Look into Hewlett-Packard terminals and see how much more your computer can do.

Alphanumeric terminals



, Graphics terminals, Printers, Plotters, Digitizers.

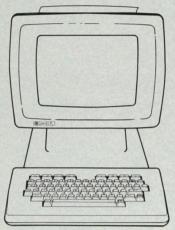
Build a system that lets your computer show you how much more it can do.

Because your computer peripheral needs will vary according to your application, this catalog is designed to help you build the right peripheral combination for your requirements. Hewlett-Packard terminals and hardcopy peripherals can be used individually or in combination to meet your exact needs.

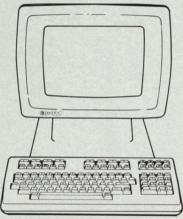
Hewlett-Packard terminals provide a number of important features which make program development more efficient and data entry easier. HP peripheral devices include alphanumeric display and printing terminals, graphics display terminals, data capture terminals, printers, graphics printers, graphics printers, graphics plotters, and digitizers. Whatever your application — business, engineering, science, medicine, education, or manufacturing — there's an HP terminal and hardcopy peripheral combination that's right for you.



HP terminals. Interactive terminals for virtually a



Interactive Terminal 2621P



Display Terminal 2626A

Alphanumeric Terminals.

2621A/2621P Interactive Terminals

• High quality display • Lower cost • Character Mode editing • Easy to use • Integral

thermal printer (2621P)
Reliable performance at a budget price. HP's lowest cost CRT terminals provide simplicity, reliability and quality in products designed for interactive applications. These terminals feature a high resolution display with both upper and lower case characters, two pages of display memory with complete cursor control, typewriter-style keyboard and local editing. With the 2621P's integral printer providing quick and quiet copy at 120 characters per second, you get the convenience of local hardcopy with the speed of a video terminal.

2626A Display Terminal

 Multiple workspaces and windows
 Dual data communications ports
 Forms copying on integral printer (optional) • Interactive forms design • 80 to 160 character column lines

A high performance terminal using silicon on sapphire components to provide unique

display capabilities and data communications flexibility. The HP 2626A allows division of the display memory into four independent workspaces and the display screen into separate windows to examine and manipulate the contents of the workspaces. Independent terminal configurations may be attached to each workspace allowing four virtual terminals. High throughput data entry is possible by using separate workspaces. While the operator keys data into one form, the CPU can work with a form in a hidden workspace. In addition, dual data communications ports may be linked to workspaces to display data from two different sessions or computers. An optional forms copy integral printer can provide copies of forms, or, using a compressed mode, print 132 column reports on the 8½ inch wide paper. The extraordinary power and flexibility of this terminal is made easy to use via screen labeled function keys, which allow the system designer to create forms interactively, and via configuration of the terminal using menu selection.

2645A Display Station

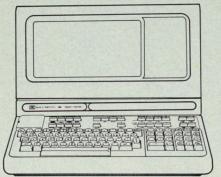
High resolution display
 Forms
 User-defined soft keys
 Full editing capability

Integrated mass storage (optional)

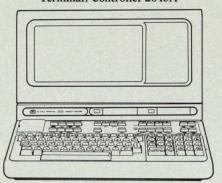
A sophisticated and flexible interactive terminal providing substantial off-line capabilities with optional mass storage. The 2645A provides up to 9600 baud, block mode, and a choice of communications capabilities. Standard RS-232-C/V.24 serial ASCII, optional 20mA current loop and asynchronous or synchronous multipoint are fully supported. Protected fields, alphanumeric checking and the line drawing character set make data entry easy. Adjustable margins, line inserts or deletes, character insert with optional wraparound, and block moves provide a powerful tool for text editing or program preparation. User-definable soft keys can be used to transmit messages to a computer or to control local functions, greatly simplifying terminal operations. Optional, fully integrated dual cartridge tapes provide up to 110 Kbytes mass storage for each tape, allowing you to perform many tasks offline.

Display Terminals	Interactive Terminal 2621A/2621P	Display Terminal 2626A	
Display Characteristics			
High Resolution	Enhanced 9 x 15 dot character cell with half dot shifting.	Enhanced 9 x 15 dot character cell with interstitial dots.	
Screen Enhancements	Underline.	Inverse video, underline, blinking standard. Windowing to divide screen to 4 independent workspaces.	
Character Sets	Standard 128 ASCII, with upper and lower case. 6 International sets with keyboards available as options.	Standard 128 ASCII, with upper and lower case, and 96 character line drawing set. Optional math symbol and large double size character set. 6 International sets with keyboards available as options.	
Editing			
Local Functions	Line insert/delete. Character insert/delete.	Line insert/delete. Character insert/delete with or without wraparound.	
Remote Functions	Line mode, modify mode.	Line mode, modify mode, block mode, format mode.	
Forms		Programmable protected fields for forms design with line drawing set, data checking, and screen enhancements. Interactive forms design module	
Memory/Storage			
Display	48 lines of display memory.	119 lines of display memory. Memory may be divided into 4 separate workspaces.	
Cartridge Tape Units			
Programmability			
Function Keys	8 preprogrammed function keys.	8 preprogrammed or user-definable screen labeled softkeys.	
Numeric Keypad	Embedded numeric keypad.	Separate numeric keypad.	
Hardcopy	2621P with integral thermal printer. Optional parallel port (2621A only).	Optional integral forms copy thermal printer, compressed print for 132 column lines.	
Interface	RS-232-C/V.24. Optional 20mA current loop.	RS-232-C/V.24. Optional 20mA current loop or multipoint. Second RS-232-C/V.24 port for concurrent operation with two computers or external RS-232-C/V.24 printer.	

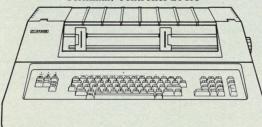
Il computer systems.



Microprogrammable OEM Terminal/Controller 2649A



Intelligent OEM Terminal/Controller 2649I



Printing Terminal 2635B

Display Station 2645A

Enhanced 9 x 15 dot character cell with half dot shifting

Inverse video.

Optional blinking, underline, and half bright display

Standard 128 ASCII, with upper and lower case. Optional math symbol, large character, line drawing, and user definable character sets. 4 International sets available.

Line insert/delete. Character insert/delete with or without wraparound. Block mode, format mode.

Programmable protected fields for forms design using optional screen enhancements and line drawing sets.

28 lines of 80 characters each display memory expandable to 110 lines with optional memory.

Optional off-line capability with fully integrated dual cartridges mass storage (up to $110\,\mathrm{kilobytes}$ each).

8 preprogrammed or user-definable softkeys.

Separate numeric keypad.

Optional peripheral RS-232-C/V.24 and 8-bit duplex printer interface

RS-232-C/V.24. Optional 20mA current loop or multipoint.

2649 Family of OEM Microprogrammable Terminals

The HP 2649 Series is a family of OEM terminals that allow you to tailor the hardware and firmware to meet your special requirements. The 2649 features modular architecture and an extensive programming capability, with all the features of the 2640 family—including proven reliability. The cornerstone of the OEM terminal family is the 2649Å.

2649A Microprogrammable OEM Terminal/Controller
• Complete system in a single package • Modular architecture • Powerful central processor • Graphic display capability • Flexible memory and interface options

An intelligent terminal or controller with capabilities tailored to meet your specific application requirements. The 2649A incorporates a microprocessor, memory, I/O, and peripherals in a single, attractive package. It is an ideal building block with optional plug-in modules allowing you to easily adapt the terminal. Choose from a wide selection of general purpose interfaces including shared peripheral and data communications interfaces. A variety of memory options including RAM, ROM and PROM modules are available to meet your program and data storage requirements. And if changes in the terminal firmware are necessary, the 2649A is programmable in 8080 assembler. You may select from existing firmware or write your own code to suit your application. The optional graphics capability of the 2649A allows large quantities of data to be displayed in graphical form for easy interpretation. A comprehensive documentation package, user instruction class, and 2649 development systems are also provided to aid you in hardware and firmware development.

2649I Intelligent OEM Terminal/Controller
• Programmable in BASIC • Integral mass storage • Simple user interface • Choice of data communications capability • Shared peripheral interface

The intelligent solution to a broad range of applications which require a high level programming language, microprocessor display and keyboard. The 2649I offers an enhanced BASIC programming capability for a variety of intelligent terminal applications. It is ideally suited for both OEMs and end-users who need to develop customized software on intelligent terminals. The 2649I dual cartridge tapes store up to 110 Kbytes each, providing an extensive stand-alone or work station processing capability. English-like commands control data flow between the terminal screen, cartridge tapes, printers or other peripherals. The standard 2649I operates up to 9600 baud with handshake and offers asynchronous point-to-point data communications using an RS-232-C/V.24 interface. Optional capabilities include, 20mA current loop and asynchronous or synchronous multipoint communications. Multiple 2649I terminals can share the same compatible printer, or a single 2649I can share several compatible printers, maximizing the cost-effectiveness of multiple device configurations.

2635B Printing Terminal

• Typewriter-style keyboard • Numeric keypad • RS-232-C/V.24 up to 9600 baud • 180 cps bidirectional print • Configuration keys

A printing terminal for a variety of applications. The typewriter-style keyboard allows ease of use in program development, time sharing, and problem solving applications. A separate numeric keypad aids remote data entry. An RS-232-C/V.24 interface supports multiple line protocols when a remote hardcopy terminal is needed. The flexible microprocessor-controlled 2635B can be configured to handle a variety of printing requirements. It prints bidirectionally at 180 cps and makes use of easily programmable print features. Special configuration keys make most printing features available with a few keystrokes. These include eight print widths for the printing of headings and bold type, and 132 columns on 8½ inch wide paper. Horizontal and vertical tabs, twelve different vertical line spacings, and margin controls are set via simple keystrokes. Printed output can be easily tailored for forms and reports. Higher quality output can be obtained with an optional high density character set.

Printing Terminal	Printing Terminal 2635B
Printing Characteristic	S
Print Type	Dot matrix characters, impact.
Print Speed	Up to 180 cps, bidirectional.
Print Enhancements	8 selectable print pitches. Variable line spacing with manual or program control.
Character Sets	Standard 128 ASCII, with upper and lower case and control characters.
Columns	132 columns.
Paper Characteristics	
Paper Type	Fanfold standard paper.
Paper Size	31mm (1.22 in.) to 400mm (15.75 in.) wide.
Paper Handling	16-channel vertical forms control.
Forms	Single or multipart forms, up to 6 part copy.
Keyboard	Familiar typewriter style.
Numeric Keypad	Separate numeric keypad.
Interface	RS-232-C/V.24.

Graphics Terminals.

- 2647A Intelligent Graphics Terminal
 User programmable in BASIC High level graphics commands
- Graphics for the non-programmer multiple automatic plotting
- Dual integrated cartridge tapes All 2648A and 2645A standard

A uniquely flexible programmable tool for a wide range of graphics applications areas. Microprocessor intelligence brings sophisticated graphics to the user who has little or no programming experience. A fill-in-the-blanks menu form drives the multiple automatic plotting feature to produce a variety of bar, pie, line and log charts without system software.

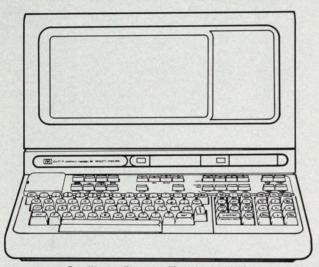
Programmability in BASIC also permits wide flexibility and power in customizing the terminal's performance to specific tasks. Graphics features of the 2647A may be incorporated into programs with high level English-like commands which can control graphics functions either online or offline. The 2647A offers full interactive alphanumeric capability for program prepraration, text editing and data entry. Multiple 2647A terminals may share the same compatible hardcopy devices such as plotters and printers, maximizing the cost-effectiveness of multiple device configurations.

2648A Graphics Terminals

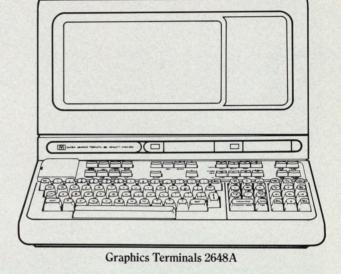
• Bright raster scan display • Hardware zoom and pan • Rubber band

line • All 2645A alphanumeric capabilities

High performance capabilities for users requiring low-cost graphics terminals. The 2648A can be used in computer-aided design, scientific and engineering data plotting, computer-aided artwork and many other applications. Raster scan technology offers a high level of picture clarity and brightness. Line graphs of tabular data can be easily obtained without host CPU graphics software. Fill in a simple menu form on the screen and, from a few keystrokes, the 2648A will plot the data with the axes automatically scaled and labeled. For interactive alphanumerics, the 2648A provides all the features of the 2645A Display Station for text editing, data entry, and program preparation.



Intelligent Graphics Terminal 2647A









Graphics Display Terminals	Intelligent Graphics Terminal 2647A	Graphics Terminal 2648A	
Display Characteristics			
High Resolution 720 x 360 dot raster scan display. Enhanced 9 x 15 dot character cell with half dot shifting.			
Graphic Enhancements	Rectangular area shading, line	e patterns, zoom and pan.	
Graphics Drawing	Rubberband line, selective erase, graphics text.		
Screen Enhancements	Inverse video. Optional blinking, half bright, underline.		
Character Sets	Standard 128 ASCII, with upper and lower case. Optional math symbols, large character, and line drawing sets.		
Editing			
Local Functions	Line insert/delete. Character insert/delete with or without wraparound.		
Remote Functions	Block mode, format mode.		
Forms	Programmable protected fields for forms design using optional screen enhancements and line drawing sets.		

	Graphics Display	
	Terminals (continued)	Intelligent Graphics Terminal 2647A
	Memory	
	Graphics	Independent graphics
	Display	88 lines of 80 charac
	Cartridge Tape Units	Optional off-line capability
		mass storage (up
į	Programmability	
6	Stand-Alone Local	BASIC with AGL (9-15K bytes program workspace).
	Programmability	
	Automatic Plotting	Multiple automatic plotting of pie, bar, log and cartesian charts.
	Function Keys	8 preprogrammed or user-definable screen-labeled softkeys.
	Hardcopy	RS-232-C/V.24, HP video, or shared peripheral interface.
STATE OF STREET	Interfaces	RS-232-C/V.24. Optional

Data Capture Terminals.

3075A/3076A/3077A Data Capture Terminals

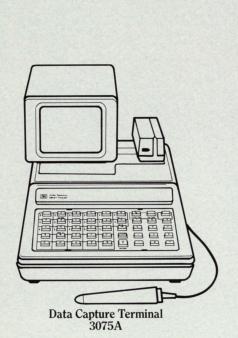
• Wide choice of input media • Range of display capabilities

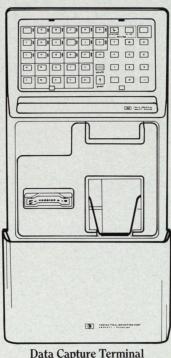
• User-definable function keys • Interactive • Minimum operator

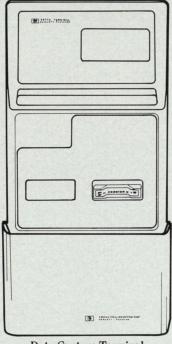
training required

The HP family of data capture terminals is designed for applications such as work-in-process inventory control, labor costing, access control, time and attendance reporting, job status tracking . . . any application requiring data input from personnel not familiar with office or computer equipment. Typical transactions on Data Capture Terminals are simple, short, highly repetitive, and designed to minimize the interference with

the operator's normal job function. Extensive use of function keys, as well as machine-readable documents and item identifiers, reduce keying operations, minimize errors and save time. The data capture terminals can be equipped with readers for punched/mark sense cards, punched badges, magnetic stripe badges and bar codes. Choose from a variety of feedback features ranging from simple prompting lights to a 5" CRT capable of displaying 16 lines of 32 characters each. Validation results can be indicated at each step of the transaction and corrective action requested immediately.







Data Capture Terminal 3076A

Data Capture Terminal 3077A

or houseaster	Graphics Terminal 2648A
2000000	
-	and alphanumerics memory.
t	ers each display memory.
	with fully integrated dual cartridges to 110 kilobytes each).
100000	
DANIES	
MATERIAL PROPERTY.	Requires no programming to produce various line charts.
	8 preprogrammed or user-definable softkeys.
TOTAL DESCRIPTION OF THE PERSON NAMED IN COLUMN TWO IS NOT THE PERSON NAMED IN COLUMN TWO IS	RS-232-C/V. 24, HP video, or shared peripheral interface (raster dump only).
52	20mA current loop or multipoint.

Data Capture Terminals	Desktop	Wall Mount	Time Reporting
Summary of Characteristics	3075A	3076A	Terminal 3077A
Keyboard Numeric Pad Function Keys Alpha Keys	Standard Standard Optional	Standard Standard Optional	N/A N/A N/A
Display Prompting Lights Numeric one line display Alpha one line display CRT Display Built-in Clock Strip Printer	Standard	Standard	N/A
	Standard	Standard	N/A
	Optional	Optional	Optional
	Optional	Optional	N/A
	N/A	N/A	Standard
	Optional	Optional	N/A
Input Type V Badge Reader Card Reader Bar Code Reader Magnetic Strip Reader	Optional	Optional	Standard
	Optional	Optional	Optional
	Optional	Optional	N/A
	Optional	Optional	Optional
Auxiliary Interfaces Aux. HP-IB (IEEE 488-1978) Port Aux. RS-232-C/V.24 Port	Optional	Optional	N/A
	Optional	Optional	N/A

Put together and hardcopy peripherals that let you see

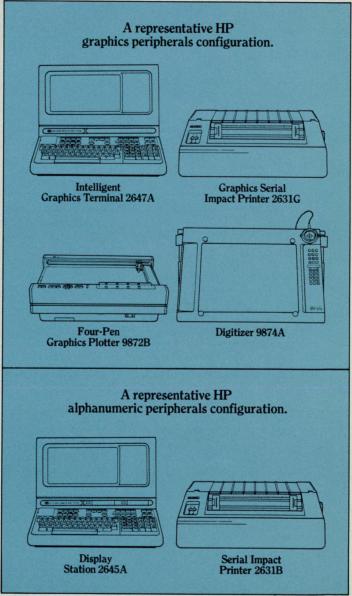
HARDCOPY CAPABILITIES		ALPHANUMERIC	DISPLAY TERMINALS		
FOR HP TERMINALS	Interactive Terminals 2621A/2621P	Display Terminal 2626A	Display Station 2645A	OEM Microprogrammable Terminals 2649 Series	
Alphanumeric Printing					
High throughput, impact printing.		Serial Impact Printer 2631B.	Serial Impact Printer 2631B.	Serial Impact Printer 2631B.	Gr. Pr.
Convenient, quiet thermal printing.	Integral Thermal Printer (2621P only).	Thermal Printer 7310A, Thermal Printer 9876A, Integral Thermal Printer (optional).	Thermal Printer 7310A. Thermal Printer 9876A.	Thermal Printer 7310A. Thermal Printer 9876A.	Gr. Th Th Pri
Full character font quality printing.		Full Font Character Impact Printer 9871A.	Full Font Character Impact Printer 9871A.	Full Font Character Impact Printer 9871A.	Fu
Multipart preprinted forms.		Serial Impact Printer 2631B. Full Font Character Impact Printer 9871A.	Serial Impact Printer 2631B. Full Font Character Impact Printer 9871A.	Serial Impact Printer 2631B. Full Font Character Impact Printer 9871A.	Gra Pri Fu Im
Forms Printing.		Forms & Text Thermal Printer 7310A. Integral Thermal Printer (optional).	Forms & Text Thermal Printer 7310A.	Forms & Text Thermal Printer 7310A.	Gra Th
Graphics and Alphanumerics Combined					
Printing of text and graphics on same page.					Gra Pri Plo Gra Th
Graphics Vector Plotting					Pri
Multicolor graphs and charts.					T
Automatic pen changing.					For Plo
Manual pen changing.					Gra
Overhead Transparencies for presentations & overlays.					Ole
Automatic pen changing.					For Plo
Manual pen changing.					Gra
Unattended plotting with automatic paper advance.					Plo For Wi
Long axis plotting.					Plo
Graphics Input Devices					
Workstation for transformation of virtually any size graphical document into X-Y coordinates.					Dig

the terminal e how much more your computer can do.

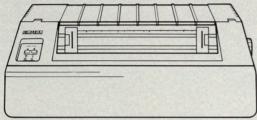
GRAPHIC DISPLAY TERMINALS **OEM** Microprogrammable ntelligent Graphics **Graphics Terminal** Terminal with Terminal 2647A 2648A **Graphics 2649 Series** phics Serial Impact Graphics Serial Impact Graphics Serial Impact ter 2631G. Printer 2631G. Printer 2631G. phics, Forms & Text Graphics, Forms & Text Thermal Printer 7310A. Graphics, Forms & Text rmal Printer 7310A. Thermal Printer 7310A. rmal Graphics hter 9876A. Thermal Graphics Thermal Graphics Printer 9876A. Printer 9876A Font Character Full Font Character **Full Font Character** act Printer 9871A. Impact Printer 9871A. Impact Printer 9871A Graphics Serial Impact Printer 2631G. phics Serial Impact Graphics Serial Impact Printer 2631G. ter 2631G. Font Character Full Font Character Full Font Character act Printer 9871A Impact Printer 9871A. Impact Printer 9871A phics, Forms & Text Graphics, Forms & Text Graphics, Forms & Text rmal Printer 7310A. Thermal Printer 7310A. Thermal Printer 7310A. Graphics Serial Impact Printer 2631G. phics Serial Impact Graphics Serial Impact Printer 2631G. ter 2631G. Plotter/Printer 7245B. ter/Printer 7245B. Plotter/Printer 7245B. phics, Forms & Text rmal Printer 7310A. Graphics, Forms & Text Graphics, Forms & Text Thermal Printer 7310A. Thermal Graphics Thermal Printer 7310A. rmal Graphics Thermal Graphics ter 9876A. Printer 9876A Printer 9876A r-Pen Graphics Four-Pen Graphics Four-Pen Graphics ter 9872B. Plotter 9872B. Plotter 9872B. Pen Graphics Plotter Paper Advance 9872S. Four-Pen Graphics Plotter With Paper Advance 9872S. Four-Pen Graphics Plotter With Paper Advance 9872S. hics Plotter 7225A Graphics Plotter 7225A. Graphics Plotter 7225A Pen Graphics Four-Pen Graphics Plotter 9872B. Four-Pen Graphics er 9872B. Plotter 9872B. Pen Graphics Plotter Four-Pen Graphics Plotter Four-Pen Graphics Plotter Paper Advance 9872S With Paper Advance 9872S. With Paper Advance 9872S. hics Plotter 7225A. Graphics Plotter 7225A. Graphics Plotter 7225A. er/Printer 7245B. Plotter/Printer 7245B. Plotter/Printer 7245B. Pen Graphics Plotter Paper Advance 9872S. Four-Pen Graphics Plotter With Paper Advance 9872S. Four-Pen Graphics Plotter With Paper Advance 9872S. er/Printer 7245B. Plotter/Printer 7245B. Plotter/Printer 7245B. izer 9874A.

Hewlett-Packard also offers a variety of interfaces for these peripheral devices for the non-HP customer. These are described on the pages indicated below.

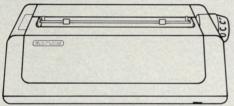
Product	Model Number	
Serial Impact Printer	2631B	See page 8
Character Impact Printer	9871A	See page 8
Thermal Graphics Printer	9876A	See page 9
Graphics Forms & Text Printer	7310A	See page 9
Plotter/Printer	7240A	See page 10
Graphics Plotter	7225A	See page 10
Four-Pen Graphics Plotter	7220A	See page 11
Four-Pen Graphics Plotter		
with Paper Advance	7220S	See page 11
Four-Pen Graphics Plotter	7221B	See page 11
Four-Pen Graphics Plotter		
with Paper Advance	7221S	See page 11



HP hardcopy peripherals. The best thing next to an HP terminal.



Serial Impact Printer 2631B



Character Impact Printer 9871A

Printers.

2631B Serial Impact Printer

• 180 cps bidirectional print • High density print • Single or multipart forms • Variety of interfaces

A convenient, high performance serial printer designed for optimum throughput and printing versatility. Microprocessor control provides smart bidirectional printing at 180 characters per second. Printing reports, listing programs, and printing on preprinted forms is made easier by a wide range of print features. These include user-programmable high density print for better quality, margins, twelve vertical line spacings, eight print widths allowing up to 132 columns on 8½ inch wide paper, and 16-channel vertical format control for use with varying page lengths. The printer handles single or multipart forms of variable lengths and widths. Optional accessories further facilitate paper handling. Interfaces allow the 2631B to be used in a broad range of applications on HP systems as a primary or secondary system printer, a remote print station, or a hardcopy output device for HP's family of display

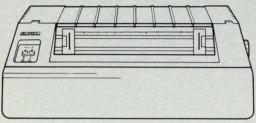
9871A Character Impact Printer

• Full-character printer • Multiple languages • 30 cps print speed • Plotting capability

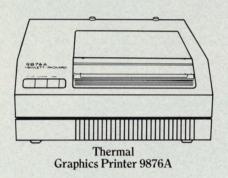
· Single sheet or z-fold paper

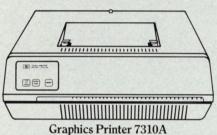
A full character tabletop printer with "daisy wheel" design that produces professional typewriter quality output. With an optional interface the 9871A can provide the 2640 series terminal user with a hardcopy of the terminal display memory. Interchangeable 96-character discs allow English, European, ASCII, Katakana, Cyrillic and APL characters to be printed at 30 characters per second. Flexible plotting capabilities for graphs and charts are accomplished through the bidirectional motion of the platen and print mechanism. Output copy from the printer is provided on single sheets, continuous fan-fold paper, or on multiple sheet forms for copies.

Alphanumeric Printers	Serial Impact Printer 2631B	Character Impact Printer 9871A
Printing Characteristics	Dot matrix character, impact.	Full font character, impact.
Print Speed Up to 180 cps, bidirectional.		30 cps, bidirectional.
Printing Enhancements Selectable print widths and line spacings. Automatic underline capability, margins.		Variable character and line spacing. Limited graphics plotting.
Character Sets Standard 128 ASCII. Optional high density, Roman extension, math and international language sets.		Standard 128 ASCII. 6 interchangeable international language disks available.
Columns (normal character pitch).		132 columns.
Paper Characteristics		
Paper Size	Between 31 mm (1.22 in.) and 400 mm (15.75 in.) wide.	Up to 318 mm (15 in.) wide.
Paper Type Fanfold standard paper.		Single sheet or fanfold standard paper.
Paper Handling 16-channel vertical forms control.		Automatic feed for fanfold paper. Optional forms feed mechanism.
Forms	Single or multipart preprinted forms, up to 6 part copy.	Continuous fanfold forms.
Interfaces Standard RS-232-C/V.24. Optional HP-IB (IEEE 488-1978), 8-bit parallel differential, and 8-bit parallel TTL.		Standard RS-232-C/V.24. Optional HP-IB (IEEE 488-1978).



Graphics Serial Impact Printer 2631G





Graphics Printers.

2631G Graphics Serial Impact Printer

• Graphics output on standard paper • 180 cps alphanumeric output • High density print

Quick report generation

Prints both alphanumerics and raster graphics data. As a hardcopy output device for the 2647A Intelligent Graphics Terminal, the 2631G works as a high performance printer in a variety of applications. As an alphanumeric printer, it prints at 180 characters per second in normal density, and at 90 characters per second in high density print. Smart bidirectional operation and print features combine to optimize throughput. Programmable print widths, vertical line spacings, variable page length and corresponding vertical format control facilitate report generation, program listing, and printing on forms. The 72×72 dots-per-inch resolution offered in graphics mode allows the 2631G to print an image of the 2647A screen in either normal or zoom mode. For business graphics output, such as line or bar charts, quick clear copies can be made on the 2631G for easy examination. Review copies of entire reports can be generated quickly, using both the high density print and graphics capabilities. The 2631G is a convenient tabletop size, with an optional stand available.

9876A Thermal Graphics Printer

• Raster graphics hardcopy • Quiet desktop printer • 480 lines per minute • 80 characters

A fast, quiet thermal line printer for graphics as well as alphanumeric printing. Featuring print speeds up to 480 lines per minute, the 9876A is ideal for high-speed listings, frequent working reports, or quick plotting and graphics. Dot-for-dot graphics dumps from the 2647A and 2648A terminals to the 9876A are possible through available options. Choose from RS-232-C/V.24, 8-bit parallel and HP-IB (IEEE 488-1978) interfaces. The 9876A is designed for reliable unattended operation and runs quietly in the office or lab. The 9876A uses high-contrast, fade-resistant blue or black printing paper which comes perforated, flat-packaged and fan-folded into 330 standard size sheets.

7310A Graphics Printer

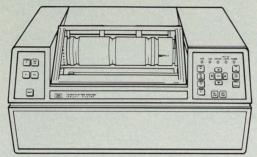
• Graphics, forms & text printer • Automatic page cutting and stacking • Simple, high-speed operations • Variety of interfaces

Fast, high resolution graphics, forms, and text tailored to your printing needs. The 7310A offers a selection of interfaces, convenient desktop size, multiple character sets and programmable page sizes to fit a variety of computing environments. Print forms, graphs, and report pages just the size you need — the internal paper cutter neatly trims and stacks each page. An optional forms character set allows the 7310A to print special forms easily and quickly. The unique proportional spacing of the USASCII character set, enhancements for underline, bold face and inverse print, as well as variable line height and spacing may be combined to produce crisp, superior quality reports. Up to 31 separate foreign language and special symbol sets may be printed. In order processing, inventory control, or production scheduling, the 7310A can copy forms from the 2640-series terminal display or print directly from an applications program running on the host computer or controller.

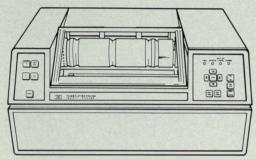
High resolution graphic images, forms and terminal display screens, and superior quality text printing capability combine to make the 7310A an ideal printer for alphanumeric and

graphics terminals or remote printing needs.

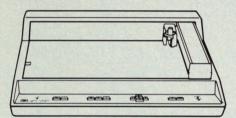
Graphics Printers	Graphics Serial Impact Printer 2631G	Thermal Graphics Printer 9876A	Graphics, Forms, and Text Printer 7310A			
Graphics Characteristics	Graphics Characteristics					
Raster image resolution	976 dots at 72 dots per inch (28 dots/cm.).	560 dots at 77 dots per inch (30 dots/cm.).	720 dots at 100 dots per inch (40 dots/cm.).			
Alphanumeric Print Characteristics	Dot matrix character, impact.	Dot matrix character, thermal.	Dot matrix character, thermal.			
Character Size	9 x 15 dot matrix cell, 7 x 9 character.	7 x 12 dot matrix cell, 5 x 7 character.	9 x 15 dot matrix cell, 7 x 9 character.			
Print Speed	180 cps, bidirectional.	90 to 480 lpm.	200 to 500 lpm.			
		Selectable line spacing. Underline, overline, 150% character size.	Selectable line spacing, line heights, and character size. Underline, boldface, reverse print.			
Roman extension, math and international European languages, and Katakana set. tion pea		Standard 128 ASCII with fixed and proportional spacing, Roman extensions, and European languages. Optional math symbol, line drawing, APL, and Katakana set.				
Columns	132 columns (normal character pitch).	80 columns.	80 columns.			
Paper Size and Type	Between 31mm and 400mm standard.	8.5 x 11 inch and ISO A4 fanfold.	Continuous roll of 8.5 inch or ISO A4 width.			
Forms	Single or multipart preprinted forms.		Prints and completes forms with optional forms character set.			
RS-2		HP-IB (IEEE 488-1978). Optional RS-232-C/V.24, 20mA current loop, 8-bit parallel.	HP-IB (IEEE 488-1978). Optional RS-232-C/V.24, RS-423-A, 8-bit parallel.			



Plotter/Printer 7240A



Plotter/Printer 7245B



Graphics Plotter 7225A

Graphics Plotters.

7240A and 7245B Plotter/Printers

• Fast output of graphics with text • High-contrast thermal output on black or blue trace paper • Unattended operation • Long-axis plots • HP-IB (IEEE 488-1978) or RS-232-C/V.24 interface

Compact desktop units for high-quality graphics and fast, clean text on the same page. Designed for quiet in-office use or rugged laboratory conditions, these plotter/printers are ideal peripherals for the engineering, scientific, and business applications in which both high resolution vector graphics and fast matrix printing are required. Both plotter/printers draw plots with one axis up to 5 meters (16.4 feet) long, produce unattended graphics and text, and draw circles or arcs with a single command. The 7240A and 7245B have a sophisticated thin-film printhead and soft platen writing surface that produce page-after-page of sharp, high-contrast text and graphic documentation on black or blue trace paper. Both devices utilize the Hewlett-Packard Graphics Language (HP-GL) instruction set, common to other HP vector plotters. The HP 7240A is designed with an RS-232-C/V.24 interface making it attractive as a peripheral for non-HP systems. The HP 7245B is designed with an HP-IB (IEEE 488-1978), interface for use with computer, desktop computer, and microprocessor-based systems. The 7245B provides a raster graphics image printing capability from HP graphics terminals and an additional dot matrix printing font with 132-column condensed characters.

7225A Graphics Plotter

• Compact size • High performance at a budget price • Quality plots on paper or overhead

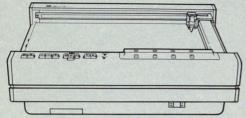
transparency film • Interfaces for a variety of controllers

Publication quality hardcopy graphics output is available for the budget-conscious user with the 7225A graphics plotter. Fast plotting is done on either overhead transparency film or paper—sizes up to 8% x 11" or ISO A4. Smooth, continuous lines are produced thanks to the plotter's .032 mm (.0013 inch) addressable microsteps—pens will make 8 moves across the width of a human hair. Multicolor plots can be produced by manually changing the colored pens.

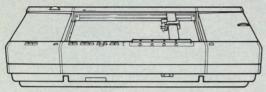
The plotter is adaptable. Changeable "personality modules" contain the plotter intelligence and interface capabilities for a variety of controllers. Interfaces include HP-IB (IEEE 488-1978) for many HP desktop computers, computer systems, and graphics terminals; and RS-232-C/V.24 for remote connections to other computers. Plotter intelligence takes much of the computation burden off the controller, for more extensive computer utilization.

Mechanical reliability is ensured by simplicity of design. Linear stepping motors provide high accuracy with a minimum of moving parts.

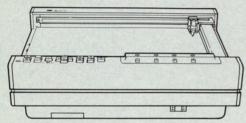
Graphics Plotters	Plotter/Printer 7240A/7245B	Graphics Plotter 7225A	Family of 9872B/9872S	Four-Pen Graphics 7220A/7220S	Plotters 7221B/7221S
Plot Characteristics	Thermal plotting and printing.	Vector pen plotter.	Vector four-p	en plotter with automati	c pen changing.
Multicolor Charts and Graphs		Manual pen changing.	Programmab	le automatic pen selection	n of four colors.
Paper Size	216mm (8.5 inch) English or 210mm (8.27 inch) metric width.	Up to A4 or 8½ x 11 inch paper.	Up to A3 or 11 x	17 inch paper or roll pape	er for paper advance.
Long Axis Plotting	One axis up to 5 meters (16.4 ft.).				
Plotting Speed In Either Axis Along 45° Vector	256mm/sec. (10.1 in/sec). 363mm/sec. (14.3 in/sec).	250mm/sec. (10 in/sec). 350mm/sec. (13.8 in/sec).		360 mm/sec. (14 in/sec 509 mm/sec. (20 in/sec	
Device Command Language	Hew	Compacted binary for efficient data communication.			
Raster Graphics	Produce hard copy of CRT image from HP graphics terminals (7245B only).				
Overhead Transparency			Multicolor overh	ead slides.	
Unattended Operation	Automatic paper feed from roll.		Automatic pape	r advance and page cutti	ng on "S" models.
Printing Characteristics Plot Annotation Speed Drawn Vector Characters Dot Matrix Characters	Approximately 3 cps (2.5 mm characters).				
Character Sets	Up to 38 cps. 9 matrix and 5 drawn character sets.	5 resident character sets. 6 resident character sets.			
Print Versatility		Programmable chara	acter size, slant, and dir	rection.	
Interface	7245B - HP-IB (IEEE 488-1978). 7240A - RS-232-C/V.24.		HP-IB (IEEE 488-1978).	RS-232-C/V.24.	RS-232-C/V.24.



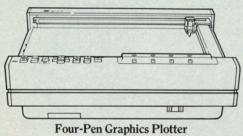
Four-Pen Graphics Plotter

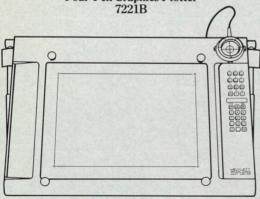


Four-Pen Graphics Plotter With Paper Advance 9872S



Four-Pen Graphics Plotter 7220A





Digitizer 9874A

Family of Four-Pen Graphics Plotters

• Programmable selection of 4 pens • Exceptional line quality • Unattended operation with paper advance • Overhead transparencies • HP-IB (IEEE 488-1978) or RS-232-C/V.24 interfaces available

The HP family of 4-pen plotters produce publication-quality plots on paper or overhead transparencies. Special pens and media allow users to directly produce multicolor overhead transparencies for presentations. In addition, programmable pen speed selection is available to meet the requirements of a variety of plotting media. The HP-developed microstep technology provides smooth, high quality lines and resolution to .025mm (.001"). The "S" models provide automatic paper advance and cutting by front panel or programmatic control for fully unattended operation. Pages can be cut into either $8\frac{1}{2}$ " x 11" (ISO A4) or 11" x 17" (ISO A3) sizes.

9872B and 9872S Four-Pen Graphics Plotters

• HP-IB interface • Connects to a variety of computer systems, desktop computers, and graphics terminals • 46 HP-GL commands for ease of programming

Publication-quality multicolor graphs for a variety of computer and instrumentation systems. The HP-IB (IEEE 488-1978) interface allows connection to a variety of computer systems, desktop computers, and graphics terminals. The units feature the easy-to-program HP-GL (Hewlett-Packard Graphics Language) command set. HP-GL is a set of two-letter mnemonics that allows the user to easily create graphics. High level graphics language support is available on many HP desktops, computer systems, and graphics terminals.

7220A and 7220S Four-Pen Graphics Plotters

RS-232-C/V.24 serial ASCII interface • High-speed communications of up to 2400 baud
 50 HP-GL commands for ease of programming • Selection of modem or hardwire

interface.

Designed for the high-speed communications environment, the 7220A/7220S provide the same high resolution, high quality multicolor graphics of the 7221 and 9872. Featuring switch selection of baud rates from 75 to 2400, plus choice of full or half duplex to fit a variety of data communications requirements. For environments that do not require an optimized data communications language, the 7220 has a powerful instruction set made up of the easy-to-program Hewlett-Packard Graphics Language (HP-GL) instruction set. These commands equip the plotter with such capabilities as relative and absolute plotting, single-command arcs and circles generation, point digitizing, labeling, character sizing, integer scaling, and window plotting. The 7220 provides a 900-byte buffer with an additional 2000 bytes as an option.

7221B and 7221S Four-Pen Graphics Plotters

• RS-232-C/V.24 serial ASCII interface • Compacted binary command language for efficient remote communications • Software support available for a number of computer systems and timeshare services • Selection of modem or hardwire interface

Efficient production of high quality multicolor graphs in the low-speed remote communication environments. The units feature switch-selectable baud rates ranging from 75 to 2400 baud and choice of full or half duplex to adapt to a variety of data communications requirements. The 7221's efficient compacted binary language minimizes connect time when using slow speed telephone modem communications. This powerful, compacted binary instruction set provides such advanced and powerful capabilities as point digitizing, single-command arc and circle generation, choice of 6 resident character sets, programmable graph limits and control of character size, direction and slant. The 1100 byte buffer capacity, with 2000 bytes optional, includes space for macroinstructions, user-defined sequences of plotter instructions that can be invoked via a single command once they are stored in the buffer.

Graphic Input Devices

9874A Digitizer

Optimum operator interface • Independent workstation for convenience • Transforms maps, photos, strip charts, engineering drawings on the digitizer into X-Y coordinates
 Digitizes any size document • Display and programmable audio tone provide continuous feedback

Easy transformation of a wide range of graphic documents into X-Y coordinates for the computer. Designed as an independent workstation, the HP 9874A Digitizer offers a human engineered digitizing process that is more comfortable and less prone to operator error. The tiltable glass platen enables backlighted projection of 35mm slides, movie frames and X-rays. Through the 9874A's microprocessor and axis extension feature, virtually any size document can be digitized. The 9874A has its own special function keys, numeric keypad and feedback prompts including a display for questions and a programmable audio tone providing further efficiency and convenience.

Graphic Input Device	Digitizer 9874A	Digitizer 9874A (continued)		
Digitizing Characteristics		Document Material Nonconductive, up to 4mm thick.		
Resolution	025 mm (.000984 inches).	Operating Features		
Accuracy of Cursor	.125 mm (.000492 inches).	Platen Tiltable glass platen. Rear projection of graphic image		
Active Digitizing Area	435 mm X 315 mm (17.13 in. X 12.40 in.).	Digitizing	Easy alignment of coordinate system. Free moving cursor, Single	
Paper Characteristics		Digitizing	and continuous sampling modes. Microprocessor intelligence.	
Axis Extension	± 53.69 km (± 33.36 miles).	Interface HP-IB (IEEE 488-1978).		

See how much more an H

Technical Systems.

HP 1000 Computer Systems
The HP 1000 Family offers a range of modular computer products that spans the spectrum from low-cost to high-performance. From the family of four program-compatible processors comes an assortment of products which are available as fully configured systems, stand-alone computers in a box, or low-cost board computers. The HP 1000 is designed for applications in manufacturing and engineering, such as automatic testing, measurement and control, and lab computation.

Complementing the range of processors and system peripherals are applications packages and program development tools for the HP 1000 family. The powerful real time executive (RTE) operating system combines fast response to external events with secure multi-user session control. As a program development workstation, the power of FORTRAN, PASCAL, real-time BASIC, assembly language, and microcode is available to the user. HP 1000 applications packages include graphics, data base management, and factory data capture. Powerful distributed systems capabilities allow local processing while data bases or interactive processes may be located remotely on HP 1000 or HP 3000 computers.



HP 9800 Desktop Computers

HP desktop computers are valuable tools for scientific and engineering applications such as design and statistical analysis, data acquisition and control, business management, and control of test instrument clusters. With their built-in interpretive language and with easy programming, editing and use, desktop computers are practical even for the operator with little training. The desktop computers provide mathematical and statistical software packages, specialized software packages, formal programming training courses, and HP support to assist you with your application needs. Portability allows you to perform a large variety of application.

Each Hewlett-Packard desktop computer interfaces to a variety of input devices, such as digitizers, punched tape and marked cards, and output peripherals such as plotters and thermal and impact printers. This gives HP desktop computer products a large range of capabilities that can grow as your needs grow. Because additional interfaces and memory can be added, HP desktop computers can

grow with your requirements.



P computer system can do.





Business Systems.

HP 3000 Computer Systems

The HP 3000 systems are designed for business processing in large and medium size companies. HP 3000 systems support multiprogramming environments, including a complete data base management and inquiry facility, interactive program development, and an advanced communications/network capability.

A powerful operating system, Multiprogramming Executive III (MPE III), optimizes the processing of the large number of users who concurrently communicate with the system through both interactive terminals and batch requirements.

For many small-to-medium companies an HP 3000 handles the entire data processing load, from inventory control to engineering design, sales order entry, payroll, and personnel records. Larger, multidivisional corporations distribute computing power throughout the company by linking a number of HP 3000's.

HP 250 Computer Systems

The HP 250 is designed to meet the business management needs of small companies and the departments of larger ones. User convenience and human engineering combine with excellent computing power to allow simplified operation—even for the first-time user. You get big system performance at small system prices, so you can afford to take advantage of the improved efficiency that computers offer. The Winchester disc-based HP 250 is equally at home in the office or in the computer room and operates on either standard 110 or 220-volt power.

The HP 250 incorporates several features that make the applications specialist's job of tailoring individual solutions simpler and less costly. Tools for data base management, forms and report generation provide capabilities once available only on more expensive business computers. These programming tools are designed to take advantage of HP Business BASIC.

Within the HP 250 is a processor that handles computations, performs sorts, controls information flow and directs peripheral operation. Memory, mass storage, remote console and printer options all help accommodate today's and tomorrow's system requirements.

HP 300 Computer Systems

The HP 300 is a full capability, low cost computer system designed for dedicated, online business applications.

The basic unit includes the Information Display System, built-in disc storage for over 12 million characters, flexible disc storage for one million characters, 256 thousand characters of error correcting, solid-state memory and the HP 300's powerful processor.

powerful processor.

The HP 300 can be expanded to include additional applications terminals and HP 300 Workstations, multiple printers, over 490 million characters of online disc storage, and over a million characters of built-in, error correcting, solid state

main memory

The Information Display System (IDS) is part of the HP 300's overall design aimed at making management information more accessible. Information can be organized into "windows", and pushbutton softkeys guide the user through the system, increasing programming productivity and application execution efficiency. For additional information please contact your local sales office. Or you may write or call one of the major HP sales offices listed below.

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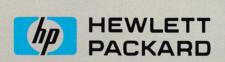
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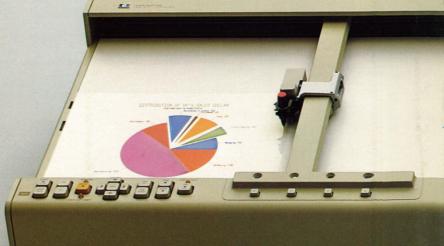
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	Graphics Terminals 2647A Intelligent Graphics Terminal 2648A Graphics Terminal Data Capture Terminals Family of Data Capture Terminals
	Printers 2631B Serial Impact Printer 9871A Character Impact Printer 2631G Graphics Serial Impact Printer 9876A Thermal Graphics Printer 7310A Graphics, Forms & Text Printer
	Graphics Plotters 7240A/7245B Plotter/Printer 7225A Graphics Plotter 9872B & 9872S Four-Pen Graphics Plotters 7220A & 7220S Four-Pen Graphics Plotters 7221B & 7221S Four-Pen Graphics Plotters 9874A Digitizer
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