## IDENTIFICATION

PRODUCT CODE;

PRODUCT NAME!

MAINTAINER: DATE CREATED!

AUTHOR:

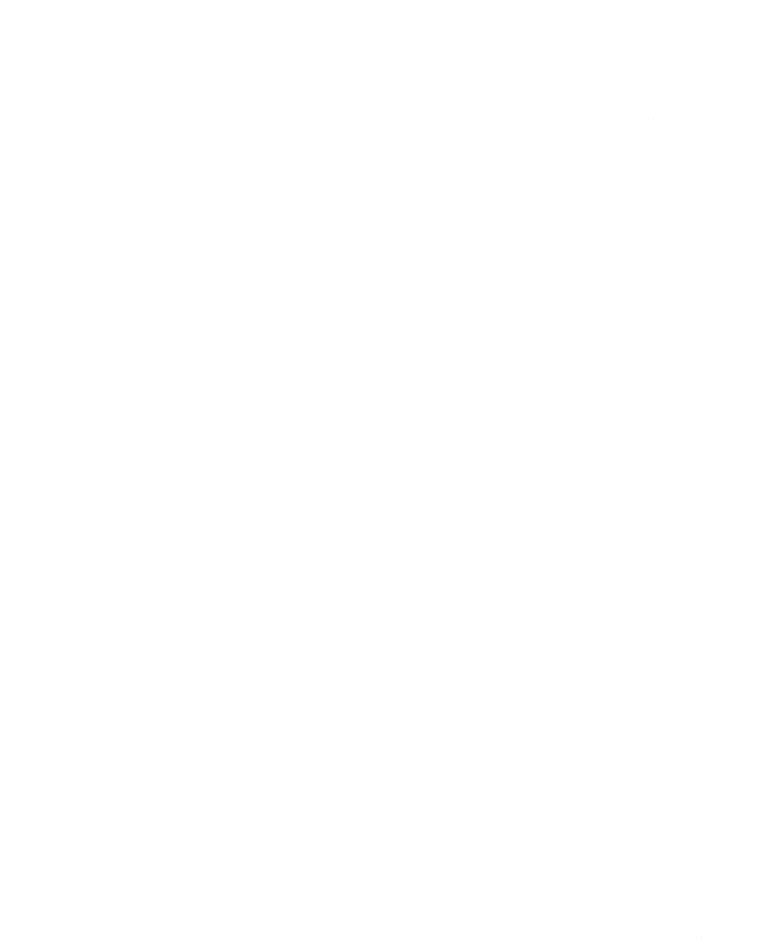
MAINDEC-8E-DOBB

PDP-8/E INSTRUCTION TEST 2

ED-FORTMILLER

DIAGNOSTIC GROUP JUNE 18, 1971





## ABSTRACT

THIS PROGRAM IS AN EXTENSIVE TEST OF AUTOINDEXING, INDIRECT ADDRESSING, AND THE DCA INSTRUCTION FOR THE PDP-8/E. IT ALSO OFFERS MINIMAL TESTING FOR INTERBUPT AND THE AND, TAD, ISE, JMS, JMP, AND PROCESSOR IOT INSTRUCTIONS.

2. REQUIREMENTS

EQUIPMENT

2.1

PDP-8/E EQUIPPED WITH TELETYPE

2.2 STORAGE

THE PROGRAM OCCUPIES MEMORY LOCATIONS BOOD-4416. The binary Loader Must be stored in the Last Memory Page.

PRELITINARY PROGRAMS

2,3

IT IS ASSUMED THAT MAINDEC-BE-DOA(N) HAS BEEN RUN SUCCESSFULLY.

LOADING PROCEDURE

METHOD

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THE STANDARD BINARY LOADER IS USED.

STARTING PROCEDURE

4.1 CONTROL SHITCH SETTINGS (NONE)

4.2 STARTING ADDRESS

200

OPERATOR ACTION

A. SET THE SHITCH REGISTER TO 200. PRESS LOAD ADDRESS.

B. PUSH CLEAR AND THEN CONTINUE. A PROGRAMMED HALT OCCURS WHEN AN ERROR IS ENCOUNTERED.

**J** OPERATING PROCEDURE

SAME AS SECTION 4.

ERRORS

ERROR HALIS AND DESCRIPTION

6,1 6.

SEE LISTING.

ERROR RECOVERY

6.2

IF IT IS DESIRED TO LOOP ON THE TEST CAUSING THE ERROR, REPLACE THE OPERATE INSTRUCTION PRECEDING THE HLT WITH A JMP TO THE BEGINNING OF THE TEST.

RESTRICTIONS

8.1 .

THE TELETYPE BELL RINGS AT THE END OF 1550 PROGRAM PASSES WHICH IS APPROXIMATELY EVERY 5 SECONDS.

ALL PERIPHERAL DEVICES MUST BE FUNCTIONING TO A DEGREE THAT THE PROCESSOR CLEAR BUTTON WILL CLEAR THEIR FLAGS AND NO FLAGS WILL TURN ON UNLESS AUTHORIZED. EXECUTION TIME MISCELLANEOUS

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THE PROGRAM IS A SERIES OF MANY SMALL INDIVIDUAL TEST. EACH TEST IS PERFORMED USING PREVIOUSLY CHECK FUNCTINS TO VALIDATE THE TEST. WHEN AN ERROR IS ENCOUNTERED, THE OPERATOR SHOULD INSERT A JUMP INSTRUCTION INTO MEMORY TO CAUSE THE PROGRAM TO LOOP ON THE FAILING TEST. THE PROBLEM CAN THEN BE FOUND BY USING THE OSCILLOSCOPE.

THE INDIVIDUAL PROGRAM TESTS ARE GROUPED INTO THE FOLLOWING CLASSIFICATIONS AND ARE PERFORMED IN THE ORDER SHOWN:

- 1. DCA TEST
- 2. INDIRECT ADDRESSING TEST
- A. USING TAD
- 3. AUTOINDEX TEST
- C. USING AND
- . PROCESSOR LOT TEST
- TO THE COUNTY OF THE COUNTY OF
- . INTERRUPT TEST
- FOLLOWING TAD FOLLOWING TAD FOLLOWING DCA FOLLOWING DCA FOLLOWING DCA FOLLOWING JAP FOLLOWING CLA FOLLOWING CLA FOLLOWING CLA FOLLOWING SKP
- . CHECK FOR UNAUTHORIZED AUTOINDEXING

TO ASSURE THE OPERATOR THAT THE PROGRAM IS FUNCTIONING PROPERLY. THE TELETYPE BELL RINGS APPROXIMATELY EVERY 5 SECONDS

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