IDENTIFICATION

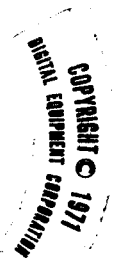
PRODUCT CODE: MAINDEC-8/E-D0AB

PRODUCT NAME: PDP-8/E INSTRUCTION TEST 1

DATE CREATED: MAY 10, 1971

MAINTAINER: DIAGNOSTIC GROUP

AUTHOR: ED FORTMILLER

1. **ABSTRACT**

THIS IS A DIAGNOSTIC PROGRAM FOR TESTING THE AND, TAD,
OPERATE, AND BASIC MQ, INSTRUCTIONS OF THE PDP-8/E ONLY.

2. **REQUIREMENTS**

2.1 **EQUIPMENT**

A PDP-8/E EQUIPPED WITH TELETYPE.

2.2 **STORAGE**

THIS PROGRAM USES LOCATIONS 0000-5314. THE BINARY LOADER MUST
BE STORED IN THE LAST MEMORY PAGE.

2.3 **PRELIMINARY PROGRAMS**
----

3. **LOADING PROCEDURE**

3.1 **METHOD**

THE STANDARD BINARY LOADER IS USED.

4. **STARTING PROCEDURE**

4.1 **CONTROL SWITCH SETTINGS**

SR=7777

4.2 **STARTING ADDRESS**

0200

4.3 **OPERATOR ACTION**
----

1. SET SR TO 200 AND PRESS LOAD ADDRESS.

2. SET SR TO 7777 AND PUSH CLEAR AND CONTINUE

3. PROGRAM WILL HALT. MA=147

4. IF AC IS NOT EQUAL TO 0000 AN ERROR HAS OCCURRED.

5. PUSH CONTINUE. PROGRAM WILL RUN UNTIL STOPPED OR UNTIL
   AN ERROR IS ENCOUNTERED.

5. OPERATING PROCEDURE
----

6. ERRORS

SAME AS SECTION 4.

6.1 ERROR HALTS AND DESCRIPTION

SEE LISTING.

6.2 ERROR RECOVERY

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

7. RESTRICTIONS

7.1 STARTING RESTRICTIONS: NONE

7.2 OPERATING RESTRICTIONS: NONE
----

8. MISCELLANEOUS

8.1 EXECUTION TIME

THE TELETYPE BELL RINGS AT THE END OF 1440 PROGRAM PASSES
WHICH IS APPROXIMATELY EVERY 5 SECONDS.

9.

PROGRAM DESCRIPTION

THE PROGRAM CONSISTS OF MANY INDIVIDUAL TESTS. IN MOST CASES
EACH TEST CHECKS ONLY ONE FUNCTION AND USES PREVIOUSLY TEST-
ED FUNCTIONS AS A BASIS FOR THE TEST. THE PROGRAM COUNTER
ACTION IS STRICTLY SEQUENTIAL EXCEPT FOR SKIPS. THE ONLY JMP
INSTRUCTIONS USED ARE AT THE BEGINNING AND END OF THE PROGRAM.
THE SEQUENCE OF TESTING IS AS FOLLOWS:

1. TEST ALL OPERATE FUNCTIONS INDIVIDUALLY EXCEPT FOR ROTATES.

2. TEST "TAD" INSTRUCTION.

3. TEST ROTATE FUNCTIONS.

4. TEST "BSW" INSTRUCTION.

5. GROUP 1 OPERATE INSTRUCTION TEST. ALL POSSIBLE COMBINATIONS.

6. GROUP 2 OPERATE INSTRUCTION TEST. ALL POSSIBLE COMBINATIONS.

7. MQ INSTRUCTION TEST. ALL POSSIBLE COMBINATIONS.

8. TEST "AND" INSTRUCTION.

THE TELETYPE BELL RINGS APPROXIMATELY EVERY 5 SECONDS.

10.

LISTING