

TEXT LISTING

068-000672-01

PROGRAM

CARTRIDGE/DISKETTE RELIABILITY  
PROGRAM

TEXT TAPE

097-000672-01

ABSTRACT

THE CARTRIDGE/DISKETTE DISK RELIABILITY PROGRAM IS A MAINTENANCE PROGRAM DESIGNED TO EXERCISE AND TEST THE 6031/6030 DISK SYSTEMS AND 1-4 DISK DRIVES.

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PROGRAM NAME:  CORP.SR
6031/6030 CARTRIDGE/DISKETTE DISK RELIABILITY PROGRAM

REVISION HISTORY:
01  INCREASE THROUGHPUT FOR >16K CPU'S
    ADD MIN/MAX HEAD OPTION
    UPDATE FOR UTOS I/O MODULES
    CORRECT ALL OUTSTANDING PROBLEMS

MACHINE REQUIREMENTS:
NOVA/JUNOVA/ECLIPSE FAMILY CENTRAL PROCESSOR
18K READ/WRITE MEMORY
TELETYPE OR CRT AND CONTROL (4010)
4234 CONTROLLER & CARTRIDGE DRIVE
*** OR ***
6031/6030 CONTROLLER & DISKETTE DRIVE
CARTRIDGE STORAGE MEDIA TYPE 4234C OR
4234D..OR..DISKETTE STORAGE MEDIA TYPE
1098A AS APPLICABLE
***OR***
6095 10 MEGABYTE DISK SYSTEM

TEST REQUIREMENTS:  N/A

SUMMARY:
THE CARTRIDGE/DISKETTE DISK RELIABILITY PROGRAM
IS A MAINTENANCE PROGRAM DESIGNED TO EXERCISE
AND TEST THE 6031/6030 DISK SYSTEMS AND 1-4
DISK DRIVES.  THE DISK DRIVES MAY BE SHARED
BETWEEN TWO COMPUTERS IN WHICH CASE THE FOLLOWING
PROGRAMS MAY BE RUNNING IN EACH COMPUTER:

ONE COMPUTER RUNNING TEST
(SA 501 "EVEN"), THE OTHER (SA 501 "ODD")
WITH SURFACE RANGE (0 THRU 3) OR ANY STARTING
ADDRESS, ONE CPU WITH SURFACE RANGE (0 THRU 1)
& THE OTHER CPU WITH SURFACE RANGE (2 THRU 3).

IF NO DRIVES ARE TO BE SHARED, THERE ARE
NO OTHER RESTRICTIONS AS TO THE RUNNING OF
THESE PROGRAMS ON A DUAL PROCESSOR SYSTEM.

THE CONTROL CAN BE ANY DEVICE CODE 20-76 OCTAL.
THE DEFAULT IS 33 - SEE 9.0 FOR OTHER SETTINGS

RESTRICTIONS:
16.0
IF A DISK DRIVE IS SHARED BETWEEN TWO
COMPUTERS THEN EITHER :
(A) ONE CPU MUST RUN (SA 501 "EVEN") AND THE
OTHER (SA 501 "ODD") WITH SURFACE RANGES
(0 THRU 3). OR...
(B) BOTH WITH ANY STARTING ADDRESS BUT ONE CPU
WITH SURFACE RANGE (0 THRU 1) AND THE OTHER WITH
SURFACE RANGE (2 THRU 3).

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NAME: CORP.TX          PART NUMBER: 097-000672
DESCRIPTION: CARTRIDGE/DISKETTE RELIABILITY PROGRAM
REVISION HISTORY:
REV.          DATE
00           04/21/78
01           03/02/79
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PROGRAM DESCRIPTION/THEORY OF OPERATION:
A. RELIABILITY TEST (SA 500)
A RANDOM NUMBER GENERATOR IS USED TO SELECT
A DISK DRIVE, CYLINDER, HEAD BEGINNING
SECTOR, AND NUMBER OF CONSECUTIVE SECTIONS.
RANDOM DATA IS THEN GENERATED, WRITTEN, AND
READ. THE SEQUENCE IS REPEATED INDEFINITELY.
B. RELIABILITY TEST (SA 501) WITH OPTIONS
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SAME AS A, EXCEPT THAT OPERATOR IS GIVEN
THE OPTION OF SELECTING "ODD" OR "EVEN", CYL-
INDERS FOR RUNNING DUAL PROCESSORS BY TYPING
"O" FOR ODD OR "E" FOR EVEN. TYPING "CR"
OPTIONS ALONE GETS SINGLE PROCESSOR
ON DATA PATTERNS (SEE 7D II) FOR
CHOOSING A CONSTANT CYLINDER, HEAD, SECTOR
OR # OF SECTORS. ANY LETTER RESPONSE TO
CYL, HEAD ETC GETS RANDOM FUNCTION FOR THAT
VARIABLE. A CARRIAGE RETURN ONLY GETS THE
RANDOM FUNCTION FOR ALL VARIABLES. ALL
INPUTS ARE RANGE CHECKED AND REJECTED IF OUT
OF RANGE.
C. INCREMENTAL DISK ADDRESS TEST (SA 502)
OPERATOR IS GIVEN OPTION ON DATA (SEE 7D II)
REQUESTED DATA IS FIRST WRITTEN OVER THE EN-
TIRE PACK. THEN THE DATA IS READ FROM ALL
SECTORS. THIS INSURES THAT ALL DISK PACK
BLOCKS ARE USABLE AND ARE FORMATTED PROPERLY.
THE TEST IS THEN REPEATED FOR ALL READY DISCS,
AND PASS IS PRINTED. THE SEQUENCE IS REPEATED
INDEFINITELY.
#NOTE
SWPAK7=1, PROGRAM HALTS AFTER WRITE WITH READ
VERIFICATION ALLOWING OPERATOR TO CHANGE PACKS.
SWPAK=1 PUTS PROGRAM INTO READ ONLY MODE
#N SAYS 501,502 ONLY. IF SA 501-DATA MUST INOT!
BE RANDOM (SEE 7D II).
ALL NUMBERS ENTERED ABOVE MUST BE IN OCTAL.
ANY NON-OCTAL INPUT IS TREATED AS A LETTER.
ANY LETTER INPUT FOR CYL,HEAD,SECTOR, OR # OF
SECTORS GETS RANDOM FUNCTION IN THE RELIABILITY
TEST WITH OPTIONS.

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D. COMMAND STRING INTERPRETER (SA 503)
AS A TROUBLE SHOOTING AID THE SERVICE
ENGINEER MAY TYPE IN HIS OWN TEST LOOP AFTER
STARTING AT 503, THREE ARGUMENTS MUST BE
ENTERED IN RESPONSE TO THREE PROGRAM QUESTIONS:
"UNIT", "DATA", AND "COMMAND STRING". ALL
NUMBERS MUST BE ENTERED IN OCTAL.
I. UNIT: TYPE UNIT & OR CARRIAGE RETURN
TO USE PREVIOUS ENTRY.
II. DATA: ROT=ROTATED 110110 PATTERN - THIS
DATA OPTION APPLIES TO (SA 502)
INCREMENTAL DISK ADDRESS TEST ONLY
AND RESULTS IN A TOTAL OF 4 PASSES
ACROSS THE PACK ROTATING THE PATTERN
AFTER EACH PASS BEFORE PRINTING THE
MESSAGE "****PASS****". THIS IS TO
INSURE THAT A PEAK PHASE SHIFT IS
EVOKED ACROSS EACH BIT CELL OF THE
PACK. THIS TEST PATTERN IS RECOMMENDED
WHEN RUNNING ERROR RATES.
RAN=RANDOM
AL=ALL ONES
ALZ=ALL ZEROS
PAT=110110 PATTERN
ALZ=252510 PATTERN
FL=FLOATING ONE PATTERN
FLZ=FLOATING ZERO PATTERN
AD=ALTERNATING CYLINDER AND
HEAD SECTOR WORDS
VAR=EXISTING WORDS ENTERED PREVIOUSLY
AS DESCRIBED BELOW
ALTERNATIVELY ENTER A STRING OF UP TO 7
OCTAL 16 BIT WORDS TO BE USED AS
DATA. THE WORDS ENTERED ARE USED
REPEATEDLY TO MAKE UP A SECTOR BLOCK.
TYPE "CR" TO USE THE PREVIOUS ENTRY.

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10005 .MAIN

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III. COMMAND STRING

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1. READ HEAD,SECTOR,#SECTORS
2. WRITE SAME
3. SEEK CYLINDER
4. RECALIBRATE
5. LOOP (GO TO BEGINNING OR LR)
6. DELAY N (N=DELAY IN MS)
7. LR (BEGIN LOOP HERE)
8. FORMAT (CYL,HD,SECTOR)
   (INCLUDES THE NECESSARY SEEK)
9. TYPE CARRIAGE RETURN TO USE THE
   PREVIOUS UNIT, DATA, OR COMMAND
   STRING...
10. TYPE ESCAPE TO BYPASS UNIT & DATA
   PROMPT TO COMMAND STRING PROMPT,
   USING PREVIOUSLY ENTERED UNIT# &
   DATA.
11. TYPE "R" TO INTERRUPT EXECUTION
   OF CURRENT COMMAND AND RETURN TO
   UNIT# PROMPT
12. TYPE "O" TO ENTER OOT
13. TYPE "W" FOR STATISTICS LOG
14. TYPE "L" FOR ERROR LOGS

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NOTE: OPTIONS 14 & 15 ARE VALID ONLY FOR THE COMMAND STRING BEING EXECUTED; LOGS ARE CLEARED PRIOR TO EACH COMMAND STRING ENTRY.

THE FOLLOWING EXAMPLE WOULD CAUSE UNIT 1 TO SEEK CYLINDER 50, THEN REPEATEDLY WRITE SECTORS 2 AND 3 OF HEAD 1, THEN READ IT BACK AND CHECK. DATA SPECIFIED AS ALTERNATE WORDS OF ZEROS THEN ONES :

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UNIT: 1
DATA: 0,17777
COMMAND STRING: SEEK 50 LR WRITE 1,2,2 READ SAME LOOP

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NOTE: EITHER SPACES OR A COMMA MAY BE USED AS AN ARGUMENT DELIMITER. EACH RESPONSE IS TERMINATED BY TYPING CARRIAGE RETURN. IF MORE ROOM IS NEEDED ON A LINE, TYPE LINE FEED TO SPACE TO THE NEXT LINE. A DOES NOT ELIMINATE THE NEED FOR DELIMITER. THE WORD "SAME" USED WITH READ, OR WRITE, WILL CAUSE THE PREVIOUS DISK ADDRESS PARAMETERS TO BE USED.

SHOULD COMMAND STRING ENTRIES EXCEED INPUT BUFFER CAPACITY, THE PROGRAM RESPONDS WITH THE MESSAGE "INPUT OVERFLOW". THE OPERATOR MUST DEPRESS ONE OR MORE "RUBOUTS" FOLLOWED BY A "CR" TO POSITION THE BUFFER POINTER TO THE LAST VALID COMMAND IN THE STRING AND BEGIN EXECUTION.

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AN "R" TYPED WHILE A STRING IS BEING EXECUTED WILL CAUSE THE PROGRAM TO RETURN TO THE UNIT# PROMPT. THE ESCAPE KEY WILL BYPASS THE UNIT AND DATA PROMPTS TO THE COMMAND STRING PROMPT, USING PREVIOUSLY ENTERED UNIT# AND DATA. AFTER COMPLETION OR TERMINATION OF A COMMAND STRING, TYPING A CARRIAGE RETURN WILL CAUSE THE PROGRAM TO ADVANCE TO THE NEXT PROMPT USING THE UNIT, DATA, OR COMMAND STRING PREVIOUSLY ENTERED.

TO CHANGE THE CURRENT VALUE OF "SWREG" AND/OR ENTER THE OTCAL DEBUGGER WHILE IN "COMMAND STRING INTERPRETER", THE PROGRAM MUST BE EXECUTING A COMMAND. IF NO COMMAND HAS BEEN ENTERED, PROCEED TO COMMAND STRING PROMPT AND TYPE IN THE LOOP COMMAND.

INPUT VALIDATION:

IV.

A. UNIT: THE PROGRAM WILL ACCEPT ONLY THOSE UNIT#'S PREVIOUSLY CONFIGURED BY THE OPERATOR DURING STARTUP. AFTER A "LOSS OF READY" ON A PARTICULAR UNIT THAT UNIT#'S # WILL BE REJECTED UNTIL THE UNIT HAS BEEN RE-INSTATED. SEE SECTION 12 NOTE #1.

R. DATA: THE PROGRAM WILL ACCEPT ONLY THOSE PATTERNS DESCRIBED IN SECTION 5 D. II. SPELLING ERRORS OR NON-RECOGNIZED PATTERNS WILL BE REJECTED.

C. COMMANDS: THE PROGRAM REJECTS ANY UNRECOGNIZED COMMANDS AND WILL ALLOW ANY INPUT WITHIN THE BIT FIELD BOUNDARIES OF THE APPLICABLE PARAMETER WITH THE EXCEPTION OF THE # OF SECTORS TO BE TRANSFERRED. THE ALLOWABLE RANGE OF # OF SECTS IS DETERMINED BY THE AVAILABLE BUFFER SIZE AND CANNOT BE ZERO.













10017 .MAIN

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11.1.3 ODT COMMANDS

THE LOCATIONS THAT CAN BE EXAMINED AND MODIFIED BY THE USER ARE CALLED CELLS. THESE CELLS ARE OF TWO TYPES: INTERNAL CPU CELLS AND MEMORY LOCATIONS.

OPENING INTERNAL CELLS

THE COMMAND TO OPEN ONE OF THE INTERNAL REGISTERS IS OF THE FORM "NA" WHERE N IS AN OCTAL EXPRESSION BETWEEN 0 AND 7

0-3 FOR ACCUMULATORS 0-3  
4 FOR PC OF THE NEXT INSTRUCTION TO BE EXECUTED IN THE EVENT OF A "P" COMMAND.  
5 CPU AND I/O STATUS  
BIT INTERPRETATION  
15 STATUS OF I/O DONE FLAG  
14 STATUS OF INTERRUPTS (ION FLAG)  
13 STATUS OF CARRY BIT  
6 ADDRESS OF THE LOCATION HAVING THE BREAK POINT (IF ANY)  
7 INSTRUCTION AT THE BREAK POINT LOCATION

OTHER COMMANDS TO OPEN CELLS ARE:

"ADR"/ OPEN THE CELL AND PRINT ITS CONTENTS  
./ OPEN THE CELL CURRENTLY POINTED TO BY THE POINTER AND PRINT ITS CONTENTS.  
.\*"ADR"/ ADD "ADR" TO THE POINTER, OPEN THE CELL AND PRINT ITS CONTENTS.  
+."ADR"/ SUBTRACT "ADR" FROM THE POINTER, OPEN THE CELL AND PRINT ITS CONTENTS.  
"CR" THE RETURN KEY IS USED TO CLOSE THE OPEN CELL WITH OR WITHOUT MODIFICATION.  
"LF" LINE FEED IS USED TO CLOSE THE OPEN CELL WITH OR WITHOUT MODIFICATION AND TO OPEN THE SUCCEEDING CELL.  
" " CLOSE THE OPEN CELL WITH OR WITHOUT MODIFICATION AND OPEN THE PRECEDING CELL  
/ CLOSE THE OPEN CELL WITHOUT MODIFICATION, AND OPEN THE CELL POINTED TO BY ITS CONTENTS.  
+."ADR"/ CLOSE THE OPEN CELL WITHOUT MODIFICATION, AND OPEN THE CELL POINTED TO BY ITS CONTENTS + "ADR"  
-."ADR"/ CLOSE THE OPEN CELL WITHOUT MODIFICATION, AND OPEN THE CELL POINTED TO BY ITS CONTENTS - "ADR"

10018 .MAIN

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MODIFICATION OF A CELL

ONCE A CELL HAS BEEN OPENED ITS CONTENTS CAN BE MODIFIED BY TYPING THE NEW VALUE THE CELL IS TO CONTAIN IN THE FORM OF AN OCTAL EXPRESSION FOLLOWED BY "CR" OR "LF". IF A + OR - IS TYPED AS THE FIRST CHARACTER OF THE EXPRESSION THEN THE VALUE OF THE EXPRESSION IS ADDED TO OR SUBTRACTED FROM THE OLD CONTENTS OF THE CELL. THE ADDRESS ITSELF OR AN EXPRESSION RELATIVE TO THE ADDRESS CAN BE DEPOSITED BY TYPING A "." OR "+/-OCTAL EXPRESSION". A RUBOUT COMMAND GIVEN RIGHT AFTER OPENING A CELL ALLOWS THE MODIFICATION OF ITS CONTENTS AS IF THEY WERE TYPED IN JUST BEFORE THE COMMAND WAS ISSUED.

OTHER ODT COMMANDS

RUBOUT THIS KEY IS USED TO DELETE ERRONEOUSLY TYPED DIGITS. EACH TIME THE KEY IS PRESSED THE RIGHT M DIGIT IS DELETED AND ECHOED ON THE TERMINAL. IF THE RUBOUT KEY IS PRESSED RIGHT AFTER OPENING A CELL THEN IT DELETES THE RIGHT MOST DIGIT OF THE CONTENTS. THIS ALLOWS THE MODIFICATION OF THE CELL AS IF ITS CONTENTS WERE TYPED IN JUST BEFORE THE KEY WAS PRESSED.

"ADR"B INSERT A BREAK POINT AT LOCATION "ADR". ONLY ONE BREAK POINT CAN BE INSERTED AND ANY ENTRY TO ODT AFTER EXECUTING A BREAK POINT WILL CAUSE IT TO BE DELETED.

D DELETE THE BREAK POINT IF ANY.

P RESTART THE EXECUTION OF THE PROGRAM AT LOCATION POINTED TO BY 4A.

"ADR"R START EXECUTING THE PROGRAM AT "ADR" AFTER IO-RESET.

K KILL THE STRING TYPED SO FAR. THE ODT RESPONDS WITH A "2" AND THE OPEN CELL IS CLOSED WITHOUT MODIFICATION.

= PRINT THE OCTAL VALUE OF THE INPUT ONLY. THIS WILL CLOSE ANY OPEN CELLS WITHOUT MODIFICATION AND WILL NOT OPEN A CELL.

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:11.2.0 MEMORY DUMP UTILITY (SA513)
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:11.2.0.1 THIS UTILITY AFFORDS THE USER THE CAPABILITY
? OF DISPLAYING, IN OCTAL FORMAT, THE CONTENTS
? OF CONTIGUOUS MEMORY LOCATIONS OF VARIABLE BLOCK
? LENGTHS.
?
:11.2.0.2 BLOCKS OF CONTIGUOUS MEMORY THAT ARE IDENTICAL
? AND GREATER THAN 64 ENTRIES IN LENGTH ARE "OUT-
? PUT IN AN ABBREVIATED FORMAT (SEE PAR 11.2.2).
? THIS FEATURE WILL CONSERVE HARD COPY AND EXECUTION
? TIME.
?
:11.2.0.3 THE USER MAY ALSO SPECIFY A SEARCH WORD. THE
? TOTAL NUMBER OF ENTRIES FOUND MATCHING THIS
? WORD; WILL BE DISPLAYED AT THE END OF THE PRINTOUT
?
:11.2.0.4 THIS PROGRAM MAY BE MANUALLY STARTED AT LOCATION
? " (SA513) " SYMBOLIC (I.E. THE FIRST ADDRESS OF
? THE UTILITY).
?
:11.2.1 DIALOGUE
?
:11.2.1.1 PROGRAM DIALOGUE TERMINATED BY A "2" REQUIRES A
? USER RESPONSE BEFORE PROGRAM EXECUTION CAN CON-
? TINUE. IN THE FOLLOWING DIALOGUE USER RESPONSE IS
? INDICATED BY " " ;
?
? WD? "AAAAAA"
? FST ADR? "888888"
? LST ADR? "CCCCC"
?
? WHERE:
? "AAAAAA" IS ANY OCTAL NUMBER IN THE RANGE OF 000000
? THRU 177777.
?
? "888888" IS ANY OCTAL NUMBER IN THE RANGE OF 000000
? THRU 077776; AND EQUAL TO, OR LESS THAN "CCCCC".
?
? "CCCCC" IS ANY OCTAL NUMBER IN THE RANGE OF 000001
? THRU 077777; AND EQUAL TO, OR GREATER THAN "AAAAAA".
?
:11.2.1.2 A RESPONSE OF "0", "CR", "LF", "TAB", OR "SPACE"
? TO ANY REQUEST WILL BE INTERPRETED AS A "0" RE-
? SPONSE.
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:11.2.2 ERRORS
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:11.2.2.1 AN ILLEGAL RESPONSE TO A REQUEST, (I.E. A NON-
? OCTAL CHARACTER), WILL RESULT IN A REPEAT OF THAT
? REQUEST.
?
:11.2.2.2 A RANGE ERROR RESPONSE, (I.E. FIRST ADDRESS
? GREATER THAN LAST ADDRESS), WILL RESULT IN THE RE-
? START OF THE PROGRAM IF ENTERED MANUALLY; OR A
? RETURN TO PC +3 IF ENTERED DYNAMICALLY.
?
:11.2.3 TYPICAL PROGRAM RESPONSE
?
:ADR:> 0 1 2 3 4 5 6 7
? 10 NN-NN NN-NN NN-NN NN-NN NN-NN NN-NN NN-NN NN-NN
? 11 NN-NN NN-NN NN-NN NN-NN NN-NN NN-NN NN-NN NN-NN
? :SAME
? 1100 NN-NN NN-NN NN-NN NN-NN NN-NN NN-NN NN-NN NN-NN
? 1110 NN-NN NN-NN NN-NN NN-NN NN-NN NN-NN NN-NN NN-NN
? :WD'S FOUNDE= MM-MM
?
:11.2.3.1 WHERE:
? THE "NN-NN" ENTRIES ABOVE CORRESPOND TO THE CON-
? TENTS OF THE ASSOCIATED ADDRESSES.
?
? THE "MM-MM" ENTRY ABOVE REPRESENTS THE TOTAL NUMBER OF
? WORDS (OCTAL) FOUND MATCHING THE SEARCH WORD.
?
:11.2.3.2 IN THE EXAMPLE ABOVE IT IS ASSUMED THAT THE
? CONTENTS OF LOCATIONS 10 THRU 107 INCLUSIVE ARE IDENTICAL.
? THEREFORE THE ABBREVIATED OUTPUT, (I.E. LOCATIONS 20
? THRU 107 INCLUSIVE ARE REPLACED BY THE TEXT MESSAGE
? "SAME").
?
? NOTE:
? FOR MANUAL MODE OF OPERATION SWITCH "2" IN LOCATION
? "SWREG" MUST BE "0" OR THE PROGRAM WILL HANG IN A
? LOOP.
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12.0 SPECIAL NOTES/SPECIAL FEATURES:
12.1 "LOSS OF READY" - SEVERAL CONSIDERATIONS
ARE GIVEN TO LOSS OF READY STATUS DURING
PROGRAM EXECUTION AS FOLLOWS:
(1.A) DURING INITIAL RECAL OF CONFIGURED DRIVES-
A LOSS OF READY RESULTS IN AN ERROR MESSAGE
AND PROGRAM RESUMES RECAL OF REMAINING DRIVES.
THIS ALLOWS THE OPERATOR TO CONFIGURE "OFFLINE"
DRIVES FOR FUTURE TESTING BY CONFIGURING DRIVES
THAT ARE NOT READY AT START UP TIME. SUCH
DRIVES WILL BE CONFIGURED WITH AN "OFFLINE"
STATUS.
(1.B) ANY LOSS OF READY DURING PROGRAM EXECUTION=
RESULTS IN THE APPLICABLE DRIVE BEING PLACED
IN AN OFFLINE STATUS. AN ERROR MESSAGE IS
PRINTED AND TESTING RESUMES ON THE REMAINING
DRIVES. IF ALL CONFIGURED DRIVES ARE "OFFLINE"
THE PROGRAM PRINTS A MESSAGE TO THAT EFFECT
& HALTS. PROGRAM MUST THEN BE RESTARTED AS PER
SECTION 3 (OPERATING PROCEDURES).
(1.C) "OFFLINE" DRIVES- ANY DRIVE INITIALLY CON-
FIGURED BUT SUBSEQUENTLY OFFLINE AS DEFINED
IN SECTION 6 (LOSS OF RDY) MAY BE PLACED
ONLINE WITH THE FOLLOWING CONSIDERATIONS:
(1.C.1) SINGLE PROCESSOR MODE- A DRIVE COMING READY
RESULTS IN AN ONLINE STATUS OF THE APPLICABLE DRIVE
AND TESTING WILL RESUME ON THAT DRIVE.
(1.C.2) DUAL PROCESSOR MODE/BOTH CPU'S RUNNING-
A DRIVE COMING READY RESULTS IN AN ONLINE STATUS
FOR THE CPU CURRENTLY SELECTED WHEN THE READY
ATTN OCCURS. THE DE-SELECTED CPU WILL RE-INSTATE
ALL OFFLINE DRIVES THAT HAVE COME READY AT THE
COMPLETION OF ITS CURRENT PASS.
(1.C.3) DUAL PROCESSOR MODE/SINGLE CPU-IF A DRIVE COMES
READY WHILE THE CPU IS SELECTED, (SEEKING, READING,
OR WRITING), IT IS IMMEDIATELY RE-INSTATED. IF
READY OCCURS WHILE THE CPU IS NOT SELECTED, THE
DRIVE OR DRIVES WILL BE RE-INSTATED AT THE COMPLETION
OF THE CURRENT PASS.
ALL DRIVES NOT PREVIOUSLY CONFIGURED AT START OF
PROGRAM ARE IGNORED.
12.2 THE PROGRAM WILL ACCOUNT FOR UP TO A MAX. OF
2**31 SECTORS WRITTEN OR READ. SPECIAL TEST
RUNS EXCEEDING THIS FACILITY WILL REQUIRE AN
OPERATOR'S TEST LOG TO AUGMENT SOFTWARE ACCOUNTING.
2**31 SECTORS = APPROX. 5.5* 10**11 WORDS.

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12.3 SWPAKT=1, PROGRAM HALTS AFTER WRITE WITH READ
VERIFICATION ALLOWING OPERATOR TO CHANGE PACKS.
SWPAKT=1, PUTS PROGRAM INTO READ ONLY MODE # SA'S
SWPAKT=2 ONLY. IF SA 501-DATA MUST NOT BE RANDOM.
START AT THE ABOVE SELECTED ADDRESS.
12.4 ALL NUMBERS ENTERED IN 7.0 MUST BE IN OCTAL.
ANY NON-OCTAL INPUT IS TREATED AS A LETTER.
ANY LETTER INPUT FOR CYL,HEAD,SECTOR, OR # OF
SECTORS GETS RANDOM FUNCTION IN THE RELIABILITY
TEST WITH OPTIONS.
PROGRAM RUNTIME
113.0
THE EFFICIENCY OF THIS PROGRAM IS CORE DEPENDENT.
ALTHOUGH THE PROGRAM IS DESIGNED TO RUN WITH A
MINIMUM OF 16K OR MEMORY, MAXIMUM THROUGHPUT
UTILIZING THE FULL CAPABILITY OF THE CONTROLLER
IS ACHIEVED WITH MEMORIES OF 16K OR LARGER. IT
IS RECOMMENDED THAT THOSE SYSTEMS INTENDED TO BE
USED AS ERROR RATE TESTING PLATFORMS USE 16K
MINIMUM OF MEMORY.
PROGRAM RUNTIMES ARE SUBSTANTIALLY REDUCED WITH
MEMORIES OF 16K OR LARGER. PROGRAM CAN USE UP
TO 16K USING 2 BUFFERS AND UP TO 24K USING 3 BUF-
FERS IN THE RANDOM RELIABILITY TEST SA 500.
A TYPICAL RUNTIME IS 60 MIN FOR 1 PASS OF SA 505
(RUNALL) ON 1 DRIVE WITH 16K OF MEMORY.
READ, WRITE AND SEEK OPERATIONS ARE TIMED BY
SPECIAL ROUTINES, WHEN THE PROGRAM IS FIRST
STARTED, THE TIMING ROUTINE WILL TEST FOR THE
PRESENCE OF A REAL TIME CLOCK (RTC) TO DERIVE
TIMING FROM IT. IF NO RTC IS PRESENT, THE
PROGRAM WILL TYPE "TTO BAUD RATE". THIS MESSAGE
REFERS TO THE BAUD RATE OF THE CONSOLE TERMINAL
(DEVICE 10 & 11). TYPE IN THE BAUD RATE. IF
A TYPING ERROR OCCURS IN THE NUMBER STRING
(BEFORE THE CARRIAGE RETURN), SIMPLY TYPE A
NON-NUMERIC CHARACTER AND THE REQUEST FOR THE
BAUD RATE WILL BE REPEATED. IF THE CARRIAGE
RETURN HAS BEEN GIVEN AFTER A TYPING ERROR, RE-
LOAD THE PROGRAM.
.EJECT

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\*\*00000 TOTAL ERRORS, 00000 PASS 1 ERRORS