

DataGeneral

**TECHNICAL
STATEMENT**

TEXT LISTING

068-000673-01

PROGRAM

CARTRIDGE DISKETTE DISK
FORMATTER PROGRAM

TEXT TAPE

097-000673-01

ABSTRACT

THE CARTRIDGE DISKETTE DISK FORMATTER PROGRAM IS A UTILITY PROGRAM DESIGNED TO FORMAT AND CHECK DISK PACKS TO BE USED ON THE ABOVE DISK SYSTEMS. THE PROGRAM IS !NOT! A MAINTENANCE PROGRAM AND ASSUMES THE HARDWARE TO BE IN WORKING ORDER. THE PROGRAM WILL, ON DETECTING A NON-DATA RELATED ERROR, PRINT THE ERROR INFORMATION AND TAKE THE CORRESPONDING UNIT OFFLINE.

10005 .MAIN

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01 ;
02 ;
03 ; NOTE THAT EITHER SPACES OF A COMMA MAY
04 ; BE USED AS AN ARGUMENT DELIMITER. EACH
05 ; RESPONSE IS TERMINATED BY TYPING CARRIAGE
06 ; RETURN. IF MORE ROOM IS NEEDED ON A LINE,
07 ; TYPE LINE FEED TO SPACE TO THE NEXT LINE.
08 ; THE WORD "SAME" USED WITH READ, OR WRITE,
09 ; WILL CAUSE THE PREVIOUS DISK ADDRESS
10 ; PARAMETERS TO BE USED.
11 ;
12 ; SHOULD COMMAND STRING ENTRIES EXCEED INPUT
13 ; BUFFER CAPACITY, THE PROGRAM RESPONDS WITH
14 ; THE MESSAGE "INPUT OVERFLOW". THE OPERATOR MUST
15 ; DEPRESS ONE OR MORE "HUBOUTS" FOLLOWED BY
16 ; A "CR" TO POSITION THE BUFFER POINTER TO
17 ; THE LAST VALID COMMAND IN THE STRING AND
18 ; BEGIN EXECUTION.
19 ;
20 ; AN "R" TYPED WHILE A STRING IS BEING EXECUTED WILL
21 ; CAUSE THE PROGRAM TO RETURN TO COMMAND STRING START.
22 ; THE ESCAPE KEY WILL BYPASS UNIT AND DATA PROMPTS TO
23 ; THE COMMAND STRING PROMPT.
24 ;
25 ; THE FOLLOWING EXAMPLE WOULD CAUSE UNIT 1 TO SEEK
26 ; CYLINDER 50, THEN REPEATEDLY WRITE SECTORS 2 AND 3
27 ; OF HEAD 1, THEN READ IT BACK AND CHECK. DATA IS
28 ; SPECIFIED AS ALTERNATE WORDS OF ZEROS THEN ONES.
29 ;
30 ; UNIT: 1
31 ; DATA: 0,17777
32 ; COMMAND STRING: SEEK 50 LR WRITE 1,2,2 READ SAME LOOP
33 ;
34 ; D. ERROR LOG RECOVERY (SA503)
35 ; THE ERROR LOG MAY BE RECOVERED AT THIS STARTING ADDRESS.
36 ; THE OPERATOR MUST NOT RESTART THE PROGRAM AT ANY OTHER
37 ; ADDRESS PRIOR TO RECOVERING THE LOGS AS THE LOGS ARE
38 ; INITIALIZED AT RESTART.
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10006 .MAIN

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01 ;
02 ; SWITCH SETTINGS
03 ;
04 ; LOCATION "SWREG" IS USED TO SELECT THE PROGRAM OPTIONS
05 ; (NOT SYSTEM CONFIGURATION). WHILE RUNNING UNDER DTOS,
06 ; THIS LOCATION WILL BE LOADED BY THE MONITOR. HOWEVER,
07 ; UNDER STAND ALONE AND PROGRAM LOAD MODES THIS LOCATION
08 ; WILL BE SET ACCORDING TO THE ANSWERS SUPPLIED BY THE
09 ; OPERATOR. IN ANY CASE THE OPTIONS CAN BE CHANGED OR
10 ; VERIFIED BY USING ONE OF THE COMMANDS GIVEN IN SEC. 8.3.
11 ;
12 ; SWITCH OPTIONS
13 ; DIFFERENT BITS AND THEIR INTERPRETATION AT LOCATION
14 ; "SWREG" IS AS FOLLOWS:
15 ;
16 ; BIT OCTAL BINARY INTERPRETATION
17 ; VALUE VALUE
18 ;
19 ; 1 40000 1 LOOP ON ERROR
20 ;
21 ; 2 20000 0 SKIP LOOPING ON ERROR
22 ;
23 ;
24 ; 5 02000 1 PRINT TO CONSOLE
25 ;
26 ;
27 ;
28 ; 5 02000 1 ABORT PRINT OUT TO CONSOLE
29 ;
30 ;
31 ; DO NOT PRINT ON THE LINE PRINTER
32 ; PRINT ON THE LINE PRINTER
33 ;
34 ; SWITCH COMMANDS
35 ; ONCE THE PROGRAM STARTS EXECUTING THE STATE OF ANY OF
36 ; THE BITS CAN BE CHANGED BY HITTING KEYS I-9, A-F. THE
37 ; PROGRAM WILL CONTINUE RUNNING AFTER UPDATING THE OPTIONS
38 ; EACH KEY WILL COMPLEMENT THE STATE OF THE BIT AFFILIATED
39 ; WITH IT, THUS BIT 4 CAN BE ALTERED BY HITTING KEY 4.
40 ; SETTING OF ANY BIT OF LOCATION "SWREG" WILL SET BIT 0.
41 ; (DEFAULT MODE IS DEFINED AS ALL BITS OF SWREG SET TO 0)
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; "LF" LINE FEED IS USED TO CLOSE THE OPEN CELL WITH
; OR WITHOUT MODIFICATION AND TO OPEN THE SUC-
; CEEDING CELL.
; " " AND OPEN THE PRECEDING CELL
; / CLOSE THE OPEN CELL WITHOUT MODIFICATION, AND
; + "ADR"/ OPEN THE CELL POINTED TO BY ITS CONTENTS.
; - "ADR"/ 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"
;
; 11.3.2 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 EX-
; PRESSION 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 EXPRESS-
; SION" 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.
;
; 11.3.3 OTHER ODT COMMANDS
; 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 CALL 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"8 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 BY 4A.
; "ADR"R START EXECUTING THE PROGRAM AT "ADR" AFTER AN
; IO-RESET.
; K KILL THE STRING TYPE 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.
;
; NOTE: IN PROGRAMS WITH RELOCATE THEMSELVES THE
; USER SHOULD PLACE BREAK POINTS ONLY IN THE
; ORIGINAL PROGRAM AREA. IF A BREAK POINT IS
; PLACED OUTSIDE THIS AREA THE RESULTS WILL BE
; UNPREDICTABLE.

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; 12.0 SPECIAL NOTES/SPECIAL FEATURES:

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1. THE PROGRAM IS NOT A MAINTENANCE PROGRAM AND ASSUMES THE HARDWARE TO BE IN WORKING ORDER.
2. IT IS RECOMMENDED THAT AT LEAST 4 PASSES (WPI/AREA) BE ALLOWED TO INSURE PACK QUALITY. IF TIME PERMITS, LONGER RUNS WILL FURTHER INSURE QUALITY.
3. 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 "TO SAUD 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, RELOAD THE PROGRAM.

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; 13.1 PROGRAM RUNTIME:

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- PROGRAM RUNTIMES ARE SUBSTANTIALLY REDUCED WITH MEMORIES OF 16K OR LARGER.
- TYPICAL RUNTIME (4 PASSES) IS APPROXIMATELY 12 MINUTES FOR A SINGLE DRIVE, TWO SURFACES USING A NOVA 3 CPU.

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; EJECT

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0013 .MAIN

**00000 TOTAL ERRORS, 00000 PASS 1 ERRORS