

TABLE OF CONTENTS

0.0	TIMER TEST SEQUENCE:
1.0	GENERAL INFORMATION:
1.1	MINIMUM CONFIGURATION
1.2	LOADING PROCEDURES
1.3	MESSAGE FORMAT
1.4	COMMENTS
2.0	SPECIAL TOOLS & ADDITIONAL DOCUMENTS:
2.1	SPECIAL TOOLS: WRAP CONNECTOR P/N 1632917. WRAP CONNECTOR P/N 1633835.
2.2	ADDITIONAL DOCUMENTS:
3.0	PURPOSE:
3.1	'AUTO' MODE MAPS:
3.2	'MANUAL' MODE MAPS:
3.3	'PAPER ONLY' MAPS:
3.4	'FAILURE ONLY' MAPS:
3.5	DIAGNOSTICS, UTILITIES, EXERCISERS, OFF LINE TESTS:
4.0	PROGRAMMER'S COMMENTS:
4.1	LOADING WITH THE PROGRAMMER CONSOLE.
5.0	SERVICE INFORMATION:
5.1	CONFIGURATION INFORMATION:
6.0	DEVICE UTILITIES:
7.0	DEVICE EXERCISERS:
8.0	DEVICE DIAGNOSTICS:
9.0	DEVICE OFF LINE TESTS:

## 0.0 TIMER TEST SEQUENCE:

FOR A COMPLETE TEST OF THE DEVICE LOAD AND EXECUTE THE FOLLOWING MAP(S) IN THE SEQUENCE LISTED:

5000 ENTRY MAP,  
5001 MANUAL WRAP MAP.

NOTE: THESE MAPS TEST BOTH TIMERS ON THE CARD WITH A SINGLE RUN:  
WHEN THE ALTERNATE CONSOLE DISPLAY IS '...I5000 LOADED DA=40' THE TIMERS AT  
ADDRESSES 40 AND 41 WILL BOTH BE TESTED.

## 1.0 GENERAL INFORMATION:

## 1.1 MINIMUM CONFIGURATION

THE SERIES/1 MAINTENANCE MATERIAL NEEDS A MINIMUM SYSTEM CONFIGURATION OF:  
SERIES/1 PROCESSING UNIT, 16K STORAGE, A DISKETTE DRIVE AND A PROGRAMMER CONSOLE.

## 1.2 LOADING PROCEDURES

ALL MDI MAPS, DIAGNOSTICS, UTILITIES, AND EXERCISERS ARE ON THE DIAGNOSTIC  
DISKETTES.  
SEE THE DISKETTE LABEL.

USE STANDARD DCP LOADING PROCEDURES:

WHEN THE CONSOLE FUNCTION IS ASSIGNED TO A KEYBOARD CONSOLE DEVICE PRESS 'C'  
(TO LOAD AND WAIT FOR OPTION SELECTION) OR 'B' (FOR LOAD AND GO) FOLLOWED BY  
THE FOUR CHARACTER MAP / PROGRAM I.D. (SEE THE DIAGNOSTIC SERVICE GUIDE  
07.00.00).  
TO LOAD WITH THE PROGRAMMER CONSOLE SEE 4.1 THIS DOCUMENT.

## 1.3 MESSAGE FORMAT

IF AN ALTERNATE CONSOLE IS ASSIGNED, MAP MESSAGES ARE FORMATTED AS FOLLOWS:

\*\*\*\*\* I3CXX MAP=YYYY STEP=ZZZZ \*\*\*\*\*

I3CXX IDENTIFIES THE HALT AS A MDI/MAP HALT

YYYY=MAP #  
ZZZZ=MAP STEP #

IF MAP=3CXX THE HALT IS THE RESULT OF A MDI SUPERVISOR DECISION INSTEAD OF A  
MAP DECISION (SEE MDI HALT LIST FOLLOWING).

## MDI HALT LIST

## MAP=DESCRIPTION/ACTION

3C01 ENTER ADDRESS OF DEVICE TO BE TESTED (2 CHARACTERS, THAT IS, FOR ADDRESS  
01 ENTER F01)  
3C05 ENTER 'FROM' STEP (4 CHARACTERS, THAT IS, FOR STEP 001 ENTER F0001)  
3C06 ENTER 'TO' STEP (4 CHARACTERS, THAT IS, FOR STEP 099 ENTER F0099)  
3C08 DEVICE ADDRESS NOT VALID.  
3C0E DEVICE OR MAP NOT FOUND

MESSAGES THAT ARE NOT DISPLAYED IN THIS FORMAT ARE DCP MESSAGES.  
FOR MORE INFORMATION ABOUT ANY DCP HALT OR MDI SUPERVISOR HALT (MAP=3CXX), SEE  
THE DIAGNOSTIC SERVICE GUIDE, 06.00.00, COMMON HALT LIST.

WHEN THE PROGRAMMER CONSOLE IS THE ACTIVE CONSOLE, HALTS ARE IDENTIFIED AS  
FOLLOWS:

'WAIT' LAMP ON.  
DATA LAMPS=MAP# OR MDI/DCP HALT CODE.  
LEVEL 3 REGISTERS WILL CONTAIN:  
R0= MAP STEP #.  
R1= DEVICE ADDRESS AND TYPE CODE (AATT).  
R3= POINTER TO ADDITIONAL DATA (SEE DIAGNOSTIC SERVICE GUIDE 05.03.00,  
05.04.00)

SEE DIAGNOSTIC SERVICE GUIDE 07.01.00.

25JUN79 PN1635069

EC375475 PEC754882

MAP 5000-2

1.4 COMMENTS

THE DISKETTE MUST BE CORRECTLY CONFIGURED BEFORE THE MAPS / PROGRAMS WILL EXECUTE CORRECTLY. SEE 5.1 THIS DOCUMENT AND DIAGNOSTIC SERVICE GUIDE 08.00.00

A 'SYSTEM LEVEL' FAILURE MAY APPEAR TO BE A DEVICE FAILURE. ALWAYS USE SYSTEM ENTRY MAP (MAP 0020) FOR BEST RESULTS.

FOR ANY 'CHECK' CONDITION (MCK, PCK, PWR/THERM) GO TO MAP 3871, ENTRY POINT A.

IF THESE MAPS SAY TO CHANGE THE ATTACHMENT CARD AND THE SYSTEM STILL FAILS AFTER EXCHANGING THE CARD, ANOTHER ATTACHMENT MAY BE CAUSING THE FAILURE. MAP 0070 IS A CHANNEL ISOLATE PROCEDURE FOR THIS TYPE OF PROBLEM.

USE THE IBM GENERAL LOGIC PROBE, P/N453212, AND THE CE METER UNLESS THE MAP SPECIFIES AN OSCILLOSCOPE, OR A DIFFERENT METER.  
SPECIAL TOOLS & ADDITIONAL DOCUMENTS:

2.0

2.1 SPECIAL TOOLS;

2.2 ADDITIONAL DOCUMENTS:

DIAGNOSTIC SERVICE GUIDE.  
PROCESSING UNIT THEORY DIAGRAMS MANUAL.  
PROCESSING UNIT MAINTENANCE INFORMATION MANUAL.  
SERIES 1 LOGICS, MLD VOLUME 01.  
SERIES 1 INSTALLATION INSTRUCTIONS.

3.0

PURPOSE:

THE 50XX MAPS WILL VERIFY CORRECT OPERATION OR FIND AND ISOLATE FAILING FIELD REPLACEMENT UNIT'S IN THE TIMER DEVICE FEATURE 7840.

3.1 'AUTO' MODE MAPS:

THE DEVICE ENTRY MAP (MAP # 5000) IS THE FIRST 'AUTO' MODE MAP (SEE THE DIAGNOSTIC SERVICE GUIDE 05.00.00). IF A COMPLETE AUTO TEST NEEDS ADDITIONAL MAPS, MDI WILL AUTOMATICALLY LOAD AND EXECUTE THEM IN THE CORRECT SEQUENCE. WHEN A FAILURE OCCURS, USE MANUAL MAP 5002 TO ANALYZE THE FAILURE AND CALL THE FAILING FIELD REPLACEMENT UNIT. IF NO FAILURE IS FOUND AND A PROBLEM IS STILL SUSPECTED, RUN MANUAL MAP 5001.

3.2 'MANUAL' MODE MAPS:

THE FOLLOWING 'MANUAL' MODE MAPS PERFORM ADDITIONAL TESTS AND/OR ISOLATE FAILURES FOUND BY THE 'AUTO' MAPS:

MANUAL MAP 5001 TESTS THE EXTERNAL GATE AND CLOCK PART OF THE TIMER USING WRAP CONNECTOR P/N1633835 OR P/N1632917.

MANUAL MAP 5002 FINDS THE FAILING FIELD REPLACEMENT UNIT THAT WAS FOUND BY MAP 5000.

3.3 'PAPER ONLY' MAPS:

NONE.

3.4 'FAILURE ONLY' MAPS:

THE FOLLOWING MAPS ASSUME A FAILURE. USE THEM ONLY WHEN INSTRUCTED TO DO SO BY ANOTHER MAP.

NONE.

3.5 DIAGNOSTICS, UTILITIES, EXERCISERS, OFF LINE TESTS:

NONE.

4.0 PROGRAMMER'S COMMENTS:

THIS MAP DISPLAYS 'EXPECTED/RECEIVED' DATA WHEN AN ALTERNATE CONSOLE IS ASSIGNED. (SEE PARAGRAPH 4.0).

NOTE: THESE MAPS TEST BOTH TIMERS ON THE CARD WITH A SINGLE RUN: WHEN THE ALTERNATE CONSOLE DISPLAY IS '...I5000 LOADED DA=40' THE TIMERS AT ADDRESSES 40 AND 41 WILL BOTH BE TESTED.

THESE MAPS DO THE FOLLOWING.

- GIVE ALL COMMANDS TO THE TIMER DEVICE.
- CHECK ALL OIO AND INTERRUPT CONDITION CODES, EXCEPT INTERFACE DATA CHECK.
- CHECK ACCURACY OF THE TIMER DEVICE.
- CHECK THE EXTERNAL GATE AND CLOCK USING WRAP CONNECTOR P/N 1633835.

THESE MAPS CALL THIS FIELD REPLACEMENT UNIT:  
TIMER DEVICE CARD.

ADDITIONAL INFORMATION MAY BE AS FOLLOWS:

MESSAGES  
INT RTN/CKPT = RRCC, ER ADR = AAAA, STAT WD = POOE  
WHERE:  
RRCC = INTERNAL ROUTINE/CHECKPOINT NUMBER.  
AAAA = NEXT INSTRUCTION ADDRESS FOLLOWING THE END OF THE TEST ROUTINE THAT FOUND THE ERROR.  
POOE = P = 8 - 'TEST RUNNING'  
E = 1 - 'ANY ERROR OCCURRED'  
2 - 'GOT INTERRUPT FROM TIMER THAT WAS NOT EXPECTED.'

4.1 LOADING WITH THE PROGRAMMER CONSOLE.

TO EXECUTE THE MAPS WITH THE PROGRAMMER CONSOLE:

MAP	CONSOLE ENTRY
5000	(B), B, (I), (B), 5, 0, 0, 0, (I), (I)
5001	(B), B, (I), (B), 5, 0, 0, 1, (I), (I)
5002	(B), B, (I), (B), 5, 0, 0, 2, (I), (I)

5.0 5.1 SERVICE INFORMATION:  
CONFIGURATION INFORMATION.

SEE DIAGNOSTIC SERVICE GUIDE 08.01.04.

- 6.0 DEVICE UTILITIES:  
NONE
- 7.0 DEVICE EXERCISERS:  
NONE
- 8.0 DIAGNOSTICS:  
NONE
- 9.0 OFF LINE TESTS:  
NONE