

**DataGeneral**

---

---

**TECHNICAL  
STATEMENT**

---

---

TEXT LISTING

068-000512-04

PROGRAM

ERCC DIAGNOSTIC  
MULTI-LAYER ECLIPSE CPU-2

TEXT TAPE

097-000512-04

ABSTRACT

THE ERCC DIAGNOSTIC IS DESIGNED TO VERIFY THE OPERATION OF THE ERCC OPTION AND TO DETECT AND LOCALIZE FAILURES IN THE ERCC LOGIC IN THE CPU-2 AND IN ANY ERCC MEMORY IN THE SYSTEM. THE DIAGNOSTIC EXECUTES USING TEST LOCATIONS IN ALL ERCC MEMORY MODULES.

```

0001 EMLER          MACRO REV 06.30          15:37:55 03/21/79          1.0002 EMLER
02 01
03 02
04 03
05 04
06 05
07 06
08 07
09 08
10 09
11 10
12 11
13 12
14 13
15 14
16 15
17 16
18 17
19 18
20 19
21 20
22 21
23 22
24 23
25 24
26 25
27 26
28 27

```

```

: TITLE EMLERCC
: ECLIPSE ERROR CORRECTION TEST
: MULTI-LAYER CPU 2

```

```

*****
: NAME: EMLERCC.TX          PART NUMBER: 097-000512

```

```

: DESCRIPTION: ERCC DIAGNOSTIC, MULTI-LAYER ECLIPSE CPU-2
: TEXT FILE

```

```

: REVISION HISTORY:

```

REV.	DATE
00	05/20/77
01	12/28/77
02	09/22/78
03	11/17/78
04	03/13/79

```

: COPYRIGHT © DATA GENERAL CORPORATION, 1977, 1978, 1979
: ALL RIGHTS RESERVED.
*****

```

10003 FMLR

```
01 :
02 :
03 :
04 :
05 :
06 :
07 :
08 :
09 :
10 :
11 :
12 :
13 :
14 :
15 :
16 :
17 :
18 :
19 :
20 :
21 :
22 :
23 :
24 :
25 :
26 :
27 :
28 :
29 :
30 :
31 :
32 :
33 :
34 :
35 :
36 :
37 :
38 :
39 :
40 :
41 :
```

ERCC, MULTI-LAYER CPU 2, DIAGNOSTIC

THE DIAGNOSTIC IS DESIGNED TO RUN IN AN AUTO-LOAD AUTO-RUN ENVIRONMENT.

1.0 ABSTRACT

1.1 ERCC DIAGNOSTIC

THE ERCC DIAGNOSTIC IS DESIGNED TO VERIFY THE OPERATION OF THE ERCC OPTION AND TO DETECT AND LOCALIZE FAILURES IN THE ERCC LOGIC IN THE CPU-2 AND IN ANY ERCC MEMORY IN THE SYSTEM. THE DIAGNOSTIC EXECUTES USING TEST LOCATIONS IN ALL ERCC MEMORY MODULES.

THE PROGRAM WILL TEST NON-INTERLEAVED AND UP TO 8 WAY INTERLEAVED MEMORY CONFIGURATIONS, FROM 32K TO 1024K.

IT IS ASSUMED THAT THE 21 BIT MEMORY TO BE TESTED, EXCLUDING THE ERCC OPTION, IS FAULT FREE.

THE FOLLOWING TYPES OF MEMORIES ARE SUPPORTED BY THIS PROGRAM.

32K X 21 BIT S.C.

128K X 21 BIT S.C.

2.0 MACHINE REQUIREMENTS

2.1 ECLIPSE PROCESSOR WITH ERCC MULTI-LAYER CPU 2 S-150, M/600, C-150, S-250, C350

2.2 32K READ/WRITE 21 BIT ERCC MEMORY

2.3 TTY

10004 FMLR

```
01 :
02 :
03 :
04 :
05 :
06 :
07 :
08 :
09 :
10 :
11 :
12 :
13 :
14 :
15 :
16 :
17 :
18 :
19 :
20 :
21 :
22 :
23 :
24 :
25 :
26 :
27 :
28 :
29 :
30 :
31 :
32 :
33 :
34 :
35 :
36 :
37 :
38 :
39 :
40 :
41 :
```

3.0 OPERATING PROCEDURE

3.1 LOADING

LOAD PROGRAM VIA THE BINARY LOADER.

3.2 START ADDRESS

SET SWITCHES TO 200 OCTAL.

S?WPD 3.3

3.3. SWITCH SETTINGS

LOCATION "SWREG" IS USED TO SELECT THE PROGRAM OPTIONS (NOT SYSTEM CONFIGURATION). WHILE RUNNING UNDER DTOS, THIS LOCATION WILL BE LOADED BY THE MONITOR. HOWEVER UNDER STAND ALONE AND PROGRAM LOAD MODES THIS LOCATION WILL BE SET ACCORDING TO THE ANSWERS SUPPLIED BY THE OPERATOR. IN ANY CASE THE OPTIONS CAN BE CHANGED OR VERIFIED BY USING ONE OF THE COMMANDS GIVEN IN SEC. 3.3.2

3.3.1 SWITCH OPTIONS

DIFFERENT BITS AND THEIR INTERPRETATION AT LOCATION "SWREG" IS AS FOLLOWS:

BIT	OCTAL VALUE	BITINARY VALUE	INTERPRETATION
1	40000	1	LOOP ON ERROR
2	20000	1	SKIP LOOPING ON ERROR
3	10000	1	PRINT TO CONSOLE
4	04000	1	ABORT PRINT OUT TO CONSOLE
5	02000	1	DO NOT PRINT % FAILURE
6	01000	1	PRINT % FAILURE
7	0	0	ALLOW END OF PASS PRINT OUT
8	00400	1	SUPPRESS END OF PASS PRINT OUT
9	00200	1	DO NOT PRINT ON THE LINE PRINTER
10	0	0	PRINT ON THE LINE PRINTER
11	0	0	DO NOT HALT ON ERROR
12	0	0	HALT ON ERROR
13	0	0	DO NOT PRINT SUMMARY AND/OR
14	0	0	PASSING OF EACH SUBTEST
15	0	0	PRINT SUMMARY AND/OR
16	0	0	PASSING OF EACH SUBTEST
17	0	0	PRINT ONLY THE FIRST ERROR
18	0	0	PRINT EVERY ERROR

3.3.2 SWITCH COMMANDS

ONCE THE PROGRAM STARTS EXECUTING THE STATE OF ANY OF THE BITS CAN BE CHANGED BY HITTING KEYS 1-9, A-F. THE PROGRAM WILL CONTINUE RUNNING AFTER UPDATING THE OPTIONS.

0005 EMLER

01 : EACH KEY WILL COMPLEMENT THE STATE OF THE RIT AFFILIAT-  
02 : ED WITH IT, THUS BIT 4 CAN BE ALTERED BY HITTING KEY 4.  
03 : (SETTING OF ANY RIT OF LOCATION "SWREG" WILL SET RIT 0.  
04 : (DEFAULT MODE IS DEFINED AS ALL BITS OF SWREG SET TO 0)  
05 : THE PROGRAM CAN BE LOCKED INTO SWITCH MODIFICATION MODE  
06 : BY TYPING A 0, IN WHICH CASE MORE THAN ONE RIT CAN BE  
07 : CHANGED BEFORE CONTROL IS ALLOWED TO RETURN TO THE  
08 : MAIN PROGRAM.  
09 :  
10 : OTHER COMMANDS  
11 : 3.3.2.1  
12 : "CR" A "RETURN" CAN BE TYPED TO CONTINUE THE PROGRAM  
13 : AFTER ITS LOCKED IN A SWITCH MODIFICATION MODE  
14 :  
15 : "D THIS COMMAND GIVEN AT ANY TIME WILL RESET "SWREG"  
16 : TO DEFAULT MODE AND RESTART THE PROGRAM.  
17 :  
18 : "R THIS COMMAND GIVEN AT ANY TIME WILL RESTART THE  
19 : PROGRAM. SWITCHES ARE LEFT WITH THE VALUES THEY  
20 : HAD BEFORE THE COMMAND WAS ISSUED.  
21 :  
22 : "O THIS COMMAND GIVEN AT ANY TIME WILL CAUSE THE  
23 : PROGRAM CONTROL TO GO TO ODT (NOTE: THIS IS AN  
24 : OPTIONAL COMMAND AND IS AVAILABLE ONLY IF  
25 : ODTPK IS PRESENT)  
26 :  
27 : M THIS COMMAND GIVEN AT ANY TIME WILL PRINT THE  
28 : CURRENT OPERATING MODES.  
29 :  
30 :  
31 : 3.4 DEFINED OPTIONAL SWITCH SETTINGS  
32 : SWITCH 9 (1) = BYPASS EXIST TEST  
33 : SWITCH 10 (1) = BYPASS MAPPED TESTING  
34 : SWITCH 11 (1) = PRINT ERCC EXIST MAP  
35 :  
36 :  
37 :  
38 : O?ODT 3.5  
39 :  
40 : OCTAL DEBUG TOOL (ODT)  
41 :  
42 : THE DIAGNOSTIC IS EQUIPPED WITH A BUILT IN ODT WHICH CAN  
43 : BE ACCESSED BY HITTING CONTROL 0 ("O") AT ANY TIME DURING  
44 : THE EXECUTION OF THE PROGRAM (AFTER SETTING THE PARA-  
45 : METERS).  
46 : ON ENTERING ODT THE ADDRESS OF THE LOCATION HAVING THE  
47 : NEXT INSTRUCTION TO BE EXECUTED WILL BE TYPED-OUT.  
48 :  
49 : 3.5.1 CONVENTIONS AND SYMBOLS  
50 : THE FOLLOWING CONVENTIONS ARE USED BY THE ODT:  
51 : ? PESSING ANY ILLEGAL KEY CAUSES THE ODT TO RES-  
52 : POND WITH A "2".  
53 : @ ODT IS READY AND AT YOUR SERVICE.  
54 :  
55 : 3.5.2 COMMAND STRUCTURE  
56 : AN ODT COMMAND HAS THE FOLLOWING FORMAT:  
57 : [ARGUMENT] [COMMAND]  
58 : AN ARGUMENT MAY BE ONE OF THE FOLLOWING:  
59 : "EXP" AN OCTAL EXPRESSION CONSISTING OF OCTAL NUMBERS  
60 : SEPARATED BY PLUS (+) OR MINUS (-) SIGNS. LEAD-

0006 EMLER

01 : ING ZEROS NEED NOT BE TYPED.  
02 : AN ADDRESS IS THE SAME AS AN EXPRESSION EXCEPT  
03 : THAT RIT 0 IS NEGLECTED.  
04 : A COMMAND IS A SINGLE TELETYPE CHARACTER  
05 :  
06 : 3.5.3 ODT COMMANDS  
07 : THE LOCATIONS THAT CAN BE EXAMINED AND MODIFIED BY THE  
08 : USER ARE CALLED CELLS. THESE CELLS ARE OF TWO TYPES:  
09 : INTERNAL CPU CELLS AND MEMORY LOCATIONS.  
10 :  
11 : 3.5.3.1 OPENING INTERNAL CELLS  
12 : THE COMMAND TO OPEN ONE OF THE INTERNAL REGISTERS IS OF  
13 : THE FORM "NA" WHERE N IS ANY OCTAL EXPRESSION BETWEEN  
14 : 0 AND 7  
15 : 0-3 FOR ACCUMULATORS 0-3  
16 : FOR PC OF THE NEXT INSTRUCTION TO BE EXECUTED IN  
17 : THE EVENT OF A "P" COMMAND.  
18 : 5 CPU AND TIO STATUS  
19 : RIT INTERPRETATION  
20 : 15 STATUS OF TIO DONE FLAG  
21 : 14 STATUS OF INTERRUPTS (ION FLAG)  
22 : 13 STATUS OF CARRY RIT  
23 : 6 ADDRESS OF THE LOCATION HAVING THE BREAK POINT (IF  
24 : ANY)  
25 : 7 INSTRUCTION AT THE BREAK POINT LOCATION  
26 :  
27 : OTHER COMMANDS TO OPEN CELLS ARE:  
28 :  
29 : "ADR"/ OPEN THE CELL AND PRINT ITS CONTENTS  
30 : / OPEN THE CELL CURRENTLY POINTED TO BY THE POINTER  
31 : AND PRINT ITS CONTENTS.  
32 : "+ADR"/ AND "ADR" TO THE POINTER, OPEN THE CELL  
33 : AND PRINT ITS CONTENTS.  
34 : "-ADR"/ SUBTRACT "ADR" FROM THE POINTER, OPEN  
35 : THE CELL AND PRINT ITS CONTENTS.  
36 : "CR" THE RETURN KEY IS USED TO CLOSE THE OPEN CELL  
37 : WITH OR WITHOUT MODIFICATION.  
38 : "LF" LINE FEED IS USED TO CLOSE THE OPEN CELL WITH OR  
39 : WITHOUT MODIFICATION AND TO OPEN THE SUCCEEDING  
40 : CELL.  
41 : \* CLOSE THE OPEN CELL WITH OR WITHOUT MODIFICATION  
42 : AND OPEN THE PRECEDING CELL  
43 : / CLOSE THE OPEN CELL WITHOUT MODIFICATION, AND  
44 : OPEN THE CELL POINTED TO BY ITS CONTENTS.  
45 : "+ADR"/ CLOSE THE OPEN CELL WITHOUT MODIFICATION, AND  
46 : OPEN THE CELL POINTED TO BY ITS CONTENTS + "ADDR".  
47 : "-ADR"/ CLOSE THE OPEN CELL WITHOUT MODIFICATION, AND  
48 : OPEN THE CELL POINTED TO BY ITS CONTENTS - "ADR".  
49 :  
50 : 3.5.3.2 MODIFICATION OF A CELL  
51 : ONCE A CELL HAS BEEN OPENED ITS CONTENTS CAN BE MODIFIED  
52 : BY TYPING THE NEW VALUE THE CELL IS TO CONTAIN IN THE  
53 : FORM OF AN OCTAL EXPRESSION FOLLOWED BY "CR" OR "LF".  
54 : IF A + OR - IS TYPED AS THE FIRST CHARACTER OF THE EX-  
55 : PRESSION THEN THE VALUE OF THE EXPRESSION IS ADDED TO OR  
56 : SUBTRACTED FROM THE OLD CONTENTS OF THE CELL. THE  
57 : ADDRESS ITSELF OR AN EXPRESSION RELATIVE TO THE ADDRESS  
58 : CAN BE DEPOSITED BY TYPING A " " OR "L"/OCTAL EXPRESS-  
59 : ION". A RUBOUT COMMAND GIVEN RIGHT AFTER OPENING A CELL  
60 : ALLOWS THE MODIFICATION OF ITS CONTENTS AS IF THEY WERE

0007 EMLER

10008 EMLER

```

01 : TYPED IN JUST BEFORE THE COMMAND WAS ISSUED.
02 :
03 : 3.5.3.3 OTHER ODT COMMANDS
04 : THIS KEY IS USED TO DELETE ERRONEOUSLY TYPED
05 : DIGITS. EACH TIME THE KEY IS PRESSED, THE RIGHT MOST
06 : DIGIT IS DELETED AND ECHOED ON THE TERMINAL. IF
07 : THE RUBOUT KEY IS PRESSED RIGHT AFTER OPENING A
08 : CELL THEN IT DELETES THE RIGHT MOST DIGIT OF THE CELLS
09 : CONTENTS. THIS ALLOWS THE MODIFICATION OF THE CELL
10 : AS IF ITS CONTENTS WERE TYPED IN JUST BEFORE THE
11 : KEY WAS PRESSED.
12 : "ADR"B INSERT A BREAK POINT AT LOCATION "ADR".
13 : ONLY ONE BREAK POINT CAN BE INSERTED AND ANY
14 : ENTRY TO ODT AFTER EXECUTING A BREAK POINT WILL
15 : CAUSE IT TO BE DELETED.
16 : D DELETE THE BREAK POINT IF ANY.
17 : P RESTART THE EXECUTION OF THE PROGRAM AT LOCATION
18 : POINTED BY 4A.
19 : "ADR"R START EXECUTING THE PROGRAM AT "ADR" AFTER AN
20 : IO-RESET.
21 : K KILL THE STRING TYPED SO FAR. THE ODT RESPONDS
22 : WITH A "?" AND THE OPEN CELL IS CLOSED WITHOUT
23 : MODIFICATION.
24 : = PRINT THE OCTAL VALUE OF THE INPUT ONLY.
25 : THIS WILL CLOSE ANY OPEN CELLS WITHOUT
26 : MODIFICATION AND WILL NOT OPEN A CELL
27 :
28 :
29 : NOTE: IN PROGRAMS WHICH RELOCATE THEMSELVES THE
30 : THE USER SHOULD PLACE BREAK POINTS ONLY IN THE
31 : THE ORIGINAL PROGRAM AREA. IF A BREAK POINT IS
32 : PLACED OUTSIDE THIS AREA THE RESULTS WILL
33 : BE UNPREDICTABLE.
34 :
35 :
36 : 3.6 NORMAL OPERATION
37 : PROGRAM WILL EXECUTE ALL DIAGNOSTIC TESTS
38 : IN ALL ERCC MEMORIES. AT END OF EACH PASS,
39 : A PASS COUNTER WILL BE PRINTED IF
40 : SWITCH 4 IS RESET.
41 :

```

```

01 :
02 :
03 :
04 :
05 :
06 :
07 :
08 :
09 :
10 :
11 :
12 :
13 :
14 :
15 :
16 :
17 :
18 :
19 :
20 :
21 :
22 :
23 :
24 :
25 :
26 :
27 :
28 :
29 :
30 :
31 :
32 :
33 :
34 :
35 :
36 :
37 :
38 :
39 :
40 :
41 :
42 :
43 :
44 :
45 :

```

```

: 4.0 ERROR DESCRIPTION
:
: 4.1
: DIAGNOSTIC
: UPON THE DETECTION OF AN ERROR, THE C/PC,
: AND THE AC'S WILL BE PRINTED. ALSO, THE
: CONTENTS OF THE ADDRESS REGISTER IN ERCC
: AND THE FAULT CODE REGISTER WILL BE PRINTED
: ALONG WITH THE LOGICAL TEST ADDRESS.
: IF THE PROGRAM IS RUNNING IN MAPPED MODE,
: THE CURRENT PHYSICAL TEST BLOCK MAP DATA.
: ALSO BE PRINTED ALONG WITH OTHER MAP DATA.
: THE PHYSICAL TEST ADDRESS IS ALSO PRINTED.
: THE PROGRAM WILL THEN LOOP ON THE FAILING TEST
:
:
: 4.2
: DIAGNOSTIC - ABNORMAL
: SEVERAL TYPES OF UNEXPECTED FAILURES
: WILL CAUSE THE PROGRAM TO ENTER ODT.
: THIS IS INDICATED BY AN "a" ON THE TTY.
: FAULT TYPES ARE AS FOLLOWS:
: PROTECTION FAULT
: UNEXPECTED INTERRUPT
: STACK OVERFLOW OR UNDERFLOW
: NO ERCC MEMORY FOUND
:
:
: THE CAUSE OF ANY OF THESE FAILURES SHOULD BE
: CORRECTED BEFORE RESUMING ERCC TESTING.
:
: 4.3
: ERCC EXIST TEST
: SINCE THE PROGRAM USES VARYING TEST LOCATIONS,
: IT MUST DETERMINE ON THE FLY IF THE
: TEST LOCATION DOES RESIDE IN AN ERCC MEMORY.
: IN THE DIAGNOSTIC, IF ALL OF MEMORY IS SCANNED,
: AND NO ERCC MEMORIES ARE FOUND, A
: MESSAGE "NO ERCC MEMORY" WILL BE OUTPUT TO THE TTY.
: SWITCH 9 CAN BE USED TO ELIMINATE THIS
: DYNAMIC EXIST TEST, BUT THIS SHOULD ONLY BE DONE
: IF THE FIRST 32K IN THE SYSTEM IS AN ERCC MEMORY.
: THIS FEATURE SHOULD ONLY BE USED IF THE OPTION
: IS FAILING SO BADLY, THAT THE SOFTWARE CANNOT
: DETERMINE THAT IT EXISTS.

```



10011 EMLER

01 18.0 PROGRAMMING DESCRIPTION

02

03

04 8.1 DDA INSTRUCTION

05

06

07 THE DDA INSTRUCTION IS USED TO ENABLE

08 THE ERCC OPTION ACCORDING TO THE SETTING

09 OF BITS 14-15 IN THE SPECIFIED AC.

10

11

12 BITS 14-15 MEANING

13

14

15

16 00 DISABLE CHECKING AND CORRECTION.

17 WRITE VALID CHECK FIELD BITS.

18 01 DISABLE CHECKING AND CORRECTION.

19 WRITE CHECK BIT FIELD OF 37

20 IF CORE MEMORY. IF SEMICONDUCTOR

21 MEMORY OLD CHECK BIT FIELD

22 IS UNAFFECTED.

23 10 ENABLE CHECKING AND CORRECTION.

24 DO NOT INTERRUPT ON

25 MEMORY ERROR.

26 11 ENABLE CHECKING AND CORRECTION.

27 INTERRUPT ON MEMORY ERROR.

28

29 8.2 DIA INSTRUCTION

30

31

32 THE LOW ORDER 16 BITS OF THE 19 BIT PHYSICAL

33 ADDRESS OF THE MEMORY LOCATION IN ERROR IS

34 PLACED IN BITS 0-15 OF THE SPECIFIED AC.

35 THE ADDRESS BITS ARE INVERTED AND BITS 4-11

36 ARE READ AS ZERO'S.

37

38 8.3 DIB INSTRUCTION

39

40 A FIVE BIT ERROR CODE IS PLACED IN BITS 0-4

41 OF THE SPECIFIED AC. BITS 5-11 OF THE SPECIFIED

42 AC ARE SET TO 0. THE HIGH ORDER 4 BITS OF THE

43 20 BIT PHYSICAL ADDRESS OF THE FAILING LOCATION

44 ARE PLACED IN BITS 12-15. THE ERROR CODE TELLS

45 WHICH BIT WAS IN ERROR AND HAS BEEN CORRECTED.

46 THE VARIOUS ERROR CODES AND THEIR MEANINGS

47 ARE DESCRIBED BELOW.

48

49

50

51

52

53

54

55

56

57

58

59

60

FAULT CODE MEANING (BIT LOCATION OF ERROR)

00000 NO ERROR

00001 CHECK BIT 4

00010 CHECK BIT 3

00011 DATA BIT 0

00100 CHECK BIT 2

00101 DATA BIT 1

00110 MULTIPLE BIT ERROR

00111 DATA BIT 3

0012 EMLER

01 01000 CHECK BIT 1

02 01001 DATA BIT 4

03 01010 ALL 21 BITS ARE 1.

04 01011 DATA BIT 6

05 01100 DATA BIT 7

06 01101 DATA BIT 8

07 01110 DATA BIT 9

08 01111 MULTIPLE BIT ERROR

09 10000 CHECK BIT 0

10 10001 DATA BIT 1

11 10010 DATA BIT 12

12 10011 DATA BIT 13

13 10100 DATA BIT 14

14 10101 ALL 21 BITS ARE 0.

15 10110 DATA BIT 2

16 10111 MULTIPLE BIT ERROR

17 11000 DATA BIT 10

18 11001 MULTIPLE BIT ERROR

19 11010 DATA BIT 5

20 11011 MULTIPLE BIT ERROR

21 11100 DATA BIT 15

22 11101 MULTIPLE BIT ERROR

23 11110 MULTIPLE BIT ERROR

24 11111 MULTIPLE BIT ERROR

25

26 19.0 PROGRAM RUN TIME

27

28 PASS 1

29 THE ROM TESTS ARE QUITE TIME CONSUMING

30 AND ARE EXECUTED ONLY THE FIRST TIME

31 THROUGH THE PROGRAM. THEY ALONE TAKE

32 AROUND 45 SECONDS. THE FIRST

33 PASS THEREFORE IN A SYSTEM WITH 32K WILL

34 BE ABOUT 1 MINUTE.

35

36 PASS "N"

37

38

39

40

41

42

43

44

45

46

47

48

49

50

51

52

53

54

55

56

57

58

59

60

THE PROGRAM RUN TIME IS A FUNCTION OF THE

AMOUNT OF ERCC MEMORY IN THE SYSTEM.

IT IS APPROXIMATELY 10 SECONDS PER 32K OF ERCC

MEMORY.

\*\*10.0 MANUAL MAP DUMP UTILITY

\*\* A MAP DUMP UTILITY IS AVAILABLE TO THE USER WHICH

\*\* DUMPS THE CURRENT CONTENTS OF EITHER THE MMAPU OR MMAPUL.

\*\* THE USER MUST START THE DUMP UTILITY

\*\* AT LOCATION 176 (OCTAL). CAUTION SWITCH (11) MUST BE 0

\*\* I.E.S = 0 (RESET). THE PROGRAM WILL HALT FOLLOWING MAP

\*\* DUMP EXECUTION.

\*\*11.0 MODULE ISOLATION PROCEDURE

\*\* TYPICALLY IN A SYSTEM THAT HAS BEEN FUNCTIONING

\*\* ERROR FREE THE PROBLEM LIES EITHER ON CPU2 WHICH

\*\* CONTAINS THE ERCC LOGIC OR ON A PARTICULAR ERCC

\*\* MEMORY. IF THE FAILING TEST IS EXERCISING THE FIRST

0013 EMLER

01 :  
02 : DETECTED ERCC MEMORY, THE PROBLEM COULD BE EITHER  
03 : CPU2 OR THE MEMORY BOARD. IF THE FAILING TEST IS  
04 : EXERCISING A MEMORY OTHER THAN THE FIRST MEMORY,  
05 : IT IS PROBABLY THAT PARTICULAR MEMORY BOARD.  
06 :  
07 : CONTROL LOGIC AND ROM FAILURES ARE USUALLY ON CPU2.  
08 :  
09 : ADDRESS PROBLEMS COULD BE ON CPU2 OR THE SPECIFIC  
10 : MEMORY BOARD.  
11 :  
12 : INTERRUPT PRIORITY ERRORS ARE MOST LIKELY DUE TO  
13 : INCORRECT PRIORITY WIRING ON THE BACKPANEL. INTERRUPT  
14 : PRIORITY SHOULD START IN THE SLOT WHICH CONTAINS  
15 : THE ERCC CPU2.  
16 :

10014 EMLER

\*\*00000 TOTAL ERRORS. 00000 PASS 1 ERRORS



0015 FMLER

020TD 001520 MC 5/38  
STWPD 001084 MC 4/10