HEWLETT PACKARD

Display Terminals

Dealer Sales Guide

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HP Computer Museum
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Hewlett-Packard Terminals

The HP 700 family of terminals opens new selling opportunities. Now you can satisfy your customers with a range of high quality terminals.

Very competitive prices

Value packed functionality, more standard memory, a choice of green, amber or soft white screen color.

Superior ergonomics including sharp character definition, excellent keyboard feel, 72 hertz flicker-free operation.

And you have the HP quality and service! Again, as in the past 6 years, Hewlett-Packard came out #1 in overall support satisfaction according to the 1988 Data Pro Survey.

This guide will help you to select the right HP 700 terminal for each of your terminal opportunities.

HP Terminals: A Success Story

The HP700 Series of display terminals were designed with *cost minimization as a primary goal.* To achieve this, three (3) principal strategic elements were utilized.

1.Lower manufacturing costs

The mission of R&D engineers and procurement engineers was to maximize leverage. Therefore, all of the terminals in this series were designed into the same plastic enclosure. The same keyboard dimensions were used as well as the same monitors. All of the intelligence was designed on a single printed circuit board—a different one for each model, of course. This too minimized cost.

2.Improve quality

Quality was improved through automation and HPs own CIM (Computer Integration Manufacturing) process. These terminals were designed to be easily manufacturable. The process included automatic testing at many points during the assembly. High quality components from our worldwide sourcing effort further added to a very reliable manufacturing process.

3.Marketing

Low cost, mass produced products require efficient distribution. Therefore, HP is creating working partnerships with a limited number of distributors. We want to sell HP manufactured terminals onto non-HP systems through distributors who have well developed customer relationships with many non-HP accounts.

HP SuccessLine: Service Alternatives for Terminals

At Hewlett-Packard we want you to get the most out of your terminal. To meet the goals of maximum uptime and productivity at minimum cost, our quality products are backed by a range of hardware services. You can choose among five hardware maintenance programs, depending upon whether your highest priority is a quick response or a low cost for your terminals.

HP maintains a staff of trained Customer Engineers and spare parts at each Service Office and Customer Service Center. Each has its own service inventory and tools assuring that quality service will be available when you need it.

A one year Return-to-HP warranty is standard. Option W03 may be ordered (at no cost) to convert the 1 year warranty to a 90 day on-site warranty. HP offers five major service options after warranty. These very competitively priced options are:

Customer Return Service	$3 per month*
Scheduled Support	$3 per month*
Next Day Support	$4 per month*
Priority Support	$7 per month* (within 4 working hours)
Express Exchange	$3.50 per month (1 year) $3.00 per month (3 years)

HP Customer Return Service

This service provides the lowest cost maintenance for your terminal. You ship your terminal to an HP Customer Service Center where it will be repaired, tested, and sent back to you within 3 working days after it is received. If you can afford to be without your equipment or if you have spares at your site, Customer Return Service offers the most economical service option.

HP SuccessLine Scheduled Support

This service offers the lowest on-site support costs for your terminals. With a minimum of $500 of monthly support maintenance charges, HP will make scheduled weekly visits to a single, central site which you specify.

HP SuccessLine Next Day Support

If your applications require a one-workday response, then Next Day Support gives you following-day response between the hours of 8:00 a.m. and 5:00 p.m. every business day excluding HP holidays.

HP SuccessLine Priority Support

If your terminal applications call for a high level of availability, Priority Support offers best possible (not to exceed 4 hours) response. This service is especially valuable if you do not stock spare equipment at your site. Support coverage is from 8:00 a.m. to 9:00 p.m. every business day excluding HP holidays.

Express Exchange

This service is geared for many terminals, remotely distributed, with quick turn around required. When a terminal fails in the field, the user contacts a support desk which has been set up within the user's organization to determine whether the problem is hardware, software or user related. If it's determined to be hardware, the support desk facsimiles a request for a replacement order to HP's central service facility. If the order is received prior to 4:00 p.m. Pacific time, the customer will receive before 10:30 a.m. the following working day a preconfigured replacement unit which is "like new" cosmetic condition. This replacement unit becomes the users permanent unit. The user then places the failed unit in the shipping container the replacement unit came in, and mails it back to HP via the US mail.

Customized terms negotiated with each contract. Minimum of 25 terminals required. Customer must have a technical desk.

To order HP maintenance services or obtain assistance in determining the service to meet your specific needs, call:
800-835-HPHP

***See the HP travel directory for coverage areas and specific pricing**

Miscellaneous Service/Warranty Information

Warranty of HP Terminals

1 year parts only, return product to HP for repairing or replacing failing within 1 year from shipment.

Conversion of Service to On-Site Service (W03 Option)

Contact your nearest Service Responsible Office (SRO) with proof of purchase. They will administer the conversion.

To obtain additional information on the support services, the following brochures are available.

HP SuccessLine Data Sheet	5952-0535D
Express Exchange Service	5952-6570
Customer Return Service 22B	5959-8239
World Wide Customer Support Travel and Office Directory	5953-7167
Warranty and Installation	5954-1617D
Field Training Guide	5952-0535D

Ordering Information

HP 700/43 (ASCII)

Order Number	Description
C1006A	HP 700/43 Fully Featured ASCII terminal with amber phosphor
C1006G	HP 700/43 Fully Featured ASCII terminal with green phosphor
C1006W	HP 700/43 Fully Featured ASCII terminal with soft white phosphor; black characters on a white background.

Required Localization Option

ABA	U.S. keyboard kit

Non-Required Warranty Option

W03	Convert one year warranty to 90 days on-site

Accessories

40242X	HP direct connect type 232 cable. Male (25-pin)/male (3-pin), 5 m (16 ft.)
40242G	Serial (RS232C) printer cable. Male (25-pin)/male (25-pin); 5 m (16 ft.)

Additional Documentation

Users' Manual	5959-5011
Reference Manual	5959-5013
Datasheet	5953-8637

HP 700/44 PC Terminal

Order Number	Description
C1007A	HP 700/44 PC Terminal with amber phosphor
C1007G	HP 700/44 PC Terminal with green phosphor
C1007W	HP 700/44 PC Terminal with soft white phosphor: black characters on a white background

Required Localization Options

ABA	U.S. keyboard kit

Non-Required Warranty Option

W03	Convert one year warranty to 90 days on-site

Additional Documentation

Users Manual	C10007-90001
Datasheet	5953-8640
Reference Manual	C10007-90006

Ordering Information

HP 700/32 (DEC/ANSI Compatible)

Order Number	Description
C1017A	HP 700/32 DEC VT320 compatible terminal with amber phosphor
C1017G	HP 700/32 DEC VT320 compatible terminal with green phosphor
C1017W	HP 700/32 DEC VT320 compatible terminal with page white phosphor; black characters on a white background

Required Localization Option

ABA	U.S. keyboard kit

Non-required Warranty Option

W03	Convert one year warranty to 90 days on-site

Additional Documentation

Users Manual	C1017-90001
Reference Manual	C1017-90002
Datasheet	5953-8647

HP 700/22 (DEC/ANSI Compatible)

Order Number	Description
C1004A	HP 700/22 DEC VT220 compatible terminal with amber phosphor
C1004G	HP 700/22 DEC VT220 compatible terminal with green phosphor
C1004W	HP 700/22 DEC VT220 compatible terminal with soft white phosphor; black characters on a white background

Required Localization Option

ABA	U.S. keyboard kit

Non-required Warranty Option

W03	Convert one year warranty to 90 days on-site

Additional Documentation

User's Manual	C1004-90028
Reference Manual	C1004-90001
Datasheet	5953-8633

HP 700 Family Quick Reference Guide

ASCII Terminal

HP700/43

Features

Fully Featured ASCII Terminal

80/132 Column

Soft White, Amber or Green Screen

4 Pages of Memory

Printer Port is Standard (RS232C Bidirectional port)

58 Programmable Keys

72 Hertz Screen Refresh Rate

Compatibility Modes

Wyse 30

Wyse 50

Televideo 905

Televideo 910+

Televideo 925E

Televideo 950

ADDS Viewpoint A2

Lear Siegler ADM 3A

Lear Siegler ADM 5

Lear Siegler ADM 31

Hazeltine 1500

Qume QVT-101

DEC Compatibles

HP700/32

Features

DEC VT320 Compatibility

80/132 Columns

27, 44, or 55 Line Display

Page White, Amber or Green Screen

Full Overscan Display

4 Pages of Memory

Printer Port is Standard (DEC423 6-Pin Bidirectional Port)

60 Programmable Keys

72 Hertz Screen Refresh Rate

Compatibility Modes

VT52

VT100

VT320 (VT220)

DEC Compatibles-cont'd

HP 700/22

Features	Compatibility Modes
DEC VT220 Compatibility	VT52
80/132 Columns	VT100
Soft White, Amber or Green Screen	VT220
4 Pages of Memory	
Printer Port is Standard (RS232C 9-Pin Port)	
30 Programmable Keys	
72 Hertz Screen Refresh Rate	

PC Terminal

HP 700/44

Features	Compatibility Modes
PC Terminal Functionality	HP-PC Term
• AT2 Keyboard Layout • PC Character Set • Key Scanning Codes	VT220 VT100
Soft White, Amber or Green Screen	VT52
72 Hertz Refresh Rate	
4 Pages of Memory	
80/132 Columns	
99 Programmable Key	
Printer Port is Standard (RS232C 9-Pin Port)	

The HP 700/43

Product Description

The HP 700/43 is a mid-range, multi-personality ASCII terminal with 12 of the most popular compatibility modes. These include Wyse WY-30, WY-50; TeleVideo 905, 910+, 925 E, 950; Lear Siegler ADM 3A, ADM 5, ADM 31; Hazeltine 1500; ADDS Viewpoint A2; and Qume QVT-101. Its four pages of display memory with 80 and 132 column format makes the HP 700/43 an outstanding value!

The major features of the HP 700/43 and their benefits are summarized in the following table.

Major Features	Advantage/Benefit
Full Function Keyboard •106-key •58 programmable keys •Separate cursor, editing and numeric pads	Programmable keys and separate cursor, editing and numeric pads increase user productivity by eliminating the need for repetitive or complex commands and allowing easier and faster access to the appropriate keys.
Superior Display Quality •14-inch display •High resolution character cell, 9 × 14 with half dot shift, which is equivalent to 18 × 14 for most characters	Larger, better formed characters reduce viewing fatigue and increase user productivity
3 Phosphor Colors •green •amber •soft white	Allows the user to choose the screen color that maximizes comfort and productivity. Soft white display (black characters on a white screen) is similar to a typewritten page.
12 Compatibility Modes •Wyse 30, 50 •TeleVideo 905, 910+, 925E, 950 •ADDS Viewpoint A2 •Lear Siegler ADM 3A, ADM 5, ADM 31 •Hazeltine 1500 •Qume QVT-101	Allows one terminal for multiple applications
72 Hz screen refresh rate	Less flicker reduces viewing fatigue and increases user productivity. Especially important for a soft white display set in positive mode.
80 and 132 column display	Enhanced functionality to allow user preview of more characters in 132 column mode.
4 pages of display memory	Allows viewing of longer text and data items saving time and reducing system interaction.

How to Win With The HP 700/43

Product Positioning

A fully featured ASCII terminal at a surprisingly low price!

In a price-performance sensitive market, the HP 700/43 is in an excellent position. It offers an aggressive price in addition to its extensive functionality and superb ergonomics. The HP 700/43 offers additional features over most of the competitive products such as four pages of memory, 58 programmable function keys, soft white phosphor, green or amber phosphor, with high character resolution on a 14-inch screen.

The key competitive products in the mid-range ASCII segment are Wyse's WY-50 and WY-150, the Televideo 965, the IBM 3151, the Falco 5500e and the ADDS 2020.

When selling against the WY-50, the HP 700/43 offers the following advantages:

- Soft white phosphor
- Superior character resolution
- Additional compatibility modes
- 3 additional pages of memory
- Additional programmable keys for added functionality

The WY-150 was introduced in November, 1988 and will eventually replace the WY-50. The WY-150 has a higher list price than the WY-50 and fewer emulation modes. It offers a page white phosphor, in addition to green and amber displays. It has seven pages of memory and comes with a choice of three keyboard layouts (ASCII, ANSI, PC). When selling against this Wyse product, the HP 700/43 has a lower list price and a broader offering of compatibility modes.

The IBM 3151 models 360 and 460 feature cartridges that expand the functionality of the terminal. With the WY-50/WY-50+ cartridge, the IBM 3151 competes in this mid-range ASCII segment. Note the following advantages of the HP 700/43 when selling against a model 360 or 460:

- Soft white phosphor
- Superior character resolution
- 3 additional pages of memory
- Programmable keys
- Tilt & swivel

A key competitor in the distributor channel is Falco. When selling against the Falco 5500e, the HP 700/43 offers the following:

- Superior character resolution
- More emulation modes
- Programmable keys

When selling against the ADDS 2020, the HP 700/43 has the following advantages:

- Superior character resolution
- More emulation modes
- 3 additional pages of memory
- Programmable keys

The Televideo 965 competes in the high end of the ASCII segment. It has more emulation modes and some additional features when compared to the HP 700/43. However, the HP 700/43 has a lower list price and should fulfill your customers' functional requirements.

HP 700/43 Competitive Feature Chart (3/1/89)

Features	HP 700/43	WY-50	TV 965	Falco 5500e	WY-150	IBM 3151 Model 360/460	ADDS 2020
Tilt & Swivel	Yes	Yes	Yes	Yes	Yes	Opt	Yes
Phosphor*	G,A,SW	G,A	G,PW	G,A,SW	G,A,SW	G,A	G,A,W
Character Size	7 × 11	7 × 12	7 × 11	7 × 9	NA**	NA**	7 × 12
Character Cell	9 × 14	10 × 13	10 × 16	10 × 16	10 × 16	NA**	10 × 13
Half Dot Shift***	Yes	No	No	No	No	No	No
132 Column	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Window	Horiz split	Horiz split	Horiz split	Yes	Horiz split	No	No
Pages	4	1	7	7	7	1	1, 2 opt.
Block Cursor	Yes	Yes	Yes	Yes	Yes	NA**	Yes
Emulations	12	9	23	10	8	12	8
Wyse 30	Yes	Yes	No	No	No	No	No
Wyse 50	Yes	Yes	Yes, 50+	Yes	Yes, 50+	Yes, 50+	Yes
Televideo 905	Yes	No	No	No	No	No	No
Televideo 910+	Yes	No, 910	Yes, 910, 912	Yes	Yes	Yes, 910	No, 910
Televideo 920	No	Yes	Yes	Yes	No	Yes, 921	Yes
Televideo 925E	Yes	No, 925	Yes, 925	Yes	No, 925	Yes, 925	No, 925
Televideo 950	Yes	Yes	Yes, 955	Yes, 955	No	No	No
ADDS Viewpt A2	Yes	Yes	Yes, 60	Yes	Yes	Yes	Yes, A1
ADM 3A	Yes	No	Yes	No	No	Yes	No
ADM 5	Yes	No	Yes	No	No	Yes	No
ADM 31	Yes	Yes	Yes	No	No	No	No
Hazeltine 1500	Yes	Yes	Yes	Yes	No	Yes	Yes
Qume	Yes	No	No	No	No	No	No
Other			IBM 3101, 3161, 3162, DG D200; DEC VT100; PC Terminal	IBM 3101, DG200	DEC VT100, VT52, PC Terminal		Regent 40
Printer Port	RS232	RS232	RS232	RS232	Centronics	RS232	RS232/ Centronics
Max Baud Rate	38.4K	38.4K	38.4K	38.4K	38.4K	38.4K	38.4K
Keyboard	ASCII	ASCII	ASCII, VT-220, IBM Enhanced PC and IBM RT/316X	ASCII	ASCII, ANSI, Enhanced PC	PC AT 2****	ASCII
Function Keys	16	16	16	16	16	16	16
Programmable	58	32	64	27	32	36	44
NVR	Yes	Yes	Yes	Yes	Yes	NA**	Yes
Warranty	1 Year	1 Year	1 Year	1 Year	1 Year	1 (3 opt.)	1 Year

* G = Green phosphor, A = Amber phosphor, W = White (White characters on black screen), SW = Soft White (Black characters on white screen)

** NA = not available at press time

*** Half-dot shift improves character readability by doubling the 9 × 14 character cell to 18 × 14 for most characters

**** ASCII keycaps additional cost

Product information above obtained from manufacturer's datasheets. Product specifications subject to change without notice.

HP 700/43 Questions and Answers

Q What is a flat screen and why doesn't the HP 700/43 have one?

A The term "flat screen" implies less curvature than a typical CRT display. We chose not to use a "flat screen" because our display surveys during development consistently indicated better character focus was achieved on our current CRT.

Note: "Flat screen" should not be confused with the term "flat panel" which describes the use of a non-CRT technology which reduces the thickness of the display, i.e. the Portable Vectra CS display.

Q Does the HP 700/43 support RS232 connection only?

A No. The HP 700/43 also has HP422 capability which allows you to locate your terminal further away from your computer system because of the built-in noise immunity.

Q What is the difference between the WY-50 and the WY-150?

A The WY-150 has a higher list price than the WY-50 and fewer emulation modes. It offers a paper-white display, in addition to green and amber displays. (The WY-50 is only available in green and amber.) The terminal was designed to meet the West German ZH1/618 standard, and has a refresh rate of 78 Hz or 60 Hz. The character cell is user selectable, either 10×16 or 10×13 in 80 column mode. The emulations on the WY-50 are ASCII only, while the WY-150 has ANSI compatibility (DEC VT100 and VT52) and PC Term. The WY-150 offers a choice of three keyboards: Wyse ASCII (101 keys), Wyse ANSI (101 keys), or Enhanced PC (103 keys). The WY-150 has seven pages of memory, while the WY-50 has only a single page.

Q What is the difference between a 72 Hz refresh rate and one that is slightly higher, for example, a 75 Hz refresh rate?

A The refresh rate refers to the frequency that the screen is refreshed. Its difficult to perceive any real difference between displays that have a refresh above 70 Hz. At this frequency, the display is virtually flicker free.

The One Minute Demonstration HP 700/43

The following procedure shows you how to:

- Demonstrate the HP 700/43's superior display quality
- Show the 12 terminal Compatibility Modes
- Display 132 column
- Display the Programmable Keys menus

1. Connect the power cord and keyboard cable. Power on the terminal.

2. Press the Setup key while holding down the Shift key. This displays the softkeys that represent the setup menus available on the HP 700/43.

3. Press "User Setup", f1. Use the contrast and brightness slide controls to adjust the display for comfortable viewing. Note the superior display quality. Encourage your customer to compare our display quality to other low cost terminals.

4. If your terminal has the soft white phosphor, check to see that the field for "Screen Attr" is set to "Reverse." If not, use f2 (Next Choice) to change the selection.

5. Press f8 to display the next menu, "System Setup." The first field on this screen, "Screen Width", toggles between 80 and 132 column mode.

6. Move the cursor to the "Compatibility" field. "Next Choice" (f2) toggles through the twelve compatibility modes.

7. Press the "Next Menu" (f8) softkey to toggle through the other menus available. The Programmable Keys Menus allows the user to program many editing keys in addition to the function keys.

8. Press the Setup key to exit the menus.

The HP 700/32

Product Description

The HP 700/32 is Hewlett-Packard's DEC VT320 compatible terminal for DEC and other computer systems. Since the VT320 adheres to the ANSI (American National Standards Institute) X3.64 terminal protocol standard, the HP 700/32 can be used on a variety of computer systems running applications compatible with the ANSI terminal protocol as well as the complete line of DEC's computer systems. With the same keyboard layout as the VT320 and with VT100 and VT52 emulation modes, the HP 700/32 is a plug compatible fit for DEC applications.

The major features of the HP 700/32 and their benefits are summarized in the following table.

Major Features	Advantage/Benefit
DEC VT320 Plug Compatibility	Ability to replace DEC and other plug compatible terminals with the 700/32 without risking future system incompatibilities
ANSI Compatibility	Compatibility with an industry standard allows connections to any computer system running ANSI compatible applications and protects the customer from future system incompatibilities
Superior Display Quality •14 inch screen •High resolution character cell, 14 × 13 character in a 20 × 16 cell	Larger, better formed characters reduce viewing fatigue and increase user productivity
3 Phosphor Colors •Page white •Green •Amber	The choice of page white, amber or green allows the user to choose the screen color that maximizes comfort and productivity. Characters are displayed on a fully overscanned screen. Page white full screen provides a borderless full screen video as easy to read as a printed page.
72 Hertz Screen Refresh Rate	Less flicker reduces viewing fatigue and increases user productivity. Especially important for a page white positive screen.
4 pages of Display Memory	Allows viewing of longer text and data items saving time and reducing systems interaction. And its 3 more pages than DEC offers!
Programmable key definition menu	Allows programming of keys in easy-to-use menu.
Programmable keys saved in non-volatile memory	Programmable key definitions are retained when terminal is powered off (or in the case of a hard reset.)
27, 44 or 55 line display	Three screen display modes to choose from allows optimal viewing of longer text and data items.
Bidirectional printer port	Allows the terminal to receive input through the printer port and pass it directly to the system.

How to Win With The HP 700/32

Product Positioning

A DEC VT320 compatible terminal with superior functionality and enhanced ergonomics at an affordable price.

Today DEC terminals capture approximately 50% of the DEC/ANSI terminal market. The remaining 50% is fragmented among many independent terminal manufacturers. With a large part of the market fragmented, HP has an opportunity to offer the service and support of a large company and price performance that is superior to the most competitive products offered by the independents.

The key competition for the HP 700/32 includes the DEC VT320, the Wyse 85, the Televideo 9320, the Falco 5220s and the Link MC5.

When selling against the DEC VT320, the HP 700/32 has the following advantages:

- Superior ergonomics: full overscan display, superior character resolution, 72 Hz refresh rate
- 3 additional pages of memory
- 44 and 55 line display mode
- 60 programmable function keys (DEC has 15)
- Programmable key definition menu
- Programmable keys saved in non-volatile ROM
- 2 programmable message lines
- Tilt & swivel

The HP 700/32 also has key advantages over the Televideo 9320:

- Superior ergonomics: full overscan display, superior character resolution, 72 Hz refresh rate
- Green phosphor
- 2 additional pages of memory
- 44 and 55 line display
- 60 programmable function keys (Televideo has 30)
- 2 programmable message lines

When selling against the WY-85, the HP 700/32 has the following advantages:

- VT320 emulation
- Superior ergonomics: full overscan page white phosphor, superior character resolution, 72 Hz refresh rate
- Page white phosphor
- 3 additional pages of memory
- 44 and 55 line display
- DEC423 connectivity
- 60 programmable function keys (Wyse has 30)
- 2 programmable message lines

The Falco 5220s offers dual host capability, but it does not compete with the following features found on the HP 700/32:

- Full overscan page white display, 72 Hz refresh rate
- DEC423 connectivity
- 4 pages of memory (Falco 5220s has 3 pages)
- 2 programmable message lines

The Link MC5 is a multi-host ASCII/ANSI/PC terminal. It offers 7 pages of memory, up to 50 display lines and a 78 Hz refresh rate. However, it does not provide the following:

- DEC423 connectivity
- 60 programmable function keys
- 2 programmable message lines

When selling against the WY-185, the HP 700/32 has the following advantages:

- 2 additional pages of memory
- 44 and 55 line display
- 60 programmable function keys (Wyse has 30)
- 2 programmable message lines
- Larger character size and cell which provides larger, better formed characters

HP 700/32 Competitive Feature Chart (3/1/89)

	HP 700/32	DEC VT320	WY-85	TV 9320	Falco 5220s	Link MC5	WY 185
Screen							
Phosphor*	A,G,W	A,G,W	A,G	A,W	A,G,W	A,G,W	A,G,W
Refresh Rate	72Hz	60Hz	60Hz	70Hz	60Hz	78Hz	85Hz
Full overscan	Yes	No	No	No	No	Yes	Yes
Tilt and Swivel	Yes	$20 opt	Yes	Yes	Yes	Yes	Yes
Flat screen	No	Yes	No	Yes	Yes	Yes	No
Display							
Character Size	14 × 13	12 × 7	7 × 9	7 × 9	8 × 13	NA**	NA**
Character Cell	20 × 16	15 × 12	10 × 10	10 × 14	10 × 16	10 × 13	10 × 20
Pages of memory	4	1	1	2	3	7	2
Rows	27,44,55	24	24,25	24	Up to 50	25,26,51	25
VT320 Emulation	Yes	Yes	No	Yes	Yes	Yes	Yes
Programmable F keys	60	15	30	30	NA**	38	30
Dual Host	No	No	No	No	Yes	Yes	No
F keys saved in NVR	Yes	No	Yes	Yes	Yes	Yes	Yes
Menu driven F keys	Yes	No	Yes	Yes	NA**	Yes	Yes
Desk accessories***	No	No	No	Clock/cal/calc	Cal/calc	No	No
DEC423	Yes	Yes	No	Yes	No	No	Yes
Warranty	1 Year	1 Year	1 Year	1 Year	1 Year	1 Year	1 Year

* G = Green, A = Amber, W = White
** NA = not available at press time
*** Cal = calendar, calc = calculator

Product information above obtained from manufacturers' datasheets. Product specifications subject to change without notice.

HP 700/32 Questions and Answers

Q What is a flat screen and why doesn't the HP 700/32 have one?

A The term "flat screen" implies less curvature than a typical CRT display. We chose not to use a "flat screen" because our display surveys during development consistently indicated better character focus was achieved on our current CRT.

Note: "Flat screen" should not be confused with the term "flat panel" which describes the use of a non-CRT technology which reduces the thickness of the display, i.e., the Portable Vectra CS display.

Q What type of printers does the HP 700/32 work with?

A As a DEC compatible product, it works with DEC compatible printers:

DEC LA34/38	DEC LA120
DEC LA35/LA36	DEC LA50
DEC LA12	DEC LQP02
DEC LA100	DEC LA75

Q What is the difference between the DEC VT320 and the DEC VT220?

A The DEC VT320 was introduced in August 1987 to replace the DEC VT220, which is no longer available. The VT320 is a superset of the VT220 and includes the following new features:

1) A slightly larger screen (the VT220 has a 12 inch screen)
2) A 25th status line that is programmable
3) DEC 423 connectivity. The DEC 423 connection looks similar to a phone jack connection. It supports the DECconnect Wiring Scheme. The VT320 includes one cable to convert from the DEC 423 port to the industry standard RS 232 port (25 pin)
4) Redefinable keys:
a) COMPOSE Key—can be disabled
b) BACKSPACE Key—can be BACKSPACE or BACKSPACE and delete characters
c) ESC Key—can be ESC or tilda
d) <>Key—can be <>or tilda
5) New character fonts

Q What are the advantages of the HP 700/32 in comparison to the DEC VT320?

A In addition to the VT320 features, the HP 700/32 offers the following enhancements:

1) Full overscan
2) Superior character resolution
3) Four pages of memory vs. DEC's one page
4) Tilt and swivel standard vs. DEC's tilt standard, $20 option for tilt and swivel base
5) 60 programmable keys vs. DEC's 15 keys
6) Up to 55 line display vs. DEC's 25 lines
7) Programmable key definition menu
8) Programmable keys saved in non-volatile RAM
9) 2 programmable message lines vs. DEC's programmable status line
10) 38.4K baud rate vs. DEC's 19.2K baud rate

Q What are the differences between the HP 700/32 and the HP 700/22?

A The HP 700/32 DEC VT320 compatible terminal supersedes the HP 700/22 DEC VT220 compatible terminal. It offers increased functionality with its improved feature set. The HP 700/32 offers backwards compatibility to the HP 700/22 except in the following instances:

1) Different port connectors (The HP 700/32 adds DEC423 connectivity)
2) The HP 700/32 does not offer a separate VT220 emulation mode. Like the DEC VT320, the VT320 emulation mode is a superset of the VT220 mode and is backwards compatible. Also available are the VT52 and VT100 modes.

The One Minute Demonstration HP 700/32

The following procedure shows you how to:

- Demonstrate the HP 700/32's superior display quality
- Display the new user-friendly setup menus
- Demonstrate how to use the menus to define a function key

1. Connect the power cord and keyboard cable. Power on the terminal.

2. Press the Setup key on the keyboard to display the Global menu. Note the new user-friendly menu format which allows you to enter and exit any of the setup menus with the cursor control keys.

3. Use the contrast and brightness slide controls to adjust the display for comfortable viewing. Note the superior display quality. DEC's character cell is 10 × 10, HP's is 20 × 16.

4. In the User Menu, move the cursor to the "On Line" field and press the Space Bar or the Enter Key on the numeric pad to change the field from yes (the power on default value) to no (local mode so you can type on the screen.)

5. If your terminal has the page white phosphor, check to see that the "Background" field is set to "Light." If not, use the Space bar key to change the selection. The full overscan page white provides a borderless full screen video as easy to read as a printed page. Save the new value by hitting the F1 function key "Save for power on." (To view the page white display, exit the setup menu by hitting the Setup key.)

6. Use the cursor keys to cycle through all the setup menu screens.

7. In the Program menu, you can define a specific function key. Try this by entering a space, then hitting the F6 function key and the shift key simultaneously. This will allow you to define the shifted F6 function key. Type in some miscellaneous characters for the definition.

8. Press the Setup key again to return to local mode where you can type on a blank screen. Press "shift" and F6 to display your new function key definition.

The HP 700/22

Product Description

The HP 700/22 Display Terminal is Hewlett-Packard's DEC VT220 compatible terminal for DEC and other computer systems. Since the VT220 adheres to the ANSI (American National Standards Institute) X3.64 terminal protocol standard, the HP 700/22 can be used on a variety of computer systems running applications compatible with the ANSI terminal protocol as well as the complete line of DEC's computer systems. With the same keyboard layout as the VT220 and with VT220, VT100, and VT52 emulation modes, the HP 700/22 is a plug compatible fit for DEC applications.

The major features of the HP 700/22 and their benefits are summarized in the following table.

Major Features	Advantage/Benefit
DEC VT220 Plug Compatibility	Ability to replace DEC and other plug compatible terminals with the 700/22 without risking future system incompatibilities.
ANSI Compatibility	Compatibility with an industry standard allows connections to any computer system running ANSI compatible applications and protects the customer from future system incompatibilities.
Superior Display Quality •14-inch screen •High resolution character cell, 9 × 14 with half dot shift, which is equivalent to 18 × 14 cell for most characters	Larger, better formed characters reduce viewing fatigue and increase user productivity.
3 Phosphor Colors •Soft White •Green •Amber	The choice of soft white, amber, or green allows the user to choose the screen color that maximizes comfort and productivity. Soft white with black characters on a white background, is similar to a typewritten page.
72 Hertz Screen Refresh Rate	Less flicker reduces viewing fatigue and increases user productivity. Especially important for soft white positive screen.
4 pages of Display Memory	Allows viewing of longer text and data items saving time and reducing systems interaction. And it's 3 more pages than DEC offers!
Function Key Definition Menu	Allows programming of function keys in easy-to-use menu.
Programmable Status Line	Provides the flexibility to reserve the status line for messages from the system.
Function Keys Saved in Non-volatile Memory	Function key definitions are retained when terminal is powered off (or in the case of a hard reset).
Bi-directional Printer Port	Allows the terminal to receive input through the printer port and pass it directly to the system.

How to Win With The HP 700/22

Product Positioning

An ergonomically designed DEC VT220 compatible terminal at a competitive price.

Today DEC captures approximately 50% of the DEC/ANSI terminal market. The remaining 50% is fragmented among many independent terminal manufacturers. With a large part of the market fragmented, HP has an opportunity to offer the service and support of a large company as well as the pricing and features of the most competitive products offered by the independents.

The key competition for the HP 700/22 includes the DEC VT320, the Televideo 9320, the Wyse 85, the C. Itoh CIT326, the Falco 5220s and the Esprit Opus 220.

When selling against the DEC VT320, the HP 700/22 has the following advantages:

- Superior ergonomics: character resolution, 72 Hz refresh rate
- 3 additional pages of memory
- Twice as many programmable keys
- Function key definition menu
- Function keys saved in non-volatile memory
- Current loop
- Tilt and swivel

The HP 700/22 also has several key advantages over the Televideo 9320:

- Superior ergonomics: character resolution, 72 Hz refresh rate
- Green phosphor
- 2 additional pages of memory
- Programmable status line
- Current loop

When selling against the WY-85, the HP 700/22 has the following advantages:

- Superior ergonomics: character resolution, soft white phosphor, 72 Hz refresh rate
- 3 additional pages of memory
- Lower list price
- Programmable status line

The CIT326 offers dual host capability, but it does not have the following features found on the HP 700/22:

- 72 Hz refresh for a flicker free soft white display

The Falco 5220s is a multi-host multi-session DEC-compatible terminal. However, its price is not as competitive as the price of the HP 700/22 and it does not provide a 72 Hz refresh rate which is especially important for a soft white display (black characters against a white background.)

When selling against the Esprit Opus 220, the HP 700/22 offers the following advantages:

- Superior ergonomics: character resolution
- 2 additional pages of memory
- Programmable status line

HP 700/22 Competitive Feature Chart (3/1/89)

Features	HP 700/22	DEC VT320	Televideo 9320	WY-85	CIT 326	FALCO 5220s	Esprit Opus 220
Flat Screen	No	Yes	No	Yes	Yes	Yes	Yes
Tilt & Swivel	Yes	Opt	Yes	Yes	Yes	Yes	Yes
CRT Size	14 in.	14 in.	14 in.	14 in.	14 in.	14 in.	14 in.
Phosphor*	G/A/SW	G/A/PW	A/PW	G/A	G/A/SW	G/A/SW	G/A/SW
Character Size	7 × 11	12 × 7	7 × 9	7 × 9	9 × 15	8 × 13	7 × 11
Character Cell	9 × 14	15 × 12	10 × 14	10 × 10	10 × 16	10 × 16	9 × 13
Half Dot Shift***	Yes	No	No	No	No	No	No
Display Lines	24	24	24	24	24	up to 50	24
Refresh Rate	72 Hz.	60 Hz.	70 Hz.	60 Hz.	60 Hz.	60 Hz.	NA**
Pages	4	1	2	1	4	3	2,2 opt.
Block Cursor	Yes	Yes	Yes	Yes	Yes	Yes	Yes
VT320 Mode	No	Yes	Yes	No	No	Yes	No
Dual Hosts	No	No	No	No	Yes	Yes	No
Max Baud Rate	38.4	19.2	19.2	38.4	19.2	38.4	38.4
Current Loop	Yes	No	No	Yes	Yes	Opt.	Opt.
Keyboard Size	106	105	108	105	108	108	109
Word Processing KB	No	Yes	No	No	No	Opt.	Yes
Programmable	30	15	30	30	180	116	36
NVR	Yes	No	Yes	Yes	Yes	Yes	Yes
Programmable Status Line	Yes	Yes	No	No	Yes	NA**	No
Clock/Calendar	No	No	Yes	No	No	Yes	No
F Key Menu	Yes	No	Yes	Yes	Yes	Yes	NA**
NVR F Keys	Yes	No	NA**	Yes	Yes	NA**	Yes
Warranty	1 Year	1 Year	1 Year	1 Year	1 Year	1 Year	2 Years

* G = Green, A = Amber, SW = Soft White HP's term for black characters on white screen, W = White (white characters on black screen), PW = Paper White, DEC's term for black characters on white screen.
** NA = not available at press time
*** Half dot shift improves character readability by doubling the 9 × 14 character cell to 18 × 14 for most characters

Product information above obtained from manufacturer's datasheets. Product specifications subject to change without notice.

HP 700/22 Questions and Answers

Q What is a flat screen and why doesn't the HP 700/22 have one?

A The term "flat screen" implies less curvature than a typical CRT display. We chose not to use a "flat screen" because our display surveys during development consistently indicated better character focus was achieved on our current CRT.

Note: "Flat screen" should not be confused with the term "flat panel" which describes the use of a non-CRT technology which reduces the thickness of the display, i.e. the Portable Vectra CS display.

Q What type of printers does the HP 700/22 work with?

A As a DEC compatible product, it works with DEC compatible printers:

DEC LA34/38	DEC LA120
DEC LA35/LA36	DEC LA50
DEC LA12	DEC LQP02
DEC LA100	DEC LA75

Q What are the differences between the DEC VT320 and the HP 700/22?

A The HP 700/22 is compatible with the VT320 except for the following low volume options and the new user enhancements that do not effect software compatibility:
1) Internal modem option
2) Word processing keyboard option
3) Flat screen option
4) Redefinable keys:
a) COMPOSE Key - can be disabled
b) BACKSPACE Key - can be BACKSPACE or BACKSPACE and delete characters
c) ESC Key - can be ESC or tilda
d) < > Key - can be < > or tilda
5. DEC 423 MMJ serial data-comm and printer port. The DEC 423 connection looks similar to a phone jack connection. It supports the DECconnect Wiring Scheme. The VT320 includes one cable to convert from the DEC 423 port to the industry standard RS 232 port (25 pin).

In addition to the VT320 features, the HP 700/22 offers the following enhancements:
1) Superior character resolution
2) Four pages of memory vs. DEC's one page
3) Tilt and swivel standard vs. DEC's tilt standard, $20 option for tilt and swivel base
4) 30 programmable keys vs. DEC's 15
5) Current loop standard vs. not available on the VT320
6) 38.4K baud vs. DEC's 19.2K
7) Function key definition menu
8) Function keys saved in non-volatile memory

Q What are the differences between the DEC VT220 and the HP 700/22?

A The HP 700/22 is fully compatible with the VT220 except for the following low volume options. These options are also not available on most compatibles.
1) No internal modem option
2) No composite video output
3) No word processing keyboard option.

In addition to the VT220, the HP 700/22 offers the following enhancements:
1) Superior character resolution
2) Four pages of memory vs. DEC's 1 page
3) Soft white screen [black characters on a white screen] vs. DEC's white screen [white characters on a dark background].
4) 14 inch screen vs. DEC's 12 inch screen
5) Tilt and swivel vs. DEC's tilt only
6) 30 programmable keys vs. DEC's 15
7) Function key definition menu
8) Function keys saved in non-volatile memory
9) Programmable status line
10) Bi-directional printer port

The One Minute Demonstration HP 700/22

The following procedure shows you how to:

Demonstrate the HP 700/22's superior display quality

Display the four setup menus:

1. Connect the power cord and keyboard cable. Power on the terminal.

2. Press the Setup key on the keyboard to display the General Setup menu. Use the contrast and brightness slide controls to adjust the display for comfortable viewing. Note the superior display quality. DEC's character cell is 10 × 10, HP's is 9 × 14 with half dot shift which improves character readability by doubling the 9 × 14 cell to 18 × 14 for most characters.

3. Move the cursor to the "On Line" field and press Enter to change the field from yes (the power on default value) to no (local mode so you can type on the screen.)

4. If your terminal has the soft white phosphor, check to see that the "Light Background" field is set to "yes." If not, use the enter key to change the selection. Save the new value by moving the cursor to the "Save" field and hitting the enter key.

5. Press the "Next Screen" key to cycle through all four setup menu screens.

6. In the Programmable Function Key Setup menu, you can define a specific function key. Try this by choosing F6 as the function key to define and setting the qualifier key to "shift." (Use the enter key to scroll through the options and select these fields.) Type in some miscellaneous characters for the definition.

7. Press the Setup key again to return to local mode where you can type on a blank screen. Press the shift key and F6 to display your new function key definition.

Computer Museum

The HP 700/44

Product Description

The HP 700/44 is Hewlett-Packard's PC Terminal, designed for use in a multiuser PC environment. It can operate in ANSI mode (as a DEC VT52, VT100 and VT220 with an AT2 keyboard) or in PC Terminal mode (as a terminal transmitting PC-keyboard-like key-scanning codes to the host PC) Multi-user applications designed for VT220 emulation mode are widely available today while applications that utilize the scan code are growing in popularity. The HP 700/44 offers both the DEC VT220 character sets and the IBM PC character set. A user running a monochrome, alphanumeric (non-graphics) application on the HP 700/44 will use the same AT2 keyboard and see the same display (IBM PC character set) as if the application were running on a stand-alone PC. As a result, a PC operator will find the HP 700/44 minimizes the need for retraining.

Major Features	Advantage/Benefit
PC Compatibility •AT2 Keyboard Layout •IBM Character Set •Key Scanning Codes	Standardize on a single IBM AT2 keyboard and character set, minimizing operator confusion and training IBM PC character set and key-scanning codes allow alphanumeric PC (or PC look-alike) applications to run on the 700/44 to a multi-user PC
Superior Display Quality •14 inch screen •High resolution character cell, 9 × 14 character with half dot shift which is equivalent to 18 × 14 cell for most characters	Larger, better formed characters reduce viewing fatigue and increase user productivity
3 Phosphor Colors •Soft White •Green •Amber	The choice of soft white, amber, or green allows the user to choose the screen color that maximizes comfort and productivity. Soft white with black characters on a white background is similar to a typewritten page
72 Hertz Screen Refresh Rate	Less flicker reduces viewing fatigue and increases user productivity. Especially important when displaying black characters on a white screen
ANSI Compatibility	Compatibility with this industry standard allows connections to computer systems running ANSI compatible applications (when an IBM AT2 keyboard is acceptable)

How to Win With The HP 700/44

The HP 700/44 PC Terminal is designed for connection to a multiuser Personal Computer System. It offers a full-featured alphanumeric terminal with DEC VT220 emulation and PC characteristics, such as AT2 keyboard and IBM PC character set.

The key competition for the HP 700/44 includes the Wyse 60, Wyse 150, Wyse 99GT, Link MC3, and the Falco 500e.

When selling against the Wyse 60, the HP 700/44 has the following advantages:

- VT220 emulation
- Superior ergonomics, superior character resolution, 72 Hz refresh rate
- RS422

When selling against the Wyse 150, the HP 700/44 has the following advantages:

- VT220 emulation
- RS422
- 3 additional pages of memory

When selling against the Wyse 99GT, the 700/44 has the following advantages:

- Lower price
- 2 additional pages of memory
- Superior ergonomics: soft white and green, character readability, 72 Hz

When selling against the Link MC3, the HP 700/44 has the following advantages:

- VT220 emulation
- AT2 keyboard layout (extra cost for MC3)

HP 700/44 Competitive Feature Chart (9/1/89)

Features	HP 700/44	WYSE 60	LINK MC3	FALCO 500e	WYSE 99GT	WYSE 150
Tilt & Swivel	Yes	Yes	Yes	Yes	Yes	Yes
CRT Size	14″	14″	14″	14″	14″	14″
Refresh Rate	50/60/72 Hz	60 Hz	50/60 Hz	47 to 63 Hz	60/70 Hz	60/78 Hz
Phosphor*	A/G/SW	A/G/SW	A/G/SW	A/G/SW	A	A/G/SW
Character Size	9 × 14	10 × 16	10 × 14	10 × 16	10 × 13	10 × 16
Half Dot Shift**	Yes	No	No	No	No	No
Display Lines	24/25	24/25/42/44	24/25/42	25/26/28/ 33/40/44	24/25	26
Columns	80/132	80/132	80/132	80/132	80/132	80/132
Pages	4	7	6	7	2	1
Data Com Port	RS232	RS232	RS232	RS232/422	RS232/422/423	RS232
Printer	RS232	RS232	RS232	RS232/422	RS232	RS232
Current Loop	Yes	No	Opt.	Opt.	No	No
Bidirectional	Both	Both	Both	Both	Both	Both
Keyboard Layout	AT2	AT2/ANSI ASCII/AT	ASCII AT2 opt., $134 RT opt., $160	VT220/AT2 ASCII	AT2/VT220 ASCII	AT2/ANSI ASCII
Clock	No	Yes	Yes	No	Yes	No
Calendar	No	Yes	Yes	Yes	Yes	No
VT220 Emulation	Yes	No	No	Yes	Yes	No
VT100/52 Emulation	Yes	Yes	VT100	Yes	Yes	Yes
4010/4014	No	No	No	Yes	Yes	No
PC Term	Yes	Yes	Yes	Yes	Yes	Yes
Warranty	1 Year	1 Year	3 Year	1 Year	1 Year	1 Year

* G = Green, A = Amber, SW = Soft White (black characters on white screen), W = White (white characters on black screen)

** Half dot shift improves character readability by doubling the 9 × 14 character cell to 18 × 14 for most characters

HP 700/44 Questions and Answers

Q On which computer systems can the HP /44 be used?

A The HP 700/44 was designed for use with the HP Vectra QS/16S, QS/20, RS/20C, RS/25C, or Vectra 486 PCs.

Q What multiuser operating system software supports the HP 700/44?

A SCO UNIX System V/386 3.2, SCO VP/ix 1.2. and Xenix 286 and 386.

Q What SCO UNIX applications are supported on the 700/44?

A The 700/44 is compatible with SCO application (Santa Cruz Operations, Santa Cruz, California) software. Call SCO for status of specific application information and support.

Q What is the advantage of the AT2 keyboard layout?

A The AT2 keyboard layout is the standard keyboard layout on all of the Vectra PCs (CS, ES, RS and QS) PC users can move between the HP 700/44 and any Vectra without relearning the keyboard.

Q What is a PC Multiuser System?

A A PC multiuser system allows two or more people to share resources, such as data or peripherals, on a single SPU or host. Because each user has direct access to the system via a terminal, users are able to access information and store data simultaneously. The benefits for small operations such as workgroups or small businesses is that it allows for sharing of expensive peripherals and important information. Up to 32 users can be added without incurring the added expense of a PC, simply by purchasing another terminal. PC multiuser systems offer excellent price and performance advantages.

Q What is the HP Vectra PC Multiuser system?

A The Vectra Multiuser System is a complete, single vendor system operating on HP's current Intel 80386 microprocessor platform. The HP Vectra Multiuser System will consist of the following components:

- HP Vectra QS/16S, QS/20, RS/2C, RS/25C, Vectra 486 PCs.
- HP D2040A Terminal Multiplexor
- SCO UNIX System V/386 3.2 and SCO VP/ix 1.2
- HP Terminals: Series 700, Models 41, 43, 44, 22 and 32

Q Does the 700/44 have the Wyse 60 functionality?

A The 700/44 does not have the Wyse 60 Native Mode or the Wyse PC Mode.

Q Is the VT220 keyboard available on the 700/44?

A No. The IBM AT2 keyboard is the only keyboard available at this time. However, the 700/22 does have a VT220 keyboard.

The One Minute Demonstration HP 700/44

The following procedure shows you how to:

- Demonstrate the HP 700/44's superior display quality
- Display the three setup menus

1. Connect the power cord and keyboard cable. Power on the terminal.
2. Press the Setup key on the keyboard to display the General Setup menu. Use the contrast and brightness slide controls to adjust the display for comfortable viewing. Note the superior display quality.
3. Move the cursor to the "On Line" field and press Enter to change the field from "yes" (the power on default value) to "no" (local mode so you can type on the screen).
4. If your terminal has the soft white phosphor, check to see that the "Light Background" field is set to "yes". If not, use the *enter key on the numeric keypad* to change the selection. Save the new value by moving the cursor to the "Save" field and hitting the *enter key on the numeric keypad.*
5. Press the "Next Screen" key to cycle through all three setup menu screens.
6. Move to the following fields using the cursor keys and *press enter on the numeric keypad to cycle through choices:*
   - "Terminal mode" can be set to "HP-PCTerm" or VT220 compatibility
   - 24 or 25 line display
   - IBM compatible PC Character Set can be selected. The default is DEC VT220 character set.
7. Press the Setup key again to return to local mode where you can type on a blank screen.