

LISTING

496-000145-08

PROGRAM

MEMORY ADDRESS TEST

TAPE

495-000002-08

ABSTRACT

MEMORY ADDRESS TEST IS A MAINTENANCE PROGRAM DESIGNED TO DETECT MALFUNCTIONS IN THE MEMORY ADDRESS SELECTION LOGIC. THE PROGRAM FILLS MEMORY WITH AN ADDRESS PATTERN (C(ADDRESS)=ADDRESS). SUCCESSFUL READ BACK OF THE PATTERN IS PROOF THAT ALL LOCATIONS EXIST.

PAR1 .MAIN

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NAME: ADDRST,SW PART NUMBER: 094-000002

DESCRIPTION: ADDRESS TEST

REVISION HISTORY:

REV.	DATE
00	02/05/69
01	07/22/70
02	04/10/71
03	01/25/74
04	06/07/74
05	10/25/74
06	04/18/75
07	12/05/75
08	05/11/76

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A 0002 .MAIN

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11. ABSTRACT

MEMORY ADDRESS TEST IS A MAINTENANCE PROGRAM DESIGNED TO DETECT MALFUNCTIONS IN THE MEMORY ADDRESS SELECTION LOGIC. THE PROGRAM FILLS MEMORY WITH A ADDRESS PATTERN(C(ADDRESS)=ADDRESS) SUCCESSFUL READ BACK OF THE PATTERN IS PROOF THAT ALL LOCATIONS EXIST.

12. MACHINE REQUIREMENTS

12.1 ANY NOVA OR ECLIPSE PROCESSOR

12.2 4K READ/WRITE MEMORY, SEE SECTION 7.

13. SWITCH SETTINGS

STARTING ADDRESS = 2

14. OPERATING PROCEEDURE

14.1 READ IN THE PROGRAM VIA THE BINARY LOADER

14.2 SET THE SWITCHES TO 000002

14.3 PRESS START

14.4 THE PROGRAM WILL RUN UNTILL A ERROR IS DETECTED OR IT IS MANUALLY STOPPED.

15. PROGRAM OUTPUT/ERROR DISCRIPTION

15.1 WHEN A ERROR IS DETECTED THE PROGRAM WILL HALT, EXAMINE AC3 TO OBTAIN THE ADDRESS OF THE FAILURE, EXAMINE AC2 TO OBTAIN THE DATA READ FROM THE ADDRESS SPECIFIED BY AC3.

15.2 IF THE CARRY FLAG IS SET WHEN THE HALT IS EXECUTED THE MEMORY FAILED UPON READING OUT THE LOCATION JUST AFTER HAVING STORED IT. THIS SUGGEST FAULTY CURRENTS AT THE FAILING LOCATION, IF THE CARRY FLAG IS RESET WHEN THE HALT IS EXECUTED THE LOCATION FAILED AFTER HAVING BEEN SUCCESSFULLY READ ONCE. THIS SUGGEST THAT OTHER ADDRESS MAY AFFECT THE FAILING ADDRESS.

15.3 RECORD THE ADDRESS AND VALUE AT EACH HALT, PRESS CONTINUE, TRY TO FORM A PATTERN OF ERRORS, ARE ALL THE ERRORS AT ONE X OR Y LINE VALUE? DOES THE FAILING LOCATION CONTAIN THE DATA OF ANOTHER ADDRESS?

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01
02
03          16.      PROGRAM DESCRIPTION
04          /
05          /          THE PROGRAM CONSIST OF A RELATIVELY
06          /          SIMPLE STORE AND CHECK MEMORY ROUTINE,
07          /          ON THE FIRST PASS AFTER STARTING, THE
08          /          ADDRESS OF THE PATTERN LOCATION IS STORED
09          /          IN THE PATTERN LOCATION, THE LOCATION
10          /          IS THEN READ OUT AND CHECKED FOR ERRORS,
11          /          THE PROCESS CONTINUES WITH SUCESSIVE
12          /          LOCATIONS UNTILL THE END OF THE PATTERN
13          /          IS REACHED, THE CARRY WILL BE COMPLIMENTED
14          /          AT THE END OF A PASS, THE PROGRAM AGAIN
15          /          SCANS MEMORY READING AND CHECKING ,BUT
16          /          NOT STORING, THE DATA.
17
18          17.      LIMITATIONS/MISC
19          /
20          /          THE SIZE OF THE MEMORY TO BE TESTED MAY
21          /          BE MODIFIED BY CHANGING THE VALUF OF
22          /          PROGRAM LOCATION 'LAST'.

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01      MAIN
02      HRP000      .LOC 0
03      HRP000      DIRT
04
05      HRP002      .LOC 2
06      HRP002      JMP 20
07
08      HRP0020      .LOC 20
09
10      HRP002      H2P115 A1      LDA P, LAST      JSTART HERE!
11      HRP021      H1P020      MOVZ 0,P
12      HRP022      H1P000      MOVC 0,P
13      HRP023      H34116      LDA 3, IADR
14      HRP024      H754A2 A1      INC 3,3, SZC      JAC3= STARTING PATTERN.
15      HRP025      H55400      STA 3,P,3      IC(CARRY)=0 IF FILL/CHECK,
16      HRP026      H31400      LDA 2,P,3      IC(CARRY)=0 IF CHECK ONLY.
17      HRP027      H56414      SUBW 2,3, SZR      JAC2=ERROR WORD.
18      HRP03P      H63077      HALT      JAC3=ERROR ADDRESS.
19      HRP031      H16414      SUBW 0,3, SZR      ITSTEST FOR END OF PASS.
20      HRP032      H000024      JMP A
21      HRP033      H240046      LDA 1, EGGS
22      HRP034      H25P005      MOV 1,1, SNR
23      HRP035      H000022      JMP A+2
24      HRP036      H140051      DSZ EGGS+3
25      HRP037      H000054      JMP C
26      HRP04P      H02677      IORST
27      HRP041      H340052      LDA 3, EGGS+4
28      HRP042      H240051      LDA 1, EGGS+3
29      HRP043      H05776      STA 1,2,3
30      HRP044      H014000      JMP 0,3
31
32      HRP045      .LOC 45
33
34      HRP045      H000046      EGGS      JOTOS EGGS BLK PTRR
35      HRP046      H000000      EGGS:      JOTOS AUTO MODE SW
36      HRP047      H000000      P      DEVICE CODE
37      HRP050      H000000      P      ICAT SWITCH
38      HRP051      H000000      P      IN OF PASSES IN AUTO MODE
39      HRP052      H000000      P      JOTOS RETURN ADDRESS
40      HRP053      H000000      P      JSWITCH REGISTER
41
42      HRP054      H1P050 C1      TSZ EGGS+2
43      HRP055      H000020      JMP A
44      HRP056      H0P114      JSR 0ICAT
45      HRP057      H000020      JMP A
46      HRP06P      H52400 START:      SUB 2,2
47      HRP061      H2411P      ADDF:      LDA 1, C10K
48      HRP062      H33000P      ADD 1,2
49      HRP063      H51112      MOVWL 2,2, SZC
50      HRP064      H000073      JMP ADD1
51      HRP065      H21000P      LDA 0,P,2
52      HRP066      H01000P      STA 2,P,2
53      HRP067      H33500P      LDA 3,P,2
54      HRP070      H01000P      STA 0,P,2

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A 0005 .MAIN
01
02 00071 156415 SUBW 2,3,SNR
03 00072 000062 JMP ADDR
04
05 00073 024117 ADD1: LDA 1,C201
06 00074 034750 LDA 3,EGGS+2
07 00075 175004 MOV 3,3,82R
08 00076 024111 LDA 1,C2001
09 00077 132470 SUB 1,2
10 00100 050115 STA 2,LAST
11 00101 024112 LDA 1,C401
12 00102 133000 ADD 1,2
13 00103 175004 MOV 3,3,82R
14 00104 050114 STA 2,ICAT
15 00105 020117 LDA 0,REGIN
16 00106 040116 STA 0,IADR
17 00107 000020 JMP A
18 00110 010000 C10K: 10000
19 00111 002001 C2001: 2001
20 00112 000401 C401: 401
21 00113 000201 C201: 201
22 00114 000020 ICAT: A
23 00115 007577 LAST: 7577
24 00116 000116 IADR: .
25 00117 000117 REGIN: .
26
27 .TXT /COPYRIGHT(C)DGC,1969,70,71,74,75,76

00120 047503
00121 054520
00122 044522
00123 044107
00124 024124
00125 024503
00126 043504
00127 026103
00130 034461
00131 034466
00132 033454
00133 026060
00134 030467
00135 033454
00136 026064
00137 032467
00140 033454
28 00141 040466 ALL RIGHTS RESERVED/
00142 046114
00143 051040
00144 043511
00145 052110
00146 020123
00147 042522
00150 042523
00151 053122
00152 042100
00153 000000
29
30 DIRT: .TXTE 1ADDR TST 01
00154 042101
00155 151104

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0006 .MAIN
00150 152240
00157 152123
00160 134240
00161 000000
01 00162 000000 002000
02 00163 000000 START
03 00164 000000 000000
04 00165 000000 000000
05 00166 000000 000000
06 00167 000000 000000
07 00170 000000 000000
08 00171 000000 000000
09
10 .END

```

P007 ,MAIN									
A	PPPP20	4/10	4/23	4/43	4/45	5/17	5/22		
ADD1	PPPP73	4/50	5/05						
ADDP	PPPP02	4/46	5/03						
B	PPPP24	4/14	4/20						
BEGIN	PPPP17	5/15	5/25						
C	PPPP54	4/25	4/42						
C1PK	PPPP10	4/47	5/18						
C2001	PPPP11	5/08	5/19						
C201	PPPP13	5/05	5/21						
C401	PPPP12	5/11	5/20						
DIRT	PPPP54	4/03	5/30						
EGGS	PPPP46	4/21	4/24	4/27	4/28	4/34	4/35	4/42	5/06
IAOR	PPPP16	4/13	5/16	5/24					
ICAT	PPPP14	4/44	5/14	5/22					
LAST	PPPP15	4/10	5/10	5/23					
START	PPPP60	4/46	6/02						