

✓ 0001 .MAIN

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PROGRAM LISTING  
MEMORY ADDRESS TEST  
REVISION 0

RCSL: 44-RT1350.  
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; KEYWORDS: RC3603, MEMORY ADDRESS TEST.

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; BINARY TAPE: 44-RT1346  
; ASCII TAPE: 44-RT1355

↑ 0002 .MAIN

01  
02 ; MEMORY ADDRESS TEST.  
03 ; 1.0 ABSTRACT.  
04 ; MEMORY ADDRESS TEST IS A MAINTENANCE PROGRAM DESIGNED  
05 ; TO DETECT MALFUNCTIONS IN THE MEMORY ADDRESS SELECTION  
06 ; LOGIC.  
07 ; THE PROGRAM FILLS MEMORY WITH A ADDRESS PATTERN  
08 ; < C(ADDRESS)=ADDRESS >.  
09 ; SUCCESSFUL READ BACK OF THE PATTERN IS PROOF THAT ALL  
10 ; LOCATIONS EXIST.  
11 ;  
12 ; 2.0 MACHINE REQUIREMENTS.  
13 ; RC3603 CENTRAL PROCESSOR.  
14 ; MIN. 16K WORDS MEMORY.  
15 ;  
16 ; 3.0 SWITCH SETTING.  
17 ; 3.1 STARTING ADDRESS = 000002.  
18 ;  
19 ; 3.2 SWITCH 0 SWITCH 1 MEM SIZE < WORDS >  
20 ;  
21 ; 0 0 16K  
22 ; 0 1 32K  
23 ; 1 0 48K  
24 ; 1 1 64K  
25 ;  
26 ;  
27 ; 4.0 OPERATING PROCEDURE.  
28 ; READ IN THE PROGRAM VIA THE BINARY LOADER.  
29 ; SET SWITCHES = 000002.  
30 ; PRESS START.  
31 ; THE PROGRAM WILL HALT AND THE OPERATOR MUST SET  
32 ; SWITCH 0-1 AS SHOWN IN SECTION 3.2 TO INDICATE THE  
33 ; MEMORY SIZE.  
34 ; IF TEST OF EXTENDED MEMORY IS SELECTED < SW(0)=1 >  
35 ; THE 128K/64K BYTES SWITCH ON THE FRONT PANEL OF CPU708  
36 ; MUST BE IN THE 128K BYTES STATE.  
37 ; PRESS CONTINUE.  
38 ; THE PROGRAM WILL RUN UNTILL AN ERROR IS DETECTED OR IT  
39 ; IS MANUALLY STOPPED.  
40 ; 5.0 ERROR DESCRIPTION.  
41 ; WHEN AN ERROR IS DETECTED THE PROGRAM WILL HALT.  
42 ; EXAMINE AC4< PC > AND USE THE CONTENTS TO LOCATE  
43 ; THE ERROR TYPE IN THE PROGRAM LISTING.  
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0003 .MAIN

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; 6.0 PROGRAM LISTING.

.LOC 2  
.RDX 8  
JMP START

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09 00003 000050 FIRST: 50 ; FIRST LOCATION TESTED.
10 00004 000000 LAST: 0 ; LAST LOCATION TESTED.
11 00005 140000 MASK1: 140000 ;
12 00006 037777 MASK2: 037777 ;
13
14 00007 062677 START: IORST ; CLEAR MEM EXTEND FLAG.
15 00010 063077 HALT ; SET SWITCH 0-1 TO INDICATE
16 00011 060477 READS 0 ; MEMORY SIZE.
17 00012 030005 LDA 2, MASK1 ;
18 00013 143400 AND 2, 0 ;
19 00014 030006 LDA 2, MASK2 ;
20 00015 143000 ADD 2, 0 ; CALCULATE LAST TEST LOCATION.
21 00016 040004 STA 0, LAST ;
22 00017 101103 MOVL 0, 0,SNC; EXTENDED MEMORY ?
23 00020 000024 JMP BEGIN ; NO
24 00021 062701 DICP 0, 1 ; SET MEM EXTEND FLAG.
25 00022 063601 SKPDN , 1 ;
26 00023 063077 HALT ; 64K/128K BYTES SWITCH IS NOT IN
27 00024 034004 BEGIN: LDA 3, LAST ; THE 128K STATE.
28 00025 030003 LDA 2, FIRST ;
29 00026 051000 E1: STA 2,0,2 ;
30 00027 025000 LDA 1,0,2 ; FILL/CHECK ERROR:
31 00030 132414 SUB# 1, 2,SZR; AC1= ERROR WORD.
32 00031 063077 HALT ; AC2= ERROR ADDRESS
33 00032 151400 INC 2, 2 ;
34 00033 172434 SUBZ# 3, 2,SZR; TEST FOR END OF PASS.
35 00034 000026 JMP E1 ;
36 00035 030003 LDA 2, FIRST ;
37 00036 025000 E2: LDA 1,0,2 ; CHECK ONLY ERROR:
38 00037 132414 SUB# 1, 2,SZR; AC1= ERROR WORD
39 00040 063077 HALT ; AC2= ERROR ADDRESS
40 00041 151400 INC 2, 2 ;
41 00042 172414 SUB# 3, 2,SZR; TEST FOR END OF PASS
42 00043 000036 JMP E2 ;
43 00044 000024 JMP BEGIN ;

```

.END

0004 .MAIN

BEGIN	000024	3/23	3/27	3/43
E1	000026	3/29	3/35	
E2	000036	3/37	3/42	
FIRST	000003	3/09	3/28	3/36
LAST	000004	3/10	3/21	3/27
MASK1	000005	3/11	3/17	
MASK2	000006	3/12	3/19	
START	000007	3/07	3/14	

