

IDENTIFICATION

PRODUCT CODE: MAINDEC-8E-D168-D
PRODUCT NAME: PDP-8E MEMORY POWER ON/OFF TEST
DATE CREATED: JUNE 11, 1971
MAINTAINER: DIAGNOSTIC GROUP
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1. ABSTRACT

THIS PROGRAM IS A MEMORY DATA VALIDITY TEST TO BE USED AFTER A SIMULATED POWER FAIL.

2. REQUIREMENTS

EQUIPMENT

FDP-8E EQUIPPED WITH TELETYPE

STORAGE

MEMORY LOCATIONS 0000(8) - - 7601(8)

BINARY LOADER AND RIM MUST BE STORED IN LAST MEMORY PAGE.

3. USAGE

3.1 LOADING

NORMAL BINARY TAPE LOADING PROCEDURES

3.2 START UP AND/OR ENTRY

LOAD ADDRESS 0200, PRESS CLEAR AND THEN CONT. THE PROGRAM SHOULD THEN HALT AT LOCATION 0031(8). LOAD ADDRESS 0201, PRESS CLEAR AND THEN CONT. THE PROGRAM SHOULD NOW LOOP.

3.3 ERRORS IN USAGE

ERRORS DETECTED BY THE PROGRAM CAUSE THE PROGRAM TO HALT AT MEMORY LOCATION 0047(8). THE CONTENTS OF MEMORY ADDRESS 0011(8) AND 0012(8) INDICATE THE ADDRESSES OF THE DATA THAT FAILED TO CHECK-SUM. MEMORY ADDRESSES 0007(8) AND 0010(8) CONTAIN THE DATA WORDS THAT FAILED TO CHECK-SUM.

LOWER ADDRESS = (0011(8)) = 202(8)-4001(8)

UPPER ADDRESS = (0012(8)) = 4002(8)-7601(8)

LOWER ERROR WORD = (0007(8)) = 2525(8)

UPPER ERROR WORD = (0010(8)) = 5252(8)

3.4 ERROR RECOVERY

PRESS CONTINUE TO TEST FOR OTHER ERROR WORDS IN MEMORY. TO RELOAD MEMORY DO 3.2.

4. DESCRIPTION -----

THIS PROGRAM TESTS MEMORY FOR BIT DROP OUT AND PICK UP AFTER A SIMULATED POWER FAILURE WAS OCCURRED.

BY STARTING THE PROGRAM AT MEMORY ADDRESS 200(8), DATA WORDS CONSISTING OF 2525(8) ARE WRITTEN INTO MEMORY LOCATIONS 0202(8) - - 4001(8), AND DATA WORDS CONSISTING OF 5252(8) ARE WRITTEN INTO MEMORY LOCATIONS 4002(8) - - 7601(8) AFTER WHICH THE PROGRAM HALTS AT MEMORY ADDRESS 0031(8). LOAD ADDRESS 0201(8) AND RESTART THE PROGRAM; THE PROGRAM WILL 2'S ADD THE CONTENTS OF MEMORY LOCATION 202(8) WITH 4002(8). IF THE RESULT EQUALS 7777(8) THE PROGRAM WILL 2'S ADD THE CONTENTS OF MEMORY LOCATIONS 203(8) WITH 4003(8) ETC. UNTIL THE MEMORY ADDRESSES OF 4001(8) AND 7601(8) ARE TESTED. THE PROGRAM STAYS IN THE 2'S ADD COMPARE LOOP UNTIL AN ERROR OCCURS. CONCURRENTLY CYCLE THE POWER TO THE PDP-8E OFF AND ON. AFTER THE POWER HAS BEEN REAPPLIED TO THE PDP-8E, LOAD ADDRESS 201(8) AND PRESS CLEAR AND THEN CONTINUE. IF AN ERROR OCCURRED DURING THE POWER CYCLING, THE PROGRAM HALTS AT LOCATION 0047(8). THE PROGRAM MAY BE RESTARTED AT MEMORY ADDRESS 0201(8) AS MANY TIMES AS DESIRED. RESTART ADDRESS TO FILL MEMORY WITH DATA WORDS IS 0200(8).

4.2 EXAMPLES AND/OR APPLICATIONS -----

A HALT OCCURS AT MEMORY ADDRESS 0047(8).

ADDRESS 007(8) = 2535 (DATA WORD)

ADDRESS 0010(8) = 5252 (DATA WORD)

ADDRESS 0011(8) = 0270 (ADDRESS WORD)

ADDRESS 0012(8) = 4070 (ADDRESS WORD)

BIT 8 WAS PICKED UP AT MEMORY ADDRESS 0270(8).

5. EXECUTION TIME -----

1 MSEC/LOOP

0061 5252 LOREG.5252 /ERROR WORD 5252

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