

Floppy drives & Controller

PRODUCT CODE: MAINDEC-08-DIRXA-D-D
PRODUCT NAME: RX8/RX01 DIAGNOSTIC PROGRAM
DATE: JUNE, 1977
MAINTAINER: DIAGNOSTIC ENGINEERING

COPYRIGHT (C) 1975, 1977
DIGITAL EQUIPMENT CORPORATION, MAYNARD, MASS.

THIS SOFTWARE IS FURNISHED UNDER A LICENSE FOR USE ONLY ON A SINGLE COMPUTER SYSTEM AND MAY BE COPIED ONLY WITH THE INCLUSION OF THE ABOVE COPYRIGHT NOTICE. THIS SOFTWARE, OR ANY OTHER COPIES THEREOF, MAY NOT BE PROVIDED OR OTHERWISE MADE AVAILABLE TO ANY OTHER PERSON EXCEPT FOR USE ON SUCH SYSTEM AND TO ONE WHO AGREES TO THESE LICENSE TERMS. TITLE TO AND OWNERSHIP OF THE SOFTWARE SHALL AT ALL TIMES REMAIN IN DEC.

THE INFORMATION IN THIS DOCUMENT IS SUBJECT TO CHANGE WITHOUT NOTICE AND SHOULD NOT BE CONSTRUED AS A COMMITMENT BY DIGITAL EQUIPMENT CORPORATION.

DEC ASSUMES NO RESPONSIBILITY FOR THE USE OR RELIABILITY OF ITS SOFTWARE ON EQUIPMENT WHICH IS NOT SUPPLIED BY DEC.

1. ABSTRACT
2. REQUIREMENTS
 - 2.1 EQUIPMENT
 - 2.2 STORAGE
 - 2.3 PRELIMINARY DIAGNOSTIC PROGRAMS
3. LOADING PRODEEDURE
4. STARTING PROCEDURE
 - 4.1 STARTING ADDRESS LOCATIONS
 - 4.2 OPERATOR ACTION
 - 4.3 PROGRAM ACTION
 - 4.4 TEST PARAMETER SELECTIONS
 - 4.4.1 RESTRICTIONS
5. OPERATING PROCEDURE
6. ERROR DETECTION
 - 6.1 PROGRAM DEFINITIONS OF:
 - 6.1.1 WRITE ERROR
 - 6.1.2 READ ERROR (CRC)
 - 6.1.3 CRC AND DATA ERROR
 - 6.1.4 NO CRC BUT DATA ERROR
 - 6.1.5 CRC BUT NO DATA ERROR
 - 6.1.5.1 SUMCHECK ERROR
 - 6.1.6 SEEK ERROR
 - 6.1.7 PARITY ERROR
 - 6.2 DEFINITIVE ERROR CODES
 - 6.3 UNEXPECTED OR MISSING ERROR CONDITIONS:
 - 6.3.1 MISSING D.D. MARK
 - 6.3.2 UNEXPECTED D.D. MARK
 - 6.3.3 MISSING ERROR FLAG
 - 6.3.4 UNEXPECTED RX01 IRQ
 - 6.3.5 DEVICE TEST HUNG
 - 6.4 SYSTEM FAILURES: (UNKNOWN IRQ)

7. ERROR REPORTING

7.1 EXAMPLES

- 7.1.1 EXAMPLES OF INTERFACE / CONTROL RELATED ERRORS
- 7.1.2 EXAMPLES OF DRIVE / DATA RELATED ERRORS

- 7.1.2.1 SEEK ERROR
- 7.1.2.2 WRITE-CRC AND DATA ERROR
- 7.1.2.3 READ-CRC AND DATA ERROR
- 7.1.2.4 WRITE-CRC BUT NO DATA ERROR

7.2 ERROR RECOVERY

7.3 FATAL ERROR RECOVERY

8. MANUAL INTERVENTION

8.1 FIELD ENGINEERING TROUBLE SHOOTING AIDS

9. DIAGNOSTIC TEST STRATEGY

10. CONSOLE PACKAGE ADDENDUM

11. APT-8 INTERFACES

12. PROGRAM LISTING

1. ABSTRACT
//////////

THIS PROGRAM IS DESIGNED TO TEST THE RX01 FLEXIBLE DISKETTE SUBSYSTEM CONFIGURED AS A COMPLETE SUBSYSTEM, (RX8 INTERFACE, RX01 CONTROL, AND DISKETTE DRIVES), OR AS A PARTIAL SUBSYSTEM (INTERFACE, AND/OR CONTROL). OBVIOUSLY THE MAXIMUM RESOLUTION POSSIBLE IS ACHIEVED BY TESTING THE RX01 DISKETTE SUBSYSTEM CONFIGURED AS A COMPLETE SUBSYSTEM.

REVISION C

THE ADDITION OF THE CONSOLE PACKAGE.
THE REMOVAL OF TEST THREE (3).
SEE LISTING LOCATION FOR EXPLANATION
THE REMOVAL OF DECIMAL CONVERSION ROUTINES.
THE ADDITION OF APT-8 INTERFACES.

REVISION D

THE ADDITION OF THE NEW CONSOLE PACKAGE.
COMPATABILITY FOR VT78 SYSTEMS.
ABILITY TO TEST 2 RX01 UNITS(4 DRIVES).
INTERLEAVING WAS MODIFIED FOR VT78.

2. REQUIREMENTS

//////////

2.1 EQUIPMENT

//////////

A PDP-8/E TYPE GENERATION COMPUTER WITH 4K OF CORE, CONSOLE SWITCHES, TELETYPE, AND AN RX01 DISKETTE SUBSYSTEM.

THE DIAGNOSTIC CAN RUN WITHOUT HARDWARE SWITCH IF THE CONSOLE PACKAGE IS USED. IF THE CONSOLE PACKAGE IS ACTIVE 8K OF CORE IS NEEDED.

2.2 STORAGE

//////////

THIS PROGRAM IS DESIGNED TO BE RUN STAND ALONE AND MUST OCCUPY PROGRAM LOCATIONS 0 THRU 7577 OF FIELD 0.

THE CONSOLE PACKAGE OCCUPIES FIELD 1 LOCATIONS 0 TO 1100.

FIELD 1 IS NEEDED ONLY IF THE CONSOLE PACKAGE IS BEING USED.

2.3 PRELIMINARY DIAGNOSTIC PROGRAMS

//////////

THIS PROGRAM ASSUMES THAT THE HOST PDP IS FUNCTIONING CORRECTLY.