IDENTIFICATION

PRODUCT CODE: MAINDEC-08-DHMCA-A1-D

PRODUCT NAME: PDP8-E MEMORY EXTENSION
                 AND TIME SHARE CONTROL TEST

DATE CREATED: JUNE 16, 1972

MAINTAINER: DIAGNOSTIC PROGRAMMING GROUP

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MAIN DEC CHANGE NOTICE
MAY BE REQUIRED FOR
PROGRAM TO OPERATE

1. ABSTRACT

THIS PROGRAM TESTS THE MEMORY EXTENSION AND TIME SHARE CONTROL
LOGIC FOR PROPER OPERATION. THE PROGRAM EXERCISES AND TESTS
ALL IOT'S ASSOCIATED WITH MEMORY EXTENSION AND TIME SHARE
CONTROL.

ERRORS ENCOUNTERED DURING RUNNING WILL RESULT IN A PROGRAM
"HALT" OR A "JUMP TO SELF", WHICH MAY OCCUR IN ANY FIELD
DEPENDING ON THE PORTION OF THE TEST EXECUTED. ERRORS MAY
BE IDENTIFIED BY REFERENCING THE PROGRAM LISTING.

2. REQUIREMENTS

2.1 EQUIPMENT

PDP8-E COMPUTER WITH THE KM8-E OPTION INSTALLED AND AT LEAST
4K OF EXTENDED MEMORY.

2.2 STORAGE

THE PROGRAM REQUIRES 4200(8) LOCATIONS OF CORE MEMORY AND
MUST RESIDE IN FIELD 0 ONLY.

2.3 PRELIMINARY PROGRAMS

ALL THE PROGRAMS FOR THE BASIC PDP8-E MUST HAVE BEEN RUN
SUCCESSFULLY.

3. LOADING PROCEDURE

3.1 METHOD

THE PROGRAM IS LOADED INTO "FIELD 0" USING THE STANDARD
BINARY LOADER TECHNIQUE.

4. STARTING PROCEDURE

4.1 CONTROL SWITCH SETTINGS

SR 9, 10, AND 11 MUST CONTAIN AN OCTAL VALUE EQUAL TO THE
NUMBER OF EXTENDED FIELDS AVAILABLE. NOTE THAT FIELD 0
IS NOT INCLUDED.

SR0=0 WILL RESULT IN COMPLETE PROGRAM EXECUTION OF THE MEMORY

EXTENSION AND TIME SHARE CONTROL.

SR0=1 WILL LOOP THE PROGRAM ON THE MEMORY EXTENSION PORTION AND TEST THAT THE TIME SHARE IS DISABLED.

SR1=1 WILL RESULT IN AN END OF TEST HALT AT LOCATION 1565(8).

4.2   STARTING ADDRESS

THE STARTING ADDRESS IS LOCATION 0200(8).

4.3   OPERATOR ACTION

4.3.1   MEMORY EXTENSION AND TIME SHARE CONTROL (TIME SHARE ENABLED)

WITH THE PROGRAM IN MEMORY, SET THE SWITCH REGISTER TO 0000.

PRESS EXTENDED ADDRESS LOAD.

SET THE REGISTER TO 0200 OCTAL.

PRESS ADDRESS LOAD.

PLACE THE OCTAL VALUE OF EXTENDED FIELDS AVAILABLE IN SR9-11.

PRESS CLEAR AND THEN CONTINUE.

THE PROGRAM SHOULD RUN UNTIL A FAILURE OCCURS OR UNTIL STOPPED BY THE OPERATOR WITH SR1=1. NOTE THAT THE PROGRAM SHOULD ALWAYS BE STOPPED WITH SR1=1.

THE TTY BELL WILL SIGNAL A SUCCESSFUL TEST AT THE COMPLETION OF EVERY PASS.

4.3.2   MEMORY EXTENSION PORTION (TIME SHARE DISABLED)

WITH THE PROGRAM IN MEMORY, SET THE SWITCH REGISTER TO 0000.

PRESS EXTENDED ADDRESS LOAD.

SET THE SWITCH REGISTER TO 0200 OCTAL.

PRESS ADDRESS LOAD.

PLACE THE OCTAL VALUE OF EXTENDED FIELDS AVAILABLE IN SR9-11.

PLACE SR0=1 TO EXECUTE MEMORY EXTENSION ONLY.

PRESS CLEAR AND THEN CONTINUE.

THE PROGRAM SHOULD HALT AT LOCATION 3651(8). THIS WILL

VERIFY THAT THE TIME SHARE IS DISABLED. ALL OTHER ERRORS
AT THIS TIME WILL BE CONSIDERED AS AN ILLEGAL CONDITION.

PRESS CONTINUE.

THE PROGRAM SHOULD LOOP UNTIL AN ERROR OCCURS OR UNTIL STOPPED
BY THE OPERATOR WITH SR1=1.

THE TTY BELL WILL SIGNAL A SUCCESSFULL TEST AT THE END
OF EVERY PASS.

5.   OPERATING PROCEDURE

5.1   OPERATOR ACTION

5.1.1   MEMORY EXTENSION AND TIME SHARE CONTROL

VISUALLY VERIFY THAT THE TIME SHARE DISABLE JUMPER IS "OUT"
ON THE M837 MODULE AND FOLLOW THE OPERATOR ACTION IN 4.3.

5.1.2   MEMORY EXTENSION PORTION

VISUALLY VERIFY THAT THE TIME SHARE DISABLE JUMPER IS "IN"
ON THE M837 MODULE AND FOLLOW THE OPERATOR ACTION 4.3.

6.   ERRORS

6.1   ERROR DESCRIPTION

BOTH "HALTS" AND "JUMP TO SELF" ARE USED TO INDICATE ERROR
CONDITIONS. IN EITHER CASE REFER TO THE PROGRAM LISTING
FOR MORE INFORMATION.

6.2   ERROR RECOVERY

ALL ERRORS ENCOUNTERED MUST BE CORRECTED BEFORE PROCEEDING
ON IN THE PROGRAM.

7.   RESTRICTIONS

7.1   OPERATING RESTRICTIONS

PDP8-E ONLY WITH THE KM8-E OPTION INSTALLED AND AT LEAST 4K
OF EXTENDED MEMORY.

THE NUMBER OF EXTENDED AVAILABLE FIELDS MUST BE IN SR9-11.