TEXT LISTING

068-000442-05

PROGRAM

6038/6039 FLOPPY RELIABILITY

TEXT TAPE

097-000442-05

ABSTRACT

THIS IS A PROGRAM DESIGNED TO TEST THE 6038/6039 FLOPPY DISK. THE PROGRAM IS SET UP TO HANDLE A MAXMIUM OF EIGHT ADAPTERS FOR A TOTAL OF 16 DRIVES (2/ADAPTER).

NOTICE

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 0001  .MAIN    AOS ASSEMBLER REV 02.05         12:02:26 09/28/79
01
02
03
04
05
06
07              ;*****************************************************************
08              ;
09              ; NAME: FPYRL.TX                          PART NUMBER: 097-000442
10              ;
11              ;
12              ; DESCRIPTION: 6038/6039 FLOPPY DISK RELIABILITY
13              ;
14              ;
15              ; REVISION HISTORY:
16              ;
17              ;       REV.            DATE
18              ;
19              ;       00              12/03/76
20              ;       01              06/24/77
21              ;       02              10/14/77
22              ;       03              04/28/78
23              ;       04              01/05/79
24              ;       05              09/13/79
25              ;
26              ;
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30              ;
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34              ; MATERIAL A PUBLICATION.
35              ;
36              ;               NOTICE
37              ;
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47              ; SOFTWARE MANUFACTURED IN ACCORDANCE HEREWITH.
48              ;*****************************************************************
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!0002  .MAIN
01                      ;  6038/6039 DISKETTE RELIABILITY
02                      ;-------------------------------------
03                      ;-------------------------------------
04              ; FPYRL.SR
05
06              ; REVISION HISTORY:
07              ;--------------------
08              ;
09              ;REV             DATE
10              ;
11              ;       00              12/03/76
12              ;       01              06/24/77
13              ;       02              09/23/77
14              ;       03              04/28/78        DTR #95
15              ;       04              01/05/79        CLEAR DTR'S 160,
16              ;                                       177,202, AND 211
17              ;       05              09/13/79        INCLUDE IOMOD TO ENABLE
18              ;                                       RUNNING ON M8C, CLEAR
19              ;                                       DTR'S 437 AND 468
20
21
22              ; 1.0   ABSTRACT:
23              ;-----------------
24
25              ; THIS IS A PROGRAM DESIGNED TO TEST THE 6038/6039 FLOPPY DISK.
26              ; THE PROGRAM IS SET UP TO HANDLE A MAXIMUM OF EIGHT ADAPPTERS
27              ; FOR A TOTAL OF SIXTEEEN DRIVES(2/ADAPTER).
28              ;       THE DESIRED DEVICE CODE OR CODES SHOULD BE TYPED
29              ; SEPARATED BY A SPACE AND TERMINATED BY A CARRIAGE RETURN.
30              ;       THE PROGRAM CONSISTS OF EIGHT BASIC TESTS,AND COMMAND
31              ; STRING INTERPRETER.
32
33
34
35              ; 1.1 INPUTS:
36              ;--------------
37              ;       ALL INPUTS TO THE PROGRAM ARE DONE VIA THE TERMINAL
38              ; KEYBUARD.THE PROGRAM ASSUMES TURNKEY SYSTEM WITH NO SWITCHES.
39              ;       THE SWITCH REGISTER IS INTERNAL TO THE PROGRAM AND
40              ; SIMULATES THE SWITCH CONSOLE.
41              ; THE SETTING AND CLEARING OF BITS WILL BE EXPLAINED LATER.
42
43              ; 2.0 HARDWARE REQUIREMENTS:
44              ;----------------------------
45              ;       HARDWARE REQUIRED TO RUN THIS PROGRAM IS:
46              ; SINGLE OR DUAL DRIVE FLOPPY(6038/6039).
47              ; ANY MICRO-NOVA CPU
48              ; A TERMINAL(TTY OR CRT&KEYBOARD).
49              ;  HIGH SPEED PTR IS OPTIONAL DEPENDING ON SET UP.
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10003  .MAIN
01              ; 3.0   OPERATION:
02              ;-----------------
03
04              ;       THE PROGRAM HAS TWO STARTING ADDRESSES (2 OR 200).
05              ; WHEN STARTED,THE PROGRAM SIZES AND REPORTS MEMORY
06              ; LIMIT. IT THEN REQUESTS FLOPPY DEVICE CODES,AT THIS
07              ; TIME UP TO EIGHT(8) DEVICE CODES MAY BE ENTERED
08              ; SEPARATED BY A SPACE AND TERMINATED BY A CARRIAGE
09              ; RETURN.
10              ; THE PROGRAM NOW REQUESTS THE UNITS TO BE TESTED.
11              ; AFTER THESE HAVE BEEN SELECTED SWITCH SETTINGS
12              ; ARE REQUESTED. THIS WILL BE DISCUSSED LATER.
13              ; AFTER THE SWITCH SETTINGS HAVE BEEN SELECTED THE
14              ; PROGRAM REQUESTS THE LOADING OF SCRATCH DISKETTES.
15              ; WHEN THE DISKETTES HAVE BEEN LOADED THE OPERATOR
16              ; TYPES A CR AND THE PROGRAM CONTINUES.
17              ;       THE PROGRAM NOW REQUESTS THE TESTS TO BE RUN.
18              ; A CARRIAGE RETURN WILL SELECT TESTS (1 - 8) AND
19              ; UNIT SWITCHING TEST TO BE RUN
20              ; IN SEQUENCE ON EACH DEVICE.WHEN DONE DISK COPY IS RUN.
21              ; TYPING A NUMERIC CHARATER  1-8 WILL SELECT AND
22              ; LOCK ON THAT TEST.
23              ; WHEN LOCKED ON A TEST UNITS DO NOT CHANGE.
24              ; AN ALPHA "I" WILL SELECT THE INTERCHANGABILITY
25              ; TEST,AN ALPHA "U" WILL SELECT UNIT SWITCHING
26              ; TEST. ANY OTHER ALPHA CHARACTER WILL
27              ; PUT YOU IN COMMAND STRING.
28              ; BELOW IS A LIST OF THE TESTS AND THE TYPE OF DATA:
29              ; TEST 1          ALL ZEROS
30              ; TEST 2          ALL ONES
31              ; TEST 3          ALTERNATE ONES AN ZEROS
32              ; TEST 4          ALTERNATE ZEROS AN ONES
33              ; TEST 5          ALL SIXS
34              ; TEST 6          SEVEN ZERO PATTERN
35              ; TEST 7          RANDOM DATA
36              ; TEST 8          RANDOMLY ORGANIZED ONES AND ZEROS
37              ; TEST 9          INTERCHANGABILITY
38              ;                 UNIT SWITCHING TEST
39
40              ;       THE PROGRAM IS COMPLETLY RE-ENTERANT. IF AT
41              ; ANY TIME WHILE RUNNING THE FIRST EIGHT TESTS YOU
42              ; WANT TO RESTART: TYPE A CNTL R(THIS RESTARTS WITH
43              ; THE CURRENT SWITCH SETTINGS) OR A CNTL D (THIS
44              ; RESTARTS WITH THE SWITCHS SET TO ZERO).
45              ; INTERCHANGE TEST RESTARTS AUTOMATICALLY WHEN
46              ; COMPLETED.
47
48
49              ; 4.0   LOGICAL DISK UNITS
50              ;---------------------------------
51
52              ;       LOGICAL DISKS WILL BE OF THE FORMAT DDU DD=DEVICE CODE
53              ;    U=UNIT NO.
54                      S?WPD   5
55
56
57              ;5.     SWITCH SETTINGS
58              ;
59              ;       LOCATION "SWREG" IS USED TO SELECT THE PROGRAM OPTIONS
60              ;       (NOT SYSTEM CONFIGURATION). WHILE RUNNING UNDER DTOS,
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 0004  .MAIN
01              ;       THIS LOCATION WILL BE LOADED BY THE MONITOR.
02              ;       UNDER STAND ALONE AND PROGRAM LOAD MODES THIS
03              ;       LOCATION WILL BE SET ACCORDING TO THE ANSWERS SUPPLIED
04              ;       BY THE OPERATOR. IN ANY CASE, THE OPTIONS CAN BE CHANGED
05              ;       OR VERIFIED BY USING ONE OF THE COMMANDS GIVEN IN SEC.
06              ;       5.2
07              ;
08              ;
09              ;5.1    SWITCH OPTIONS
10              ;       DIFFERENT BITS AND THEIR INTERPRETATION AT LOCATION
11              ;       "SWREG" IS AS FOLLOWS:
12              ;
13              ;       BIT     OCTAL   BINARY  INTERPRETATION
14              ;               VALUE   VALUE
15              ;
16              ;       1               0       LOOP ON ERROR
17              ;               40000   1       SKIP LOOPING ON ERROR
18              ;
19              ;       2               0       PRINT TO CONSOLE
20              ;               20000   1       ABORT PRINT OUT TO CONSOLE
21              ;
22              ;       3               0       DO NOT PRINT % FAILURE
23              ;               10000   1       PRINT % FAILURE
24              ;
25              ;       4               0       ALLOW END OF PASS PRINT OUT
26              ;               04000   1       SUPPRESS END OF PASS PRINT OUT
27              ;
28              ;       5               0       DO NOT PRINT ON THE LINE PRINTER
29              ;               02000   1       PRINT ON THE LINE PRINTER
30              ;
31              ;       6               0       DO NOT HALT ON ERROR
32              ;               01000   1       HALT ON ERROR
33              ;
34              ;       7               0       DON'T PRINT SUBTEST SUMMARY OR PASS
35              ;               00400   1       PRINT SUMMARY AND/OR
36              ;                               PASSING OF EACH SUBTEST
37              ;       8               0       PRINT ONLY THE FIRST ERROR
38              ;               00200   1       PRINT EVERY ERROR
39
40              ;5.2    SWITCH COMMANDS
41              ;       ONCE THE PROGRAM STARTS EXECUTION THE STATE OF ANY OF
42              ;       THE BITS CAN BE CHANGED BY HITTING KEYS 1-9, A-F. THE
43              ;       PROGRAM WILL CONTINUE RUNNING AFTER UPDATING THE OPTIONS.
44              ;       EACH KEY WILL COMPLEMENT THE STATE OF THE BIT AFFILIAT-
45              ;       ED WITH IT, THUS BIT 4 CAN BE ALTERED BY HITTING KEY 4.
46              ;       SETTING OF ANY BIT OF LOCATION "SWREG" WILL SET BIT 0.
47              ;       (DEFAULT MODE IS DEFINED AS ALL BITS OF SWREG SET TO 0)
48              ;       THE PROGRAM CAN BE LOCKED INTO SWITCH MODIFICATION MODE
49              ;       BY TYPING A 0, IN WHICH CASE MORE THAN ONE BIT CAN BE
50              ;       CHANGED BEFORE  CONTROL IS ALLOWED TO RETURN TO THE
51              ;       MAIN PROGRAM.
52              ;
53              ;5.2.1  OTHER COMMANDS
54              ;
55              ;       "CR"    A "RETURN" CAN BE TYPED TO CONTINUE THE PROGRAM
56              ;               AFTER ITS LOCKED IN A SWITCH MODIFICATION MODE
57              ;
58              ;       ^D      THIS COMMAND GIVEN AT ANY TIME WILL RESET "SWREG"
59              ;               TO DEFAULT MODE AND RESTART THE PROGRAM.
60              ;
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 0005  .MAIN
01              ;       ^R      THIS COMMAND GIVEN AT ANY TIME WILL RESTART THE
02              ;               PROGRAM. SWITCHES ARE LEFT WITH THE VALUES THEY
03              ;               HAD BEFORE THE COMMAND WAS ISSUED.
04              ;
05              ;       ^O      THIS COMMAND GIVEN AT ANY TIME WILL CAUSE THE
06              ;               PROGRAM CONTROL TO GO TO ODT (NOTE: THIS IS AN
07              ;               OPTIONAL COMMAND AND IS AVAILBLE ONLY IF
08              ;               ODTPK IS PRESENT)
09              ;
10              ;       M       THIS COMMAND GIVEN AT ANY TIME WILL PRINT THE
11              ;               CURRENT OPERATING MODES.
12              ;
13
14              ;
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!0006  .MAIN
01              ;6.0  COMMAND STRING:
02              ;---------------------
03              ;       THE PROGRAM HAS A COMMAND STRING INTERPRETER.
04              ; IT IS ENTERED BY TYPING ANY ALPHA CHARATER WHEN TEST#
05              ; IS REQUESTED.
06              ; WHEN COMMAND STRING IS ENTERED IT REQUESTS UNIT TO
07              ; BE TESTED. A ZERO OR A ONE ARE THE ONLY RESPONSES
08              ; ALLOWED.
09              ; DATA TYPE IS NOW ASKED FOR:THE OPERATOR MAY SELECT ANY
10              ; ONE OF THE TYPES LISTED BY TYPING ITS CORRESPONING
11              ; NUMBER FOLLOWED BY A CARRIAGE RETURN.
12              ;       NOW THE COMMAND STRING MAY BE ENTERED.
13              ; THE COMMANDS ALLOWED ARE AS FOLLOWS:
14              ; WRITE READ SEEK RECAL RESTART LOOP LR.
15              ;       THE WRITE COMMAND IS RESTRICTED TO WRITING
16              ; OF ONE SECTOR OR ALL SECTORS. THIS IS BECAUSE OF
17              ; HARDWARE CONSTAINTS.
18              ;       THE RESTART COMMAND WILL TAKE YOU OUT OF
19              ; COMMAND STRING AND BACK TO THE START OF THE PROGRAM.
20              ;       THE FORMAT FOR COMMAND STRING IS:
21              ;
22              ; SEEK 56 WRITE 1 1 READ 1 1 RECAL LOOP
23              ;
24              ; *** NOTE ***
25              ; A SEEK COMMAND MUST BE FOLLOWED BY SOME OTHER COMMAND
26              ; SUCH AS READ WRITE ETC.A SEEK CAN NOT BE TERMINATED
27              ; WITH A CARRIAGE RETURN.
28
29              ; THE LOOP COMMAND ALLOWS LOOPING ON THE COMMAND STRING
30              ; OR THE PORTION OF THE STRING PRECEDING THE LOOP COMMAND.
31              ;EXITING FROM THE LOOP IS DONE BY HITTING A KEY ON THE
32              ; KEYBOARD.
33              ;  WHEN DATA IS REQUESTED THE RESPONSE IS A NUMBER
34              ; FROM 1-7. BELOW IS LISTED THE CORRESPONDING PATTERNS:
35              ;
36              ;       1= ALL ZEROS
37              ;       2= ALL ONES
38              ;       3= 125252
39              ;       4= 52525
40              ;       5= 66666
41              ;       6= 70707
42              ;       7= RANDOM
43
44
45              ; 7.0   ERRORS
46              ;---------------
47              ;       WHEN ERRORS OCURR THEY ARE REPORTED IMMEDIATLY.
48              ;    THE PROGRAM THEN WILL GO BACK TO THE BEGINNING OF
49              ;    FAILING TEST AND RUN IT AGAIN. THIS WILL NOT OCCUR,
50              ;    HOWEVER,IF SWITCH "1" IS SET.THE PROGRAM WILL PROCEED
51              ;    TO THE NEXT TEST.
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10007 .MAIN

**00000 TOTAL ERRORS, 00000 FIRST PASS ERRORS

0008 .MAIN

S?WPD 006770 MC 3/54