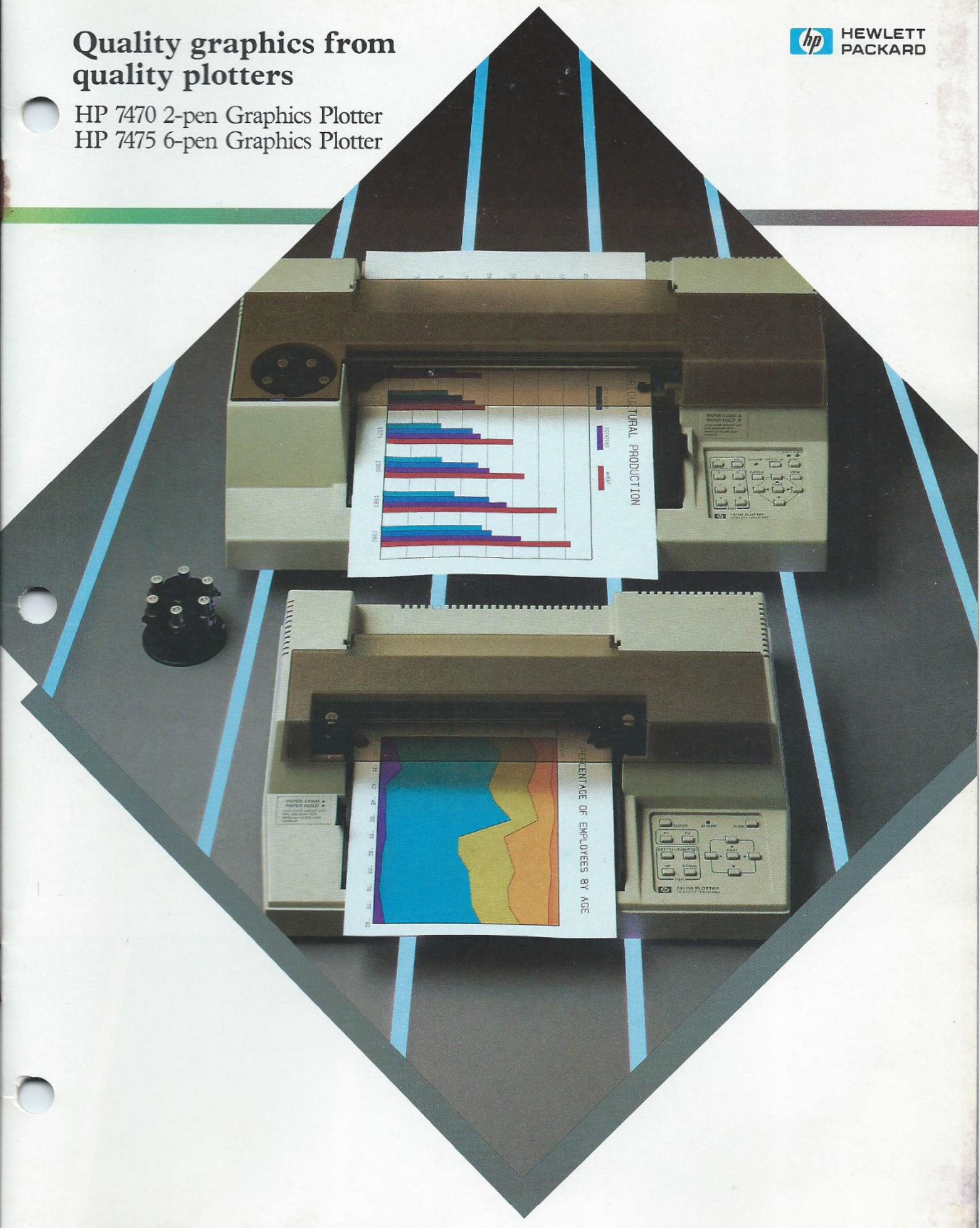
Quality graphics from quality plotters

HP 7470 2-pen Graphics Plotter
HP 7475 6-pen Graphics Plotter

HEWLETT PACKARD



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Quality — at a price you can afford

As one of today's professionals, *you* need graphics. Why? Because graphics get back to basics. You can spot trends and relationships — analyze data — communicate your ideas.

Communication is faster — and easier, too! According to recent studies, information in graphic form can actually be communicated up to 60,000 times faster than information in written form. And an increase in effective communication means an increase in productivity — yours *and* others.

Even the most complicated data is easy to understand, and to explain, when presented as a graph or a chart. Multicolor graphics help clarify data such as:

- market shares
- sales revenues
- financial forecasts
- labor distribution
- sales trends
- technical performance
- statistical comparisons
- organization charts
- production curves
- cash flow

And the list goes on and on! Colorful, precise graphics add clarity to your reports and presentations. And graphics let your professionalism shine through during visual presentations.

To reflect the quality of your work, you want to present quality graphics. Hewlett-Packard's HP 7470 2-pen and HP 7475 6-pen color plotters give you that quality — at a price you can afford.

Quality graphics

You can be sure your graphics will be the highest quality possible when they're made on a Hewlett-Packard plotter. With a resolution of 0.025 mm (0.001 in.), curved lines are smooth, not jagged, and straight lines are consistently straight. The exceptional repeatability of these plotters, 0.1 mm (0.004 in.), assures you that edges align in bar or pie charts, and that there are no gaps between where the pen movement started and ended the character. It's the quality look of Hewlett-Packard graphics!

Quality — plus the features you want

Fast graphics

There's no waiting for your graphics with a Hewlett-Packard plotter. With a velocity of 38.1 cm/s (15 in./s), and an acceleration of 2 g's, these plotters give you quality graphics *quickly!* When you need that important graph for an unexpected presentation, your graph will be ready in minutes!

Both the HP 7470 and the HP 7475 have built-in automatic pen capping and pen damping, so your pens write the first time, every time, giving you a consistent, quality line.

Nothing is left to chance when you choose Hewlett-Packard as your partner for quality graphics.

First-rate supplies

Of course, the quality of your graphics also depends on the quality of the supplies you use — pens, paper, transparency materials. Hewlett-Packard manufactures their own pens to strict quality standards. Paper and transparency material must also meet demanding standards of excellence.

Software available

Best of all, you don't have to be a programmer to produce quality graphics on HP plotters. HP plotters are supported by a variety of professional graphics software packages for almost all popular desktop and personal computers. Your Hewlett-Packard sales representative will help you choose a package to suit your individual needs.

However, if you do want to program, HP has made that easy for you, too. HP plotters contain a simple yet powerful graphics language called Hewlett-Packard Graphics Language (HP-GL). HP-GL controls functions like pen movements, labeling, character set selection, axis placement, arc and circle drawing, and digitizing.

Built-in reliability

Hewlett-Packard products have an international reputation for reliability. HP has been in the graphics business for 24 years — and in the digital plotter business for 14 years. Hewlett-Packard knows graphics.

Take a closer look at Hewlett-Packard's plotters on the following pages. Then decide which features *you* need to get started with quality graphics. Add a Hewlett-Packard plotter to your computer system today — and get the graphics edge!

The 7475 6-pen graphics plotter

Quality graphics for your professional computer

Because the quality of your graphics reflects the quality of your work, Hewlett-Packard designed the HP 7475 graphics plotter especially to meet *your* needs for quality graphics. HP's 7475 has features you would expect to find only on a much more expensive graphics plotter.

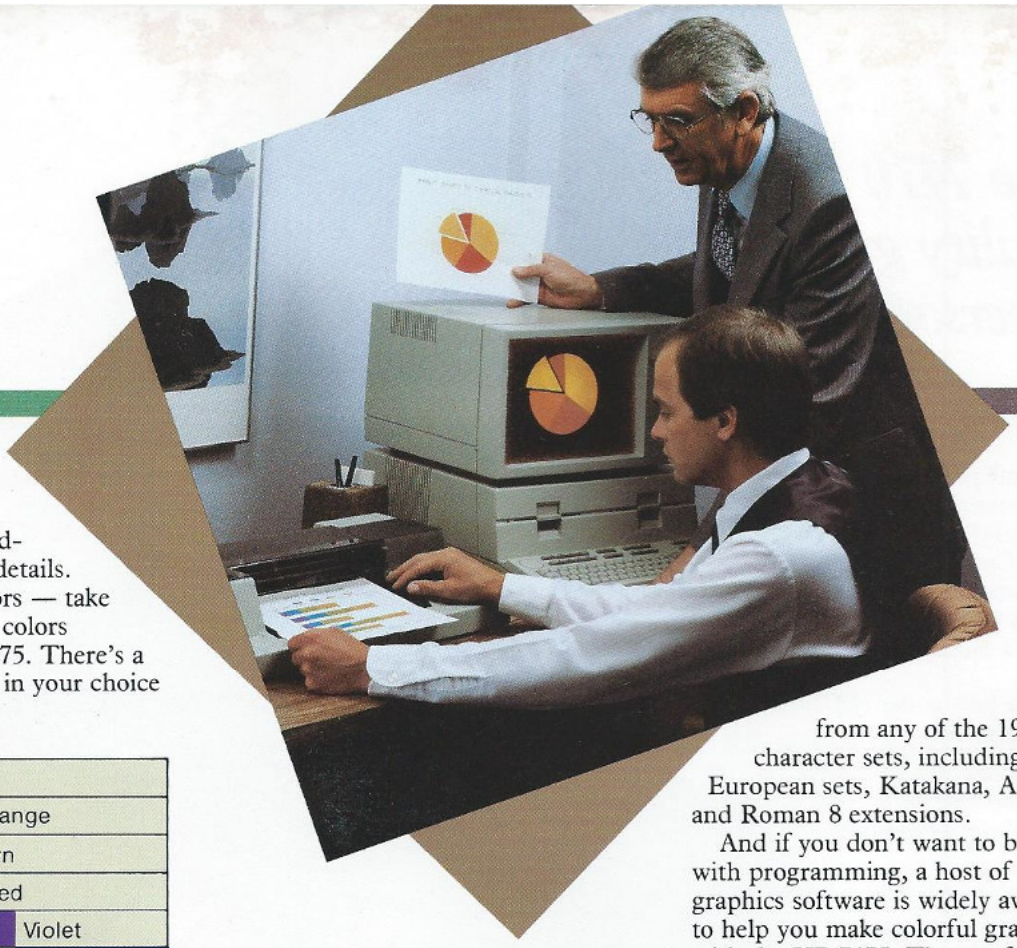
Two paper sizes

With the HP 7475, you have your choice of two paper sizes for colorful, quality graphics: A4/A, which is 210 × 297 mm (8½ × 11 in.); or A3/B, which is 297 × 420 mm (11 × 17 in.). The A4/A size will add color and interest to your reports and visual presentations. The larger A3/B size charts are especially well-suited for time lines, PERT charts, schematics, engineering drawings, and applications when you need to show added visual details.

Writing system with extras

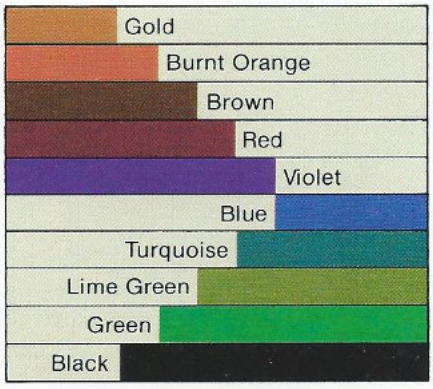
The 7475 has an easy-to-load, 6-pen carousel. From the compact carousel, pens are selected, returned to place, and capped after use. Your pens are always ready to plot when you need that fast overhead transparency for a last-minute presentation.

Although industry experts maintain that good graphics contain at most four colors per chart, Hewlett-Packard provides six pen stalls so you



can store and use pens of different widths — thick pens for bold headings and thin pens for details.

And speaking of colors — take a look at the many pen colors available for the HP 7475. There's a rainbow of colors, each in your choice of two widths.



Friendly plotter

The HP 7475's simple and friendly front-control panel *almost* makes your charts for you!

A press of the button starts a built-in demonstration plot. You can test your pen colors before you plot, and demonstrate the full potential of your plotter quickly and easily.

Place the paper or transparency material on the plotter using the handy guide control — easy, instant media alignment! A light indicates the paper size for which your plotter is currently set. And you can choose pens from either the front panel or by program control.

Press the "view" button, and your chart automatically comes to the front of the plotter so you can see what you've plotted. Press the button again, and the plotting continues —*exactly* where the plot ended previously.

From the front panel of the 7475, you can rotate your charts 90 degrees. So if you need to incorporate a horizontal chart into a vertical format, it can be done easily and quickly by pressing a button.

Front-panel control also lets you digitize or scale points.

Time saver

With so many features integrated into the design of the HP 7475, you can save *your* valuable time for other tasks.

The 7475 contains more than 50 simple yet powerful HP-GL instructions. These instructions govern such tasks as drawing arcs and circles, filling rectangles and wedges for bar and pie charts (built-in especially for business graphics), and selecting from any of the 19 character sets, including ISO European sets, Katakana, ASCII, and Roman 8 extensions.

And if you don't want to bother with programming, a host of graphics software is widely available to help you make colorful graphics with the HP 7475. These software packages let you create multicolor, professional-looking graphics on almost any computer —without the need to program! Ask your HP sales representative to help you choose the software package for your particular application.

Computer compatible

With two interfaces available, the HP 7475 is compatible with almost any computer in the marketplace today. The two interfaces are: Option 001 for RS-232-C/CCITT V.24; or Option 002 for HP-IB (IEEE 488-1978).

An optional eavesdrop cable lets you connect the RS-232-C HP 7475 in series with a terminal, saving a serial port from the computer.

HP's 7475 has quality and performance you would expect to find only on plotters costing twice the price. Don't wait to add an HP 7475 graphics plotter to your professional system. Get the HP 7475, and get the quality graphics you deserve.

The 7470 2-pen graphics plotter

Quality graphics for your personal computer

Turn your personal computer into your personal graphics workstation with the HP 7470 2-pen graphics plotter. Compact and portable, the 7470 produces quality A/A4-size graphics you would expect to see only on a much more expensive plotter.

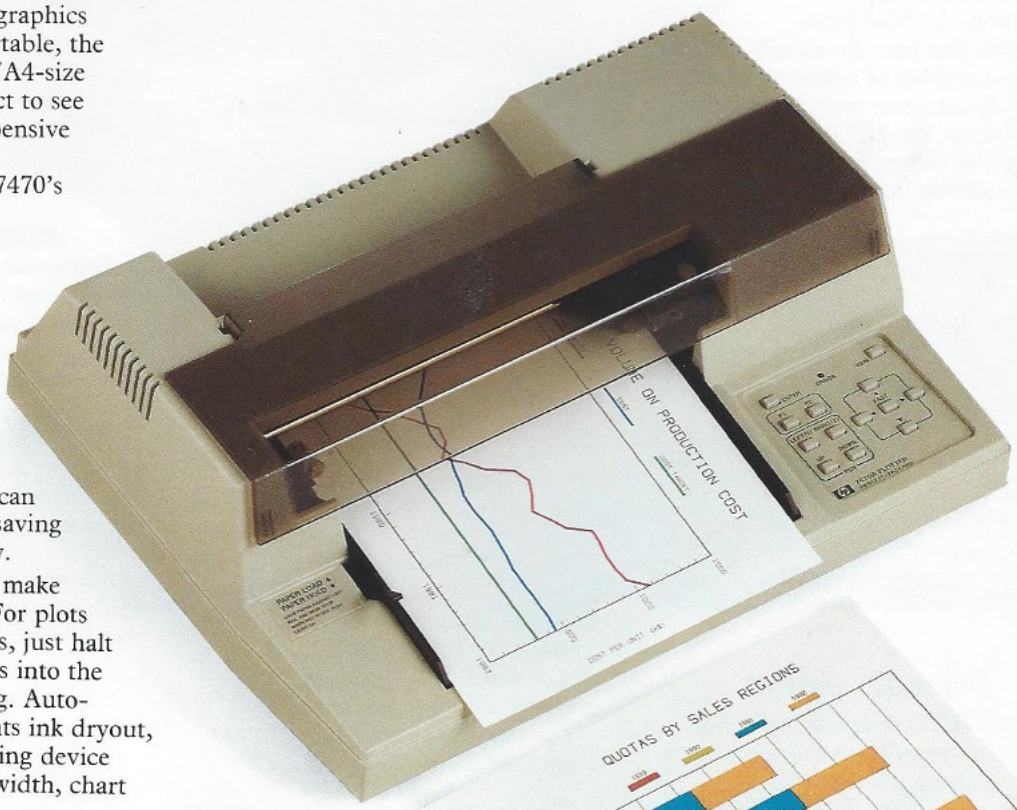
Take a look at the HP 7470's quality features.

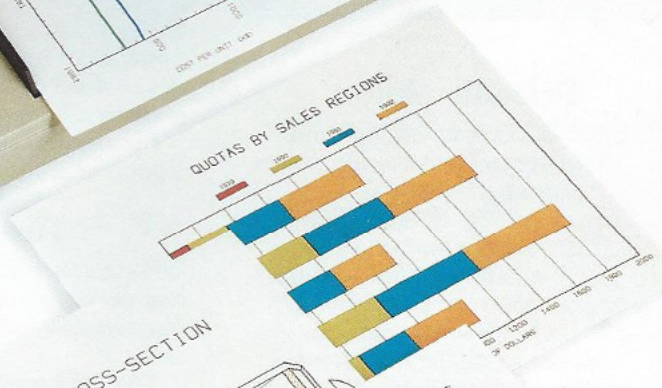
Versatile writing system

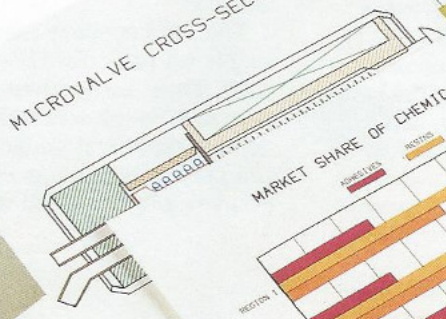
The HP 7470's 2-pen writing system plots on either paper for reports or transparency material for overhead projection. Overhead transparencies can be made in minutes — saving you both time and money.

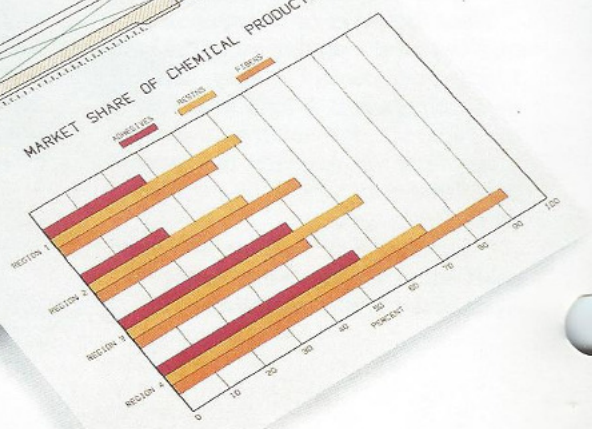
Two built-in pen stalls make two-color plotting easy. For plots with more than two colors, just halt the plotter, snap new pens into the stalls, and resume plotting. Automatic pen capping prevents ink dryout, and the special pen damping device gives you consistent line width, chart after chart.

Your charts will have variety with the 7470. Choose from a myriad of









pen colors in two line widths, seven dashed-line types, text written in any direction you wish (with or without slant), and in your choice of type styles.

Easy to use

And the HP 7470 is easy to use and to operate — a flip of a lever and your paper is perfectly in place.

Almost everything you need to operate the plotter is right up front on the control panel. This clearly defined panel provides you with manual control of paper and pen movement. You can select pens or halt the plotter to substitute pens or to view the plot. The front panel also gives you easy access to the digitizing capability and the scaling points.

Intelligent plotter

The HP 7470 is a smart plotter. It has five internal character sets (including three European sets), to end the need for software-generated characters.

And the 7470 contains more than 40 HP-GL instructions built in, so you can use simple commands to perform a variety of operations — like drawing arcs and circles, selecting pen velocity, and defining characters.

Software available

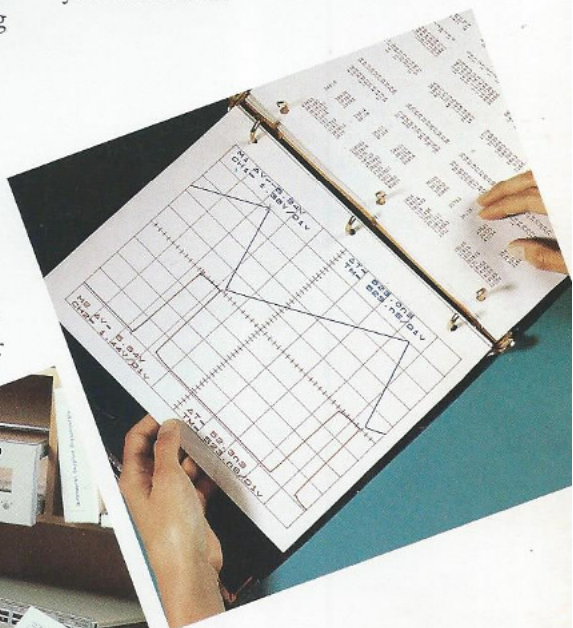
Today many software packages are available to help you make quality graphics with *your* computer. With graphics software packages, you can produce a variety of colorful graphics easily and quickly — no programming necessary. Your Hewlett-Packard sales representative will help you choose software for your particular application.

Ready to work

The 7470 is ready to work for *you* because this plotter can be connected to almost any computer in the marketplace. Three interfaces are available for the 7470: Option 001 for RS-232-C/CCITT V.24, Option 002 for HP-IB (IEEE 488-1978), or Option 003 for HP-IL. The interface you select is built into your plotter.

An optional eavesdrop cable lets you convert the RS-232-C HP 7470 for eavesdrop use with a terminal, saving one of the computer's ports.

Modern technology has produced a quality plotter for *your* personal computer. Get HP's 7470, and get the graphics you need — at a price you can afford.



Ordering Information

HP 7475 ACCESSORIES SUPPLIED

	HP Part No.
Operation and Interconnection Manual	07475-90002
Interfacing and Programming Manual	07475-90001
Reference Card	07475-90004
Plotter Paper 50 sheets, A/A4 chart paper* 50 sheets, B/A3 chart paper*	
Plotter Pens 4-color pack (4 pens/package), 0.3 mm, 1 each black, red, green, blue	5060-6810
6-color pack (6 pens/package), 0.3 mm, 1 each burnt orange, brown, violet, turquoise, gold, and lime green	5060-6894
Single-color pack (5 pens/package), 0.7 mm, black	5060-6890
Power Cord (appropriate cord supplied based on destination)	

*Depending on plotter destination, paper will be either 210 × 297 mm (9280-0588) or 8½ × 11 in. (9280-0589) for A/A4 size. Paper will be either 297 × 420 mm (9280-0615) or 11 × 17 in. (9280-0614) for B/A3 size.

HP 7475 ORDERING INFORMATION

Interface Options	Option No.
RS-232-C/CCITT V.24 (cable not included)	001
HP-IB (IEEE 488-1978) (cable not included)	002

Cables Available	HP Part No.
Male–male, RS-232-C, pin-pin cable for use with Option 001	17355A
Male–female, special RS-232-C, pins 1-1, 2-3, 3-2, 7-7, 20-5, cable for use with Option 001 (for use with the IBM® Personal Computer configured interfacing systems)	17255A
Eavesdrop cable for use with Option 001	17455A
HP-IB 1-metre cable for use with Option 002	10833A

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HP 7470 ACCESSORIES SUPPLIED

	HP Part No.
Operator's Manual	07470-90002
Interconnection Guide	07470-90003
Interfacing and Programming Manual	07470-90001
Reference Card	07470-90004
Plotter Paper 50 sheets*	
Plotter Pens 4-color pack (4 pens/package), 0.3 mm, 1 each black, red, green, blue	5060-6810
Power Cord (appropriate cord supplied based on destination)	
HP-IL Cable, ½ metre**	8120-3380

*Depending on plotter destination, paper will be either 210 × 297 mm (9280-0588) or 8½ × 11 in. (9280-0589) for A/A4 size.

**Supplied with Option 003 only.

HP 7470 ORDERING INFORMATION

Interface Options	Option No.
RS-232-C/CCITT V.24 (cable not included)	001
HP-IB (IEEE 488-1978) (cable not included)	002
HP-IL (cable included)	003

Cables Available	HP Part No.
Male–male, RS-232-C, pin–pin cable for use with Option 001	17355A
Male–female, special RS-232-C, pins 1-1, 2-3, 3-2, 7-7, 20-5, cable for use with Option 001 (for use with the IBM® Personal Computer configured interfacing systems)	17255A
Eavesdrop cable for use with Option 001	17455A
HP-IB 1-metre cable for use with Option 002	10833A
HP-IL ½-metre cable for use with Option 003	82167A

Technical Information

		HP 7475	HP 7470
Media Sizes		210 × 297 mm (ISO A4) 8½ × 11 in. (ANSI A) 297 × 420 mm (ISO A3) 11 × 17 in. (ANSI B)	210 × 297 mm (ISO A4) 8½ × 11 in. (ANSI A)
Pens	Number	6, automatic pen changing	2, automatic pen changing
	Type	fiber tip	fiber tip
Media		Paper or overhead transparency film.	
Resolution	Smallest addressable step size	0.025 mm (0.001 in.)	0.025 mm (0.001 in.)
Repeatability	With a given pen	0.1 mm (0.004 in.)	0.1 mm (0.004 in.)
	From pen to pen	0.2 mm (0.008 in.)	0.2 mm (0.008 in.)
Pen Velocity, Each Axis	Pen down	Maximum — 38.1 cm/s (15 in./s) Programmable — 1 to 38 cm/s in 1 cm/s increments	Maximum — 38.1 cm/s (15 in./s) Programmable — 1 to 38 cm/s in 1 cm/s increments
	Pen up	50.8 cm/s (20 in./s)	50.8 cm/s (20 in./s)
Acceleration		Approximately 2 g's	
Character Sets		19 — ANSI ASCII, HP 9825 Character Set, French/German, Scandinavian, Spanish/Latin American, JIS ASCII, Roman 8 Extensions, Katakana, ISO IRV, ISO Swedish, ISO Swedish for Names, ISO Danish/Norwegian, ISO Danish/Norwegian for Names, ISO German, ISO French, ISO United Kingdom, ISO Italian, ISO Spanish, ISO Portuguese.	5 — ANSI ASCII, HP 9825 Character Set, French/German, Scandinavian, Spanish/Latin American.
Maximum Plotting Area	Pen Axis	258 mm (10.2 in.) for A/B 275 mm (10.8 in.) for A4/A3	191 mm (7.5 in.) for A 191 mm (7.5 in.) for A4
	Paper Axis	414 mm (16.3 in.) for B 402 mm (15.8 in.) for A3 198 mm (7.80 in.) for A 192 mm (7.56 in.) for A4	257 mm (10.2 in.) for A 272 mm (10.7 in.) for A4
Interfaces	HP-IB (IEEE 488-1978)	Implements the following HP-IB functions as defined in IEEE 488-1978: SH1, AH1, T2, TE0, LE0, SR1, RL0, DC1, DT0, L2, PP0, (listen only or address less than 7, otherwise PP2).	Same as 7475
	RS-232-C/CCITT	Asynchronous serial ASCII with switch selectable baud rates of 75, 110, 150, 200, 300, 600, 1200, 2400, 4800, 9600. External clock input capabilities with intermediate baud rates of up to 9600 baud. 1024 byte buffer. (Eavesdrop cable available as an option.)	Same as 7475 except 255 byte buffer.
	HP-IL	Not available	Hewlett-Packard Interface Loop for use with portable systems.
Power Requirements	Source	100, 120, 220, 240 V~ −10%, +5%	100, 120, 220, 240 V~ −10%, +5%
	Frequency	48–66 Hz	48–66 Hz
	Consumption	35 W maximum	25 W maximum
Environmental Range	Operating	0°C to 55°C	0°C to 55°C
	Non-operating	−40°C to 75°C	−40° to 75°C
Size	Height	127 mm (5 in.)	127 mm (5 in.)
	Width	568 mm (22.4 in.)	432 mm (17 in.)
	Depth	367 mm (14.5 in.)	343 mm (13.5 in.)
Weight	Net	7 kg (16.0 lb)	6 kg (13.5 lb)
	Shipping	Approx. 11 kg (25.0 lb)	Approx. 10 kg (22.0 lb)
FCC	FCC certified to conform to limits set for radio frequency interference when used with a Class B computing device.		

HEWLETT PACKARD

For more information, call your local HP Sales Office or nearest Regional Office: Eastern (301) 258-2000; Midwestern (312) 255-9800; Southern (404) 955-1500; Western (213) 877-1282; Canadian (416) 678-9430. Or Write Hewlett-Packard, 3000 Hanover Street, Palo Alto, CA 94304. **In Europe:** Hewlett-Packard S.A., 7, rue du Bois-du-Lan, P.O. Box, CH-1217 Meyrin 2, Geneva, Switzerland. **In Japan:** Yokogawa-Hewlett-Packard Ltd., 29-21 Takaido-Higashi 3-chome, Suginami-ku, Tokyo 168.

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