IDENTIFICATION

PRODUCT CODE: MAINDEC-08-DHRKC-H-D

PRODUCT NAME: RK8E/RK8L DATA RELIABILITY PROGRAM

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MAINTAINER: DIAGNOSTIC ENGINEERING

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1. ABSTRACT

THE RK8E/RK8L DATA RELIABILITY PROGRAM IS DESIGNED PRIMARILY AS AN ACCEPTANCE TEST TO VERIFY DISK DATA TRANSFERS WITHIN THE DISK SYSTEM.

THE "ACCEPT MODE" OF OPERATION VERIFIES THE CAPABILITY OF TRANSFERRING A TOTAL 3 X 18(9) BITS OF DATA TO AND FROM EACH INDIVIDUAL DISK DRIVE ON THE DISK SYSTEM.

THE "MANUAL INTERVENTION MODE" IS AVAILABLE AS A HARDWARE DEBUGGING AID TO ALLOW THE OPERATOR TO SELECT DATA PATTERNS, TRANSFER LENGTHS, AND ADDRESSING.

(NOTE: LOCATION 0 CONTAINS REVSION LEVEL (IN ASCII) OF PROGRAM ON PROGRAM LOAD).

2. RESTRICTIONS

THE RK8L CONTROL,WHICH CAN CONTROL UP TO 8 DRIVES,WILL NOT RUN WITH THE DW8E BUS ADAPTER. THE REASON FOR THIS STATEMENT IS THAT THE RK8L CONTROL USES IOTS FOR EXTENDED DRIVES 4-7 WHICH IS NOT AVAILABLE ON THE DW8E.

2.1 HARDWARE

A. PDP-8/A, 8/E, 8/F, OR 8/M COMPUTER OR OTHER FAMILY OF 8 COMPATIBLE COMPUTER WITH NECCESSARY DW8E BUS ADAPTER.

B. AT LEAST 4K OF READ/WRITE MEMORY. AT LEAST 8K OF MEMORY IS NECESSARY FOR OPERATION OF THE CONSOLE PACKAGE.

C. ASR-33 TELETYPE OR EQUIVALENT

D. RK8E OR RK8L DISK CONTROL

E. RK05J OR RK05F DISK DRIVE(S)

F. FORMATTED 2200 BPI-16 SECTOR PACK(S).

NOTE: THE RK05F DISK DRIVE IS CONSIDERED AS TWO SEPARATE UNITS. WHEN ANSWERING ALL QUESTIONS THE SEPARATE DRIVES MUST BE SPECIFIED. DSK0?, DSK1?, DSK2?, ETC.

2.2 PROGRAM STORAGE

THE PROGRAM OCCUPIES OR UTILIZES LOCATION 0000 TO LOCATION 7577 OF FIELD 0. ALL EXTENDED MEMORY LOCATIONS, IF AVAILABLE, ARE UTILIZED FOR TESTING.

2.3 PRELIMINARY PROGRAMS

THIS PROGRAM REQUIRES A FORMATTED CARTRIDGE ON ALL DRIVES TO BE TESTED.

ALL BASIC AND EXTENDED MEMORY DIAGNOSTICS SHOULD BE RUN PRIOR TO RUNNING THIS PROGRAM.

RK8E CONTROL: RUN THE RK8E DISKLESS CONTROL TEST AND THE RK8E/RK8L DISK FORMATTER IF THIS DIAGNOSTIC FAILS TO OPERATE PROPERLY.

RK8L CONTROL: RUN THE RK8L INSTRUCTION TEST AND THE RK8E/RK8L FORMATTER IF THIS DIAGNOSTIC FAILS TO OPERATE PROPERLY.

2.4 EXECUTION TIME

THE PROGRAM EXECUTION TIME (I.E. PASSING 3 X 10(9) BITS OF DATA ON A DISK DRIVE), IS APROX. 4 HOURS PER DISK DRIVE ON A 4K MEMORY SYSTEM OR APROX. 3.5 HOURS PER DISK DRIVE ON SYSTEMS WITH EXTENDED MEMORY.

3. SWITCH REGISTER SETTINGS

SWR0=1 LOOP ON WRITE SEQUENCE.

SWR1=1 LOOP ON READ SEQUENCE.

SWR2=1 INHIBIT ALL ERROR TYPEOUTS

SWR3=1 TYPE "STATUS-COMPLETE" REPORT.

SWR4=1 PROGRAM STOP ON HALT.

SWR5=1 DRIVE DISCONNECT AFTER PASS COMPLETION.

SWR6=1 PERFORM ONLY "OVERLAP SEEKS", DO NOT EXECUTE DATA BREAKS.

4. OPERATOR AND/OR PROGRAM ACTION

4.1 STANDARD TEST PROCEDURE

A. START AS SPECIFIED THROUGH OUT THIS DOCUMENTATION IS KEY CLEAR AND THEN KEY CONTINUE ON PDP8/E, PDP8/M, AND PDP8/F COMPUTERS.

B. LOAD THE PROGRAM INTO MEMORY FIELD 0 USING THE STANDARD BINARY LOADER TECHNIQUE.

C. IF IT IS DESIRED TO CHANGE THE IOT CODES WITHIN THE PROGRAM, FOLLOW THE PROCEDURE IN SECTION 4.6.

D. RUN THE ACCEPTANCE MODE OF DATA RELIABILITY WITH ALL DRIVES AND MEMORY AVAILABLE BY FOLLOWING THE PROCEDURE