

DataGeneral

**TECHNICAL
STATEMENT**

TEXT LISTING

068-000291-03

PROGRAM

ECLIPSE TELETYPE TEST

TEXT TAPE

097-000291-03

ABSTRACT

THE TELETYPE TEST IS A MAINTENANCE PROGRAM DESIGNED TO DETECT MALFUNCTIONS IN THE TELETYPE LOGIC, INTERRUPT SYSTEM AND THE I/O BUS LOGIC. THE PROGRAM MAY BE USED TO TEST TELETYPE MODELS ASR33, KSR33, KSR35, ASR37 (MOD) AND KSR37. IT CAN ALSO BE USED WITH CRT CONSOLE TERMINALS. THE PROGRAM CONTAINS ROUTINES TO PUNCH AND READ RANDOM DATA, ECHO TYPED KEYS, PUNCH FROM THE SWITCH REGISTER, ETC.

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0001 ETTY          MACRO REV 06.30      09:41:34 12/15/78
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; NAME: ECLTTYST.TX          PART NUMBER: 097-000291
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; DESCRIPTION: ECLIPSE TELETYPE TEST
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; REVISION HISTORY:
;
; REV.          DATE
; 00           04/11/75
; 01           08/06/76
; 02           12/31/76
; 03           10/06/78
;
; COPYRIGHT © DATA GENERAL CORPORATION, 1975, 1976, 1978
; ALL RIGHTS RESERVED.
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*****
; TITLE ETTY
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; ECLIPSE TELETYPE TEST
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; 0.0 REVISION HISTORY
;
; REV. 03 WAS CREATED TO
; IMPLEMENT THE STANDARDS PROVIDED
; BY DL18.
; THIS HAS NOT CHANGED THE PHILOSOPHY
; OR TEST PROCEDURES IN THIS PROGRAM.
; ALL UNNECESSARY "IORS1" HAVE BEEN
; DELETED FROM THIS FILE.
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ABSTRACT

TELETYPE TEST IS A MAINTENANCE PROGRAM DESIGNED TO DETECT MALFUNCTIONS IN THE TELETYPE LOGIC, INTERRUPT SYSTEM, AND THE I/O BUS LOGIC. THE PROGRAM MAY BE USED TO TEST TELETYPE MODELS ASR33, KSR33, KSR 35, ASR 37 (MOD) AND KSR 37. IT CAN ALSO BE USED WITH CRT CONSOLE TERMINALS. THE PROGRAM CONTAINS ROUTINES TO PUNCH AND READ RANDOM DATA, ECHO TYPED KEYS, PUNCH FROM THE SWITCH REGISTER, ETC.

MACHINE REQUIREMENTS

ECLIPSE PROCESSOR

MIN OF 2K READ/WRITE MEMORY

ASR33, KSR33, KSR35, ASR 37 (MOD), OR KSR 37

TELETYPES OR A CRT CONSOLE DISPLAY TERMINAL.

START OPTIONS

- =NEW DEVICE CODE STARTING ADDRESS
- =DIAGNOSTIC STARTING ADDRESS
- =PRINT C(SWITCHES)R ON TELETYPE
- =ECHO TYPED INPUT
- =PRINT CHARACTER SET
- =PUNCH AND READ RANDOM DATA
- =PUNCH AND READ COUNTER

SWITCH OPTIONS

- SWITCH 0(1) =PROCEED FROM A ERROR
- SWITCH 1(1) =SET TO 1 FOR ASR TELETYPES
- SWITCH 2(1) =DON'T CHECK KEYBOARD PARITY (MUST BE SET TO 1 FOR ECHO TEST OF CRT.)

OPERATING PROCEDURE

LOAD THE PROGRAM VIA THE BINARY LOADER. USE THE HIGH SPEED READER IF AVAILABLE. OR USE THE DIAGNOSTIC OPERATING SYSTEM. IF THE DEVICE CODES OF THE UNIT UNDER TEST ARE NOT 10 AND 11; ENTER THE EVEN NUMBER IN REGISTER 000005, AND START AT 000006. THE PROGRAM WILL MODIFY ITSELF AND HALT READY FOR THE NEXT STEP. IF THE PROGRAM IS RUN IN MANUAL MODE, IT WILL ASK THE OPERATOR TO SET THE DESIRED OPERATING SWITCHES FOLLOWED BY CR. (SEE SECTION 3. FOR SWITCH OPTIONS). ONCE THIS HAS BEEN DONE, THE PROGRAM WILL PROCEED. THE DEFAULT SWITCH SETTINGS (ALL SWITCHES TO 0) ARE ACCOMPLISHED BY INPUTTING ONLY A CR.

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TESTING A ASR33 TELETYPE

SET THE TELETYPE TO THE LOCAL POSITION

PRESS THE TAPE PUNCH ON BUTTON

PRESS THE "HERE IS" KEY. THE PUNCH SHOULD FEED BLANK TAPE.

PRESS THE "REPT" KEY, THEN THE "RUR OUT" KEY. EXAMINE THE TAPE FOR ALL HOLES

PERFORM THE ABOVE TWO STEPS UNTIL ABOUT 15 INCHES OF TAPE HAVE BEEN PUNCHED.

SET THE TELETYPE SWITCH TO LINE.

PLACE THE END OF THE PUNCHED TAPE IN THE READER. A TAPE LOOP ABOUT ONE FOOT LONG IS THUS FORMED BETWEEN THE READER AND THE PUNCH.

SET THE READER SWITCH TO THE START POSITION.

SET THE SWITCH REGISTER TO 040060

PRESS START

THE PROGRAM WILL RUN UNTIL MANUALLY STOPPED OR AN ERROR IS DETECTED. THE WORD "PASS" WILL BE PRINTED AT THE END OF EACH PASS. OTHER INDETERMINATE CODES WILL ALSO BE PRINTED.

WHEN THE PROGRAM HAS COMPLETED SEVERAL PASSES SET THE DATA SWITCHES TO 000063.

PRESS RESET

SET THE READER SWITCH TO FREE.

PRESS THE PUNCH OFF BUTTON

PRESS START

A SUBSET OF THE ASCII CHARACTER SET WILL BE PRINTED. THE SET BEGINS WITH THE SEQUENCE "MMMM" TO PERMIT CARRIAGE RETURN ADJUSTMENTS ON A WIDE LETTER. AFTER SEVERAL LINES HAVE BEEN PRINTED PRESS RESET AND EXAMINE THE PRINTED DATA.

SET THE DATA SWITCHES TO 000062

PRESS START

STRIKE EACH KEY ON THE KEYBOARD AND CHECK TO INSURE THAT IT IS ECHOED PROPERLY.

SET THE DATA SWITCHES TO 000064

PRESS RESET.

REMOVE THE PUNCHED TAPE FROM THE READER AND PUNCH.

PRESS THE PUNCH ON BUTTON

PRESS START

INSERT THE LEADER OF ALL ZEROS INTO THE READER.

SET THE READER SWITCH TO START.

THE PROGRAM SHOULD PUNCH AND READ RANDOM DATA UNTIL MANUALLY STOPPED OR AN ERROR IS DETECTED.

TELETYPES WHICH DO NOT CONTAIN THE READER AND PUNCH OPTIONS MAY BE TESTED BY SETTING DATA SWITCH 1(0) AND OMITTING THOSE STEPS PERTAINING TO THE READING AND PUNCHING OF TAPE.

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0008 ETTY

**00000 TOTAL ERRORS, 00000 PASS 1 ERRORS

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01
02 PRINT CHARACTER SET (START ADDRESS 63)
03 A PORTION OF THE ASCII CHARACTER SET IS
04 REPEATLY TYPED.
05 PUNCH AND READ RANDOM (START ADDRESS 64)
06 THIS IS THE PRIME TEST OF THE TELETYPE
07 READER AND PUNCH IN FULL DUPLEX OPERATION.
08 THE MSKO INSTRUCTION AND THE INTERRUPT SYS-
09 TEM ARE USED TO PROVIDE RANDOM START-STOP
10 SEQUENCES TO THE READER AND PUNCH. THE DATA
11 PUNCHED IS EVEN PARITY... RANDOM NUMBERS.
12 PUNCH AND READ COUNT (START ADDRESS 65).
13 THIS TEST IS SIMILAR TO THE PREVIOUS TEST
14 EXCEPT THAT A COUNT PATTERN IS USED.
15
16 RESTRICTIONS/MISC
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18 THE DIAGNOSTIC ROUTINE WILL PRINT VARIOUS
19 INDETERMINATE CHARACTERS.
20 THE PRIMARY TIMING TEST IS THE ECHO TEST.
21 IF A UNIT UNDER TEST WILL NOT PROPERLY ECHO
22 CHARACTERS FROM THE KEYBOARD THE INTERFACE
23 TIMING CIRCUITS SHOULD BE SUSPECT.
24 A MODEL 37 ASR TELETYPE MUST BE MODIFIED
25 BEFORE IT CAN BE TESTED WITH THIS PROGRAM.
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*EOT