

by the program. "UP" and "DOWN" will allow the operator to raise or lower the pen manually, irrespective of the program selected state of the pen.

POWER REQUIREMENTS:

Can be connected for either 115 or 230 VAC, 50/60 Hz. Connected for 115 VAC unless suffix "J."

Maximum Apparent Power is 120 Volt/Amperes with Pen Down and No Pen Motion. Line Voltage tolerance is plus or minus 10% from nominal input requirements.

CONFIGURATIONS

Type	Type Number
115VAC input power	XY8-EH
230VAC input power	XY8-EJ
Table Top version, 115VAC	XY8-EK

LINE PRINTER OPTION

LE8 Line Printer

The LE-8 line printer offers the user a low-cost, high-speed, flexible method of printing computer output at a rate dependent upon the option selected. It accepts ASCII characters from the AC.

Each character is selected from the set of 64 (or 96) available by means of six-bit or seven-bit binary code. (Appendix E lists the ASCII code for each character.) Each code is loaded separately from the computer into a 20-character (or, in the case of the 132-column model, 22-character) core storage Line Printer Buffer from AC 6-11 (or AC 5-11), with the least significant bit appearing in AC11. After each code is transferred into the Line Printer Buffer, the Line Printer Done Flag appears, indicating that the printer is ready to receive the next character. When the Line Printer Buffer is filled, or a control character has been received, the print cycle is initiated. Character codes not in the character set in Appendix E are printed as spaces. The line feed command and carriage return command are similar to the corresponding commands in the Teletype. The form feed command advances the paper to the top of the page. The Printer Done Flag is set after each of these operations.

During the print cycle, the paper and inked ribbon pass between a row of 80 hammers (132 in the 132-column model) and the continuously rotating drum that contains all of the available characters. Variable reluctance pickoffs scan the stored characters in synchronism with the rotating characters, and the control system actuates the appropriate hammer as the desired character approaches the print position. The full line is printed in 20-column segments, with one drum revolution required for each segment. After the last character of a line is printed, the Line Printer Buffer is cleared automatically.

There are no operator controls in the control module. The following controls are on the printer:

TOP OF FORM—Advances paper to top-of-form position; disabled in on-line mode

PAPER STEP—Advances paper one line; disabled in on-line mode

ON LINE/OFF LINE—Selects mode of operation for the printer

MASTER CLEAR—Initializes printer to ensure proper state of electronic elements

PRINT INHIBIT—Inhibits print hammers.

The line printer is available in any of the following combinations:

LE8-FA	80 columns	64 characters	60 Hz
LE8-FB	80 columns	64 characters	50 Hz
LE8-HA	80 columns	96 characters	60 Hz
LE8-HB	80 columns	96 characters	50 Hz
LE8-JA	132 columns	64 characters	60 Hz
LE8-JB	132 columns	64 characters	50 Hz
LE8-KA	132 columns	96 characters	60 Hz
LE8-KB	132 columns	96 characters	50 Hz

The interface is contained on one PDP-8/E module, which plugs into the OMNIBUS.

The specifications for the LE8 line printer are as follows:

Printable characters

character set	64 or 96
type	Open Gothic print
size	Typically 0.095 inches high and 0.065 inches wide
code format	ASCII
characters per line	80 or 132
drum speed	1760 rpm (64 character drum)

Print rate

80 column model

64 character	356 Lines/minute, columns 1-80
	460 Lines/minute, columns 1-60
	650 Lines/minute, columns 1-40
	1110 Lines/minute, columns 1-20

96 character	253 Lines/minute, columns 1-80
	330 Lines/minute, columns 1-60
	478 Lines/minute, columns 1-40
	843 Lines/minute, columns 1-20

132 column model

64 character	245 Lines/minute, columns 1-132
	290 Lines/minute, columns 1-110
	356 Lines/minute, columns 1-88
	460 Lines/minute, columns 1-66
	650 Lines/minute, columns 1-44
	1110 Lines/minute, columns 1-22

96 character	173 Lines/minute, columns 1-132 205 Lines/minute, columns 1-110 253 Lines/minute, columns 1-88 330 Lines/minute, columns 1-66 478 Lines/minute, columns 1-44 843 Lines/minute, columns 1-22
Format	Top-of-form control, single line advance and perforation step over.
Paper feed	One pair of pin-feed tractors for 1/2-inch hole center, edge-punched paper. Adjustable for any paper width from 4 inches to 9-7/8 inches on the 80-column model; or a maximum width of 14-7/8 inches for the 132 column model.
Paper slew speed	13 inches per second
Print area	8 or 13.2 inches wide, left justified
Character Spacing	10 characters per inch
Line spacing	6 lines per inch for 80-column, 6 or 8 lines for 132-column printer
Line advance time	20 milliseconds
Character synchronization	Variable reluctance pick-offs sense drum position

Printer Dimensions

	80 column	132 column
Height	46 inches	46 inches
Width	24 inches	48 inches
Depth	22 inches	25 inches
Weight	275 pounds	420 pounds

Printer Power Requirements

115 vac + or - 10%, 60 Hz + or - 3 Hz, single phase, 300 watts
or
240 vac + or - 10% 50 Hz + or - 3 Hz, single phase, 300 watts

Signal cable 25 foot interconnecting signal cable is supplied with system

Paper

Type standard fanfold, edge punched
Dimensions 4 inches to 9-7/8 inches wide (80 column)
4 inches to 14-7/8 inches wide (132 column) with 11 inches between folds

weight (single copy)	15 pound bond (minimum)
multi copy)	12 pound bond with single-shot carbon for up to six parts

Ribbon	
type	inked roll
width	9 inches (80 column); 14 inches (132 column)

Programming

The IOT instructions which command the line printer are:

Skip on Character Flag (PSKF)

Octal Code: 6661
Operation: Senses the content of the line printer done flag; if it contains a binary 1, the contents of the PC are incremented by one so that the next sequential instruction is skipped.

Clear the Character Flag (PCLF)

Octal Code: 6662
Operation: Clears the Line Printer Done Flag.

Skip on Error (PSKE)

Octal Code: 6663
Operation: Senses the content of the Line Printer Error Flag; if it contains a binary 1, indicating that an error (drum gate open, out of paper, excessive temperature) has been detected, the contents of the PC are incremented by one so that the next sequential instruction is skipped.

Load Printer Buffer, Print on Full-Buffer or Control Character (PSTB)

Octal Code: 6664
Operation: Loads the character into the print buffer, and prints if the buffer is full, or if the character was a control instruction. This instruction does not clear the AC.

Set Program Interrupt Enable Flag (PSIE)

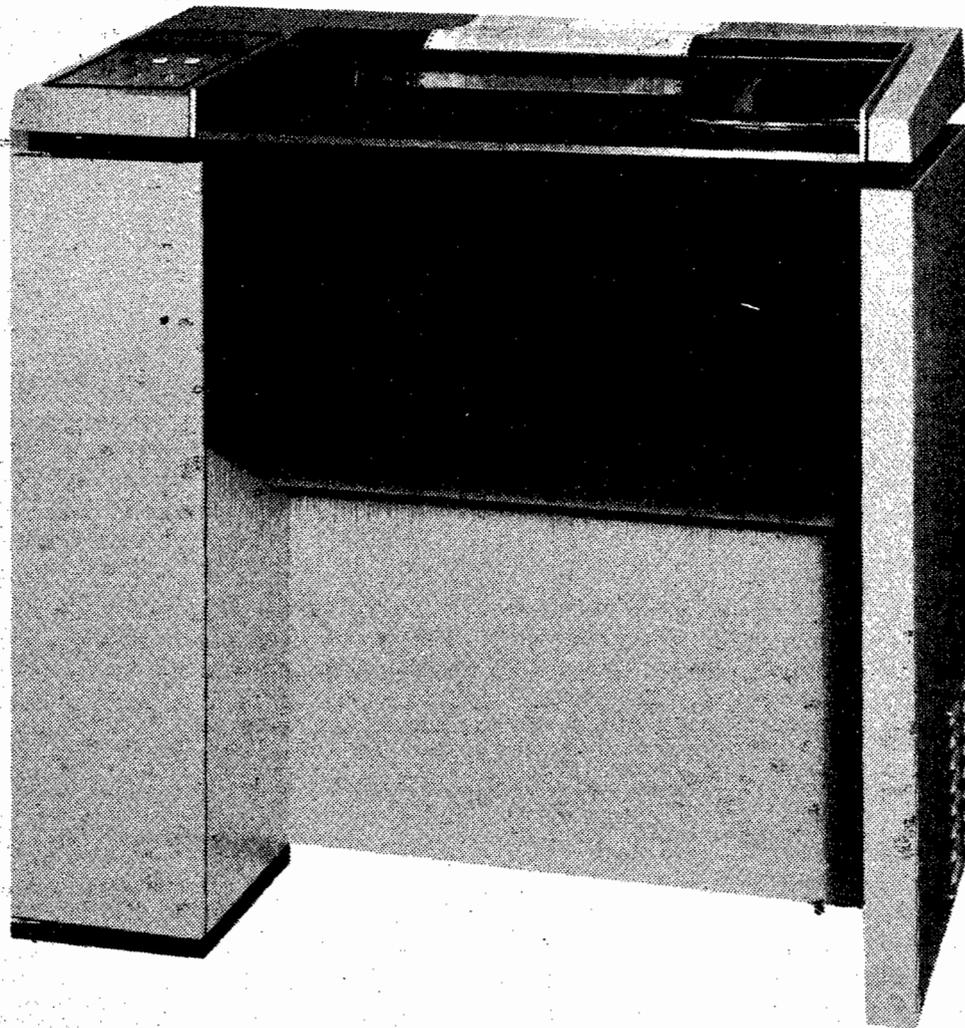
Octal Code: 6665
Operation: Sets the interrupt enable (IE) flip-flop to a one, permitting the Printer Done Flag to request a program interrupt.

Clear Line Printer Flag, Load Character, and Print (PCLF, PSTB)

Octal Code: 6666
Operation: This is a microprogram combination of PCLF and PSTB.

Clear Program Interrupt Flag (PCIE)

Octal Code: 6667
Operation: Clears the interrupt enable flip-flop.



LE-8 Line Printer 132—Column Model

DATA COMMUNICATIONS EQUIPMENT OPTIONS

DC08H Automatic Calling Unit Controller

Digital Equipment Corporation offers several data communications products that have the ability to control Bell System Automatic Calling Units or equivalent. Among these are the DC08H, a general-purpose PDP-8 unit designed to be used with any of several data communications systems. It interfaces with up to ten Bell System 801A (Dial Pulse) or 801C (Touch-Tone®) Automatic Calling Units. The interface conforms to the Electronic Industries Association (EIA) Standard RS-232-B.