1. IDENTIFICATION

1.1 Digital-7-50-M

1.2 Teleprinter Input-Output Test

1.3 December 12, 1964
2. ABSTRACT
Tests input and output function of the teleprinter.
Four separate tests are used:
1. Repeating single character output line.
2. Repeating character sequence output line.
3. Input a line message, followed by output of same message.
4. Input of a character, output of same character.

3. REQUIREMENTS

3.3 Equipment
Teleprinter Model 33KSR or 28KSR.

4. USAGE
The following instructions are for the Model 33KSR; where treatment differs for Model 28KSR, it will be noted.

If AC switch bit 0=1, a variable time between output characters will be allowed. AC switch bits 3-9 (28KSR 3-12) specify time x 100 microseconds between characters.

RIM load the Teleprinter Test tape. The program will start automatically at location 208.

Fixed Character Sequence Output
Starting location 20.
Prints alphabets, digits and other characters on each line, and repeats sequence. Sequence is same for both typewriters as follows:
ABCDEFGHIJKLMNOPQRSTUVWXYZ
0123456789./,:;&-_"?$/!

Repeat Input Character
Starting location 21.
After each key is struck (except carriage return tab), the printer will print the same character as the one struck. Carriage return is not automatic and must be accompanied by line feed.

Fixed Character Line Output Program
Starting location 22.
AC switch 10-17 (28KSR 13-17) bits specify code for character to print. At the completion of a line, a carriage return will automatically occur, and the line will be repeated. AC switches may be changed while the program is running.

Repeat Input Sequence
Starting location 23.

A sequence is typed on the keyboard and when the carriage return key—or line feed, or control J, or control M—(28KSR carriage return only) is pressed, the sequence will be repeated one time. At the completion of the type-out, a new message may be typed in, or typing @ while depressing the control and shift keys (28KSR blank key) will repeat the message.

8. FORMAT
Tape formats are ASCII, FIO, DEC, and FB. Occupies 20-1000.

10. PROGRAM
10.4 Program Listing

TELETYPETTEST TAPE PDP-7 9/13/64
INDEX=10
INDEX1=11
20/
JMP TELTST
JMP ECHO
JMP REP
JMP TEL2

TELST, LAC (ALPHA-1 /PRINT ALL TELETYPET CHARACTERS
DAC INDEX
LAC (ALPHA-END
DAC CNT
KRB
TLS 10
LAC (-100000 /SET DELAY AFTER EACH LINE
DAC CNTI

TELI, LAC 1 INDEX /LOOP TO PRINT ALPHABET
JMS TY1
ISZ CNT
JMP TEL1
ISZ CNT1
JMP -.1
KSF
JMP TELTST /IF NO CHARACTER TYPED, CONTINUE
TEL2,
LAC (TABLE DAC INDEX
LAC TEM
DAC 1 INDEX
KSF
JMP .-1
KRB
703301
SKP
JMP TEL4
SAD (10
JMP TEND1
SAD (2
JMP TEND2
DAC 1 INDEX
JMP TEL2 4
TEL3,
LAC (TABLE DAC INDEX
LAC 1 INDEX1
JMS OTY
LAC INDEX1
SAD INDEX
JMP . 2
JMP TEL3 2
LAC (212
703301
LAC (10
JMS OTY
LAC (215
703301
LAC (2
JMS OTY
KSF
JMP .-1
KRB
DAC TEM
703301
SZA
SAD (200
JMP TEL3
JMP TEL2
TEL4,
SAD (212
JMP TEND1
SAD (215
JMP TEND2
JMP TEL3-2

/SET TO READ FROM THE KEYBOARD

/EXIT IF A LINE FEED OR C.R.

/IF NOT, STORE CHARACTER TYPED

/SET TO PRINT LINE

/PRINT TYPED LINE

/PRINT LINE FEED AND C. R.

/WAIT FOR CHARACTER TO BE TYPED

/READ CHARACTER
/TERM CHAT ON INPUT
TEND1, LAC (215 703301
LAC (2
JMS OTY
JMP TEND2 2
TEND2, LAC (212 703301
LAC (10
JMS OTY
LAC INDEX
SAD (TABLE
JMP TEL2 2
JMP TEL3
/TERM BY A LINE FEED
/TERM BY A C.R.
/TEST FOR NO CHARACTERS IN

/TYPE BACK CHARACTER TYPED
ECHO
KR
KS
JMP .-1
KR
JMS OTY
JMP ECHO 1
/TYPE TEST WORD CONTINUALLY
REP,
LAC (-70 /FILL LINE WITH CHARAC IN ACSWITCHES
DAC CNT
LAT
JMS OTY
ISZ CNT
JMP .-3
LAC (215 703301
LAC (2
JMS OTY
LAC (212 703301
LAC (10
JMS OTY
JMP REP
/TYPE 3 CHARACTERS
TY1,
0
JMS RL6
JMS TYP1
JMS RL6
JMS TYP1
JMS RL6
JMS TYP1
JMP 1 TY1
TYP1,

0
DAC TEM
AND (37
SNA
JMP TY2
703301
SKP
JMP TYLB
LAC OCL
SPL
LAC OCU
SAD OCS
JMP .3
JMS OTY

DAC OCS
LAC TEM
JMS OTY

TY2,
LAC TEM
JMP 1 TYP1

TYLB,
ADD (LAC BTATAB-1
DAC .+1
XX
SZL
JMP TYLC

TYLD,
JMS OTY
JMP TY2

TYLC,
JMS RL6
RTL
RTL
JMP TYLD

/INDEXED BY BAUDOT, FIGURES LEFT HALF, LETTERS RIGHT HALF

BTATAB,
265324
215215
271317
240240
243310
254316
256315
212212
251314
264322
246307
270311
260320
272303
/SUBROUTINES AND DATA
QTY, 0
TDS
LAT
SPA
JMP DELAY
TSF
JMP .-1
JMP I QTY
DELAY, RTR
RTR
AND (3777
CMA
DAC CNTD
DELAY1, LAC I .
LAC I .
LAC I .
ISZ CNTD
JMP DELAY1
JMP I OTY
RL6, 0
RTL
RTL
JMP I RL6
/TABLE OF ALL TELETYPE CHARACTERS
ALPHA, FLEX ABC FLEX DEF
FLEX MNO FLEX POR
FLEX YZ
FLEX 012 FLEX 345
FLEX 678 FLEX 9 /
END,
/CASE CONTROL STORAGE
OCS, 33
OCU, 33
OCL, 37
TABLE, TABLE 200/
START TELTST

/TYPE 1 CHARACTER SUBROUTINE
/TEST FOR DELAY ON
/BIT 0=0 MEANS NO DELAY
/IF NO DELAY, WAIT FOR THE FLAG
/3x8 MS DELAY
/EACH DELAY IS ABOUT 100 MS.

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