



PERMANENT
MEMORANDUM

M 1123

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DATE

August 29, 1961

SUBJECT

Read Binary Test

TO

PDP-1 Maintenance Personnel

ABSTRACT

This is a utility program designed to test the performance of the PDP Reader. As the reader reads a closed loop of tape of alternate ones and zeroes, each bit is checked against core memory.

FROM

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Introduction

When the reader test is performed, a check is made after every rpb command. The reader reads three characters and shifts them into the reader buffer. Then there is an 18 bit transfer from Reader Buffer to IO. The contents of the IO are transferred to the accumulator, where all 18 bits are checked at once. Test word switches 0 to 18 vary the timing between rpb commands.

Operating Instructions

- #1 Load read binary test into memory.
- #2 Push stop button and examine button in order to turn off the rim flip-flop.
- #3 Put closed loop tape for binary testing into reader and turn reader on.*
- #4 Set test address switches to XXXX, the starting address, and push start.
- #5 Vary the speed of the tape loop by setting test word switches 0 - 17.
- #6 If the computer halts, the error will appear in the AC and the word just read will be in the IO.
- #7 Vary the \pm ten volt margins on the reader, Input Mixer, and In-Out logic while using this test. Note in the computer log book, the voltage and bit or bits that caused the computer to halt.

Listing

```
,read binary test
,S. Lambert
,use tape with all ones and zeroes
opd      jda 170000
org 0
start    szs * 20
         jmp test3
         lat
         dac c
         rpb
         dio temp
         lac temp
         and a
         sas a
```

```

        hlt
        lac c
        jda count
        rpb
        dio temp
        lac temp
        and b
        sas b
        hlt
        lac c
        jda count
        jmp start
count    0
        dap z
        lac count
        cma
        dac count
q        isp count
        jmp q
z        jmp
temp    0
a        770077
b        007700
c        0
jmp start end .
```

*The following generates tape for use with this rpb test:

```
start    lio templ
         ppb
         lio temp2
a        ppb
         szs * 10
         jmp start
         cli
         jmp a
templ    770077
temp2    007700
```