



Education

Education materials

Courses Available

Advanced Systems
OS/VS, MVS
VSAM,
IMS/VS
DL/1,
Communications Systems
Management Education
IBM Personal Computer
Office Systems/Information Centre
Small Systems
VM/370
DOS/VSE
CICS/VS

General Information

ENROLMENTS —

The IBM Education Direct exists to provide education at your fingertips. Call

1-800-268-5412*

Specify appropriate course code.

PACKAGE ORDERS —

Self Study Programs may be ordered by calling the IBM Education Direct at the above telephone number and specifying the appropriate package number.

COURSE AVAILABILITY —

Regularly scheduled classes appear in the IBM Education Schedule. A copy of the schedule may be obtained by calling Education Direct at the above telephone number.

PRICES —

Prices may be obtained by referencing the Education Schedule or by calling Education Direct.

FURTHER REFERENCE —

The following reference documents are available from the Education Direct

1. Course Catalogue
2. Education Schedule

FURTHER ASSISTANCE —

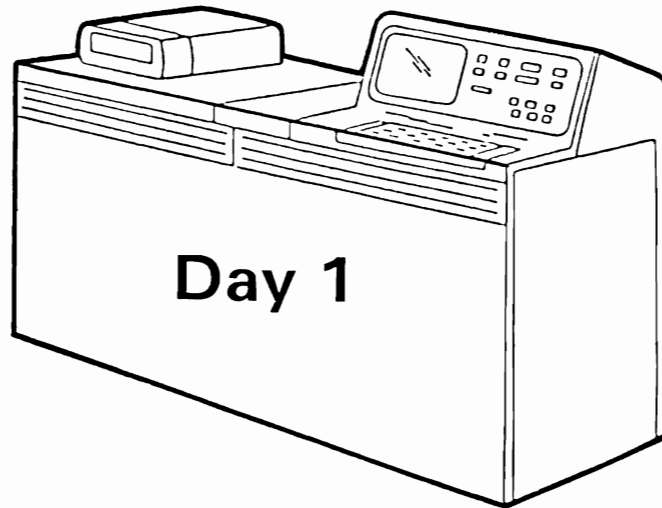
Education can assist you with the above. If additional planning or in-depth assistance is required you may request Education Direct to have an Education Marketing Representative contact you.

* In Toronto call 492-6044

* 112-800-268-5412 in B.C.



SYSTEM/38 SYSTEM OPERATOR WORKSHOP

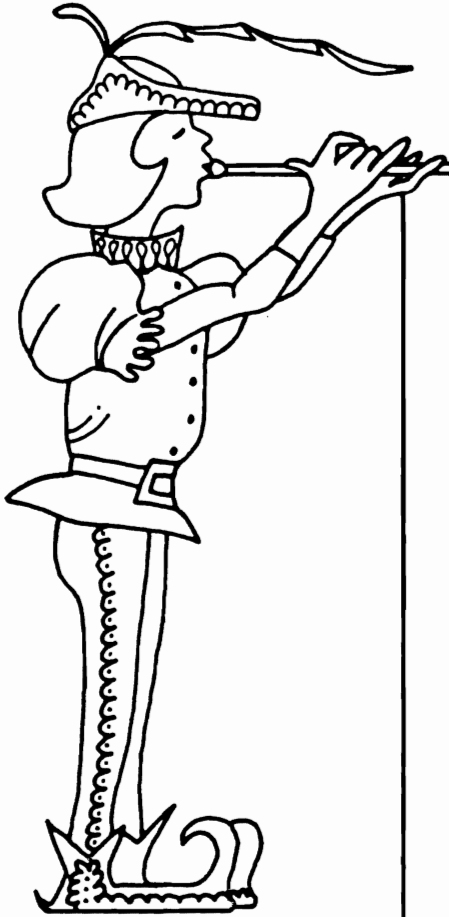


SYSTEM/38 SYSTEM OPERATOR WORKSHOP COURSE OBJECTIVES

Upon completion of this class, the student should be able to:

- Describe and understand the role of a System/38 Operator
- Correctly use System/38 work station devices and system-supplied menus
- Start and terminate Control Program Facility (CPF)
- Monitor system-supplied devices and user work stations
- Execute control language programs and commands as specified in class exercises
- Code commands necessary to send completion and information messages
- Use the supplied save/restore commands to save/restore class exercises
- Do basic monitoring of Subsystems and Job processing.
- Monitor and manage spooled output files
- Perform basic systems operations pertaining to the System and History Logs
- Determine the possible cause and solutions of system and program problems

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INTRODUCING . . .

NAME:

COMPANY:

BACKGROUND:

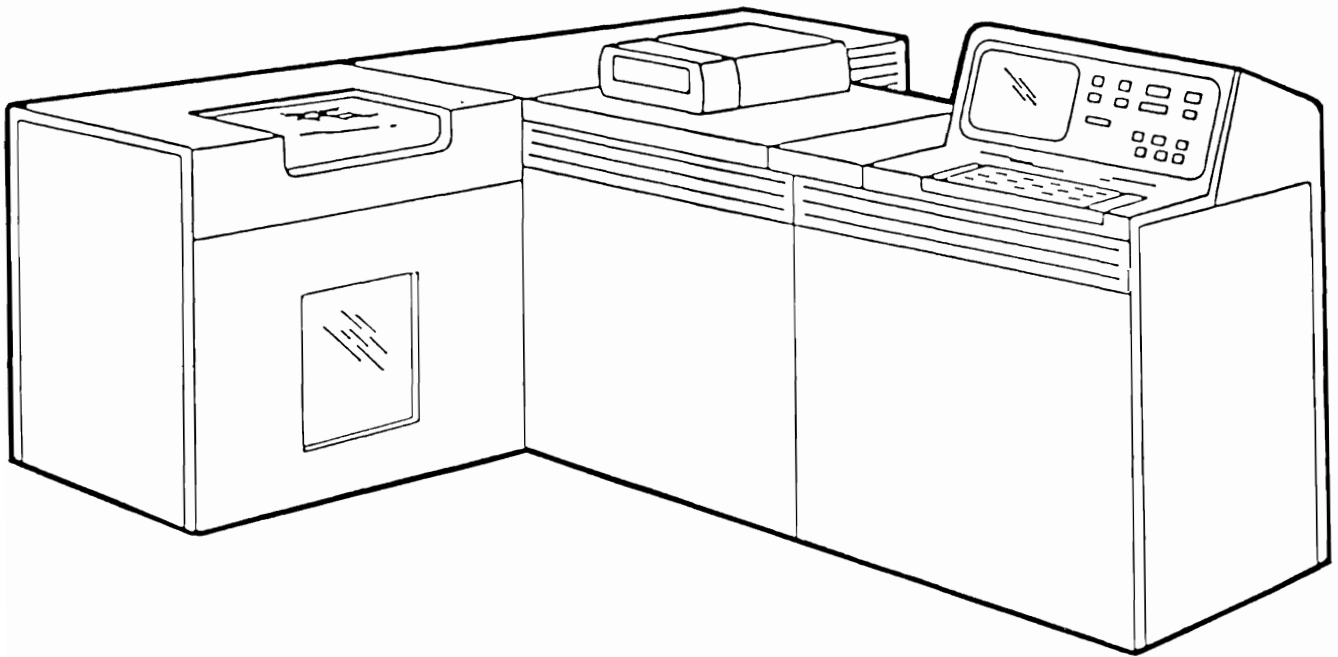
Day 1 Objectives

Describe:

- The Physical System
- Duties of a System Operator
- Functions of IBM Support Personnel
- The use of the work station and System Console
- Start up of the System
- How to correctly code and execute a Control Language Command
- Use of these Command Function Keys:
 - CF1
 - CF2
 - CF3
 - CF4
 - CF7
 - CF13
 - CF14
 - CF15
 - CF16
 - CF18
 - CF24
 - HELP



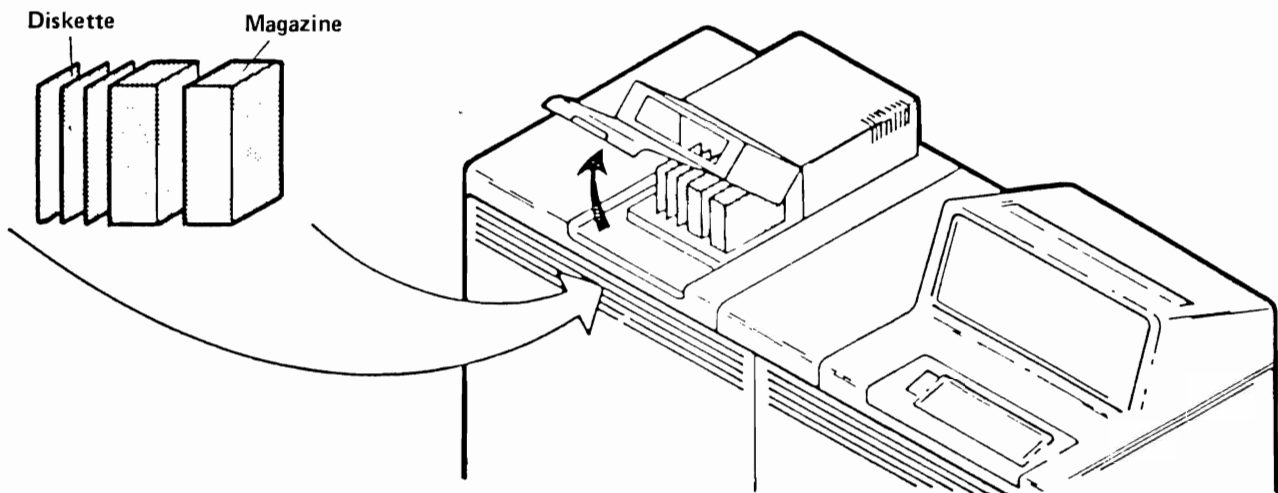
SYSTEM/38 MAINFRAME



Standard Features on the S/38 are:

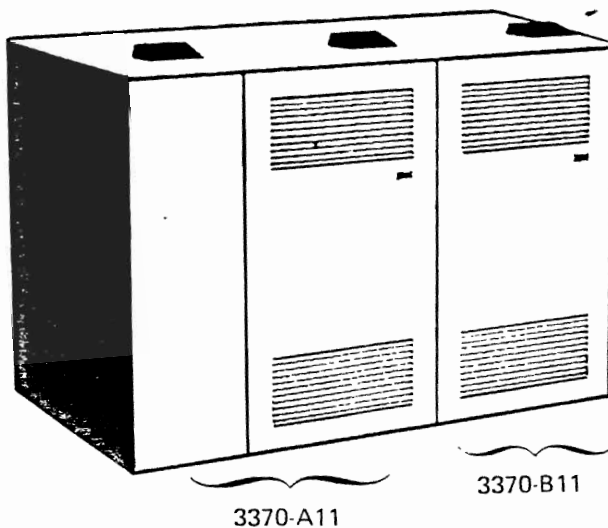
- Console Keyboard/Display Screen
- Time-of-Day Clock
- Operator/Service Panel
- Local Communications Adapter

IBM DISKETTE MAGAZINE DRIVE



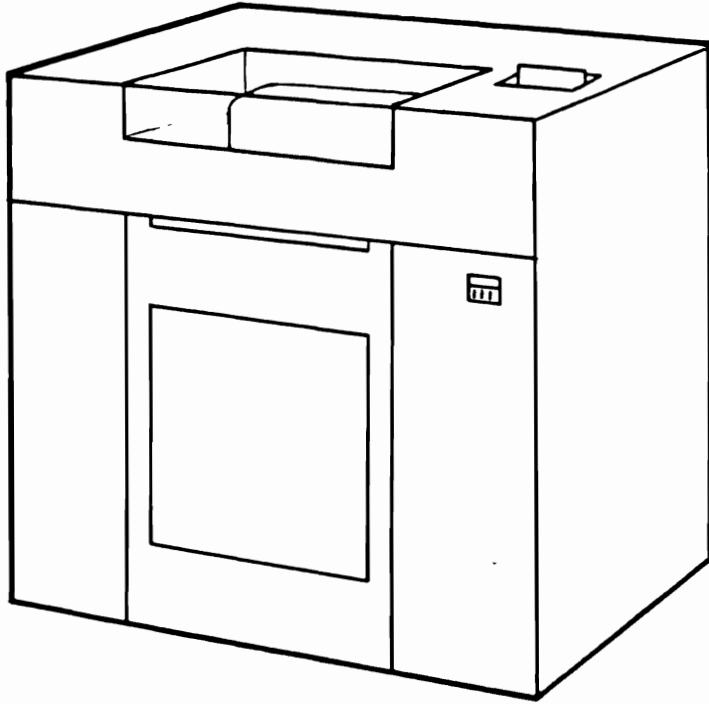
- Standard on all S/38 Models
- Holds 3 Single Diskettes
- Holds 2 Magazines (10 diskettes per magazine)

IBM 3370 DIRECT ACCESS STORAGE DEVICE



Each 3370 Holds 571,392,000
Bytes of Data on
Non—Removable Magnetic Disks

SYSTEM PRINTERS



5211 Model 2

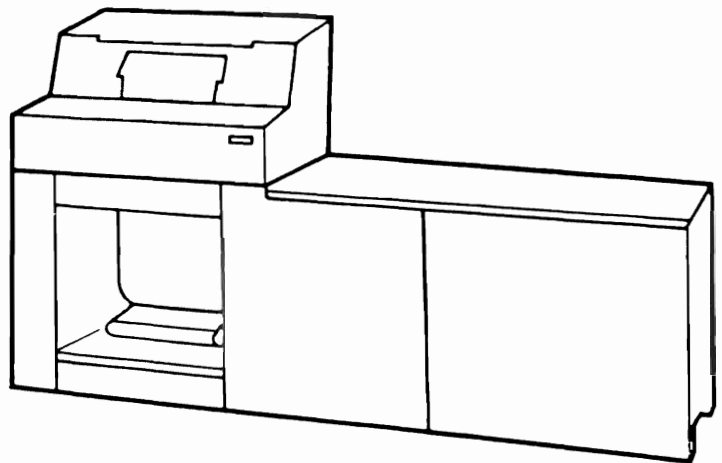
Lines per Minute: 300

3262 Models A1 & B1

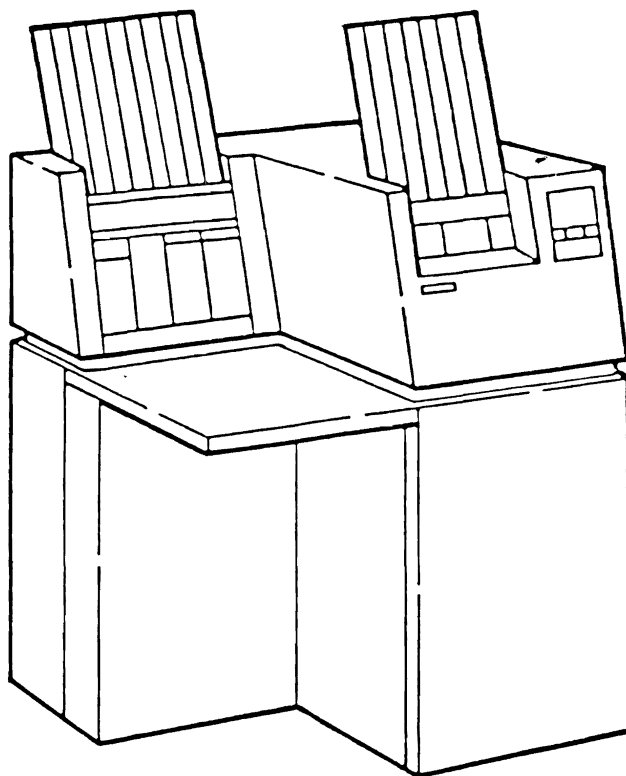
Lines per Minute: 650

3203

- Lines per Minute: 1200

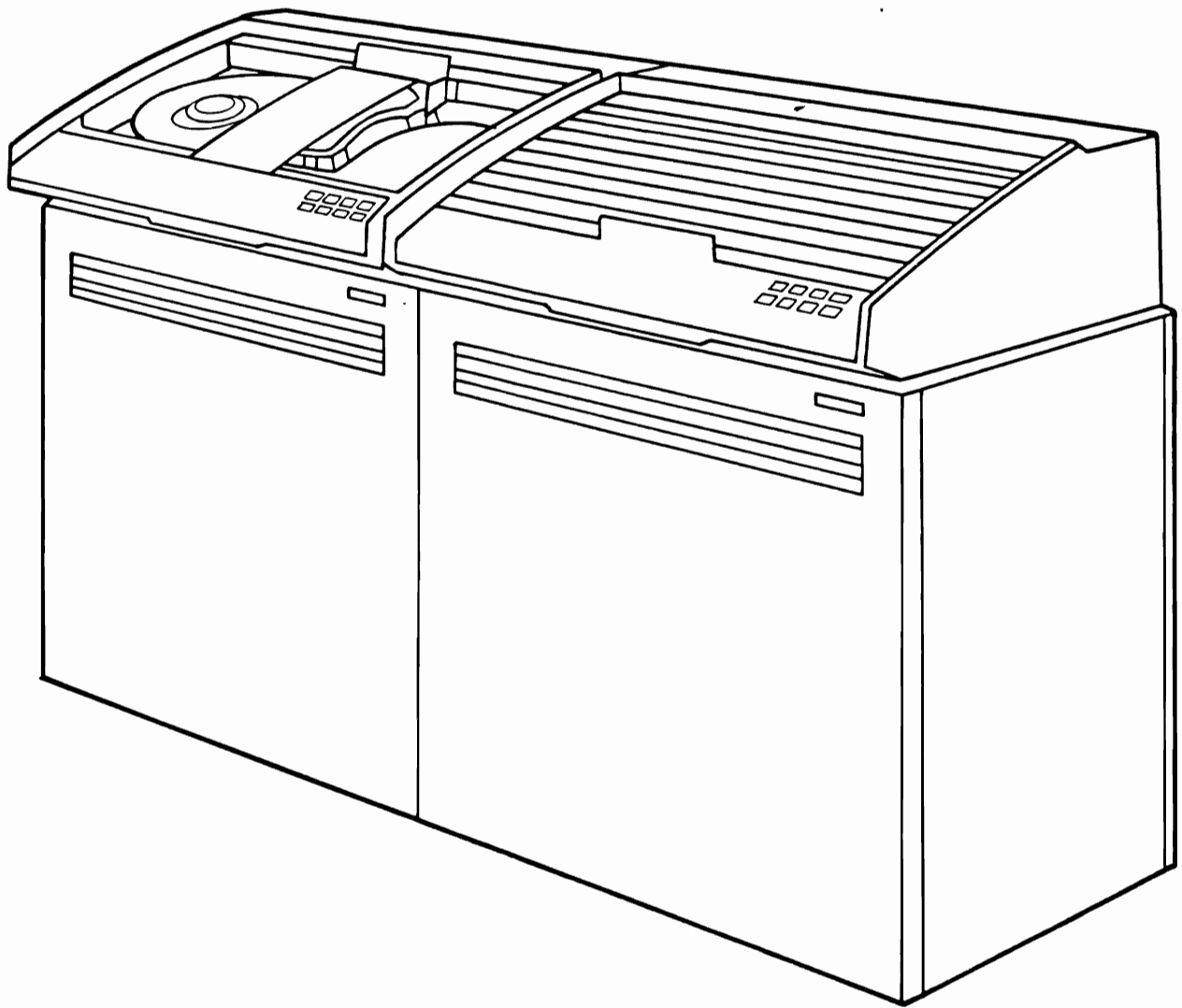


**IBM 5424 MULTI—FUNCTION
CARD UNIT
(MFCU)**

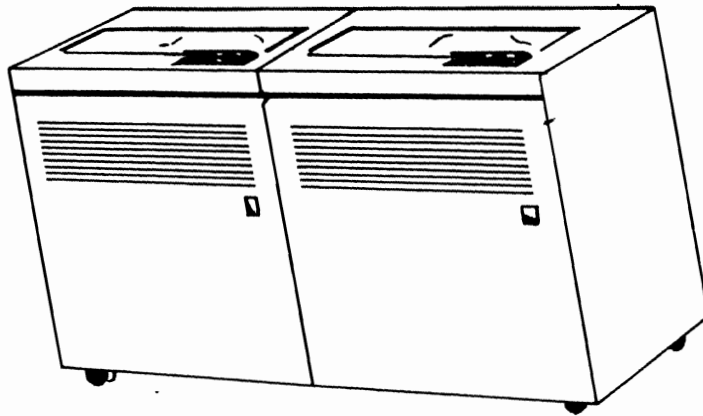


- 96-COLUMN CARDS

**IBM 3410/3411
MAGNETIC TAPE UNIT**

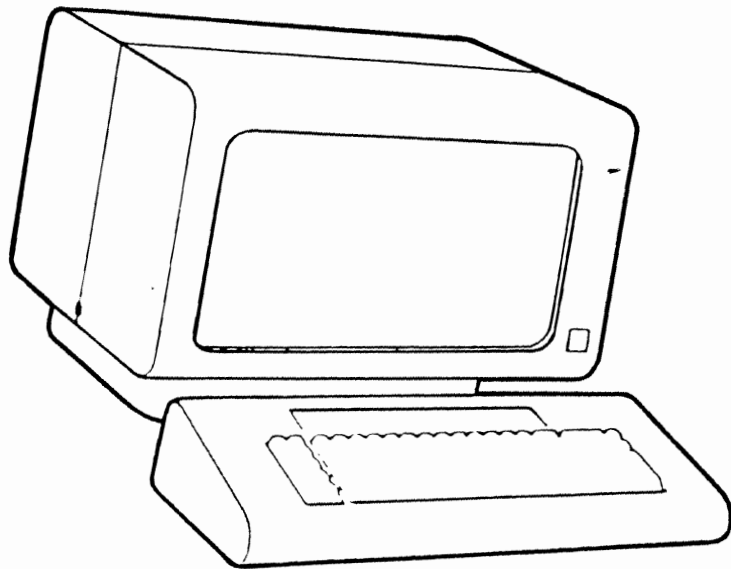


IBM 3430 Magnetic Tape Unit



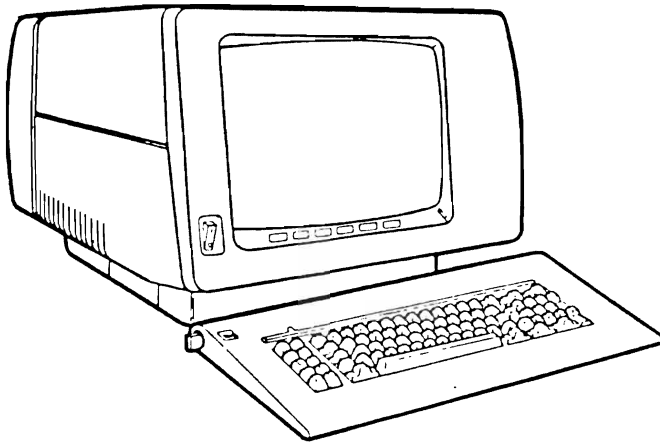
- * Model A - Tape drive/controller
- * Model B - 2nd, 3rd, and 4th drives in the string

5251 DISPLAY STATION



- 1920 Character Display Screen
- Movable Keyboard (with 3 possible key arrangements)
- 24 Programmable Command Keys

MORE DISPLAY STATIONS . . .

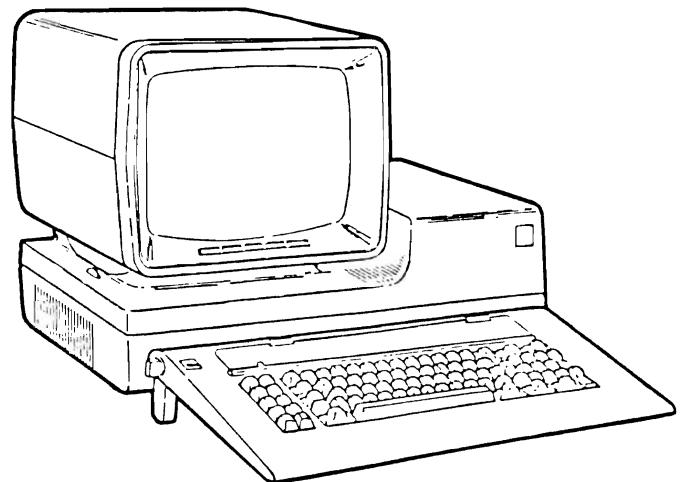


5292

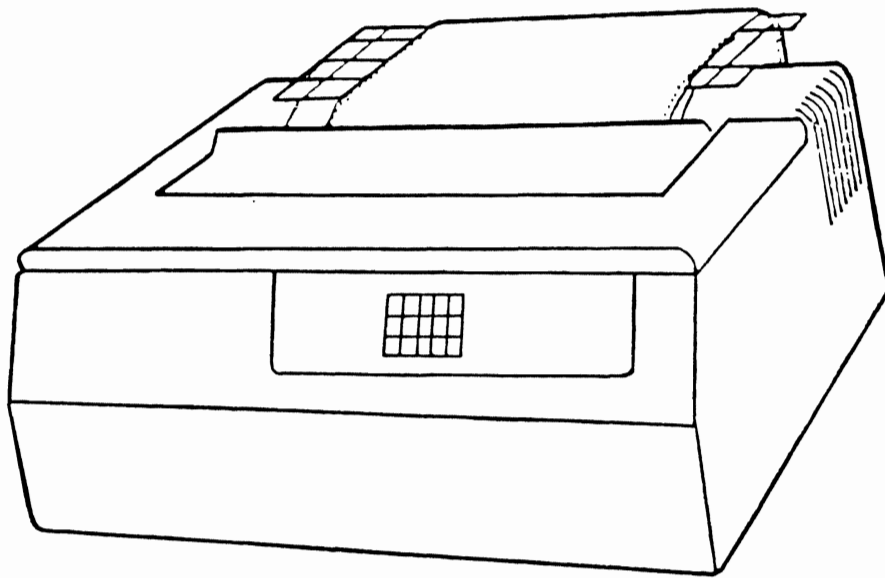
- Plug compatible with 5251
- Tiltable screen
- Low profile keyboard
- Cable - thru standard feature
- Operator selectable cursor
- Seven colors
- Color alignment via keyboard
- Self test diagnostics

5291

- Plug compatible with 5251
- Tiltable screen
- Low profile keyboard
- Cable - thru standard feature
- Operator selectable cursor

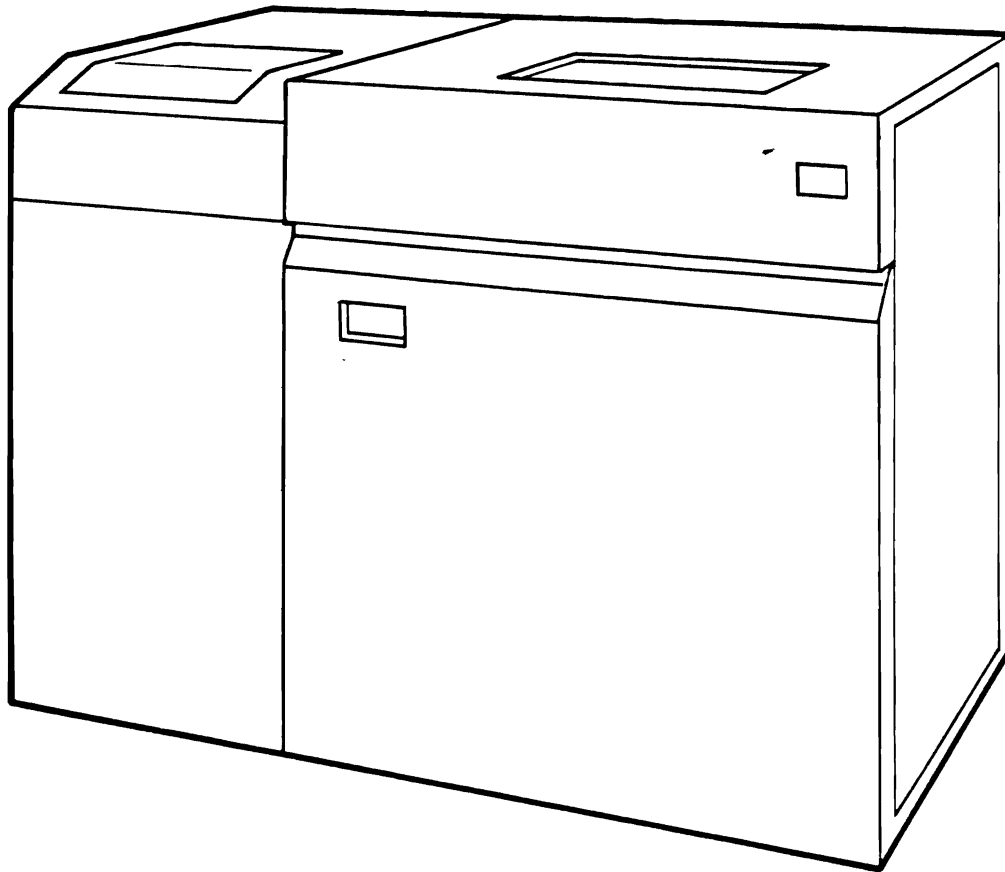


5224 PRINTER



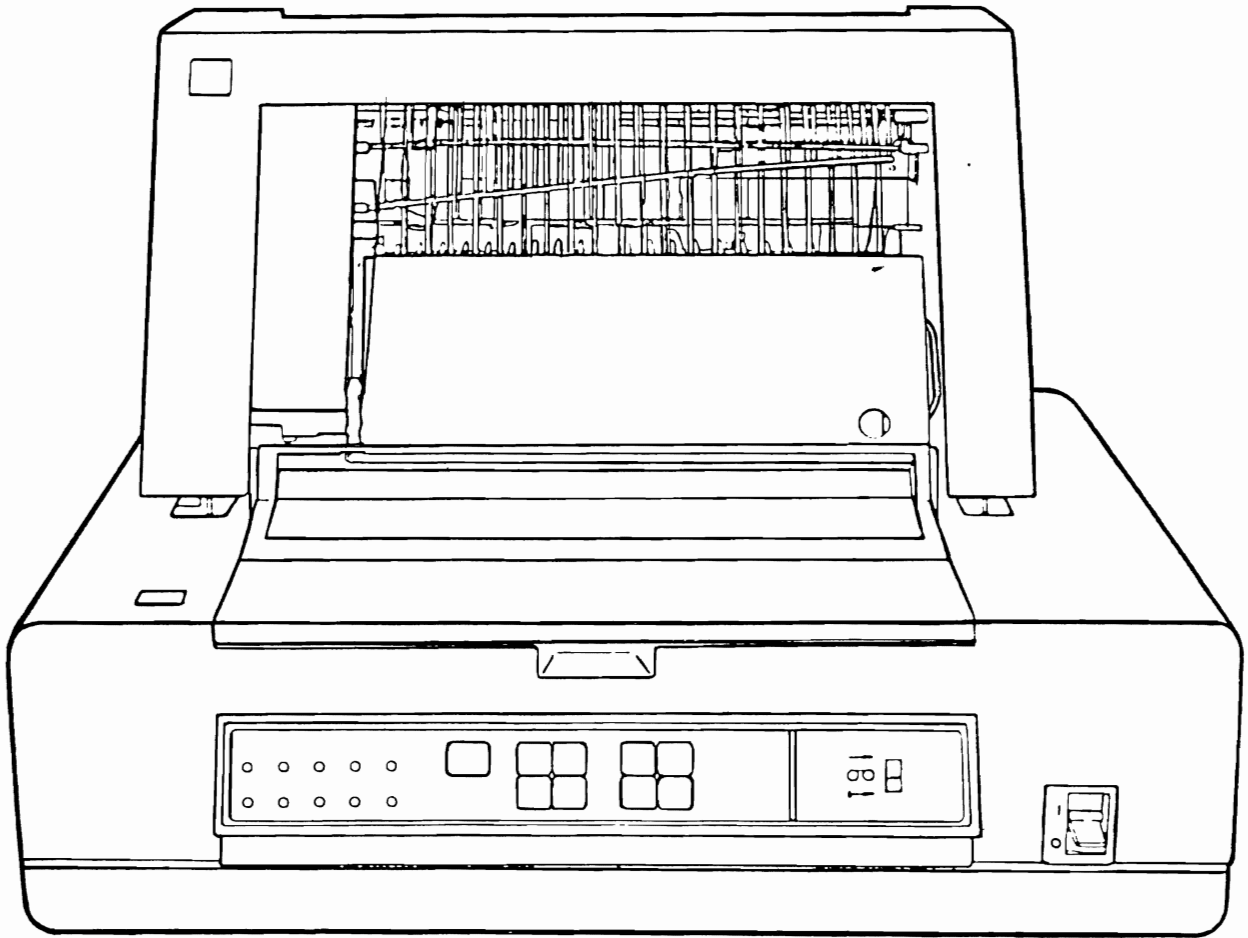
- Lines per Minute: 240

5225



- Lines per Minute: 560

5219 PRINTER



- Characters per Second: 60
- Letter Quality
- Sheet Feed Paper

**YOUR ROLE
AS AN**

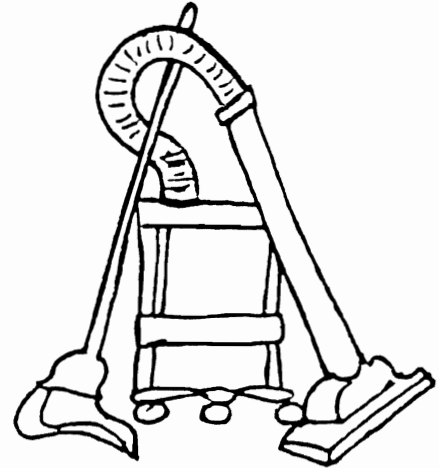
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THE 3 MAIN RESPONSIBILITIES OF A SYSTEM OPERATOR

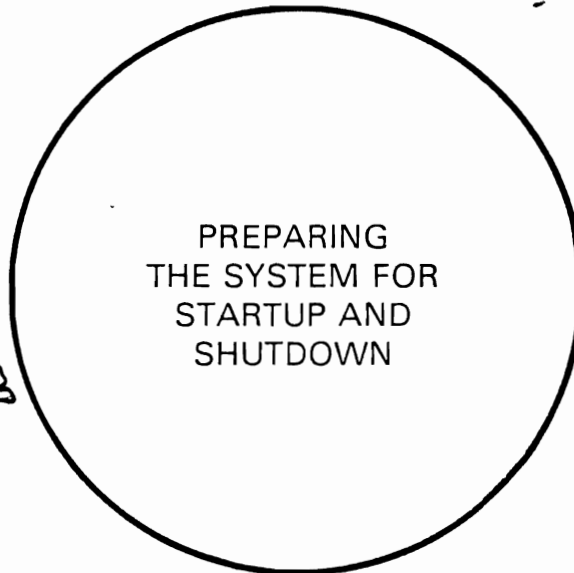
- Prepare the System for Start up and Shut down
- Overlook Machine and Device Operations
- Control Computer Operations During the Day



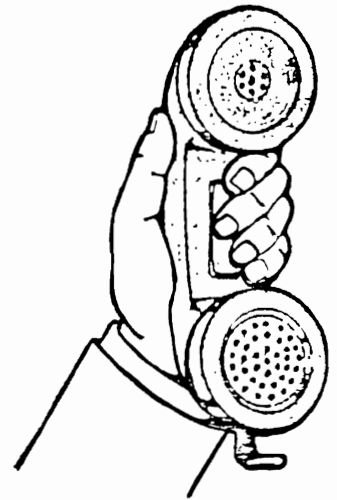
Routing Reports



Neatness & Clean-up



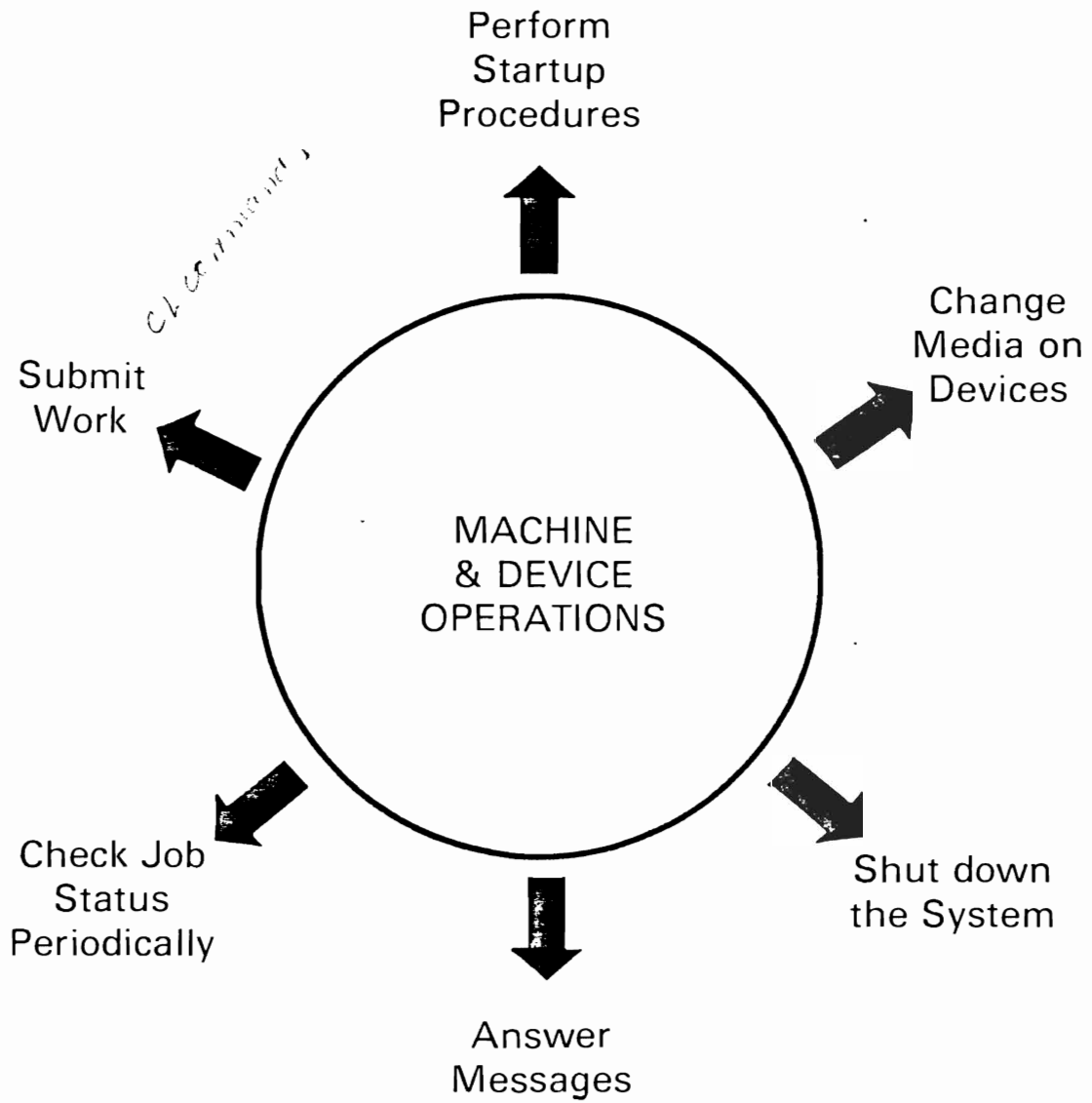
Having adequate supplies

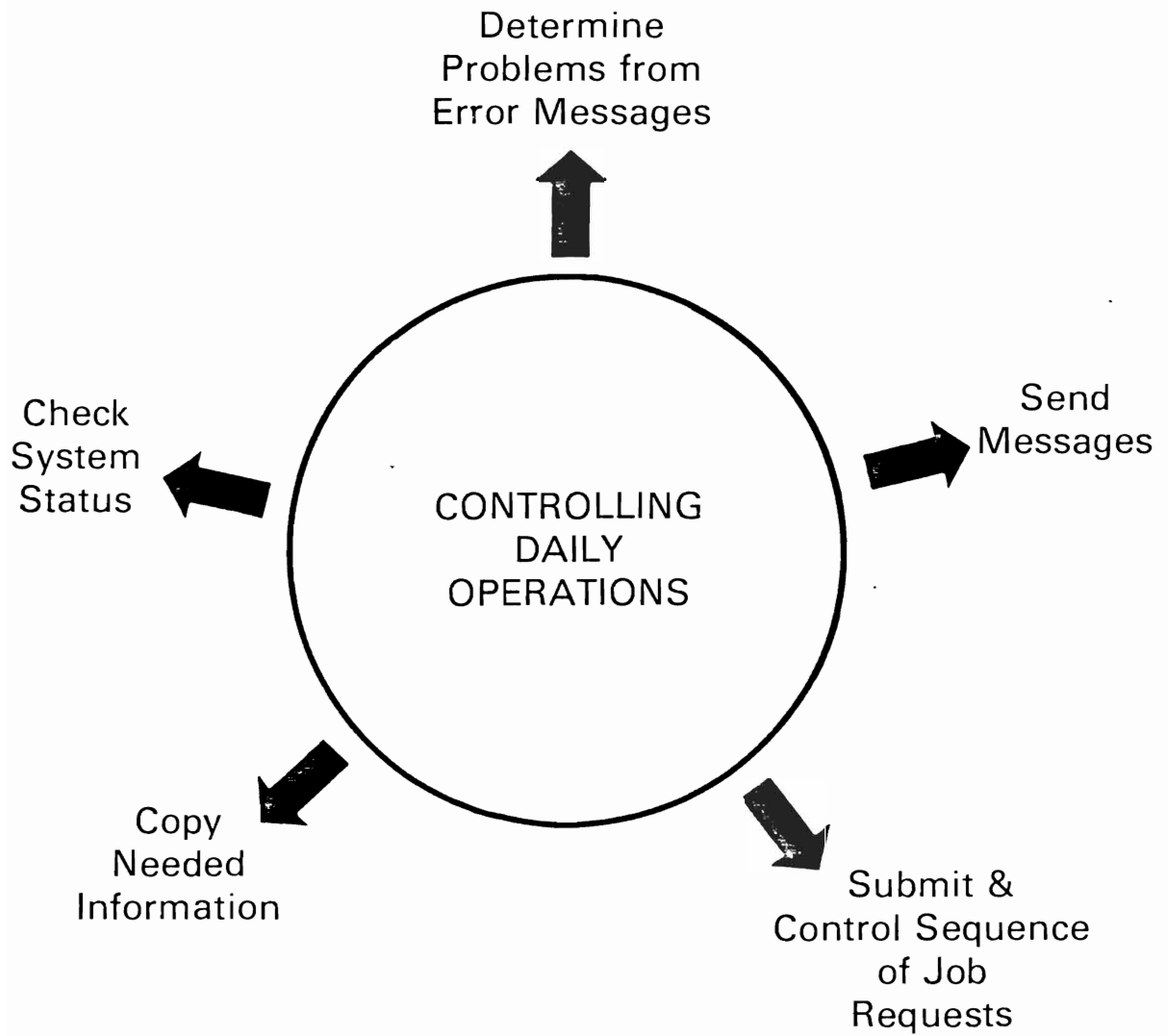


Notifying Person in Charge of Problems

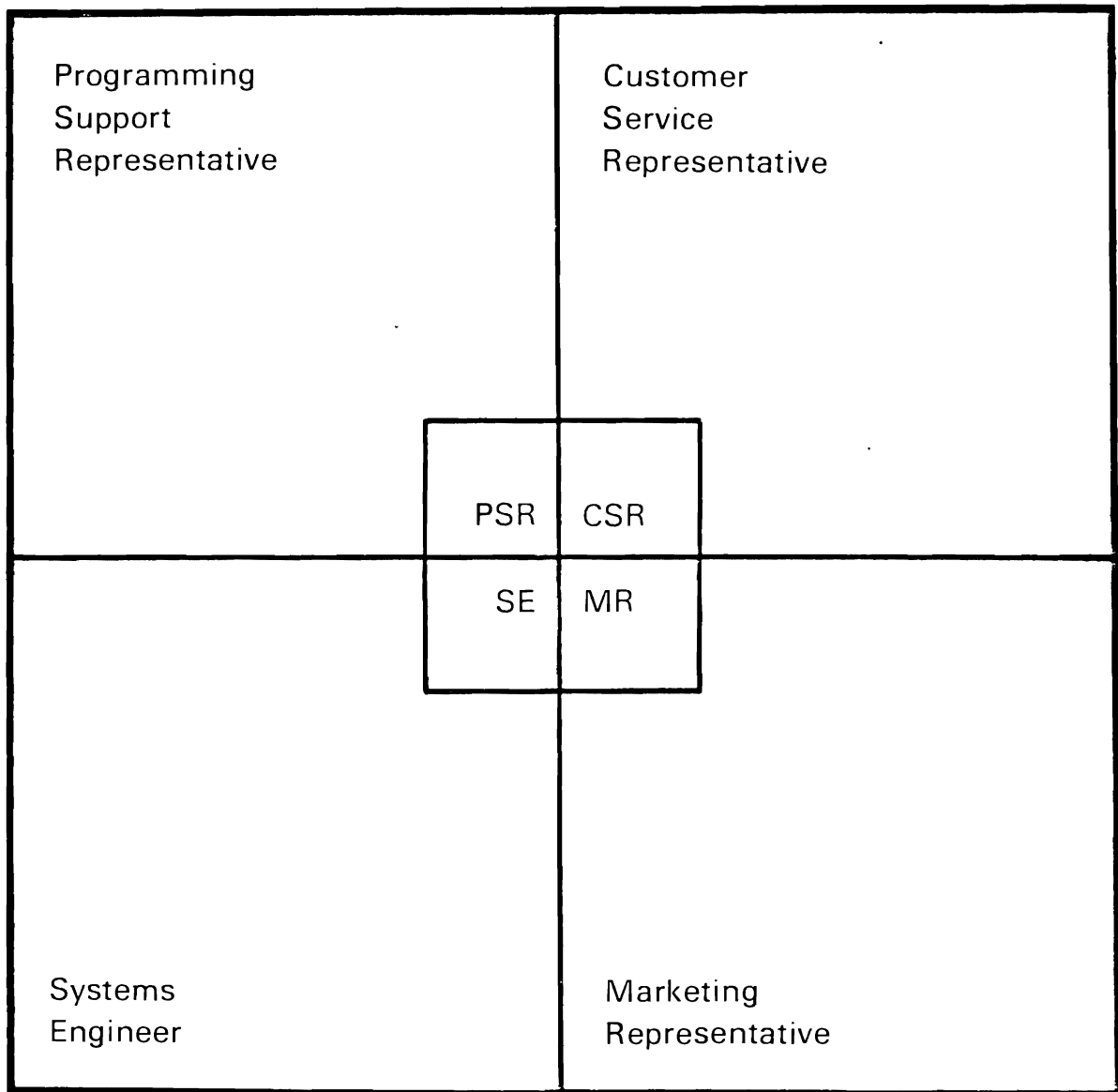
DEC							1
2	3	4	5	6	7	8	
9	10	11	12	13	14	15	
16	17	18	19	20	21	22	
23	24	25	26	27	28	29	
30	31						

Scheduling Work





IBM SUPPORT STRUCTURE

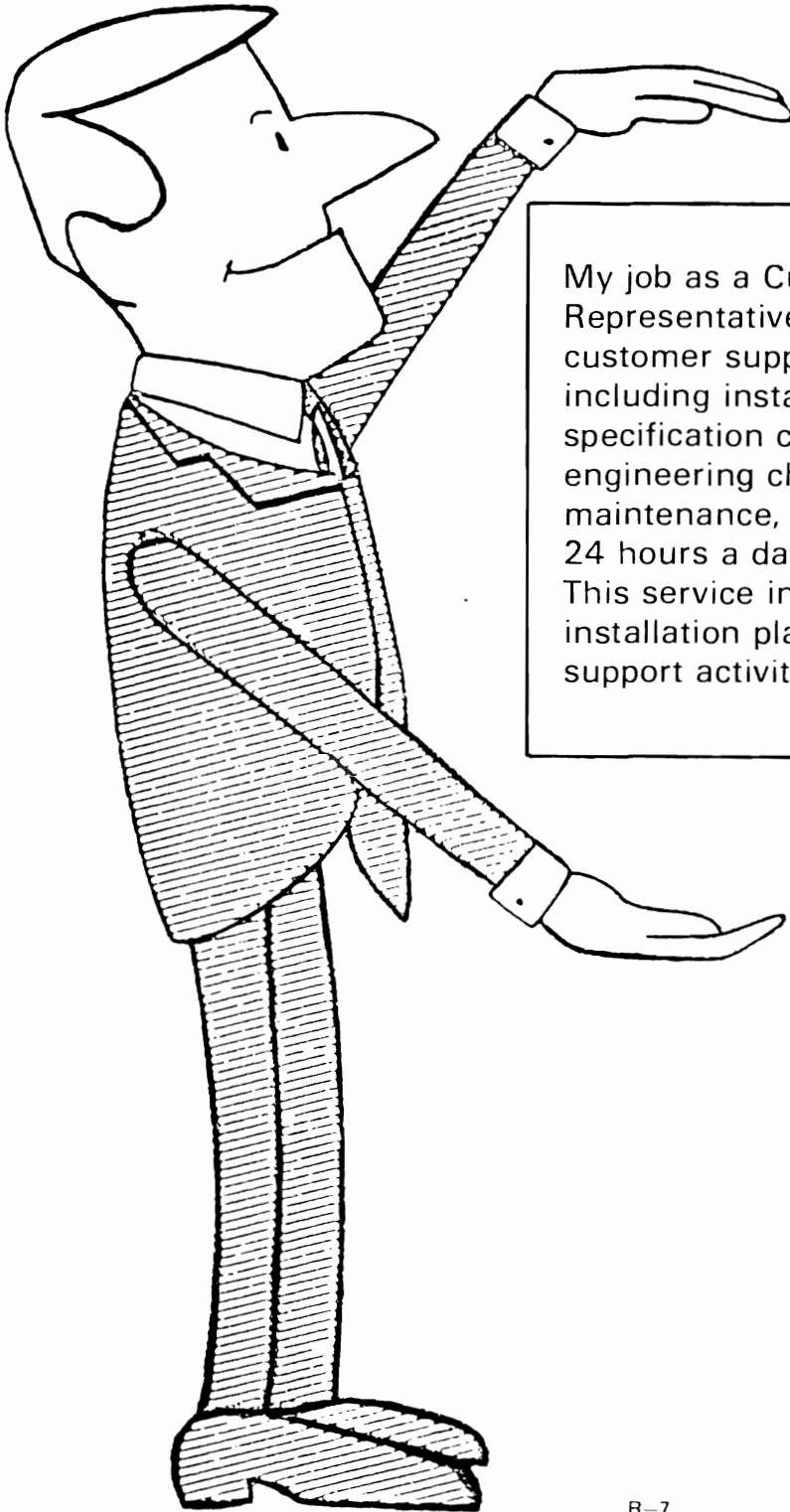


PROGRAM SUPPORT REPRESENTATIVE (PSR)

My job as a Programming Support Representative consists of providing customer support on a timely basis. I install, make changes, and do preventive maintenance on System/38 software, and installed programs.



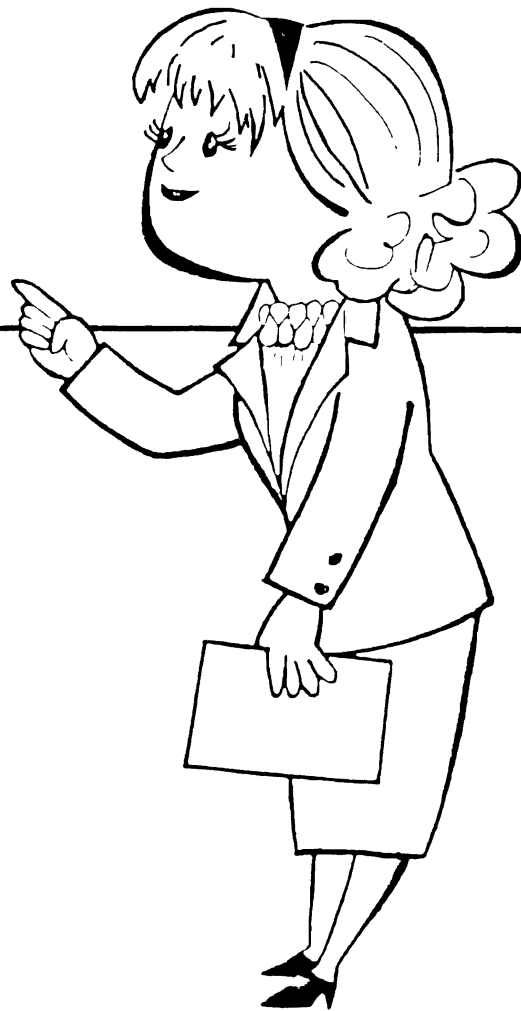
Customer Service Representative (CSR)



My job as a Customer Service Representative consists of providing customer support on a timely basis, including installation of machines, specification changes and engineering changes, preventative maintenance, and emergency service 24 hours a day, seven days a week. This service includes hardware, installation planning, and marketing support activities.

SYSTEMS ENGINEER (SE)

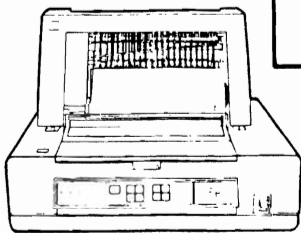
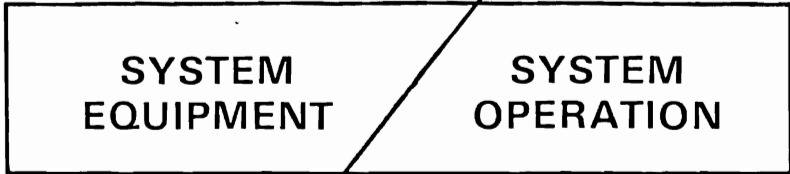
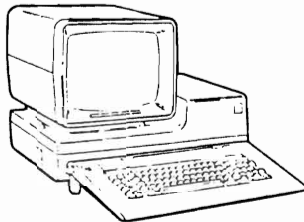
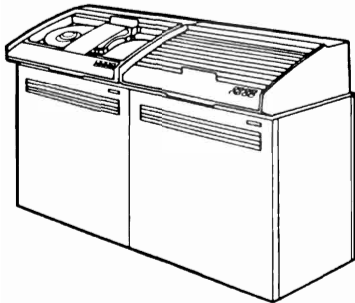
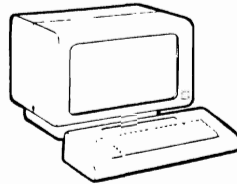
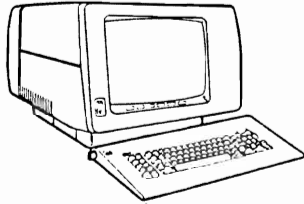
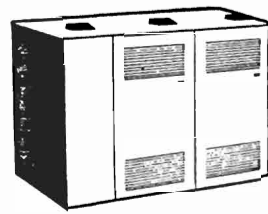
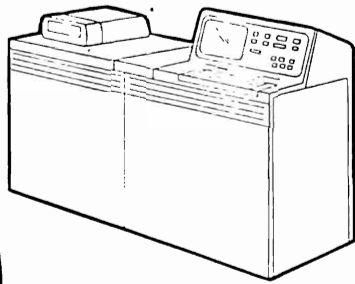
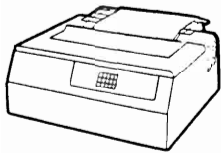
As a Systems Engineer, I am responsible for the installation of System/38 hardware and software products in your offices. I will perform surveys, studies, systems design and analysis, informal customer education, and recommend data processing solutions to meet customer requirements.



MARKETING REPRESENTATIVE (MR)

As a Marketing Representative, I am responsible for the sale and installation of IBM products to prospects and customers. I do proposal writing, sales presentations, studies, surveys, meetings with customer executives, general system design and recommending data processing solutions to meet your needs.





Control Language

Spooling Operations

System Updating

System Operator Commands

Message Handling

General System Operations

Work Stations

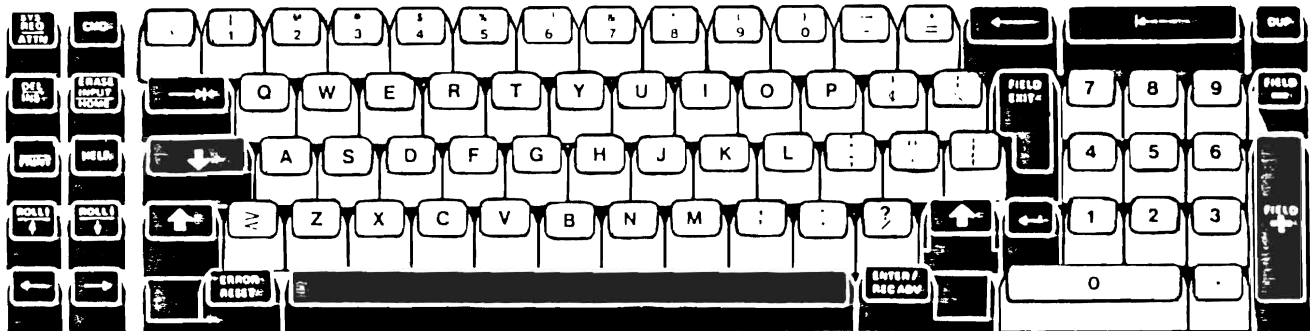
Job Operations

SOME HELPFUL TOPICS IN THE SYSTEM/38 OPERATOR'S GUIDE

- System Operator Commands
- Device Control Operations
- Spooling Operations
- Message Handling
- Job Operations

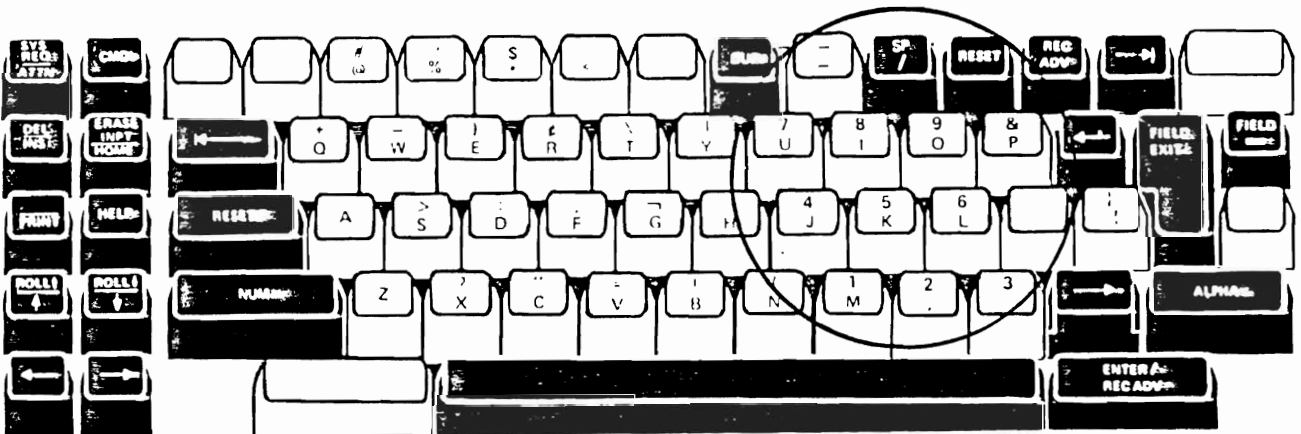
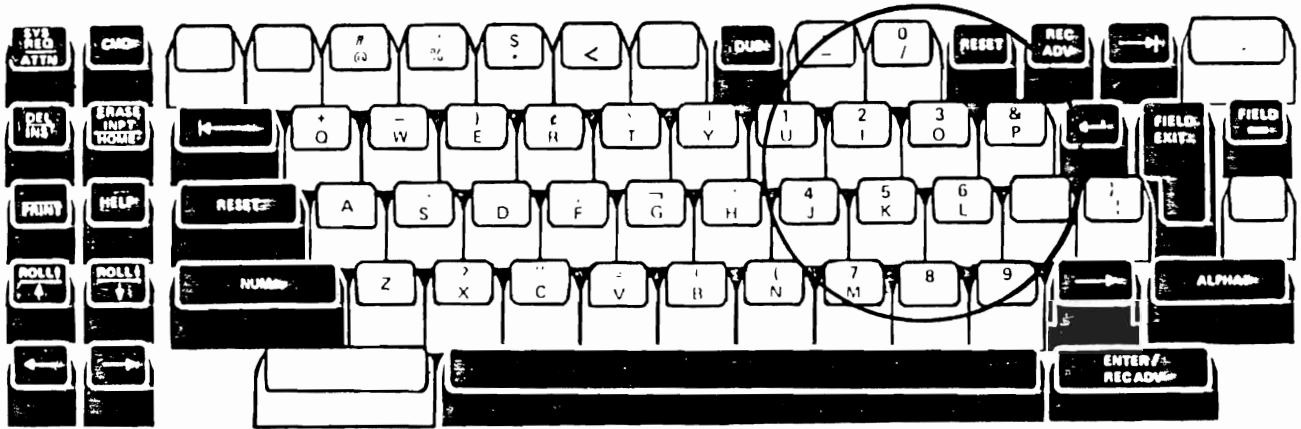
**USE OF
WORK
STATIONS**

TYPEWRITER—LIKE KEYBOARD



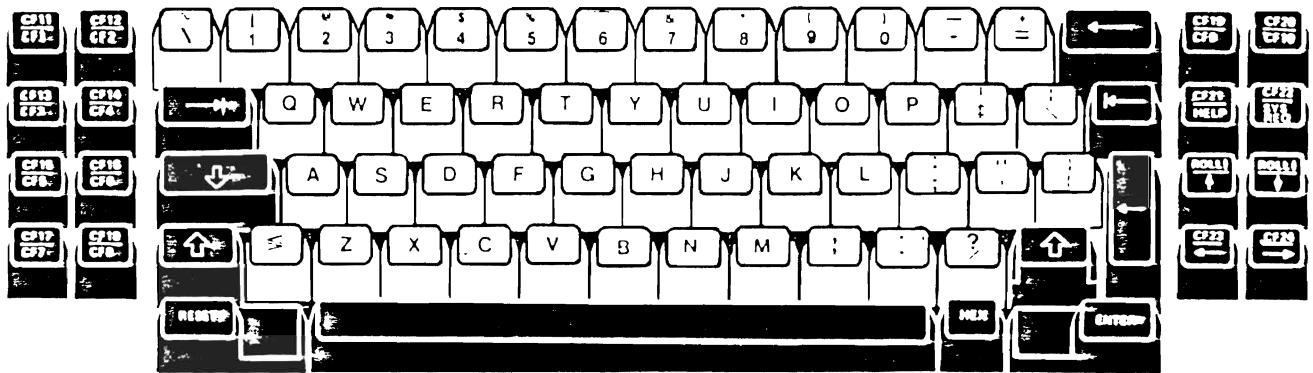
- Calculator—Like Numeric Pad
- Field Advance Keys
- Field Backspace Key
- HELP Key
- Field Exit Key
- PRINT Key
- Roll Keys
- CMD Key
- ENTER/REC ADV Key
- Backspace Key
- Next Line Key
- RESET Key

DATA ENTRY KEYBOARDS



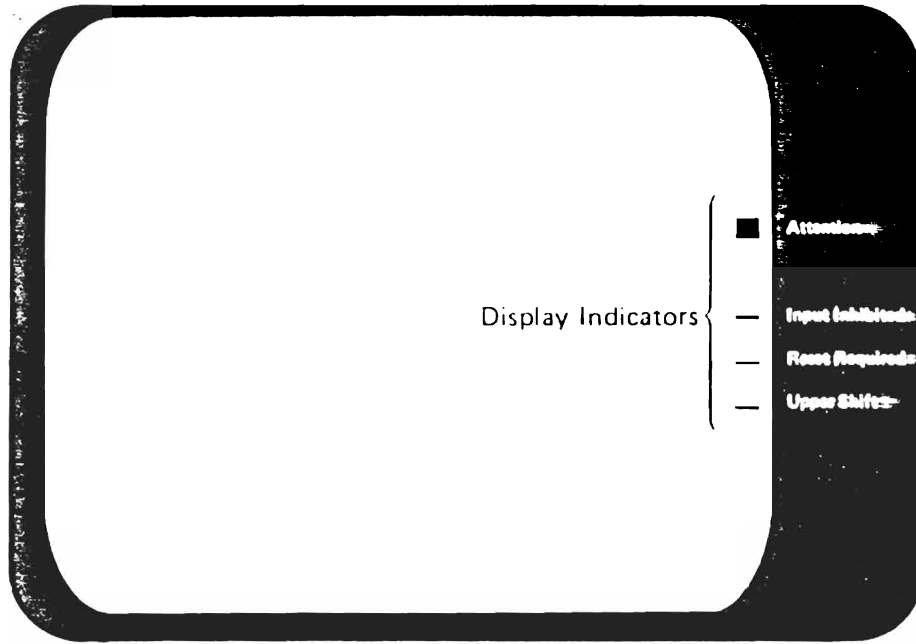
NOTE: The numbers are in upper case and in different positions on these keyboards.

SYSTEM CONSOLE KEYBOARD



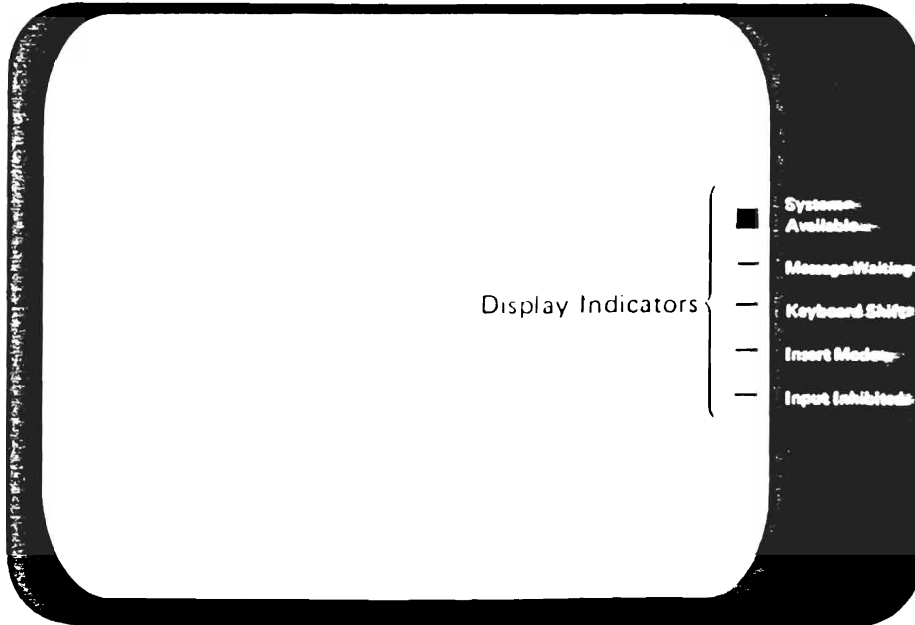
- Position Cursor Keys on the right side
- Roll Forward and Roll Backward Keys on the right side
- Command Function Keys on the left and right sides
 - CF1: CF10 are Lower Case
 - CF11: CF24 are Upper Case
- No Field Exit Keys
- Hex Key
- CF24 is the same as the PRINT Key

WORK STATION INDICATORS



System Console Screen

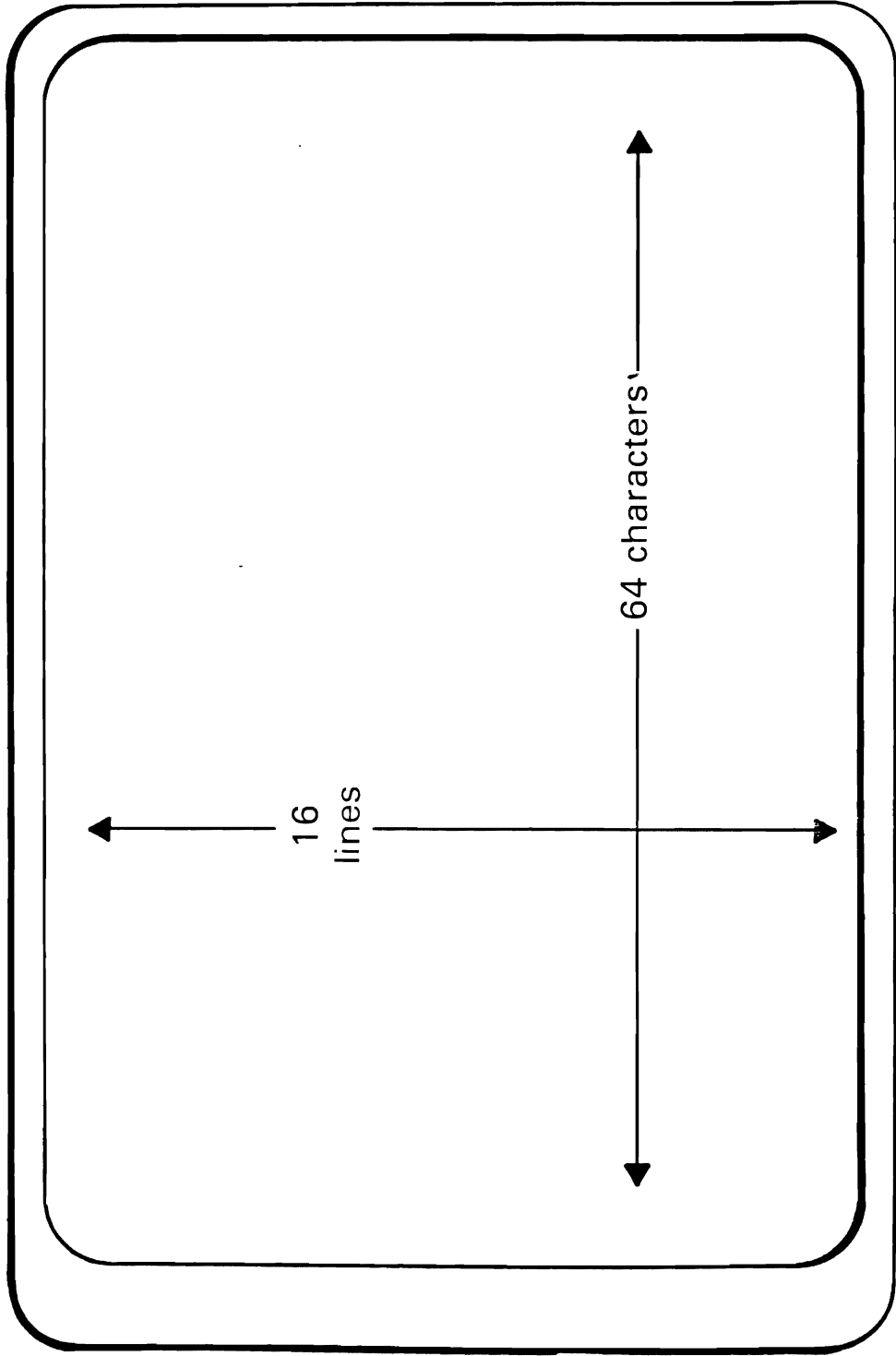
- The indicator is on
- The indicator is off



5250 Display Screen

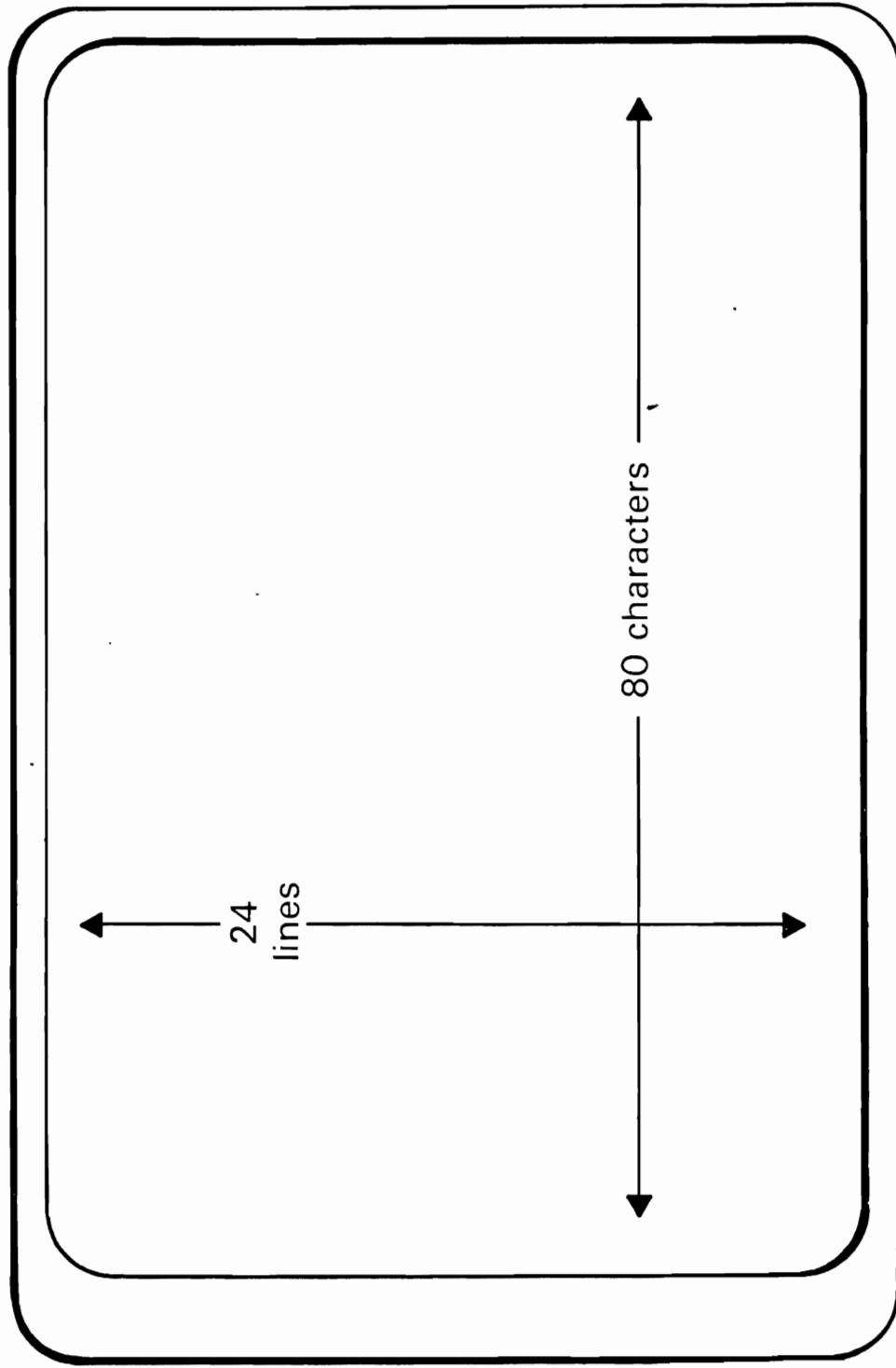
- = The indicator is on
- = The indicator is off

System Console Screen



= 1024 Characters Total

Work Station
Display Screen



= 1920 Characters Total

FUNCTIONS VALID FOR ALL CPF

CF1	Exit function (return to original display)
CF2	Back up to previous display
CF24	Print (system console)

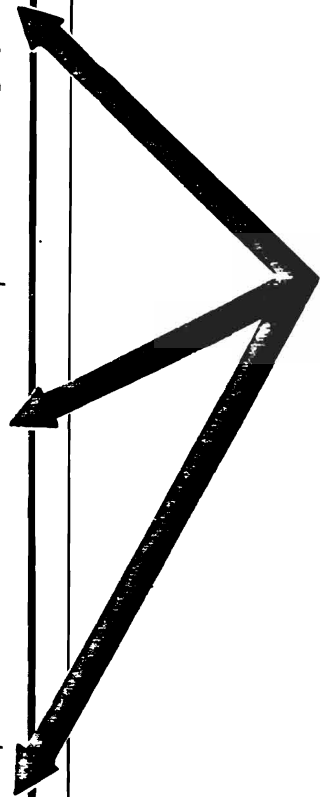
**FUNCTIONS VALID ON
COMMAND ENTRY SCREEN**

CF3	Duplicate command
CF4	Prompt key
CF7	Display detail messages
HELP	Explains Detail Messages (above)

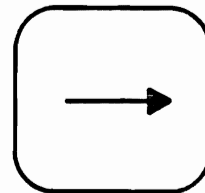
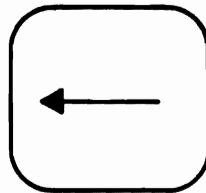
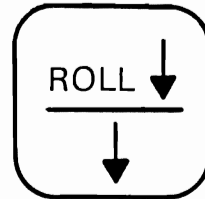
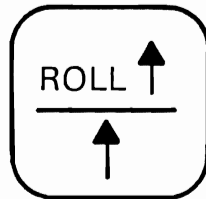
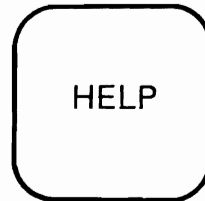
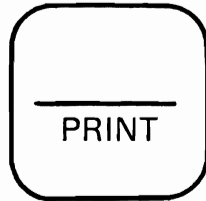
COMMAND ENTRY DISPLAY


18 horizontal lines for command entry.

CF3 - Duplicate CF4 - Prompt CF7 - Low level messages

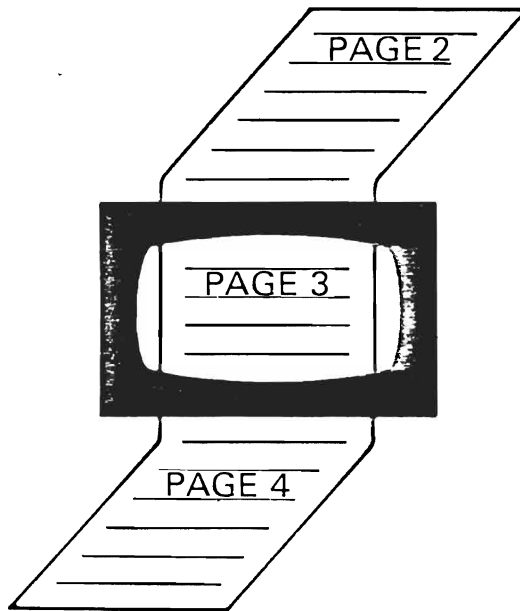


CURSOR POSITIONING & ROLL UP/ROLL DOWN

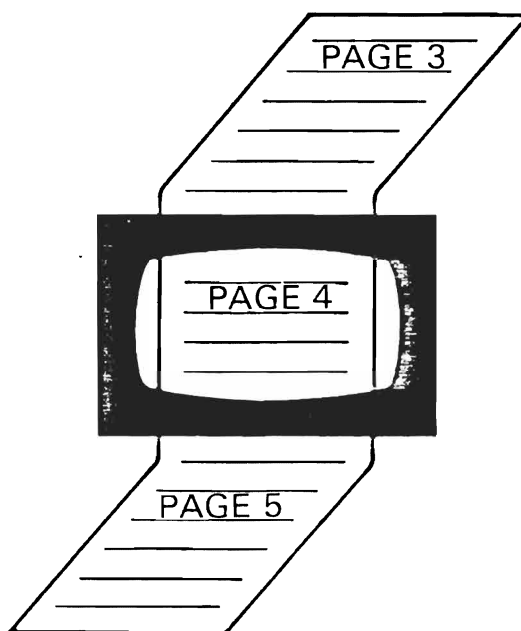


<p>Upper Case </p>	<p>Lower Case</p>
<p>Roll up Roll down</p>	<p>Print Help Cursor Up Cursor Down Cursor Left Cursor Right</p>

You can only view a part of the entire data file at one time. . .

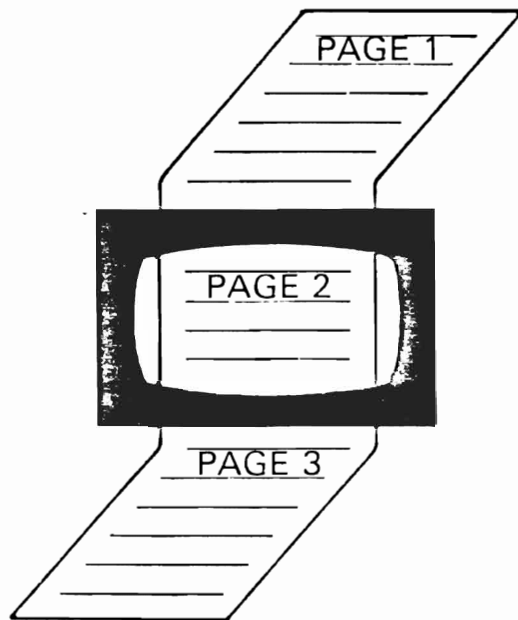


ROLL FORWARD (UP)



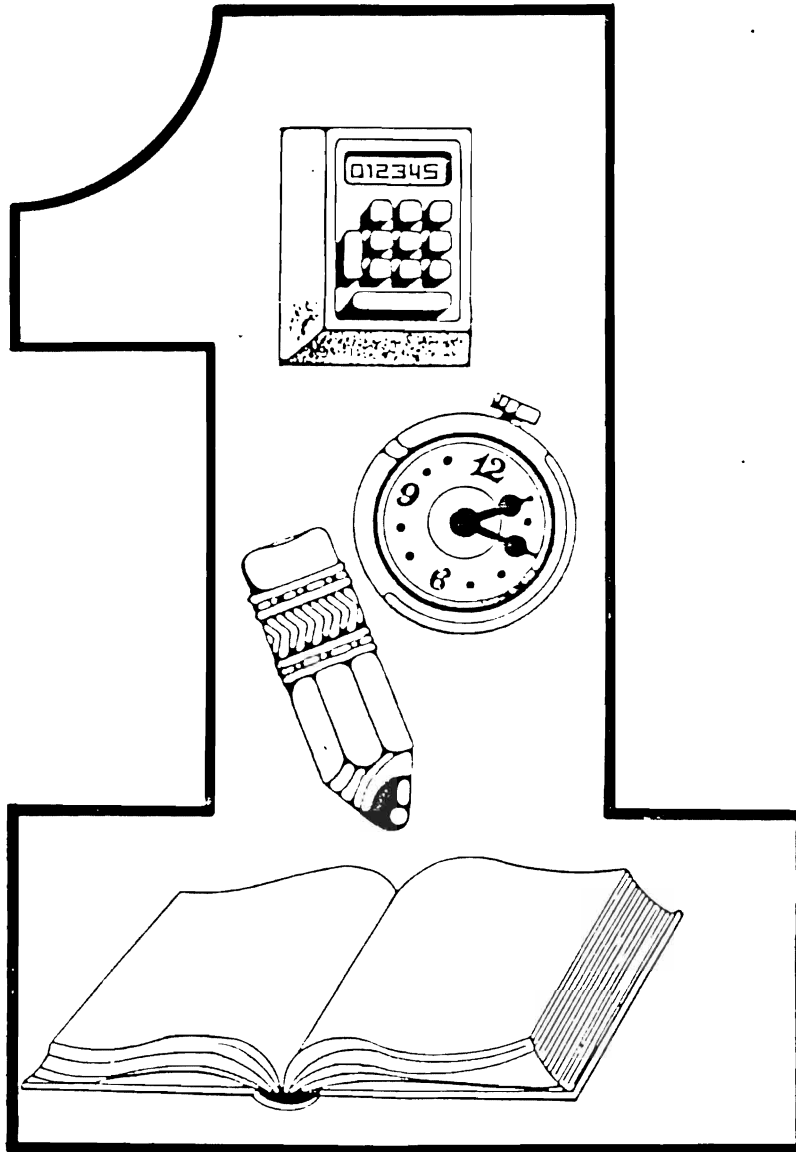
Depress SHIFT
& ROLL ↑

ROLL BACKWARD (DOWN)



Depress SHIFT
& ROLL ↓

LAB EXERCISE



**S
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P**

STEP

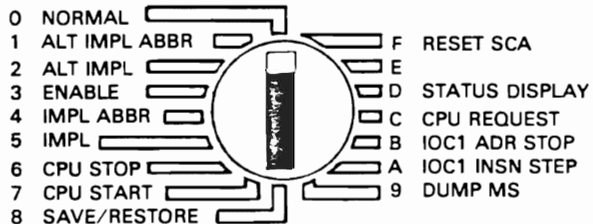
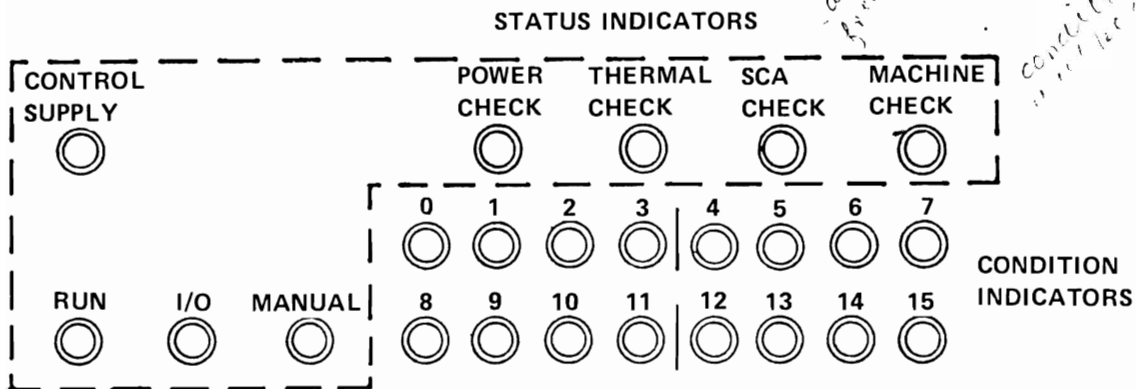
1

Set switches for IMPL and depress the POWER—ON button

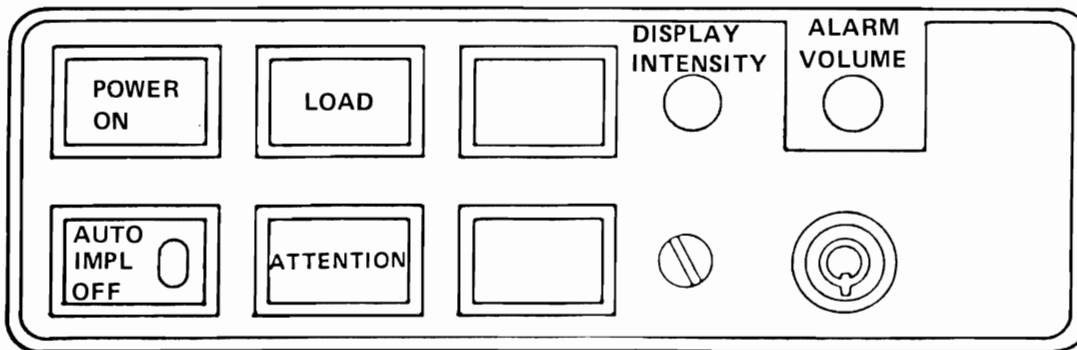
**Five Steps
to
CPF Start up**

- 1. Set switches for IMPL and depress POWER ON button**
- 2. Enter password on Signon screen**
- 3. Key in changes on the CPF Start up Prompt**
- 4. Notice CPF Completion Messages**
- 5. Start subsystems, communication lines, printers, etc.**

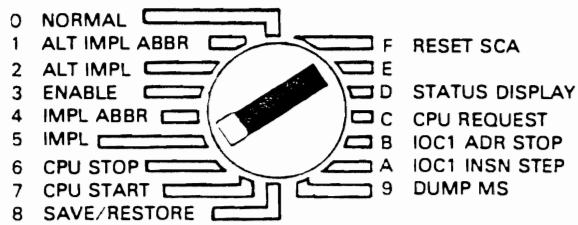
OPERATOR/SERVICE PANEL



ROTARY SWITCHES



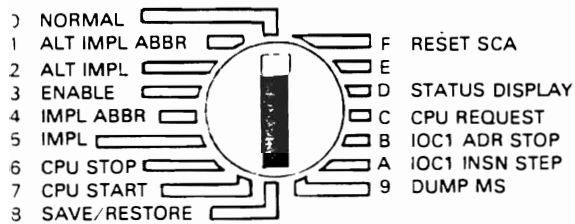
Set the Multifunction Rotary Switches



to have a **NORMAL IMPL**
and
depress the **POWER ON** or **LOAD** button

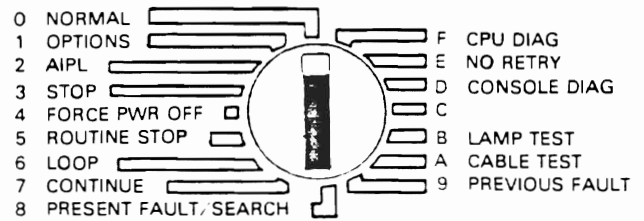
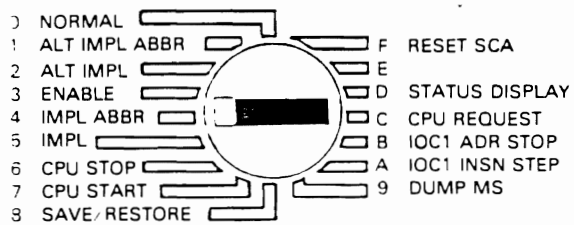
OR . . .

**Set the
Multifunction Rotary Switches**



**to have a NORMAL IMPL
and
depress the POWER ON**

Set the Multifunction Rotary Switches



to have an Abbreviated IMPL
and
depress the POWER ON or LOAD button

STEP

2

Enter password on Sign On Screen

This is the signon screen . . .

ENTER PASSWORD TO SIGN ON:

—

Type in 'SYSOPR' and depress the ENTER key

STEP

3

Key in changes on the
CPF Start up Prompt

?

?

Date

TIME

After CPF has been started

You may need to:

- Load diskettes/magazines needed for input, save/restore
- Load forms in Printer(s)
- Put Printer(s) in Ready condition
- Turn on work stations
- Load tape reels in Magnetic Tape Units
- Put Multi-function Card Unit in Ready condition

START CPF PROMPT

START CONTROL PROGRAM FACILITY PROMPT

ENTER THE FOLLOWING:

SYSTEM DATE (MDY):

SYSTEM TIME:

JOB QUEUES (*KEEP *CLEAR)

OUTPUT QUEUES (*KEEP *CLEAR):

INCOMPLETE JOB LOGS (*KEEP *CLEAR):

CONFIGURATION MENU (*NO *YES):

05 / 30 / 80
00 : 00 : 00

*KEEP

*KEEP

*KEEP

*NO

LAST TERMINATION WAS NORMAL

The only parameters that usually need to
be changed

STEP 4

Notice CPF Completion Messages

CPF Completion Messages

MESSAGE QUEUE-QSYSOPR Delivery: *BREAK Msgq sev: 00

Control unit QWSC1 contacted.

Start of controlling subsystem in progress.

Start of subsystem QCTL.QSYS in progress.

Start CPF complete.

Subsystem QCTL started.

CF6 - Remove a message

CF7 - Display all

CF8 - Remove all

Depress the ENTER key

STEP

5

Start Subsystem,
Communication Lines,
Printers,
etc.

START SUBSYSTEM COMMAND

COMMAND ENTRY DISPLAY

:: STRSBS SBSD(QINTER)

CF3 - Duplicate

CF4 - Prompt

CF7 - Low level messages

QSYSOPR MESSAGE QUEUE DISPLAY 1

MESSAGE QUEUE- QSYSOPR Delivery: *BREAK Msgq sev: 00
Start of subsystem QINTER.QGPL in progress.

CF6 - Remove a message CF7 - Display all CF8 - Remove all

Depress the ENTER key

QSYSOPR MESSAGE QUEUE DISPLAY 2

MESSAGE QUEUE- QSYSOPR Delivery: *BREAK Msgq sev: 00
Subsystem QINTER cannot allocate work station LWS01.
Subsystem QINTER cannot allocate work station LWS02.
Subsystem QINTER cannot allocate work station LWS03.
Subsystem QINTER cannot allocate work station LWS06.
Subsystem QINTER cannot allocate work station LWS07.
Subsystem QINTER cannot allocate work station LWS08.
Subsystem QINTER cannot allocate work station LWS05.
Subsystem QINTER started.

CF6 - Remove a message CF7 - Display all CF8 - Remove all

Depress the ENTER key

Start the System Printer

```
COMMAND ENTRY DISPLAY
:: STRPRTWTR DEV (QSYSPRT) OUTQ (QPRINT)
   Rdr or wtr QSYSPRT.OSYS.005922 submitted to jobq QSPL.QGPL
::
```

CF3 - Duplicate

CF4 - Prompt

CF7 - Low level messages

Verify the Print Belt/Train

MESSAGE QUEUE- QSYSOPR Delivery: *BREAK Msgq sev: 00

Verify prt belt/train QSYSIMAGE.*LIBL on QSYSVRT (C G).

?: 9

CF6 - Remove a message CF7 - Display all CF8 - Remove all

Verify the Form Alignment

MESSAGE QUEUE- QSYSOPR Delivery: *BREAK Msgq sev: 00

Verify alignment on device QSYSVRT (I G R N C).

? : (I)

CF6 - Remove a message CF7 - Display all CF8 - Remove all

Press the "HELP" key

SECOND LEVEL MESSAGE DISPLAY

Msg Id: CPA5316 Sev: 99 Type: INQUIRY 11/24/82 09:42:39
Job: QSYSPRT User: QSYS Nbr: 005909
From pgm: Inst: To pgm: Inst:
Verify alignment on device QSYSPRT (I G R N C).

First line for file is 6. Check forms for correct alignment. If forms aligned, enter I to continue printing or enter G to skip to next form, reprint first line and continue printing. If forms not aligned, to reprint first line on current form and verify alignment, press STOP/RESET, use Forms Advance Knob to adjust alignment, press READY, enter R. Or to reprint first line on next form and verify alignment, press STOP/RESET, advance the paper to the next form by pressing CARRIAGE RESTORE, use Forms Advance Knob to adjust alignment, press READY, enter N. Enter C to cancel processing.

to find out the meanings of each choice

S
Y
S
T
E
M

S
H
U
T
D
O
W
N

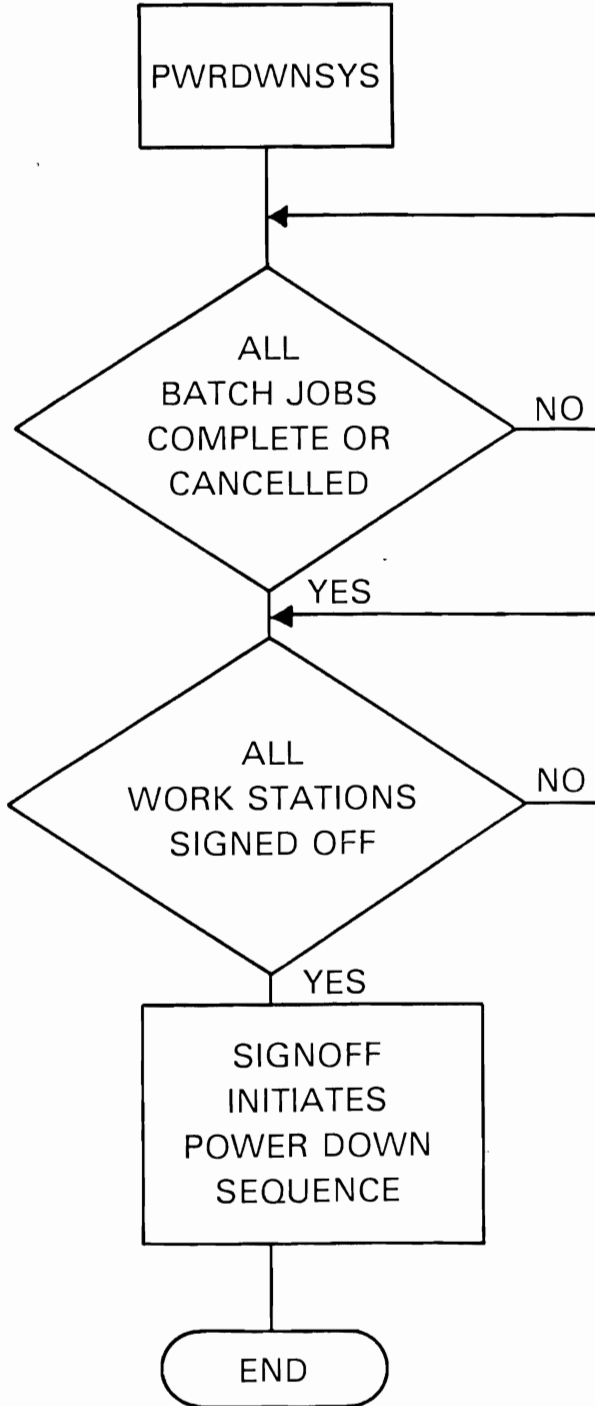
POWER DOWN SYSTEM COMMAND PROMPT

Power Down System (PWRDWN SYS) Prompt

Enter the following:

How terminate (*CNTRLD *IMMED):	OPTION	P	<u>*CNTRLD</u>
Delay time in sec, if *CNTRLD:	DELAY	P	<u>*NOLIMIT</u>
Restart after power down?	RESTART		<u>*NO</u>

CONTROLLED POWER DOWN —ALL JOBS COMPLETED



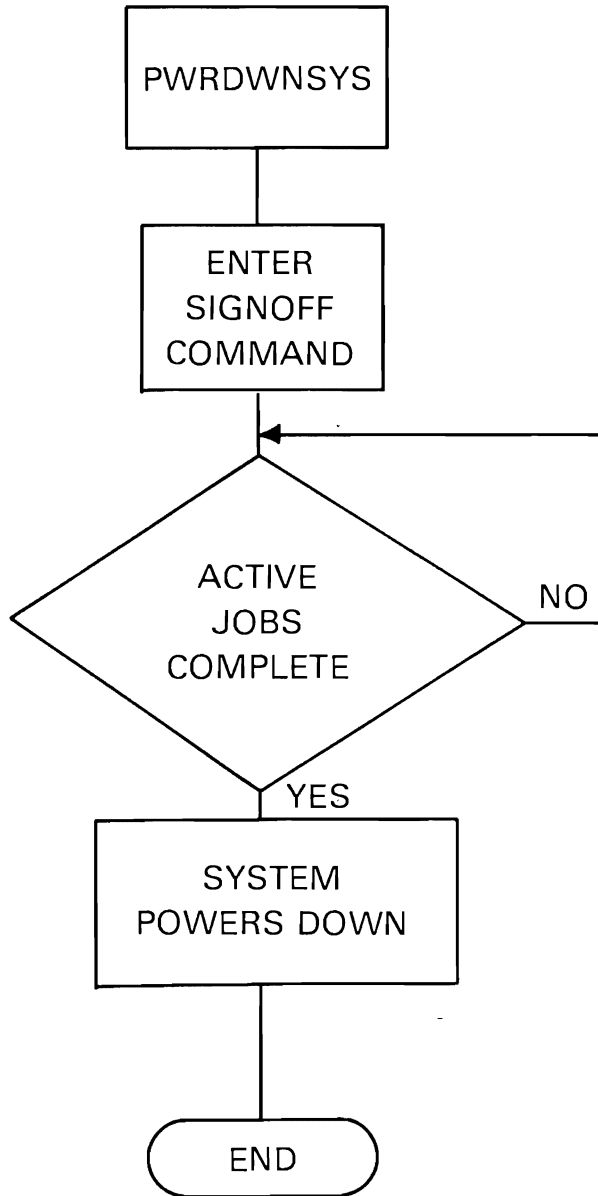
The PWRDWNSYS command is entered by the system operator, a CL jobstream, or a CL program.

The system operator can wait for batch jobs to complete or cancel them.

The system operator can notify work station users to sign off by sending messages. When other users have signed off the system operator should sign off.

The system operator signing off completes the last active job on the system and the system powers down.

CONTROLLED POWER DOWN AS SOON AS JOBS COMPLETED



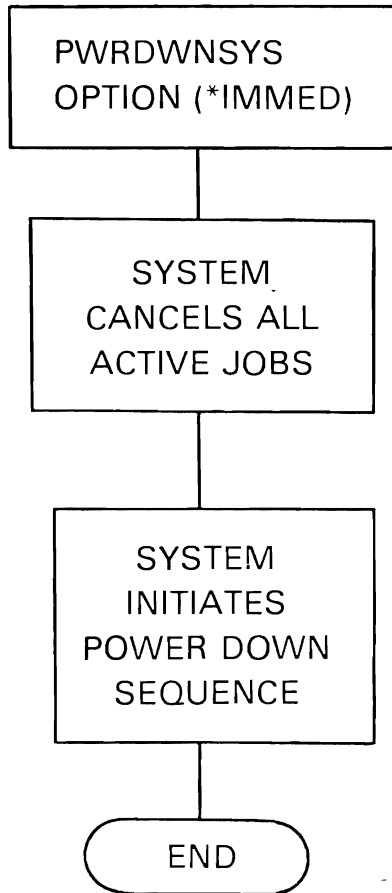
The PWRDWNSYS command is entered by the system operator, a CL jobstream, or a CL program.

The system operator verifies that the active jobs do not need a system operator present and then signs off and leaves.

Processing continues until all active jobs are complete.

The system powers down after all active jobs are complete.

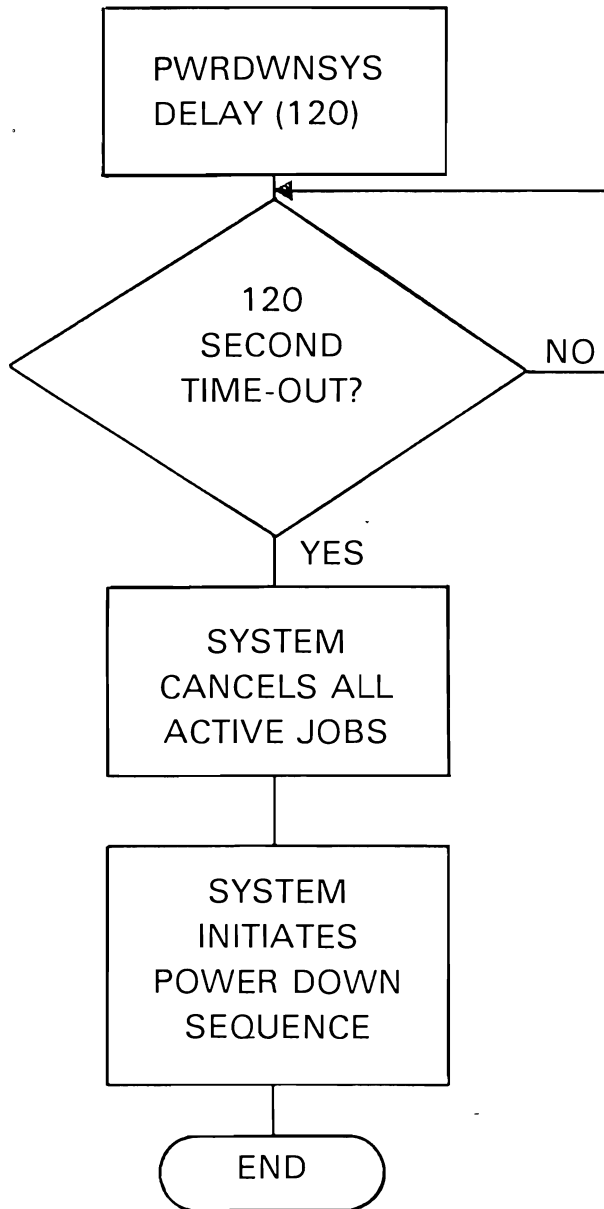
IMMEDIATE POWER DOWN



The PWRDWNSYS *IMMED command can be issued from a CL jobstream, a CL program, or the system operator.

The OPTION (*IMMED) parameter tells the system to stop processing active jobs and cancel all active jobs immediately. The jobs files may be partially updated.

CONTROLLED POWER DOWN WITH TIME LIMIT



The PWRDWNSYS command with time delay can be issued from a CL jobstream, a CL program, or the system operator.

The DELAY parameter allows you to enter the number of seconds you want to continue processing before cancelling active jobs.

If jobs are cancelled because the time limit has run out, the jobs files may be partially updated.

The system initiates the power down sequence after all jobs have completed or cancelled.

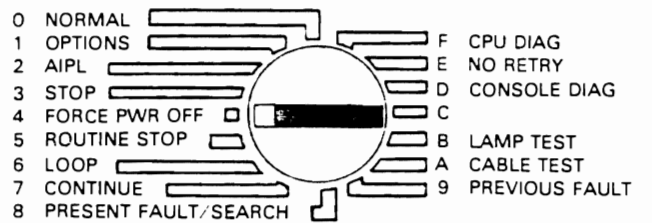
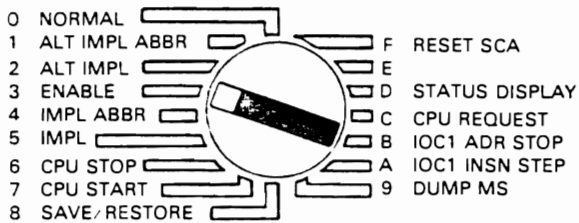
POWER DOWN WITH POWER WARNING FEATURE

- Automatic power down that will save volatile storage, ensure data base files and access paths quickly. The quick power down reduces the time required to bring the system back up because data base access paths and machine directories should not have to be rebuilt.
- Possibility of Auto-IMPL (if you have that feature) or using the normal power on sequence.

POWER DOWN USING THE OPERATOR/SERVICE PANEL

If you are unable to enter the PWRDWNSYS command, you can power down the system by using the Operator/Service Panel:

1. Set the Rotary Switches to:



2. Depress the LOAD Button

In Conclusion. . . .

The Five Steps to CPF Start up

- set the switches for IMPL
- enter password to signon
- key in date & time on CPF Start up Screen
- notice CPF messages
- start subsystems, printers, communication lines, etc.

C
C
O
L
M
M
M
A
N
D
S

OBJECT

A UNIT WHICH OCCUPIES SPACE IN STORAGE, UPON WHICH OPERATIONS CAN BE PERFORMED

EXAMPLES: FILE
LIBRARY
PROGRAM

OBJECTS

TYPE	IDENTIFIER	DESCRIPTION
FILE	*FILE	Contains, or provides access to, a group of related data records in the system
PROGRAM	*PGM	Contains the executable code needed to perform the user's task
LIBRARY	*LIB	Contains one or more other objects. Serves as a directory to find objects by name.
JOB DESCRIPTION	*JOB	Contains a set of attributes that are used to control job execution
DEVICE DESCRIPTION	*DEV	Describes a device on the system, and its features
LINE DESCRIPTION	*LIND	Describes a communication line on the system, and its features

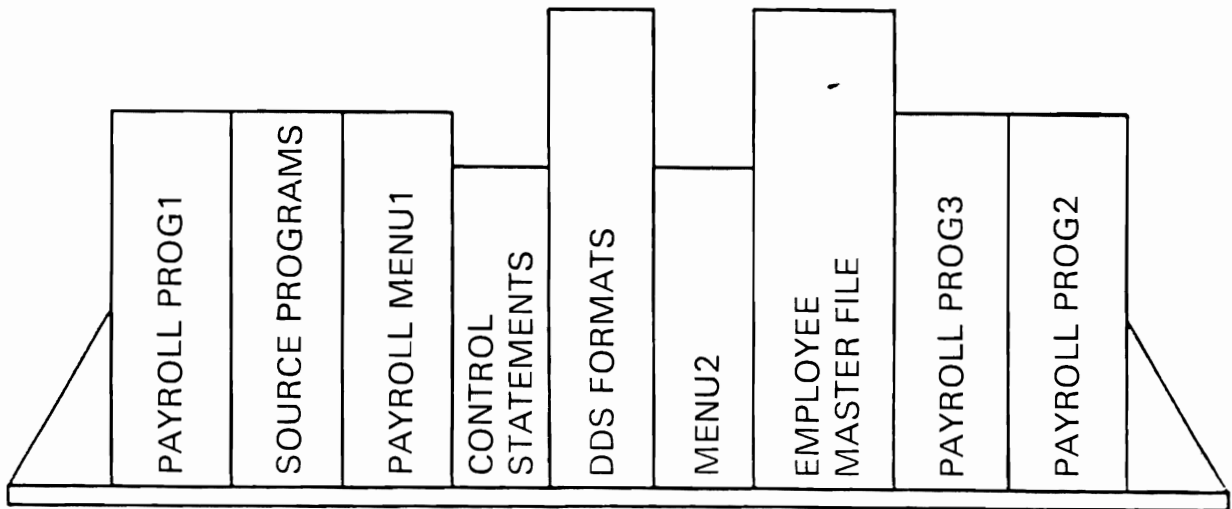
MORE OBJECTS

TYPE	IDENTIFIER	DESCRIPTION
COMMAND	*CMD	Contains the description of a Control Language command
DATA AREA	*DTAARA	Contains a data value that can be used and changed by more than one job
MESSAGE FILE	*MSGF	Contains descriptions of predefined messages
MESSAGE QUEUE	*MSGQ	Contains messages being sent and received by the system and its users
JOB QUEUE	*JOBQ	Contains entries for jobs that are to be executed by the system
OUTPUT QUEUE	*OUTQ	Contains entries for spooled output files to be written to an output device

LIBRARY

A Library is a Directory to other Objects on the System/38

A LIBRARY



A LIBRARY IS A DIRECTORY TO OTHER
OBJECTS ON THE SYSTEM/38

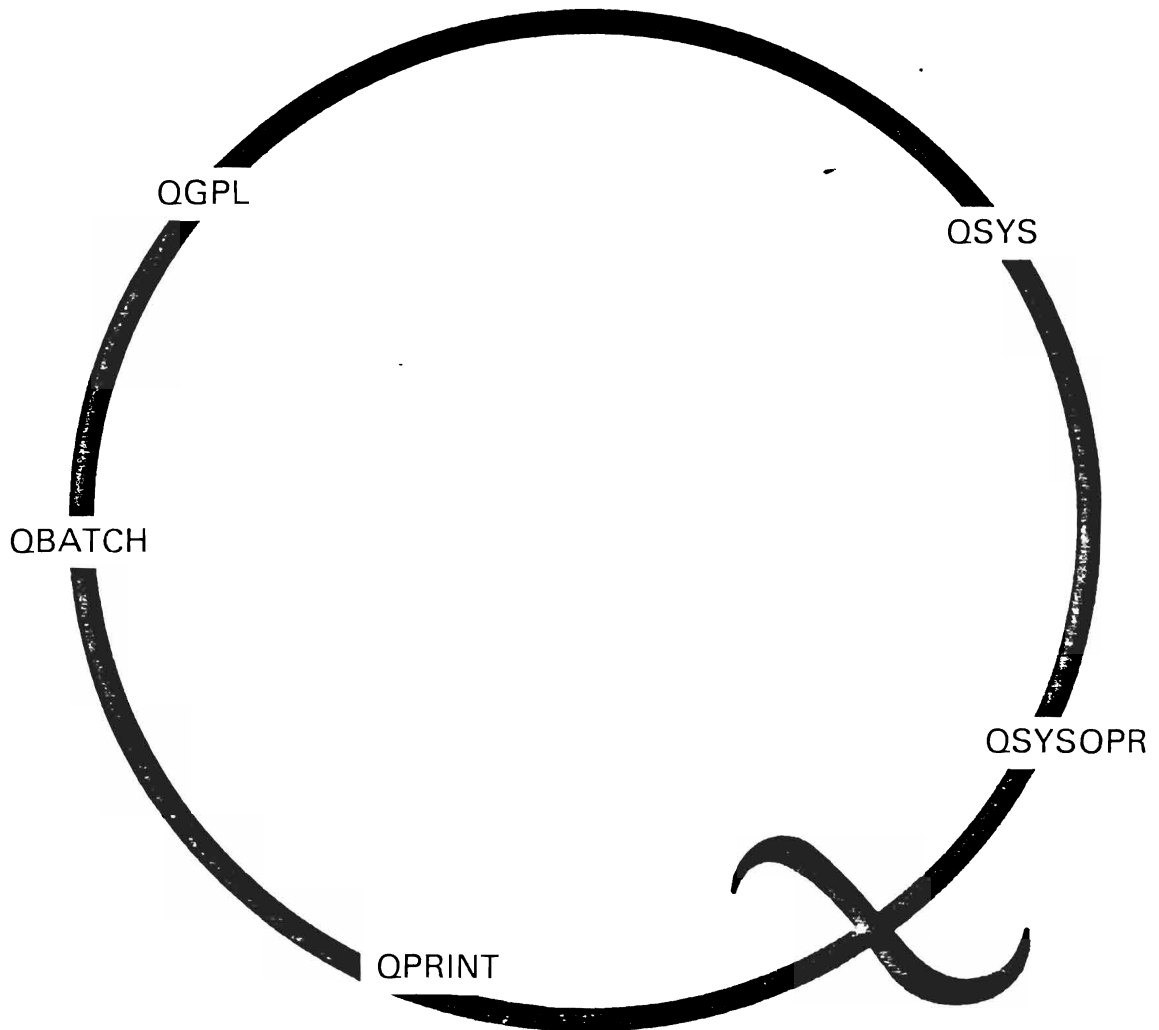
A LIBRARY IS USED TO GROUP RELATED
OBJECTS ON THE SYSTEM/38

OBJECTS:
PROGRAMS
CONTROL STATEMENTS
DATA FILES

MORE LIBRARIES SUPPLIED BY IBM. . .

- QRECOVERY (recovery library): Contains information for recovery after a system failure
- QRPG (RPG III library): Contains all programs and information needed to create RPG III programs
- QCBL (COBOL library): Contains all programs and information needed to create COBOL programs
- QIDU (utilities library): Contains all programs and objects needed to execute S/38 utilities

IBM—SUPPLIED OBJECTS START WITH. . .



SIMPLE NAME VS. QUALIFIED NAME

SIMPLE NAME:

PGM 1

VS.

QUALIFIED NAME:

PGM 1 . **LIB 1**

Program Name Library Name

GENERIC NAMES

A group of characters common to several object names.

CUST*

ITEM*

PAY*

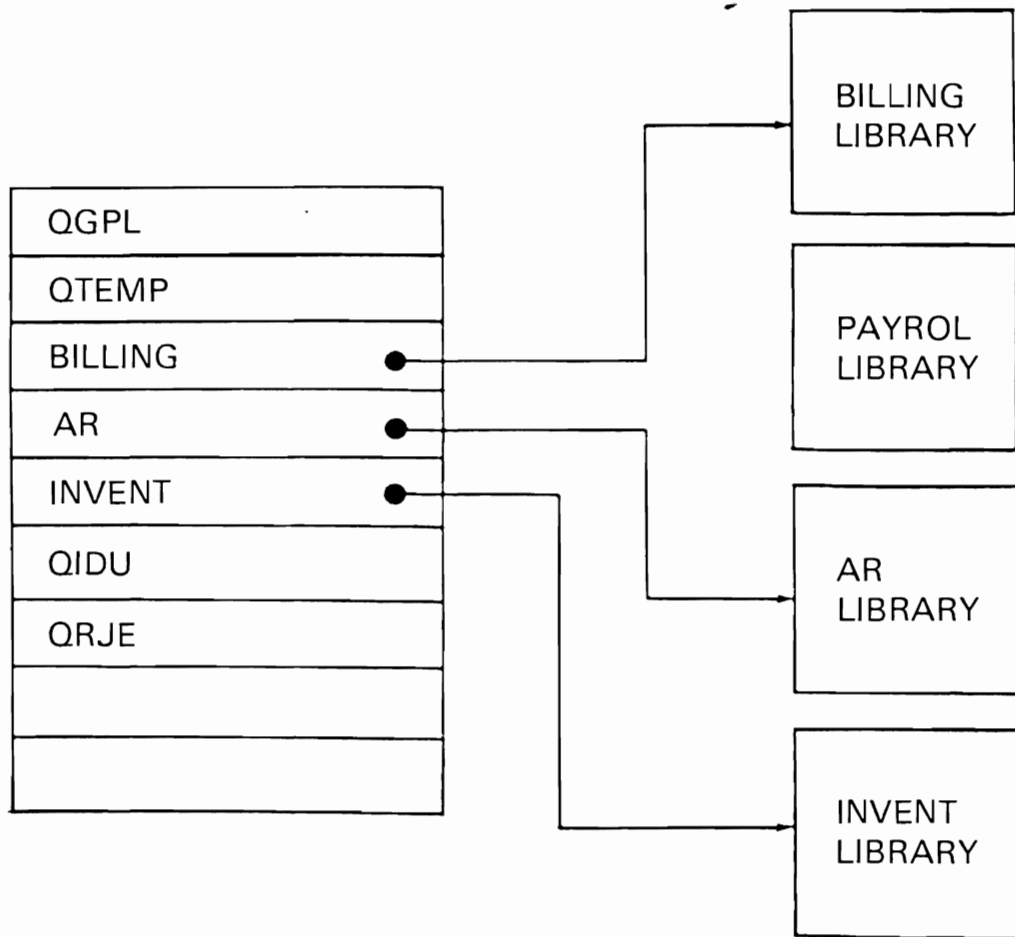
If a **GENERIC NAME** is specified in a command, the system will search for all objects whose names begin with those characters.

LIBRARY LIST

An ordered list of library names used to find an object

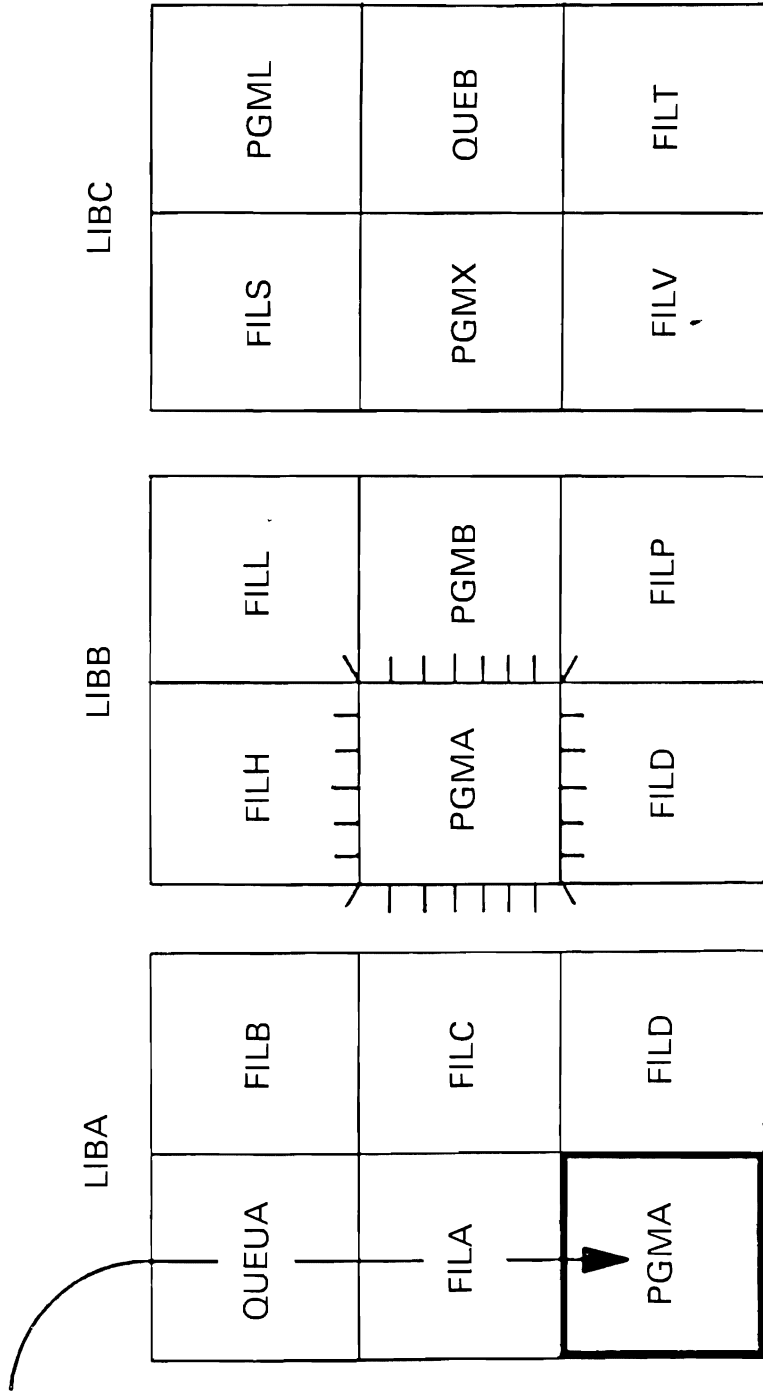
THE LIBRARY SEARCH LIST

AN ORDERED LIST OF LIBRARY NAMES USED TO FIND AN OBJECT



FINDING AN OBJECT

USING LIBRARY LIST



LIBRARY LIST: LIBA, LIBB, LIBC

FIND THE OBJECT: PGMA

USRPRF

CRT

RDR

MSG

LIB

CLR

SYS

SRC

SBS

ADD

COMMAND

PARTS OF WORDS GROUPED TOGETHER TO DESCRIBE AN OPERATION TO BE PERFORMED

OUTQ

CHG

PGM

DLT

DSP

RMV

STR

RTV

STS

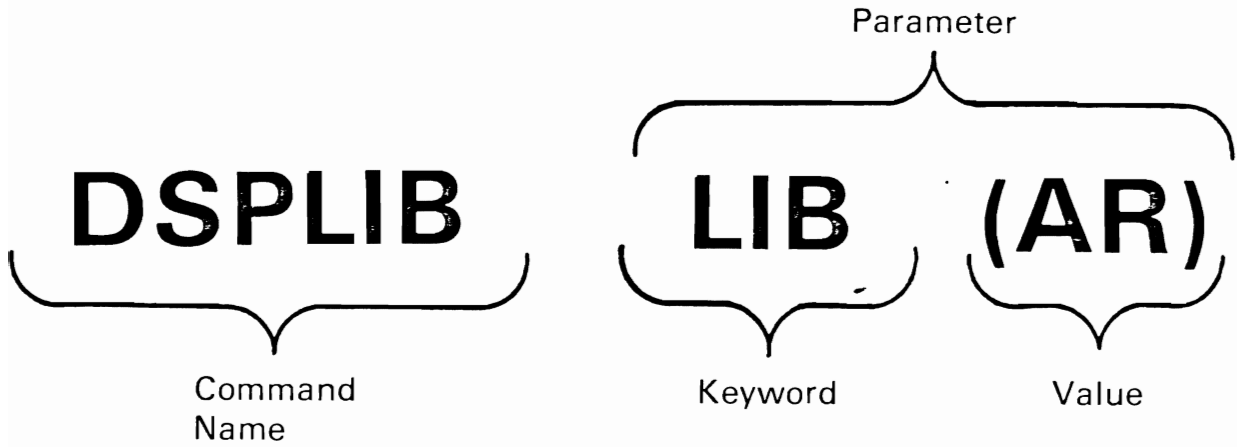
PF

VAL

REF

LIBL

PARTS OF A COMMAND



DSP = Display (action word)

LIB = Library (object)

DISPLAY LIBRARY LIST COMMAND
→ HAS NO REQUIRED PARAMETERS

DSPLIBL

DSPLIBL

OUTPUT (*LIST)

OPTIONAL PARAMETER

NAME THE PARTS OF THIS COMMAND. . .

SAVLIB LIB (AR)

THE TWO WAYS TO WRITE A COMMAND

```
DSPLIB ARLIB *LIST
```

*Positional without keywords

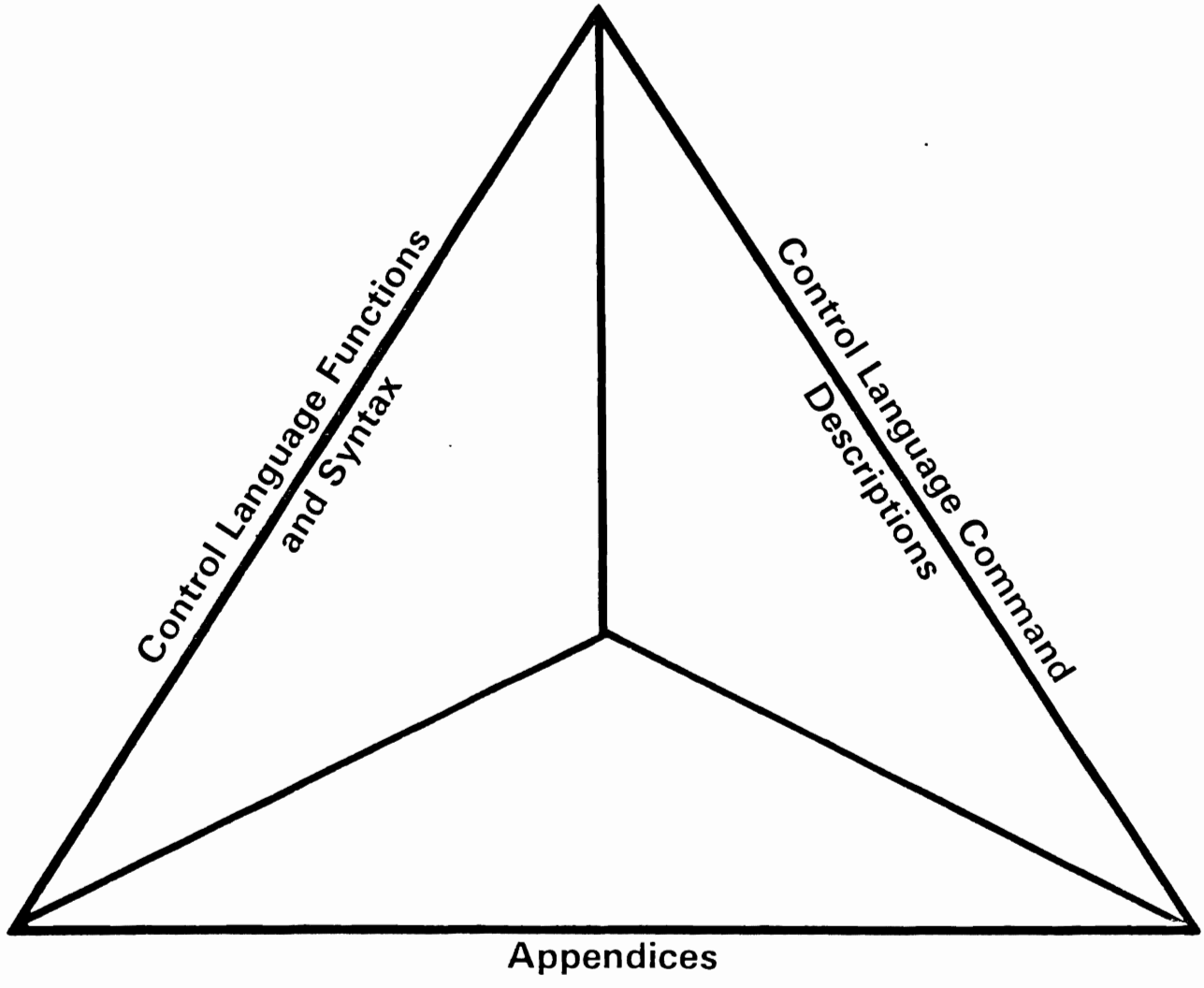
```
DSPLIB LIB (ARLIB) OUTPUT (*LIST)
```

*With keywords (doesn't have to be positional)



**SYSTEM/38
CONTROL
LANGUAGE
REFERENCE
MANUAL**

The System/38 Control Language Reference Manual is divided into 3 parts:



PART 1
Control Language Functions
and Syntax

Chapter 1

Summary of CPF Functions and Object Types

Chapter 2

Control Language Syntax

PART 2

Control Language Command Descriptions

Chapter 3

Format of Command Descriptions

Chapter 4

Command Descriptions

Chapter 5

Command Definition Statements

PART 3 Appendices

Appendix A
Expanded Parameter Descriptions

Appendix B
Expressions

Appendix C
User Profile Matrix Chart

Appendix D
Files Used by Control Language Commands

Appendix E
Error Messages That Can Be Monitored

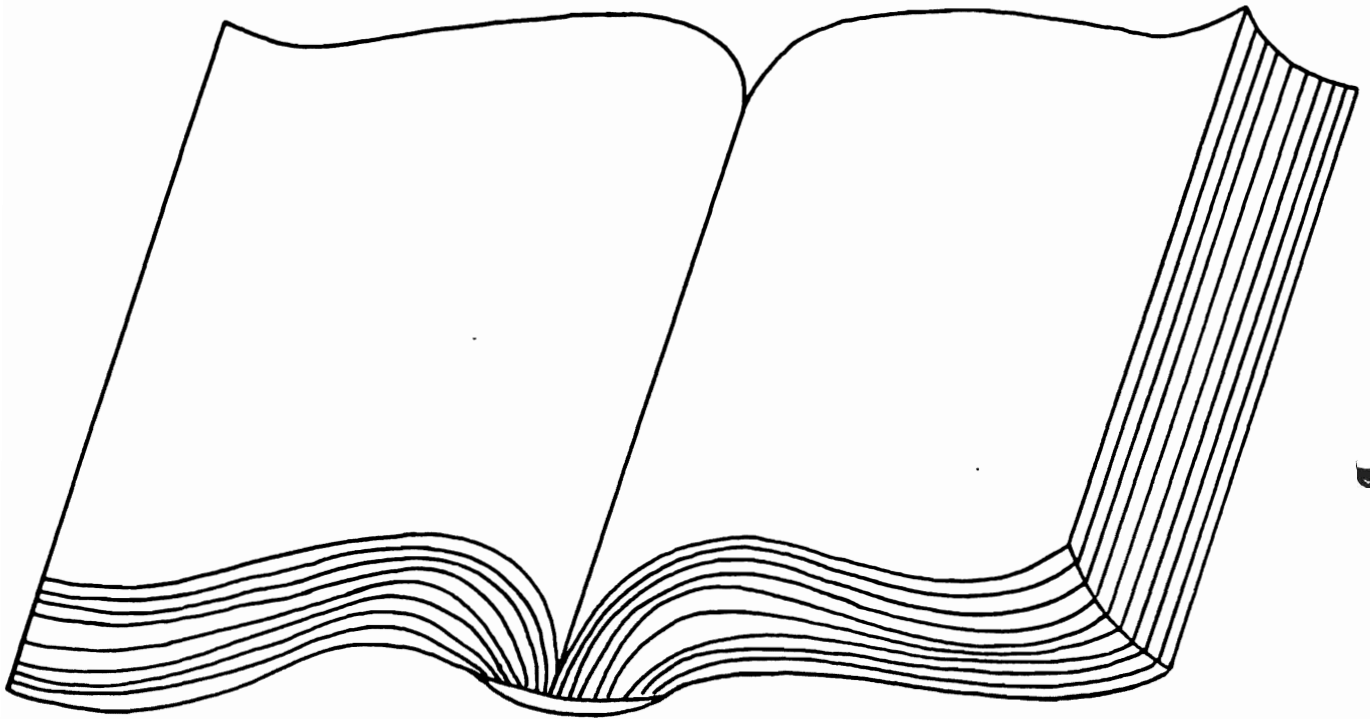
Appendix F
Command And Keyword Abbreviations

PLUS. . .

Glossary of Terms and Abbreviations

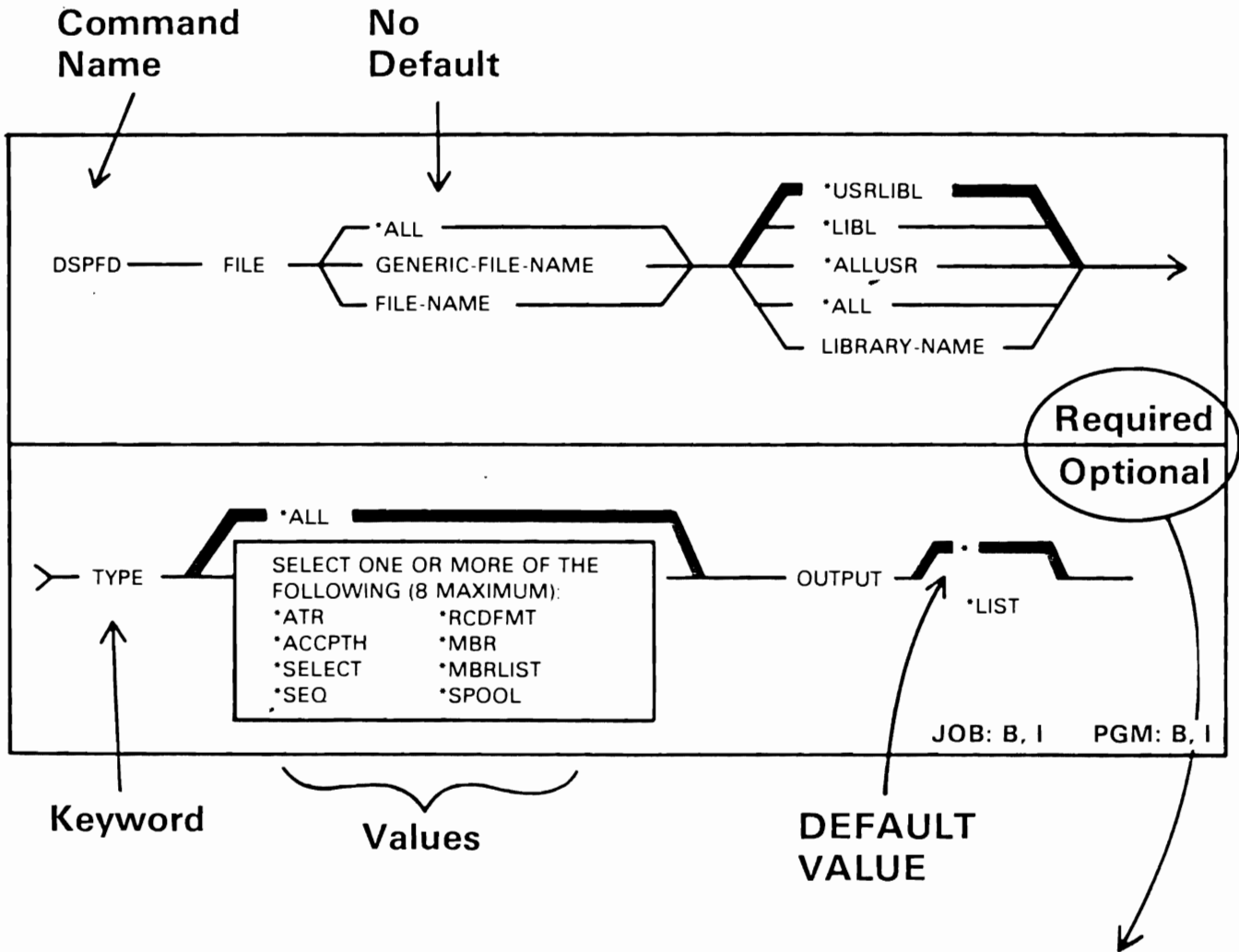
Index

COMMAND DESCRIPTIONS



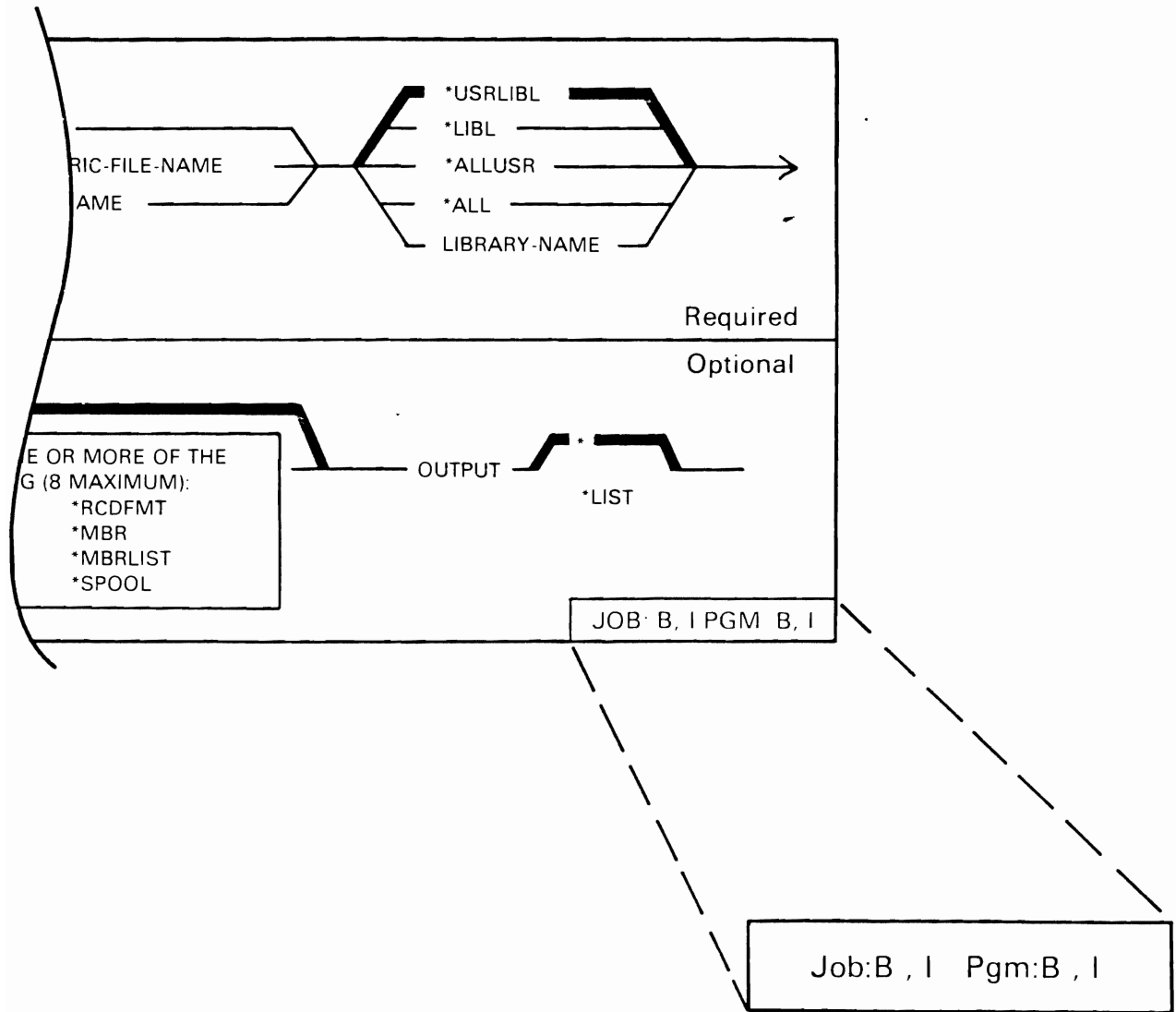
Command Descriptions are in
alphabetical order by Command Name

COMMAND SYNTAX DIAGRAM



NOTE: Everything above the line is REQUIRED; everything below the line is OPTIONAL

ENTRY CODES (BATCH & INTERACTIVE)



Explains where the command can be entered

THE EXPLANATIONS OF THE COMBINATIONS OF ENTRY CODES

CODE	REPRESENTING
Job:B	Batch job
Job:I	Interactive job
Job:B,I	Batch & Interactive jobs
Pgm:B	Program, batch
Pgm:I	Program, interactive
Pgm:B,I	Program, batch and interactive

Program or Job
Batch, Interactive,
or Both



WOULD YOU

LIKE A

BETTER

WAY?

WHAT COMMAND

WILL

DISPLAY MY

MESSAGES?

COMMAND PROMPTING

CF4

Press CF4 to get. . .

COMMAND GROUPING MENU

CMDGRP

Select one of the following:

1. All Commands Menu
2. Verb Menu
3. Subject Menu
4. Object Management Menu
5. Data Base File Menu
6. File Menu
7. Device Management Menu
8. Programming Menu
9. Program Debug Menu
10. Message Handling Menu
11. Utilities Menu (If Installed)
12. Input/Output Spooling Menu
13. System Control Menu
14. Work Management Menu
15. Configuration Menu
16. Security Menu
17. Save/Restore Menu

ALLCMD
VERB
SUBJECT
OBJ
DBF
FILE
DEVMGT
PGM
DBG
MSGHDL
UTL
SPL
SYSCTL
WRKMGT
CFG
SEC
SAVRST

Option or command: _____ Or menu: _____

Partial command name: _____

CF1-Exit CF2-Previous menu CF16-Execute with no prompt

THE COMMAND GROUPING MENU

Take Option 10 to get. . .

MSGHDL Message Handling Menu

Select one of the following:

- 1. Log Menu
- 2. Message Description Menu
- 3. Message File Menu
- 4. Message Menu
- 5. Message Queue Menu
- 6. Reply List Menu

LOG
MSGD
MSGF
MSG
MSGQ
RPLY

Option or command: 4 Or menu: _____

Parameters: CF2-Previous menu CF16-Execute with no prompt

+

THE MESSAGE HANDLING COMMANDS MENU

THE MESSAGE MENU

MSG

Message Menu

Select one of the following:

1. Display Messages
 2. Send Break Message
 3. Send Message
 4. Send User Message
 5. Message Description Menu
 6. Message File Menu
 7. Message Queue Menu
 8. Reply List Menu
- DSPMSG
SNDBRKMSG
SNDMSG
SNDUSRMSG
- MSGD
MSGF
MSGQ
RPLY

Only Valid in CL Programs

9. Monitor Message
 10. Receive Message
 11. Remove Message
 12. Retrieve Message
 13. Send Program Message
 14. Send Reply
- MONMSG
RCVMSG
RMVMSG
RTVMSG
SNDPGMMMSG
SNDRPY

Option or command: 1 Or menu: _____

Parameters: _____

CF1-Exit CF2-Previous menu CF16-Execute with no prompt

Lists message commands

To execute this command

Display Messages (DSPMSG) Prompt

Enter the following:

Message queue name or *WRKSTN:

Library name:

Message type:

Messages to display first:

Severity code filter (00-99):

Output (* or *LIST):

MSGQ	P	*WRKSTN
MSGTYPE	P	*ALL
START	P	*LAST
SEV	P	0
OUTPUT	P	*

Fill in the parameters!

While In Prompting Mode. . .

Display Messages (DSPMSG) Prompt

Enter the following:


Message queue name or *WRKSTN:	MSGQ	P	*WRKSTN
Library name:			
Message type:	MSGTYPE	P	*ALL
Messages to display first:	START	P	*LAST
Severity code filter (00-99):	SEV	P	0
Output (* or *LIST):	OUTPUT	P	*

what are your options?

FUNCTIONS VALID DURING PROMPTING

CF13	Display key assignments
CF14	Display command string
CF15	Display error messages
CF16	Enter command (as is) — command complete
CF18	Revert command to defaults

DISPLAY STATION KEYBOARD TEMPLATES



IBM 5251 Display Station Models 2 and 12
Keyboard Template

GX21-9327-0

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File No. S5250/S34/S38-06 Printed in USA December 1978

IBM System/38 Keyboard Template																							
											GX21-7756-2	CPF											
13	Display Key Assignments (Prompter)	14	Display Command String (Prompter)	15	Display Error Messages (Prompter)	16	Command Complete (Prompter)	17		18	Revert to Command Defaults (Prompter)	19		20		21		22		23		24	
1	Return	2	Previous Display	3		4	Command Prompt	5	Redisplay	6		7		8		9		10		11		12	

CF13

DISPLAY
COMMAND FUNCTION
KEY ASSIGNMENTS

DISPLAY KEY ASSIGNMENTS

PROMPTER KEY ASSIGNMENTS

- ENTER - Next display, on last display, enter command.
- CF1 - End prompting. No command entered.
- CF2 - Back up to previous display.
- CF13 - Display key assignments.
- CF14 - Display resulting command string.
- CF15 - Display all error messages.
- CF16 - Enter command - command complete.
- CF18 - Revert to all command defaults.
- HELP - Second level message if cursor on message.

The following operators can be keyed into input fields:

- ? - Display permissible values for this field.
- BLANK - Replace value in field with default.
- & - Expand this field.
- + - Allow more list elements at end of list.
- < - Delete this list element.
- > - Insert list element prior to this field.

INPUT FIELD OPERATORS

- ?** - Display permissible values for this field
- BLANK** - Replace the value in the field with the default
- +** - Allow more list elements at the end of the list
- <** - Delete this list element
- >** - Insert list element prior to this field
- &** - Expand this field

Type in a QUESTION MARK followed by a space to get. . . .

Display Messages (DSPMSG) Prompt

Enter the following:

Message queue name or *WRKSTN: MSGQ P OSYSOPR
Library name: *LIBL
Message type: ? LL P *LAST
Messages to display first: *LAST
Severity code filter (00-99): 0
Output (* or *LIST): *



PARAMETER PROMPT WITH PERMISSIBLE VALUES (MSGTYPE)

Message type:

*ALL

- *ALL
- *INFO
- *INQ
- *COPY

all the permissible values for that parameter

Display Library (DSPLIB) Prompt

Enter the following:

Library names:

LIB

P

oprlib

+ for more

+

Output (*or *LIST):

OUTPUT

P

*

Type in a "+" for room to add more parameters in a list

Then. . .

<p>LIST PROMPT (LIB)</p> <p>Library names:</p> <p><u>OPRLIB</u></p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p>
--

Add more library names

LIST PROMPT (LIB)

Library names:

OPRLIB
arlib
qgpl

Depress the ENTER key

To execute the command, just depress the ENTER key.

Display Library (DSPLIB) Prompt

Enter the following:
Library names:

LIB	P	OPRLIB
		ARLIB
		QGPL
		PAYLIB
		CUSTLIB
		*

Output (* or *LIST):

+ for more	
OUTPUT	P

But, you didn't want to display QGPL?

Display Library (DSPLIB) Prompt

Enter the following:

Library names: LIB P
Output (* or *LIST): + for more
OUTPUT P

OPRLIB
ARLIB
< PL
PAYLIB
CUSTLIB
*



Type in a "<" followed by a space

Display Library (DSPLIB) Prompt

Enter the following:

Library names:	LIB	P	OPRLIB
			<u>ARLIB</u>
			<u>PAYLIB</u>
			<u>CUSTLIB</u>
			<u>*</u>

+ for more

Output (* or *LIST):	OUTPUT	P
----------------------	--------	---

It has disappeared!

Display Library (DSPLIB) Prompt

Enter the following:

Library names:

LIB	P	OPRLIB
		<u>ARLIB</u>
		<u>PAYLIB</u>
		<u>CUSTLIB</u>
		<u>*</u>

+ for more

Output (* or *LIST):

OUTPUT

P

You want to list SYSLIB before PAYLIB?

Display Library (DSPLIB) Prompt

Enter the following:

Library names:

LIB

P

+ for more

Output (* or *LIST):

OUTPUT

P

OPRLIB
ARLIB
> YLIB
CUSTLIB
*LIST



Type in a ">" followed by a space

LIST PROMPT (LIB)

Library names:

ARLIB
syslib

Then add SYSLIB

CF14

DISPLAY
COMMAND STRINGS

DISPLAY MESSAGE PROMPT

Display Messages (DSPMSG) Prompt

Enter the following:

Message queue name or *WRKSTN:	MSGQ	P	OSYSOPR
Library name:			*LIBL
Message type:	MSGTYPE	P	*ALL
Messages to display first:	START	P	*LAST
Severity code filter (00-99):	SEV	P	0
Output (* or *LIST):	OUTPUT	P	*LIST

Press CF14

This is what the command will look like to the system

```
COMMAND STRING DISPLAY

DSPMSG MSGQ(QSYSOPR)
OUTPUT (*LIST)

(Every parameter not listed
contains defaults)
```

CF15

DISPLAY
ERROR MESSAGES

CREATE DEVICE DESCRIPTION PROMPT

+++

Create Device Description (CRTDEVD) Prompt

Enter the following:

Device description name:	DEVD	R	LWS09
Device address:	DEVADR	R	00150
Device type code:	DEVTYPE	R	5299
Model identifier:	MODEL	R	8
Control unit name:	CTLU		*NONE
Online at CPF start (*YES *NO):	ONLINE		*YES
Dkt/tape error retries	RETRY	—	
Error type:			
Maximum times to retry:	+ for more		
Dkt/tape error log threshold	THRESHOLD	—	
Threshold error type:			
Number of errors allowed:	+ for more		
Drop line at signoff:	DROP		*YES
Associated work stn printer:	PRINTER		*NONE
Message queue name:	MSGQ		OSYSOPR
Library name:			*LIBL
Print image name:	PRTIMG		
Library name:			*LIBL

'00150 ' for parameter DEVADR must be 6 characters in length.

While entering parameter values, you may make a mistake or two. . .

ERROR MESSAGE DISPLAY

Position cursor at message and depress HELP key:

'00150 ' for parameter DEVADR must be 6 characters in length.

'5299 ' not valid for parameter DEVTYPE

'8 ' not valid for parameter MODEL

Multiple values, list, or qualified name not allowed in single input fld.

Position Cursor on a Message & Depress the HELP key

SECOND LEVEL MESSAGE DISPLAY

Msg Id: CPD0084 Sev: 30 Type: DIAGNOSTIC 01/19/83 11:03:54

Job:

User:

Nbr:

From pgm: QCAFLD Inst: 05B9 To pgm: QCL Inst:

'5299 'not valid for parameter DEVTYPE

Value not one of valid values supported. Change value

Second — Level Messages will tell you the error
and possible solutions

CF16

ENTER
COMMAND
(AS IS)

To execute this command — fill in the desired parameters and depress ENTER.

+++

Copy File (CPYF) Prompt

Enter the following:

From file name:	FROMFILE	R	FILEA	
Library name:			*LIBL	
To file name or *LIST:	TOFILE	R	FILEB	
Library name:			*LIBL	
From member or label name:	FROMIMBR	P	*FIRST	
To member name or label name:	TOMBR	P	*FIRST	
Replace or add records:	MBROPT	P	*REPLACE	
Create file (*NO *YES):	CRTFILE	P	*NO	
Which records to print:	PRINT		*NONE	
Record format of logical file:	RCDFMT		*ONLY	
Copy from record number:	FROMRCD		*START	
Copy to record number:	TORCD		*END	

NOTE: This indicates there is more to come!

Need to fill in any more parameters?

+++

Copy File (CPYF) Prompt

Copy from record key
Number of key fields:
Key value:

FROMKEY

*NONE

_____ + for more

Copy to record key
Number of key fields:
Key value:

TOKEY

*NONE

_____ + for more

Number of records to copy:

NBRRCDs

*END

NOTE: Still more to come!

Copy File (CPYF) Prompt

+++

Include records by char test

Field name or *RCD:

Character position:

Relational operator:

Value:

*NONE

Include records by field test

Relationship (*IF *AND *OR):

Field name:

Relational operator:

Value:

INCREL

*NONE

Record format field mapping:

Source date and seq update:

+ for more

FMTOPT

SRCOPT

*NONE

*SAME

NOTE: Still more to come!

Copy File (CPYF) Prompt

Source sequence numbering	SRCSEQ	<u>1.00</u>
Starting sequence number:		<u>1.00</u>
Increment number:		<u>*CHAR</u>
Print format (*CHAR *HEX):	PRTFMT	<u>0</u>
Number of errors allowed:	ERRLVL	<u>*YES</u>
Compress out deleted records?	COMPRESS	

Depress ENTER to execute the Copy File

To execute without viewing the rest of the related screens. . .

+++

Copy File (CPYF) Prompt

Enter the following:

From file name:	FROMFILE	R	FILEA
Library name:			*LIBL
To file name or *LIST:	TOFILE	R	FILEB
Library name:			*LIBL
From member or label name:	FROMMBR	P	*FIRST
To member name or label name:	TOMBR	P	*FIRST
Replace or add records:	MBROPT	P	*REPLACE
Create file (*NO *YES):	CRTFILE	P	*NO
Which records to print:	PRINT		*NONE
Record format of logical file:	RCDFMT		*ONLY
Copy from record number:	FROMRCD		*START
Copy to record number:	TORCD		*END

CF18

REVERT
COMMAND
TO DEFAULTS

If you have made a mistake and wish to start all over. . .

Create Physical File (CRTPF) Prompt

+++

Enter the following:

Physical file name:

Library name:

Source file containing DDS:

Library name:

Source member containing DDS:

Record length, if no DDS:

Source listing options:

File type (*DATA *SRC):

Member name, if desired:

Expiration date for member:

Maximum number of members:

Access path maintenance:

Access path recovery:

Force keyed access path:

Member size:

Initial number of records:

Increment number of records:

Maximum number of increments:

Allocate storage (*NO *YES):

Contiguous storage?

FILE	R	MINE
		QGPL
SRCFILE	P	QDDSSRC
		*LIBL
SRCMBR	P	*FILE
RCDLEN	P	
OPTION	P	
FILETYPE		*DATA
MBR		*FILE
EXPDTE		*NONE
MAXMBRS		1
MAINT		*IMMED
RECOVER		
FRCACCPH		*NO
SIZE		
		10000
		1000
		3
ALLOCATE		*NO
CONTIG		*NO

just depress CF18 to re-enter all defaults values

SYSTEM OPERATOR MENU

SYSTEM OPERATOR MENU

Select one of the following:

1. DSPJOBQ (jobq)
2. DSPOUTQ (outq)
3. SNDMSG tomsgq, (type), msg
4. CALL program
5. Execute command
6. SBMJOB (job), (jobd),(cmd)
7. STRPRTWTR dev,outq
8. DSPWTR (writer)
9. SBMDKTJOB dev, label, (loc)
10. SBMDBJOB file, (member)
11. DSPSBMJOB
12. DSPACTJOB (reset)
80. DSPMNU (menu)
90. SIGNOFF (*NOLIST *LIST)

Option: _____ Params: _____

Cmd or parm: _____

Log requests: *YES_____ CF3-Command entry CF4-Prompt (5,6 only)

CF6-DSPMSG QSYSOPR CF7-DSPSBS CF8-DSPSYS

Depress CF3 to get the .

COMMAND ENTRY DISPLAY

COMMAND ENTRY DISPLAY

15 horizontal lines for text entry.

CF3 - Duplicate

CF4 - Prompt

CF7 - Low level messages

Designed for command entry ease-of-use

COMMAND ENTRY DISPLAY

:: dspmsg qsusopr

CF3 - Duplicate CF4 - Prompt CF7 - Low level messages

Enter a command and depress the ENTER key

Oops. . .Wrong Spelling

COMMAND ENTRY DISPLAY

```
:: dspmsg qsusopr  
Message queue QSUSOPR.*LIBL not found.
```

CF3 - Duplicate CF4 - Prompt CF7 - Low level messages

Position cursor at the message and depress the HELP key

COMMAND ENTRY DISPLAY

```
:: dspmsg qsusopr  
Message queue QSUSOPR.*LIBL not found.  
:: dspmsg qsusopr
```

CF3 - Duplicate CF4 - Prompt CF7 - Low level messages

Depress CF3 to duplicate the command

SYSTEM OPERATOR MESSAGE QUEUE

MESSAGE QUEUE - QSYSOPR Delivery: *HOLD Msgq sev: 00

Subsystem QINTER cannot allocate work station LWS07.

Subsystem QINTER cannot allocate work station LWS08.

Subsystem QINTER cannot allocate work station LWS05.

Start of subsystem QSPL.QGPL in progress.

Subsystem QINTER cannot allocate work station LWS02.

Subsystem QSPL started.

Subsystem QINTER started.

Start of subsystem QBATCH.QGPL in progress.

Subsystem QBATCH started.

Writer QSYSVRT.QSYS.008059 started.

Verify prt belt/train QSYSIMAGE.*LIBL on QSYSVRT (C G).

? : G

Verify alignment on device QSYSVRT (I G R N C).

? : I

CF6 - Remove a message

CF7 - Display all

CF8 - Remove all

Low Level Messages Display

LOW LEVEL MESSAGES

```
:: dspmsg qsusopr
Cannot resolve to obj QSUSOPR. Type/subtype X'1902' auth X'0000'.
Message queue QSUSOPR.*LIBL not found.
Error on device LWS02. Device response code is 08010200.
Print operation used default printer device file QSYSVRT.*LIBL. Reason cod
:: dspmsg qsusopr
Cannot resolve to obj QSUSOPR. Type/subtype X'1902' auth X'0000'.
Message queue QSUSOPR.*LIBL not found.
```

CONTROL LANGUAGE REVIEW

1. Vocabulary: Object
Library
Library search list
command

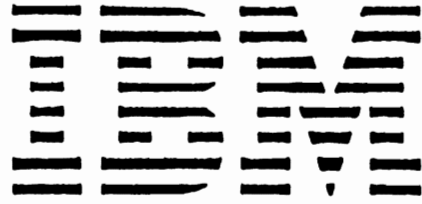
2. Command Function Keys: CF1
CF3
CF4
CF7
CF13
CF14
CF15
CF16
CF18
HELP

3. System/38 System Operators Guide

4. Control Language Syntax

5. Command Prompting:
 - Valid Operators
 - Valid Command Functions
 - “+++”

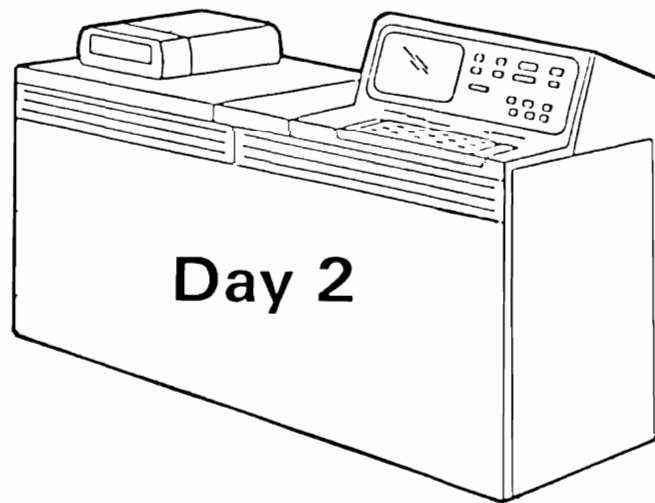




SYSTEM/38

SYSTEM OPERATOR

WORKSHOP



Day 2 Objectives

Describe:

- Message Handling on the System/38
- How to prepare and manage devices
- The flow of a job through the System
- How to start, release, hold and cancel jobs on
job queues,
spool queues,
output queues
- Use of the System Request Function

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SYSTEM REQUEST MENU

Select one of the following:

1. Transfer to secondary interactive job
2. Cancel previous request
3. Display current job
4. Display messages (msgq)
5. Send message 'msg' tomsgq
90. Sign off (*NOLIST *LIST)

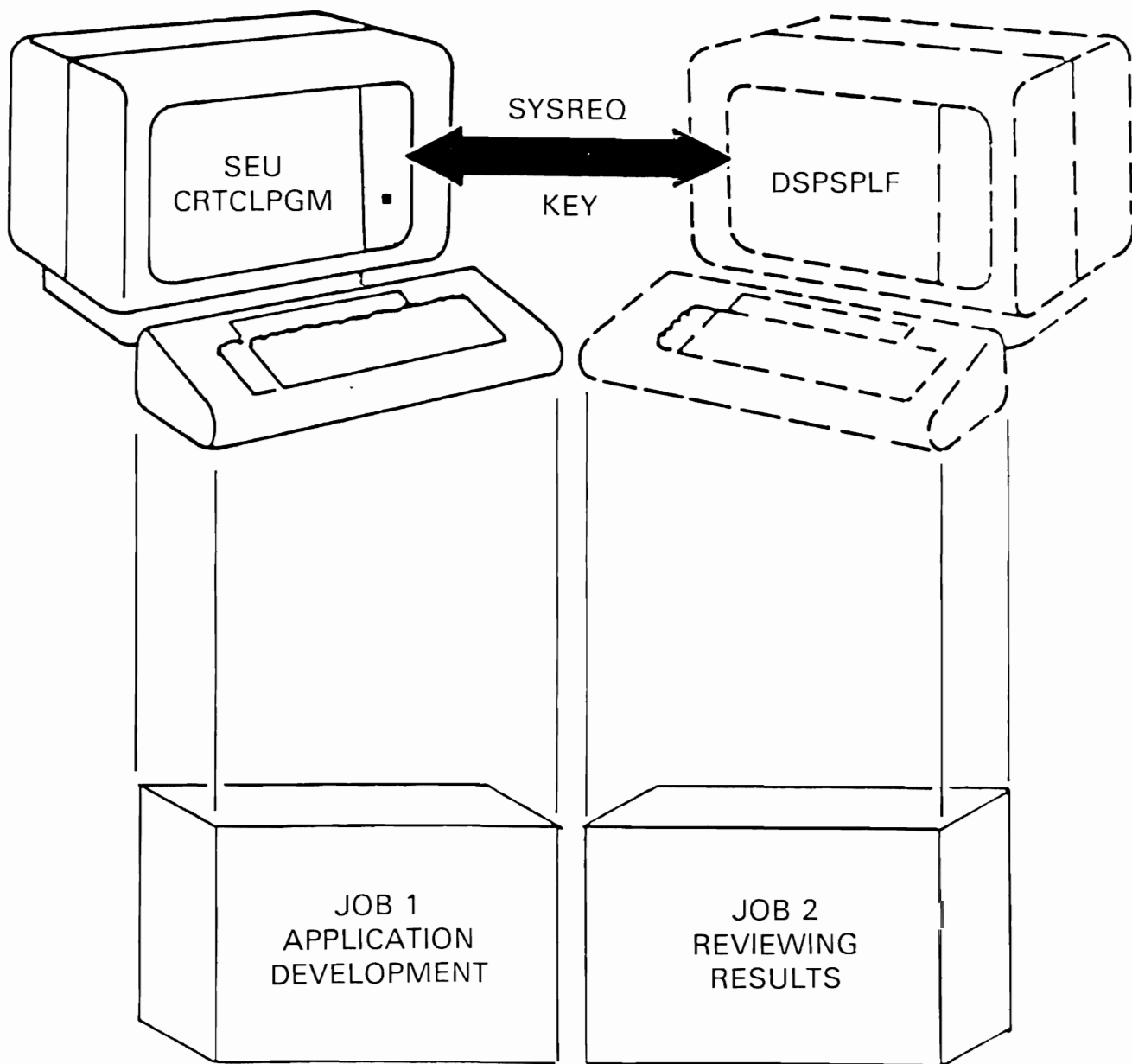
Option: _____

CF4—Prompt (4, 5 and 90)

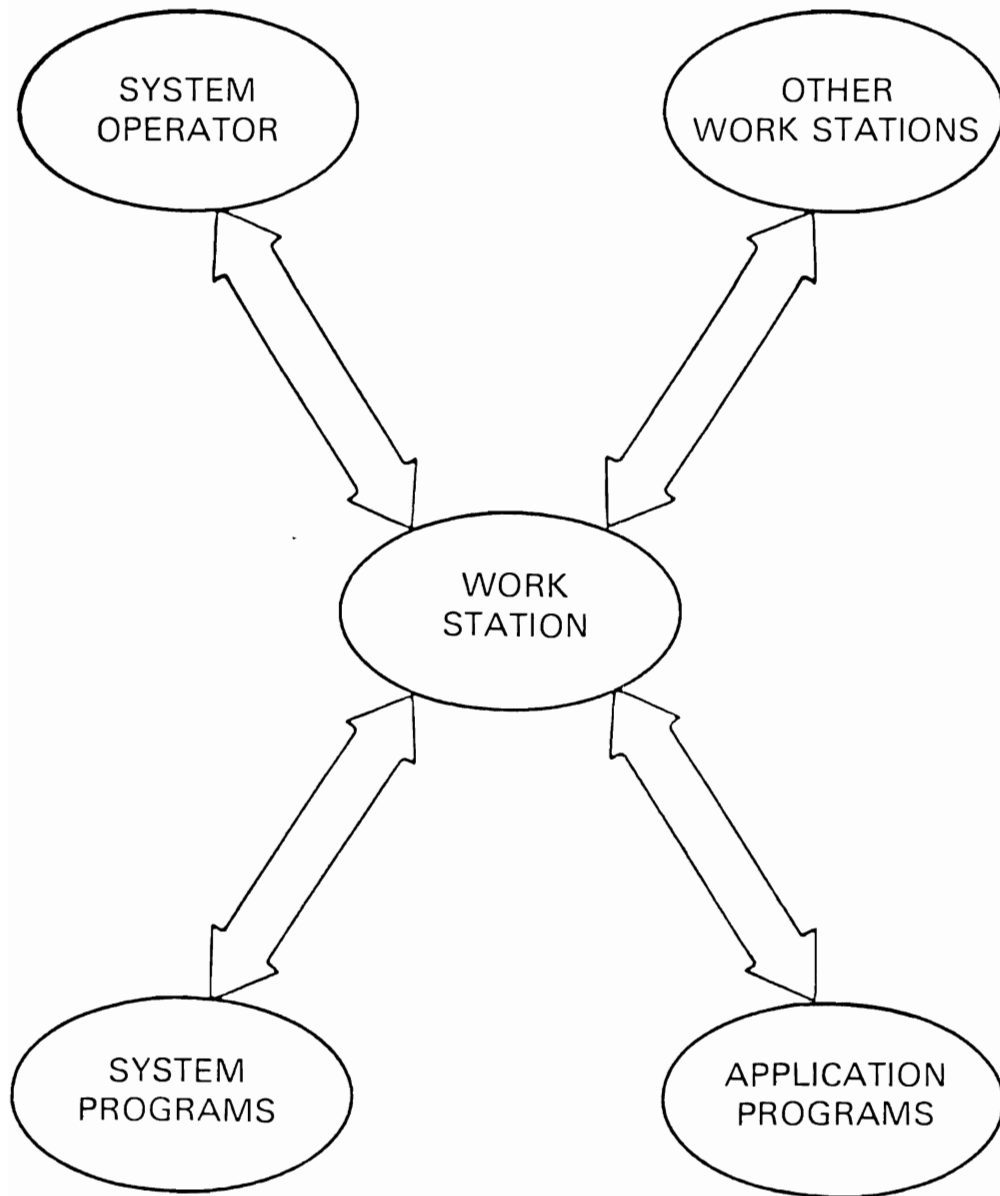
Parameters: _____

ENTER PASSWORD TO SIGN ON:
—

TWO INTERACTIVE JOBS



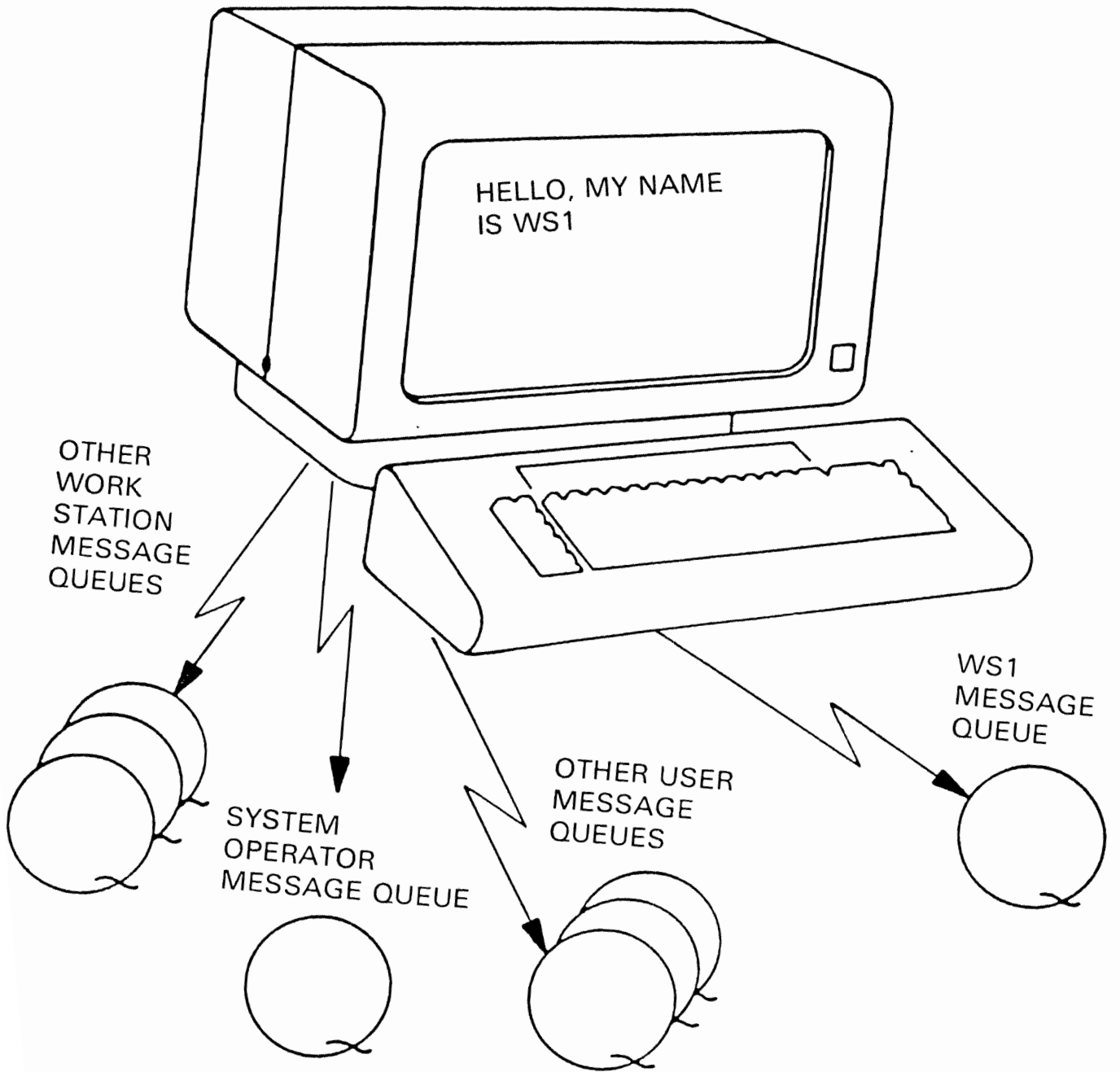
M
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G



BASIC MESSAGE HANDLING COMMANDS

- SEND MESSAGES SNDMSG
 SNDBRKMSG
- DISPLAY MESSAGES DSPMSG

SENDING MESSAGES FROM A WORK STATION

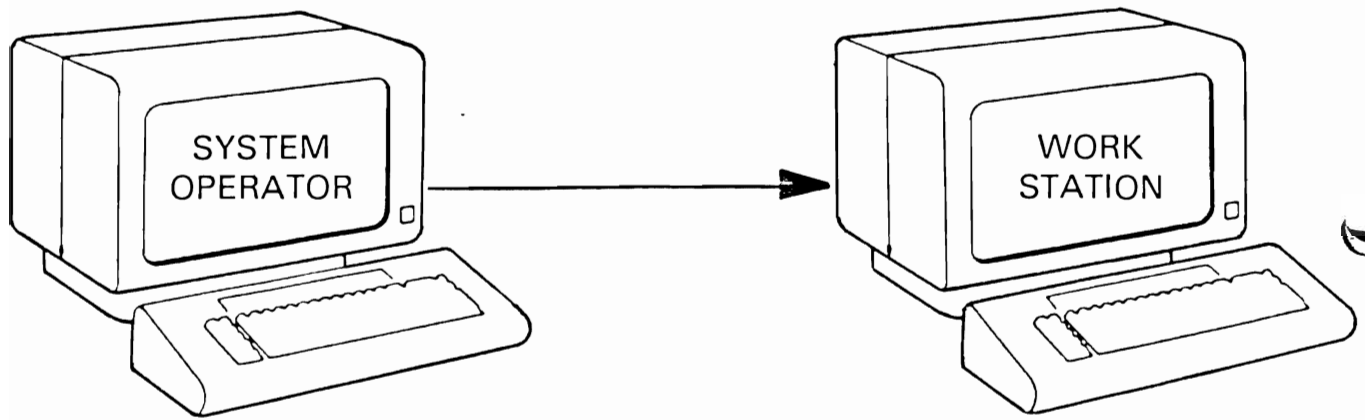


MESSAGE QUEUE TYPES

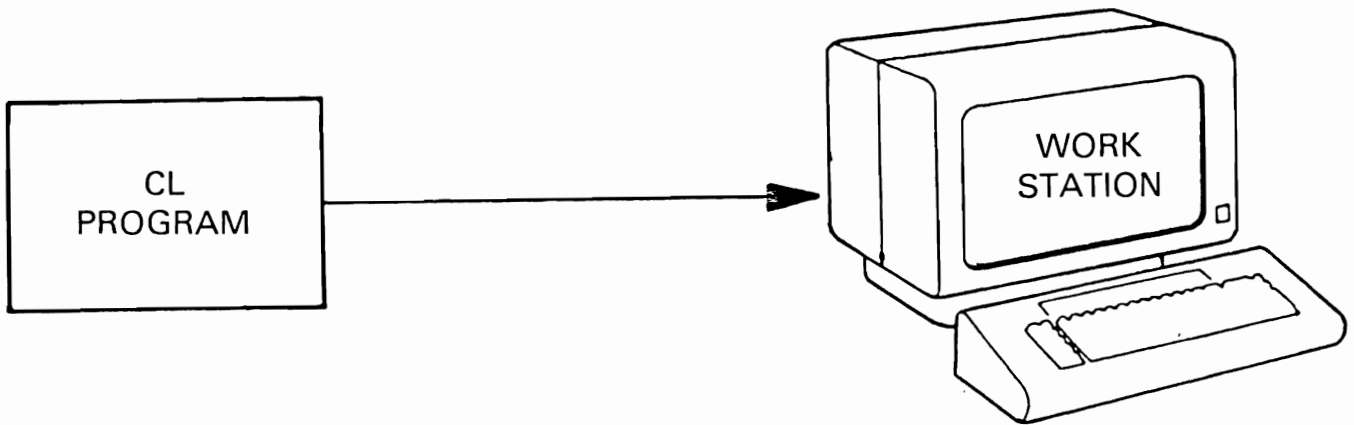
- WORK STATION
- USER
- SYSTEM OPERATOR
- JOB MESSAGE
- SYSTEM LOG

TYPES OF MESSAGES — 1

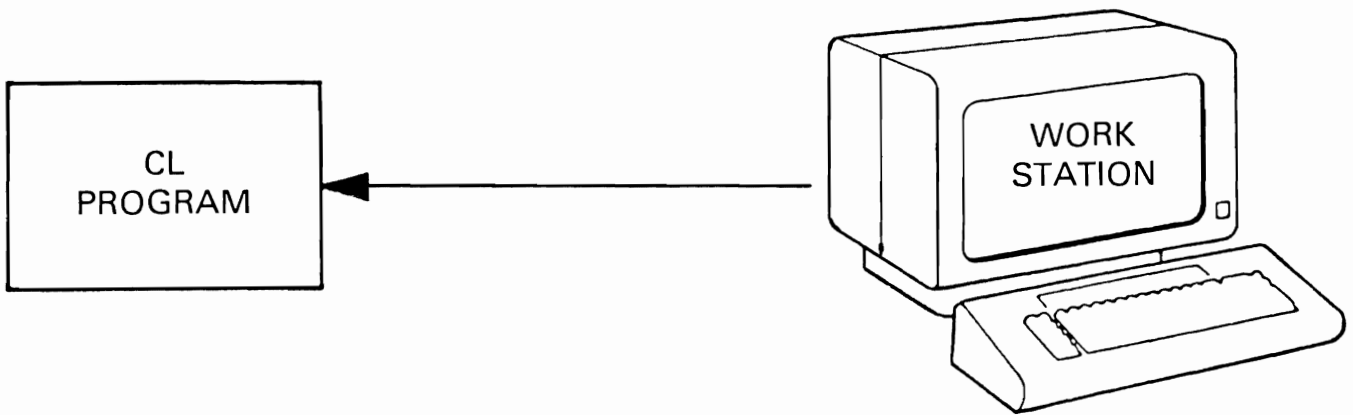
INFORMATION — "SHUTDOWN WILL OCCUR IN 15 MINUTES"



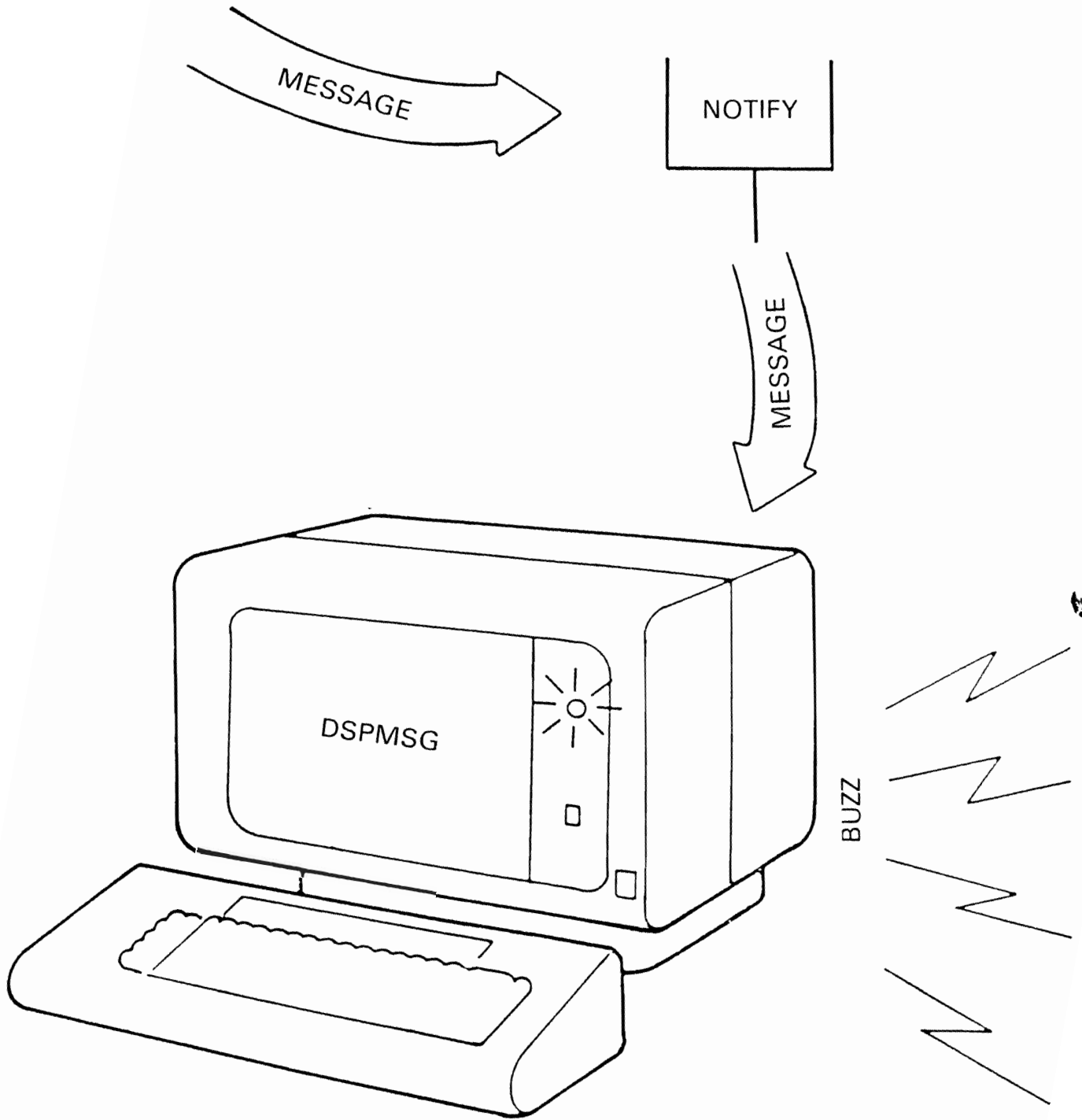
INQUIRY — "ENTER DEPARTMENT NUMBER" MSG1



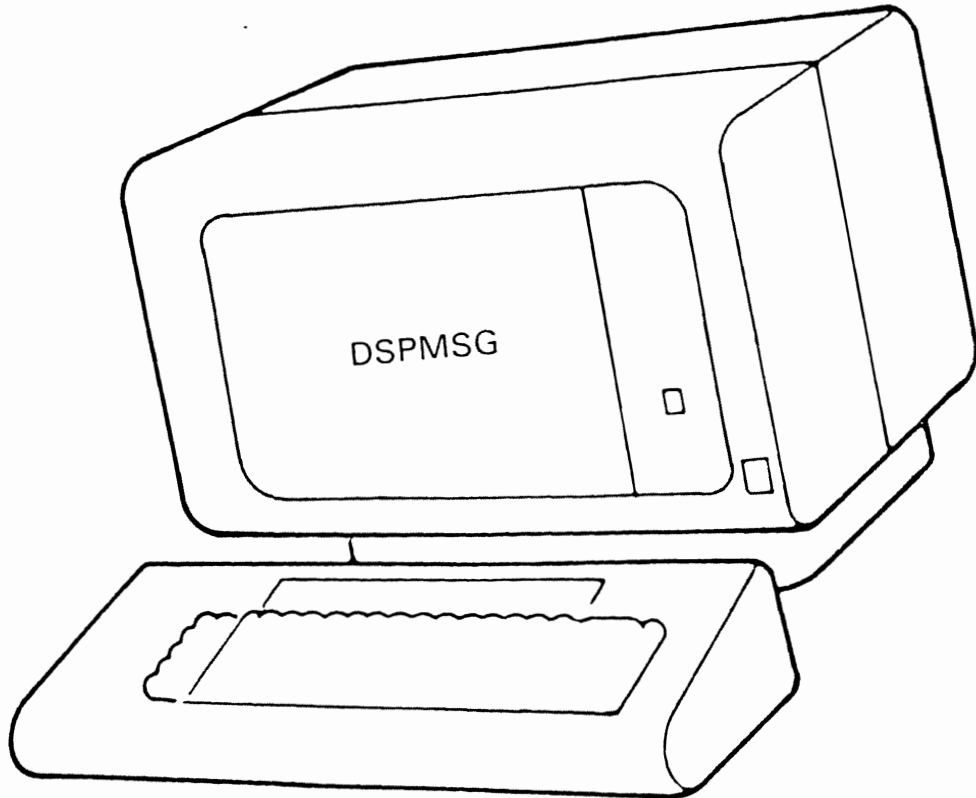
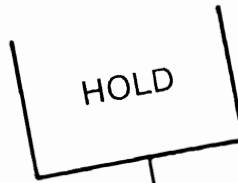
REPLY — MSG1 REPLY — 938



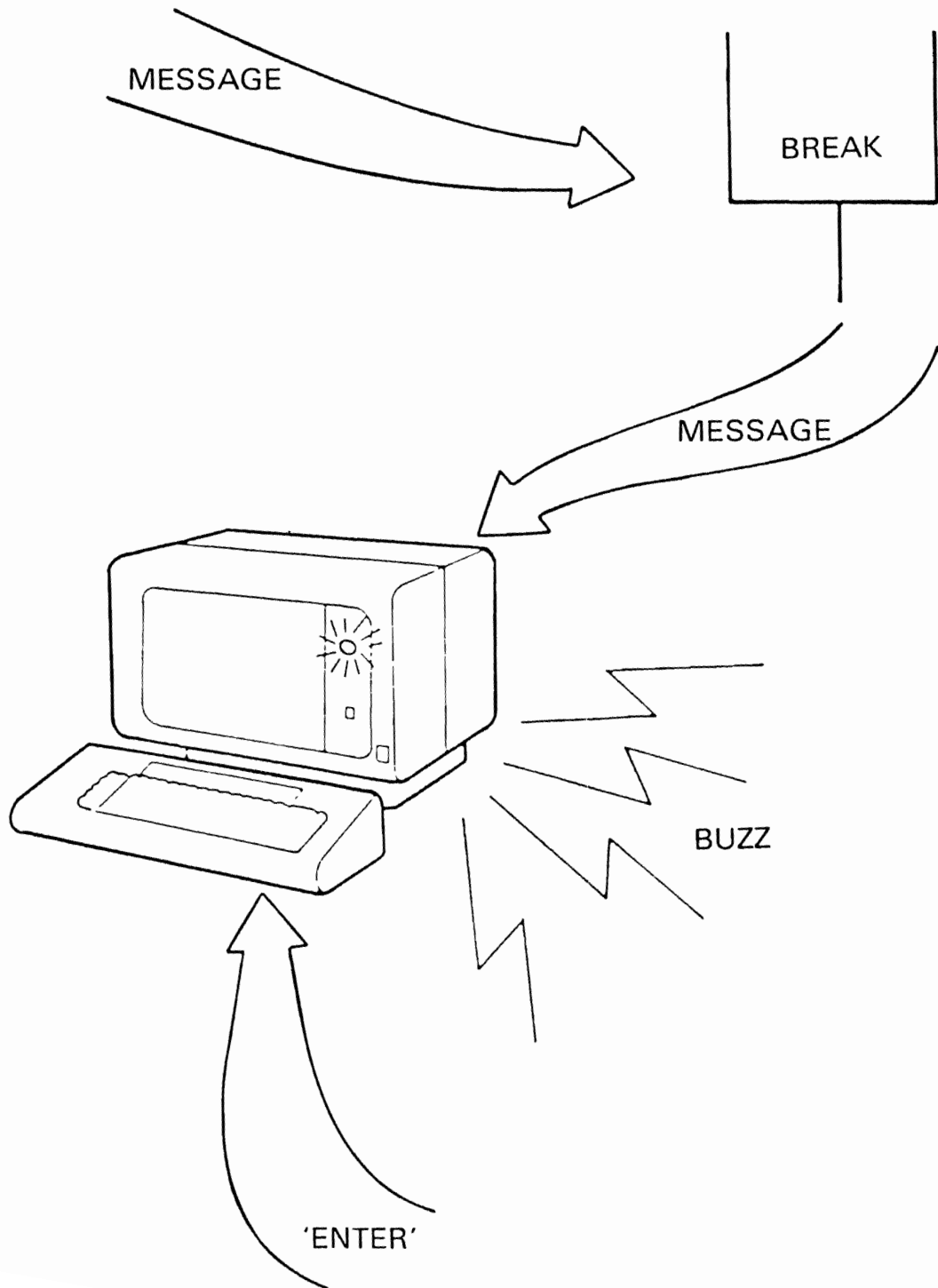
NOTIFY DELIVERY



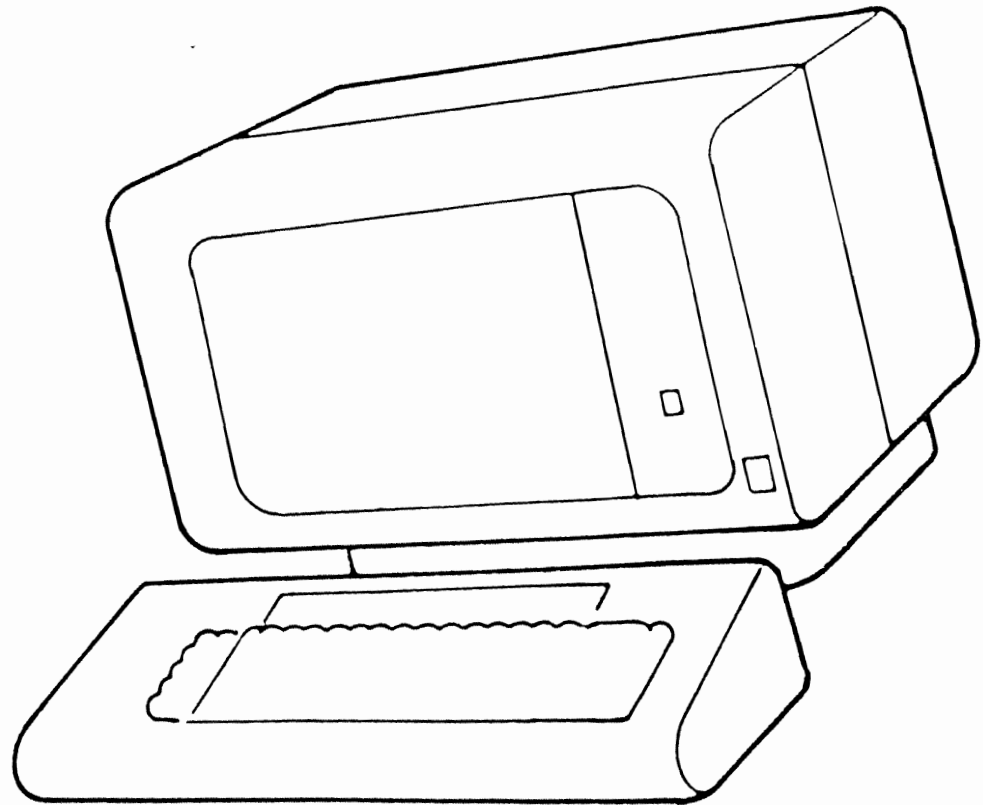
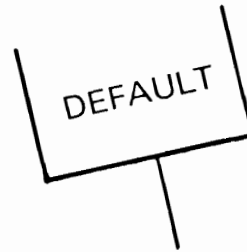
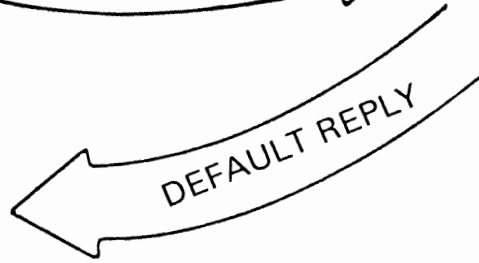
HOLD DELIVERY



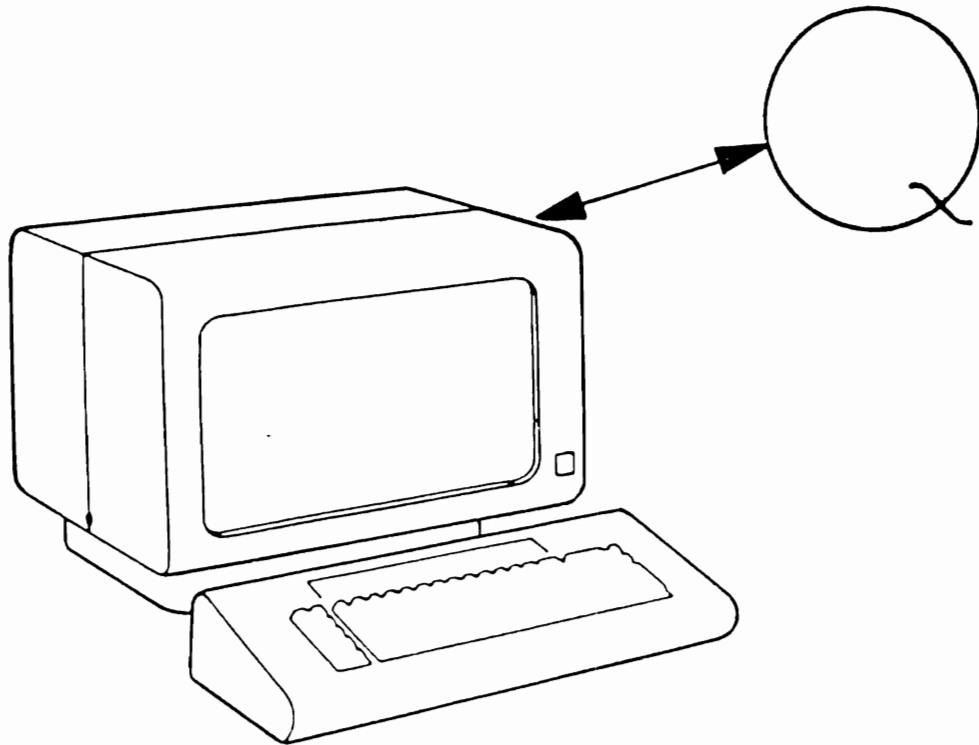
BREAK DELIVERY



DEFAULT DELIVERY



WORK STATION AND CONSOLE MESSAGE QUEUES AT SIGN ON



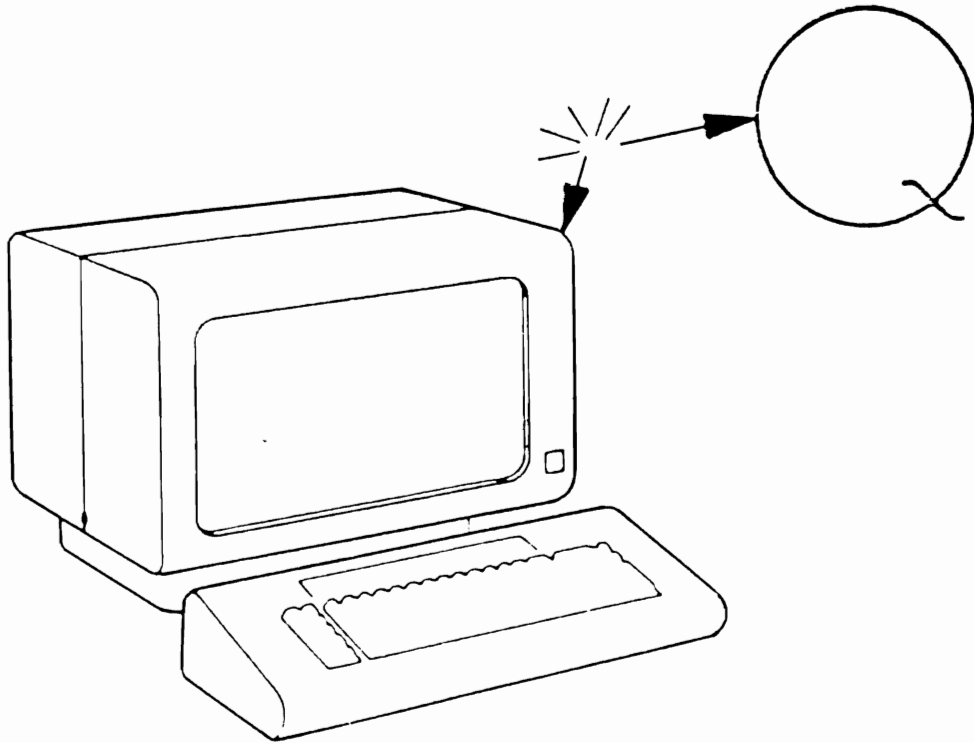
WORK STATION MESSAGE QUEUE IS
ALLOCATED TO USER'S JOB

QUEUE IS SET TO NOTIFY DELIVERY

ANY HELD MESSAGES ARE RESET TO NEW
MESSAGES

ATTENTION LIGHT TURNED ON —
AUDIBLE ALARM SOUND

WORK STATION AND CONSOLE MESSAGE QUEUES AT SIGN OFF



WORK STATION MESSAGE QUEUE IS
DEALLOCATED

QUEUE REVERTS TO HOLD
DELIVERY

ANY SUBSEQUENT USER CAN
DISPLAY MESSAGES ON THE QUEUE

ADDITIONAL MESSAGES CAN BE
SENT TO THE QUEUE AFTER
SIGN OFF

DISPLAY MESSAGES COMMAND

DSPMSG MSGQ (*WRKSTN | message-queue-name)
 MSGTYPE (*ALL | *INFO | *INQ | *COPY)
 START (*FIRST | *LAST)
 SEV (00 | *MSGQ | severity-code)
 OUTPUT (* | *LIST)

DSPMSG MSGQ (*WRKSTN) OUTPUT (*LIST)

SEND MESSAGE COMMAND

SNDMSG MSG ('message-test')
 TOMSGQ (message-queue-name)
 MSGTYPE (*INFO | *INQ)
 RPYMSGQ (*WRKSTN | message-queue-name)

SNDMSG MSG ('RUN BILLING WHEN READY') + TOMSGQ (WSØ6)

SEND BREAK MESSAGE COMMAND

SNDBRKMSG MSG ('message-text')
 TOMSGQ (*ALLWS | message-queue-name)
 MSGTYPE (*INFO | *INQ)
 RPYMSGQ (QSYSOPR.* LIBL | message-queue-name)

SNDBRKMSG MSG ('SHUTDOWN IN 10 MINUTES') + TOMSGQ (*ALLWS)

MESSAGE QUEUE- OSYSOPR Delivery: *BREAK Msgq sev: 00
Verify alignment on device LPR01 (I G R N C).

?: _____

CF6—Remove a message CF7—Display all CF8—Remove all

Press the "HELP" key

SECOND LEVEL MESSAGE DISPLAY

Msg Id: CPA5316 Sev: 99 Type: INQUIRY 11/24/82 09:42:39
Job: QSYSPRT User: QSYS Nbr: 005909
From pgm: Inst: To pgm: Inst:
Verify alignment on device QSYSPRT (I G R N C).

First line for file is 6. Check forms for correct alignment. If forms aligned, enter I to continue printing or enter G to skip to next form, reprint first line and continue printing. If forms not aligned, to reprint first line on current form and verify alignment, press STOP/RESET, use Forms Advance Knob to adjust alignment, press READY, enter R. Or to reprint first line on next form and verify alignment, press STOP/RESET, advance the paper to the next form by pressing CARRIAGE RESTORE, use Forms Advance Knob to adjust alignment, press READY, enter N. Enter C to cancel processing.

to find out the meanings of each choice

THREE STEPS TO REASSIGN THE SYSTEM OPERATOR FUNCTION TO A WORK STATION

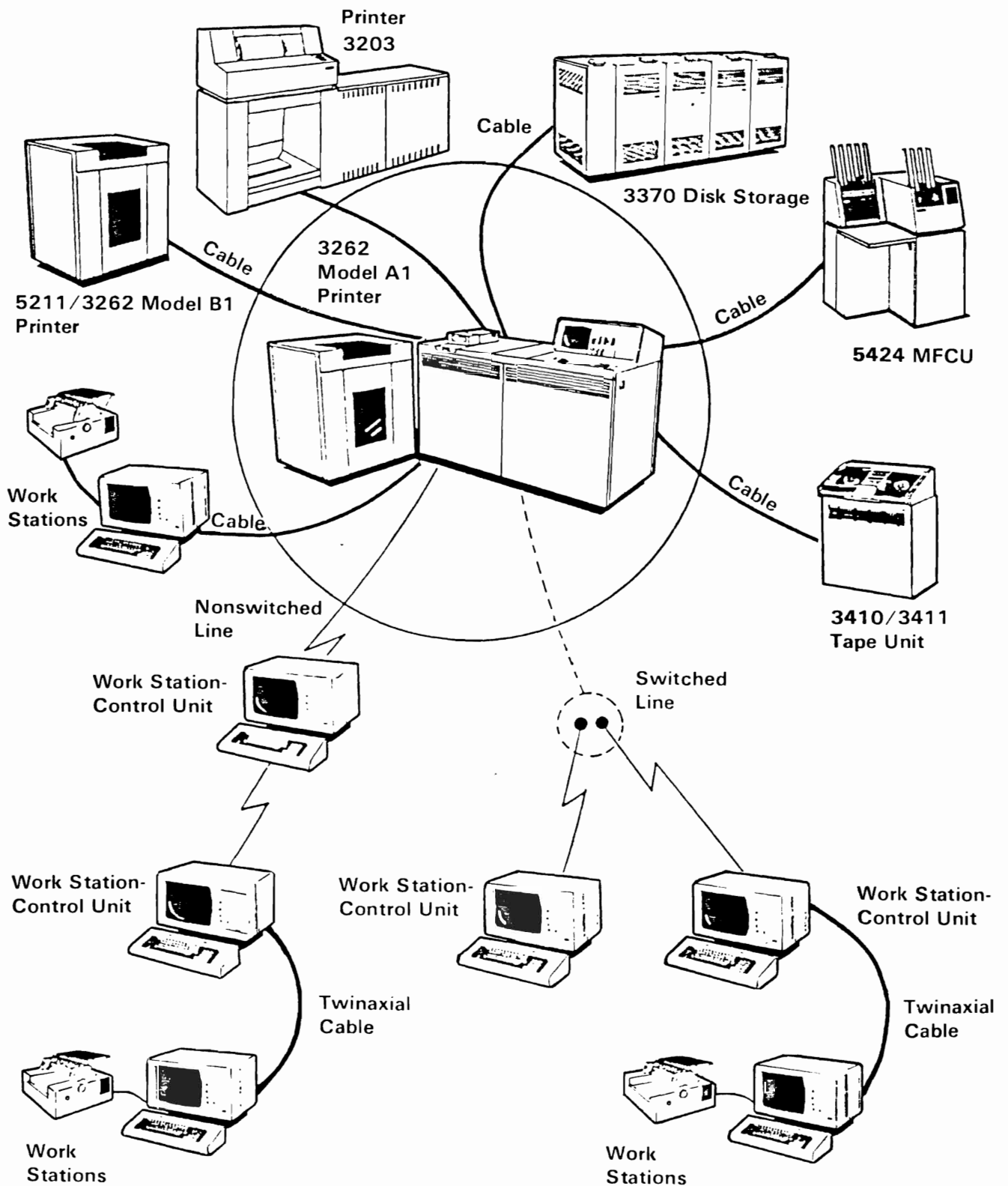
1. Sign off System Console
2. Sign on to a Work Station
3. Execute CHGMSGQ Command

CHGMSGQ

MSGQ (QSYSOPR)

DLVRY (*BREAK)
(*NOTIFY)

**M
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CREATE DEVICE DESCRIPTION

Work Station

Enter the following:

Device description name:

Device address:

Device type code:

Model identifier:

Control unit name:

Online at CFP start (*YES *NO):

Dkt/tape error retries

Error type:

Maximum times to retry:

Dkt/tape error log threshold

Threshold error type:

Number of errors allowed:

Drop line at signoff:

Associated work stn printer:

Message queue name:

Library name:

Print image name:

Library name:

+++

DEVD	R	<u>LWS02</u>
DEVADR	R	<u>000000</u>
DEVTYPE	R	<u>5292</u>
MODEL	R	<u>0001</u>
CTLU		<u>OWSC1</u>
ONLINE		<u>*YES</u>
RETRY	—	_____

+ for more		_____
THRESHOLD		_____

+ for more		_____
DROP		<u>*YES</u>
PRINTER		<u>LPR01</u>
MSGQ		<u>OSYSOPR</u>
		<u>*LIBL</u>

PRTIMG		<u>*LIBL</u>

WORK STATION

Create Device Description (CRTDEVD) Prompt

Print file name:
Library name:
Work stn controller address:
Work stn controller keyboard:
Allow blink (*YES *NO):
BSC contention resolution:
Local LU name:
Remote LU name:
Font identification:
Form feed:
Emulation device type:
Emulation keyboard type:
Public authority
(*NORMAL *ALL *NONE)
Text 'description':

PRTFILE
WSCADR
WSCKBD
ALWBLN
CONTN
LCLLU
RMTLU
FONT
FORMFEED
EMLDEVTYP
EMLKBDTYP
PUBAUT
TEXT

QSYSPRT
*LIBL
*NONE
*NONE
*YES
*SYS
*CONT
3277
*UPPER
*NORMAL
Local Work Station #2

CREATE CONTROL UNIT DESCRIPTION

Create Control Unit Desc (CRTAUD) Prompt +++

Enter the following: Control unit description name: Control unit type: Model number: Control unit address: Switched line (*NO *YES): Nonswitched line name: Speed select feature? Switched telephone number: Switched initial connection: Exchange identifier in hex: BSC local identifier: BSC remote identifiers: SSCP identifier: Online at CPF start (*YES *NO): Switched line names: Switched network backup? Allow delayed connection? Attached device names:	CUD TYPE MODEL CTLADR SWITCHED LINE SELECT TELNBR INLCNN EXCHID LCLID RMTID + for more SSCPID ONLINE LINLST + for more SWNBKU DLYFEAT DEV + for more	R R R R QWSC1 WSC *NONE 0030 *NO *NONE *NO *NONE *ANS 0000000 *NONE *NONE 0000000000000 *YES *NO *NO LWS04 LWS05
---	--	---

WORK STATION CONTROLLER

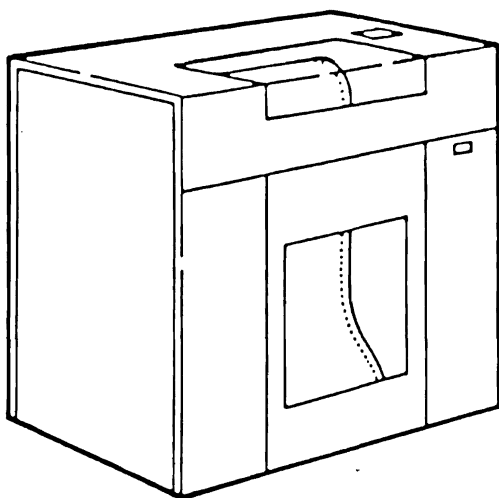
Create Control Unit Desc (CRTAUD) Prompt

BSC device delay in sec: DEVDLY 120
BSC program delay in sec: PGMDLY 120
Remote job entry (*NO *YES): RJE *NO
RJE host: RJEHOST *NONE
RJE host 'signon'/'logon': RJELOGON *NONE

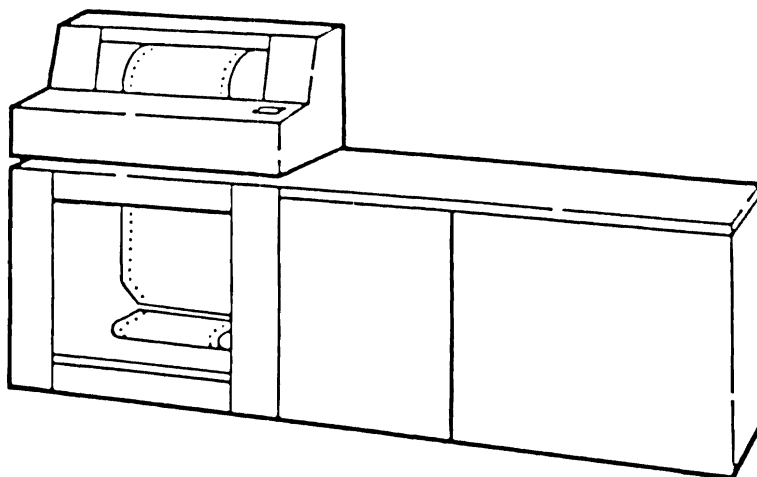
3270 device emulation? EML3270 *NO
Public authority PUBAUT *NORMAL
(*NORMAL *ALL *NONE) Local Work
Text'description': TEXT

Station Controller _____

5211 — SYSTEM PRINTER



3203 — MOD 5 — SYSTEM PRINTER



DISPLAY DEVICE DESCRIPTION

1 /23/83 19:42:39 19:42:39 +++

Status: ACTIVE
Device description name:
Device address:
Device type code:
Model number:
Control unit description name:
Online at CPF start:

DEVD
DEVADR
DEVTAPE
MODEL
CTLU
ONLINE
QSYSPRT
000018
5211
0002
*YES



To power off, execute the command:

PWRDEV DEV(QSYSPRT) STATUS (*OFF)

MESSAGE QUEUE— QSYSOPR Delivery: *BREAK Msgq sev: 00
Verify alignment on device QSYSVRT (I G R N C).
?:①

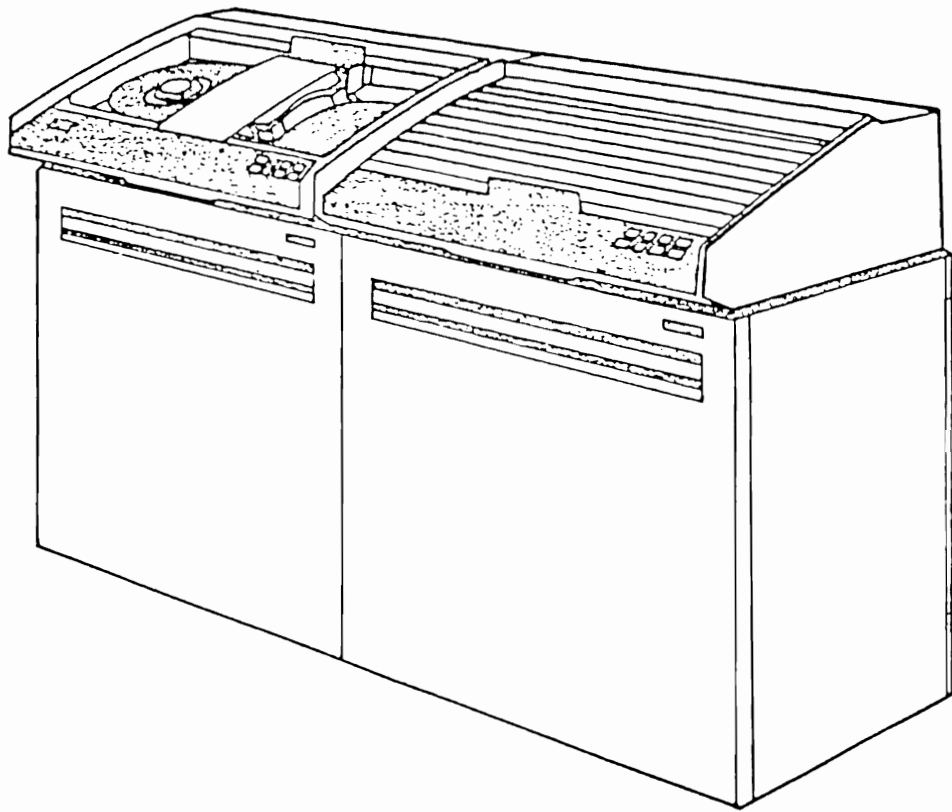
MESSAGE QUEUE— QSYSOPR Delivery: *BREAK Msgq sev: 00
Verify prt belt/train QSYSIMAGE. *LIBL on QSYSVRT (C G).
?:②

CF6 —

CF6—Remove a message CF7—Display all CF8—Remove all

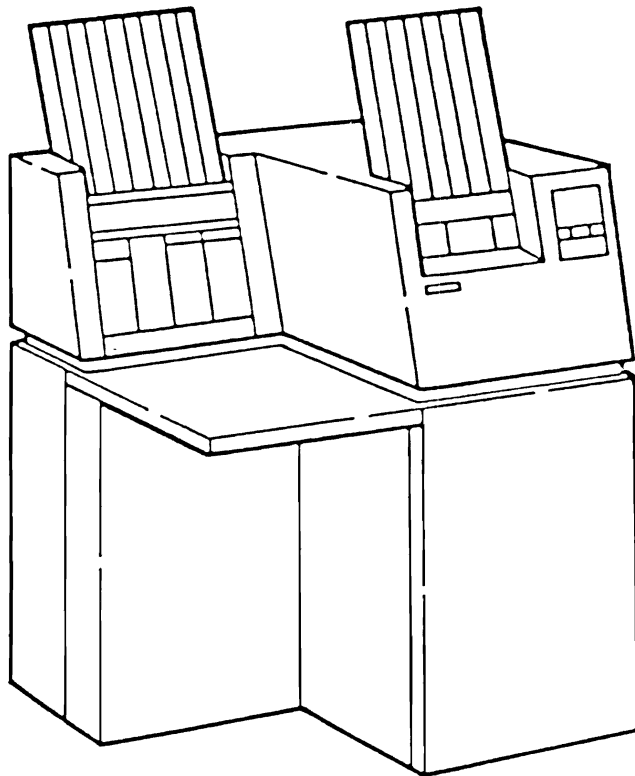
STRPRTWTR DEV (QSYSVRT) OUTQ (QPRINT)

**IBM 3410/3411
MAGNETIC TAPE UNIT**



**PWRCTLU CTLU (QTAPE) STATUS (*ON)
(*OFF)**

5424 — CARD DEVICE




Device Name: QCARD96

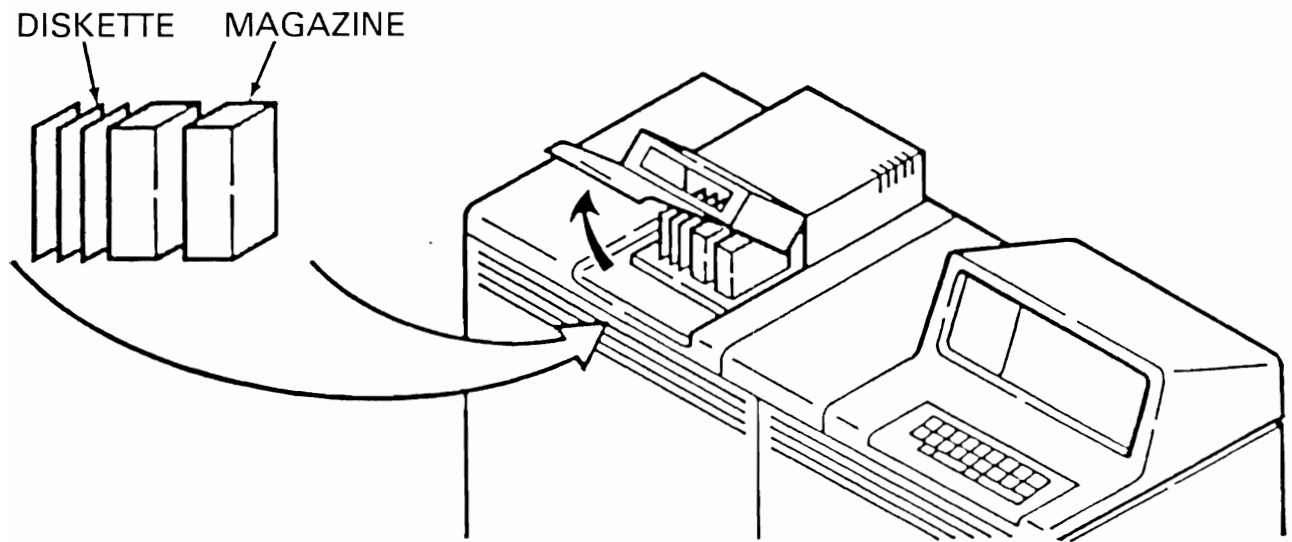


System/38 Diskette Magazine Drive

Provides:

- **Data exchange between systems or offline diskette devices**
 - **Input/Output for Spooling**
 - **Save/Restore Operations**
- 

DISKETTE MAGAZINE DRIVE

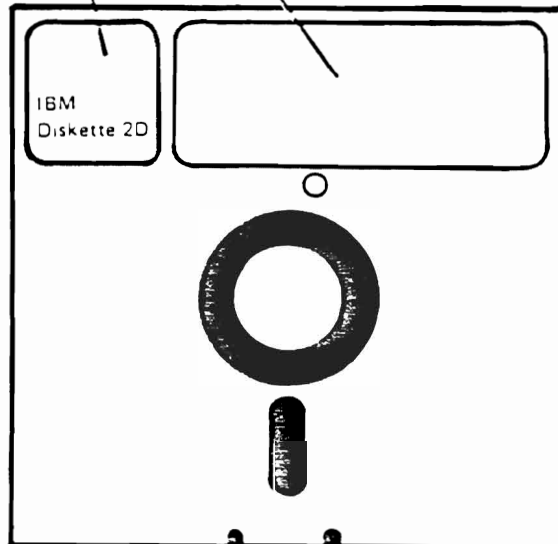


Once loaded, all other operations are done automatically under programming instructions

IBM DISKETTES

Permanent Label

Temporary Label

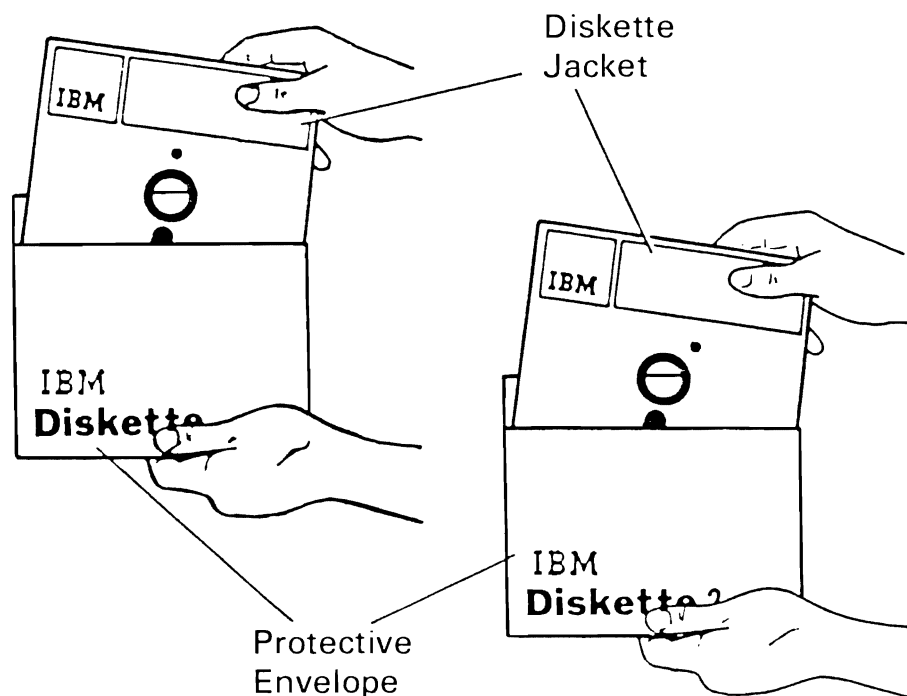


OBSERVE THESE DISKETTE HANDLING PRECAUTIONS

- DO NOT USE A DISKETTE CONTAMINATED BY STICKY OR ABRASIVE SUBSTANCES, EVEN IF THE CONTAMINANT IS ONLY ON THE DISKETTE JACKET. THE READ/WRITE HEADS CAN BE DAMAGED AND THEY CAN CONTAMINATE OTHER DISKETTES.
- RETURN THE DISKETTE TO ITS PROTECTIVE ENVELOPE AS SOON AS IT IS REMOVED FROM A DRIVE OR MAGAZINE. THE ENVELOPE PROTECTS IT FROM STATIC, SPILLS, SCRATCHES, AND FINGERPRINTS.
- DO NOT TOUCH OR ATTEMPT TO CLEAN THE EXPOSED DISKETTE SURFACE. BE ESPECIALLY CAREFUL TO AVOID GRASPING THE DISKETTE IN THE AREA OF THE HEAD SLOT.
- DO NOT FOLD OR BEND THE DISKETTE.
- DO NOT USE CLIPS OR RUBBER BANDS ON A DISKETTE.
- DO NOT PLACE HEAVY OBJECTS ON DISKETTES. THE WEIGHT CAN CAUSE SERIOUS DAMAGE.
- DO NOT EAT, DRINK, OR SMOKE WHILE HANDLING THE DISKETTE.
- DO NOT EXPOSE DISKETTES TO HEAT GREATER THAN 51.5°C (OR 125°F) OR DIRECT SUNLIGHT.
- DO NOT PLACE DISKETTES NEAR MATERIALS THAT MIGHT BE MAGNETIZED. DATA CAN BE LOST FROM A DISKETTE EXPOSED TO A MAGNETIC FIELD.
- ATTACH LABELS ONLY IN THE LABEL AREA, BEING CAREFUL NOT TO COVER THE INDEX HOLE. REMOVE ANY OLD LABELS FIRST. DO NOT USE TAPE ON THE DISKETTE.

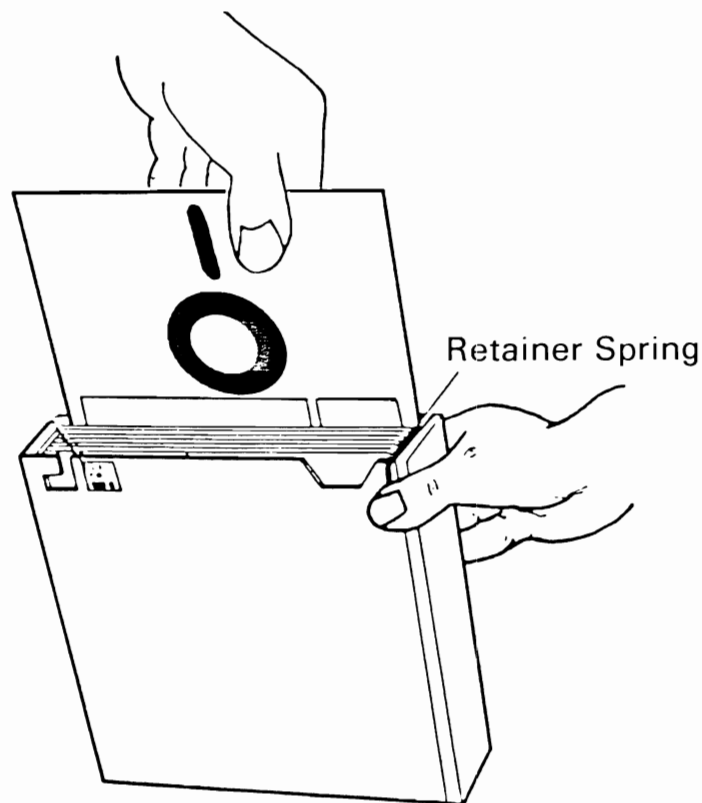
DISKETTE HANDLING PRECAUTIONS (CONT)

- DO NOT WRITE ON DISKETTES OUTSIDE THE LABEL AREA. USE ONLY FIBER-TIP PENS WHEN WRITING ON LABELS ATTACHED TO THE DISKETTE AND THEN ONLY WITH THE DISKETTE IN ITS PROTECTIVE ENVELOPE.
- DO NOT MAKE ERASURES ON OR NEAR THE DISKETTE.
- STORE DISKETTES NEEDED FOR IMMEDIATE USE FLAT IN THEIR PROTECTIVE ENVELOPES, IN STACKS OF 10 OR LESS.
- WHEN STORING DISKETTES VERTICALLY, SUPPORT THE DISKETTES SO THEY DO NOT LEAN OR SAG.
- FOR LONGER STORAGE, USE THE ORIGINAL SHIPPING CARTON, WITH EACH DISKETTE IN ITS PROTECTIVE ENVELOPE. SHIPPING CARTONS CAN BE STORED VERTICALLY OR HORIZONTALLY.

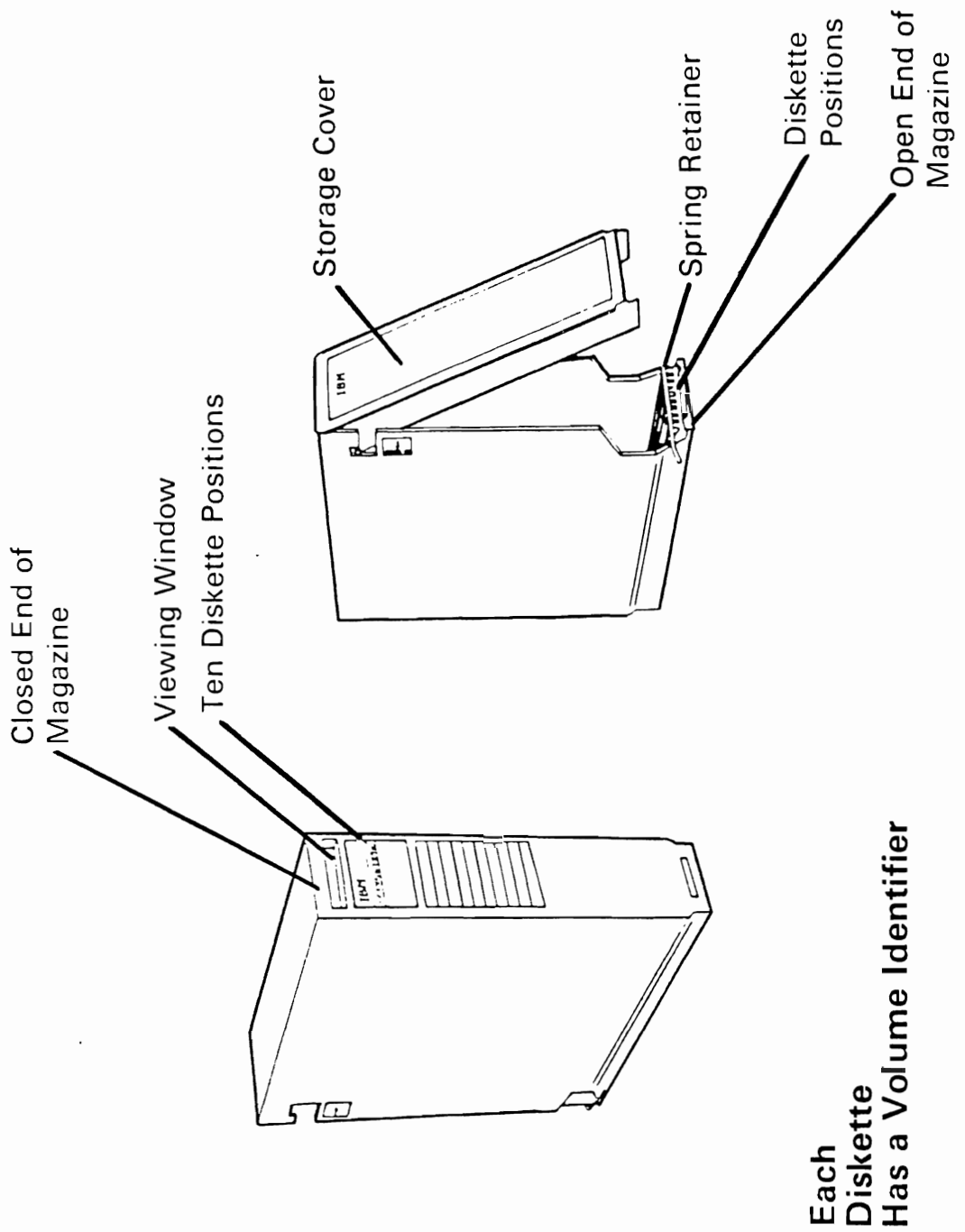


TO LOAD A DISKETTE INTO A MAGAZINE:

1. Press and hold down the diskette retainer spring and insert the diskette, label edge first, into the selected slot position.
2. Verify that the diskette is aligned properly.
3. Gently push the diskette in until the rear edge clears the retainer spring. The spring will restore itself and thereby lock the diskette in place.

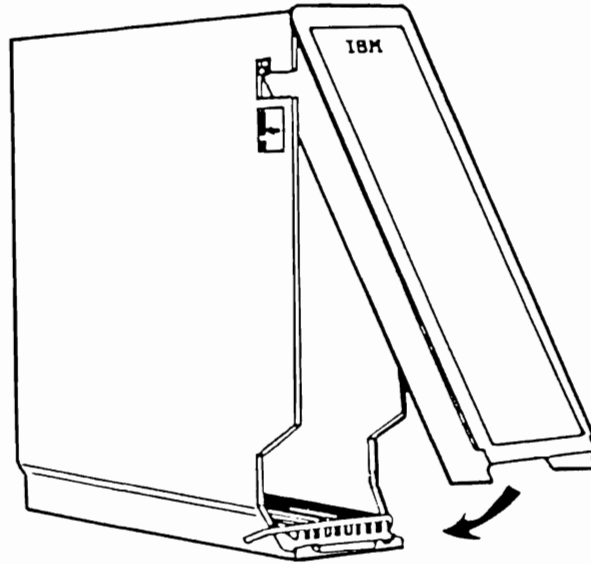


CAUTION: The diskette should slide easily. If it does not, remove it and correct the obstruction before attempting to insert it again.



HOW TO REMOVE A DISKETTE FROM A MAGAZINE

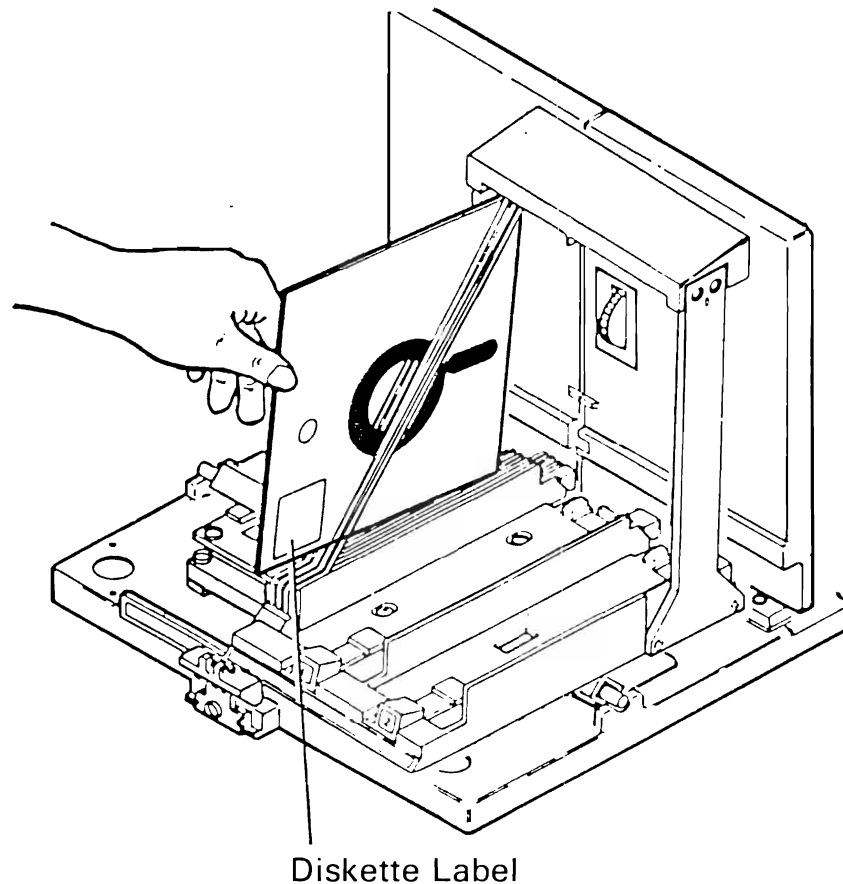
1. Press and hold down the diskette retainer spring
2. Gently pull the diskette out



The protective cover should be placed on the open end of the magazine to protect the diskettes. However, the cover must be removed before the magazine is loaded into the magazine drive.

TO LOAD A DISKETTE INTO AN I/O SLOT:

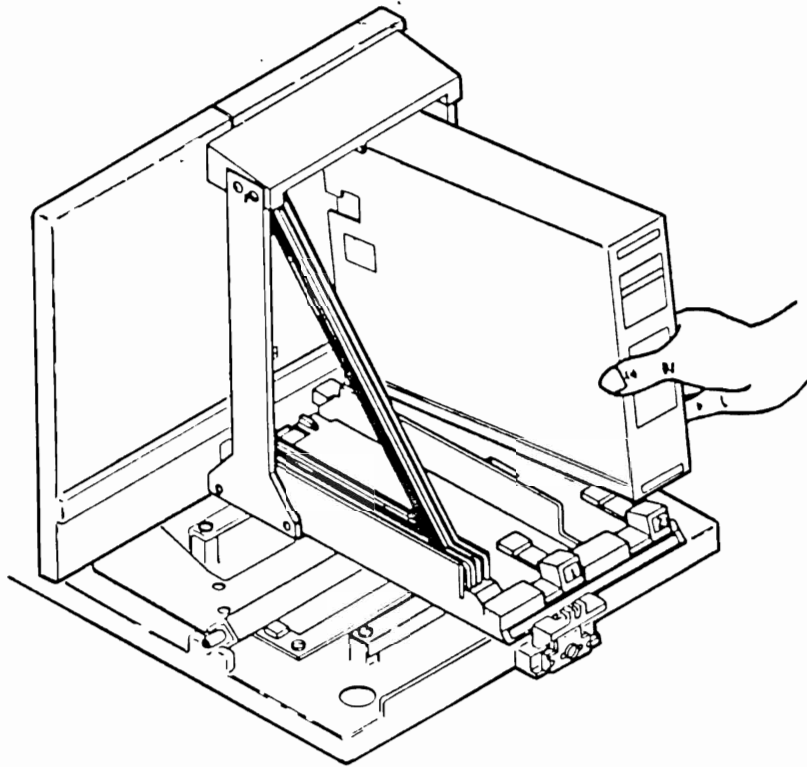
1. Remove the diskette from its envelope.
2. Hold the diskette with the label edge toward the front of the system unit and insert the opposite edge between the guide wires of the selected slot.
3. Push the diskette in toward the guide — in window until the label edge of the diskette nearest you clears the stop.



CAUTION: The diskette should slide in easily. If it does not, remove it and correct the obstruction before attempting to insert the diskette again.

TO LOAD A MAGAZINE

1. Place the magazine between the guide rails of the position selected, with the magazine's open end facing the guide — in window.
2. Push the magazine in toward the guide — in window until the magazine retainer button snaps up, locking the magazine in place.



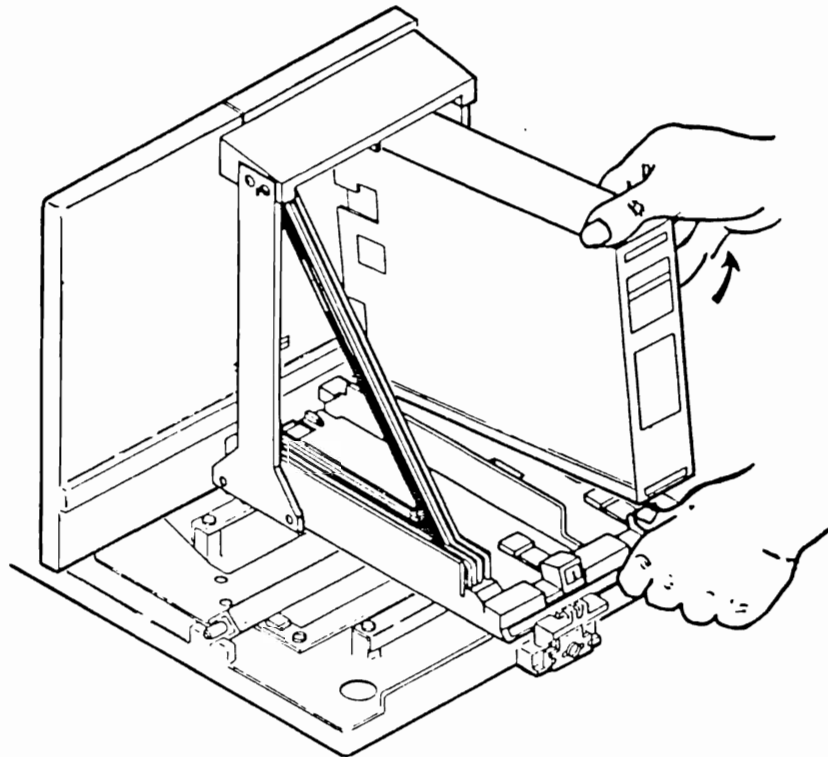
CAUTION: Do not attempt to load the magazine when the selected position is aligned with the guide — in window; the retainer button for that position will be locked.

TO UNLOAD A DISKETTE:

- 1. Gently pull the diskette toward you until the edge touches the stop**
- 2. Lift the edge of the diskette slightly to clear the stop and slide the diskette out**

TO UNLOAD A MAGAZINE:

1. Press the magazine retainer button and allow the magazine to be ejected.
2. Lift the magazine's closed end (the end nearest you) slightly to clear the stop, and remove the magazine.



DEVICE VARY ON AND OFF GUIDELINES

- TO PREVENT THE DEVICE FROM BEING USED OR WHILE THE DEVICE IS BEING SERVICED
- SOME TYPES OF ERROR CONDITIONS INVOLVING THE INTERACTION BETWEEN THE SYSTEM AND A DEVICE, CONTROL UNIT, OR LINE CAN BE CORRECTED BY VARYING THE DEVICE OFFLINE AND VARYING THE DEVICE ONLINE AGAIN
- A DEVICE THAT IS BEING USED OR HAS BEEN ALLOCATED FOR USE CANNOT BE VARIED OFFLINE
- A DEVICE OR CONTROL UNIT MUST BE VARIED OFFLINE BEFORE ITS POWER CAN BE SHUT OFF BY COMMAND. THE DEVICE MUST BE POWERED ON BEFORE IT CAN BE VARIED OFFLINE.
- ALL DEVICES CONNECTED TO A CONTROL UNIT MUST BE VARIED OFFLINE BEFORE THE CONTROL UNIT CAN BE VARIED OFFLINE. A CONTROL UNIT MUST BE VARIED ONLINE BEFORE EACH DEVICE CONNECTED TO IT CAN BE VARIED ONLINE.
- ALL CONTROL UNITS CONNECTED TO A LINE MUST BE VARIED OFFLINE BEFORE THE LINE CAN BE VARIED OFFLINE.
- A LINE MUST BE VARIED ONLINE BEFORE EACH CONTROL UNIT CONNECTED TO IT CAN BE VARIED ONLINE.
- IF A NEW DEVICE IS TO BE ADDED TO AN EXISTING CONTROL UNIT, THAT CONTROL UNIT AND ALL EXISTING DEVICES ATTACHED TO IT MUST BE VARIED OFFLINE AND THE SUBSYSTEM TERMINATED BEFORE THE NEW DEVICE CAN BE ADDED. THE CONTROL UNIT AND THE DEVICES ATTACHED TO IT, INCLUDING THE NEW DEVICE, MUST THEN BE VARIED ONLINE AND THE SUBSYSTEM STARTED BEFORE THOSE DEVICES CAN BE USED AGAIN.

To take offline communication line, SWL4, connected to control units, CU5 and CU6, which are connected to work stations WS4, WS5 and work station printer WSP6, execute these commands:

VRYDEV DEV(WWS4 WWS5 WWS6) STATUS(*OFF)

VRYCTLU CTLU(CU5 CU6) STATUS(*OFF)

VRYLIN LINE(SWL4) STATUS(*OFF)

NOTE:

These commands must be executed in the above order!

To return to system operation the work stations WS4, WS5, and work station printer WSP6 connected to control unit CU5, which is connected to line SWL4, enter these commands:

VRYLIN LINE (SWL4) STATUS (*ON)

VRYCTLU CTLU (CU5) STATUS (*ON)

VRYDEV DEV (WS4 WS5 WSP6) STATUS (*ON)

NOTE:

These commands must be executed in the above order!

DSPDEVCFG COMMAND

1/25/83 8:34:07 DEVICE CONFIGURATION +---

CONTROL UNIT DESCRIPTION

Control unit name: QWSC1 Address: 0030 Status: ACTIVE

Type: WSC Model:

Exchange ID: 00000000

Nonswitched line:

Switched line:

Attached device names:

LWS04

LWS07

LWS03

LWS08

LRP01

LWS01

LWS06

LWS05

LWS02

DISPLAY DEVICE CONFIGURATION
Control Unit Description

DSPDEVCFG COMMAND

```

1/25/83 8:34:21      DEVICE CONFIGURATION
                    DEVICE DESCRIPTIONS
DEVICE  DEVICE  DEVICE  MODEL  DEVICE  CONTROL
NAME   ADDRESS  TYPE   NUMBER STATUS  UNIT NAME
LPR01  000030   5256   0003   VRYON  QWSC1
LWS01  010030   5251   0011   SIGNON QWSC1
LWS02  020030   5292   0001   ACTIVE QWSC1
LWS03  030030   5251   0011   VRYON  QWSC1
LWS04  040030   5251   0011   SIGNON QWSC1
LWS05  050030   5291   0001   ACTIVE QWSC1
LWS06  060030   5251   0011   VRYON  QWSC1
LWS07  070030   5251   0011   VRYON  QWSC1
LWS08  080030   5251   0011   VRYON  QWSC1
QCONSOLE 000002   CONS           ACTIVE
QDKT    000012   72MD          1001   VRYON
QSYSVRT 000018   5211          0002   ACTIVE

```

DISPLAY DEVICE CONFIGURATION

Device Descriptions

Relating to the previous Control Unit

And if you have any communications . . .

```
1/26/83  8:59:57      DEVICE CONFIGURATION      +++
                LINE DESCRIPTION
                Line nbr: 21      Status: VRYOFF
                EBCDIC  SWT      Data rate: 02400
Switched line control unit:      Speed select: *NO
Nonswitched line control units:
```

DISPLAY DEVICE CONFIGURATION
Line Description

The Commands . . .

DSPDEV — Display Device Description

DSPCUD — Display Control Unit Description

DSPLIND — Display Line Description

. . . will tell you the following:

- Name
- Address
- Type
- Model
- Attached Devices
- Control Unit
- On Line at CPF start?
- Drop at signoff?
- Text Description

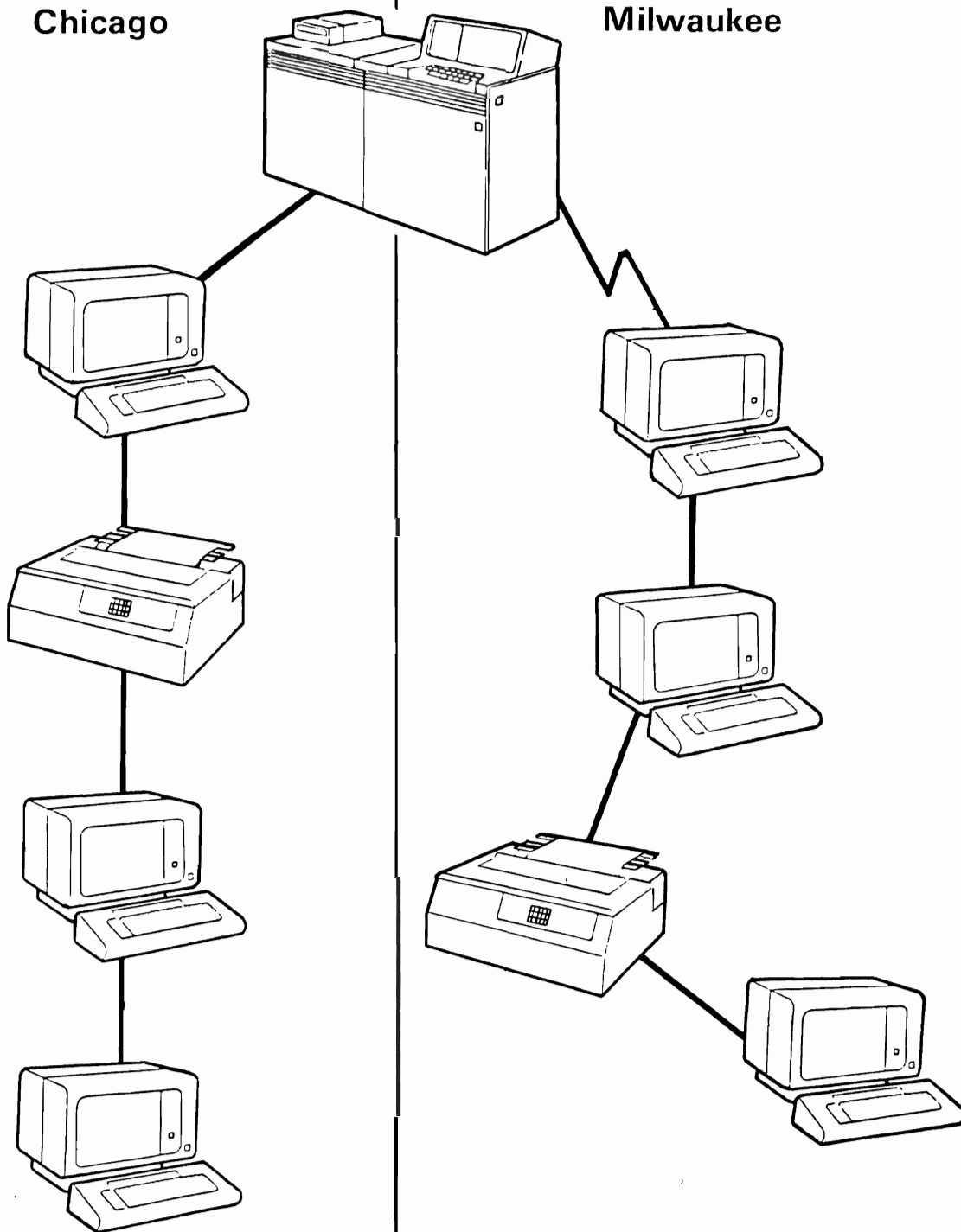
LOCAL

Chicago

VS.

REMOTE

Milwaukee



Cable

vs.

**Communications
Lines**

COMMUNICATIONS STATUS COMMANDS

DSPLINSTS: Display Line Status

DSPCTLSTS: Display Control Unit Status

DSPDEVSTS: Display Device Status

With the following parameters:

DEV (*ALL)
(device name)

OUTPUT (*
(*LIST)

DSPLINSTS LINE (*ALL)

LINE/CTLU/DEV	12:15:06	STATUS	JOB NAME	USER	NBR
LINE1		ACTIVE			
CUD1		ACTIVE			
RMT1WS01		ACTIVE	RMT1WS01	QPGMR	003012
CUD2		ACTIVE			
RMT21		VARIED ON			
RMT22		FAILED			
RMTprt		ACTIVE/WTR	RMTprt	QSYS	002983
BSCLINE		CONNECT PENDING			
LINE2		ACTIVE			
CUD201		ACTIVE			
HELP-Details on options 1 thru 11					CF5-Redisplay
					+

DEPRESS THE HELP KEY

TO SEE YOUR OPTIONS

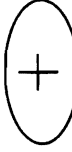
Help For Line Status Display

Description

The Display Line Status command displays the configuration of specified lines on a system, with attached control units and devices. The status of each of these objects is also displayed, along with the job names of all jobs using a device. Numeric options can be entered in the input field to the left of each entry to cause the function associated with that option to be performed.

Options

- 1-Display job identified in the job column.
- 2-Display description of line, control unit, or device.
- 3-Change description of line, control unit, or device with current changeable values filled into the command prompt.
- 4-Vary on the line, control unit, or device and all control units or devices listed under it.
- 5-Vary off the line, control unit, or device and all control units or devices listed under it.



There's more!

Also Column Description

Help For Line Status Display

- 6-Stop recovery for line, control unit, or device.
- 7-Resume recovery for line, control unit, or device
- 8-Display mode status for a peer device.
- 9-Cancel job. The controlled option is used.
- 10-Hold communication device.
- 11-Release communication device.

Command function keys

- CF1-Exit and return to basic working display.
- CF2-Back up to previous display.
- CF5-Update the information displayed with the current status.

Columns

LIN/CTL/DEV/M

The second vertical column displays the name of the item whose information is being displayed on that line. Line (LIN) names start in the first position, control unit (CTL) names are indented two spaces, device (DEV) names are indented four spaces, and mode (M) names are indented six spaces.



Still more!

And Still More!

STATUS

The third column lists the status of the line, control unit, or device. One of the following values is used to indicate status:

ACTIVE. The line, control unit, or device is currently in use. For a display device, the device is signed on or is in use by a batch, auto-start, or interactive job.

ACTIVE/ALLOCATE. The device is active and a job is allocating a source conversation.

ACTIVE/DETACHED. The device is active and being used by a job that has been detached from the communication session.

ACTIVE/RDR. The device is active and a spool reader is using this device.

+

DSPCTLSTS CTLU (CUD1)

1/26/83 12:20:36 CONTROL UNIT STATUS DISPLAY - CUD1

LINE/CTLU/DEV	STATUS	JOB NAME	USER	NBR
LINE1	ACTIVE			
— CUD1	ACTIVE			
— RMT1WS01	ACTIVE	RMT1WS01	OPGMR	003012

HELP-Details on options 1 thru 11

+
CF5-Redisplay

DSPDEVSTS DEV (RMT1WS01)

```
1/26/83 12:08:56      DEVICE STATUS DISPLAY - RMT1WS01
LINE/CTLU/DEV  STATUS  JOB NAME  USER  NBR
--LINE1
--  CUD1      ACTIVE
--  RMT1WS01  ACTIVE  RMT1WS01  QPGMR  003012
```

HELP-Details on options 1 thru 11

CF5-Redisplay

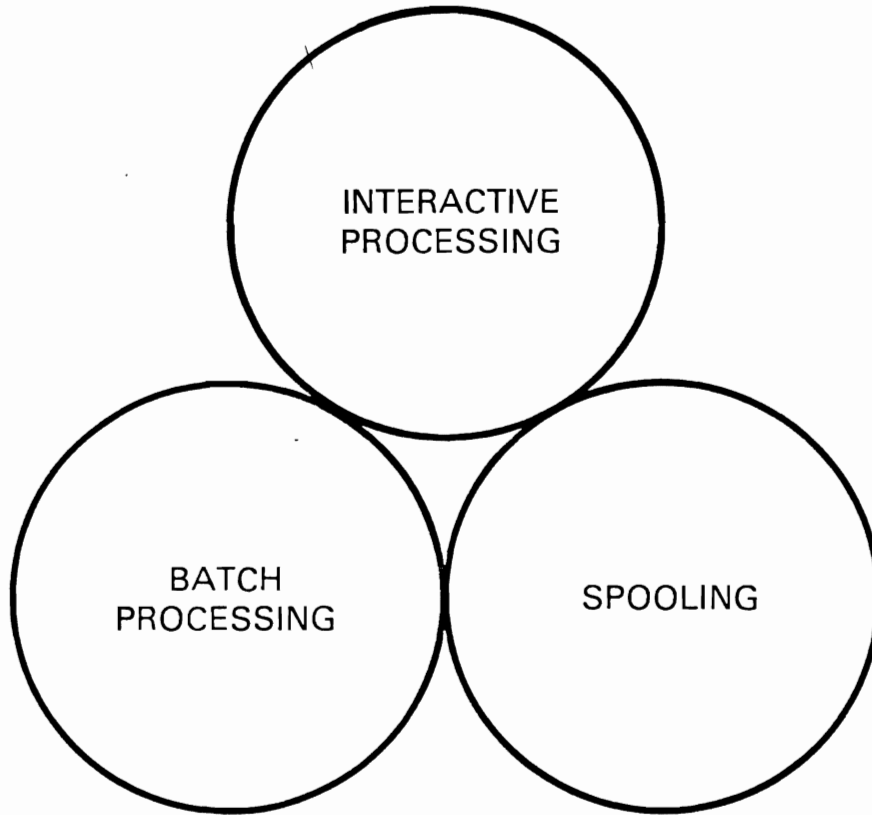
DEVICE COMMAND SUMMARY

- PWRDEV
- VRYDEV
- VRYCLTU
- VRYLIN
- DSPDEVCFG
- DSPDEVD
- DSPCUD
- DSPLIND
- DSPLINSTS
- DSPCTLSTS
- DSPDEVSTS

SUBSYSTEMS

J
O
B
P
R
O
C
E
S
S
I
N
G
&
G

SUBSYSTEM — A specialized environment for handling a certain type of work or function, such as



INTERACTIVE

Processing where the system responds to each individual request of users at work stations.

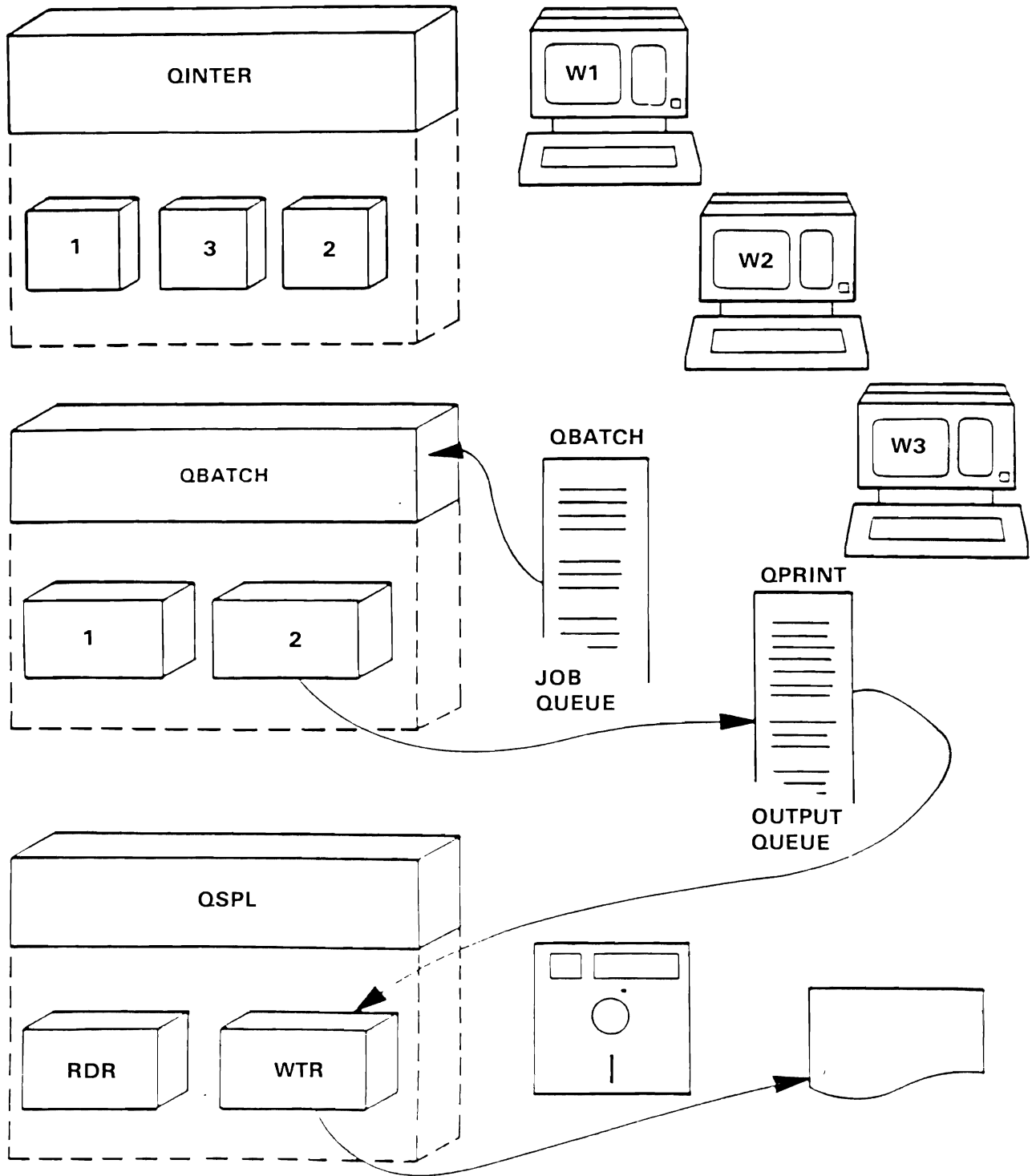
BATCH

Processing where the system executes a set of instructions with data and provides information on the result

SPOOLING

Functions where information is transferred into the system from an input device (ex. card reader), or information is transferred out of the system to an output device (ex. printer)

SUBSYSTEMS



IBM—SUPPLIED SUBSYSTEMS

- QCTL: The Controlling Subsystem
- QBATCH: The Batch Subsystem
- QINTER: The Interactive Subsystem
- QPGMR: The Online Programmers Subsystem
- QSPL: The Spooling Subsystem

A SUBSYSTEM DESCRIPTION CONTAINS

- Subsystem Description Library Name
- Maximum Number of Jobs
- Memory Size
- Activity Level
- Status
- Autostart Job Entries
- Work Station Entries
- Type of Work Station Entries
- Job Queue Entries
- Routing Entries and Sequence Numbers

SUBSYSTEM WORK — ENTRY TYPES

- **Autostart Job Entry:** A job that is automatically initiated when the subsystem is started
- **Work Station Entry:** One or a group of work stations from which interactive jobs can be initiated
- **Job Queue Entry:** Specifies one of the job queues from which the subsystem can select batch jobs

STARTING A SUBSYSTEM

:: STRSBS QBATCH.OGPL

TERMINATING A SUBSYSTEM

:: TRMSBS SBS(QBATCH)

TERMINATING CPF

:: TRMCPF

:: TRMSBS SBS(*ALL)

POWER DOWN THE SYSTEM

:: PWRDWN SYS

OTHER SUBSYSTEM COMMANDS

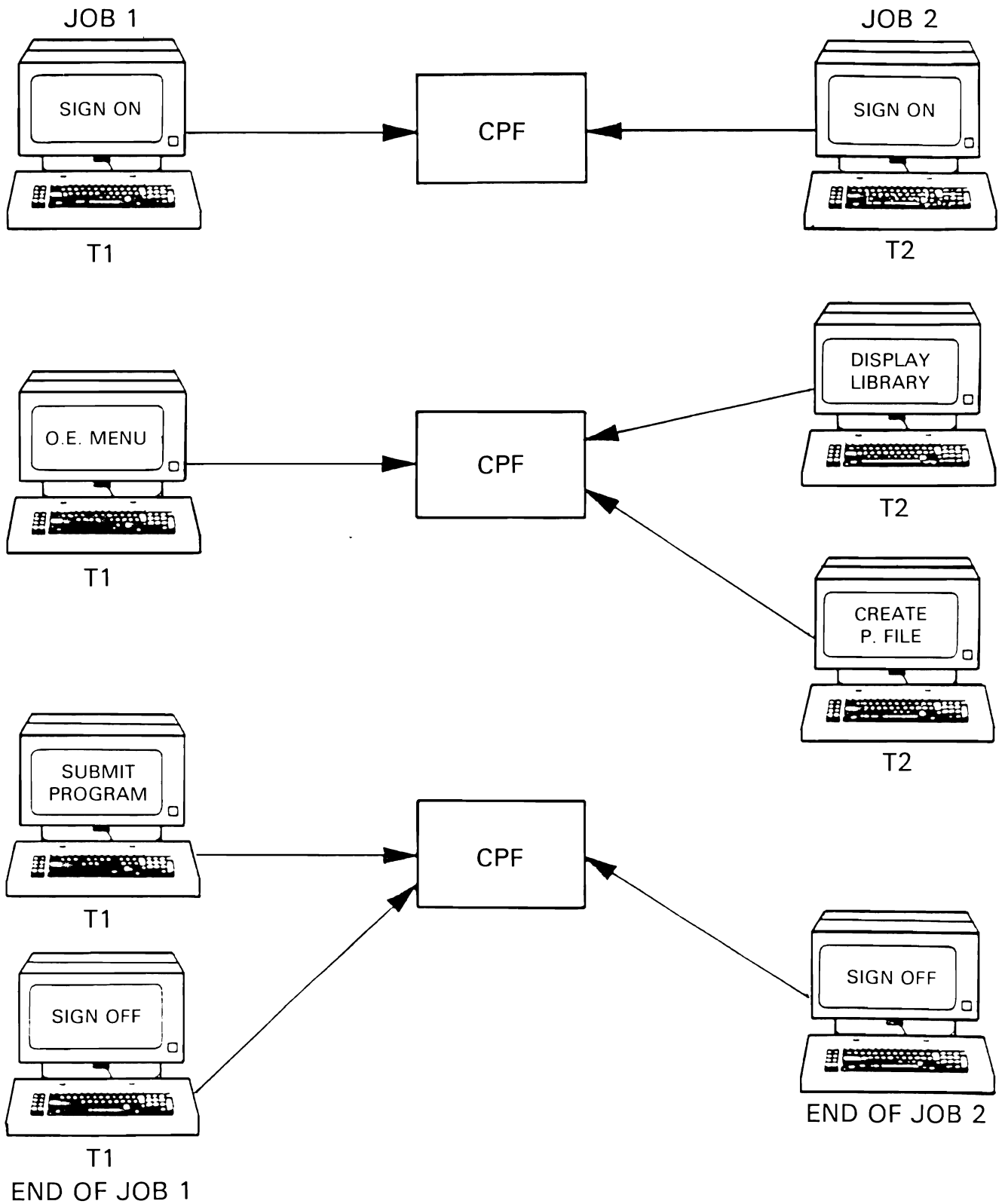
DSPSBSD: Display Subsystem Description

CHGSBSD: Change Subsystem Description

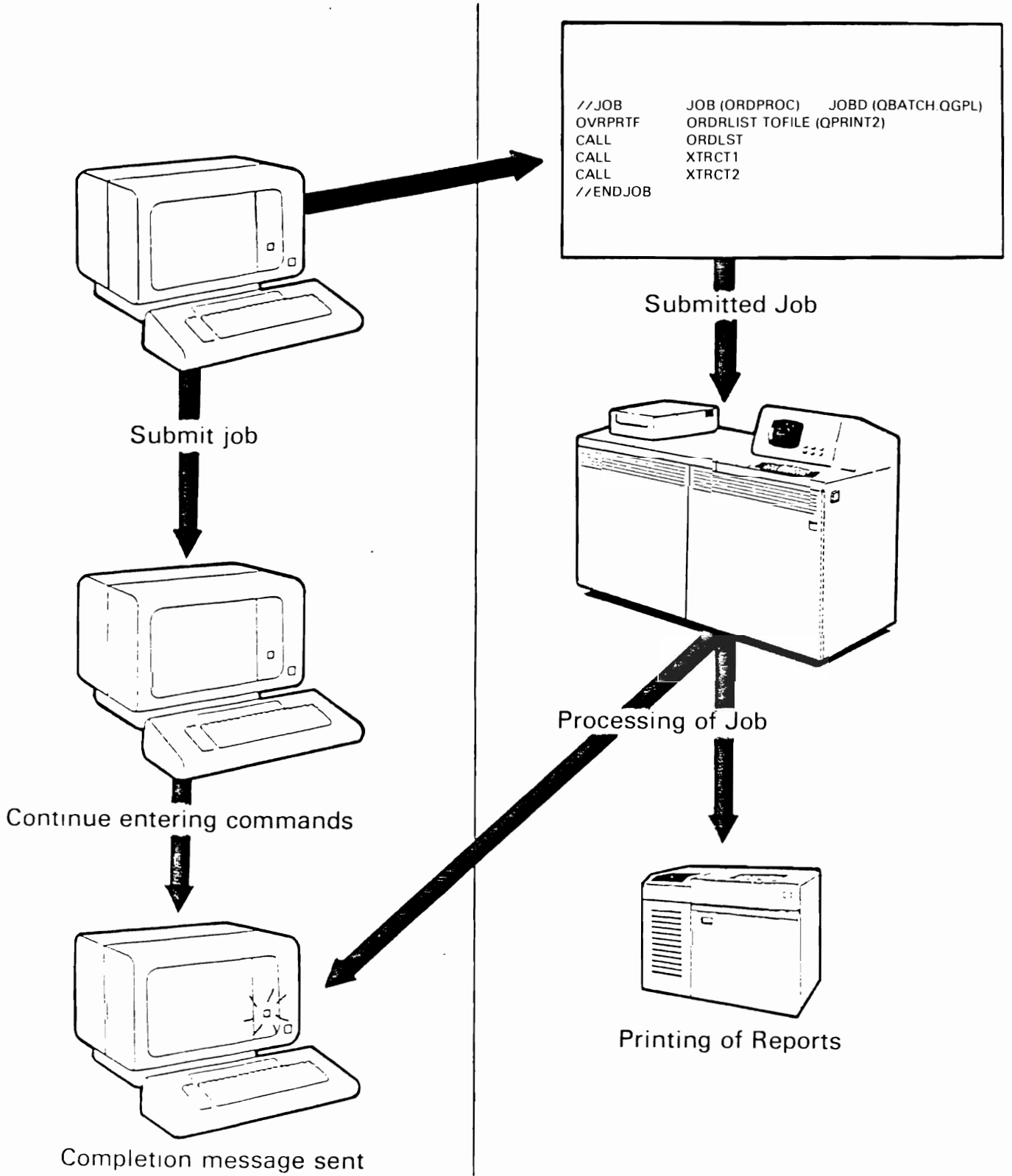
DLTSBSD: Delete Subsystem Description

CRTSBSD: Create Subsystem Description

INTERACTIVE JOBS



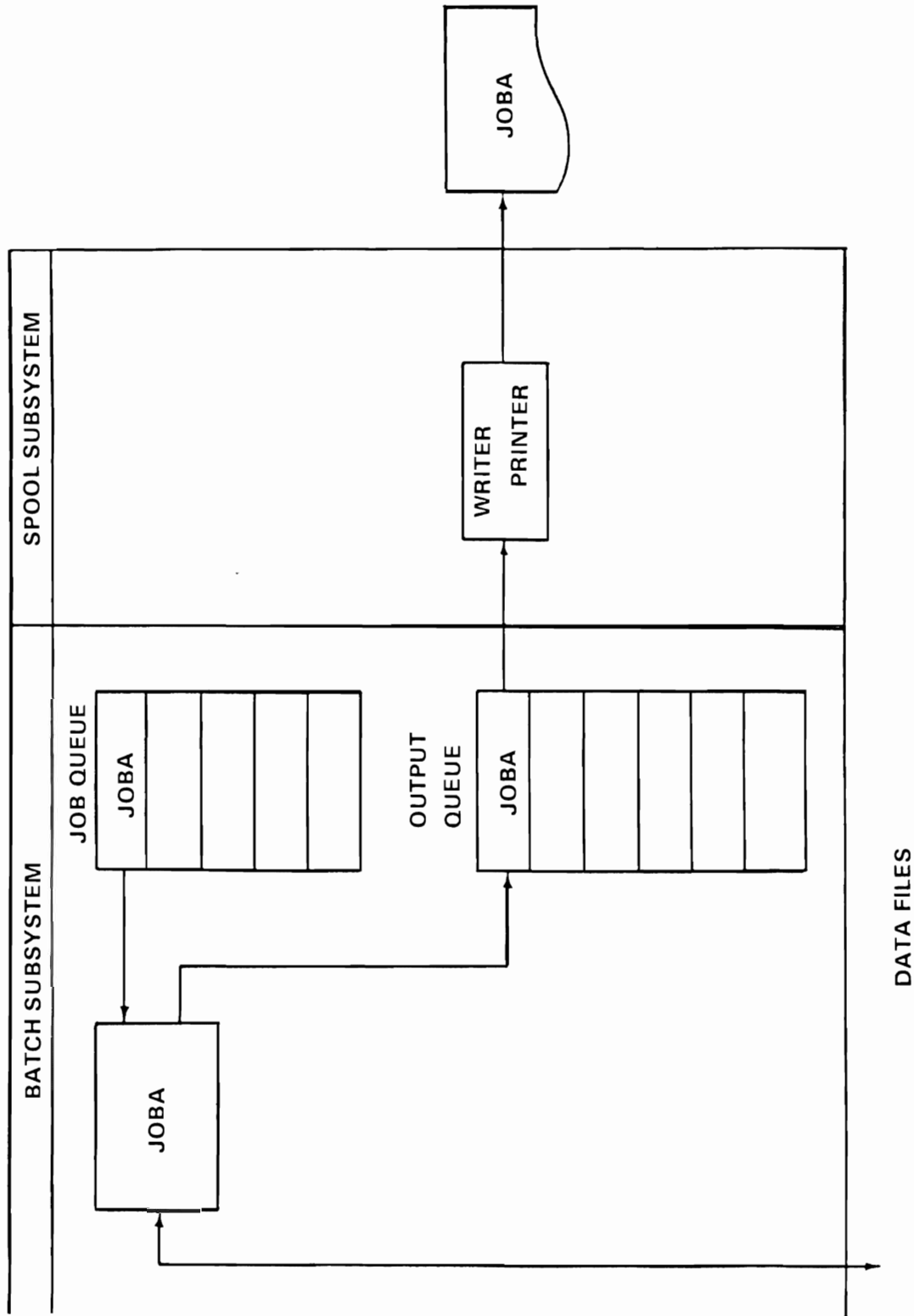
BATCH JOB PROCESSING



STAGES OF JOB EXECUTION

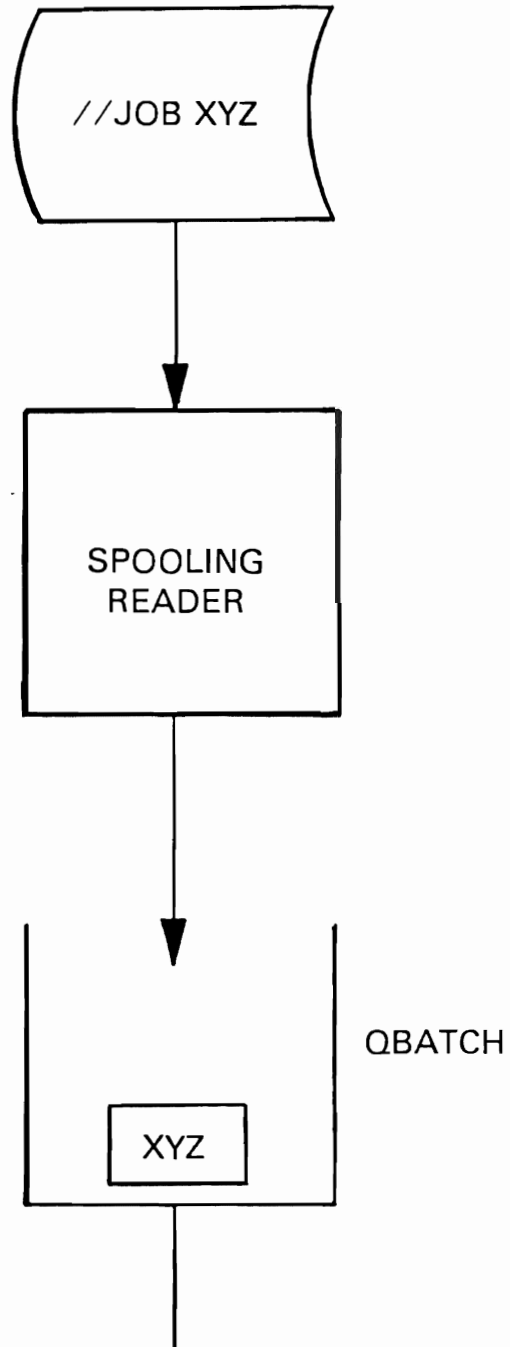
1. Job is submitted or a reader is started to read in the job commands
2. Job is put on the job queue
3. Job is executed
4. Job finishes.
A message is sent to work station.
Output is placed in output queue.
5. Printer is started (if not already started)
6. Output is printed

JOBA EXECUTION PATH



PUTTING A JOB IN A JOB QUEUE

STRDBRDR FILE(JOBONE)



START READERS

STRCRDRDR	DEV(QCARD96)		
STRDBRDR	FILE(JOBFILE)	MBR(AR03)	
STRDKTRDR	DEV(QDKT)	LABEL(MYLABEL)	LOC(*S1)
SBMCRDJOB	DEV(QCARD96)	HOPPER (1)	JOBQ(QBATCH)
SBMDKTJOB	DEV(QDKT)	LABEL(XYZ)	JOBQ(QBATCH)
SBMDBJOB	FILE(DBJOB1)	JOBQ(QBATCH)	

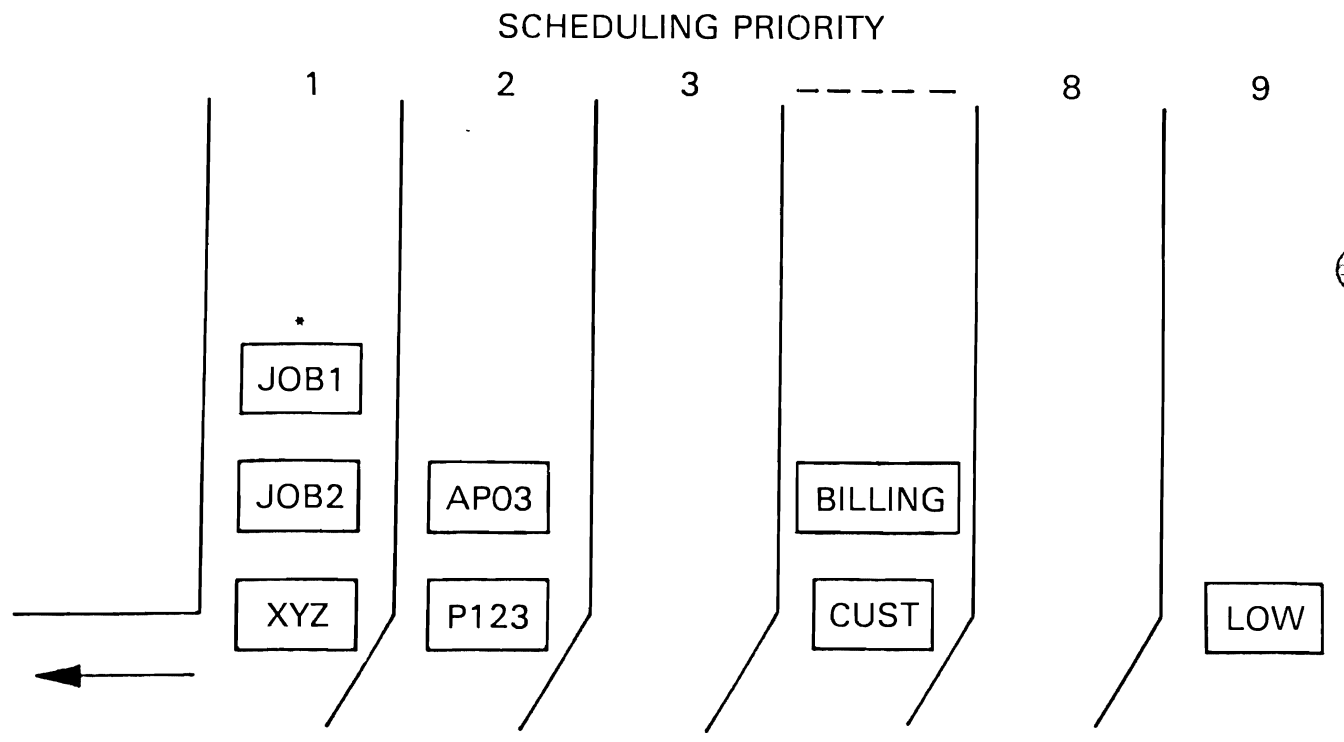
JOB QUEUE

JOBS ARE PLACED ON JOB QUEUES BY WORK STATIONS (SUBMITTED COMMANDS) OR SPOOLED READERS

JOBS ARE INITIATED ACCORDING TO PRIORITY

LOWEST NUMBER IS HIGHEST PRIORITY

IF PRIORITY EQUAL, FIRST IN FIRST OUT RULE APPLIES



*NEW JOB WITH PRIORITY 1 ADDED HERE

JOB QUEUE DISPLAY

01/06/81 10:30:45 JOB QUEUES

QUEUE NAME	LIBRARY	JOBS	SUBSYSTEM	STATUS
_1QBATCH	QGPL	5	QBATCH	HELD
_OSPL	QGPL	20	QSPL	
_OCTL	OSYS	3	OCTL	

1—DSPJOBQ 4—HLDJOBQ 6—RLSJOBQ CF5—Redisplay

DSPJOBQ *ALL

QBATCH JOB QUEUE DISPLAY

01/06/81	15:38:41	JOB QUEUE — QBATCH	LIB — QGPL	SBS
JOB NAME	USER	NBR	PTY	STATUS
CPYJOBX	OPGMR	006313	5	HELD
WS02	OSYSOPR	006315	5	

CF5—REDISPLAY

DSPJOBQ QBATCH

DISPLAY ACTIVE JOBS DISPLAY

```

6/01/82      8:54:15      ACTIVE JOBS DISPLAY      CPU: .0%
Elapsed: 00:00:00      -----ELAPSED-----      Active jobs:      8
SBS/JOB      TYP  PL  PTY  CPU  INT  RSP  AUXIO  CPU  FUNCTION  STS
QBATCH      SBS  2  0   .4   0    0    0   .0%  DEQW
OCTL        SBS  2  0  1.2   0    0    0   .0%  DEQW
QCONSOLE    INT  2 10 10.8   0    0    0   .0%  *--CMDENT
QINTER      SBS  2  0  3.8   0    0    0   .0%  DEQW
LWS02       INT  2 20 74.9  0    .0  0   .0%  C-DSPACT JOB
QSPL        SBS  2  0  .3    0    0    0   .0%  DEQW
OSYSARB     SYS  2  0  4.8   0    0    0   .0%  EVTW
SCPF        SYS  2 52 30.7  0    0    0   .0%  EVTW
    
```

```

1-DSPJOB      2-Spl files      4-HLDJOB      5-Inv stack      6-RLSJOB      7-Locks      8-Exclude
9-CNLJOB      CF5-Redisplay    CF6-Restart    CF7-Reset      CF8-DSPSYSSTS
    
```

JOB TYPE FIELD IN ACTIVE JOBS DISPLAY

ASJ: AUTOSTART

BCH: BATCH

INT: INTERACTIVE

RDR: READER

SBS: SUBSYSTEM MONITOR

SYS: SYSTEM

WTR: WRITER

FUNCTION FIELD IN ACTIVE JOBS DISPLAY

C = COMMAND EXECUTED INTERACTIVELY: IN BATCH JOB STREAM OR FROM SYSTEM MENU

P = PROGRAM: HIGH LEVEL PROGRAM CALLED INTERACTIVELY, PROGRAM CALLED IN BATCH JOB STREAM, INITIAL PROGRAM IN USER PROFILE, NAME OF A SYSTEM REQUEST PROCESSOR (QCL, QMNSYSRQ, QOPRMENU, QPGMMENU, QCALLMENU)

L = MESSAGE QUEUE BEING PRODUCED, COPIED

- QHST
- QSRV
- QCHG

* = SPECIAL VALUE

- JOBLOG: JOB LOG
- DUMP: DUMP IN PROGRESS
- CMDENT: COMMAND ENTRY DISPLAY

STATUS FIELD IN DISPLAY ACTIVE JOB DISPLAY

CNL: THE JOB HAS BEEN CANCELED WITH THE *IMMED OPTION OR
DELAY TIME HAS EXPIRED WITH THE *CNTRLD OPTION

HLD: THE JOB IS HELD

SRO: THE JOB IS THE INACTIVE HALF OF A SYSTEM REQUEST JOB
PAIR

LCKW: THE JOB IS WAITING FOR A LOCK

EVTW: THE JOB IS WAITING ON AN EVENT

DEQW: THE JOB IS WAITING ON A DEQUEUE OPERATION

DEQA: THE JOB IS WAITING ON A QUEUE OPERATION IN THE MPL

EXC: THE JOB IS CURRENTLY EXECUTING IN THE MPL

INEL: THE JOB IS INELIGIBLE AND NOT IN THE CURRENT MPL

JOB DISPLAY

Job: TEAMJOB1 User: QSECOFR Nbr: 004069
DISPLAY JOB MENU

Select one of the following

1. All of 2 through 9
2. Status attributes
3. Definition attributes
4. Execution attributes, if active
5. Program invocation stack, if active
6. Spooled files
7. Locks, if active
8. Commitment control status, if active
9. Library list, if active

Option: 1

DSPJOB JOB(LWS02)

JOB STATUS

6/01/82 10:32:20 JOB STATUS ATTRIBUTES
Job: LWS02 User: QSECOFR Nbr: 000114
Status of job: ACTIVE
Date/time entered system: 06/01/82 10:13:54
Date/time started: 06/01/82 10:13:54
Subsystem name: QINTER
Subsystem pool id: 2
Submitted by job/user/nbr: INTER
Type of job: 0
Program return code: NO
Controlled cancel requested:

CF5—Redisplay CF10—Menu

JOB DEFINITION

6/01/82 8:55:07 JOB DEFINITION ATTRIBUTES +++
Job: LWS02 User: OSECOFR Nbr: 000114
Job queue name: JOBQ
Library name:
Job priority (on JOBQ): JOBPTY
Output priority (on OUTQ): OUTPTY 5
Cancel severity: CNLSEV 30
Job logging (lvl sev text): LOG 4 00 *SECLVL
Default output queue name: OUTQ QPRINT
Library name: OGPL
Job date: DATE 06/01/82
Job switches: SWS 00000000
Inquiry message reply: INQMSGRPY *RQD

CF5—Redisplay CF10—Menu

JOB COMMANDS

DSPJOB

CHGJOB

CNLJOB

HLDJOB

RLSJOB

JOB NAME QUALIFICATIONS

No Qualifiers

PAYPRT

↑
Job

Qualified Job Name

PAY. DEPT25

↑ ↑
Job User

Fully Qualified Job Name

PAYPRT . SMITH . 120856

↑ ↑ ↙
Job User Job Number

SPOOLING

QUEUES

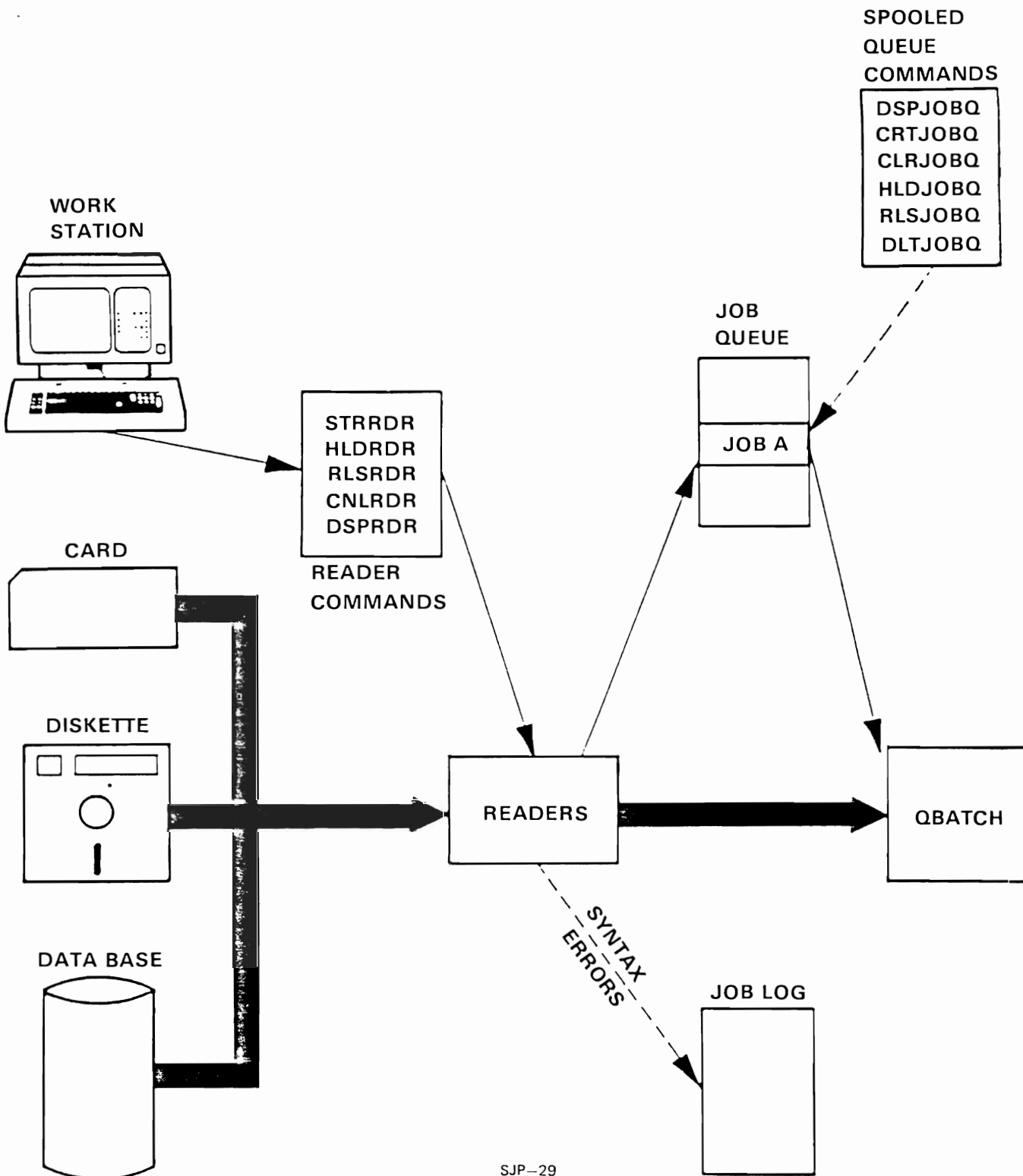
JOB QUEUES

- ANY NUMBER OF JOB QUEUES ALLOWED
- IF MULTIPLE QUEUES, EACH MUST HAVE UNIQUE NAME
- MORE THAN ONE JOB QUEUE CAN BE ACTIVE IN A SUBSYSTEM
- HIGHEST PRIORITY, LOWEST NUMBERED JOB QUEUE USED FIRST
- ANY JOB QUEUE CAN BE 'FED' AT ANY TIME

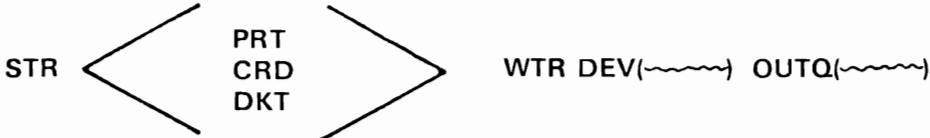
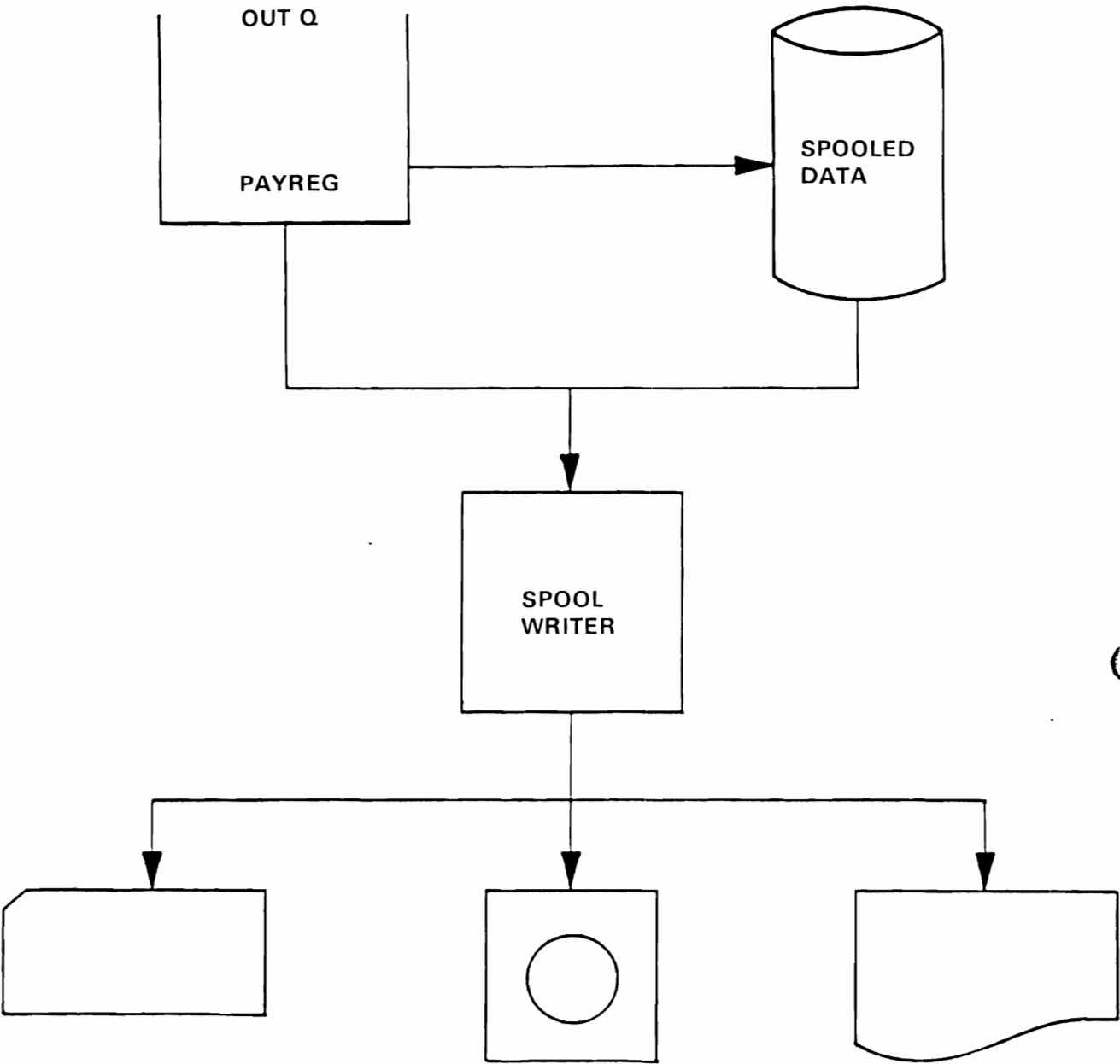
OUTPUT QUEUES

- ANY NUMBER OF OUTPUT QUEUES ALLOWED
- ONLY ONE OUTPUT QUEUE CAN BE ACTIVE TO A SPECIFIC DEVICE AT A GIVEN TIME
- ANY OUTPUT QUEUE CAN BE FED AT ANY TIME BY ANY PROGRAM EXECUTING IN THE SYSTEM

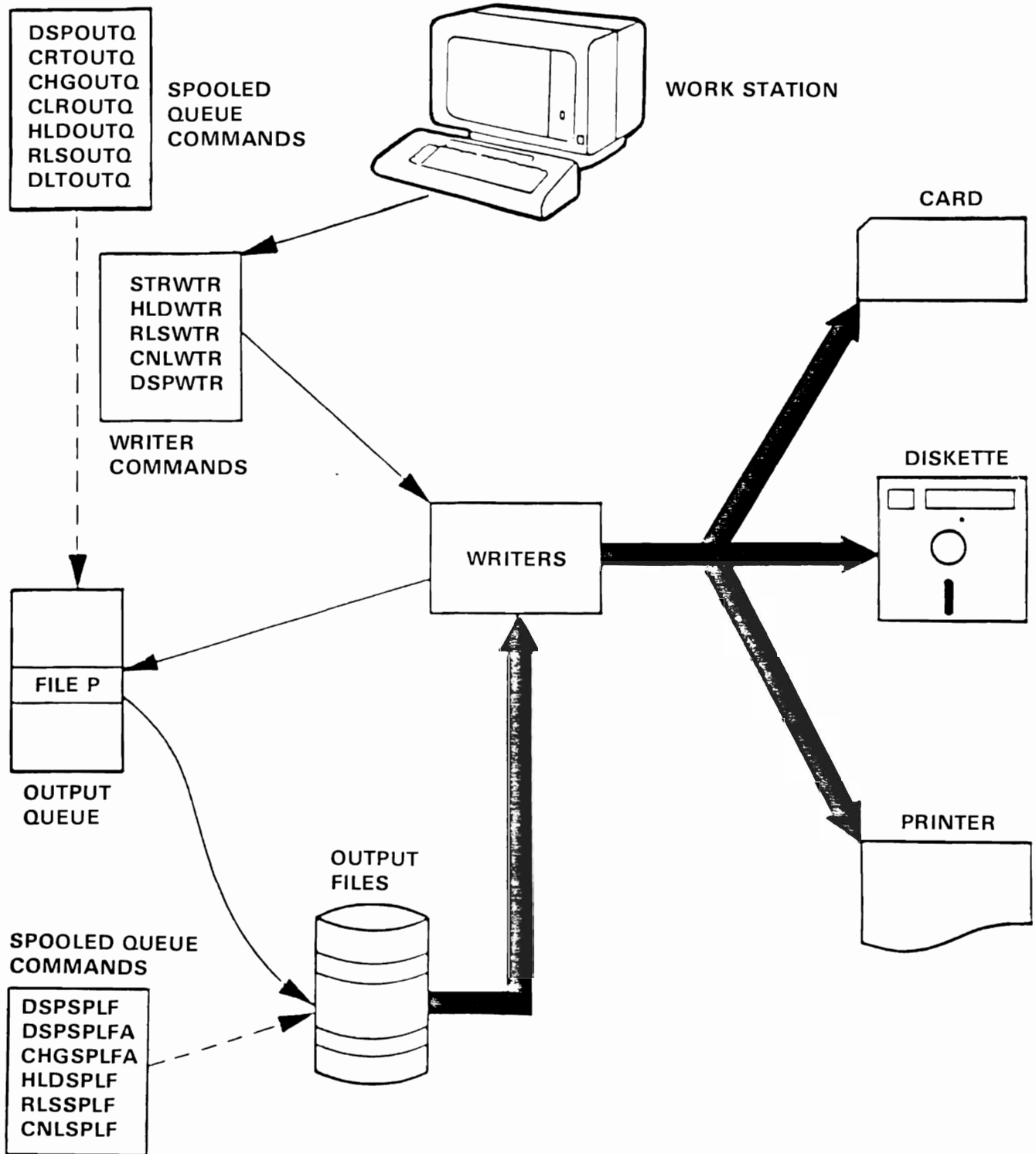
INPUT SPOOL COMMANDS



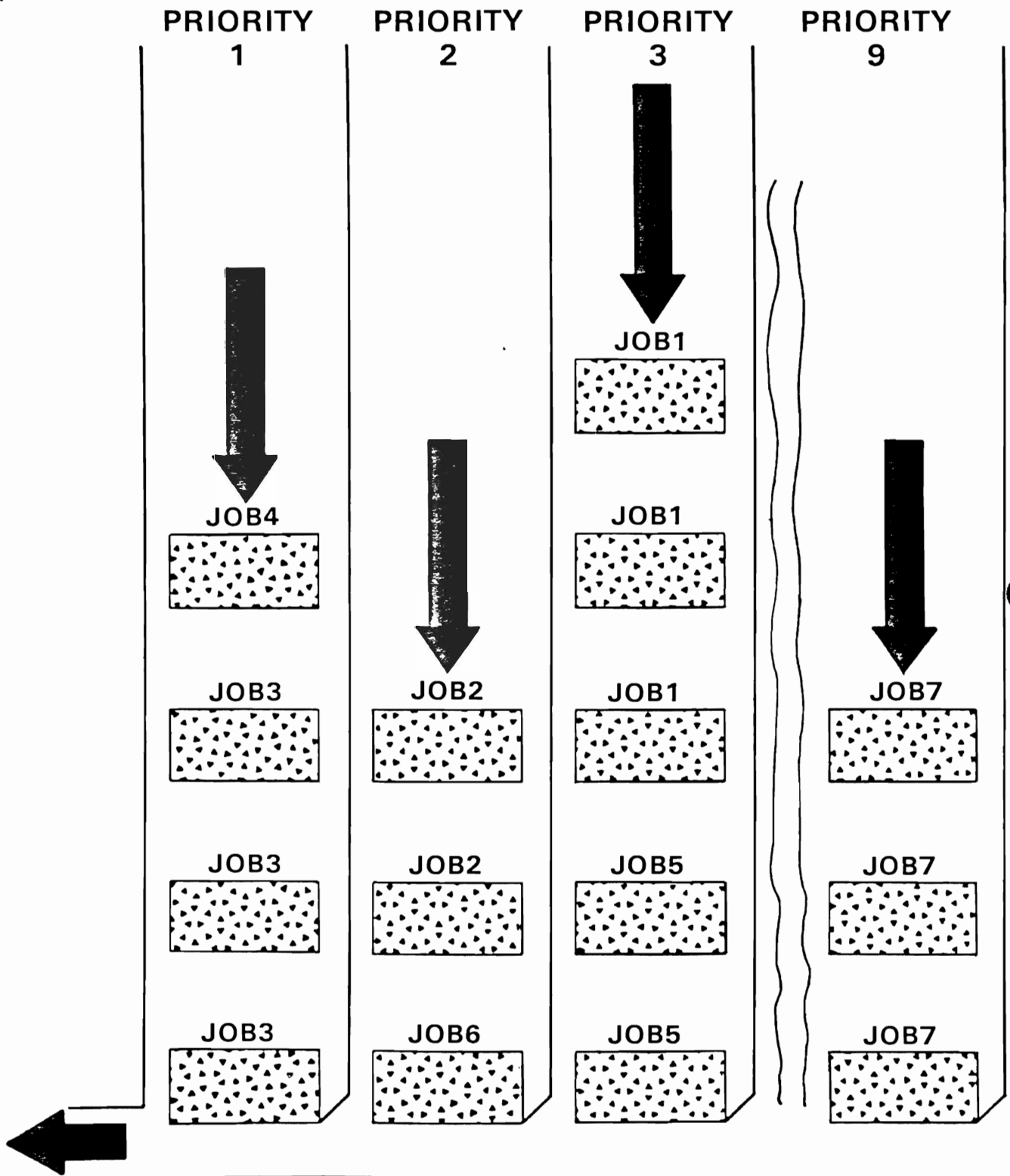
SPOOLING WRITER



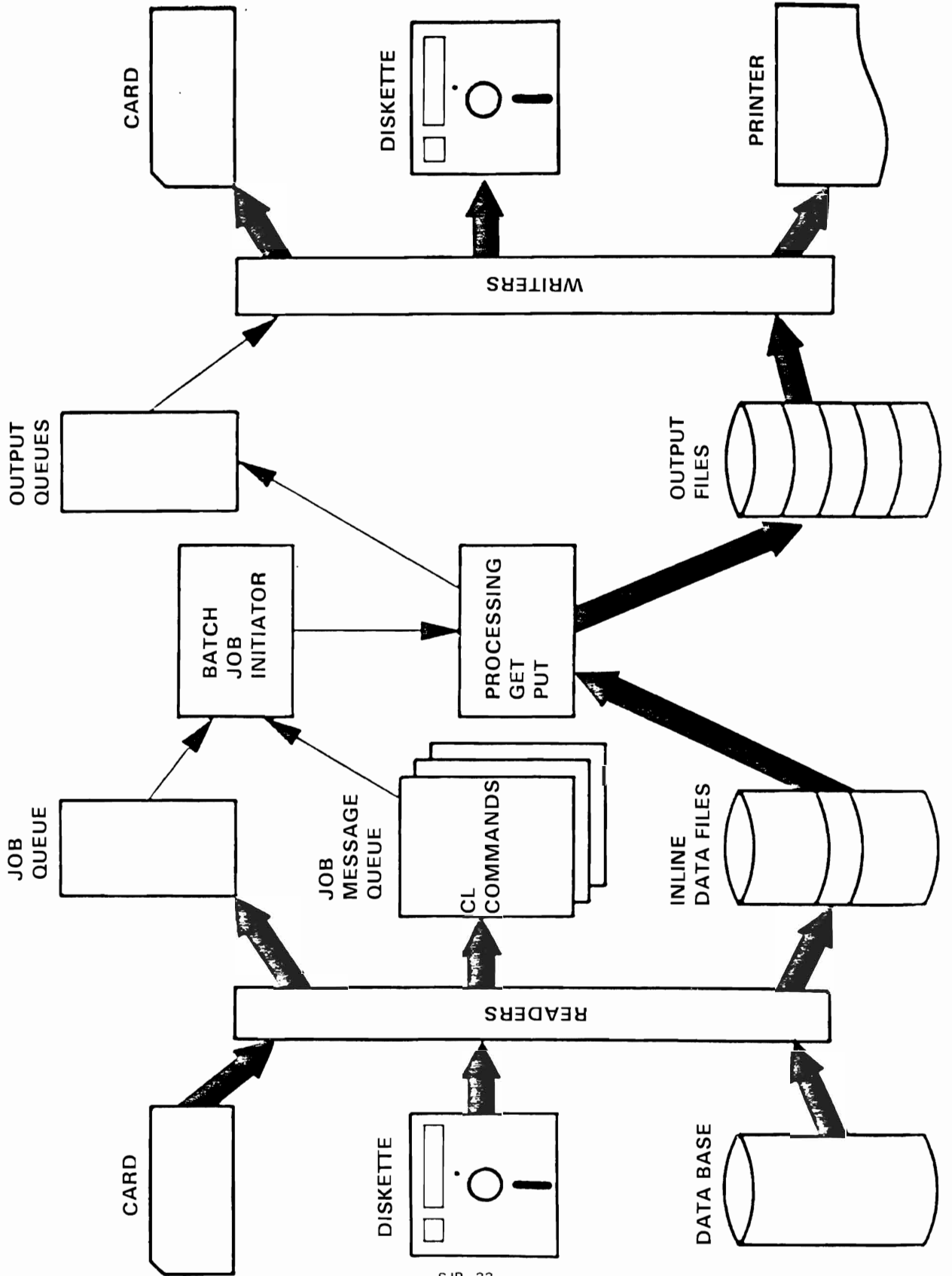
OUTPUT SPOOL COMMANDS



SPOOLING OUTPUT QUEUE



SPOOLING OVERVIEW



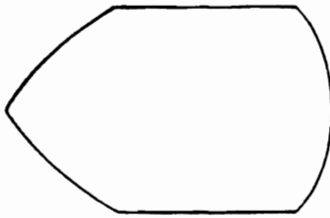
START WRITER

STRCRDWTR	DEV(QCARD96)	OUTQ(QPUNCH)
STRDKTWTR	DEV(QDKT)	OUTQ(QDKT) LOC(*S1)
STRPRTWTR	DEV(QSYSPRT) FILE(APREG)	OUTQ(QPRINT) PAGE(15)

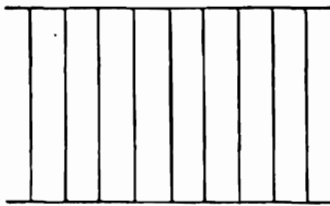
START WORK STATION PRINTER

STRPRTWTR	DEV(PRT1)	OUTQ(OUTZX)
	MSGQ(*REQUESTER)	AUTOTRM(*YES)

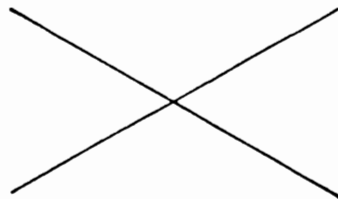
SPOOLED OUTPUT MAY BE



DISPLAYED



HELD



CANCELLED

OR PRINTED, PUNCHED, OR WRITTEN TO
AUXILIARY STORAGE

SPOOLED FILE INFORMATION

6/01/82 10:37:33 SPOOLED OUTPUT FILES

Job: LWS02 User: QSECOFR Nbr: 000114

FILE	NBR	OUTQ	LIBRARY	PTY	RCD/PAGE	STATUS	CPY	FORMTYPE
—OSYSPRT	0001					FIN		
—OSYSPRT	0002					FIN		
—OSYSPRT	0003					FIN		
—OSYSPRT	0004					FIN		
—OSYSPRT	0005					FIN		
—OSYSPRT	0006					FIN		
—OSYSPRT	0007					FIN		
—OSYSPRT	0008					FIN		
—OSYSPRT	0009					FIN		
—OSYSPRT	0010					FIN		
1 OSYSPRT	0011	QPRINT	QGPL	5	1P	RDY	1	*STD

1—DSPSPLF 2—DSPSPLFA 4—HLDSPFLF 6—RLSSPLF 9—CNLSPLF
 CL5—Redisplay CF10—Menu

DSPSPPLF

5/13/83 16:21:38 SPOOLED FILE - QPRTJOBDD NUMBER - 0001

Control: Page: 1 Line: 1 Columns: 1 77

Scan: Positions: 1 132

OPERA

DISPLAY JOB DESCRIPTION

5714SS1 R05 M00 830610
 Job description— OPERATOR
 Library name— OPERATOR
 User profile name— OPERATOR
 CL syntax check— *NOCHK
 Hold on job queue— *NO
 Cancel severity— 30
 Job date— *SYSVAL
 Job switches— 00000000
 Inquiry msg reply— *RQD

Job priority— 5
 Job queue name— QBATCH
 Library name— QGPL
 Output priority— 5
 Output queue name— OPEROUTQ
 Library name— OPERATOR
 Job logging
 Message level— 1
 Message severity— 10
 Text level— *MSG

OPERA

DISPLAY JOB DESCRIPTION

5714SS1 R05 M00 830610
 Routing data— QCMDB
 Request data— *NONE
 5714SS1 R05 M00 830610
 Initial library list— (Read by columns)
 OPERATOR
 OPERA
 QGPL

OPERA

DISPLAY JOB DESCRIPTION

CF3-Fold CF7-Scan HELP-Help

Displays the Contents of
 The Spool File

SPOOLED FILE INFORMATION

```

6/01/82 10:37:33      SPOOLED OUTPUT FILES
Job: LWS02           User: QSECOFR      Nbr: 000114
   FILE           NBR  OUTQ  LIBRARY  PTY  RCD/PAGE  STATUS  CPY  FORMTYPE
-- QSYSPRT       0001  --    --    --    --    --    --    --    --
-- QSYSPRT       0002  --    --    --    --    --    --    --    --
-- QSYSPRT       0003  --    --    --    --    --    --    --    --
-- QSYSPRT       0004  --    --    --    --    --    --    --    --
-- QSYSPRT       0005  --    --    --    --    --    --    --    --
-- QSYSPRT       0006  --    --    --    --    --    --    --    --
-- QSYSPRT       0007  --    --    --    --    --    --    --    --
-- QSYSPRT       0008  --    --    --    --    --    --    --    --
-- QSYSPRT       0009  --    --    --    --    --    --    --    --
-- QSYSPRT       0010  --    --    --    --    --    --    --    --
  2 QSYSPRT       0011  QPRINT  QGPL   5      1P      RDY   1    *STD
  
```

```

1--DSPSPLF  2--DSPSPLFA  4--HLDSPFLF  6--RLSSPLF  9--CNLSPLF
CL5--Redisplay  CF10--Menu
  
```

SPOOLED PRINTER FILE ATTRIBUTES

```

6/01/82 10:37:49      SPOOLED FILE ATTRIBUTES
Spooled file: QSYSPRT      Nbr: 0011      Output pty: 5
Job: LWS02      User: QSECOFR      Nbr: 000114
Status:
Output queue:          OUTQ
Library name:
Form type:            FORMTYPE
Number of copies:     COPIES
Copies not produced:
Maximum number of records:
File separators:      MAXRCDS
Output schedule:     FILESEP
Hold file:           SCHEDULE
Save file:           HOLD
Device type:         SAVE
Special device requirements:
Number of pages:
Record length:
Form length/width:   FORMSIZE
  
```

CF3—CHGSPLFA CF5—Redisplay



CHGSPLFA (CHANGE SPOOLED FILE ATTRIBUTES)

- OUTPUT QUEUE TO MOVE FILE TO
- NUMBER OF COPIES
- TYPE OF FORMS
- NUMBER OF FILE SEPARATOR PAGES OR CARDS
- AVAILABILITY OF OUTPUT FILE
- SAVE

DSPSBMJOB

Display Submitted Jobs to get:

SUBMITTED JOBS - LWS02						
JOB NAME	USER	NBR	TYPE	STATUS		
TEAMJOB1	OPER1	001192	BATCH	ACTIVE		
2 COPY	OPER1	001186	BATCH	OUTQ		
TEAMJOB1	OPER1	001180	BATCH	JOBQ	HELD	

1—DSPJOB	2—SPL FILES	4—HLDJOB	6—RLSJOB	9—CNLJOB
CF5—REDISPLAY				

Spool files, job status, job logs. . .

JOB LOG AND SPOOL FILE

2/23/83 15:08:02 SPOILED OUTPUT FILES
JOB: TEAMJOB1 USER: OPER1 NBR: 017581
FILE NBR OUTQ LIBRARY PTY RCD/PAG STATUS CPY FORMTYPE
QPRTJOB 0001 OPEROUTQ OPERATOR 5 3P RDY
QPJOBLOG 0002 JOBLGGS OGPL 5 1P RDY

1—DSPSPLF 2—DSPSPLFA 4—HLDSPLF 6—RLSSPLF 9—CNLSPLF
CF5—REDISPLAY

The JOB LOG

2/23/83 14:46:34 SPOOLED FILE — QPJOBLOG NUMBER — 0001
CONTROL: PAGE: 1 LINE: 1 COLUMNS: 1 77
SCAN: POSITIONS: 1 132
5714SS1 R04 M01 820910 SYSTEM/38 JOB LOG
JOB NAME — TEAMJOB1 USER — OPER1 NBR — 017572
TIME MSGID SEV TYPE MESSAGE TEXT
143646 CPF1124 00 INFO JOB TEAMJOB1.OPER1.017572 STARTED 02/23/83 14:36:46.
143650 CPF1164 00 COMP JOB TEAMJOB1.OPER1.017572 COMPLETED 02/23/83 14:36:49
ERMINATION CODE 0.

CF3—FOLD CF7—SCAN HELP—HELP

... .displays job messages

JOB DESCRIPTION

An object that contains information defining the attributes of a job

OBATCH JOB DESCRIPTION

01/31/83 12:21:05	JOB DESCRIPTION		
Job description—	OBATCH	Job priority—	5
Library name—	QGPL	Job queue name—	OBATCH
User profile name—	OPGMR	Library name—	QGPL
CL syntax check—	*NOCHK	Output priority—	5
Hold on job queue—	*NO	Output queue name—	OPRINT
Cancel severity—	30	Library name—	QGPL
Job date:	*SYSVAL	Job logging	
Job switches—	00000000	Message level—	2
Inquiry msg reply—	*RQD	Message severity—	20
		Message severity—	20
		Text level—	*SECLVL

Routing data— QCMDB

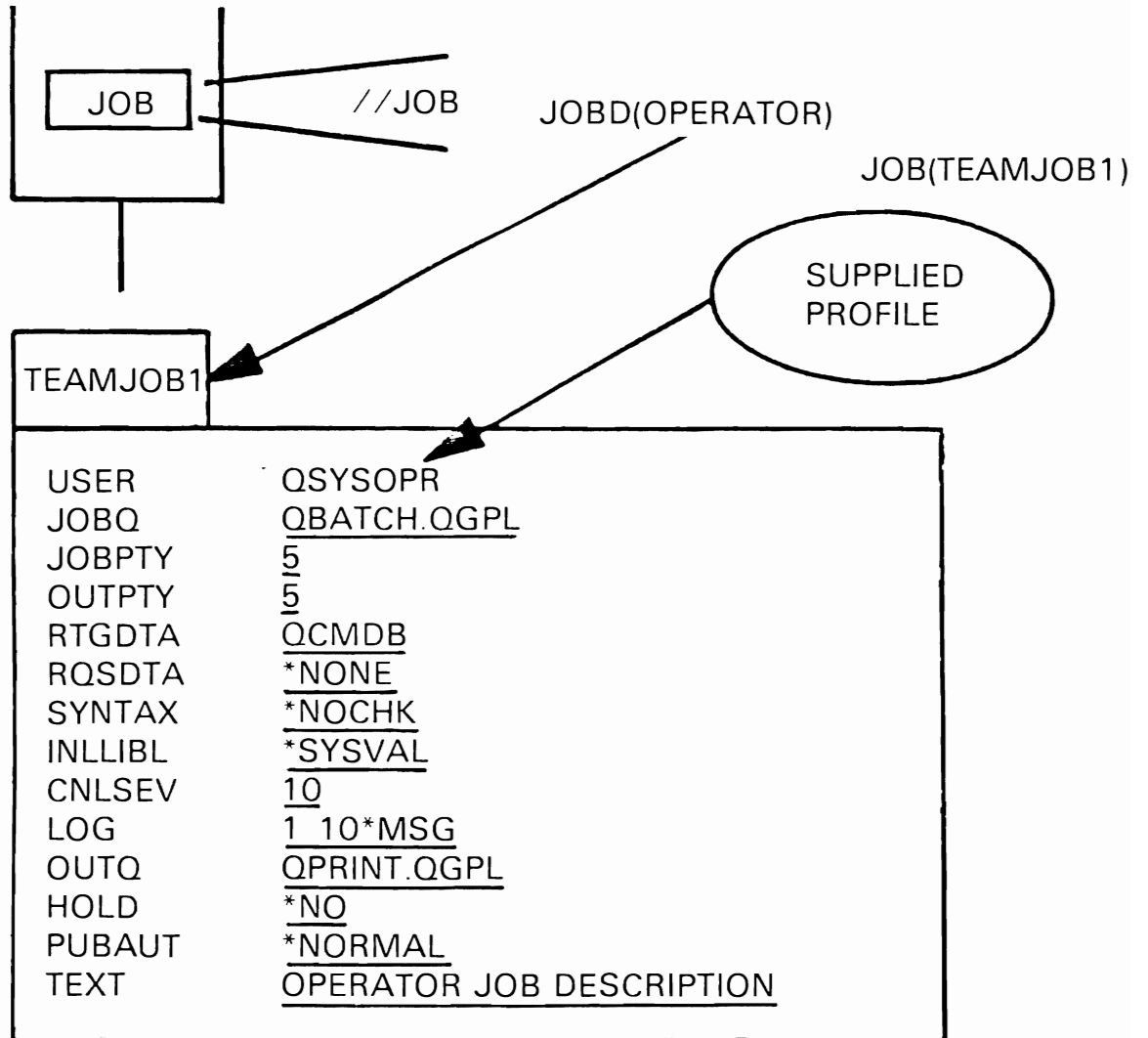
Request data— *NONE

Initial library list— (Read by columns)

*SYSVAL

DSPJOB JOB(QBATCH)

JOB DESCRIPTION



```
CRTJOB  JOBD(OPERATOR)  USER(QSYSOPR)  +
        TEXT('OPERATOR JOB DESCRIPTION')
```

DSPSYSSTS Command

```

05/13/83 16:12:19  SYSTEM STATUS DISPLAY  CPU: 6.3%
Elapsed: 00:00:36  Addr segments used: 3.3713%
Aux stg total: 791M  Used: 17.8462%  Jobs in system: 95
SYS POOL RESERVED DB DB NONDB NONDB MAX ACT→  ACT→  ACT→  ACT→
POOL SIZE  SIZE  OK  OK  OK  OK  OK  OK  OK  OK  OK  OK  OK  OK  OK  OK  OK  OK  OK  OK  OK  OK
1 550K  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0
2 916K  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0
3 70K   .0  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0
  
```

CF3-DSPSYS CF5-Redisplay CF6-Reset start CF8-DSPACTJOB

Depress CF3. . .

DSPSYS Command

```

1/31/83 13:08:14      SYSTEM DISPLAY
SUBSYSTEM SBS      ACT  TOTAL  SYS  POOLS  BY  SBS  POOL  ID
NAME  NUMBER  JOBS  STATUS  STORAGE 1  2  3  4  5  6  7  8  9  10
QBATCH 008608  0  ACTIVE  0 K  2
QCTL 008605  1  ACTIVE  0 K  2
QINTER 008606  4  ACTIVE  0 K  2  2
QSPL 008607  1  ACTIVE  70 K  2  2  3
    
```

```

1—DSPSBS  2—DSPSBSD  9—TRMSBS  CF3—DSPSYSSTS  CF5—Redisplay
    
```

**THE SYSTEM IS DIVIDED
INTO SUBSYSTEMS**

DSPSYSSTS Command

```

05/13/83 16:12:19  SYSTEM STATUS DISPLAY  CPU: 6.3%
Elapsed: 00:00:36  Addr segments used: 3.3713%
Aux stg total: 791M  Used: 17.8462%  Jobs in system: 95
SYS POOL RESERVED DB DB NONDB NONDB MAX ACT→  ACT→
POOL SIZE SIZE  SIZE  FLTS PAGES FLTS PAGES  ACT  WAIT  INELG  INELG
1 550K OK .0 .0 .0 .3 .4 .0 .0 .0 .0
2 916K OK .0 .0 .0 1.0 4.4 4 4.9 .0 .0
3 70K OK .0 .0 .0 .7 3.9 4 6.5 .0 .0
  
```

CF3-DSPSYS CF5-Redisplay CF6-Reset start CF8-DSPACTJOB

Depress CF8 . . .

... to display the active jobs.

```

6/01/82 8:54:15 ACTIVE JOBS DISPLAY CPU: .0%
Elapsed: 00:00:00 -----ELAPSED----- Active jobs: 8
SBS/JOB TYP PL PTY CPU INT RSP AUXIO CPU FUNCTION STS
QBATCH SBS 2 0 0 .4 0 0 0 0 .0% DEQW
OCTL SBS 2 0 0 1.2 0 0 0 0 .0% DEQW
QCONSOLE INT 2 10 10.8 0 0 0 *—CMDENT DEQW
QINTER SBS 2 0 0 3.8 0 0 0 .0% DEQW
LWS02 INT 2 20 74.9 0 .0 0 C-DSPACTJOB EXC
QSPL SBS 2 0 0 .3 0 0 0 .0% DEQW
QSYSARB SYS 2 0 0 4.8 0 0 0 .0% EVTW
SCPF SYS 2 52 30.7 0 0 0 .0% EVTW

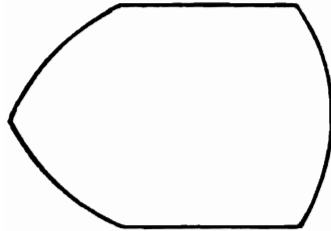
```

```

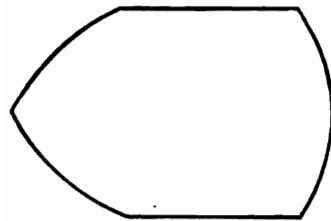
1-DSPJOB 2-Spl files 4-HLDJOB 5-Inv stack 6-RLSJOB 7-Locks
8-Exclude 9-CNLJOB CF5-Redisplay CF6-Restart CF7-Reset CF8-DSPSYSSTS

```

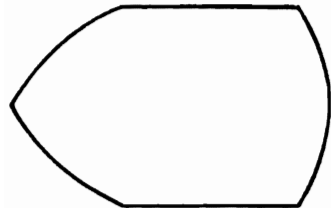
SYSTEM OPERATOR CAN DISPLAY



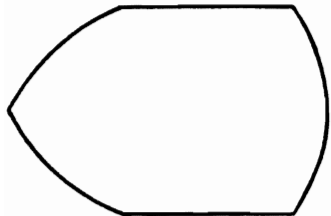
SYSTEM STATUS



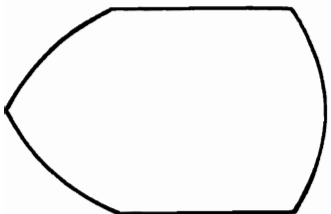
SUBSYSTEM STATUS



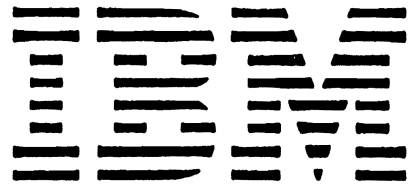
SPOOL STATUS



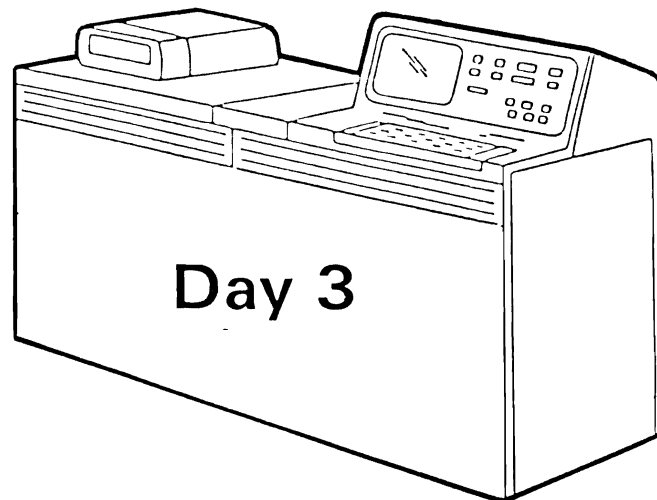
JOB STATUS



PROGRAM STATUS



SYSTEM/38
SYSTEM OPERATOR
WORKSHOP



Day 3 Objectives

Describe:

- * Options on the System Operators Menu

 - CF6

 - CF7

 - CF8

- * How to shut down the system

- * Use the Save/Restore functions

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SYSTEM OPERATOR MENU

SELECT ONE OF THE FOLLOWING: SYSTEM OPERATOR MENU

- 1. DSPJOBQ (JOBQ)
- 2. DSPOUTQ (OUTQ)
- 3. SNDMSG TOMSGQ,(TYPE),MSG
- 4. CALL PROGRAM
- 5. EXECUTE COMMAND
- 6. SBMJOB (JOB),(JOBID),(CMD)
- 7. STRPRTWTR DEV,OUTQ
- 8. DSPWTR (WRITER)
- 9. SBMDKTJOB DEV,LABEL,(LOC)
- 10. SBMDBJOB FILE,(MEMBER)
- 11. DSPSBMJOB
- 12. DSPACTJOB (RESET)
- 80. DSPMNU (MENU)
- 90. SIGNOFF (*NOLIST *LIST)

OPTION: _____ PARS: _____
CMD OR PARM: _____

LOG REQUESTS: *YES CF3—COMMAND ENTRY CF4—PROMPT(5,6 ONLY)
CF6—DSPMSG QSYSOPR CF7—DSPSBS CF8—DSPSYS

On the System Console. . .

SYSTEM OPERATOR MENU

Select one of the following:

- | | | | |
|------------|--------------------|---------------|-----------------|
| 1. DSPJOBQ | (jobq) | 7. STRPRTWTR | dev,outq |
| 2. DSPOUTQ | (outq) | 8. DSPWTR | (writer) |
| 3. SNDMSG | tomsgq,(type),msg | 9. SBMDKTJOB | dev,label,(loc) |
| 4. CALL | program | 10. SBMDBJOB | file,(member) |
| 5. Execute | command | 11. DSPSBMJOB | |
| 6. SBMJOB | (job),(jobd),(cmd) | 12. DSPACTJOB | (reset) + |

Option: _____ Parns: _____

Cmd or parm: _____

Log Requests: *YES CF3—Command entry CF4—Prompt (5,6 only)
CF6—DSPMSG QSYSOPR CF7—DSPSBS CF8—DSPSYS

the System Operator Menu is 2 pages.
Depress the Roll forward key. . .

SYSTEM OPERATOR MENU

Select one of the following:

- 80. DSPMNU (menu)
- 90. SIGNOFF (*NOLIST *LIST)

Option: _____ Parms: _____

Cmd or parm: _____

Log Requests: *YES CF3—Command entry CF4—Prompt (5,6 only)
CF6—DSPMSG QSYSOPR CF7—DSPSBS CF8—DSPSYS

to get the second screen

SYSTEM OPERATOR MENU

SYSTEM OPERATOR MENU

SELECT ONE OF THE FOLLOWING:

1. DSPJOBQ	(JOBQ)
2. DSPOUTQ	(OUTQ)
3. SNDMSG	TOMSGO,(TYPE),MSG
4. CALL	PROGRAM
5. EXECUTE	COMMAND
6. SBMJOB	(JOB),(JOBID),(CMD)
7. STRPRTWTR	DEV,OUTQ
8. DSPWTR	(WRITER)
9. SBMDKTJOB	DEV,LABEL,(LOC)
10. SBMDBJOB	FILE,(MEMBER)
11. DSPSBMJOB	(RESET)
12. DSPACTJOB	(MENU)
80. DSPMNU	(*NOLIST *LIST)
90. SIGNOFF	

OPTION: _____ PARS: _____

CMD OR PARM: _____

LOG REQUESTS: *YES

CF6—DSPMSG QSVSOPR	CF3—COMMAND ENTRY	CF4—PROMPT (5,6 ONLY)
	CF7—DSPSBS	CF8—DSPSYS

Callout A points to the 'OPTION: _____' line.
Callout B points to the 'PARS: _____' line.
Callout C points to the 'CMD OR PARM: _____' line.
Callout D points to the 'LOG REQUESTS: *YES' section.
Callout E points to the table of log requests.

TO USE ANY OF THE OPTIONS ON THE MENU:

1. Key the option number into the Option field (A)
2. Key any parameters into the TWOParms fields (B) and (C)
3. If you are entering a command (options 5 & 6) or message (option 3), key it into the CMD or Parm field (D). If your entry is too long to fit on the first line of the field (D), key it in as if you were entering it on a single line. The cursor will automatically advance to the beginning of the second line of field (D) when you reach the end of the first line.
4. If you do not want to log requests, enter *NO in the Log requests field (E)
5. Press the ENTER key

SYSTEM OPERATOR MENU

SYSTEM OPERATOR MENU		
SELECT ONE OF THE FOLLOWING:		
1. DSPJOBQ	(JOBQ)	
2. DSPOUTQ	(OUTQ)	
3. SNDMSG	TOMSGQ,(TYPE),MSG	
4. CALL	PROGRAM	
5. EXECUTE	COMMAND	
6. SBMJOB	(JOB),(JOBID),(CMD)	
7. STRPRTWTR	DEV,OUTQ	
8. DSPWTR	(WRITER)	
9. SBMDKTJOB	DEV,LABEL,(LOC)	
10. SBMDBJOB	FILE,(MEMBER)	
11. DSPSBMJOB		
12. DSPACTJOB	(RESET)	
80. DSPMNU	(MENU)	
90. SIGNOFF	(*NOLIST *LIST)	
OPTION: <u> </u>	PARMS: _____	
CMD OR PARM: _____		
LOG REQUESTS: *YES CF3—COMMAND ENTRY CF4—PROMPT (5,6 ONLY)		
CF6—DSPMSG QSYSOPR	CF7—DSPSBS	CF8—DSPSYS

OPTION 1: Requests a display of all job queues, or a display of all jobs on a specific job queue if you also enter a job queue name in the first Parm field

OPTION 2: Requests a display of all output queues, or a display of all spooled files from jobs on a specific output queue if you also enter an output queue name in the first Parms field

OPTION 3: Allows you to send a message to other work stations. In the first Parms field, you must specify the name of the work station where the message is to be sent. You can also specify a message type in the second Parms field.

SYSTEM OPERATOR MENU

SYSTEM OPERATOR MENU

SELECT ONE OF THE FOLLOWING:

1.	DSPJOBQ	(JOBQ)
2.	DSPOUTQ	(OUTQ)
3.	SNDMSG	TOMSGQ,(TYPE),MSG
4.	CALL	PROGRAM
5.	EXECUTE	COMMAND
6.	SBMJOB	(JOB),(JOBID),(CMD)
7.	STRPRTWTR	DEV,OUTQ
8.	DSPWTR	(WRITER)
9.	SBMDKTJOB	DEV,LABEL,(LOC)
10.	SBMDBJOB	FILE,(MEMBER)
11.	DSPSBMJOB	
12.	DSPACTJOB	(RESET)
80.	DSPMNU	(MENU)
90.	SIGNOFF	(*NOLIST *LIST)

OPTION: PARMS:

CMD OR PARM:

LOG REQUESTS: *YES CF3—COMMAND ENTRY CF4—PROMPT (5,6 ONLY)
 CF6—DSPMSG QSYSOPR CF7—DSPSBS CF8—DSPSYS

OPTION 4: Calls a program by using the CALL command. You must enter the name of the program in the first Parms field. When you call a program using this option, you cannot pass parameters to the program. If you need to pass parameters to the program, you must select Option 5 and enter the complete CALL command, including the parm parameter.

NOTE: When you call a program, you will not be able to select another function on the menu until the program is completed.

SYSTEM OPERATOR MENU

SYSTEM OPERATOR MENU

SELECT ONE OF THE FOLLOWING:

1. DSPJOBQ	(JOBQ)
2. DSPOUTQ	(OUTQ)
3. SNDMSG	TOMSGQ,(TYPE),MSG
4. CALL	PROGRAM
5. EXECUTE	COMMAND
6. SBMJOB	(JOB),(JOBID),(CMD)
7. STRPRTWTR	DEV,OUTQ
8. DSPWTR	(WRITER)
9. SBMDKTJOB	DEV,LABEL,(LOC)
10. SBMDBJOB	FILE,(MEMBER)
11. DSPSBMJOB	
12. DSPACTJOB	(RESET)
80. DSPMNU	(MENU)
90. SIGNOFF	(*NOLIST *LIST)

OPTION: PARMS:

CMD OR PARM:

LOG REQUESTS: *YES CF3—COMMAND ENTRY CF4—PROMPT (5,6 ONLY)
CF6—DSPMSG QSYSOPR CF7—DSPSBS CF8—DSPSYS

OPTION 5: Allows you to enter an CL command that you are authorized to use

OPTION 6: Submits a job for BATCH processing by using the SBMJOB command. If you choose, you can enter a job name in the first Parms field and/or a job description name in the second Parms field. When submitting a job using this option, you may need to enter the command that defines the actual processing of the job. You enter this command in the Cmd or Parm field.

OPTION 7: Starts a printer writer that causes output to be produced on a printer from a specific output queue. You must enter the name of the device in the first Parms field and the name of the output queue in the second Parms field.

SYSTEM OPERATOR MENU

SYSTEM OPERATOR MENU

SELECT ONE OF THE FOLLOWING:

1. DSPJOBQ	(JOBQ)
2. DSPOUTQ	(OUTQ)
3. SNDMSG	TOMSGQ,(TYPE),MSG
4. CALL	PROGRAM
5. EXECUTE	COMMAND
6. SBMJOB	(JOB),(JOBID),(CMD)
7. STRPRTWTR	DEV,OUTQ
8. DSPWTR	(WRITER)
9. SBMDKTJOB	DEV,LABEL,(LOC)
10. SBMDBJOB	FILE,(MEMBER)
11. DSPSBMJOB	
12. DSPACTJOB	(RESET)
80. DSPMNU	(MENU)
90. SIGNOFF	(*NOLIST *LIST)

OPTION: PARMS: _____

CMD OR PARM: _____

LOG REQUESTS: *YES CF3—COMMAND ENTRY CF4—PROMPT (5,6 ONLY)
CF6—DSPMSG QSYSOPR CF7—DSPSBS CF8—DSPSYS

OPTION 8: Displays a printer writer. This can be used to display the current status of all writers or to display detailed information about a particular writer. From this display you can hold, release, or cancel a writer, or display the output queue assigned to the writer.

OPTION 9: Submits a batch job from a diskette file specified in the second Parms field. The location of the diskette file can be specified in the Cmd or parm field. The default is slot *M1.

OPTION 10: Submits a batch job from the data base file specified in the first Parms field. The member name can be specified in the second Parms field.

SYSTEM OPERATOR MENU

SYSTEM OPERATOR MENU		
SELECT ONE OF THE FOLLOWING:		
1. DSPJOBQ	(JOBQ)	
2. DSPOUTQ	(OUTQ)	
3. SNDMSG	TOMSGQ,(TYPE),MSG	
4. CALL	PROGRAM	
5. EXECUTE	COMMAND	
6. SBMJOB	(JOB),(JOBID),(CMD)	
7. STRPRTWTR	DEV,OUTQ	
8. DSPWTR	(WRITER)	
9. SBMDKTJOB	DEV,LABEL,(LOC)	
10. SBMDBJOB	FILE,(MEMBER)	
11. DSPSBMJOB		
12. DSPACTJOB	(RESET)	
80. DSPMNU	(MENU)	
90. SIGNOFF	(*NOLIST *LIST)	
OPTION: <u> </u>	PARMS: _____	
CMD OR PARM: _____		
LOG REQUESTS: *YES CF3—COMMAND ENTRY CF4—PROMPT (5,6 ONLY)		
CF6—DSPMSG QSYSOPR	CF7—DSPSBS	CF8—DSPSYS

OPTION 11: Display the status of all jobs submitted at a work station, in a job, or under a user profile. All jobs submitted by a SBMDKTJOB, SBMDBJOB, SBDCRDJOB or the SBMJOB commands that are still in the system are displayed. Jobs that were submitted with the DSPDBMJOB (*NO) parameter on the Submit Jobs commands are not displayed.

SYSTEM OPERATOR MENU

SYSTEM OPERATOR MENU		
SELECT ONE OF THE FOLLOWING:		
1. DSPJOBQ	(JOBQ)	
2. DSPOUTQ	(OUTQ)	
3. SNDMSG	TOMSGQ,(TYPE),MSG	
4. CALL	PROGRAM	
5. EXECUTE	COMMAND	
6. SBMJOB	(JOB),(JOBID),(CMD)	
7. STRPRTWTR	DEV,OUTQ	
8. DSPWTR	(WRITER)	
9. SBMDKTJOB	DEV,LABEL,(LOC)	
10. SBMDBJOB	FILE,(MEMBER)	
11. DSPSBMJOB		
12. DSPACTJOB	(RESET)	
80. DSPMNU	(MENU)	
90. SIGNOFF	(*NOLIST *LIST)	
OPTION: ___	PARMS: _____	
CMD OR PARM: _____		
LOG REQUESTS: <u>*YES</u> CF3—COMMAND ENTRY CF4—PROMPT (5,6 ONLY)		
CF6—DSPMSG QSYSOPR	CF7—DSPSBS	CF8—DSPSYS

OPTION 12: Displays performance and status information about all active jobs in the system. If you specify *YES in the first Parms field, the statistics are reset and a new measurement period begins. If you do not enter this parameter, the statistics displayed are for the current time period.

OPTION 80: Displays the COMMAND GROUPING MENU from which you can prompt for any command. You can also specify a specific command type menu.

OPTION 90: Signs you off the system as the System Operator. If you want to list the job log, enter *LIST in the first Parms field.

SYSTEM OPERATOR MENU

SYSTEM OPERATOR MENU

SELECT ONE OF THE FOLLOWING:

1. DSPJOBQ (JOBQ)	
2. DSPOUTQ (OUTQ)	
3. SNDMSG TOMSGQ,(TYPE),MSG	
4. CALL PROGRAM	
5. EXECUTE COMMAND	
6. SBMJOB (JOB),(JOBID),(CMD)	
7. STRPRTWTR DEV,OUTQ	
8. DSPWTR (WRITER)	
9. SBMDKTJOB DEV,LABEL,(LOC)	
10. SBMDBJOB FILE,(MEMBER)	
11. DSPSBMJOB (RESET)	
12. DSPACTJOB (MENU)	
80. DSPMNU (*NOLIST *LIST)	
90. SIGNOFF	

OPTION: _____ PARMS: _____

CMD OR PARM: _____

LOG REQUESTS: *YES CF3—COMMAND ENTRY CF4—PROMPT (5,6 ONLY)
 CF6—DSPMSG QSYSOPR CF7—DSPSBS CF8—DSPSYS

(B)

(C)

(D)

(A)

(E)

COMMAND OPTION PARAMETERS

(A)	(B)		(C)	(D)
OPTION FIELD	ASSOCIATED COMMAND	FIRST PARMS FIELD	SECOND PARMS FIELD	CMD OR PARM FIELD
1	DSPJOBQ	(* <u>ALL</u>) OR (JOB NAME)		
2	DSPOUTQ	(* <u>ALL</u>) OR (OUTQ NAME)		
3	SNDMSG	TOMSGQ NAME	(* <u>INFO</u>) OR (* <u>INQ</u>)	MSG
4	CALL	PROGRAM NAME		
5	ANY COMMAND			CMD
6	SBMJOB	(* <u>JOB</u> D) OR (JOB NAME)	(<u>Q</u> BATCH) OR (JOB NAME)	(* <u>JOB</u> D) OR (CMD)
7	STRPRTWTR	DEVICE NAME	OUTQ NAME	
8	DSPWTR	(* <u>ALL</u>) OR (WRITER NAME)		
9	SBMDKTJOB	DEVICE NAME	LABEL	(* <u>M</u> 1) OR (LOC)
10	SBMDBJOB	FILE NAME	(* <u>F</u> IRST) OR (MEMBER NAME)	
11	DSPSBMJOB			
12	DSPACTJOB	(* <u>N</u> O) OR (* <u>Y</u> ES)		
90	SIGNOFF	(* <u>N</u> OLIST) OR (* <u>L</u> IST)		

**FUNCTIONS VALID
ON THE
SYSTEM OPERATOR MENU**

KEY	FUNCTION
CF3	Command Entry Screen
CF4	Prompt Key
CF6	Display Messages in QSYSOPR
CF7	Display Subsystems
CF8	Display System
HELP	Second—Level Display

Display Subsystems

```

2/23/83      15:10:14      SUBSYSTEM JOBS — QINTER      +++
JOB NAME     USER      NBR      TYPE      STATUS
LWS03       I478885     017563   INTER     ACTIVE
LWS01       OPER1      017570   INTER     ACTIVE
LWS01       QSECOFR   017571   INTER     SYSREQ
LWS05       OPER1     017574   INTER     SYSREQ
LWS05       QSECOFR   017580   INTER     ACTIVE

1-DSPJOB     2-SPL FILES   4-HLDJOB     6-RLSJOB     9-CNLJOB
CF5-REDISPLAY
  
```

- * QINTER (DISPLAYED)
- * QBATCH
- * QSPL

DSPSYS Command

```

1/31/83 13:08:14 SYSTEM DISPLAY
SUBSYSTEM SBS ACT TOTAL SYS POOLS BY SBS POOL ID
NAME NUMBER JOBS STATUS STORAGE 1 2 3 4 5 6 7 8 9 10
QBATCH 008608 0 ACTIVE 0 K 2
QCTL 008605 1 ACTIVE 0 K 2
QINTER 008606 4 ACTIVE 0 K 2 2
QSPL 008607 1 ACTIVE 70 K 2 2 3
  
```

1-DSPSBS 2-DSPSBSD 9-TRMSBS CF3-DSPSYSSTS CF5-Redisplay

Command Messages. . .

SYSTEM OPERATOR MENU

SELECT ONE OF THE FOLLOWING:

- 1. DSPJOBQ (JOBQ)
- 2. DSPOUTO (OUTQ)
- 3. SNDMSG TOMSGO,(TYPE),MSG PROGRAM
- 4. CALL COMMAND
- 5. EXECUTE (JOB),(JOBID),(CMD) DEV,OUTQ
- 6. SBMJOB (WRITER)
- 7. STRPRTWTR DEV,LABEL,(LOC) FILE,(MEMBER)
- 8. DSPWTR (RESET)
- 9. SBMDKTJOB (MENU)
- 10. SBMDBJOB (*NOLIST *LIST)
- 11. DSPSBMJOB
- 12. DSPACTJOB
- 80. DSPMNU
- 90. SIGNOFF

OPTION: — PARS: _____

CMD OR PARM: STRSBS SBSD (QINTER) _____

LOG REQUESTS: *YES CF3—COMMAND ENTRY CF4—PROMPT (5,6 ONLY)
CF6—DSPMSG QSYSOPR CF7—DSPSBS CF8—DSPSYS

Subsystem with name of QINTER already started.

are displayed on the bottom of the screen

Position Cursor and depress HELP key

SECOND LEVEL MESSAGE DISPLAY
Msg Id: CPF1010 Sev: 40 Type: ESCAPE 02/02/83 12:27:40
Job: User: Nbr:
From pgm: QWCCSUUC Inst: OOF E To pgm: QCL Inst: 004C
Subsystem with name of QINTER already started.

Another subsystem description with the same name is active.
Wait until the subsystem terminates to submit the command again.

. . . to get Second-Level Messages

SYSTEM UTILITY

SAVE/RESTORE

3 MAJOR FUNCTIONS:

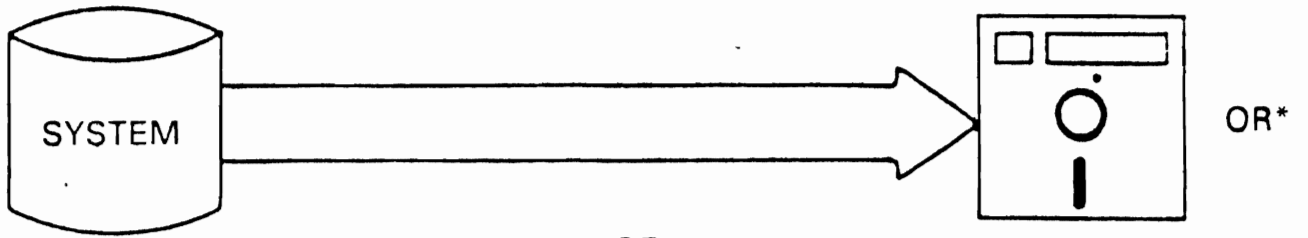
- SAVE OBJECTS
- RESTORE OBJECTS
- HISTORY INFORMATION

DEVICES

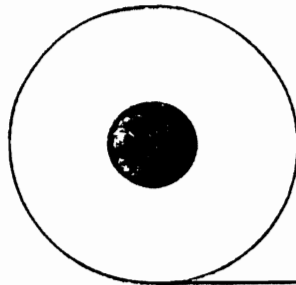
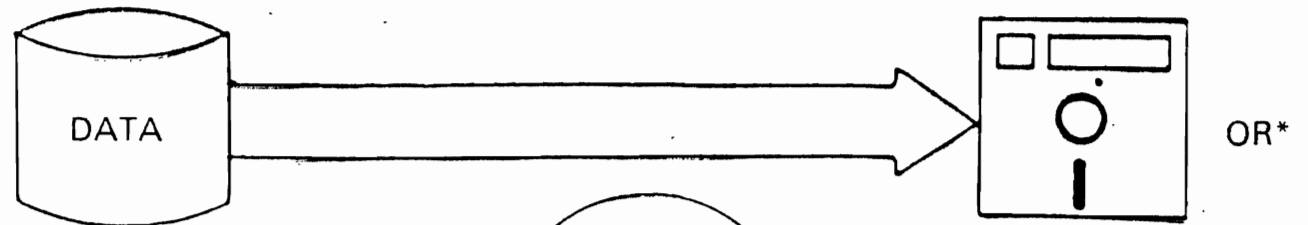
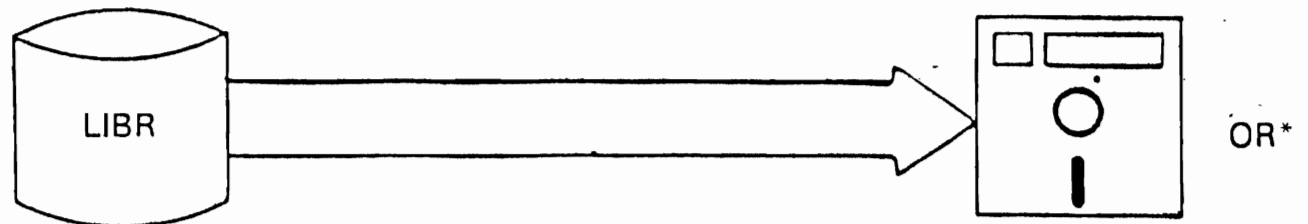
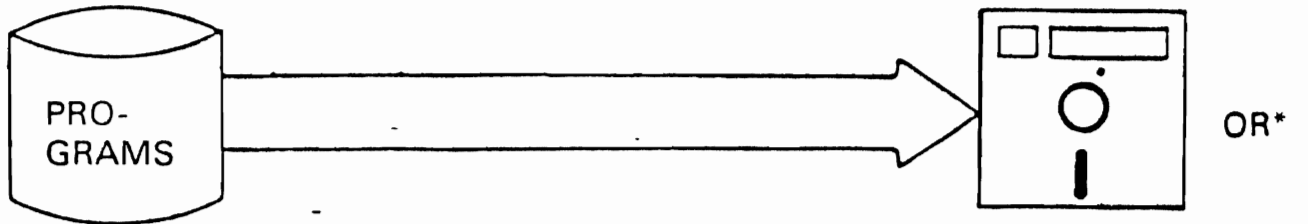
- DISKETTE MAGAZINE
- TAPE



SAVE



OR

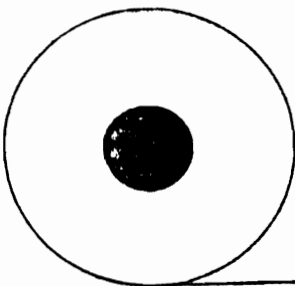
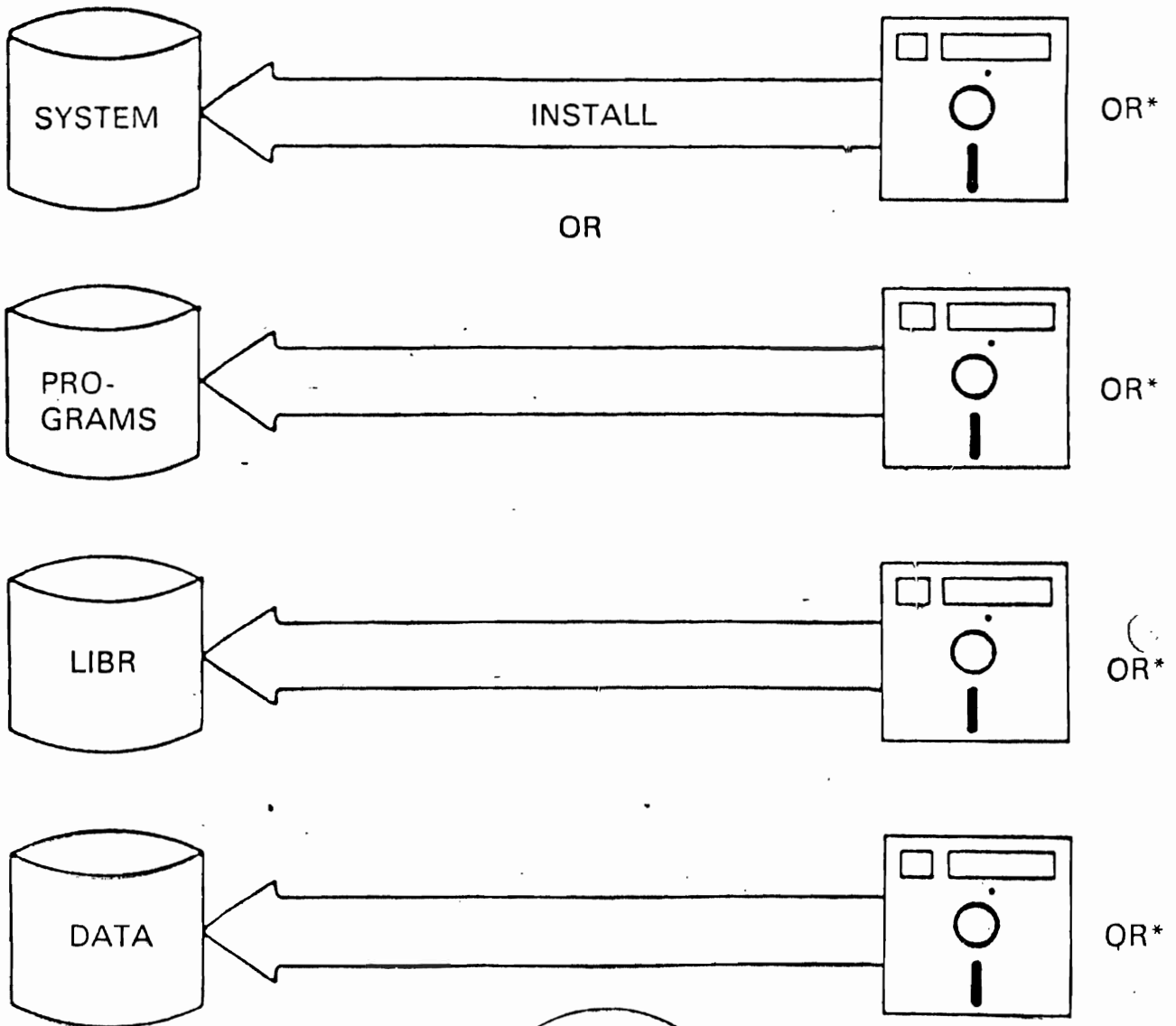


*TAPE

SR-2



RESTORE



*TAPE

SR-3



YOU CAN SAVE AND RESTORE:

- A SINGLE OBJECT IN A LIBRARY
- A GROUP OF OBJECTS BY GENERIC NAME
- A GROUP OF OBJECTS BY GENERIC NAME AND OBJECT TYPE:
 - COMMAND
 - MESSAGE FILES
 - TABLES
 - PROGRAMS
 - PRINT IMAGES
 - SUBSYSTEM DESCRIPTIONS
 - FILES
 - JOB DESCRIPTIONS
 - DATA AREAS
 - JOURNALS
 - FORMS CONTROL TABLE
- AN ENTIRE LIBRARY
- ONLY THE CHANGED OBJECTS IN A LIBRARY
- THE SYSTEM (QSYS, DEVICE CONFIGURATION, AND USER PROFILES)
- ALL LIBRARIES OTHER THAN THE SYSTEM

YOU CANNOT SAVE:

- SPOOL QUEUES
- MESSAGE QUEUES
- DAMAGED OBJECTS
- OBJECTS IN USE
- INDIVIDUAL MEMBERS (SAVLIB, SAVSYS, SAVOBJ)
- SAVCHGOBJ SAVES ONLY CHANGED MEMBERS

WHEN AN OBJECT IS SAVED THE FOLLOWING INFORMATION IS SAVED:

- OBJECT NAME
- OBJECT TYPE
- DATE AND TIME OF THE SAVE
- STORAGE REQUIRED IN THE SYSTEM
- TEXT DESCRIPTION
- OWNER NAME
- ANY PUBLIC AUTHORITY
- THE OBJECT ITSELF

SAVE

- SAVE INFORMATION KEPT BY SYSTEM
 - PHYSICALLY LOCATES BACKUP MEDIA
PREVENTS RESTORING NON CURRENT BACKUP
- SAVE CAN ONLY OCCUR WHEN SYSTEM IS GIVEN EXCLUSIVE *EXCLRD CONTROL OF AN OBJECT
 - USER MUST SCHEDULE SAVES IN ORDER TO
LEAVE FILES AVAILABLE FOR ONLINE
APPLICATIONS
- SAVING/INSTALLING THE SYSTEM REQUIRES A DEDICATED SYSTEM, ALL SUBSYSTEMS TERMINATED
- REQUIRES DISKETTE INITIALIZED TO SAVE/RESTORE FORMAT OR STANDARD LABELED TAPE
- NO LIMIT ON NUMBER OF TAPES/DISKETTES USED FOR SAVE/RESTORE

FREE STORAGE FUNCTION

STORAGE USED FOR AN OBJECT NOT NEEDED ON LINE CAN BE FREED WHEN THE OBJECT HAS BEEN SAVED

NOT A DELETE FUNCTION, MOVING, RENAMING CAN STILL BE DONE

THE SYSTEM RETAINS THE DESCRIPTION OF THE FILE, WHERE IT IS SAVED AND OTHER INFORMATION

SAVE OBJECT COMMAND

SAVOBJ OBJ(*ALL| generic-object-name | object-name)
LIB(library-name)
OBJTYPE(*ALL | object-type)
DEV(QDKT | device-name)
LOC(*M12 | *M2 | *S1 | *S2 | *S3 | *S12 | *S23 | *S123
*FIRST | *CURRENT | *SEARCH | starting-diskette-pos)
VOL(*MOUNTED | volume-identifier)
CLEAR(*NO | *YES)
STG(*KEEP | *FREE)
ENDOPT(*REWIND | *UNLOAD | *LEAVE)
SEQNBR(*END | sequence-number)
EXPDATE(*PERM | expiration-date)
PRECHK(*NO | *YES)
ACCPTH(*NO | *YES)

EXAMPLES OF SAVING OBJECTS

- SAVOBJ OBJ(JOHN) LIB(SAM)

OBJECT JOHN IN LIBRARY SAM IS SAVED

- SAVOBJ OBJ(PAY*) LIB(TOM) STG(*FREE)

ALL PROGRAMS AND FILES STARTING WITH PAY IN LIBRARY TOM ARE SAVED,
AND AT THE CONCLUSION OF THE SAVE THEIR STORAGE IS FREED

RESTORE OBJECT COMMAND

RSTOBJ OBJ(*ALL | generic-object-name | object-name)
SAVLIB(library-name)
OBJTYPE(*ALL | object-type)
DEV(QDKT | device-name)
LOC(*M12 | *M1 | *M2 | *S1 | *S2 | *S2 | *S3 | *S12 | *S23 | *S123
*FIRST | *CURRENT | *SEARCH | starting-diskette-pos)
VOL(*SAVVOL | *MOUNTED | volume-identifier)
OPTION(*ALL | *NEW | *OLD | *FREE)
MBROPT(*MATCH | *ALL | *NEW | *OLD)
SAVDATE(date-when-saved)
SAVTIME(time-when-saved)
RSTLIB(*SAVLIB | library-name)
ENDOPT(*REWIND | *LEAVE | *UNLOAD)
SEQNBR(*SEARCH | sequence-number)
OUTPUT(*NONE | *LIST)

EXAMPLES OF RESTORING OBJECTS

RSTOBJ OBJ(PAYROLL) SAVLIB(PAYLIB) OBJTYPE(*PGM)
PAYROLL PROGRAM RESTORED TO LIBRARY PAYLIB

RSTOBJ OBJ(PAY*) SAVLIB(PAYLIB) VOL(ANYXXX)
SAVDATE(102279) SAVTIME(143000)

RESTORE ALL OBJECTS NAMED PAY TO LIBRARY PAYLIB FROM
DISKETTE LABELED ANYXXX WHICH WAS SAVED AT 2:30 PM ON
10/22/79

SAVE LIBRARY COMMAND

SAVLIB LIB(*NONSYS | library-name)
DEV(QDKT | device-name)
LOC(*M12 | *M1 | *M2 | *S1 | *S2 | *S3 | *S12 | *S23 | *S123
*FIRST | *CURRENT | *SEARCH | starting-diskette-pos)
VOL(*MOUNTED | volume-identifier)
CLEAR(*NO | *YES)
STG(*KEEP | *FREE)
ENDOPT(*REWIND | *UNLOAD | *LEAVE)
SEQNBR(*END | sequence-number)
EXPDATE(*PERM | expiration-date)
PRECHK(*NO | *YES)
ACCPH(*NO | *YES)

EXAMPLE: SAVLIB LIB(BILL) LOC(*S1) CLEAR(*YES)

LIBRARY BILL SAVED ON DISKETTE AT SLOT ONE. DISKETTE WILL
BE CLEARED BEFORE SAVING.

RESTORE LIBRARY COMMAND

RSTLIB SAVLIB(*NONSYS | library-name)
DEV(QDKT | device-name)
LOC(*M12 | *M1 | *M2 | *S1 | *S2 | *S3 | *S12 | *S23 | *S123
*FIRST | *CURRENT | *SEARCH | starting-diskette-pos)
VOL(*SAVVOL | *MOUNTED | volume-identifier)
OPTION(*ALL | *NEW | *OLD | *FREE)
MBROPT(*MATCH | *ALL | *NEW | *OLD)
SAVDATE(date-when-saved)
SAVTIME(time-when-saved)
RSTLIB(*SAVLIB | library-name)
ENDOPT(*REWIND | *UNLOAD | *LEAVE)
SEQNBR(*SEARCH | sequence-number)

EXAMPLE: RSTLIB LIB(BILL) LOC(*S1) VOL(BILL) OPTION(*ALL)

ALL OBJECTS ARE RESTORED FROM VOLUME BILL MOUNTED IN
SLOT ONE.

SAVING CHANGED OBJECTS

- WORKS ON A LIBRARY BASIS
- FOR DATA BASE FILES ONLY CHANGED MEMBERS SAVED
- FILES BEING JOURNALED. WILL NOT BE SAVED
- MESSAGE, JOB, OUTPUT QUEUES NOT SAVED

SPECIFY DATE AND TIME OR DEFAULT TO LAST SAVED LIB DATE AND TIME

**FUNCTION: TO INITIALIZE ALL DISKETTES IN
A MAGAZINE**

INZDKT LOC(*M1 1 10)

NEWVOL(WILKS)

FMT(*SAVRST)

CHECK(*NO)

DISPLAY DISKETTE

DSPDKT (LOC(*S1) DATA(*SAVRST)

```

5/28/82 12:06:51  SAVE/RESTORE VOLUME - IWCLS  OBJECTS
Library: IWLIB      Objects:
Save date/time: 01/29/82 9:31:02  64 Save cmd: *PERM  SAVLIB
File label ID: IWLIB.Q001      Expiration:
OBJECT  OBJECT  SUB  OWNER  SYS STG  DATA
NAME    TYPE    TYPE NAME  REQUIRED  ON DKT
IWLIB   *LIB    DFU  QSECOFR 49664    YES
APD450  *PGM    CL   QSECOFR 29696    YES
APL999  *PGM    CL   QSECOFR 10240    YES
APO420  *PGM    ORY  QSECOFR 24064    YES
APR01   *PGM    RPG  QSECOFR 28672    YES
APR150  *PGM    RPG  QSECOFR 35840    YES
APR200  *PGM    RPG  QSECOFR 29184    YES
APR210  *PGM    RPG  QSECOFR 22016    YES
APR300  *PGM    RPG  QSECOFR 29184    YES
APR55X  *PGM    RPG  QSECOFR 28672    YES
APR555  *PGM    RPG  QSECOFR 29184    YES
GPL001  *PGM    CL   QSECOFR 13312    YES
INL001  *PGM    CL   QSECOFR 9728     YES
IWEND   *PGM    CL   QSECOFR 30720    YES
IWEND2  *PGM    CL   QSECOFR 11776    YES
IWSETUP *PGM    CL   QSECOFR 31232    YES +
1-Display saved members      CF3-Next volume
                                CF6-Previous volume

```

INITIALIZE TAPE

INZTAP

DEV(QTAPE1)

NEWVOL(IWLIB)

NEWOWNID(CLASSLIB)

CHECK(*NO)

DISPLAY TAPE

DSPTAP

DEV(QTAPE1)

LABEL(*ALL)

OUTPUT(*LIST)

CHECK DISKETTE

Check Diskette (CHKDKT) Prompt

Enter the following:

Diskette location

Unit identifier:

Starting diskette:

Ending diskette:

Volume identifier:

Suffix (*NO or *YES)

File label name:

Creation date to check for:

LOC

R

*S1

*FIRST

*LAST

*LOC

*NO

*NONE

*NONE

VOL

P

SUFFIX

P

LABEL

CRTDATE

TO GET THE VOLUME ID. . .

DISKETTE VOLUME ID

LOW LEVEL MESSAGES

:: CHKDKT LOC(*S1)
Volume ID KIM2 found on diskette at S1 on device QDKT.

SAVOBJ vs SAVLIB vs SAVCHGOBJ

Advantages:

SAVOBJ: You can save only the objects you need out of a library

SAVLIB: You can save all the objects in a library with one command

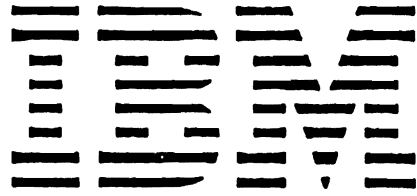
SAVCHGOBJ: You only have to save the objects that have changed

Disadvantages:

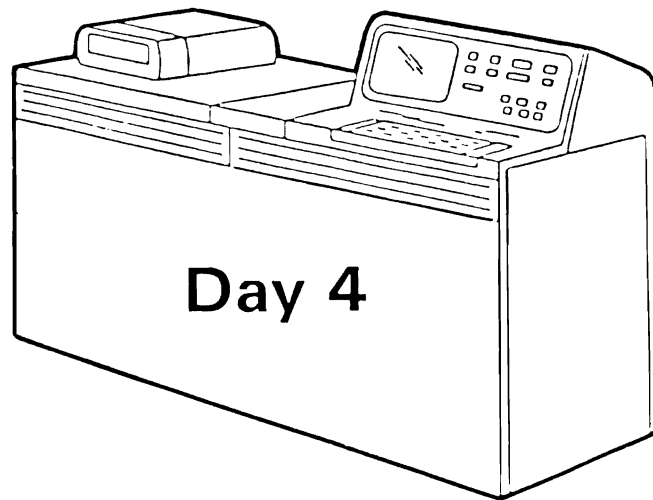
SAVOBJ: The only way you can restore an object saved using this command, is using the RSTOBJ command

SAVLIB: You have to save everything in the library

SAVCHGOBJ: You can only save one library at a time



SYSTEM/38
SYSTEM OPERATOR
WORKSHOP



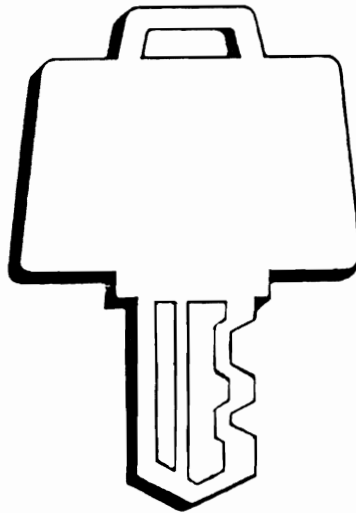
DAY 4 OBJECTIVES

- System Problem Determination
- Possible Program Problems
- Problem Investigation Techniques

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SYSTEM/38
PROBLEM DETERMINATION
GUIDE



The key to Solving Your Problems

SYSTEM/38 PROBLEM DETERMINATION GUIDE INCLUDES:

PDP Codes and Error Log Numbers

Collecting Information

Diskette and Tape Media Maintenance

Examples of System Information Useful in
Problem Determination

Using CSNAP to Find Line and Control Unit
Problems

System Problem Determination Procedure

- 1. Determine hexadecimal light code**
- 2. Look up hexadecimal code in Chapter 4 of the IBM S/38 Problem Determination Guide**
- 3. Take whatever action is specified in the "action" column**
- 4. If that doesn't help, then call your service representative**

CPF 4244 Not authorized to output queue &6.&7.

Obtain authority for the output queue or the library from the security officer or owner. To put a file on an output queue, you must have *ADD authority to the queue and *READ authority to the library that contains the queue.

Severity: 40 PDP code: J4

System Action: The requested function was not performed.

Variable	Format
&1 UFCB file name	*CHAR 10
&2 ODP file name	*CHAR 10
&3 ODP library name	*CHAR 10
&4 ODP device/member name	*CHAR 10
&5 ODP DM control field	*CHAR 24
&6 Output queue name	*CHAR 10
&7 Library name or *LIBL	*CHAR 10
&8 Reserved	*CHAR 0
&9 Reserved	*CHAR 0
&10 Blanks	*CHAR 12
&11 First UFCB	*SPP 400
&12 Current UFCB	*SPP 400
&13 Open data path	*SYP
&14 DM communications queue	*SYP
&15 File control block	*SYP

Default program: QDMBKOUT

CPF 4245 Print image or translate table for file previously deleted.

Create print image or translate table again (CRTPRTIMG or CRTTBL command).

Severity: 40 PDP code: L

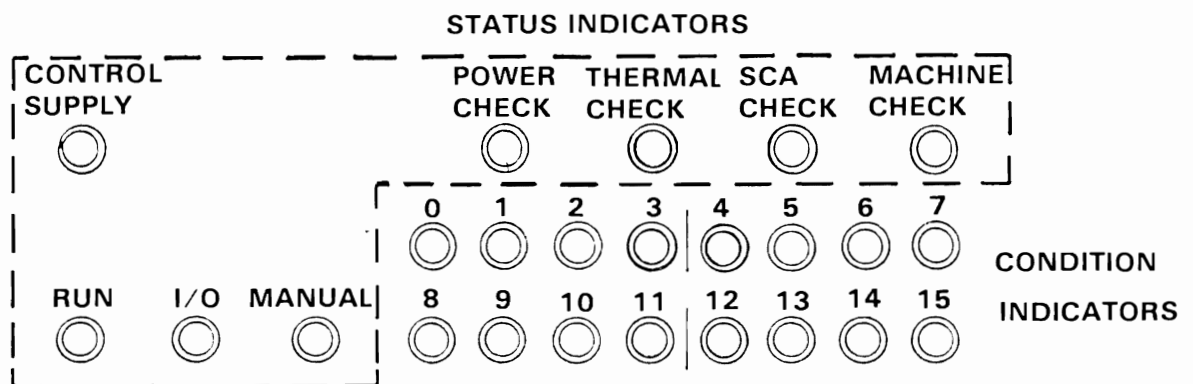
System Action: The requested function was not performed.

Variable	Format
&1 UFCB file name	*CHAR 10
&2 ODP file name	*CHAR 10
&3 ODP library name	*CHAR 10
&4 ODP device name	*CHAR 10
&5 Offset to pointer	*CHAR 24
&6 Reserved	*CHAR 0
&7 Reserved	*CHAR 0
&8 Reserved	*CHAR 0
&9 Reserved	*CHAR 0
&10 Reserved	*CHAR 0
&11 First UFCB	*SPP 400
&12 Current UFCB	*SPP 400
&13 Open data path	*SYP
&14 DM communications queue	*SYP
&15 Device file control block	*SYP
&16 Logical unit description	*SYP
&17 MI response queue	*SYP
&18 Active source sink req block	*SYP

Default program: QDMBKOUT












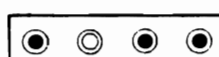

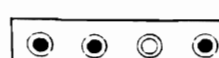




OPERATOR/SERVICE PANEL



**NOTE: Status Indicators
Condition Indicators**

Each Group of Lights
Represent a Number or Character

	=	0
	=	1
	=	2
	=	3
	=	4
	=	5
	=	6
	=	7
	=	8
	=	9
	=	A
	=	B
	=	C
	=	D
	=	E
	=	F

How to Complete the Form

You fill in the information asked for, in the appropriate spaces.

For example, if your system stopped working, and the following occurred:

- The console showed the code 106AF365.
- The system lights showed the code F001-085A.

You would complete the form as follows. You would report 106AF365 as your system reference code.

PD-9A1

Example:

IBM SYSTEM/38 PROBLEM SUMMARY FORM

1. Account Name: ABC COMPANY

2. System Operator: L. MILLER

3. Date: 6/18/83

4. Time: 10:00:00

5. Lights (mark with an X any lights that are on):

Control Supply	<input type="checkbox"/>	Power Check	<input type="checkbox"/>	Thermal Check	<input type="checkbox"/>	SCA Check	<input type="checkbox"/>	Machine Check	<input checked="" type="checkbox"/>
Run	<input type="checkbox"/>	0	<input type="checkbox"/>	1	<input type="checkbox"/>	2	<input type="checkbox"/>	3	<input type="checkbox"/>
I/O	<input type="checkbox"/>	4	<input checked="" type="checkbox"/>	5	<input checked="" type="checkbox"/>	6	<input checked="" type="checkbox"/>	7	<input checked="" type="checkbox"/>
Manual	<input type="checkbox"/>	8	<input checked="" type="checkbox"/>	9	<input checked="" type="checkbox"/>	10	<input checked="" type="checkbox"/>	11	<input checked="" type="checkbox"/>
		12	<input checked="" type="checkbox"/>	13	<input checked="" type="checkbox"/>	14	<input checked="" type="checkbox"/>	15	<input checked="" type="checkbox"/>

6. Record the following:

a. Code shown on the system console screen (if any): LC6AF (See Note)

b. Indicator code: 025A (See Note)

c. First 8 characters of the error log number (if any): 00000000 (See Note)

Note: When you call for service, report the first code you record in this section. Call this code the **system reference code**.

7. Record the following:

a. Completion code (if any):

b. Other codes (if any):

8. Devices affected by the problem (if any):

Name(s)	Machine type	Attached control unit	Attached line (if any)

9. Latest release of CPF: 5 0

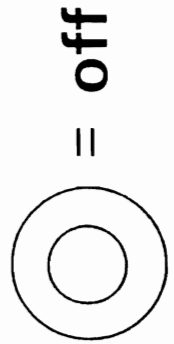
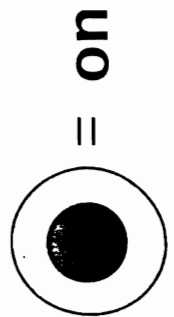
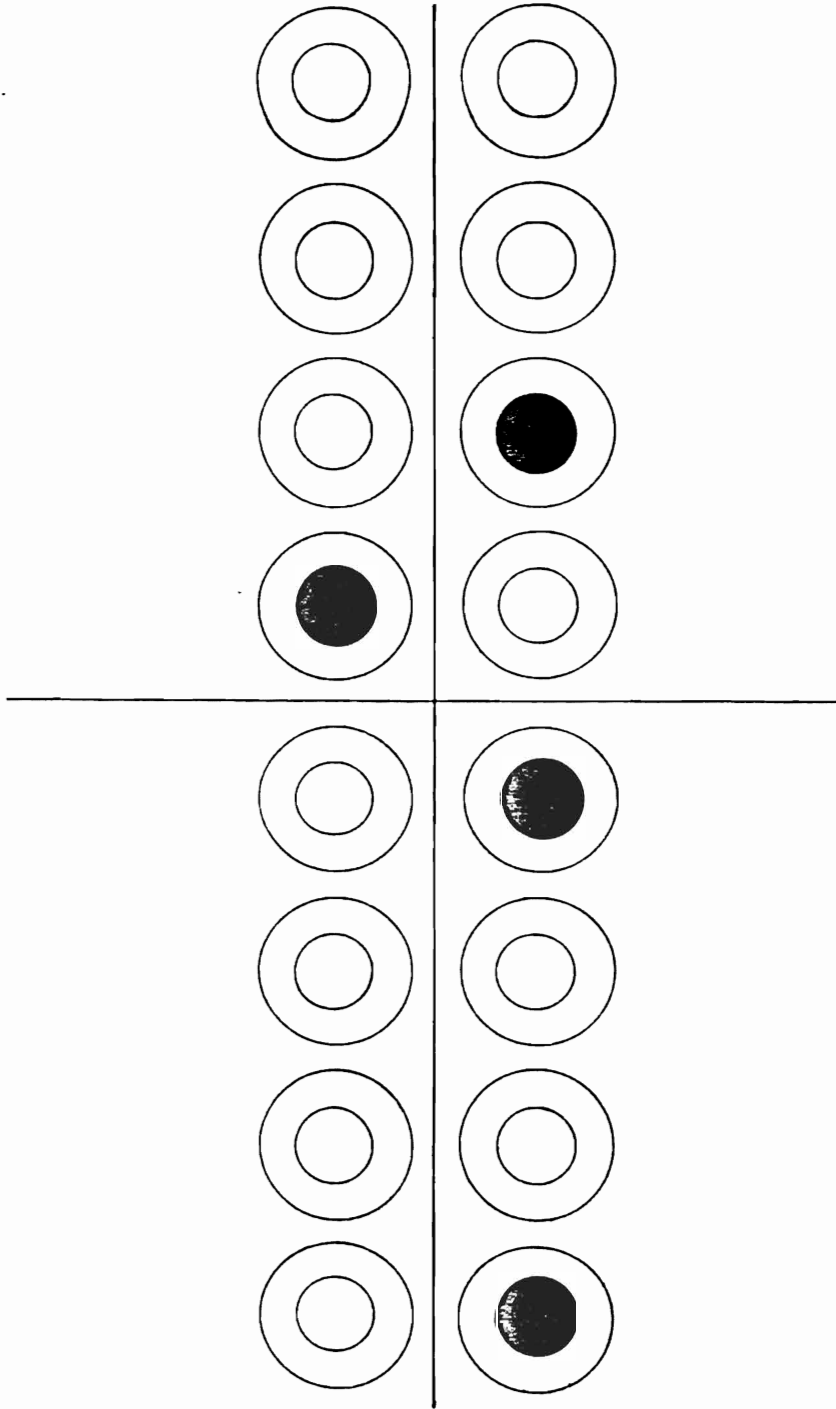
10. Describe the problem: _____

Also, gather information you collected.

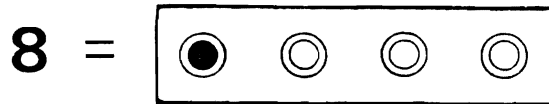
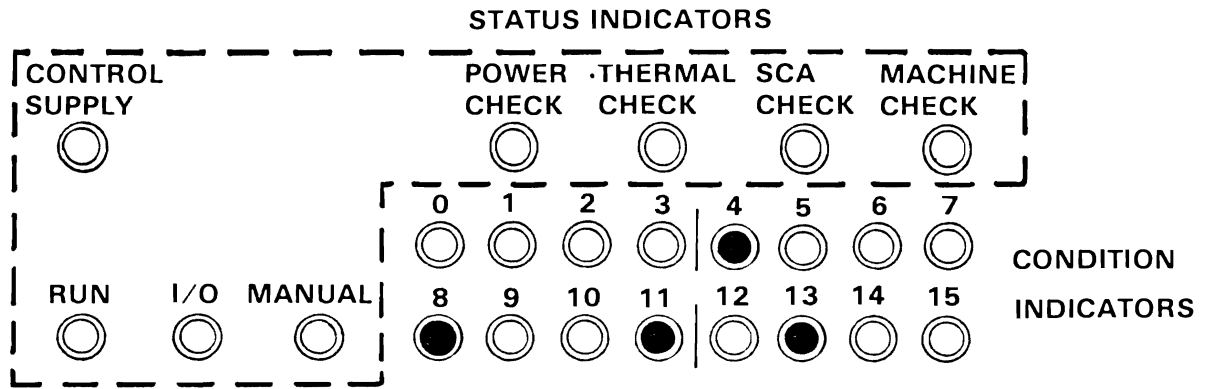
This is my system reference code

PD-9A2

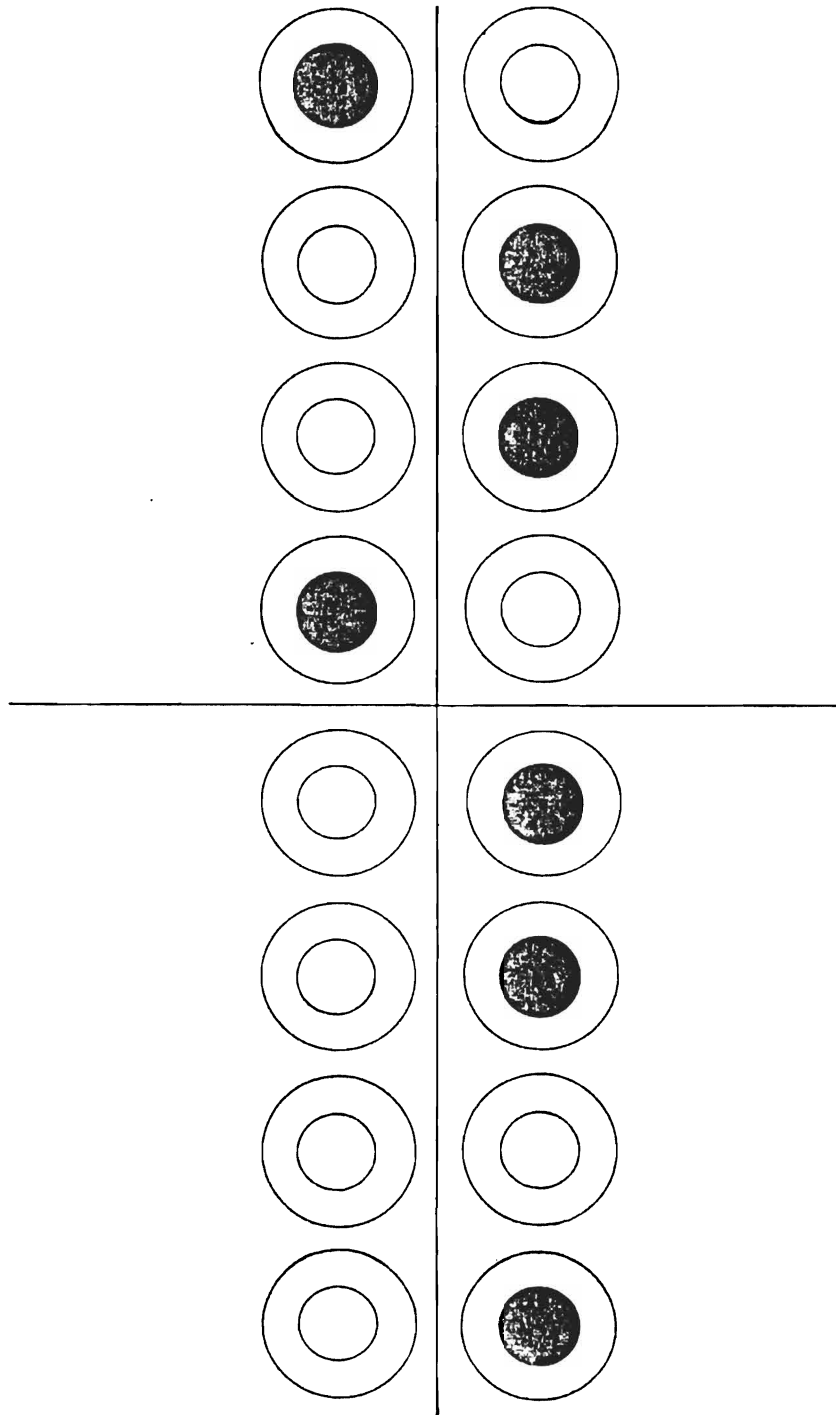
What 4-Digit Code Does This Represent?



LIGHT CODE REPRESENTATION



What 4-Digit Code Does This Represent?

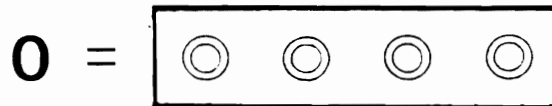
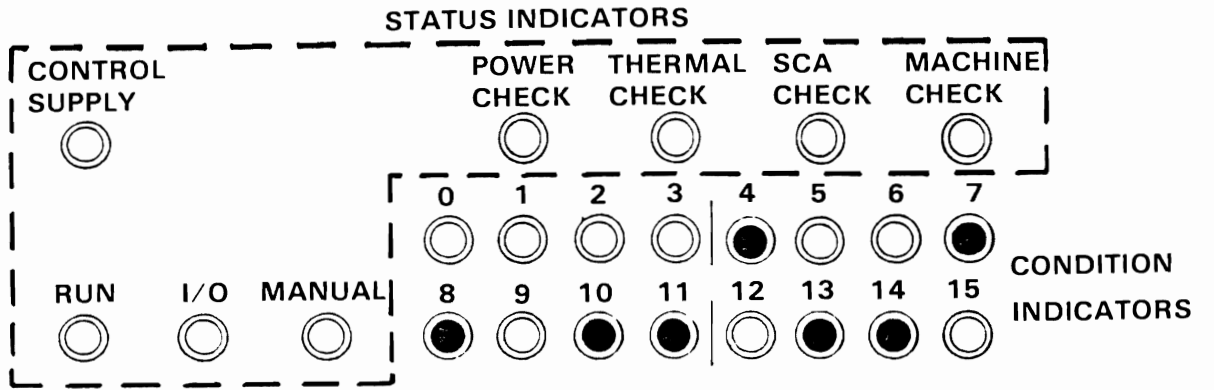


= on

= off



LIGHT CODE REPRESENTATION



MACHINE CHECK EXCEPTIONS

Warning: Beware of the light patterns that represent the following Error Codes:

- 3F10: Storage Directory Rebuild
- 3F30: Address Space Regeneration
- 3F50: Authority Initialization

In Conclusion. . . .

The Four Steps to CPF Problem Determination:

- Determine hex code
- Look up hex code in IBM Problem Determination Guide
- Take specified action
- Then, if needed, call service representative

POSSIBLE PROGRAM PROBLEMS

- Loop: A series of instructions that the system performs many times until a certain condition is met. If the ending condition is never met, you have an infinite loop.
- Inefficiently Designed Programs
- Lock-out: when several jobs are waiting to use the same object.
- System Programming Problems: If your system is not programmed for the amount or type of work it has, the system could take unusually long to finish the job.
- Machine Programming Problems: A machine programming problem or CPF could keep your job from finishing

WHEN YOUR JOB IS LOOPING . . .

- The run indicator on the operator/service panel stays on
- The run indicator and the I/O indicator blink on and off continually
- The job shows an ACTIVE, ACT, or EXC status on any status display
- The input inhibited light does not go off (on a work station job)
- Excessive printer, diskette, card, or tape output is produced
- Other jobs in the same subsystem work slowly or stop

DISPLAY ACTIVE JOBS DISPLAY

6/01/82 8:54:15 ACTIVE JOBS DISPLAY CPU: .0%

Elapsed: 00:00:00

-----ELAPSED-----

Active jobs: 8

SBS/JOB	TYP	PL	PTY	CPU	INT	RSP	AUXIO	CPU	FUNCTION	STS
QBATCH	SBS	2	0	.4			0	.0%		DEQW
QCTL	SBS	2	0	1.2			0	.0%		DEQW
QCONSOLE	INT	2	10	10.8			0	.0%	*-CMDENT	DEQW
QINTER	SBS	2	0	3.8			0	.0%		DEQW
LWS02	INT	2	20	74.9	0	.0	0	.0%	C-DSPACTJOB	EXC
QSPL	SBS	2	0	.3			0	.0%		DEQW
QSYSARB	SYS	2	0	4.8			0	.0%		EVTW
SCPF	SYS	2	52	30.7			0	.0%		EVTW



1-DSPJOB 2-Spl files 4-HLDJOB 5-Inv stack 6-RLSJOB 7-Locks
 8-Exclude 9-CNLJOB CF5-Redisplay CF6-Restart CF7-Reset CF8-DSPSYSSTS

Large % of CPU

While you are trying to determine the cause of the job problem, hold the job:

```
HLDJOB JOB(FAILJOB) SPLFILE(*YES)
```

If you cannot quickly find the cause, cancel the job:

```
CNLJOB JOB(FAILJOB) OPTION(*IMMED)
```

If, after 30 minutes the job has not been cancelled re-
IMPL.

After the system has finished IMPL, check the job log to find information that might describe the problem:

```
DSPLOG JOB(FAILJOB)
```

MESSAGE QUEUE- QSYSOPR Delivery: *HOLD Msgq sev: 00
Press READY or START on device QSYSVRT unit 5211-0002.
Verify alignment on device QSYSVRT (I G R N C).

?: |

Wtr QSYSVRT stopped printing at or after page 1 of file QS
Lost contact with device LWS06.
Access path rebuilt for mbr QADFULG1 file QADFULG1.QIDU.
Access path rebuilt for mbr QSALEFILE file QSALEFILE.QIDU.
Access path rebuilt for mbr QAQRYLG1 file QAQRYLG1.QIDU.
Access path rebuilt for mbr QAQRYLG2 file QAQRYLG2.QIDU.
Press READY or START on device QSYSVRT unit 5211-0002.
Immediate cancel initiated for job KIM.QSECOFR.008027 by u
Location S2 empty on dev QDKT.(C R) ERR 0012-0303-6197A8FD

?:

CF6 - Remove a message CF7 - Display all CF8 - Remove all

**Look in QSYSOPR for
any unanswered messages**

PROBLEM DETERMINATION PROCEDURE CODES (PDP)

Each message sent by the system is given a 1 or 2 character PDP code which identifies the reason the message was sent. To find the PDP code refer to your message.

Some PDP Code Descriptions:

- J: Object Accessing Error
- K: Hardware Error
- L: Intervention Required
- N: Nonobject Accessing Error
- P: Program Structure Error
- R: Resource Availability Error
- T: Time Limit Violation
- V: Conflict Situation
- Y: Internal Indicator

COLLECT INFORMATION ON PROBLEMS

- Logged information
- Dumps of information
- Authorized Analysis Reports (APAR)
- Verifying Devices



Collecting this information ahead of time saves your service representative time and allows you to perform most normal activities while your machine is being serviced

LOGGED INFORMATION

Records of system actions, job performance, and system service that tell a service representative what kind of activities have occurred on the system. The System/38 has the following logs to help you:

- History and Service Logs

DSPLOG LOG(QSRV) OUTPUT(*LIST)

- Programming Change Logs

DSPLOG LOG(QCHG)

PERIOD((*AVAIL *BEGIN) (*AVAIL *END))

OUTPUT(*LIST)

- Machine Internal Data

LSTERRLOG TYPE(*DEV)

LSTINTDTA TYPE(*ECLOG)

- Job Logs

SIGNOFF LOG(*LIST)

DUMPS AND TRACES

Dumps contain data copied from the system internal storage in readable form to an external media, such as a printer. Traces track internal machine activities when a job is executing. On the System/38 there are:

- Message Dumps
- Service Mode Dumps and Traces

```
SRVJOB JOB(WS03)
DMPJOB
DMPOBJ OBJ(ORDERIN.ORD) OBJTYPE(*FILE)
DMPSYSOBJ
TRCJOB
TRCJOB SET(*OFF)
TRCJOB SET(*CNL)
ENDSRV
```

DEVICE VERIFICATION

Device Verification involves entering commands to test a device. The commands to test a device are as follows:

- Verify Printer

VFYPRT DEV(WSP01)

- Start Confidence Checker

STRCNFCHK DEV(QDKT QCARD96) TIME(60)

Confidence Checker

CONFIDENCE CHECK STATUS DISPLAY

DEVICE NAME	STATUS	ACTION
DISKETTE		—
MFCU	ERROR	—

1 - Cancel device
2 - Hold device

3 - Release device

STRCNFCHK DEV(QDKT QCARD96) TIME(60)

WHAT RELEASE LEVEL DO I HAVE?

DSPDTAARA	Q5714SS1.QSYS	—	CPF
	Q5714RG1.QRPG	—	RPG
	Q5714IDU.QIDU	—	IDU
	Q5714CV2.QS3E	—	REFORMAT

5/05/83 16:42:41 DATA AREA DISPLAY
Data area: Q5714SS1 Library: QSYS
Type: *CHAR
Length: 14
Text description: CPF RELEASE/MODIFICATION LEVEL
Value: VALUE
OFFSET *...+.....1.....+.....2.....+.....3.....+.....4.....+.....5
0 'R05M00 830610'

DISPLAY PROGRAM CHANGES
DSPPGMCHG LIB(QRPG)

5714SS1 R04 M01 820910 PROGRAMMING CHANGE STATUS

Library - QRPG

PPID	PC	PPREL	STATUS
5714RG1	04105	R04M01	Permanently applied
5714RG1	04104	R04M01	Permanently applied
5714RG1	04103	R04M01	Supersceded
5714RG1	04102	R04M01	Permanently applied
5714RG1	04101	R04M01	Supersceded
5714RG1	X0475	R04M01	Supersceded
5714RG1	X0466	R04M01	Supersceded

Displays programming changes (PCs) and locally generated programming changes (patches) for a specified program product and library

STAND — ALONE DUMPS

While going through the process of problem determination, you may be required to take either or both of the following STAND—ALONE DUMPS:

- **Main Storage Stand—Alone Dump:**
The contents of main storage are copied onto diskettes.
- **Virtual Storage Stand—Alone Dump:**
The contents of all of virtual storage are copied onto diskettes.

SUGGESTED DAILY SCHEDULE WITH BATCH LABS

	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
9:00	INTRODUCTION	REVIEW	REVIEW	REVIEW
9:30	ROLE OF AN OPERATOR	SYS/REQUEST & BREAK		
10:00	BREAK	MESSAGE HANDLING	BREAK	BREAK
10:30	USE OF WORK STATIONS	MONITORING SYSTEM MONITORING SYSTEM SUPPLIED DEVICES	USE OF SYSTEM OPERATORS MENU	P R O B L E M
11:00	LAB - WORK STATIONS			DETERMINATION AND LAB
11:30				
12:00	L U N C H	L U N C H	L U N C H	
1:00	STARTUP OF CPF	A B	SYSTEM OPERATORS MENU	
1:30	ENTERING CONTROL LANGUAGE COMMANDS	DEVICES AND MESSAGES		
2:00		SUBSYSTEMS	SHUTDOWN OF CPF	
	BREAK	A N D		
3:00	ENTERING CL COMMANDS (cont)	JOB PROCESSING	SAVE RESTORE	
3:30	L A B	L A B	L A B	
4:00		SUBSYSTEM AND JOB PROCESSING	SAVE RESTORE	
4:30	CL COMMANDS			
5:00				

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