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PROGRAM

MEMORY CHECKERBOARD III

TAPE

095-000031-02

ABSTRACT

CHECKERBOARD III IS A MANTAINANCE PROGRAM DESIGNED TO PRODUCE WORST NOISE CONDITIONS ON THE SENSE/INHIBIT WIRES. THE PROGRAM SHOULD BE RUN TO INSURE PROPER OPERATION OF THE SENSE AMPS, INHIBIT DRIVERS, AND MEMORY CURRENTS.

```
  0001  .MAIN
01
02
03
04
05
06
07              ;*****************************************************************
08              ;
09              ; NAME: CHECKIII.SR                        PART NUMBER: 094-000031
10              ;
11              ;
12              ; DESCRIPTION: CHECKERBOARD III
13              ;
14              ;
15              ; REVISION HISTORY:
16              ;
17              ;       REV.            DATE
18              ;
19              ;       00              05/07/70
20              ;       01              06/28/71
21              ;       02              01/25/74
22              ;
23              ;
24              ; COPYRIGHT (C) DATA GENERAL CORPORATION, 1970, 1971, 1974
25              ; ALL RIGHTS RESERVED.
26              ;*****************************************************************
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  0002  .MAIN
01
02              ;                       CHECKERBOARD III
03
04              ;1.     ABSTRACT
05              ;               CHECKERBOARD III IS A MAINTENCE PROGRAM DESIGNED
06              ;               TO PRODUCE WORST CASE NOISE CONDITIONS ON THE
07              ;               SENSE/INHIBIT WIRES. THE PROGRAM SHOULD BE RUN
08              ;               TO INSURE PROPER OPERATION OF SENSE AMPS,INHIBIT
09              ;               DRIVERS, AND MEMORY CURRENTS.
10
11
12              ;2.     MACHINE REQUIREMENTS
13              ;2.1            NOVA/SUPERNOVA PROCESSOR
14              ;2.2            4K READ/WRITE MEMORY
15
16
17              ;3.     SWITCH SETTINGS
18              ;3.1            STARTING ADDRESS        =000002
19              ;3.2            SWITCH 0(1)             =1024 READ/WRITE DISTURB
20              ;3.3            SWITCH 15(1)            =INHIBIT HALT ON ERROR
21
22
23              ;4.     OPERATING PROCEEDURE
24              ;4.1            LOAD THE PROGRAM VIA THE BINARY LOADER
25              ;4.2            SET SWITCHES TO 000002
26              ;4.3            PRESS START
27              ;4.3.1          THE PROGRAM WILL PRINT THE HIGHEST
28              ;               LOCATION THE PATTERN IS TO USE.
29              ;4.4            IF THE FAILURES ARE MARGINAL, SETTING SWITCH
30              ;               0 MAY AID IN INDUCING A FAILURE TO OCCURE.
31              ;4.5            WHEN SCOPING OR ADJUSTING CURRENTS, SETTING
32              ;               SWITCH 15 WILL INHIBIT THE ERROR HALT, THE
33              ;               HELL WILL STILL BE RUNG.
34              ;4.6            PROGRAM MODIFICATIONS
35              ;4.6.1                  C(3)=ADR        THE STARTING PATTERN ADD
36              ;4.6.2                  C(5)=INHIBIT    INHIBIT THE CHECKERBOARD
37              ;                                       PATTERN ON CLEARED BITS.
38
39
```

```
▲ 0003  .MAIN
01
02                ;5.     PROGRAM OUTPUT/ERROR DISCRIPTION
03                ;5.1            AT EACH OCCURANCE OF ERROR, IF THE TELETYPE IS N
04                ;               BUSY THE BELL WILL BE RUNG. IF SWITCH (15) IS ZE
05                ;               THE PROGRAM WILL HALT AT LOCATION "ER".
06                ;5.2            WHEN A ERROR HALT OCCURES:
07                ;                       C(1)=THE ERROR WORD
08                ;                       C(2)=THE ERROR ADDRESS
09                ;                       C(3)=ADDRESS OF PROGRAM
10                ;5.3            SET SWITCH (15) IF  SCOPING,PRESS CONTINUE.
11                ;5.4            SYNC PULSES
12                ;                       A "P" PULSE (A74) IN STORE CYCLE.
13                ;                       A "S" PULSE (A52) CHECK ONES PATTERN WOR
14                ;                       A "C" PULSE (A50) CHECK ZEROS PATTERN WO
15
16                ;6.     PROGRAM DISCRIPTION
17                ;6.1            STORE THE CHECKERBOARD PATTERN
18                ;6.2            IF SWITCH 0(1) DISTURB THE CONTENTS OF MEMORY BY
19                ;               REFFERANCING LOCATIONS 0101,0202,0303,ETC. 512
20                ;               TIMES. THIS PRODUCES 1024 READ/WRITE DISTURBS.
21                ;6.3            CHECK THE PATTERN WORD
22                ;6.4            COMPLEMENT AND CHECK THE WORD
23                ;6.5            RESTORE THE WORD
24                ;6.6            WHEN THE END OF THE PATTERN IS REACHED THE
25                ;               PROGRAM COMPLEMENTS THE PATTERN WORD AND RE-
26                ;               TURNS TO STEP 6.1 .
27
28                ;7.     LIMITATIONS
29                ;               NONE
30
```

```
▲ 0004  .MAIN
01
02                      000002 .LOC 2
03 00002 000164                 JMP MSIZ
04
05 00003 000620 ADR:    620             ;PATTERN STARTING ADDRESS
06 00004 007577 FINAL:  7577            ;PATTERN FINAL ADDRESS
07 00005 177777 INH:    -1              ;MASK FOR INHIBITED BITS
08 00006 000000 PATT:   0               ;PATTERN WORD
09 00007 000000 ERET:   0
10
11                      000040 .LOC 40
12
13 00040 000017 C17:    17
14 00041 000400 C400:   400
15 00042 000077 C77:    77
16 00043 007777 C7777:  7777
17 00044 000207 C207:   207
18 00045 000101 C101:   101
19 00046 060200 CNIOC:  NIOC 0
20 00047 060100 CNIOS:  NIOS 0
21 00050 070000 C070000:        070000
22 00051 000000 MODUAL: 0
23 00052 000000 EDIST:  0
24 00053 001000 K1000:  1000
25 00054 177577 M201:   -201
26 00055 000224 CMA:    MMA2
27 00056 177625 PSIZE:  BEGIN-CEND
28 00057 000000 PLOC:   0
29 00060 000000 BPROG:  0
30 00061 000000 EPROG:  0
31 00062 012345 RANDOM: 12345
32 00063 177760 M20:    -20
33 00064 000020 C20:    20
34 00065 000432 CBEG:   BEGIN
35 00066 000000 RETURN: 0
36
37
38 00067 004126 SEND:   JSR .RAND       ;GET A RNADOM #
39 00070 000062         RANDOM
40 00071 024224         LDA 1,FINAL
41 00072 030056         LDA 2,PSIZE
42 00073 147000         ADD 2,1
43 00074 101220         MOVZR 0,0
44 00075 122422         SUBZ 1,0,SZC
45 00076 000075         JMP .-1
46 00077 123000         ADD 1,0         ;AC0=# MODULO C(FINAL).
47 00100 024063         LDA 1,M20
48 00101 123400         AND 1,0
49 00102 024003         LDA 1,ADR
50 00103 122433         SUBZ# 1,0,SNC   ;IF # TO SMALL USE
51 00104 121000         MOV 1,0         ;C(ADR) FOR STARTER.
52
53 00105 040057         STA 0,PLOC
54 00106 034063         LDA 3,M20
55 00107 117000         ADD 0,3
56 00110 054060         STA 3,BPROG
57 00111 142400         SUB 2,0
58 00112 040061         STA 0,EPROG
```

```
A 0005  .MAIN
01
02 00113 145000 MOVE:   MOV 2,1
03 00114 030065          LDA 2,CHEG
04 00115 021000          LDA 0,0,2       ;MOVE A COPY OF
05 00116 041420          STA 0,20,3      ;CHECKERBOARD TO
06 00117 175400          INC 3,3         ;SELECTED SPOT.
07 00120 151400          INC 2,2
08 00121 125404          INC 1,1,SZR     ;TEST FOR LAST REG
09 00122 000115          JMP MOVE+2      ;TO BE MOVED.
10 00123 030057          LDA 3,PLOC
11 00124 005401          JSR 1,3         ;EXIT TO PROG.
12 00125 000212          JMP MMA
13
14 00126 054160 .RAND:   STA 3,.UD03     ;GENERATE A RANDOM #
15 00127 010160          ISZ .UD03
16 00130 044156          STA 1,.UD01
17 00131 050157          STA 2,.UD02
18 00132 031400          LDA 2,0,3
19 00133 021000          LDA 0,0,2
20 00134 004143          JSR .UD50
21 00135 034162          LDA 3,.UD20
22 00136 163000          ADD 3,0
23 00137 041000          STA 0,0,2
24 00140 024156          LDA 1,.UD01
25 00141 030157          LDA 2,.UD02
26 00142 000160          JMP @.UD03      ;RETURN
27
28 00143 024163 .UD50:   LDA 1,.UD21
29 00144 044161          STA 1,.UD10
30 00145 105120          MOVZL 0,1
31 00146 125120          MOVZL 1,1
32 00147 014161          DSZ .UD10
33 00150 000146          JMP .-2
34 00151 107000          ADD 0,1
35 00152 125120          MOVZL 1,1
36 00153 125120          MOVZL 1,1
37 00154 123000          ADD 1,0
38 00155 001400          JMP 0,3
39
40 00156 000000 .UD01:   0
41 00157 000000 .UD02:   0
42 00160 000000 .UD03:   0
43 00161 000000 .UD10:   0
44 00162 033031 .UD20:   33031
45
46 00163 000010 .UD21:   10
47
```

```
A 0006  .MAIN
01
02 00164 020053 MSIZ:   LDA 0,K10WP     ;SIZE THE MEMORY
03 00165 115000          MOV 0,3
04 00166 031400 MSIZ1:   LDA 2,0,3       ;SAVE C(MEM)
05 00167 055400          STA 3,0,3
06 00170 025400          LDA 1,0,3
07 00171 051400          STA 2,0,3       ;RESTORE MEMORY
08
09 00172 125014          MOV# 1,1,SZR
10 00173 124415          COM# 1,1,SNR
11 00174 000202          JMP MSIZ2       ;END OF MEMORY
12 00175 136414          SUB# 1,3,SZR    ;AC1=BAD, AC3=GOOD
13 00176 063077          HALT            ;MEMORY FAILED.
14 00177 117400          ADC 0,3
15 00200 175113          MOVL# 3,3,SNC   ;INCREMENT MEMORY ADDRESS.
16 00201 000166          JMP MSIZ1       ;TEST FOR 32K.
17
18 00202 020054 MSIZ2:   LDA 0,M2W1
19 00203 163000          ADC 3,0
20 00204 040004          STA 0,FINAL
21 00205 004372          JSR CRLF
22 00206 004247          JSR MESS
23 00207 000234          MESIZE
24 00210 024004          LDA 1,FINAL
25 00211 004266          JSR PDCT
26
27 00212 063611 MMA:     SKPDN TTO
28 00213 000212          JMP .-1         ;WAIT FOR TTO DONE.
29 00214 020055          LDA 0,CMA
30 00215 040021          STA 0,1         ;SET INTERRUPT RETURN.
31 00216 152520          SUBZL 2,2       ;THIS PROG TEST FOR INTERRUPT
32 00217 102000 MMA1:    ADC 0,0         ;ABILITY TO CLEAR MA.
33 00220 040000          STA 0,0
34 00221 025000          LDA 1,0,2
35 00222 060177          NIOS CPU        ;ENABLE INTERRUPT
36 00223 005000          JSR 0,2         ;SET HIT INTO MA
37 00224 045000 MMA2:    STA 1,0,2
38 00225 020000          LDA 0,0
39 00226 112414          SUB# 0,2,SZR    ;AC0=PC STORED
40 00227 063077          HALT            ;AC2=CORRECT, MEMORY FAILED!
41 00230 151120          MOVZL 2,2
42 00231 151113          MOVL# 2,2,SNC
43 00232 000217          JMP MMA1
44 00233 000067          JMP SEND
45
46              MESIZE: .TXTE 1
47 00234 040714 LAST LOCATION TESTED !
   00235 152123
   00236 146240
   00237 141717
   00240 152101
   00241 147711
   00242 120116
   00243 142724
   00244 152123
   00245 042305
   00246 000240
```

```
A 0007  .MAIN
01
02                ;TTO NON INTERRUPT PACKAGE
03                ;"MESS" PRINTS ASCII MESSAGES AS SPECIFIED BY ASSEMBLR
04                ;"CHAR" PRINTS ASCII CHARACTOR, C(0)R,C(0)L MUST BE 0
05                ;WILL RETURN +2 IF C(0)R=0,CORRECTS THE PARITY,33 SIMULATE
06                ;"TYPE" PRINTS C(0)R. MUST HAVE PROPER PARITY. RETURN IS
07                ;TO CALL+1,REPLACE THIS ROUTINE WITH INTERRUPT TYPE IF DESIRED.
08                ;"CRLF" PRINTS A CARRIAGE RETURN
09                ;"POCT" PRINTS C(1) IN OCTAL FOLLEOWED BY A TAB
10                ;"PDEC" PRINTS C(1) IN DECIMAL,LEADONG ZEROS SUPPRESSED,
11                ;FOLLOWED BY A TAB.
12
13 00247 054546 MESS:   STA 3,MESSR      ;PRINT A TEXT MESSAGE
14 00250 010545          ISZ MESSR
15 00251 031400          LDA 2,0,3        ;C(2) POINTS TO MESSAGE
16 00252 024542          LDA 1,C377       ;A 8 BIT MASK
17 00253 021000          LDA 0,0,2        ;C(2)=DATA WORD
18 00254 125112          MOVL# 1,1,SZC
19 00255 123701          ANDS 1,0,SKP
20 00256 123401          AND 1,0,SKP      ;C(0)=DATA CHARACTOR RIGHT
21 00257 151400          INC 2,2          ;INC TO NEXT WORD
22 00260 124000          COM 1,1          ;FLIP MASK
23 00261 004343          JSR CHAR         ;PRINT
24 00262 000253          JMP MESS+4       ;ANOTHER
25 00263 002532          JMP @MESSR       ;LAST
26
27 00264 020525 ZOCT:    LDA 0,CH240
28 00265 101001          MOV 0,0,SKP
29
30 00266 020525 POCT:    LDA 0,C60
31 00267 030322          LDA 2,OCTAB      ;PRINT C(1) IN OCTAL
32 00270 000273          JMP .+3
33 00271 030332 PDEC:    LDA 2,DECTB      ;PRINT C(1) IN DECIMAL
34 00272 020517          LDA 0,CH240      ;SUPPRESS LEADING  ZEROS
35 00273 054342          STA 3,RADRET     ;BOTH ENTRYS PRINT NUMBER
36 00274 040341          STA 0,ZSUPP      ;THEN TAB TO NEXT POSITION
37 00275 050276          STA 2,.+1
38 00276 000000 DECOCT:  0                ;A"LDA 2,TABLE" INSTRUCTION
39 00277 010276          ISZ .-1
40 00300 034342          LDA 3,RADRET     ;SETUP "TAB" AT END
41 00301 020503          LDA 0,CHTAB
42 00302 151005          MOV 2,2,SNR      ;IF TABLE ENTRY=0
43 00303 000343          JMP CHAR         ;EXIT WITH TAB
44 00304 034341          LDA 3,ZSUPP      ;ZEROS SUPPRESS STUF
45 00305 102400          SUB 0,0
46 00306 146512 DECOT:   SUBL# 2,1,SZC
47 00307 000314          JMP DECP
48 00310 146400          SUB 2,1          ;FORM THE DIGIT
49 00311 034502          LDA 3,C60
50 00312 101400          INC 0,0
51 00313 000306          JMP DECOT
52 00314 151235 DECP:    MOVZR# 2,2,SNR
53 00315 034476          LDA 3,C60
54 00316 054341          STA 3,ZSUPP      ;C(0)=DIGIT
55 00317 163000          ADD 3,0          ;MAKE ASCII
56 00320 004343          JSR CHAR         ;PRINT
57 00321 000276          JMP DECOCT       ;GET NEXT DIGIT
58
```

```
A 0008  .MAIN
01
02
03 00322 030323 OCTAB:   LDA 2,.+1
04 00323 100000          100000
05 00324 010000          10000
06 00325 001000          1000
07 00326 000100          100
08 00327 000010          10
09 00330 000001          1
10 00331 000000          0
11
12 00332 030333 DECTB:   LDA 2,.+1
13       000012 .RDX 10
14 00333 023420          10000
15 00334 001750          1000
16 00335 000144          100
17 00336 000012          10
18 00337 000001          1
19 00340 000000          0
20       000010 .RDX 8
21
22 00341 000000 ZSUPP:   0
23 00342 000000 RADRET:  0
24
25 00343 054442 CHAR:    STA 3,CHRET      ;PRINT C(0) RIGHT
26 00344 101325          MOVZS 0,0,SNR    ;RETURN +2 IF NULL
27 00345 001401          JMP 1,3
28 00346 040440          STA 0,CHSAV
29 00347 176000          ADC 3,3          ;COMPUTE THE PARITY
30 00350 117000          ADD 0,3
31 00351 163404          AND 3,0,SZR
32 00352 000347          JMP .-3
33 00353 176660          SUBCR 3,3        ;COMBIND PARITY WITH CHAR
34 00354 020432          LDA 0,CHSAV
35 00355 163000          ADDS 3,0
36
37 00356 034426 CHAR1:   LDA 3,CHTAB      ;IS THIS A TAB
38 00357 116405          SUB 0,3,SNR
39 00360 000363          JMP .+3          ;YES
40 00361 004435          JSR TYPE         ;NO PRINT IT
41 00362 002423          JMP @CHRET       ;EXIT
42
43 00363 020424          LDA 0,CHORZ      ;SIMULATE A TAB
44 00364 034424          LDA 3,CHAR7      ;VIA 1 TO 8 SPACES
45 00365 117405          AND 0,3,SNR
46 00366 002417          JMP @CHRET
47 00367 020422          LDA 0,CH240
48 00370 004426          JSR TYPE
49 00371 000363          JMP .-6
50
```

```
A 0000  .MAIN
01
02
03
04 00372 054420 CRLF:   STA 3,CRLFR      ;SAVE RETURN
05 00373 020410         LDA 0,C215
06 00374 004343         JSR CHAR         ;PRINT CARRIAGE AND LF
07 00375 020405         LDA 0,C212
08 00376 004343         JSR CHAR
09 00377 102400         SUB 0,0
10 00400 040427         STA 0,CHORZ      ;CLEAR HORZ POSISTION
11 00401 002411         JMP @CRLFR       ;EXIT
12
13 00402 000212 C212:   212
14 00403 000215 C215:   215
15 00404 000011 CHTAB:  11
16 00405 000000 CHRET:  0
17 00406 000000 CHSAV:  0
18 00407 000000 CHORZ:  0
19 00410 000007 CHAR7:  7
20 00411 000240 CH240:  240
21 00412 000000 CRLFR:  0
22 00413 000060 C60:    60
23
24 00414 000377 C377:   377
25 00415 000000 MESSR:  0
26 00416 054412 TYPE:   STA 3,TYPRET     ;TYPE THE C(0)R IF
27 00417 010770         ISZ CHORZ
28 00420 074477         READS 3          ;SWITCH 1(0).
29 00421 175100         MOVL 3,3
30 00422 175102         MOVL 3,3,SZC
31 00423 002405         JMP @TYPRET      ;INHIBIT TYPE EXIT.
32 00424 063511         SKPBZ TTO
33 00425 000777         JMP .-1
34 00426 061111         DOAS 0,TTO
35 00427 002401         JMP @TYPRET
36 00430 000000 TYPRET: 0
37
38
```

```
A 0000  .MAIN
01
02
03 00431 063077         HALT             ;OPERATOR ERROR FIX C(ADR)
04 00432 004401 BEGIN:  JSR .+1
05 00433 054066         STA 3,RETURN
06 00434 034063         LDA 3,ADR
07 00435 030050         LDA 2,CW70000
08 00436 020024         LDA 0,FINAL
09 00437 143400         AND 2,0
10 00440 040052         STA 0,EDIST
11 00441 173400         AND 3,2
12 00442 050051         STA 2,MODUAL     ;THE MEMORY MODUAL
13
14 00443 030003 IPAT:   LDA 2,ADR
15 00444 024041         LDA 1,C400
16 00445 020006         LDA 0,PATT       ;PRESET PATTERN
17 00446 147424         AND 2,1,SZR
18 00447 100000 IPAT1:  COM 0,0
19 00450 024005         LDA 1,INH
20 00451 123403         AND 1,0          ;MASK INHIBITED BITS
21 00452 024040         LDA 1,C17
22
23 00453 060300 FILL:   NIOP 0           ;SYNC AT A74
24 00454 034060         LDA 3,BPROG      ;CODE TO AVOIDE OVERWRITE
25 00455 156436         SUBZ# 2,3,SEZ    ;OF THE PROGRAM.
26 00456 000403         JMP .+3          ;PATT < PROGRAM BEGIN.
27 00457 034061         LDA 3,EPROG
28 00460 172436         SUBZ# 3,2,SEZ    ;DONT SKIP IF > PROG END.
29 00461 041000         STA 0,0,2
30 00462 034042         LDA 3,C77
31 00463 151420         INC 2,2          ;PATTERN
32 00464 133414         AND# 1,2,SZR     ;SKIP EVERY 16 TIMES
33 00465 000766         JMP FILL
34 00466 157414         AND# 2,3,SZR     ;SKIP EVERY 64 TIMES
35 00467 000760         JMP IPAT1
36 00470 020004         LDA 0,FINAL      ;TEST FOR FINAL ADDRESS
37 00471 142432         SUBZ# 2,0,SZC    ;EVERY 64 LOC, 4K
38 00472 000752         JMP IPAT+1       ;FILL TIME=100MS.
39
```

```
▲ 0011  .MAIN
01
02 00473 030051 DISTUR: LDA 2,MODUAL     ;DISTURB MODULE SELECT
03 00474 020043          LDA 0,C7777      ;DISTURB AT LOCATION
04 00475 024052          LDA 1,EDIST      ;0101,0202,0303,ETC.
05 00476 123000          ADD 1,0
06 00477 024045          LDA 1,C101       ;EVERY OTHER CORE IN MEMORY
07 00500 133000          ADD 1,2          ;IS DISTURBED AT LEAST
08 00501 074477          READS 3          ;1024 TIMES+INHIBIT DISTURBS.
09 00502 175112          MOVL# 3,3,SZC    ;BUT ONLY IF SWITCH 0
10 00503 142433          SUBZ# 2,0,SNC    ;IS SET TO A ONE.
11 00504 000406          JMP ICHECK       ;END OF DISTURB
12 00505 176400          SUB 3,3
13 00506 025000          LDA 1,0,2        ;REFFERANCE MEMORY
14 00507 175704          INCS 3,3,SZR
15 00510 000776          JMP .-2
16 00511 000766          JMP DISTURB+4
17
18 00512 030003 ICHECK: LDA 2,ADR        ;INITIALIZE CHECK CYCLE
19 00513 024041          LDA 1,C400
20 00514 020006          LDA 0,PATT       ;X LINE INIT PATTERN
21 00515 133414          AND# 1,2,SZR
22 00516 100000 ICK:     COM 0,0
23 00517 034005          LDA 3,INH
24 00520 163400          AND 3,0          ;MASK INHIBITED BITS
25 00521 024047          LDA 1,CNIOS      ;"S" PULSE
26 00522 114044          COMO 0,3,SZR     ;"C" PULSE
27 00523 024046          LDA 1,CNIOC      ;ON 1/0 DISTURB SIGNELS
28 00524 044412          STA 1,CHECK
29
30
31 00525 024060          LDA 1,BPROG      ;CODE TO PREVENT PATTERN
32 00526 146436          SUBZ# 2,1,SEZ    ;CHECK OF PROGRAM.
33 00527 000407          JMP CHECK        ;PATT<PROGRAM BEGIN.
34 00530 024061          LDA 1,EPROG
35 00531 132436          SUBZ# 1,2,SEZ
36 00532 000404          JMP CHECK        ;PATT>PROGRAM END
37 00533 024064          LDA 1,C20
38 00534 133000          ADD 1,2
39 00535 000416          JMP ECHECK
40 00536 000000 CHECK:   0                ;A SYNC PULSE ISSUED
41 00537 025000          LDA 1,0,2        ;SIGNELS RWVZ,RWV1
42 00540 106414          SUB# 0,1,SZR
43 00541 004427          JSR ERR1
44 00542 055000          STA 3,0,2
45 00543 025000          LDA 1,0,2
46 00544 136414          SUB# 1,3,SZR     ;SIGNELS UV1,UVZ
47 00545 004424          JSR ERR2
48 00546 041000          STA 0,0,2
49 00547 151400          INC 2,2
50 00550 024040          LDA 1,C17        ;COUNT 16 TIMES
51 00551 147414          AND# 2,1,SZR
52 00552 000764          JMP CHECK
53
54
```

```
▲ 0012  .MAIN
01
02 00553 034042 ECHECK: LDA 3,C77
03 00554 157414          AND# 2,3,SZR     ;CHECK FOR END OF
04 00555 000741          JMP ICK          ;LINE
05 00556 024074          LDA 1,FINAL      ;EVERY 64 TIMES
06 00557 146432          SUBZ# 2,1,SZC    ;CHECK FOR END OF CORE
07 00560 000733          JMP ICHECK+1
08 00561 020006          LDA 0,PATT       ;COMP THE
09 00562 100000          COM 0,0          ;PATTERN
10 00563 040006          STA 0,PATT
11 00564 101004          MOV 0,0,SZR
12 00565 000647          JMP BEGIN+2
13 00566 034066          LDA 3,RETURN
14 00567 001400          JMP 0,3
15
16
17
18 00570 101020 ERR1:    MOVZ 0,0         ;DISTURB ENTRY
19 00571 054007 ERR2:    STA 3,ERET       ;UNDISTURB ENTRY
20 00572 034044          LDA 3,C207       ;C(1)=ERROR WORD
21 00573 063411          SKPBN TTO        ;C(2)=ERROR ADDRESS
22 00574 075111          DOAS 3,TTO       ;SET SWITCH 1 TO
23 00575 074477          READS 3          ;INHIBIT HALT
24 00576 175200          MOVR 3,3
25 00577 034057          LDA 3,PLOC
26 00600 054066          STA 3,RETURN
27 00601 101003          MOV 0,0,SNC
28 00602 063077 ER:      HALT             ;IF TTY NOT BUSY
29 00603 114040          COMO 0,3         ;TURN OF TTY IF
30 00604 002007          JMP @ERET        ;TO NOISEY.
31 00605 000605 CEND:    .
32
33                       .TXT    /COPYRIGHT (C) DGC,1970,71,74
   00606 047503
   00607 054520
   00610 044522
   00611 044107
   00612 020124
   00613 041450
   00614 020051
   00615 043524
   00616 026103
   00617 034461
   00620 030067
   00621 033454
   00622 026061
   00623 032067
34 00624 046101 ALL RIGHTS RESERVED/
   00625 020114
   00626 044522
   00627 044107
   00630 051524
   00631 051040
   00632 051505
   00633 051105
   00634 042525
   00635 000104
35
36                .END
```

0013 .MAIN
0014 .MAIN

ADR	000003	4/05	4/49	10/06	10/14	11/18		
BEGIN	000432	4/27	4/34	10/04	12/12			
BPROG	000060	4/29	4/56	10/24	11/31			
C0700	000050	4/21	10/07					
C101	000045	4/18	11/06					
C17	000040	4/13	10/21	11/50				
C20	000064	4/33	11/37					
C207	000044	4/17	12/20					
C212	000402	9/07	9/13					
C215	000403	9/05	9/14					
C377	000414	7/16	9/24					
C400	000041	4/14	10/15	11/19				
C60	000413	7/30	7/49	7/53	9/22			
C77	000042	4/15	10/30	12/02				
C7777	000043	4/16	11/03					
CBEG	000065	4/34	5/03					
CEND	000605	4/27	12/31					
CH240	000411	7/27	7/34	8/47	9/20			
CHAR	000343	7/23	7/43	7/56	8/25	9/06	9/08	
CHAR1	000356	8/37						
CHAR7	000410	8/44	9/19					
CHECK	000536	11/28	11/33	11/36	11/40	11/52		
CHORZ	000407	8/43	9/10	9/18	9/27			
CHRET	000405	8/25	8/41	8/46	9/16			
CHSAV	000406	8/28	8/34	9/17				
CHTAB	000404	7/41	8/37	9/15				
CMA	000055	4/26	6/29					
CNIOC	000046	4/19	11/27					
CNIOS	000047	4/20	11/25					
CRLF	000372	6/21	9/04					
CRLFR	000412	9/04	9/11	9/21				
DECOC	000276	7/38	7/57					
DECOT	000306	7/46	7/51					
DECP	000314	7/47	7/52					
DECTB	000332	7/33	8/12					
DISTU	000473	11/02	11/16					
ECHEC	000553	11/39	12/02					
EDIST	000052	4/23	10/10	11/04				
EPROG	000061	4/30	4/58	10/27	11/34			
ER	000602	12/28						
ERET	000007	4/09	12/19	12/30				
ERR1	000570	11/43	12/18					
ERR2	000571	11/47	12/19					
FILL	000453	10/23	10/33					
FINAL	000004	4/06	4/40	6/20	6/24	10/08	10/36	12/05
ICHEC	000512	11/11	11/18	12/07				
ICK	000516	11/22	12/04					
INH	000005	4/07	10/19	11/23				
IPAT	000443	10/14	10/38					
IPAT1	000447	10/18	10/35					
K1000	000053	4/24	6/02					
M20	000063	4/32	4/47	4/54				
M201	000054	4/25	6/18					
MESIZ	000234	6/23	6/46					
MESS	000247	6/22	7/13	7/24				
MESSR	000415	7/13	7/14	7/25	9/25			
MMA	000212	5/12	6/27					
MMA1	000217	6/32	6/43					
MMA2	000224	4/26	6/37					

0015 .MAIN

MODUA	000051	4/22	10/12	11/02			
MOVE	000113	5/02	5/09				
MSIZ	000164	6/03	6/02				
MSIZ1	000166	6/04	6/16				
MSIZ2	000202	6/11	6/18				
OCTAB	000322	7/31	8/03				
PATT	000006	4/08	10/16	11/20	12/08	12/10	
PDEC	000271	7/33					
PLOC	000057	4/28	4/53	5/10	12/25		
POCT	000266	6/25	7/30				
PSIZE	000056	4/27	4/41				
RADRE	000342	7/35	7/40	8/23			
RANDO	000062	4/31	4/39				
RETUR	000066	4/35	10/05	12/13	12/26		
SEND	000067	4/38	6/44				
TYPE	000416	8/40	8/48	9/26			
TYPRE	000430	9/26	9/31	9/35	9/36		
ZOCT	000264	7/27					
ZSUPP	000341	7/36	7/44	7/54	8/22		
.RAND	000126	4/38	5/14				
.UD01	000156	5/16	5/24	5/40			
.UD02	000157	5/17	5/25	5/41			
.UD03	000160	5/14	5/15	5/26	5/42		
.UD10	000161	5/29	5/32	5/43			
.UD20	000162	5/21	5/44				
.UD21	000163	5/28	5/46				
.UD50	000143	5/20	5/28				