Computer Museum

HP DraftMaster I and II Plotters

Technical Data

The quality and performance you expect from HP's premier pen plotters

Features
- Exceptional performance
- Superb line quality
- Accommodates A4/A through A0/E media
- HP 7580 series software emulation
- International design

- One-year on-site warranty
- Low on-site service contract prices
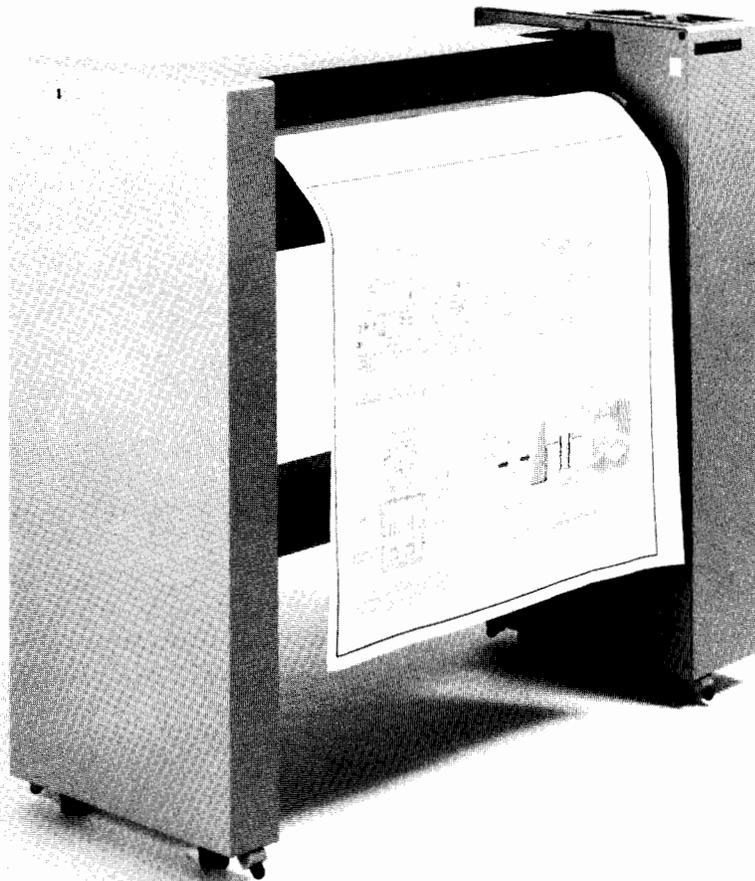
In addition, the DraftMaster II offers
- Roll-feed capability
- Long-axis plotting

Hewlett-Packard has created a second generation of drafting plotters to meet the high-performance requirements that today's CAD environments demand—the A0/E-size Draft-Master I (HP 7595A) and the A0/E and roll-feed DraftMaster II (HP 7596A) plotters.

High Performance
The DraftMaster plotters have a maximum pen speed of 60 cm/s (24 in./s), acceleration of up to 5.7 g, and a host of built-in intelligence features.

HP's pen sorting function trims plotting time by minimizing pen changes. The DraftMaster plotter scans a plot program to combine pen-up/pen-down moves wherever possible. The bi-directional plotting feature further increases drawing efficiency by automatically starting the next line segment at its nearest endpoint. And the powerful 10 MHz 16-bit microprocessor enables the HP Draft-Master to draw numerous short lines quickly, a real advantage in lettering.

Excellent Line Quality

With an addressable resolution of 0.025 mm (0.001 in.), repeatability of 0.10 mm (0.004 in.), and a unique "smooth curve generator," the DraftMaster plotters offer professional, high-quality output.

Media and Pen Flexibility

With the HP DraftMaster plotters, users can choose from vellum, polyester film, tracing bond, and plotter or glossy paper, in A4/A-through A0/E-size cut sheets, and A4/A-size transparency films. HP's DraftMaster plotters support fiber-tip (paper and transparency), roller-ball, disposable liquid-ink, and refillable liquid-ink pens.

DraftMaster II Roll-feed Capability

HP's Draftmaster II is designed for high-volume, unattended operation, continuous feed, and long-axis plotting. Drawings can be stored neatly on a take-up roll or cut off one at a time with the built-in media cutter.

Convenient Pen and Media Handling

DraftMaster plotters sense media size and can automatically scale the plot size to fit. And pens are always capped automatically to prevent ink from drying out.

Users won't have to reset pen speed and force when changing pen types, either — HP Draft-Master plotters have a unique adjustable carousel. Simply twist the barrel to the desired setting. DraftMaster will automatically adjust speed and force for optimum results.

Triple Interface

For maximum hardware compatibility, all HP DraftMaster plotters come with a triple interface—RS-232-C Serial, HP-IB (IEEE 488-1978), and RS-422-A (for longer distance computer connections). And HP DraftMaster plotters have full eavesdrop capability (dual serial I/O for terminal configurations).

HP 7585B and HP 7586B Software Emulation

There's a tremendous amount of software already available for the DraftMaster plotters because all of the software written for the HP 7585B and 7586B drafting plotters will run on the HP DraftMaster I and II. Just the touch of a button engages HP's proprietary software emulation feature.

International Symbols and Languages

The 32-character LCD menu can prompt in any of six languages: English (default), French, German, Italian, Spanish, and Japanese. The front-panel buttons are labeled with symbols instead of words. And when programming with HP-GL (Hewlett-Packard Graphics Language) commands, users can select from over 20 international character sets in three fonts.

Technical Information

Media Sizes

Ranges include ISO sizes A0 through A4, ANSI sizes A through E, and architectural sizes, as well as oversized media.

DraftMaster I (sheets only): acceptable media widths, 207.0-381.0 mm (8.15-15.0 in.), 539.0-713.0 mm (21.22-28.07 in.), 753.0-927.0 mm (29.65-36.5 in.)

DraftMaster II (same sheet sizes as listed above, plus these roll sizes): width, 609.6 mm (24.0 in.), 914.4 mm (36.0 in.); length, 46.0 m (150.0 ft.).

Pens

Number: 8 in carousel
Type: Fiber-tip (paper and transparency), roller-ball, liquid-ink (refillable and disposable)

Media

Vellum, double-matte polyester film, tracing bond, transparency film, paper (regular and glossy)

Character Sets
(Each in three fonts)
French/German, HP 9825, Scandinavian, Spanish/Latin American, Roman Extensions, Special Symbols, and these ISO registered sets: ANSI ASCII (006), French (025), French (069), German (021), International Reference Version (002), Italian (015), JIS ASCII (014), Katakana (013), Norwegian I (060), Norwegian II (016), Portuguese (016), Spanish (017), Swedish (010), Swedish for Names (011), United Kingdom (004),

Resolution
Addressable: 0.025 mm (0.001 in.)

Mechanical: 0.00625 mm (0.00025 in.)

Repeatability
For a given pen: 0.10 mm (0.004 in.)
(These specifications are for 0.08 mm (0.003 in.) paper, vellum, or polyester film.)

Accuracy
0.09% of the move or 0.25 mm (0.01 in.), whichever is greater. (These specifications are for 0.08 mm (0.003 in.) polyester film.)

Pen Velocity
Pen down: 60 cm/s (24 in./s) independent of vector direction

Pen up: 60 cm/s (24 in./s) regardless of pen-down speed

Acceleration
Maximum: 5.7 g (55.5 m/s, 182.4 ft./s) on diagonal, 4 g per axis

Programmable: 2 or 4 g (19.4 or 39 m/s)

Pen Force
Programmable or front panel selectable: 15-66 grams

Margins (sheets only)
Expanded mode: three margins approx. 5.0 mm (0.2 in.) each, fourth margin approx. 29.0 mm (1.14 in.)

Normal mode: three margins approx. 15.0 mm (0.59 in.) each, fourth margin approx. 39.0 mm (1.54 in.)

Buffer Size
25K (configurable)

Environmental Range
Temperature
Operating: 0 to 55 degrees C (32 to 131 degrees F)

Storage: -40 to 75 degrees C (-40 to 167 degrees F)

Humidity
Sheets: 5 to 95% (in 0 to 40 degrees C)

Rolls: 30 to 70% (in 10 to 30 degrees C)

Power Requirements
Source: 100, 120, 220, 240 V, ~+10%, −10%

Frequency: 48-66 Hz

Consumption: less than 105 W maximum

Physical Specifications
Height: 119.4 cm (47.0 in.)

Width: 134.6 cm (53.0 in.)

Depth: 50.8 cm (20.0 in.)

DraftMaster I:
Net weight: 73.0 kg (160.0 lb)
Shipping weight: 90.0 kg (200.0 lb)

DraftMaster II:
Net weight: 75.0 kg (164.0 lb)
Shipping weight: 92.0 kg (205.0 lb)

Interface and Cable Requirements

System	Cable
HP Vectra PC with HP 24540A/B serial/parallel interface card or HP 24541A/B dual serial interface card using 9-pin connector	HP 24542G
HP Vectra PC with HP 24541A/B dual serial interface card using 25-pin connector	HP 17255M
HP Touchscreen PC using serial interface	HP 17255M
HP Touchscreen PC using HP-IB interface	HP 10833A (1.0 m) HP 10833B (2.0 m) HP 10833C (3.0 m) HP 10833D (0.5 m)
IBM PS/2, PC, PC-XT, and compatibles	HP 17255D
IBM AT and compatibles	HP 24542G
Apple Macintosh 128K and 512K	HP 92219M
Apple Macintosh SE and Macintosh Plus	HP 92219M and Apple P/N M0199
Apple IIe	HP 17355M

Ordering Information
Standard Units
7595A
HP DraftMaster I Large-format drafting plotter

7596A
HP DraftMaster II Large-format roll-feed drafting plotter

Note: Interface cables must be ordered separately.

Accessories Included with DraftMaster I and II

User's Guide (language appropriate to plotter destination)

Power cord (appropriate to plotter destination)

Paper sampler

Adjustable pen carousels (2)

Fiber-tip pens (10)

Roller-ball pens (4)

Disposable drafting pens for vellum with adapters (4)

Grit wheel brush

Plotter supplies catalog

Additional Accessories Included with DraftMaster II

Paper roll sampler, 914.4 mm (36.0 in.) wide, 13.72 m (45.0 ft.) long

Take-up spool, 914.4 mm (36.0 in.)

Media cutters (2)

Accessories Available

17520A	Roll-feed Upgrade Kit (DraftMaster I only; must be installed by a qualified service representative)
07595-90001	Programmer's Reference (English only)
07595-90003	Programmer's Pocket Guide (English only)
07595-90000	Hardware Support Manual
5062-1576	Additional pen carousels

For a complete list of available supplies, check the current version of the plotter supplies catalog or the Hewlett-Packard PC Peripherals Price Guide.

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Technical information in this document is subject to change without notice.