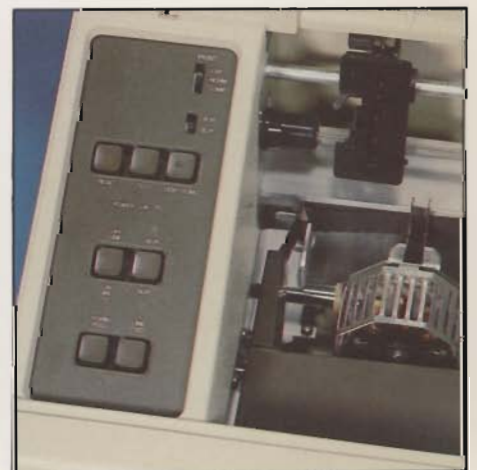
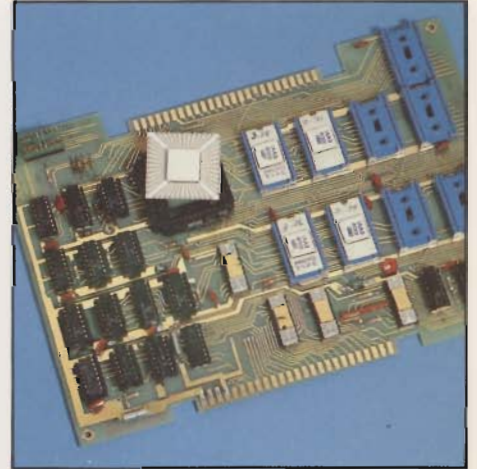
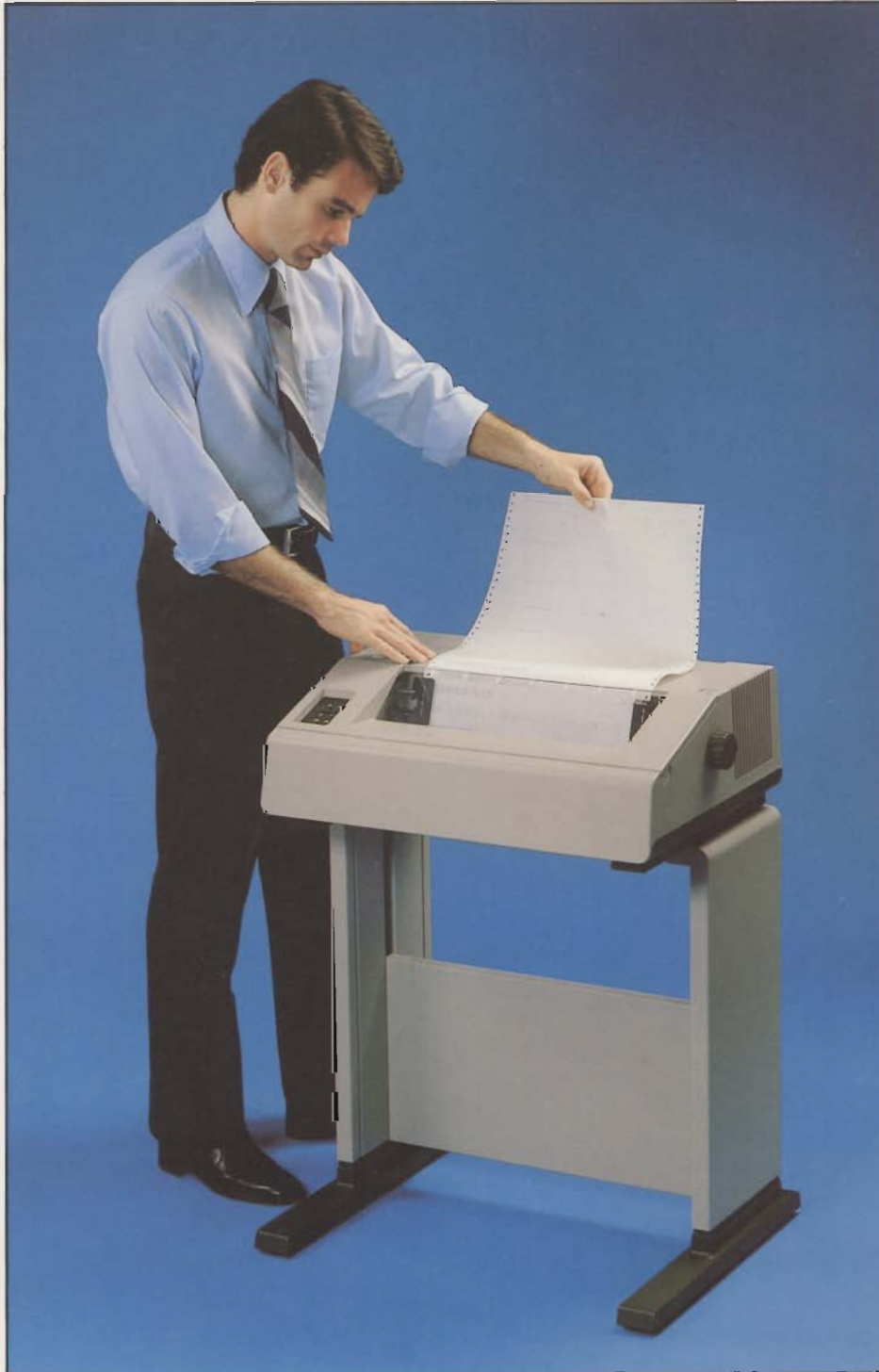


# HP 2631A Printer

HEWLETT  PACKARD

Microprocessor control provides high performance and flexibility while mechanical simplicity and modular design minimize cost of ownership.



# Printing Speed and Versatility

An outstanding lineup of standard features printed on an HP 2631A.

## PRINT SPEED

SMART bi-directional printing gives the HP2631A capabilities unparalleled by other printers in its class. The printing characteristics of the HP2631A, listed below, are examples of how SMART bi-directional printing works. Shaded arrows show the direction of printing. When the arrows become dashed, the print head goes into a high speed slew skipping over embedded spaces. Notice that at the beginnings and ends of the lines, leading and trailing blanks are completely eliminated; the most efficient path is chosen for the next line, not necessarily left-to-right and right-to-left.

## 2631A PRINTING CHARACTERISTICS

CHARACTER FORMATION	Dot Matrix (7x9)
PRINT DIRECTION	SMART bi-directional (left to right & right to left)
PRINT SPEED	180 Characters per second
LINE SPACING	1,2,3,4,6,8,12 lines per inch
FORMS USED	Up to 6 part
PRINT MODES	Normal(10 characters per inch) Expanded(5 characters per inch) Compressed(16.7 characters per inch)

THE HP2631A MAXIMIZES THROUGHPUT BY OPTIMIZING THE PRINT DIRECTION.

## PRINT VERSATILITY

The HP2631A has outstanding speed and throughput, yet speed is only one criterion for judging the capabilities of a printer. There are other STANDARD features which on many other printers are, at best, options.

The HP2631A offers a high resolution 7x9 dot matrix with a full 128 USASCII character set standard. Vertical line spacing may be set at 6 or 8 lines per inch by an operator's control switch or at 1,2,3,4,6,8 or 12 lines per inch via program control. This allows mixing line spacing for specialized applications such as engineering and scientific notation.

$$E=MC^2, N_1, n_2, i_3$$

The HP2631A offers three standard print densities (modes): In NORMAL mode the HP2631A prints similarly to other printers; EXPANDED mode allows highlighting of areas within text such as titles, headings and keywords; in COMPRESSED mode the HP2631A gives highly readable text and allows use of standard 8 1/2 inch wide pages, printing up to 132 characters across the page. There are other STANDARD features of the HP2631A which make it outstanding. Automatic underlining in all print modes allows additional highlighting of text. Horizontal tabs as a standard feature allow high speed slew to specified areas on special forms.

THE ABOVE TEXT TOOK 21 SECONDS TO PRINT ON THE HP2631A  
THIS IS EQUIVALENT TO PRINTING APPROXIMATELY 95 LINES PER MINUTE.



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**For research and education purposes only.**

# Design Features

Mechanical simplicity and modular design =  
low cost of ownership with the HP 2631A.

The HP 2631A Printer is controlled by a Hewlett-Packard microprocessor system. Silicon on Sapphire technology is used by HP to manufacture the microprocessor. Innovative design throughout the HP 2631A gives you maximum performance from the mechanical capabilities of the printer.

## Simple Mechanical Design

A lead-screw, driven by a servo motor, propels the print head across the page. The ribbon is driven by the print head motion thus eliminating an additional motor.

## Long-Life Print Head

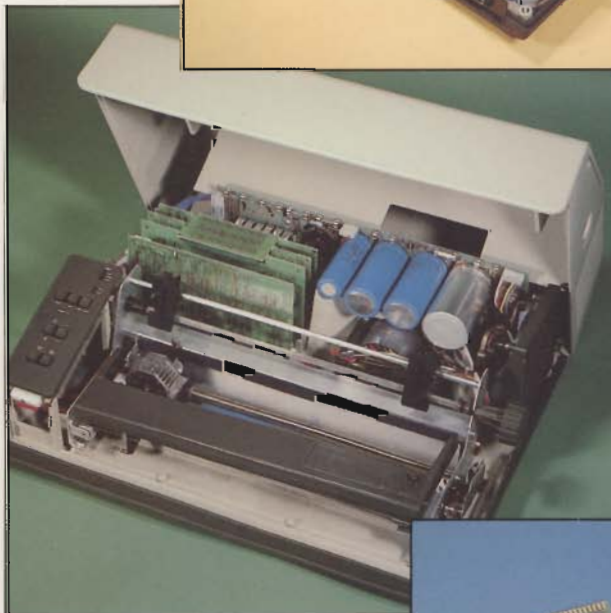
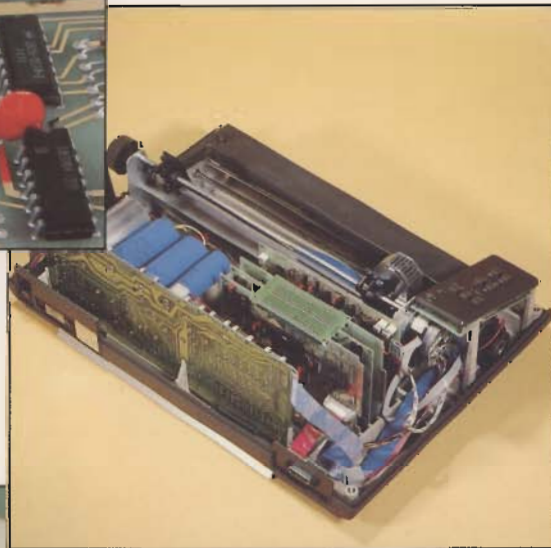
The nine-wire print head used in the HP 2631A provides clear, consistent printout on up to six copies. The use of a nine-wire print head allows lower case descenders to be printed as well as true underlining. The average life of the print head is conservatively rated at 100 million characters, making replacement an infrequent task. However, when replacement is required, this self-aligning head is easily replaced using the hex key supplied with the printer.

## Modular Design

The design of the HP 2631A permits easy access to components for servicing and provides interfacing flexibility.

The modular structure of the printer allows it to be interfaced with a variety of systems. The following interface options are currently available:

- 8-bit parallel differential line driver (for use with HP 2100/21MX series computers).
- 8-bit parallel-TTL (for HP 2640 series terminals).
- 8-bit parallel-TTL OEM-type.
- RS232C/CCITT V24 with or without modem control.
- 20 milliamp current loop.
- Hewlett-Packard Interface Bus (HP-IB) conforms to IEEE standard 488-1975.



# User Features

Smart printing means versatility and convenience.



## Print Versatility

The HP 2631A sets new standards for printer performance and versatility. Standard features such as three print modes, seven vertical line densities, auto-underlining, and more make the HP 2631A an easy choice for your output requirements.

- Three print modes offer a high degree of flexibility in formatting your output. In addition to normal ten characters per inch, expanded print mode is useful for headings and highlighting. Compressed print allows lines of up to 132 characters to be printed on 8½ inch paper or 227 characters on 14⅞ inch paper.
- Seven vertical line densities allow line spacing from 1 line per inch to 12 lines per inch. True superscripts and subscripts can be printed using 12 lines per inch.
- Auto-underlining in all print modes provides additional emphasis to key words and phrases in your output.
- Optional secondary character sets give the HP 2631A true bi-lingual capability.

## Convenience

Programmers and operators will appreciate the convenience features of the HP 2631A. Installation flexibility, cartridge ribbon, and self test are just a few that make this printer an ideal solution for your output requirements.

- Pedestal or table-top mounting is made possible by incorporating all of the electronics into the printer mainframe. Bottom and rear paper feed slots provide maximum installation flexibility.
- Unique cartridge ribbon, good for 10 million characters, is easily removed and installed without touching the ribbon itself.
- Self-test feature allows the operator or programmer to easily verify proper operation of the printer.
- Display functions feature allows control codes to be printed. This is a useful tool for program development.



Effective  
Lines  
Per Minu

500

400

300

200

100

# HP 2631A Printer Specifications and Ordering Information

## SPECIFICATIONS

### Physical

Width:	640 mm (25.2 inches)
Depth:	470.4 mm (18.5 inches)
Height:	215.7 mm (8.5 inches)
Weight	
Printer:	22.95 KG (51 pounds)
Pedestal Assembly:	23.85 KG (53 pounds)

### Clearance Requirements

Front and Rear:	Adequate for operator access
Sides:	76 mm (3 inches) minimum

### Performance

Print character formation:	Dot Matrix (7x9)
Print direction:	Bi-directional (left-to-right and right-to-left)
Printing Speed:	180 characters per second
Line Feed Rate	
6 LPI:	30 msec/line
8 LPI:	24 msec/line
Form Feed Rate	
6/8 LPI:	176.6 mm/sec (6.95 in/sec)
Copies:	1-6 copies up to 0.43 mm thickness
Print Modes:	Normal, Expanded, Compressed

### Forms Use

The HP 2631A will accommodate edge perforated forms varying in width from 400 mm (15.75 in.) edge-to-edge to 31 mm (1.22 in.) perforation-to-perforation, and thickness from .08 mm (.003 in.) to .43 mm (.017 in.). Single or multiple part forms including card stock and glued edge forms may be used interchangeably. Multiple part forms and card stock should be tried for satisfactory feeding, registration and print quality.

### Vertical Format Control

Number of Channels: 8 non-programmable

### Electrical Characteristics

	Input (VAC)	Range (V)	Frequency Tolerance (HZ)
Voltage Source:	100	88-110	48-62
(Selectable)	120	105-132	48-62
	220	194-242	48-62
	240	212-264	48-62
Power cable length:	1.8 metres (6 feet).		

### Environmental

Temperature	
Non-Operating:	-40°C to 75°C (-40°F to 167°F)
Operating Survival:	-20°C to 65°C (-4°F to 149°F)
Operating:	0°C to 55°C (32°F to 131°F)
Humidity	
Non-Operating:	65°C (149°F) @ 90%
Operating:	40°C (104°F) @ 5% to 95%
Heat Dissipation:	265 watts

## ORDERING INFORMATION

<b>2631A</b>	180 Characters Per Second Printer. 8-bit differential line driver interface.	<b>2631A-825</b>	Replace standard interface with option 046 and documentation for operation with 9825A desktop computer.
<b>2631A-040</b>	Replace standard interface with RS232C without modem control. Cable included.	<b>2631A-830</b>	Replace standard interface with option 044 and documentation for operation with 9830A/B desktop computer.
<b>2631A-041</b>	Replace standard interface with RS232C with 202 type modem control. Cable included.	<b>2631A-831</b>	Replace standard interface with option 046 and documentation for operation with 9831A desktop computer.
<b>2631A-042</b>	Replace standard interface with 20 milliamp current loop.	<b>2631A-845</b>	Replace standard interface with option 046 and documentation for operation with 9845A desktop computer.
<b>2631A-044</b>	Replace standard interface with 8 bit TTL type interface.		Foreign character sets available — contact your HP Sales Representative.
<b>2631A-046</b>	Replace standard interface with HP-IB	<b>26098A</b>	Pedestal assembly for 2631A Printer.
<b>2631A-051</b>	Similar to option 041 except RS232 type connector is replaced with 2640 type edge connector (emulates 13260B) cable not included.	<b>26098A-001</b>	Adds casters to pedestal.
<b>2631A-210</b>	Add 12845B interface kit and documentation for use with 2100/21MX series computers.		
<b>2631A-240</b>	For use with HP 2640 series terminals. Includes 13232J cable and 13238A interface.		



For more information, call your local HP Sales Office or East (301) 948-6370 Midwest (312) 255-9800 South (404) 955-1500 West (213) 877-1282. Or, write: Hewlett-Packard, 1501 Page Mill Road, Palo Alto, California 94304. In Europe: Post Office Box CH-1217 Meyrin 2, Geneva, Switzerland. In Japan: Yokogawa-Hewlett-Packard 59-1, Yoyogi 1-chome Shibuya-ku, Tokyo, 151. In Canada: 6877 Goreway Drive, Mississauga, Ontario L4V1L9.