPSLC | EQU | VPSCP | INSTRUCTION LENGTH CODE (ILC) |
|  |  | * |  |  |  |
|  | 000000C0 | VPSLCM | EQU | X'C0' |  |
|  | B5 00001 | VPSCC | EQU | VPSCP | CONDITION CODE (CC) |
|  | 00000030 | VPSCCM | EQU | X'30' |  |
|  | B5 00001 | VPSPM | EQU | VPSCP | PROGRAM MASK |
|  | 0000000F | VPSPMM | EQU | X'0F' |  |
|  | B5 00001 | VPSFO | EQU | VPSCP | FLOATING POINT OVERFLOW MASK |
|  |  | * |  |  |  |
|  | 00000008 | VPSFOM | EQU | X'08' |  |
|  | B5 00001 | VPSDO | EQU | VPSCP | DECIMAL OVERFLOW MASK |
|  | 00000004 | VPSDOM | EQU | X'04' |  |
|  | B5 00001 | VPSEU | EQU | VPSCP | EXPONENTIAL UNDERFLOW MASK |
|  | 00000002 | VPSEUM | EQU | X'02' |  |
|  | B5 00001 | VPSSF | EQU | VPSCP | SIGNIFICANCE MASK |
|  | 00000001 | VPSSFM | EQU | X'01' |  |
| B5 00002 |  | VPSIN | DS | XL2 | INTERRUPT CODE |
| B5 00004 |  | VPSIC | DS | F | INSTRUCTION COUNTER |

## VAM Tape Control Record (CHAVTR)

CHAVTR is a control record which is inserted, by VAM Tape (CZAET), as the first record of each tape data set; it is used by VAM Tape and Recreate Catalog (CZAAX) to reconstruct a data set on direct access storage. CHAVTR occupies 315 bytes of storage.

CHAVTR Storage map

```
DEC    HEX
  0      0 |                           UNNAMED                                    |
           |                                                                      |
  8      8 |                                                                      |
           |                           VTRDS1                                     |
           |                                                                      |
           |                                                                      |
           |                                                                      |
 40     28 |                                   |                                  |
           =                                   |        VTRDS2                    =
           |                                                                      |
           |                                                             |VTRDSV  |
 80     50 |                                                             |        |
 88     58 |                           UNNAMED                                    |
           |                                                                      |
 96     60 |           VTRBID          |          UNNAMED                         |
104     68 |           VTRDEV          |                                          |
           |                           UNNAMED                                    |
           |                                                                      |
           |                                                                      |
128     80 |       VTRCDT      |      VTREDT         |                            |
           =                          UNNAMED                                     =
           |                                                                      |
           |                                                                      |
256    100 |VTRFID  |                                                             |
           |_____|          UNNAMED                                            |
272    110 |   VTRLPB      |                                                      |
           |_____|                                                     |
280    118 |                         VTRSCD               |VTRXPD                 |
288    120 |              UNNAMED                    |       VTRFTP               |
296    128 |VTRRFM  |UNNAMED |           VTRRCL           |VTRKYL  |VTRKLC        |
304    130 |VTRKLC  |UNNAMED |           VTRSAL           |       VTRNDP          |
312    138 |    VTRDOP     |VTRNOP    |                                           |
           |_____|_____|
```

## Fields in CHAVTR -- by displacement

| DEC | HEX | FIELD | | DEC | HEX | FIELD | | DEC | HEX | FIELD |
|---|---|---|---|---|---|---|---|---|---|---|
| 0000 | 0000 | VTRJFC | | 0128 | 0080 | VTRCDT | | 0298 | 012A | VTRRCL |
| 0008 | 0008 | VTRDS1 | | 0131 | 0083 | VTREDT | | 0302 | 012E | VTRKYL |
| 0043 | 002B | VTRDS2 | | 0256 | 0100 | VTRFID | | 0303 | 012F | VTRKLC |
| 0087 | 0057 | VTRDVP | (EQU) | 0256 | 0100 | VTRDSC | | 0306 | 0132 | VTRSAL |
| 0087 | 0057 | VTRDVS | (EQU) | 0272 | 0110 | VTRLPB | | 0310 | 0136 | VTRNDP |
| 0087 | 0057 | VTRDVI | (EQU) | 0274 | 0112 | VTRSCD | | 0312 | 0138 | VTRDOP |
| 0087 | 0057 | VTRDSV | | 0287 | 011F | VTRXPD | | 0314 | 013A | VTRNOP |
| 0096 | 0060 | VTRBID | | 0294 | 0126 | VTRFTP | | | | |
| 0104 | 0068 | VTRDEV | | 0296 | 0128 | VTRRFM | | | | |

## Alphabetical list of fields in CHAVTR

| FIELD | DEC | HEX | | FIELD | DEC | HEX | | FIELD | DEC | HEX |
|---|---|---|---|---|---|---|---|---|---|---|
| VTRBID | 0096 | 0060 | | VTRDVP | 0087 | 0057 | (EQU) | VTRNDP | 0310 | 0136 |
| VTRCDT | 0128 | 0080 | | VTRDVS | 0087 | 0057 | (EQU) | VTRNOP | 0314 | 013A |
| VTRDEV | 0104 | 0068 | | VTREDT | 0131 | 0083 | | VTRRCL | 0298 | 012A |
| VTRDOP | 0312 | 0138 | | VTRFID | 0256 | 0100 | | VTRRFM | 0296 | 0128 |
| VTRDSC | 0256 | 0100 | | VTRFTP | 0294 | 0126 | | VTRSAL | 0306 | 0132 |
| VTRDSV | 0087 | 0057 | | VTRJFC | 0000 | 0000 | | VTRSCD | 0274 | 0112 |
| VTRDS1 | 0008 | 0008 | | VTRKLC | 0303 | 012F | | VTRXPD | 0287 | 011F |
| VTRDS2 | 0043 | 002B | | VTRKYL | 0302 | 012E | | | | |
| VTRDVI | 0087 | 0057 | (EQU) | VTRLPB | 0272 | 0110 | | | | |

## Assembler listing of CHAVTR

| LOCATION | INSTRUCTION | SOURCE | INST | OPER | COMMENT |
|---|---|---|---|---|---|
| | B7 00000 | CHAVTR | DSECT | | VAM TAPE CONTROL RECORD |
| | | * | | | (4096 BYTES) |
| B7 00000 | | VTRJFC | DS | 0CL256 | ORIGINAL JFCB DATA |
| B7 00000 | | | DS | CL8 | RESERVED |
| B7 00008 | | VTRDS1 | DS | CL35 | DSNAME WITHOUT USERID |
| B7 0002B | | VTRDS2 | DS | CL44 | DSNAME WITH USERID |
| B7 00057 | | VTRDSV | DS | XL1 | DATA SET ORGANIZATION FLAG |
| | B7 00057 | VTRDVI | EQU | VTRDSV | VISAM FLAG |
| | 00000004 | VTRDVIM | EQU | X'04' | VISAM MASK |
| | B7 00057 | VTRDVS | EQU | VTRDSV | VSAM  FLAG |
| | 00000005 | VTRDVSM | EQU | X'05' | VSAM  MASK |
| | B7 00057 | VTRDVP | EQU | VTRDSV | VPAM  FLAG |
| | 00000006 | VTRDVPM | EQU | X'06' | VPAM  MASK |
| B7 00058 | | | DS | CL8 | RESERVED |
| B7 00060 | | VTRBID | DS | CL4 | RECORD IDENTIFIER, %*%* |
| B7 00064 | | | DS | CL4 | RESERVED |
| B7 00068 | | VTRDEV | DS | F | ORIGINAL DEVICE RESIDENCE |
| B7 0006C | | | DS | CL20 | RESERVED |
| B7 00080 | | VTRCDT | DS | XL3 | LAST ORIGINAL REFERENCE |
| | | * | | | DATE (YDD) |
| | | * | | | Y=YEAR (0-99), DD=DAY |
| | | * | | | (1-366) |
| B7 00083 | | VTREDT | DS | XL3 | LAST ORIGINAL CHANGE DATE |
| | | * | | | (YDD) |
| | | * | | | Y=YEAR (0-99), DD=DAY |
| | | * | | | (1-366) |
| B7 00086 | | | DS | CL122 | RESERVED |
| B7 00100 | | VTRDSC | DS | 0CL59 | ORIGINAL DSCB DATA |
| B7 00100 | | VTRFID | DS | XL1 | FORMAT IDENTIFIER, X'FA' |
| B7 00101 | | | DS | CL15 | RESERVED |
| B7 00110 | | VTRLPB | DS | XL2 | NUMBER OF BYTES USED IN |
| | | * | | | LAST PAGE (VS) |
| B7 00112 | | VTRSCD | DS | XL13 | SYSTEM CODE |
| B7 0011F | | VTRXPD | DS | XL1 | PAD FACTOR (VI) |
| B7 00120 | | | DS | CL6 | RESERVED |
| B7 00126 | | VTRFTP | DS | XL2 | FILE TYPE |
| B7 00128 | | VTRRFM | DS | XL1 | RECORD FORMAT |
| B7 00129 | | | DS | XL1 | RESERVED |
| B7 0012A | | VTRRCL | DS | XL4 | RECORD LENGTH |
| B7 0012E | | VTRKYL | DS | XL1 | KEY LENGTH |
| B7 0012F | | VTRKLC | DS | XL2 | KEY LOCATION . |
| B7 00131 | | | DS | XL1 | RESERVED |
| B7 00132 | | VTRSAL | DS | XL4 | SECONDARY ALLOCATION |
| B7 00136 | | VTRNDP | DS | XL2 | NUMBER OF DATA PAGES |
| B7 00138 | | VTRDOP | DS | XL2 | NUMBER OF DIRECTORY PAGES |
| | | * | | | (VI,VP) |
| B7 0013A | | VTRNOP | DS | XL1 | NUMBER OF OVERFLOW PAGES |
| | | * | | | (VI) |

## External Prompt Message Table (CHAXPR)

CHAXPR contains the message ID and inserts for a message from be sent from one task to another.

### CHAXPR Storage map

```
DEC   HEX  _____
  0     0 |                              XPRMID                              |
          |_____|
  8     8 |         XPRCNT             |XPRFL1 |        XPRUN1               |
          |_____|
 16    10 |XPRINL |
          |_____|
```

### Fields in CHAXPR -- by displacement

| DEC | HEX | FIELD | | DEC | HEX | FIELD | | DEC | HEX | FIELD |
|------|------|-------|--|------|------|-------|--|------|------|-------|
| 0000 | 0000 | XPRMID | | 0012 | 000C | XPRINV | (EQU) | 0016 | 0010 | XPRINL |
| 0008 | 0008 | XPRCNT | | 0012 | 000C | XPRFL1 | | 0017 | 0011 | XPRINS |
| 0012 | 000C | XPRWAC | (EQU) | 0013 | 000D | XPRUN1 | | | | |

### Alphabetical list of fields in CHAXPR

| FIELD | DEC | HEX | | FIELD | DEC | HEX | | FIELD | DEC | HEX | |
|-------|------|------|--|-------|------|------|--|-------|------|------|--|
| XPRCNT | 0008 | 0008 | | XPRINS | 0017 | 0011 | | XPRUN1 | 0013 | 000D | |
| XPRFL1 | 0012 | 000C | | XPRINV | 0012 | 000C | (EQU) | XPRWAC | 0012 | 000C | (EQU) |
| XPRINL | 0016 | 0010 | | XPRMID | 0000 | 0000 | | | | | |

### Assembler listing of CHAXPR

```
LOCATION   INSTRUCTION SOURCE   INST  OPER    COMMENT
           B9 00000    CHAXPR   DSECT         EXTERNAL PROMPT MESSAGE
                          *                   DSECT
*******************************************************************************
* CHAXPR WAS IMPLIMENTED FOR APAR I6663.                                      *
* WHEN A MODULE OUTSIDE A PARTICULAR TASK WISHES TO CAUSE A PRMPT TO          *
* OCCUR IN THAT TASK, AN MCB MAY BE VSEND'D TO THE TASK. CHAXPR IS            *
* USED TO COVER THE MCBTXT FOR THE PURPOSE OF SPECIFYING THE MESSAGE          *
* ID AND THE INSERTS FOR THE MESSAGE TO BE ISSUED IN THE TARGET TASK.         *
*******************************************************************************
B9 00000                XPRMID   DS    CL8     MESSAGE ID
B9 00008                XPRCNT   DS    F       COUNT OF INSERTS
B9 0000C                XPRFL1   DS    X       FLAGS
           B9 0000C     XPRINV   EQU   XPRFL1  CALL INTERVENE AFTER PROMPT
           00000080     XPRINVM  EQU   X'80'
           B9 0000C     XPRWAC   EQU   XPRFL1  IF ON, MSG SENT BY CZAWA,
           00000040     XPRWACM  EQU   X'40'   BULKIO ABEND RECOVERY
B9 0000D                XPRUN1   DS    XL3     RESERVED
B9 00010                XPRINL   DS    X       INSERT LENGTH
B9 00011                XPRINS   DS    0C      INSERT
```