

IDENTIFICATION

Product Code: MAINDEC-08-D2PE-D
Product Name: Family-of-8 ASR 33/35
Teletype Tests Part 1
Date Created: February 21, 1969
Maintainer: Diagnostic Group



1. ABSTRACT

The Family-of-8 ASR33/35 Teletype Tests Part 1 is the first part of a two part package used to test the ASR33, ASR33TY, or ASR35 Teletype when attached to a Family-of-8 system.

Part 1 contains nine selectable programs numbered from 0 to 10 (octal). The programs are selected by means of the switch register (SR).

The programs available are:

PRG0	Basic Input Logic Tests
PRG1	Basic Output Logic Tests
PRG2	Reader Test
PRG3	Test Tape Generator. Punches tape with characters stored in locations 0021 and 0022.
PRG4	Test Tape Generator. Punches Binary Count Pattern test tape.
PRG5	Reader Exerciser. Reads Binary Count pattern tape in random length blocks, and with fixed stalls between characters. The stall is determined at random.
PRG6	Reader Exerciser. Reads Binary Count pattern tape. Fixed stall between characters. Stall count is taken from LOC 0023.
PRG7	Reader Exerciser. Reads tape punched with any 2 test characters. Random length blocks and fixed stall between characters. The stall is determined at random.
PRG10	Reader Exerciser. Reads tape punched with any 2 test characters. Fixed stall between characters. Stall count taken from LOC 0023.
PRG11	ASR33TY Automatic Reader option test. Checks for correct response to READER ON, and READER OFF commands.
PRG12	ASR33TY Automatic Punch option test. Checks for correct response to PUNCH ON and PUNCH OFF commands

2. REQUIREMENTS

2.1 Equipment

Standard PDP-8/S, PDP-8 or PDP-8/I with ASR33, ASR33TY, or ASR35 Teletype.

NOTE

Programs PRG0 through PRG10 are not written specifically for the ASR33TY Teletype. Whenever these programs are run, be sure to lock the punch and reader in their ON position. In the case of the reader, use a heavy rubber band to keep the reader switch in the ON position.

2.2 Storage

Locations 0000 through 2341 are used.

3. LOADING PROCEDURE

3.1 Method

The Binary Loader is used to load the program.

4. STARTING PROCEDURE (PRG0)

4.1 Control Switch Settings (PRG0)

SR0	Halt at end of routine. Routine number in AC.
SR1	Select routine whose number is set in SR6 through SR11.
SR2	Loop program.
SR6 through SR11	Routine number to be selected.

4.2 Starting Addresses (PRG0)

This program starts at LOC 0200.

4.3 Program and/or Operator Action (PRG0)

- a. Insure Teletype is on-line.
- b. Load binary count pattern test tape in reader.
- c. Turn on reader.
- d. Load address 0200.
- e. Set SR to 0000.
- f. Press START.
- g. Program halts at LOC 0232 to permit setting of options.
- h. Select desired options, if any, in SR. For normal run SR should be 0000. Press CONTINUE.
- i. Program is executed and halts at LOC 0274, program end halt, if no loop options are selected and if no errors occur.

5. OPERATING PROCEDURE (PRG0)

5.1 Program and/or Operator Action (PRG0)

5.1.1 Normal Halts (PRG0)

LOC 0232	SR SET halt. Occurs to permit setting of desired options.
LOC 0274	Program end halt. Occurs if no "loop program" option is set. Set desired options and press CONTINUE. If no options are set, this halt reoccurs.
LOC 0320	Routine end halt. Occurs at end of routine if SR0 = 1. To proceed, press CONTINUE.

6. ERRORS (PRG0)

6.1 Error Halts and Description (PRG0)

LOC 0177	Incorrect program number selected. Set SR to 0000 and press CONTINUE.
LOC 0255	Nonexistent routine selected. Set correct routine number in SR6 through SR11 and press CONTINUE.
LOC 1221	PRG0, routine 0 error halt. KCC instruction failed to clear the AC. Pressing CONTINUE enters scope loop that sets AC to all 1s, issues KCC to clear AC, and repeats. Manual restart.
LOC 1244	PRG0, routine 1 error halt. 200 ms after KRB instruction the flag is not set, or KSF instruction failed to skip on flag = 1. Pressing CONTINUE repeats the test.
LOC 1267	PRG0, routine 2 error halt A. Same as PRG0, routine 1 error halt.
LOC 1271	PRG0, routine 2 error halt B. KSF instruction failed to skip with flag = 1. Pressing CONTINUE enters scope loop that skips on flag continuously. Manual Restart.
LOC 1320	PRG0, routine 3 error halt A. Same as PRG0, routine 1 error halt.
LOC 1322	PRG0, routine 3 error halt B. KCC failed to reset, or KSF instruction skipped with flag = 0. Pressing CONTINUE enters scope loop that clears the flag and skips on flag continuously. Manual restart.
LOC 1345	PRG0, routine 4, error halt A. Unexpected interrupt. Turn off any device that may be causing an interrupt (other than the Teletype). Pressing CONTINUE repeats the test.
LOC 1362	PRG0, routine 4, error halt B. With reader flag =1 and interrupt enabled, no interrupt occurred. Pressing CONTINUE enters scope loop that turns on interrupt continuously. Manual restart.
LOC 1417	PRG0, routine 5, error halt. Timing error. Flag not -1 110 ms after KRB command. Pressing CONTINUE enters scope loop that reads tape continuously to aid in timing adjustment. Manual restart.