# HP CHANNELS

## Introducing the new HP Vectra PC family
## Power, compability, and diversity

**HEWLETT PACKARD**

# HP CHANNELS

## On the cover



Power, compatibility, and diversity characterize the new family of HP Vectra PCs. From the entry-level HP Vectra CS PC, to the state-of-the-art HP Vectra RS/20 PC, users will find a broad range of industry-standard computers that meet their computing needs. See articles beginning on page 15.

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# HP Computer Museum
[www.hpmuseum.net](http://www.hpmuseum.net)

**For research and education purposes only.**

# Table of Contents

# HP Takes the Offensive in the Workstation Marketplace



With the September 21, 1987, introduction of our new PC workstations, coupled with our recent announcement of new terminal and portable PC products, HP has once again taken the offensive in the office and standalone PC marketplace. HP's value-added business partners can now take the offensive in their markets, including in their product arsenal the new HP Portable Vectra CS PC, the new 700 Series of low-cost terminals, and our new family of desktop PCs.

## New low-cost terminal line

The new HP product line begins with our new family of low-cost terminals. All the new HP terminals include ergonomic features such as tilt-and-swivel monitors and adjustable keyboards. All monitor controls are located on the terminal front for easy access.

And all terminals have 14-inch diagonal screens designed to produce sharper images. Terminal monitors are available in green and amber. In addition. the new HP and DEC-compatible terminals are available in soft white, with black letters displayed on the white screen.

## Entry-level ASCII family

The full-featured HP 700141 display terminal is the least expensive member of HP's new terminal offering. This model is compatible with terminals from a number of leading vendors, including Wyse, Televideo, ADDS, Lear Siegler, Qume, and Hazeltine. The HP 700141 keyboard provides 58 programmable keys, including 16 function keys that can be doubled to 32 by pressing the shift key.

## HP 2392 and HP 2394 replacements

Replacing the HP 2392 and HP 2394 terminals are the new HP 700192 and HP 700194. In addition to the features of the HP 2392, the HP 700192 supports 80- and 132-column viewing modes, storage of up to 8 pages of display memory, and 16 function keys — twice the number supported by the HP 2392. Finally, these models offer an attractive price, much lower than the models they replace.

The HP 700/94 contains all of the features of the HP 700/92 terminal plus a forms cache that allows up to 25 forms to be stored in the terminal memory, reducing the need to download forms from the host computer. Eleven data edit checks can now be done at the terminal rather than the host, reducing data communication traffic.

## DEC-compatible terminal

For DEC environments, the new HP 700122 display terminal works with programs designed for the DEC VT220, VT100, and VT52 terminals, as well as applications that follow the ANSI 3.64 protocol. The keyboard has 106 keys, in the same layout as DEC's, but includes twice as many programmable keys. And, HP's 700122 has four pages of memory for the display — four times that of DEC's VT220 terminal — allowing more information to be displayed by scrolling up and down.

## IBM-compatible terminal

The HP 700171 display terminal is designed to run applications that require an IBM 3191 A or B terminal in a 3270 Information Display Systems environment. A security lock, as well as controls for power and brightness, are located in front for ease of use. The keyboard is offered in 122-key and 102-key models, with the same configurations as those offered by IBM.

Whether you're connecting terminals to HP 3000s or other vendors' systems, HP now has the products available that will allow you to win the battle with an all-HP solution.

*Training*

# NEW CUSTOMER TRAINING COURSE FOR ADVANCED TurboIMAGE USERS

Hewlett-Packard has developed a new classroom course to enhance the current customer-training curriculum to better fill TurboIMAGE users' needs. Advanced TurboIMAGE (PIN 51480A) is designed to provide advanced-level training for the experienced database analyst, database administrator, and programmerlanalyst. The course focuses on TurboIMAGE's internal design and performance optimization.

The course is three days in length and will provide the training necessary for database analysts, database administrators, and programmer/analysts to design, manage, and support the use of database applications at their local sites.

Upon completion of the course. the student will be able to:

- Design, prototype, and implement a database for optimal performance

- Manage database buffers to effect performance

- Structure databases for optimal performance

- Design more efficient TurboIMAGE applications

- Identify and use database performance tools and utilities

- Perform techniques to troubleshoot and identify TurboIMAGE performance problems

A case study is used throughout the course to practice solving real-world database problems. Computer-based training is also used to demonstrate various database situations. Upon completion of the course, students will be better equipped to make decisions and recommendations concerning the utilization of their database applications. The course provides the specialized tools needed to fine tune database design skills.

The prerequisite for this course is successful completion of TurboIMAGE DBMS13000 (PIN 35053B), plus minimum six months working experience with IMAGE13000 or TurboIMAGE. For further information, contact your HP sales rep.

*Training*

# HP LASERJET 2000 PRINTER MAINTENANCE TRAINING AVAILABLE

Hewlett-Packard Customer Service Training is offering an HP LaserJet 2000 printer maintenance training course at the HP Dallas/Irving Technical Training Center.

Course 50045A provides customer and dealer service personnel with the knowledge and skills to operate, diagnose, troubleshoot, and repair the HP LaserJet 2000 printer (to the replaceable subassembly level).

The FY88 50045A schedule (at the Dallas Training Center) is listed below.

The week of:
    December 7, 1987
    February 1, 1988
    May 23, 1988
    August 29, 1988

For more information, or a copy of the course data sheet, please contact HP's Customer Service Training at 415-691-530015905, or 800-523-0696 (in the Continental U.S.), or 800-882-9595 (in California).

*Training*

# SELF-PACED SERVICE TRAINING PACKAGES AVAILABLE

Hewlett-Packard Customer Service Training (CST) is offering self-paced hardware service training packages on various HP PC, PC peripheral, and instrument products.

Currently, a total of 55 hardware service-training packages and 11 video computer-technology prestudies are available. Service training packages are available for products such as the HP Vectra PC (72425A), the HP QuietJet printer (2227A), and the HP 4971A analyzer. Video prestudies include Disc Mass Storage, Computer Printer, and Magtape Fundamentals.

For the latest self-paced training product list, please call Customer Service Training at 415-691-530015905 or use our toll-free numbers: 800-523-0696 (in the U.S.) or 800-882-9595 (in California).

## Also in this issue

*General*

# HP BUSINESS BASIC A.02.00 RELEASE

The A.02.00 release of HP Business BASIC Phase II is now ready for shipment. Included in this release are:

- *Performance enhancements* – Extensive optimizations to the compiler and run-time libraries means that in compiled programs, many of HPBB's features execute faster, use less code space, or both. To obtain optimal performance, users should follow the coding recommendations outlined in a white paper entitled, "Programming for Performance in HP Business BASIC – Taking Advantage of A.02.00." Copies of this white paper will be available upon request from your HP sales rep.

- *Program analyst tool* – A powerful code management tool that helps users to optimize, structure, and maintain their applications is provided within the Interpreter of HPBB A.02.00. Most importantly, this tool helps users restructure large BASICIV or BASIC1260 applications to match the smaller subunit size of HPBB/V. This tool has received very positive reviews from BETA sites, including our major HP 260 European value-added reseller (VAR).

- *Increased reliability* – Many fixes to software defects have been incorporated into this version (A.02.00).

## HPBB – an overview

HP Business BASIC's strength lies in its rich feature set, which allows programmers to concentrate on *what* needs to be done instead of *how* to do it. Its easy subsystem access makes it convenient to write large applications, and its rich interpretive environment makes it easy to write quick utilities.

HPBB consists of a complete development environment, including an interpreter for editing and debugging, and a compiler for program execution.

The HPBB feature set (summarized below) was made available to users in two distinct phases. PHASE I of HPBB, released in 1985, consisted of a core set of statements designed to approximate the functionality of BASICIV. In 1987, the PHASE II release added an impressive number of new features that increased programmer productivity and brought HPBB in closer compatibility with BASIC/260.

Now, this current A.02.00 release addresses performance, reliability, and ease of migration issues.

## HPBB strengths

- Integrated program development environment

- Structured programming

  On-line help facility

- Excellent error handling

- Direct access to subsystems

- Interpreter/Compiler

- Report Writer

- User-defined keys/Softkeys

- Advanced database statements

- Simpler access to VPlus

- Native-language support

- Compatibility aids (KSAM, JOINFORM, JOINFORM EDITOR)

- Program Analyst

- Conversion tools

## Target markets

HPBB is typically purchased by three types of users:

Users with little previous HP BASIC experience who want an extremely productive and flexible language.

HP BASIC 2501260 users who want to upgrade to the HP 3000 line because of a need for:

- More database space
- More users on the system (>10)
- HP 3000 software – HP Desk. VAB software

- HP BASICIV users who want to move onto the 900 Series HP 3000. HPBB will run in native mode on the 900 Series, BASICIV will only run in compatibility mode.

There are specific issues affecting the migration of a BASIC1260 or BASICIV user. Please read the accompanying articles entitled "JOIN13000 – HP Business BASIC Update" and "BASICIV – HP Business BASIC Update."

## Ordering information

HP Business BASIC Phase II is priced the same as the Phase I product. For those HP BASICIV and HP BASIC1260 users who have not yet updated to HP Business BASIC, a return credit is available. Users with previous versions of HPBB will need to *recompile* all programs and subprograms in SL files to enjoy the full benefits of Release A.02.00.

| Product No. | Description |
|---|---|
| 321 15A/R | *HP Business BASIC Interpreter and* Compiler |
| *Opt.* 300 | *BASICIV  return credit* |
| *Opt.* 301 | *BASIC/260 return credit* |
| *Opt.* 310 | *For use on HP 3000 Series* 37, 37XE, MICRO 3000XE |
| *Opt. OCD* | *Upgrade credit for Opt.* 310 |
| *Opt.* 320 | *First Copy for use on HP 3000 Series 39-58* |
| *Opt. OCE* | *Upgrade credit for Opt.* 320 |
| *Opt.* 330 | *First Copy for use on HP 3000 Series 64, 68, or 70* |
| *Opt. OCF* | *Upgrade credit for Opt.* 330 |
| *Opt.* 340 | *First Copy for use on* HP 3000 *Series 930 or* 950 (Compatibility Mode) |

Conversion guides, one for BASICIV and the other for BASIC1260 users, are provided with the product. In addition, the Language Reference Manuals and the Programmer's Guide Manuals are shipped with the product.

HP 260 users migrating to the HP 3000 and HP Business BASIC (HPBB) Phase II will now experience a smoother migration path. HP 260 users will find that PHASE II HPBB offers the BASIC1260 features they have come to depend on (report writer. forms support, and screen management). This latest PHASE II release (A.02.00) adds the Program Analyst. a code management tool that aids in the segmentation of large programs. In addition, this release contains compiled code performance enhancements along with documented performance hints, available upon request from the Sales Response Center.

**Conversion process**

Business BASIC provides a Conversion Utility for BASIC1260 users. In addition, the HP 260 user will require the transfer utility found on the HP 260 system. The conversion package will handle program files. data files, databases, and forms files. After the conversion package is run. a significant amount of manual conversion may be necessary, depending on programming style. That is, large applications often contain some subunits that are too large to run in the interpreter; these should be broken up on the HP 260 or with the Program Analyst. In general, this should allow for direct conversion without running into memory problems.

Users should also be aware that the datatype DECIMAL in HPBB, which is compatible with the HP 260 floating-point numbers, will receive only limited HP 3000 subsystem support. Support in SORT/MERGE was implemented in HPBB UB-Delta-3, and QUERY support via the K2/K4 users definable datatype is planned for late 1987.

**Performance considerations**

The execution speed of compiled code has been increased for many different features of Business BASIC, and in many cases, the actual amount of code generated has been reduced. To take advantage of these enhancements, users must upgrade to at least Version A.02.00 of HPBB, and recompile programs and subprograms that exist in SL files.

To maximize performance, most applications will need to be tuned so that they take advantage of HP 3000 architecture and features. Users should follow the guidelines outlined in two white papers: "BASIC1260 to HP Business BASIC – Programming for Portability" and "Programming for Performance in HP Business BASIC – Taking Advantage of A.02.00."

A characterization of overall performance improvements of the A.02.00 version will be published later as benchmarking information becomes available.

**Documentation**

For more information, users should consult the HPBB Reference Manuals, HPBB Conversion Guide, and white papers, available through the HP sales offices: "BASIC12501260 to HP Business BASIC Conversion Evaluation," "BASIC1260 to HP Business BASIC – Programming for Portability,'' and "Programming for Performance in HP Business BASIC – Taking Advantage of A.02.00."

**JOIN program**

A marketing program calied JOIN13000 is designed to aid BASIC1260 users moving to the HP 3000 environment, utilizing HP Business BASIC Phase II. JOIN13000 consists of a set of products and programs – including conversion tools – to provide an easy HP 260 to HP 3000 migration path. The targeted upgrade paths are the HP MICRO 3000XE and the HP 3000 Series 52. Please contact the Sales Response Center for the latest information on the availability of this program.

For further questions, please contact your HP sales rep.

*Note: Any reference to the HP 260 pertains to both the HP 250 and HP 260 product lines.*

HP 3000 users moving to HP Business BASIC Phase II will now experience a smoother migration path. Although HP Business BASICIV is highly compatible with BASICIV on a statement-by-statement basis, users have had difficulty segmenting large programs to match the smaller subunit size required by HP Business BASIC (HPBB). HPBB Version A.02.00 now offers the Program Analyst, a code-management tool that aids in the segmentation of large programs. In addition, this release contains compiled code performance enhancements, along with documented performance hints, available upon request from the Sales Response Center.

**Conversion process**

HPBB provides utilities to automatically convert BASICIV programs and data(BASD) files, as well as calls to BASIC/VKSAM files. Refer to BASIC/V to the HP Business BASIC Conversion Guide (PIN 32114-90004) for further information on HP Business BASIC compatibility with BASICIV. Because the HP Business BASIC compiler has changed, current users of HP Business BASIC Phase I will need to recompile their code with the installation of any PHASE II release. Also, users should be aware of the fact that although HP Business BASIC includes

the data type DECIMAL for compatibility with the HP 260 floating-point numbers, the only HP 3000 subsystems that will support this data type are SORT/MERGE and QUERY.

**Performance considerations**

HPBB's rich feature set results in a very powerful and productive language, which most likely runs slower than CPU-bound BASIC/V applications. Adding to this is the fact that BASIC/V is written in SPL and HPBB is written in Pascal. To obtain best performance, BASIC/V users should consider modifying code and using compiler options. Please consult the white paper, "Programming for Performance in HP Business BASIC – Taking Advantage of A.02.00," available from HP sales offices.

For further questions, please contact your HP sales rep.

*General*

# HP BUSINESS REPORT WRITER: NEW FEATURES WITH VERSION A.01

Since its release last year, HP Business Report Writer (HP BRW) has proved to be HP's most successful software in years. It has been described by customers and value-added businesses alike as "awesome," "a great concept," and "packed with database reporting options." It has been so well received that, in September, we will be congratulating our 1,000th customer.

However, we haven't rested on our laurels. The BRW lab has been busy and now HP is pleased to announce the release of Version A.01 on the UB-Delta-4 MIT. HP BRW A.01 new features include support of System Dictionary, a migration utility to upgrade

from Report/V and Inform/V, plus a suite of BRW intrinsics to help application programmers better integrate HP BRW into their applications.

**System Dictionary support**

HP BRW now supports System Dictionary/V as well as Dictionary/V and the MPD Application Dictionary (used by, for example, MM, PM, HPFA).

**Migration utility**

This utility translates Report/V statements into menu specifications required for HP BRW. The same utility can also convert Inform/V reports. Remember, Report/V users also receive a full (100 percent) credit toward the purchase of HP BRW. It is planned to reduce this 100 percent credit in 1988, so all Report/V users should move to HP BRW now.

**BRW intrinsics**

These allow programmers to call HP BRW from applications written in Transact, COBOL, FORTRAN, Pascal. or SPL. They enable reports to be displayed, run with user- or application-provided selection criteria. and displayed on line. Report runs can also be streamed and scheduled via intrinsics. All of these intrinsics can either invoke the standard BRW screens, or be based on user-defined screens. The report invocation could even be handled in character mode or in local language. And, as with all BRW runtime programs, the runtime intrinsics are available on the Fundamental Operating System (FOS) free of charge.

**Other enhancements**

Other enhancements to HP BRW include encryption of report passwords, and support for "real numbers" – extending HP BRW's calculation possibilities even further.

*General*

# HP REPORT FACILITY OBSOLETED

HP Report Facility (HPRF), a report writer software on the HP 3000, was introduced as a module of HP Financial Accounting (HPFA) in March. 1983. With the release of HPFA Version A.02.03, in May 1986, HPRF was replaced as HPFA's report-writer option by HP Business Report Writer (BRW). HPRF is, therefore, being obsoleted from the HP Price List effective September 1, 1987. This includes all 12 local versions.

HP Application Link, introduced in March, 1985, as another module of HPFA, is a utility that downloads HPRF files to PC spreadsheet applications. Due to its dependence on HPRF, this product is also being obsoleted from the price list at the same time. Similar functionality is available from HP BRW with AdvanceLink, as well as from HP Information Access.

Obsolescence of HPRF means that the recommended report writer for HPFA is HP Business Report Writer, HP's standard reporting tool. As well as having access to the extensive reporting capabilities of this software, your HPFA users can also have the added benefit of having a report writer that can be used across many different applications.

Following standard HP policy, support and media replacements for these products will be provided for five years beginning September 1, 1987.

# NEW RELEASE OF HP DESKMANAGER

Announcing a new release of HP DeskManager — Version B.02.00 — offering greatly improved performance compared to its predecessor, Version B.OO.OO.

Now, even more users can be supported with good response times on all HP 3000 systems running HP Desk-Manager. We've improved HP Desk performance by reducing the amount of CPU and disc I/O required by the product, and additional benefits have been gained by changing the database locking mechanism:

■ CPU consumption of HP Desk Version B.02.00 has been reduced by approximately 22 percent compared to Version B.OO.OO. CPU consumption is now approximately halfway between the levels required by A.03.01 and B.OO.OO.

■ Disc I/O has been brought down to an even greater level. The improvement on Version B.OO.OO is approximately 31 percent – almost down to the levels experienced in Version A.03.0l

The reduction in CPU consumption will enable users to support more HP Desk users with good response times than was possible with HP Desk Version B.OO.OO. This applies across the range of HP 3000 processors. In addition, database locking has been shown to be a bottleneck on top-end systems where there is heavy HP Desk usage, so the new changes in the database locking mechanism will enable incrementally even more users to be supported on HP 3000 Series 6X and 7X systems. The following table summarizes the improvements in numbers of users supported on HP Desk B.02.00:

| Moving from Version B.OO.OO | To Version B.02.00 |
|---|---|
| *HP 3000* | |
| Series 3X | 33 percent more users supported |
| Series 4X, 5X | 33 percent more users supported |
| Series 6X, 7X | 40 percent more users supported |

Users running HP Desk B.02.00 on HP 3000 Series 6X and 7X machines will experience the most significant improvements, with up to 10 percent more users supported than with Version A.03.01. Note however, that B.02.00 still requires more CPU than A.03.01, so users running HP Desk on bottom- and mid-range processors will find that approximately 20 percent fewer users can be supported than with Version A.03.01.

Users who are CPU bound and wish to upgrade from Version A.03.01 to the new release of HP Desk should use detailed performance information to determine the impact of doing this.

**Satisfied customers**

The following quotes are from Long's Drugs, one of the beta test sites for B.02.00. Their HP 3000 Series 70 system was supporting 60 to 80 online users, 20 to 30 of whom would typically be using HP Desk at the same time.

"Overall response times have improved dramatically for all users, even in periods of heavy system usage" – Rick Gerlack. Manager of Technical Support

"The capability to receive new mail while in the IN TRAY has improved performance and productivity greatly" – Tony Parker, Technical Support Analyst.

**Greater functionality with greater performance**

With this new release of HP Desk-Manager. users can obtain industry-leading performance, as well as the greater functionality introduced with Version B.OO.OO, including:

■ Application integration

■ Forms support

■ Customization capabilities

■ Improved functionality

# FASTLANE 3000: PRODUCT UPDATE

FastLane 3000 has only been on the HP Price List since July 1, but at the time of writing, it is already proving to be a well-received and valued component of the 900 Series HP 3000 solution.

FastLane 3000 is a structured consulting service that helps current HP users plan their migration to the 900 Series. The data sheet (P/N 5954-9698) and article in the August issue of HP *Channels* will give you more information on all aspects of the service.

**Its role in Controlled Shipment Program (CSP)**

Since the major objective of CSP is "to create a positive image of the 900 Series based on successful customers," FastLane 3000 has been identified as an indispensable part of this program.

Unless CSP users have already gone through the Software Evaluation & Migration Center (SEMC), they will be receiving FastLane 3000 prior to their SEMC visit. In addition to contributing to the users' success by providing its own feature set, FastLane 3000 will fulfill the requirements for their upcoming SEMC visit. It will also cover migration planning issues fully so that the SEMC sessions are more efficient and comprehensive.

**User reactions**

FastLane 3000 is routinely presented to 900 Series users on factory visits. User reaction to these presentations has been extremely positive. No objections to any aspect of the service have been raised yet. and no customer has indicated that the service was not for them. On the contrary, reactions range from serious interest to intent to buy.

Contact your HP sale rep for more information.

*HP 3000*

# HP 3000 SUPPORTS HP RUGGEDWRITER PRINTER

The recently announced HP Rugged-Writer printer (PIN 2235) is now supported on HP 3000 systems (see article on page 36). The HP RuggedWriter printer is a fast, sturdy, serial printer that will fit in many HP 3000 environ-ments. It fits especially well with Print Central and Resource Sharing in a shared environment on the HP 3000. Support is available in the following MPE VIE releases:

| HP 3000 SPU | Maximum configuration | MIT support |
|---|---|---|
| Series 37. 37XE | 3 via ATP | T-Delta-2 |
| MICRO 3000, MICRO 3000XE | 3 via ATP | UB-Delta-1 |
| Series 39, 42, 42XP, 48. 58A | 8 via ATP or ADCC | T-Delta-2 |
| Series 52, 58C | 8 via ATP or ADCC | T-Delta-5 |
| Series 64, 68 | 16 via ATP | T-Delta-2 |
| Series 70 | 16 via ATP | UA |

The HP RuggedWriter printer is supported as a spooled device in terminal and statmux configurations. It can be configured as either an RS-232 or RS-422 device at 1200, 2400, 9600, or 19.2K baud rates. The following dialog should be used to configure an HP Rug-gedWriter printer:

- LDEV #: (user specified)
- Device name:  HPPCLATP (ATP)
                HPPCCLADCC
                (ADCC)
- DRT #: (user specified)
- Unit #: (user specified)
- Software channel: O
- Type: 32
- Subtype: 14

- Termtype:  TTPCL22
             TTPCL26 (STATMUX)
- Speed: 120, 240, 960, 1920
- REC width: 66
- Output device: O
- Accept jobs/sessions: N
- Accept data: N
- Interactive: N
- Duplicative: N
- Initially spooled: Y
- Auto reply: N
- Driver:  HIOASLPO (ATP)
           HIOASLP2 (ADCC)
- Device class: LP, HP2235

*HP 3000*

# PRINT CENTRAL AND RESOURCE SHARING SUPPORT THE HP RUGGEDWRITER PRINTER

Print Central and Resource Sharing now provide support for the HP Rug-gedWriter 480 printer, a new. fast, and durable 24-wire impact printer. This support is available with the currently released Print Central and Resource Sharing software, which began user shipments in March 1987. With this support, users can connect the HP Rug-gedWriter printer to their HP 3000 for use as a shared PC printer. Print Central and Resource Sharing provide shared-printing capabilities for the HP Vectra PC, HP Touchscreen PC, and the IBM PC/XT/AT using the HP 3000 as a server.

Print Central is a low-cost, entry-level shared-printing solution for PCs connected to an HP 3000 through basic serial connections. With Print Central. the user can invest in high-quality peripherals such as the HP Rugged-Writer printer, and leverage its cost among a large group of users. Since Print Central uses existing RS-2321422 connections, no significant investment is required for additional networking equipment. With Print Central, users have access to high-quality printing capabilities, and management receives a high return on their peripheral investment.

Resource Sharing is an advanced LAN-based, PC-integration solution. It allows PC users to take full advantage of network-wide computing resources by providing shared access to central files, disc space, printers, and tape drives. Resource Sharing operates over StarLAN or ThinLAN for local config-urations and HP SERIAL for remote connections. Resource Sharing allows users to leverage their peripheral invest-ments and optimize the management and control of PC resources.

Both shared printing solutions allow users to access the capabilities of the HP RuggedWriter printer in a shared environment. RuggedWriter printer capabilities that complement Print Central and Resource Sharing include:

| Feature | Description | Benefit |
|---------|-------------|---------|
| Triple paper path | Z-fold and cut-sheet paper stock can both be preloaded. ready for use. A handfed paper path is also included. (The cut-sheet feeder is an optional accessory.) | Provides flexibility in selecting paper type. Reduces printer attending needs. |
| Unlimited duty cycle | Minimal servicing requirements. 20.000 hours MTBF. | Reduced ongoing maintenance requirements. |
| Low printing cost | $.03/page printing cost. | Low operating costs |
| Broad range of capabilities | Supports wide-carriage printing. graphics. comprehensive print features. and multipart forms. | Versatile capabilities satisfy printing needs for a variety of users. |

The HP RuggedWriter printer provides fast, reliable impact printing for a broad variety of office user needs. Together with Print Central or Resource Sharing, the RuggedWriter printer gives users a versatile shared-PC printing solution.

The RuggedWriter printer should be configured in the Print Spooler Utility as a printer model "HP 2934A" when using it with Print Central or Resource Sharing. It is supported as a DIRECT printing device only. Support of the HP RuggedWriter printer does not require a software update.

Print Central (32593A) and Resource Sharing (32597A) are currently available products.

*HP 3000*

# ANNOUNCING HP 7550 PLOTTER SUPPORT FOR PRINT CENTRAL AND RESOURCE SHARING

Now you can give your HP 3000 customers color-graphics capabilities with the HP 7550 plotter in a shared PC environment.

Print Central and Resource Sharing now support the HP 7550 plotter as a shared device for PC users. This support is available with the currently released Print Central and Resource Sharing software, which began user shipments in March 1987. Print Central is a low-cost, entry-level shared-printing solution for PCs connected to an HP 3000 through basic serial connections. Resource Sharing is an advanced LAN-based, PC integration solution.

**Print Central/Resource Sharing Spooled Plotting**

Everyone can have easy access to plotting without leaving their PC

HP 7550A

Spooled plotting means less time wasted waiting for plotter access

$ Plotter investment is spread over multiple users, production costs are reduced

Presentations take on new hfe with multi-color graphics

The HP 7550 and Print Central or Resource Sharing can make a significant contribution to the effectiveness of the user's office solution by providing:

- *Easy access* – Every member of the user's workgroups can have easy access to spooled-plotting capabilities without leaving their PCs. No more lost time transferring files from one workstation to another to get plotter access.

- *No waiting for plotter availability* – Since all plotter output is spooled, users are never held up while someone else's document finishes plotting.

- *Fnst throughput for large-volume jobs* – Multiple plotters can be configured to plot a batch of slides. Whenever each plotter finishes a slide, it will plot the next slide in the queue. Since the plotters plot concurrently, large-volunie jobs can be finished in no time.

- *Reduced costs* – Plotter investment is spread over multiple users. Also, since high-quality graphics can be created using the HP 7550, there will be less need for outside graphics services.

- *Presentations tuke on new life* – Multicolor graphics allow the user to transform complex information into simple messages with real visual impact. Using products such as the Graphics Gallery, the user can create high-power presentation materials that can make the difference.

Together with Print Central or Resource Sharing, the HP 7550 can add a whole new dimension to the user's PC output capabilities. See how shared plotter output can make a difference.

**Support requirements**

Support of the HP 7550 as a shared device with Print Central or Resource Sharing requires the following major items:

- Print Central or Resource Sharing (UB-Delta-2 or later)

- HP Vectra PC, IBM PCIXTIAT, or HP 150/Touchscreen workstations for Resource Sharing

- HP Vectra PC or IBM PCIXTIAT workstations for Print Central (spooled HP 7550 access is not supported for HP 150/Touchscreens using Print Central)

Enhanced device driver. This device driver is available immediately for users with UB-Delta-2 or later who plan to upgrade to VMIT-Delta-1 when it is available. After VMIT-Delta-1 is available, users will be required to upgrade to VMIT-Delta-1 to maintain support for the HP 7550 as a spooled device.

The HP 7550 should be configured in the Print Spooler Utility as a printer model "HP 2686A" and as "MPE Spooled" when using it with Print Central or Resource Sharing. It is supported as a DIRECT printing device only. For information on configuring the HP 7550 as a spooled HP 3000 device, contact your HP sales rep.

Print Central (32593A) and Resource Sharing (32597A) are currently available products.

## HP 3000

# HP 3000 SERIES 37 AND 42 DISCONTINUANCE

As of November 1, the HP 3000 Series 37 and Series 42 will not appear on the HP Price List. After November 1, the HP 3000 Series 37 will no longer be available for sale. HP's Finance and Remarketing Division (FRD) determines when support life begins for discontinued systems; FRD has determined that support life will start November 1 for the HP 3000 Series 37s. The Series 42R, however, will still be offered by FRD for several months. Contact your HP sales rep for more information.

HP 3000 product numbers to be removed from the price list November 1 are listed below:

| Series 37 | Series 37XE | Series 42 |
|-----------|-------------|-----------|
| 32449A | 32450BH | 30076B |
| 32459A | 32450C | 325428 |
| 30461A | | 32542BH |

## HP 1000

# NEW HP 1000 A-SERIES PRODUCT STRUCTURE

On November 1, HP will introduce a new, simplified HP 1000 A-Series product structure. This new structure eliminates all delete options and creates standard "core" computers that permit users to choose the memory, terminal interface, and cabinet alternative to meet their application requirements.

The primary goal of the restructuring effort was to decrease the complexity of the A-Series family. Benefits found as a result of the simplification effort include: reduced ordering errors, reduced time sale reps spend configuring an A-Series computer, and reduced manufacturing overhead. The new structure brings consistency to the A-Series family while retaining the flexibility required by users.

For ease of understanding, and to account for future continued simplification, the restructuring necessitates new product suffixes for all A-Series computers. This requires that users make changes in their A-Series documentation. However, the long-term benefits from the restructure will far outweigh any short-term inconvenience. Listed below are two examples of systems as they are currently configured versus the restructured versions.

| 2139A – *Current core system* | 2139B – *Restructured core system* |
|-------------------------------|------------------------------------|
| A900 boards | A900 boards |
| ¼-Mbyte ECC memory | User orders desired memory as line item |
| Cache | Cache |
| Floating point, VIS, SIS | Floating point, VIS, SIS |
| 20-slot box | 21½-slot box |
| IS available I/O slots | 15 available I/O slots |
| *Options* | |
| 014: delete memory | User orders desired memory as line item |
| 015: 230V/50Hz power | 015: 230V/50Hz power |

| 2487A – *Current core system* | 2487B – *Restructured core system* |
|-------------------------------|------------------------------------|
| A700 boards | A700 board* |
| 512 Kbyte memory | User orders desired memory as line item |
| Shoehorn | Shoehorn |
| | Floating point, SIS, VIS |
| HP-IB | HP-IB |
| Asynch interface | Order 120058 or 12040D as line item |
| RTE-A | RTE-A |
| Site prep and installation | Site prep and installation |
| *Options* | |
| 001: Floating point | Standard in system |
| 005: Fiber optic cable (P/N 5061-5800) | Option on interface line item order |
| 006: RS-232 (P/N 5061-6634) | Option on interface line item order |
| 008: Delete asynch | Order 12005B or 12040D as line item |
| 014 Delete memory | User orders memory desired as line item |
| 015: 230V/50Hz | 015 230V/50Hz |
| 022: CS/80 tape | 022: CS/80 tape |
| 044: 3½-inch minifloppy | 044: 3½-inch minifloppy |
| 061: 1600 bpi tape | 061: 1600 bpi tape |
| 150: 12121A disc prep | 151: 12122A disc prep |

Following is an illustration of the steps needed for a user to configure an A-Series computer. This graphic compares today's structure versus the new structure.
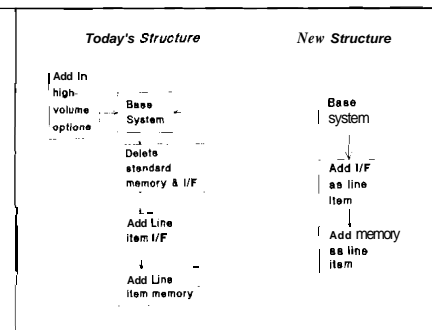


Both the old and new structures will reside on the HP Price List from November 1, 1987, to March 1, 1988, at which time, the old structure will be discontinued. Contact your HP sales rep for more information.

# HP 1000 A-Series Price Increase

Effective November 1, 1987. HP will be increasing the prices of all HP 1000 A600 and A700 computers.

Listed below are the products affected that will appear on the October 1. 1987, HP Price List.

| A600 computers | A700 computers |
|---|---|
| 2106BK | 2137A |
| 2426E | 2197C |
| 2426F | 2197D |
| 2436A | 2437A |
| 2436E | 2487A |
| 2486A | |
| 2156B | |
| 2196C | |
| 2196D | |

As with any price increase, users will have a 30-day grace period during the month of October in which to order systems at the current price. If you have any questions, contact your local HP sales rep.

# PMC/1000 Obsolescence Plans

The HP 1000 A-Series version of the PMC/1000 product will be obsolete effective January 1. 1988. At this time, both the 92121A and 92121R PMC/1000 products, including all options, will be removed from the HP Price List. The PMC/1000 product will be supported for five years after removal from the price list. During this five-year support timeframe, HP will update the product only to fix critical defects and/or to keep PMC/1000 up-to-date with a new revision of RTE-A. No enhancements will be added or considered.

# Open-System Tools for HP 9000 Series 800 Systems

Two new open-system tools are now available for the HP 9000 Series 800 Models 8253, 840S, and 850S computer systems. The new HP 93300R Driver Development Toolkit, and HP-UX Source Code Product* significantly add to the application versatility of these systems.

The HP 93300R Driver Development Toolkit provides an extensive set of tools to develop drivers for nonsupported devices, modification of existing drivers. and debugging of modified operating system code. The tools include:

- *Driver Pocks* – Sets of Channel I/O (CIO) driver sources along with "skeleton" (or fill-in-the-blank) drivers. Users can adapt the source code of these drivers to meet the special requirements of their application.**

- *Symbolic Driver Debugger* – Supports debugging of the resulting object code after a driver has been adapted from among the drivers in the Driver Packs and compiled. The Symbolic Driver Debugger can also be used to debug modified kernel code.

- *Driver. Environment Simulator* – Simulates the environment of a CIO driver within HP-UX on the HP 9000 Series 800 target system. Thus, the driver can be debugged and tested before the interface card is developed. And, the debugging and testing are done without requiring that a complete system be dedicated to only that activity.

The HP-UX Source Code Product is available to technically sophisticated users that need to:

- Gain a deeper understanding of how the operating system works, with the potential of providing their own support of the software.

- Customizing the operating system to meet specific needs.

- Meet archival requirements of the U.S. Government and other official entities.

The HP-UX Source Code Product contains the kernel, commands. libraries, and diagnostics for HP-UX, as well as an extensive set of manuals.

Contact your HP sales rep to order either of these open system tools.

*To preserve HP's reputation with our customers and to assure customer satisfaction, we are qualifying customers who want to purchase source code. A key prerequisite is the purchase of a source license for AT&T System V, Release 2, Version 2, or a later release. Your HP sales rep can provide further information on customer qualification for purchase of HP-UX Source Code.

**The driver packs included with the Driver Development Toolkit contain HP-only code drivers. Driver sources are available that contain AT&T code. An AT&T source license as described above is required. Contact your HP sales rep for details.

# New Products and Prices Realign HP 9000 Workstation Line

Hewlett-Packard has introduced a new line of graphics systems that offer performance previously unavailable without add-on accelerators, and lowered the U.S. list price on the HP 9000 Model 318M entry-level workstation.

We believe that these new products will reset expectations of users purchasing midrange graphics workstations and position us very favorably as compared to our competition. The graphics performance offered in standard midrange workstations has not kept pace with the

recent improvement in CPU performance. These new systems restore that balance for a wide range of applications.

**Leader in graphics**

The new HP 9000 Models 330MH, 330CH, 350MH, and 350CH offer improvements in performance. resolution, and display size compared to previous products in this range. All four systems use an enhanced graphics processor optimized for 2D graphics applications such as ECAD logical and physical design, MCAD 2D design and drafting. mapping, AEC. software development, and artificial-intelligence applications.

Direct hardware support is provided for features such as vector drawing, circle drawing. patterned area fill, and pixel replication. Support also is provided for bit- as well as byte-per-pixel addressing. high-speed block moves (commonly referred to as BitBLT). and future graphics accelerators.

The color-system versions provide eight color planes for up to 256 simultaneously displayable colors from a palette of more than 16 million colors. and can alternatively be configured to provide four plane double buffering. Two separately scrollable, overlay planes can be used for cursors. text, or temporary storage.

With this enhanced graphics capability, HP 9000 Models 330CH and 350CH offer a balance of CPU and graphics performance previously unavailable in this range of workstations.

A new, higher-resolution. 19-inch display is bundled into HP 9000 Models 330MH, 350CH, and 350MH systems. It is either monochrome (MH) or color (CH), and the resolution is 1280 × 1024. HP 9000 Model 330CH comes standard with a 16-inch display that has 1280 × 1024 resolution.

These 2D graphic products round out HP's overall graphics workstation offering. We established our leadership in graphics over a year ago with the introduction of the SRX solids-rendering workstation. Today. the SRX is still the highest-performance graphics solution available.

Twice we have increased the CPU power offered with the SRX system on the HP 9000 Model 350SRX workstation and Model 825SRX superworkstation. We believe it offers the best solution for 3D interactive solids modeling in terms of combined CPU and graphic performance.

**Ordering information**

The HP 9000 Model 31XM includes a 16.6MHz MC68020 microprocessor with MC68881 floating-point coprocessor. 4 Mbytes of high-speed synchronous RAM. HP-UX operating system. and a 17-inch 1024 × 768 bit-mapped monochrome display.

Both HP 9000 Models 330MH and 330CH include a 16.67MHz MC68020 CPU; MC68881 floating-point coprocessor: 1280 × 1024 monitor: 4 Mbytes of RAM; and HP-UX operating system and networking.

Both HP 9000 Models 350MH and 350CH include 25MHz MC68020 CPU; MC68881 floating-point coprocessor; 19-inch, 1280 × 1024 monitor; 8 Mbytes of RAM; and HP-UX operating system and networking.

A floating-point accelerator is available for all systems. An error checking and correcting (ECC) RAM for the Model 350 is optional.

*HP 9000*

# NEW RELEASE OF X WINDOWS FOR HP 9000 SERIES 300 AND MODEL 825

On September 1. Release A.01.00 of the X Window System (X) for the HP 9000 Series 300 began shipping. This new release includes many new features and support for most of the display systems now available for HP 9000 Series 300 computers. In addition. X will be a standard part of the HP 9000 Model 825SRX computer system. and be available as a stand-alone product for the HP 9000 Model 825S.

**History**

As many of you may be aware, X is taking the engineering-workstation industry by storm. On January 15 of this year. 11 major computer software and hardware vendors, including HP, announced their support for the X Window standard. Since then. the number of vendors that have announced their support includes nearly every major vendor of engineering hardware. and numerous software suppliers. HP has played a major role in all of these activities, and continues to be active in all aspects of the X effort.

**What's new**

There are a number of new features in Release A.01.00. All of the features of the A.00.00 product are maintained. and all of the new features are available in both the HP 9000 Series 300 and Model 825 products. The new features include:

■ *Display support* – Support for the following Series 300 display systems has been added to X:

– 98550A CH system
– 98720A SRX system

In addition. the HP 9000 Series 800 product supports the SRX display system.

■ *New software features* – The following new software capabilities are provided in Release A.O1.00:

– *Starbase on X* – A Starbase graphics driver can be linked into Starbase programs so that those programs can work in an X window(s). This driver is constructed like any other Starbase driver and all output from the program goes through the X server to be displayed. Now Starbase graphics programs can be ported to the X window system quickly and easily.

– *HP Window-X* – This set of commands and libraries allows programs written for the HP Windows19000 environment to be ported to the X environment easily. The system provides a high degree of compatibility between the two systems. It is intended as a porting aid for current applications. not as a development environment in new applications for X.

– *FORTRAN Access to X and the Xr Library* – This is a library of routines for allowing a FORTRAN programmer to access X Window and Xr Library functions. The routines provide a generalized method for allowing the construction of C language type 'info-structures' from FORTRAN for passing to C language routines.

### Literature

Detailed information about Release A.01.OO of the X Window System will be in the next printing of the "HP-UX Technical Supplement."

### Ordering information

The latest revision of the X Window System is now available. The HP 9000 part numbers are listed here:

| Product No. | Description |
| --- | --- |
| *Series* 300 | |
| 82320A | |
| Opt. 022 | X Window System (%-inchcartridge tape) |
| 82320A | |
| Opt. 045 | X Window System (3%-inchdisc) |
| 82320R | Ripht-to-Copy 82320A |
| 82320R | |
| Opt. 100 | Right-to-Copy 82320A (no manuals) |
| Model 825 | |
| 92524A | |
| Opt. AAO | X Window System (%-inchcartridge tape) |
| 92524A | |
| Opt. AA1 | X Window System ($\frac{1}{2}$-inch 1600 bpi tape) |
| 92524R | Right-to-Copy 92524A |
| 92524R | |
| Opt. 0B0 | Right-to-Copy 92524A (no manuals) |

# REDUCE ALGEBRAIC PROGRAMMING SYSTEM FOR HP 9000 SERIES 300

REDUCE is a powerful, interactive algebra system that can help engineers, mathematicians, physicists, and other scientists in solving mathematical problems. REDUCE has been growing in power and capabilities since its beginnings in 1963, under the sponsorship of RAND Corporation and the University of Utah.

Current application areas include fluid mechanics, numerical analysis, engineering design problems, celestial mechanics, quantum electrodynamics, differential geometry, and university research and education.

### REDUCE capabilities

■ Differentiation, integration, polynomial and integer factoring, matrix calculations, solution of systems of lin ear equations.

Arbitrary-precision integer or floating-point calculations, as well as rational, complex, or modular arithmetic.

■ Flexible, easy-to-learn programming language, similar to Algol or BASIC, is available in algebraic mode; in symbolic mode. Standard LISP is available with simplified syntax.

■ Automatic simplification and structuring of expressions, under the control of switches and operators that let people manipulate and display expressions in the most helpful ways.

■ FORTRAN-compatible output, including FORTRAN, C, or Ratfor code generation from REDUCE expressions.

### REDUCE enhancements

■ Complete documentation, including a reference manual, user's guide, introductory tutorial, and instant reference card.

■ Graphics commands to generate and display 2D and 3D plots of graphics and surfaces from equations and matrix values. Plots can be sent to any HP graphics printer or plotter for hard copies.

■ Other useful facilities to help REDUCE users: a statement editor for modifying and reexecuting commands, a logfile to keep records of a session, trace facilities for procedures, defaults and reset commands, and many others.

### Ordering information

The REDUCE system (PIN 98678-19010) includes REDUCE plus documentation. source code, and Common LISP execution kernel. The system runs on HP 9000 Series 300 HP-UX systems having a minimum of 4 Mbytes of RAM. HP is making this product available to users on an unsupported basis; no support product is available.

*HP 9000*

# BASIC 5.0 UPGRADE KIT NOW AVAILABLE

Good news for those HP 9000 Series 200 or Series 300 users who want to upgrade to a BASIC 5.0 Compiler from IEM's version. The BASIC 5.0 Compiler upgrade kit is available from HP's Direct Marketing Division (DMK) as of October 1. The upgrade kit consists of compiler software and documentation.

Users must return their IEM Series 2001300 (BASIC 3.0 or BASIC 4.0) compiler to DMK for credit.

The BASIC 5.0 Compiler upgrade kit is available for all three HP 9000 Series 2001300 media types:

| Product No. | Description |
|---|---|
| 98618-17200 | 5%-inch media |
| 98618-17400 | 3%-inch media recorded single-sided |
| 98618-17500 | 3%-inch media recorded double-sided |

*HP 9000*

# R-COPY SOFTWARE CLARIFICATION

A-Copy prerequisite

Eligibility for purchasing a Right-to-Copy (R-Copy) version of any given nonoperating-system software product for the HP 9000 Series 800 family requires a previous or concurrent purchase of an A-Copy on an equivalent or higher class processor. There are currently three classes of software on the HP 9000 Series 800: 825 Class, 840 Class, and 850 Class. An 850-Class A-Copy software product purchase entitles the holder of that software license to purchase an unlimited number of R-Copy licenses on any Series 80 processor. In contrast, an 825-Class A-Copy license precludes the purchase

of an R-Copy license on either an HP 9000 Model 840S or Model 850S unless an equivalent or higher class A-Copy purchase is made- (Note: Unlike subsystem software, the HP-UX operating system employs user-based pricing.)

Software bundles

In some instances, two or more A-Copy products are combined together in a bundle at a lower price than the sum of the independent products. This bundle price is typically equivalent to or less than the sum of the combined products at R-Copy prices. Although priced at R-Copy levels, an A-Copy bundle license implies A-Copy licenses for all of the individual component products. Separate pieces of the bundle may be later purchased on equivalent or lower class processors at R-Copy prices. Buying the Development Pack (FORTRAN, Pascal, DGLIAGP, Starbase) on an HP 9000 Model 825S permits a future purchase of FORTRAN, for example, at the R-Copy price on subsequent HP 9000 Model 825S purchases.

Software upgrades

The software upgrade program is provided as a companion to the hardware program to offer financial credits when-a lower-priced system is returned in exchange for the purchase of a higher-priced system. Software upgrades may also be used to convert a lower-class A-Copy license to a higher-class A-Copy license when no hardware upgrade occurs. In these instances, the A-Copy upgrade must be accompanied by an R-Copy replacement on the lower-class processor from which the original A-Copy software was upgraded. If an 840-Class A-Copy purchase is followed by a Model 850 purchase, that A-Copy license may be transferred to an 850-Class A-Copy license through the use of a software upgrade providing that it is accompanied by an 840-Class R-Copy replacement.

Contact your HP sales rep for more information.

*HP 9000*

# R-COPY PRICE INCREASE ON THE HP 9000 SERIES 800

Most R-Copy prices on HP 9000 Series 800 software will be increasing on October 1. The following products will be affected.

| Product No. | Description |
|---|---|
| 92439R | Native Language I/O |
| 92433R | Simplex Kanji Font |
| 92443R | FORTRAN for Model 825 |
| 92444R | Pascal for Model 825 |
| 92460R | ALLBASE for Model 825 |
| 92533R | Visor for Model 825 |
| 92430R | FORTRAN for Model 840 |
| 92431R | Pascal for Model 840 |
| 36217R | ALLBASE tor Model 840 |
| 92534R | Visor for Model 840 |
| 92461R | FORTRAN for Model 850 |
| 92462R | Pascal for Model 850 |
| 92469R | ALLBASE for Model 850 |
| 92535R | Visor for Model 850 |

Since the development packs (FORTRAN, Pascal. Starbase, DGL/AGP) are tied to R-Copy pricing, they will also be increased in October as shown below:

| Product No. | Description |
|---|---|
| 92447A | Development Pack for Model 825 |
| 92438A | Development Pack for Model 840 |
| 92465A | Developrnent Pack for Model 850 |

In addition, all HP 9000 Series 800 interprocessor credits (Options 0C8 and 0C9) have been adjusted to match these price increases to assure 100 percent software credit for R-Copy license upgrades.

## Also in this issue

*Portable*

# THE HP PORTABLE VECTRA CS PC – THE PORTABLE EXTENSION TO THE HP VECTRA PC FAMILY

The HP Portable Vectra CS PC (PIN D1001A) and Portable Vectra CS PC Model 20 (PIN D1009A) are the logical portable extensions to the new HP Vectra PC family. Maintaining complete compatibility with the desktop HP Vectra CS PC, the HP Portable Vectra CS PC offers a battery-powered, 17.6-pound alternative to the user requiring portability.

While in the office, take advantage of the removable supertwist LCD module and configure the HP Portable Vectra PC with an EGA or CGA color monitor. (RGB video interface/parallel printer interface adapter comes standard.) The HP Portable Vectra PC is available with either dual 3%-inch 1.4-Mbyte flexible drives, or a single floppy 20-Mbyte hard-disc configuration (available first quarter, 1988).

While on the road. the clamshell design and built-in handle ensure ease of transportability and reliable performance. The user-replaceable batteries, with built-in power gauge, give you a continual readout of remaining battery power, and up to 10 hours of continual use (up to 4 hours for the Model 20). And the large 12-inch diagonal super-twist LCD screen – the largest in the industry – provides you with a very readable, high-contrast display of your alphanumeric or graphical data.

So. when you require the quality and performance of an HP Vectra PC. and need it in a portable configuration, the HP Portable Vectra CS PC and CS PC Model 20 are ready to meet your needs.

For more information about the HP Portable Vectra CS PC. see the articles in the September issue of *HP **Channels*** beginning on page 16.

*Portable*

# GRAPHICS GALLERY FOR THE HP PORTABLE VECTRA CS PC NOW SHIPPING

Graphics Gallery for the HP Portable Vectra CS PC and the IBM PS/2 Models 30150160 is now shipping.

The Gallery Collection is now shipping on 3%-inch media. The Gallery Portfolios will also be shipping on 3%-inch media soon.

**Gallery 2.0**

The version shipping on 3%-inch media is Gallery 2.0, the newest release of Gallery announced in the August issue of *HP **Channels.*** This 2.0 release includes rotation of text and objects,

additional text features such as align text, Lotus integration directly into Drawing Gallery, more chart types, and new device support. And the DTP integration capabilities allowing Gallery pictures to be integrated into Page-Maker® and Ventura Publisher, are now bundled with Gallery 2.0.

**Using Gallery with the HP Portable Vectra CS PC in high-resolution mode**

The HP Portable Vectra CS PC has a standard graphics mode of CGA resolution. To use Gallery in high-resolution

mode on the HP Portable Vectra CS PC, or 640 × 400 resolution, a special "Setup" program that comes on the Gallery Setup Master disc must be run. Just type "SETUP LCD" from the disc drive that contains the Setup Master. The AUTOEXEC.BAT file on that PC is then modified so that Gallery will use the high-resolution mode. It is also important to made sure "High-Resolution LCD" is specified as the monitor name in DEVICEID when installing Gallery on the HP Portable Vectra CS PC. The documentation included with the Gallery 3%-inch discs has the specific details.

**Ordering information**

| Product No. | Opt. | Description |
|---|---|---|
| 68352F | 003 | The Gallery Collection |
| 68324F | 003 | Office Activities Portfolio |
| 68326F | 003 | Business Management Portfolio |
| 68325F | 003 | Chemical/Petrochemical Portfolio |
| 68327F | 003 | HP Draw Figures Portfolio |

*Desktop*

# INTRODUCING A NEW FAMILY OF HP OFFICE WORKSTATION SOLUTIONS

Hewlett-Packard offers a broad range of office workstation solutions to help you work more productively and effectively. From workgroup communications to distributed data processing to individual office applications, HP has the office workstation to meet your specific computing requirements. HP's new family of terminals, desktop personal computers, and portable PCs, combined with leading business software, accessories, and peripherals, turn workstations into working solutions.

*Presenting the HP Vectra Personul Computer Family.*

The new HP workstations work well within an integrated systems environment. The HP 700 family of terminals set the standard for performance with an HP 3000 system. All HP desktop personal computers come standard with terminal emulation software for links to host-based resources such as printers and databases.

Each HP workstation is built on industry standards, for true compatibility throughout your office environment. And as new industry standards in software, video, and networking emerge, such as Microsoft's OS/2 operating system, your HP office workstation will take advantage of them.

The new HP 700 family of terminals is designed to meet your user needs, with a high-quality 14-inch screen, a choice of phosphor screen colors, and ergonomic details, such as excellent character resolution and a built-in tilt and swivel mechanism. The HP 700 terminal family fits easily into computing environments based on Hewlett-Packard, Digital Equipment Corporation, IBM, and general-purpose systems.

An HP Portable Vectra CS PC offers IBM PC/XT software compatibility and the functionality of a desktop PC in a portable package. With a full-sized keyboard, built-in disc drives, and a detachable PC-sized LCD screen, an HP Portable Vectra PC ensures that you do not sacrifice functionality for portability. The HP Portable Vectra CS PC

is compatible with the other members of the HP Vectra personal computer family. With a wealth of choices, the HP Vectra desktop PCs meet a broad range of computing needs, and a range of budgets.

**More new members of the family**

▪ The HP Vectra CS PC delivers strong performance and IBM PC/XT compatibility to basic office tasks at an excellent price.

▪ The HP Vectra ES PC, based on an 8 MHz Intel 80286 processor, provides IBM PC/AT compatibility and powerful performance at an economical price.

▪ The HP Vectra ES/12 PC, with its 12 MHz Intel 80286 processor, offers superior performance and IBM PC/AT compatibility to demanding business users.

The HP Vectra RS/16 PC, based on the 16 MHz Intel 80386 processor, combines extremely powerful performance with flexibility due to its floor-mount package.

▪ The HP Vectra RS/20 PC provides premium performance and expandability, with a 20 MHz Intel 80386 processor and a floor-mount design, for the most advanced personal computer users.

HP's Vectra PCs turn into solutions when ordered as preassembled HP Vectra PC systems. Two solution systems are available: the HP Vectra Star-LAN PC, with all the elements you need to link to a StarLAN network, and the HP Vectra Publisher PC, which gives you the tools you need to create professional documents through desktop publishing. And you can select from a complete line of HP accessories, including memory, mass storage, and display systems, to enhance your HP Vectra PC's performance.

From keyboard design to system assembly. Hewlett-Packard engineers the latest advances into all its office workstations. Each component is thoroughly tested to ensure that all HP products meet HP's high standards for quality.

Hewlett-Packard customers consistently rate HP service and support programs first in the industry. You can choose from a variety of support plans or design your own. Either way, you make only one phone call to receive the support you expect.

See the articles in this section for more news on the new HP Vectra PC family.

*Desktop*

# THE HP VECTRA CS PC: EXCEPTIONAL VALUE IN A DESKTOP COMPUTER

Hewlett-Packard's Vectra CS PC, the entry-level member of the new HP Vectra PC family, delivers exceptional value for basic computing needs. For a very low price, you can obtain a complete monochrome system – superb quality at an attractive price.
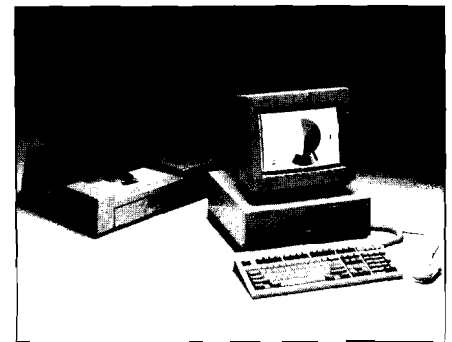


With an 8086-compatible processor, 640 Kbytes of standard memory, built-in serial and parallel ports, and a fast memory data path (16-bit memory bus), the HP Vectra CS PC makes a solid choice for core office applications such as word processing and spreadsheets.

To protect your investment, the HP Vectra CS PC offers flexibility for growth. Seven expansion slots leave plenty of room for accessories. Three mass storage shelves accommodate up to two flexible disc drives and a hard disc drive.

The power of the HP Vectra CS PC extends beyond your desktop. It is the perfect partner for HP's minicomputers and networks. Every system includes HP Terminal Program software, which allows you to tap the resources of a host computer, such as large databases, high-speed printers, and electronic mail. You can access information from the HP minicomputer or send messages quickly and conveniently to other people in your information network.

If you're looking for the ideal, entry-level PC solution, choose the HP Vectra CS PC.

# NEW ACCESSORIES FOR THE HP VECTRA CS PC

Four new accessory products are available to add power and flexibility to the HP Vectra CS PC. These products expand the HP Vectra CS PC's memory, provide fast access to large amounts of data, speed up numeric calculations. and make it easy to connect an HP Mouse and other input devices.

■ *Expanded Memory Card* – The HP Vectra CS PC comes with 640 Kbytes of main memory, the maximum directly addressable under MS®-DOS. The HP Vectra CS Expanded Memory Card adds up to 2 Mbytes of expanded memory that can be used in several ways.

With software that supports Lotus/Intel/Microsoft Expanded Memory Specification (LIM EMS). such as Lotus$^W$ 1-2-3® or Ashton-Tate's Framework II®, large spreadsheets and databases can be manipulated quickly and easily. Some of the memory can also serve as an "electronic disc drive" or RAM disc. Many leading programs, including Microsoft Windows, will run more quickly with a RAM disc.

■ *20-Mbyte Hard Disc Subsystem* – Installing a hard disc greatly increases the data storage speed and capacity of a personal computer. This hard disc subsystem, with a 65 ms average access time and 2:1 interleave factor, enables the HP Vectra CS PC to access data faster than most systems in its class, including the IBM PS/2 Model 30.

■ *Numeric Coprocessor* – Many applications that do extensive calculations, such as spreadsheets and graphics programs, will run noticeably faster with the HP Vectra CS PC Numeric Coprocessor. The Intel 8087 coprocessor chip plugs into a special socket on the HP Vectra CS PC processor board.

■ *HP-HIL accessory interface* – A mouse or tablet makes programs such as the HP Gallery Collection and Microsoft Windows even easier to use. This plug-in card allows HP-HIL input devices, including the HP Mouse, HP Graphics Tablet, and HP Touch to be connected to the HP Vectra CS PC. A special HP-HIL connector is provided, so the standard serial port is left free for a printer, plotter, or communications link.

## Ordering information

| Product No. | Description |
|---|---|
| D1171A | HP Vectra CS PC HP-HIL Accessory Interface |
| D1172A | HP Vectra CS PC Numeric Coprocessor |
| D1173A | HP Vectra CS PC 20 Mbyte Hard Disc Subsystem |
| D1174A | HP Vectra CS PC Expanded Memory Card |
| Opt. 001 | 1 Mbyte installed |
| Opt. 002 | 2 Mbytes installed |

# INTRODUCING THE NEW HP VECTRA ES AND ES/12 PCS

The HP Vectra ES and ES/12 PCs are HP's new 80286-based AT-compatible offerings. The HP Vectra ES PC is an enhanced replacement for the HP Vectra PC. The HP Vectra ES/12 PC is a superior AT-class machine, and offers excellent price/performance.



The HP Vectra ES and ES/12 PCs are designed to satisfy users with high productivity needs. The HP Vectra ES PC, with its 8 MHz Intel 80286 microprocessor, easily handles most spreadsheet, database. sophisticated word processing, and data collection applications. The HP Vectra ES/12 PC, with its 12 MHz Intel 80286 microprocessor, is excellent for more challenging applications, such as complex business graphics, large spreadsheets and databases, or desktop publishing.

If you use applications supporting the Intel 80287 math coprocessor, you will enjoy dramatic speed improvements with the optional HP Vectra PC 8 MHz 80287 Numeric Coprocessor. The optional HP Vectra ES PC Expanded Memory Card can give you up to 8 Mbytes of memory (running at 8 MHz in the ES, 12 MHz in the ES/12) for substantially increased performance

with the many applications supporting the Lotus-Intel-Microsoft Expanded Memory Specification 4.0 (LIM EMS 4.0). LIM EMS 4.0 is the industry-standard way of allowing applications to break the 640-Kbyte memory limitation of MS-DOS 3.X. Supporting applications include Lotus 1-2-3 Release 2.0. Framework II, Microsoft Windows, and many others.

The HP Vectra ES and ES/12 personal computers will provide you with high-performance, flexible tools to speed through your tasks. The HP Vectra ES PC is the choice for economical AT-class power. The HP Vectra ES/12 PC is the choice for more demanding business applications. With either product, you will have a versatile, high-productivity solution to your personal computing needs, with built in HP quality and reliability.

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## HP VECTRA ES AND ES/12 PCS: WHAT'S DIFFERENT

HP's new Vectra ES and ES/12 PCs provide you with improvements in several key areas, including: enhanced performance, increased compatibility, greater expandability, and better integration into HP 3000 environments. And the best part is, we did it without increasing the price.

### Enhanced performance

The HP Vectra ES/12 PC has a 12 MHz 80286 processor, giving it a 50 percent boost in CPU performance over today's HP Vectra PC and the Vectra ES PC. The increased speed addresses the needs of strategic, performance-sensitive market segments such as Desktop Publishing (DTP) and PC-CAD. It also allows HP better competitive positioning in the 80286 marketplace.

### Increased compatibility

By addressing all known compatibility problems with the HP Vectra PC, but still providing as much backwards compatibility as possible, the HP Vectra ES and ES/12 PCs give you flexibility to expand your personal computer needs without abandoning existing hardware and software. Key compatibility issues resolved with the new PCs include: support of third-party DIN keyboards. Novell 286 Network Software support, and operation of off-the-shelf, unmodified Xenix from Santa Cruz Operation (SCO).

The HP Vectra ES and ES/12 PCs also support the new 3 M-inch internal flexible disc drive, making them compatible with IBM's new 1.44-Mbyte format introduced on the PSI2 product line, as well as the older IBM 720-Kbyte format and HP's 710-Kbyte Touchscreen format. This increased interchange compatibility gives you the flexibility to operate in mixed PC environments.

### Greater expandability

Although the original HP Vectra PC package size has not been increased, changes in configuration allow greater expandability with the HP Vectra ES and ES/12 PCs. By incorporating a serial and parallel port with a floppy and hard-disc controller on all systems, an additional I/O slot is available. In addition, up to 8 Mbytes of memory can be supported on the HP Vectra ES and ES/12 PCs without using any additional accessory slots. The new Expanded Memory Card fits into a special HP proprietary Expanded Memory Slot, and allows up to 8 Mbytes of extended or expanded memory on a single board.

### Cost reductions

The combination of incorporating very large scale integration (VLSI) and Surface Mount Technology onto the motherboards creates not only lower manufacturing costs. but provides increased reliability as well. Coupled with ongoing procurement efforts. this allows the HP Vectra ES and ES/12 PCs to be priced the same as, or lower than, today's HP Vectra PC.

### Better integration into HP 3000 environments

By including the HP Terminal Emulation Program with every HP Vectra ES and ES/12 PC kit, these systems are ideally suited for connectivity to HP minicomputers.

While these are the major differences between today's HP Vectra PC and the new HP Vectra ES and ES/12 PCs, the bottom line is this: with the new line of HP Vectra PCs, you simply get more PC for the money.

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## EXPANDED MEMORY FOR THE HP VECTRA ES AND ES/12 PCS

For many of today's software applications written for MS-DOS, 640 Kbytes of base memory just isn't enough. Announcing the perfect solution for the HP Vectra ES and ES/12 PCs – the HP Vectra ES PC Expanded Memory Card.

Hewlett-Packard's Vectra ES PC Expanded Memory Card overcomes the 640-Kbyte barrier for software written to take advantage of the Lotus/Intel/Microsoft Expanded Memory Specification (LIM EMS), the industry standard for expanded memory. With expanded memory, you can store and manipulate large spreadsheets in a single file rather than splitting them into multiple files when the 640-Kbyte limit has been reached. In addition, expanded memory will increase the performance of your HP Vectra PC system when switching between multiple applications under Microsoft Windows.

While fully compatible with the LIM EMS, revision 3.2. popularized by Intel's Above™ Board, the HP Vectra ES PC Expanded Memory Card goes beyond this standard by using the recently introduced LIM EMS 4.0 memory specification.

The new specitication runs all of the software supported by LIM 3.2 including Lotus® 1-2-3®, Symphony⁸, Framework\a, and dBase III®. In addition, LIM EMS 4.0 features up to 16 times as many memory swap areas as cards supporting the old specification and the ability to swap executable code (computer instructions) as well as data. The benefits of LIM EMS 4.0 are most notable in applications supporting these features such as Microsoft Windows 2.0 for the HP Vectra PC (HP 45954B).

The HP Vectra ES PC Expanded Memory Card is the most expandable card available from any vendor. A single card can be loaded with up to 8 Mbytes of memory. This high memory capacity is achieved by using Single In-Line Memory Modules (SIMMs), the latest in memory packaging technology. Because the card plugs into the HP Vectra ES PC Expanded Memory Slot, included exclusively on the HP Vectra ES and ES/12 PC motherboards, none of the seven standard accessory slots need to be used for memory expansion.

The HP Vectra ES PC Expanded Memory Card is also among the fastest memory cards on the market today. When installed in the HP Vectra ES/12 PC, the HP Vectra ES PC Expanded Memory Card runs at 12 MHz, one  ıit wait state further enhancing the HP Vectra performance.

Finally, the HP Vectra ES PC Expanded Memory Card is like having two memory cards in one. All or part of the HP Vectra ES PC Expanded Memory Card can be set-up as extended memory for use in operating systems such as Xenix and Microsoft's OS/2.

The HP Vectra ES PC Expanded Memory Card – designed to make your HP Vectra ES and ES/12 PCs even better.

## Ordering information

| Product No. | Description |
|---|---|
| HP 45944A | HP Vectra ES PC Expanded Memory Card |
| Opt. 001 | 2 Mbytes of memory installed standard |
| Opt. 002 | 3 Mbytes of memory installed standard |
| Opt. 003 | 8 Mbytes of memory installed standard |
| D1354A | 2 Mbytes Expanded Memory Upgrade Kit |

*Desktop*

# HP VECTRA ES AND ES/12 PC
# DISC MECHANISMS

The HP Vectra ES and ES/12 PCs include a new four-function controller board that provides a floppy controller, serial and parallel ports. and a hard disc controller. The hard disc controller cable and data cable are included standard as well. So, if you purchase one of these new systems without a hard disc (HP Vectra ES PC Model 10 and HP Vectra ES/12 PC Model 10) and later want to add one, you need only buy a hard disc mechanism. HP now offers the existing 20-Mbyte and 40-Mbyte, IBM AT-compatible hard-disc mechanisms to meet the needs of users wishing to add on a hard disc to their system.

The new products are subsets of the existing 45896A and 458973 HP Vectra PC Internal Hard Disc Subsystems. The 45896A and 45897B include a hard-disc controller because there is not one included with the original HP Vectra PC system. If you have an original HP Vectra PC, you should order these products when you want to upgrade your systems. The table highlights the features of the new products, as well as how they differ from the existing hard disc subsystems.

| Features | 20-Mbyte drive mechanism Product No. 45896M | 40-Mbyte drive mechanism Product No. 45897M |
|---|---|---|
| Form factor | Half-height, 5¼-inch | Half-height, 5¼-inch |
| Formatted capacity | 21.2 Mbytes | 42.8 Mbytes |
| Typical average seek time (disc performance spec) | 65 milliseconds | 28 milliseconds |
| Shock – Operating – Non-operating | 10Gs 40Gs | 10Gs 40Gs |
| MTBF (Mean Time Between Failure – reliability spec) | 20.000 power-on hours | 20,000 power-on hours |
| What's included (how similar to the 45896A and 45897B) | Hard-disc mechanism, installation manual | Hard-disc mechanism, installation manual |
| What's not included* (how different from the 45896A and 45897B) | No controller card or cables are included with 45896M | No controller card, cables, or Multivoluming utility are included with the 45897M |

* *These pieces come standard with the new HP Vectra CS, ES, and RS series PCs, except Multivoluming, which comes standard with HP's MS-DOS 3.2.*

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# HP VECTRA PC OBSOLESCENCE PLANS

On October I, obsolescence of the original HP Vectra PC and selected accessories will begin. To smooth the transition, the obsolescence is being announced now and will occur in phases that will not be complete until April 1, 1988.

The HP Vectra PC is being replaced by the new HP Vectra ES and ES/12 PCs available October I. The HP Vectra ES PC has the same performance as today's HP Vectra PC but offers greater expandability at a lower cost. The HP Vectra ES/12 PC has 50 percent faster performance and greater expandability for the same price as the current HP Vectra PC. See the accompanying article on "What's different" for more details.

Hewlett-Packard will continue to honor orders for the affected products up to 30 days after their removal from the HP Price List. However, it is in your best interest to convert to the HP Vectra ES or ES/12 PCs as soon as possible, after October I.

Listed here are the products that will be discontinued, their HP Price List removal schedule, and the replacement products. Even though some of today's HP Vectra PC models will remain on the price list until January or April, 1988, all HP Vectra ES and ES/12 PC models will be available on October I, 1987. Because the new HP Vectra ES and ES/12 PCs offer a far greater price/performance package, you should consider moving to the new HP Vectra PCs as soon as possible.

| Product No. | Description | Replaced by |
|---|---|---|
| *October 1, 1987, HP Price Lisr* | | |
| 72458A 72459A | HP Vectra 3000 PC | All HP Vectra ES and ES/12 PCs now include HP Terminal Program for connection to HP 3000s |
| 72496A 72497A | HP Vectra Publisher PC | Replaced by HP Vectra ES Publisher PC or HP Vectra ES/12 Publisher PC |
| 72468A 72469A | HP Vectra StarLAN PC | Replaced by HP Vectra ES/12 StarLAN PC |
| 45987A | Numeric Coprocessor (5.33 MHz Intel 80287) | Replaced by D1387A Intel 80287 High-Speed Numeric Coprocessor: 8 MHz |
| *4th Quarter 1987* | | |
| 45954A | MS Windows for HP Vectra PC | Replaced by Version 2.0, 45954B |
| *January 1, 1988. HP Price List* | | |
| 72425A | HP Vectra PC Model 25 | Replaced by HP Vectra ES PC Model 10 *or* HP Vectra ES/12 PC Model 10 |
| 72450A | HP Vectra PC Model 50 | Replaced by HP Vectra ES PC Model IO *or* HP Vectra ES/12 PC Model 20 |
| 72460A | HP Vectra PC Model 60 | Replaced by HP Vectra ES PC Model 40 *or* HP Vectra ES/12 PC Model 40 |
| *April 1. 1988, HP Price List* | | |
| 72445A | HP Vectra PC Model 45 | Replaced by HP Vectra ES PC Model 10 *or* HP Vectra ES/12 PC Model 10 |
| 45895A | IBM PC/AT-compatible hard-disc controller kit | |
| 45896A | 20-Mbyte, half-height. hard-disc subsystem | |
| 458978 | 40-Mhyte, half-height, hard-disc subsystem | |
| 45971A | 128-Kbyte Extended Memory Kit | |

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# HP VECTRA 3000 PC DISCONTINUANCE

Due to the popularity of the HP Vectra 3000 PC Models 58 and 59, all desktop and floor-mount members of HP's new Vectra PC family now include HP terminal emulation software to access HP 3000 resources. Like the HP Vectra 3000 PC, the new product structures include models that have factory-installed video cards and mass storage devices to retain the key HP Vectra 3000 PC benefits of ease of ordering and quick setup. Simply order the appropriate video bundle, appropriate monitor, and DOS, and you have the same key benefits that the HP Vectra 3000 PC provided. Note that the terminal emulation software does not include tile transfer. If you require this feature, include AdvanceLink in your order.

The video bundles are available in a variety of flavors to give you a choice. With such a broad selection of workstations designed for HP 3000 environments to choose from, the HP Vectra 3000 PC has been discontinued and superceded by a new set of products. These new workstations add flexibility and give greater price/performance characteristics to satisfy a broad range of your needs.

### Discontinued products

All versions of the HP Vectra 3000 PC Model 58 and 59 have been discontinued and removed from the October I, 1987, HP Price List. The following products and all international versions are affected:

| Product No. | Description | Region |
|---|---|---|
| 72458A | HP Vectra 3000 PC with Monochrome Plus video. Model 58 | Worldwide |
| 72458S | HP Vectra 3000 PC with Multimode video, Model 58 | U.S. only |
| 72459A | HP Vectra 3000 PC with EGA video, Model 59 | Worldwide |

### New products

HP's new HP Vectra PC family has been designed to easily connect to the HP 3000. Any five of the following systems can be configured as an HP Vectra 3000 PC. The five systems are:

HP Vectra CS PC
- HP Vectra ES PC
- HP Vectra ES/12 PC
- HP Vectra RS/16 PC
- HP Vectra RS/20 PC

For ordering information, please refer to the article "How to Order New HP Vectra 3000 PC Configurations," also in this issue.

### Differences

The following table compares the HP Vectra 3000 PC to an equivalent system configured from HP's new Vectra PC family. Like the Model 58159, the Model 21122 includes 640 Kbytes RAM, a 20-Mbyte hard drive, a flexible drive, seriallparallel ports, a Multimode or EGA video card, and the HP Terminal Program.

|  | HP Vectra 3000 PC Model 58159 | HP Vectra CS PC Model 21122 | HP Vectra ES PC Model 21122 | HP Vectra ES/12 PC Model 21122 |
|---|---|---|---|---|
| **SPU** Speed | 8 MHz | 7 16 MHz | 8 MHz | 12 MHz |
| Communication | AdvanceLink | Terminal Program | | |
| Video adapter | Monochrome Plus or **EGA** | Multimode or **EGA** | | |
| Display | Monochrome included or **EGA** included | Order **35731A** Multimode or Order 35743A **EGA** | | |
| DOS 3.2 | Included | Order 45951B DOS 3.2 | | |

The HP Vectra RS/16 PC and HP Vectra RS/20 PC can also be built up to an HP Vectra 3000 configuration.

### AdvanceLink is optional

Since the HP Terminal Program is included with each system, Advance-Link (PIN 68333F) is optional and should be ordered only if you require file transfer or command macro capabilities.

From a workstation of choice: HP Vectra 3000 PC, to a choice of work-stations: HP Vectra CS, ES, ES/12, RS/16, or RS/20 PC.

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# HOW TO ORDER NEW HP VECTRA 3000 PC CONFIGURATIONS

The HP Vectra 3000 PC Model 58 and 59 has been so positively received that HP terminal emulation is now included with all desktop and floor-mount HP Vectra PCs. The key benefits of ease of ordering and quick setup have been preserved because the new product structures include models that have factory-installed video cards and mass storage devices. Simply order the appropriate preconfigured SPU, appropriate monitor, and DOS – and you have the same key benefits that made the HP Vectra 3000 PC so popular. Note that the terminal emulation soft-ware does not include file transfer. Should you require this feature, add AdvanceLink to your order.

The HP Vectra 3000 PC has been replaced by new configurations from the new HP Vectra PC family to give you a choice. You should now order an HP Vectra CS, HP Vectra ES, HP Vectra ES/12, HP Vectra RS/16, or HP Vectra RS/20 PC to best match your individual needs. Each system includes the new HP Terminal Program (without; file transfer) to easily connect to the HP 3000.

### Four simple ordering steps

The additional choices now available have prompted HP to update the ordering process. To order a complete system, three product numbers and a language option need to be specified. The three product numbers describe:

- HP Vectra PC SPU with a country option
- Video display

HP Vectra PC Operating System

*Step 1: Order the SPU* – You now have the flexibility to choose a precon-figured SPU based on the HP Vectra CS, HP Vectra ES, and HP Vectra ES/12 PC Models 21 and 22. The Model 21 and Model 22 includes 640 Kbytes RAM, a 20-Mbyte hard drive, a flexible drive, seriallparallel ports, a Multimode or EGA video card, the HP Terminal Program, and a keyboard.

*Step 2: Specify the country option* – The country option consists of three let-ters that together specify the country and language. While the list is exten-sive, the more common options include:

| Opt. | Country | Language |
|---|---|---|
| ABA | U.S. | English |
| ABB | Europe (HPSA) | English |
| ABD | Germany | German |
| ABE | Spain | Spanish |
| ABF | France | French |
| ABH | Netherlands | Durch |
| ABK | Intercon | English |
| ABM | Latin America | Spanish |
| ABN | Norway | Norwegian |
| ABP | Switzerland | German |
| ABQ | Switzerland | French |
| ABS | Sweden | Swedish |
| ABU | United Kingdom | English |
| ABV | Multiple countries | Arabic/English |
| ABW | Belgium | Flemish |
| ABX | Finland | Finnish |
| ABY | Denmark | Danish |
| ABZ | Italy | Italian |

*Step 3: Order the display* – If a Model 21 is being ordered, order a Multimode display. If a Model 22 is being ordered, order an EGA display.

*Step 4: Order the operating system* – The operating system of the new HP Vectra PC family is MS-DOS 3.2.

**AdvanceLink is optional**

Included with each system is the HP Terminal Program. This software is nearly identical to the terminal emulation portion of today's AdvanceLink product. Unlike AdvanceLink, however, the HP Terminal Program does not have file-transfer capabilities or command macros. If these communication features are required, then AdvanceLink will need to be added to your order (PIN 68333F).

Along with the HP Vectra ES/12 PC. both the HP Vectra RS/16 and HP Vectra RS/20 PCs can also be built up to an HP Vectra 3000 PC configuration, giving you even greater flexibility.

From a workstation of choice to a choice of workstations.

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# 3½-INCH INTERNAL FLEXIBLE DISC DRIVE FOR HP VECTRA PC

Hewlett-Packard will offer a 3%-inch internal flexible disc drive during the fourth quarter of 1987 that can be used as a second flexible drive on the HP Vectra CS, ES. ES/12, RS/16, and RS/20 PCs.

The 3%-inch drive is the ideal second flexible disc drive for the HP Vectra family PCs. With both 3%-inch and 5%-inch drives installed in their systems, users will get the best of both worlds: they can standardize on a flexible disc technology, while at the same time, maintaining a convenient bridge to the other technology. And both drives mount conveniently inside the HP Vectra PC without sacrificing an expansion slot or desk space.

HP Vectra PC family users will now be able to enjoy the benefits this drive and media have brought to HP Touchscreen PC, HP Portable, and IBM PSI2 users. The drive was built to work with the compact 3%-inch flexible disc media. This disc is more reliable than the traditional 5%-inch flexible disc, and is being used by an increasing number of vendors. It comes enclosed in a hard plastic shell with a metal shutter that covers the actual media. The shutter opens and closes only when the disc is inserted into the drive. The media revolves on a special steel hub for more accurate centering. All this gives the media unequaled protection and reliability.

This new product (HP 45813A) will allow users to share 3%-inch discs between HP Vectra and Touchscreen PCs that have 710-Kbyte double-sided HP flexible disc drives. It also will interchange 720-Kbyte discs with IBM XT, AT. and PSI2 machines or 1.44-Mbyte discs with IBM PS/2s.

The product is intelligent; there are no special readlwrite commands for users to remember. All you need to do is insert a disc formatted to one of the three capacities described above and then read it and write to it – the system automatically adjusts to the format on the disc. And you can install the 3½-inch drive into your HP Vectra PCs just as they would a standard 5%-inch flexible disc drive. The standard HP Vectra PC floppy-disc controller and cables support the product with no hardware changes required (except for HP Vectra CS PC systems. which require simple jumper changes to the PC and to the drive itself). A setup program and special software drivers are included that enable all HP Vectra PCs to take full advantage of the drive's multiformat capabilities.

**System requirements**

*System hardware* – HP Vectra, Vectra CS, ES, and RS PC hardware support the HP 45813A. The HP Portable Vectra CS PC comes standard with 3%-inch flexible disc drives, and the 45813A drive will not physically fit

into that machine.

*Operating system* – MS-DOS provides FORMAT, DISKCOPY, and SYS capabilities for disc drives. The matrix below outlines the three MS-DOS support levels for the HP Vectra PC 3%-inch flexible disc drive.

| DOS/Version | 710K/720-Kbyte support? | 1.44-Mbyte support? | Comments |
|---|---|---|---|
| DOS 3.11 All versions | No | No | Must upgrade *to* DOS 3.2 to support 3½-inch flexible disc drives. |
| DOS 3.2/ Version B.01.01* (U.S. only) | Yes | No | Can upgrade to B.01.02 by purchasing HP 45813A Opt. 001 thus obtaining full 3%-inch support. (B.01.01 was sold in the U.S. only.) |
| DOS 3.21 Version 8.01.02 and later | Yes | Yea | All new MS-DOS 3.2 purchases are Version B.01.02 or later. |

\* *It is strongly recommended that **users** with MS-DOS **3.2**, Version B.01.01, upgrade to **MS-DOS 3.2. Version** B.01.02 by **purchasing** 45813A **Option 001** at **the** time they buy **their** 3½-inch **disc.***

## Setup program

To enable all HP Vectra PCs to use 3½-inch internal flexible disc drives, a recent Setup program version, which includes 3½-inch support. is shipped with the 45813A product. This program is used when installing the drive in early HP Vectra PC machines that did not include a 3%-inch Setup option.

When the drive is purchased with a new HP Vectra PC system, the Setup program included with the system should be used for installing the product.

## 3%-inch media

The HP Vectra PC 3½-inch flexible disc drive operates at two different capacities: 1.O-Mbyte unformatted (710-Kbyte or 720-Kbyte formatted) and 2.0-Mbyte unformatted (1.44-Mbyte formatted). Two different types of flexible disc media are required to support these capacities. Media formatted to a capacity for which it was not designed, such as 1.O-Mbyte media formatted to 1.44-Mbyte or 2.0-Mbyte media formatted to 710 Kbyte or 720 Kbyte, will result in unreliable data recording and possible data loss. So, it is essential that the correct media is used for the chosen capacity (1.0-Mbyte media formatted to 710-Kbyte or 720-Kbyte and 2.0-Mbyte media formatted to the 1.44-Mbyte).

HP offers both types of media in boxes of 10 flexible discs each:

| Product No. | Unformatted capacity | Formatted capacily |
|---|---|---|
| 92192A | 1.0 Mbyte | 710 Kbyte, 720 Kbyte |
| 92192X | 2.0 Mbytes | 1.44 Mbytes |

## Interchange capabilities

The table at the top of the next column outlines the product's interchange capabilities.

| Source/Destination system (drive type) | HP Vectra Personal Computer Family 3%-inch Internal Flexible Disc Interchange Capabilities* | | | |
|---|---|---|---|---|
| | Read from source | Write to destination | Create destination format | Disc capacities interchanged |
| HP Vectra Family PCs (high density) | Yes | Yes | Yes | HP 710 Kbyte, IBM 720 Kbyte, IBM 1.44 Mbyte |
| HP Touchscreen PC (double sided) | Yes | Yes | Yes | HP 710 Kbyte, IBM 720 Kbyte |
| HP Portable. HP Portable PLUS (double sided) | Yes | Yes | No | HP 710 Kbyte |
| IBM PCIXTIAT, IBM PS/2 (double sided) | Yes | Yes | Yes | IBM 720 Kbyte |
| IBM PS/2 (high density) | Yes | Yes | Yes | IBM 720 Kbyte, IBM 1.44 Mbyte |
| HP 150 (single-sided) | No | No | No | No HP 270 Kbyte interchange |
| HP Series 80/200/300 (LIF) | No | No | No | LIF interchange not provided with the 45813A product |

\* With HP 45813A and MS-DOS 3.2, Version B.01.02 or later installed (3½-inch flexible disc drive included standard with the HP Portable Vectra CS PC).

## Specifications

| Description | 1.0-Mbyte Mode | 2.0-Mbyte Mode |
|---|---|---|
| Operating system | MS-DOS 3.2, Version B.01.01 or later | MS-DOS 3.2. Version B.01.02 or later |
| Storage format | 80 tracks per side, 9 sectors per track | 80 tracks per side. 18 sectors per track |
| Data transfer rate | 250 Kbits per second | 500 Kbits per second |
| Access time | 6ms (track to track) | 3ms (track to track) |
| Interface | Standard HP Vectra PC internal flexible Disc Controller | |
| Physical dimensions with mounting adapter and front bezel | Height: 1.6 inches Width: 6.7 inches Depth: 8.1 inches Weight: 2.1 pounds | |
| Regulatory approvals | UL Recognized CSA Certified FCC and VDE level B compliant | |

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# INTRODUCING THE NEW HP VECTRA PC MS-DOS 3.2

The new HP Vectra PC Disc Operating System, HP Vectra PC MS-DOS 3.2, Revision B.01.02 (HP 45951BX, where X denotes localized versions), will begin shipping on October 1, 1987. The HP Vectra PC preassembled solutions (such as the HP Vectra Publisher PC and HP Vectra ES/12 Star-LAN PC) shipped on October 1 or later will include this new operating system.

The HP Vectra PC MS-DOS 3.1 products (HP 45951AX) will be discontinued on January 1, 1988.

HP Vectra PC MS-DOS 3.2 is a compatible superset of IBM PC-DOS 3.2. The product will also include additional HP utilities to improve usability and functionality.

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HP Vectra PC MS-DOS 3.2 improves on IBM PC-DOS 3.2 support of 3%-inch internal flexible disc drives. IBM PC-DOS 3.2 will support IBM 720 Kbyte format. HP Vectra PC MS-DOS 3.2 will **also** support HP 710-Kbyte, double-sided format (used on the HP Touchscreen PCs) and the IBM 1.44-Mbyte format (used on the IBM PSI? series). *Note:* The 1.44-Mbyte format is possible only with the new high-density 3%-inch flexible discs (identified by their black plastic shells).

Other HP pluses to the MS-DOS 3.2 product include the Personal Applications Manager, File Manager, Multi-Voluming Utility, and Multiple Character Set Utilities.

The Personal Applications Manager (PAM) and File Manager make computer use easier than using the "C>" MS-DOS prompt. The Multi-Voluming Utility allows use of hard discs larger than the 32-Mbyte limit imposed by MS-DOS. The Multiple Character Set Utilities allows translation of extended character sets (international, math, and line drawing characters) between the HP Vectra PCs (and IBM compatibles) and HP 3000s, HP Touchscreen PCs, and HP printers.

Other changes from MS-DOS 3.1 are the new FORMAT and SYS commands. In the interests of compatibility, the new FORMAT and SYS commands will no longer have the /P switch to transfer PAM onto work discs. Instead, the new PAMINSTL utility will install or remove PAM.

Programmers wanting detailed information about HP Vectra PC MS-DOS 3.2 may purchase the MS-DOS 3.2 Programmer's Reference (HP 5061-8971).

## Users with U.S. version

The U.S. version of HP Vectra PC MS-DOS 3.2. Revision B.O1.O1, has been shipping since July I. The new release, B.01.02, differs only in that it also supports the new 1.44-Mbyte format. Users who have B.O1.OI. and are purchasing the new HP 3%-inch flexible disc drive (HP 45813A), may order the B.01.01 to B.01.02 upgrade (HP 45813A, Opt. 001). The upgrade consists of the MS-DOS 3.2 and Supplemental discs, and change pages to the manuals. Users who do not need the 1.44-Mbyte format do not need the DOS upgrade.

## Affected products

| MS-DOS 3.1 versions obsolete January 1 | New MS-DOS 3.2 shipping October 1 | Language |
|---|---|---|
| HP 45951A | HP 45951B | U.S. English |
| HP 45951AD | HP 45951BD | German |
| HP 45951AE | HP 45951BE | European Spanish |
| HP 45951AF | HP 45951BF | French |
| HP 45951AH | HP 45951BH | Dutch |
| HP 45951AM | HP 45951BM | Latin American Spanish |
| HP 45951AN | HP 45951BN | Norwegian |
| HP 45951AP | HP 45951BP | Swiss-German |
| HP 45951AQ | HP 45951BQ | Swiss-French |
| HP 45951AS | HP 45951BS | Swedish |
| HP 45951AU | HP 45951BU | United Kingdom |
| HP 45951AW | HP 45951BW | Flemish |
| HP 45951AX | HP 45951BX | Finnish |
| HP 45951AY | HP 45951BY | Danish |
| HP 45951AZ | HP 45951BZ | Italian |

*Desktop*

# HP VECTRA PC AND MICROSOFT WINDOWS: A VIEW INTO THE FUTURE

HP has introduced a new Microsoft® Windows generation for the HP Vectra PC family. Now there are two versions – Windows 2.0 and Windows1386 – that provide all the current advantages of Windows, plus build a solid foundation for the future. Both versions feature the new and advanced Windows interface that looks and works exactly like the one that will be in the future applications for the OS/2 operating system. So, you can begin learning and taking advantage of these new features today.
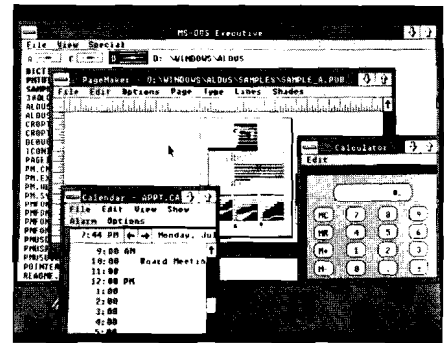


## Microsoft Windows 2.0

Microsoft Windows 2.0 is a more powerful version of the original Windows product. It will be supported across the entire family of HP Vectra personal computers. including the new HP Vectra CS, ES. and RS PCs, as well as all original HP Vectra PC systems. (Windows 2.0 will replace the existing version of Microsoft Windows for the HP Vectra PC.)

A key addition to Windows 2.0 is the new Windows interface with overlapping Windows and enhanced keyboard and mouse capabilities. With Windows 2.0, you can also take full advantage of the HP Vectra PC expanded memory accessories. Use expanded memory to simultaneously run multiple Windows applications at their full performance, and to switch rapidly between MS®-DOS applications. Windows 2.0 also includes a disc cache program that works with expanded (and extended) memory to reduce the number of times your system reads from the disc – improving your system performance.

Windows 2.0 is an excellent choice for Windows-based solutions, such as Desktop Publishing featuring Page-Maker® from Aldus, and as a general purpose MS-DOS application environment manager.

## Microsoft Windows/386

Microsoft Windows1386 is an extended version of Windows that takes full advantage of 80386-based personal computers, like the new HP Vectra RS PCs.

With Windows/386, multiple MS-DOS applications can be run at the same time, each with up to 640 Kbytes of memory. Multiple MS-DOS applications can be simultaneously run in foreground or background, or in exclusive mode for dedicated system use and better application performance. Each MS-DOS application can be run in a window, allowing concurrent viewing with other Windows and MS-DOS applications – especially useful for monitoring the status of background applications.

Windows/386 also includes a disc cache program and support for applications written to use the Lotus-Intel-Microsoft Expanded Memory Specification (LIM EMS). The capabilities of the 80386 processor allow full implementation of the LIM EMS interface. without the need for expanded memory hardware.

Windows1386 is a good selection for HP Vectra RS PC users that want to multitask MS-DOS applications.

Both Windows 2.0 and Windows1386 offer the new Windows interface that is consistent with OS/2 Presentation Manager, and provide full compatibility with earlier Windows application software. Disc caching to improve performance with both Windows and MS-DOS applications is also standard with both versions. And with Windows 2.0 and Windows1386 for the HP Vectra PC, you can take advantage of complete HP support.

There may be some users who need the previous HP Vectra PC keyboard layout with the 103 keys, which has the 10 IBM-style function keys on the left and the 8 HP-style function keys on the top. For these users. a transition keyboard is available that is **supported only on the HP Vectra** ES **and** *Vectra* ESI *12 PCs*: The HP Vectra PC Keyboard/DIN has the 103-key layout, but has DIN connector and electronics.

Users who may need the older layout of the HP Vectra PC Keyboard/DIN would be:

▪ Users who have HP Vectra PCs, and want to avoid retraining with a new keyboard layout

▪ Users of HP Word (HP Word will not support the new keyboard until Summer 1988)

▪ Users of AdvanceWrite (While AdvanceWrite Plus will support the new keyboard, the new layout has fewer function keys than the old layout.)

We recommend the new pre-assembled HP Vectra CS, ES, and RS PCs, which **include** the CPU (the computer). a PC Kit with User Manuals, and the Enhanced HP Vectra PC Keyboard. If you need the HP Vectra PC Keyboard/DIN, order:

▪ HP Vectra ES PC CPU (459XXD) *or* HP Vectra ES/12 PC CPU (459XXC)

HP Vectra ES PC Kit (D1350A Opt. AXX)

HP Vectra PC Keyboard/DIN (C1406A Opt. AXX) as separate items.

*(Opt. AXX, the country option, must be ordered to specify the language of the User Manuals and Keyboard.)*

For additional information on the new keyboards, please contact your HP sales rep.

## Ordering information

| Product No. | Description | Availability |
|---|---|---|
| HP 45954B<br>5%-inch discs | Microsoft Windows 2.0 Presentation Manager for the HP Vectra PC<br>*For use with the HP Vectra CS. ES, or RS PC* | Fourth quarter, FY 87 (November 1987 through January 1988) |
| HP 45954C<br>3%-inch discs | *For use with the HP Vectra Portable CS PC* | January 1, 1987 |
| HP D1651A<br>Opt. ABA<br>5%-inch discs | Microsoft Windows1386 Presentation Manager for the HP Vectra PC<br>*For use with the HP Vectra RS PC.* | First quarter, FY 88 (February through April 1988) |

Microsoft Windows for the HP Vectra PC, (Version 1.03). HP 45954A will be replaced by Windows 2.0 and will be discontinued November 1, 1987. A Microsoft Windows 2.0 upgrade will be available however, PIN 45954-60001.

*Desktop*

# NEW HP VECTRA PC KEYBOARDS

The new line of HP Vectra PCs will use a new, industry-compatible keyboard called the Enhanced HP Vectra PC Keyboard. It will be the standard keyboard for the HP Vectra CS. ES, and RS PC families. The keyboard for the previous versions of HP Vectra PCs used the HP-HIL interface; it will **riot** be supported on the new line of HP Vectra PCs.

The Enhanced HP Vectra PC Keyboard has the same connector (DIN) and the same layout as the IBM Enhanced PC Keyboard. It is detachable, has 101 keys, including 12 function keys, separate numeric and cursor keypads, and adjustable tilt. The full-travel, step-sculptured keys have quick response, tactile feedback, and color-coded legends.

*Desktop*

# INTRODUCING HP'S 80386-BASED PCs: THE HP VECTRA RS/16 AND RS/20 PCs

Using the power of the Intel 80386 microprocessor in a floor-mounted package, the HP Vectra RS/16 and RS/20 PC systems have the power. functionality. and expandability to meet the needs of the most demanding personal computer applications. The HP Vectra RS/16 PC uses a 16 MHz 80386 and is offered with a 40-Mbyte ST-506 disc drive to provide excellent performance at an entry-level, 80386 PC price point. The premium perforniance HP Vectra RS/20 PC uses a 20 MHz Intel 80386 microprocessor and features Hewlett-Packard designed and manufactured high-performance ESDI disc drives.
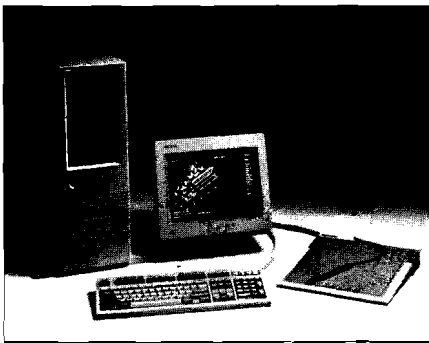
The HP Vectra RSI16 and RS/20 PC systems employ an advanced inter-leaved page mode niemory architecture featuring extremely fast niemory for zero wait state memory accesses. Up to 16 Mbytec of 32-bit memory can be supported on the processor board. 20 MHz and 16 MHz 80387 numeric coprocessors are offered as options to speed floating point calculations.

The mass storage subsystems have been designed to complement the fast microprocessors. The extensive mass storage offering features Hewlett-Packard designed and manufactured, 17ms 103-Mbyte, 155-Mbyte. and 310-Mbyte discs using ESDI interfaces, as well as an entry-level 28ms 40-Mbyte ST-506 system. The Hewlett-Packard ESDI discs feature not only industry leading performance. but also feature HP's famous ruggedness and reliability. Two hard discs are supported internally, for a maximum of 620 Mbytes. The HP Vectra RS PC has six mass storage shelves to support a wide variety of mass storage configurations including 5%-inch flexible disc drives, a 3%-inch flexible disc drive, half-height and full-height hard discs, and a tape backup unit.

The HP Vectra RS PC systems let you multitask today's DOS 3.0 applications – each in their own virtual machine with its own 640 Kbytes of memory. The optional Microsol't Windows/386 80386 control program works with DOS 3.X to provide this feature. All HP Vectra RS/20 and RS/16 PCs come with a 1.2 Mbyte flexible disc drive. one serial port, one parallel port and an HP-HIL port.

*Desktop*

# NEW HP VECTRA PC OFFICE ENTRY SOFTWARE PACK PROVIDES SAVINGS OVER 20 PERCENT

A new HP Vectra PC Office software pack is available on the October 1, 1987. HP Price List.

| Product No. | Description |
|-------------|-------------|
| 68306F | HP Vectra PC Office Entry Pack. Includes Executive MemoMaker, Lotus® 1-2-3®, and AdvanceLink. |
| Opt. 003 | For 3½-inch discs |

The HP Vectra PC Office Entry Software Pack has been developed to meet the basic needs of users. It is ideal for the new HP Vectra CS PC and Portable CS families. It provides excellent solutions in the most widely used PC applications – Lotus® 1-2-3®, the niost popular spreadsheet program for personal computers. and Executive Memo-Maker, the powerful. yet easy-to-use word processor. Add to this Advance-Link. to provide file transfer and communication to an HP 3000, and you have an ideal introduction to HP's PC-based solutions in the Personal Productivity Center (PPC).

The HP Vcctra PC Office Entry Pack also provides an excellent environment for a customer who may later wish to use advanced business graphics. The Graphics Gallery provides a high level of integration with both 1-2-3 and Executive MemoMaker. It is available in both 5%-inch and 3%-inch discs. Specify Opt. 003 on the order to have the 3½-inch version at no extra cost. Note that the 3½-inch discs are suitable for the HP Portable Vectra CS PC and IBM PSI2 family machines, but are *not* suitable for use on HP 150 Touchscreen PCs.

The HP Vectra PC Office Entry Pack requires 256 Kbytes of computer memory. and will work with a floppy-disc system. This makes the package ideal for price-sensitive situations.

### HP Vectra PC Office Professional and Vectra PC Office Assistant

The original HP Vectra PC Office Software Packs will be restructured to complement the new HP Vectra PC family of products. A price increase will accompany the restructuring.

On November 1, all shipments of the HP Vectra PC Office Professional and HP Vectra PC Ofticc Assistant Packs will include AdvanceLink. The HP Mouse will be removed from the packs. We are finding that HP Vectra Office is being successfully installed into IBM and IBM-compatible accounts and the HP Mouse is not of use since it uses the

HP-IL interface. Remember to specify a mouse when ordering HP Vectra Office or Graphics Gallery starting November 1, since it is required for using Graphics Gallery.

Although the price increase occurs on the October HP Price List, the original HP Vectra PC Office Packs will be shipped at the old prices through the end of October.

*New* HP Vectra PC Office Professional Pack, PIN 68300F, $1,650.

*New* HP Vectra PC Office Assistant Pack, PIN 68301F, $1,900.

The HP Vectra PC Offce Software Packs have proven to be a very successful and efficient way to sell software. One part number is all that is required to order six powerful software programs. Users will have a complete set of office PC capabilities that provide integration between products.

*HP Vectru PC Office Professional Software Puck, PIN 68300F*

– Graphics Gallery – *new* Version 2.0
– Executive MemoMaker
– Lotus 1-2-3
– Executive CardManager
– AdvanceMail
– AdvanceLink

*HP Vectru PC Office Assistant Software Pack, PIN 68301F*

– Graphics Gallery – *new* Version 2.0
– AdvanceWrite PLUS – *new***
– Lotus 1-2-3
– Executive CardManager
– AdvanceMail
– AdvanceLink

*Note: Foreign language versions of the HP Vectru PC Office Professional and Assistant Pucks will not change. The original HP Vectra PC Office Professional and Assistant Packs will be shipped.*

***Starting October 1, all HP Vectra Office Assistant shipments will include the new, powerful AdvanceWrite PLUS – see announcement articles in this issue for details on this new product.*

*Desktop*

# NEW HP VECTRA PC BUNDLES FOR HP STARLAN USERS

Announcing bundled office solutions based on two new members of the HP Vectra family of PCs: the HP Vectra CS StarLAN PC (PIN D1201A), and HP Vectra ES/12 StarLAN PC (PIN D1202A). Now HP StarLAN users have a choice of preassembled networked PC workstations, depending upon their price/performance requirements.

## Benefits of HP Vectra StarLAN PC

■ One-vendor LAN solution from minicomputer through node

■ One-vendor support

■ Configuration flexibility

■ Preassembly

■ Access to host resources via HP Terminal Program software

Both the HP Vectra CS and Vectra ES StarLAN PCs include:

■ Preassembled CPU with 640 Kbytes RAM. single floppy (360 Kbytes for HP Vectra CS PC and 1.2 Mbytes for HP Vectra ES/12 PC) and 20-Mbyte hard disc drives, SIP ports, HP StarLAN interface card, and choice of EGA or Multimode Monochrome video adapter.

■ EGA or Multimode Monochrome monitor HP Vectra StarLAN PC Personality Pack that contains the new enhanced HP Vectra PC Keyboard, PC Kit with documentation and HP Terminal Program software, HP StarLAN user software, HP Vectra PC DOS 3.2, and the customized installation guide.

The HP Vectra PC bundled solutions are now ordered with one system product number and three product options that must be ordered to complete the system. Pricing for the HP Vectra StarLAN PC bundles is based on sum-of-

components, with factory assembly of the hardware at no additional cost. Also. the October 1 price reduction on HP StarLAN User Link Kit has been passed on to the bundles.

These new bundles replace the current HP Vectra StarLAN PC Model 68 (PIN 45968A) and Model 69 (PIN 45969A), which will be removed from the October 1 HP Price List.

HP Vectra CS StarLAN PC and Vectra ES/12 StarLAN PC will be available worldwide.

Contact your HP sales rep for more information.

# ANNOUNCING THE HP TERMINAL PROGRAM FOR THE HP VECTRA FAMILY OF PCs

The HP Terminal Program is a terminal-emulation software package that will be shipped standard with all HP Vectra PCs shipped after October 1.

The program enables HP Vectra PCs to access alphanumeric and graphics applications on the HP 1000, HP 3000, and HP 9000, including such programs as VPLUS/3000, HP DeskManager, Query/3000, DSG/3000, HP Draw, and Graphics/1000-II. In addition, the HP Terminal Program features DEC VT100 terminal emulation – allowing users to access applications written for DEC VT52 and VT100 terminals.

The HP Terminal Program provides all of the features normally found on HP block mode and color graphics terminals. plus PC-specific features such as write to disc and read from disc.

The HP Terminal Program (HP 24597A) has been optimized for peak performance. Tests show that it is the fastest HP terminal emulation on the

market today for both alphanumeric and graphics applications. It is also faster than the HP 2627A – HP's fastest color graphics terminal – in most areas, except for drawings made from long vectors.

The HP Terminal Program is also compatible with existing HP Vectra PCs and IBM PCIXTIAT. If you need it as an independent accessory, order the HP 24597A HP Terminal Program.

For detailed product specifications, refer to the data sheet, PIN 5953-5998, available from your HP sales rep.

*Desktop*

# USING THE NEW ZOOM FEATURE IN GALLERY 2.0

With the introduction of Gallery 2.0 in August 1987, we added an enhanced "Zoom" feature to Drawing Gallery 2.0.
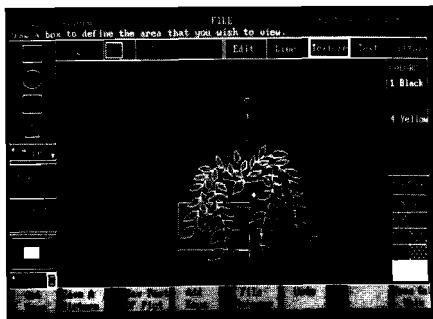

*Graphics Gallery Drawing (see the bug?)*

Now you can "rubberband" the area of your picture to zoom (see next example). This zoomed-in area of the picture is now displayed on the screen. This closer view gives you a better look at the details, making edits much easier.
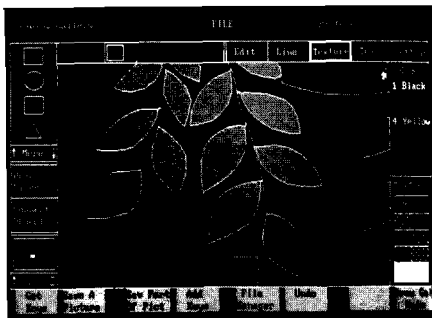

*With new Graphics Gallery 2.0 you can zoom in for detail work (now see the bug).*

There are now five levels of zoom (versus full and partial view in the previous version of Gallery). Zoom back up, a level at a time, by clicking the mouse on the arrow in the zoom box. Or zoom straight back to full view by clicking the mouse on the word "Zoom" in the zoom box.

This new feature is especially helpful in aiding the user while making sure lines meet, and objects are placed exactly where desired.

This, and many other new features in Drawing and Charting Gallery 2.0, including rotation, new text features, and more chart types, make Gallery the number one choice for PC business graphics users.

*Desktop*

# BUSINESS MANAGEMENT PORTFOLIO Now PACKAGED WITH GALLERY COLLECTION

The Business Management Portfolio has been included with the Gallery Collection since this past Spring, replacing the coupon previously included in the Gallery Collection. With the Gallery 2.0 release in August, we started actually including this Portfolio inside the Gallery Collection box.

The Business Management Portfolio, which includes symbols for the Gallery user in the areas of marketing, finance, sales, personnel, facilities management, quality assurance, and research and development, is packaged with The Gallery Collection, and the discs and manual are found inside the Charting Gallery binder of the Gallery Collection.

This Gallery Portfolio also includes a set of symbols specially designed for the European market.

The Gallery Collection (PIN 68352F) includes the following: Drawing Gallery (PIN 68351F), Charting Gallery (PIN 68350F), and Business Management Portfolio (PIN 68326F).

The other Gallery Portfolios are available separately: Office Activities Portfolio (PIN 68324F); Chemicall Petrochemical Portfolio (PIN 68325F); and HP Draw Figures Portfolio (PIN 68327F).

For those users who just purchase Drawing Gallery separately, the Business Management Portfolio can be ordered separately: Business Management Portfolio (PIN 68326F).

The Gallery Collection has been an extremely popular product for those users looking for an easy-to-use, complete, business-graphics product that enables them to produce output for high-quality presentations.

And now, with all the great new features added with the 2.0 release (see the August issue of HP Channels), including rotation, additional text features, Lotus integration directly with Drawing Gallery, more chart types, and DTP integration bundled with Gallery, the Graphics Gallery family of products continues to be the number-one solution for PC users.

# 3¹/₂-INCH MEDIA AVAILABLE FOR ADVANCEMAIL

As of October, 1987, AdvanceMail will be available in 3%-inch disc format for both the HP Vectra PC range of personal computers and the IBM PSI2 Models 30150160. The discs have a capacity of 1.4 Mbytes and offer the benefits of size, convenience and robustness that HP pioneered with these discs for the HP 150.

Users can order AdvanceMail with 3%-inch media at no extra cost by specifying Opt. 003. This ensures that they receive both 5¼-inch and 3½-inch versions of the product. If no option is specified, users will receive Advance-Mail in 5%-inch format only.

## Ordering information

| Product No. | Description |
|---|---|
| 27535F | AdvanceMail for the **HP** Vectra **PC** and IBM **PC.** 5%-inch disc format. |
| Opt. 003 | AdvanceMail for the **HP** Vectra and IBM **PC.** 5%-inch and 3%-inch disc format. |

# ANNOUNCING ADVANCEWRITE PLUS – SOPHISTICATED WORD PROCESSING WITH INTEGRATED IMAGES AND GRAPHICS



Introducing AdvanceWrite Plus – the natural successor to AdvanceWrite I, 11, and III as Hewlett-Packard's comprehensive, full-featured word-processing package.

With over 50 new features, including integrated text, graphics, and scanned images, AdvanceWrite Plus ranks among the top word-processing packages like WordPerfect, MS®Word and MultiMate Advantage™. And Advance-Write Plus has extra advantages, such as a truly integrated spreadsheet and the ability to merge text with graphics and images without an expensive bridging problem.

## Image integration

Create a whole new world of possibilities for your users' publications with AdvanceWrite Plus and image scanning. Imagine including a picture of the staff on organization charts, or having a map of a building site in the middle of a letter. It's simple to do: create a .tif file using Scanning Gallery and the HP ScanJet scanner, then merge the file into an AdvanceWrite Plus document and see unbelievable results at print time.



## Graphics integration

Use AdvanceWrite Plus with Graphics Gallery for very professional results. Any graphics gallery file in .tif format may be merged with Advance-Write Plus text, and you'll see top results at print time.
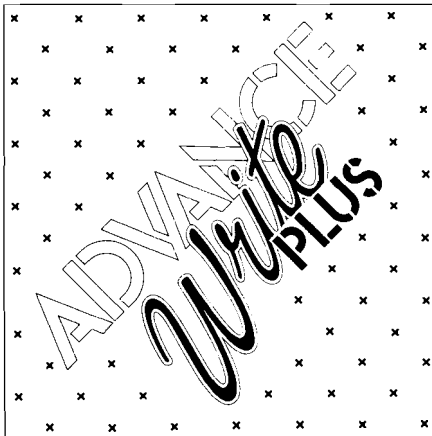
## IBM PC/XT/AT and PS/2

AdvanceWrite Plus runs on the IBM PC/XT/AT and the new PSI2 Models 30, 50. 60 (with 3%-inch media). Now you can have word-processing software for an environment of mixed PCs.

## What else is new?

*Equations Processing feature* – now you can enter and edit multilevel chemical, mathematical, and scientific equations on the screen. Greek/Math characters are seen as they will print. Perfect for users who need a flexible (and easy-to-use) system to create complex scientific and mathematical equations.

- *Oil-screen columns* – you can have up to 10 columns on the screen in newspaper style or side by side. Provides greater flexibility for producing tables and columnar documents.

- *Editable macros* – user-defined function keys enable you to store up to 1,000 keystrokes. saving time and effort. For example, you can set up a memo and have the system pause when you need to type in variable information.

And don't forget the other sophisticated features such as table of contents and index generation, the document search facility (Wordbase Manager). zoom, glossary, and section outline numbering.

**Ordering information**

| Product No. | Description |
|---|---|
| 27546F | AdvanceWrite Plus |
| Opt. 003 | For 3%-inch disc |
| 27546L | 10 copies |
| 27546Q | 50 copies (customer copies software) |
| 27546S | 50 copies (HP copies software) |
| 27546T | 5 copies of the documentation |

*AdvanceWrite Plus is available October 1, 1987.*

For more details about AdvanceWrite Plus, please contact your HP sales rep.

*MS®Word is a **U.S. registered** trademark of Microsoft Corporation.*

*MultiMate Advantage™ is a U.S. rrodemurk of MultiMate International **Corpororion, an** Ashton-Tate Company.*

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*Desktop*

# ADVANCEWRITE PLUS: HP PRINTERS SUPPORTED

Hewlett-Packard's most popular office printers are supported by AdvanceWrite Plus. Users can choose the most appropriate printer for their needs – from the excellent document quality offered by the HP LaserJet family of printers, to the popular HP ThinkJet printer or HP QuietJet printer for personal printing requirements. Here's the full list of printers supported by AdvanceWrite Plus:

**Supported printers**

- HP 2225C ThinkJet printer – Centronics interface, Epson. or HP mode

- HP 2225D ThinkJet printer – Serial interface, Epson, or HP mode

- HP 2228A QuietJet printer

- HP 2227A QuietJet Plus printer

- HP 3603A PaintJet printer – Letter-quality text and color graphics inkjet printer

- HP 2601A – Letter-quality daisywheel printer

- HP 2603A – Low-cost, letter-quality, daisywheel printer

- HP 2686A – HP LaserJet printer

- HP 2686A Option 200 or 210 – HP LaserJet PLUS printer

- HP 2686D – HP LaserJet 500 PLUS printer

- HP 33440A – HP LaserJet Series II printer

- HP 2932A – General-purpose. dot-matrix printer

- HP 2934A – Letter-quality, dot-matrix office printer

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**HP LaserJet printer font support**

The following HP LaserJet printer font cartridges and soft fonts are supported by AdvanceWrite Plus:

*Cartridges* – A. B, C. D, E, F, *G,* H. J. K, L, M, N, P, Q, R, T, U, V, Y

*Soft fonts* – AA. AB, AC, AD, AE, AF, DA. EA, RA, SA, TA, UA

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*Desktop*

# UPGRADE TO ADVANCEWRITE PLUS

Upgrades are available to Advance-Write Plus through HP's Direct Marketing Division (DMK).

**Ordering information for DMK**

| Product No. | Description |
|---|---|
| 27546-60001 | AdvanceWrite I to AdvanceWrite Plus |
| 27546-60002 | AdvanceWrite II to AdvanceWrite Plus |
| 27546-60003 | AdvanceWrite III to AdvanceWrite Plus |

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# ADVANCEWRITE PLUS DOCUMENTATION AND TRAINING

To complement the new release of AdvanceWrite, all the old documentation and training has been completely rewritten, with the emphasis firmly on clarity and ease of use.

The documentation suite now comprises the following:

| Product No. | Description |
|---|---|
| 27546-90006 | AdvanceWrite Plus: Introductory Guide |
| 27546-90007 | AdvanceWrite Plus: Advanced Function\ |
| 27546-90008 | AdvanceWrite Plus: Spreadsheets and Wordbase Manager |
| 27546-90009 | Setting Up AdvanceWrite Plus |
| 27546-90010 | AdvanceWrite Plus: Quick Reference Guide |

Since the manuals are now designed around user tasks, the Introductory Guide can serve as an excellent primer for the product.

### AdvanceWrite Plus user training

In response to user requests, we've redesigned the training package to offer users exactly the right course to match their needs.

- A beginner's course. which can be supplemented with training in the advanced features of the product on two additional one-day courses.

- An upgrade course, for users who are migrating from AdvanceWrite.

- A package of the above courses, saving users money on ordering the courses separately.

- A separate three-day course for users who have a DOS-compatible keyboard rather than the standard HP Vectra PC keyboard.

## Training ordering information

| Product No. | Description |
|---|---|
| 27542 | AdvanceWrite Plus: Course One. One-day beginner's course. |
| 27543 | AdvanceWrite Plus: Course Two. One-day course covering many of the advanced features. |
| 27544 | Advance Write Plus: Course Three. One-day course covering the new advanced features of AdvanceWrite Plus. |
| 27547 | AdvanceWrite Plus: Course Four. Use this part number to order Courses One, Two. and Three in a single block. The same part number allows user, to order the DOS-compatible keyboard version. |
| 27548 | AdvanceWrite Plus: Advanced Features. Use this number to order Course Two and Three in a two-day block. |

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# ADVANCEWRITE I AND II DISCONTINUANCE

With the introduction of AdvanceWrite Plus on October 1, 1987, AdvanceWrite I and II will begin a six-month plan for discontinuance. The products will be discontinued on April 1, 1988.

AdvanceWrite Plus offers all the features of AdvanceWrite I and II plus many more, as you can see from the companion article "Announcing AdvanceWrite Plus" in this issue. Upgrade programs enabling users to move from AdvanceWrite I or II to the new product are available from HP's Direct Marketing Division (DMK).

## Also in this issue

*General*

# ADCC PRICE INCREASE

The price of the ADCC Main, PIN 30018A, and the ADCC Extender, PIN 30019A, will be increased on the October 1, 1987. HP Price List.

The price per port of an ADCC is now on par with that of an ATP modem port. Except for console connectivity, users should purchase ATP ports rather than ADCC ports.

The new prices are effective October 1, 1987. They will be published on the price list and available for your reference as of October 1, 1987.

*Networks*

# HP STARLAN VERSUS ZBM NETWORKS

HP is in an excellent competitive position relative to IBM in the area of business office solution networking for the PC end user. With HP StarLAN and the Personal Productivity Center (PPC), users can have superior scalability and integration at a lower cost.

IBM offers several products in this arena: the PC Local Area Network Program (PC LAN) running over the Broadband, Baseband, and Token-Ring network links, and PC Support136 over the Token-Ring Network link. IBM has also announced Enhanced Connectivity Facilities (ECF), a new user service over the Token-Ring Network link, which is not yet available.

## IBM PC Local Area Network Program

The IBM PC LAN program is perhaps the most well-known IBM LAN service for the PC user. When run with the IBM LAN Support Program (Net-BIOS), it provides PC users with LAN services over three different links: PC Network-Broadband, PC Network-Baseband, and the Token-Ring Network.

The PC LAN services are transparently shared discs, printers and plotters with spooling, and the sending and receiving of messages over the network. The PC LAN Program is menu driven and offers a concurrent PC server. Each PC may be configured as a server and/or user workstation, permitting any workstation to offer its devices for sharing by any other user on the network. PC applications written to both the MS™-NET and NetBIOS network interfaces may be used. Each PC on the network must use both the PC LAN Program and the LAN Support Program.

The IBM PC Network-Broadband is a Broadband network link to which IRM PCs may attach and use the PC LAN services. This link uses CATV coaxial cable and has a link speed of 2 Mbps. A broadband link is for use where multiple service applications such as data transmission. video conferencing, and security monitoring are required on a single link. It uses a CSMAICD protocol and supports up to 72 PCs within a 1,000-foot radius using IBM PC Network Cabling Components. With a custom cable installation using non-IBM translator units, a Broadband link can be configured with up to 1,000 PCs within a 16,000-foot radius. A PC Network-Broadband can be connected to a Token-Ring Network via a dedicated PC Gateway running the IBM Token-Ring Network/IBM PC Network Interconnect Program.

The IBM PC Network-Baseband is a Baseband network link to which PCs may attach and use the PC LAN services. The Baseband network link is positioned as a low-cost, entry-level PC

network link for small businesses or departments. This link uses IBM Cabling System media, including unshielded twisted-pair telephone wire (IBM Type 3), and has a link speed of 2 Mbps. It uses a CSMAICD protocol and allows up to eight PCs to be connected in a daisy-chained fashion within a 200-foot span. The addition of a 10-port PC Network Baseband Extender box permits a maximum of 80 PCs (10 daisy-chains of eight PCs each) to be connected within a 400-foot radius.

The IBM Token-Ring Network is also a link to which PCs may attach and use the PC LAN services. IBM positions the Token-Ring link as holding the promise of a total-connectivity solution. It is a Baseband LAN with a link speed of 4 Mbps and uses a token-passing protocol. It uses the IBM cabling system. which includes unshielded twisted-pair telephone wire (Type 3). PCs, PC/2s, and 9370 departmental systems can be directly attached to the Token-Ring. An S/36 can be attached via a dedicated PC gateway, and an S/370 may be attached via a PC gateway running 3270 Emulation Program software, and a 3720 or 3725 Communications Controller or a channel attached 3174 Cluster Controller. (An S/370 may also be attached to a Broadband and Baseband link in this manner.) Up to 260 devices may be connected on one ring and multiple rings can be connected using a dedicated PC gateway running the Token-Ring Network Bridge Program software.

## PC Support/36

In addition to the PC LAN Program and the Token-Ring, IBM offers PC Support/36. which allows an S/36 to act as a server for PCs on a Token-Ring Network. PC Support136 provides the services of transparently shared discs and printers, and up to five concurrent S/36 workstation sessions to PC users on the network. The S/36 is attached to the Token-Ring using a dedicated PC gateway (XT or AT) with the PC Support/36 LAN Attachment card, the

Token-Ring Network PC Adapter II card, and running the PC Support136 gateway software. Licenses for 50 and 100 PC users on the Token-Ring may be purchased for the Si36 model 5360 and 5362, and up to 15 and 30 PC users may be licensed for the model 5364.

### Enhanced Connectivity Facilities

Enhanced Connectivity Facilities (ECF) is a "new alternative for office communications," recently announced by IBM, which provides the services of transparently shared discs and printing, file transfer, and SQL database access to PC users on the Token-Ring. The ECF services are provided on a 9370 (or S/370) host using VTAM. and CMS Servers with the VM operating system or TSO Servers with the MVS operating system. The PC workstations communicate to the host with the PC 3270 Emulation Program Version 3.0, which provides the PC users with 3270 sessions on the host system as well as access to ECF services. ECF is expected to be available at the end of this year.

### Comparison of offerings

The business office solution network offerings of IBM and HP for the PC end user have some significant differences:

■ IBM's PC user LAN services are not integrated. The PC Support136 and PC LAN Program software cannot be run concurrently. This means that a PC user cannot have PC LAN server and S/36 server access at the same time. IBM users must boot with one service, and reboot to access the other service. With HP StarLAN, a user may transparently access devices and data on both a PC server and an HP 3000 Resource Sharing server at the same time. They have one common user interface. HP users simply refer to the devices they require (e.g., C:, D:), and need not concern themselves with the type of server on which the device resides.

Today, IBM users cannot transparently integrate PC and departmental servers, as can users with HP StarLAN and Resource Sharing. Unlike PC Support/36, when ECF becomes available it may be compatible with the PC LAN Program software. If it is, this will integrate PC and 9370 departmental servers for IBM users, however, they will have to use two interfaces: one for the PC LAN services, and another to access ECF services – one interface run on top of the other. This would be cumbersome for users and consume PC memory. leaving less available for user applications.

IBM's offering is not scalable like HP's. For example, IBM has no bridge available to interconnect multiple Baseband networks, or to connect the Baseband to other network links. A business or workgroup using the PC Network-Baseband (IBM's low-cost solution) and requiring future growth or connectivity with a larger network must look elsewhere. Also, a department with an IBM PC LAN and requiring a departmental server can only add a separate PC Support136 service. One can't be integrated. An HP StarLAN network can grow with the needs of a customer, and can be interconnected with a site-wide LAN.

■ The IBM Cabling System is expensive and bulky. HP StarLAN uses unshielded twisted-pair telephone wire, which is less expensive and often already exists. Although the Token-Ring may use unshielded twisted-pair wire (IBM Type 3), it was designed to use shielded twisted-pair wire (IBM Type I), and has configuration limitations using unshielded. Using unshielded Type 3 wire, the ring supports a maximum of 72 devices with no more than 2 wiring closets. The distance runs between station and wiring closet are restricted to 45 meters if 2 wiring closets are used, and to 100 meters if only 1 wiring closet is used. Also, special IBM jumper cables and filters must be purchased for each end of a Type 3 wire between a workstation and wiring closet. HP StarLAN supports up to 50 devices per sub-network, and distance runs of 250 meters between wiring closet and workstation

are supported. Multiple wiring closets may be used, and no special connections are required at either end of the wire.

■ The HP 3000 is a superior PC integrator. In a recent survey of Fortune 1000 companies by Forrester Research, 37 percent of the respondents found the S136 "unworkable" as a PC integrator. Forrester states "the S136 does not have the database or the horsepower to make it." Concerning the 9370, Forrester states "the 9370 with VM is too complicated for the average department to install and administer," and "VM's complexity and the 9370's poor price/performance limit its viability as a DRP."[1] IBM offers its users no central, unattended backup of PC discs. An HP 3000 Resource Sharing server does. The HP 3000 provides the services and the price/performance users want.

■ IBM does not offer a remote PC link. Using HP SERIAL Network. remote PC users may gain access to an HP 3000 server on a remote HP StarLAN network. These remote PC users may then have access to their remote PC files and shared printers. IBM users must drive to the office.

■ There is little difference in the performance of the Token-Ring and HP Star-LAN. Gartner Group has stated "The bottleneck to LAN performance is in the systems and communications software. Differences between Ethernet and TRN [Token-Ring Network] are small by comparison."[2] Although HP Star-LAN is not an Ethernet network, it is an IEEE 802.3 network using the CSMA/CD access method, and is similar in performance to HP ThinLAN in an office environment. Our tests have shown that the Token-Ring and HP's StarLAN and ThinLAN are not very different in performance.

### Costs (U.S. list)

The network hardware and software price for a ten-user IBM PC LAN network (PC server), assuming 10 existing IBM PCs and no dedicated server, is

$916 per user on the PC Network-Broadband, $743 per user on the PC Network-Baseband, and $1,251 per user on the Token-Ring. These prices include the IBM PC 3270 Emulation LAN Manager Program for the Baseband link, and the IBM LAN Manager Program for the Broadband and Token-Ring links.

The network hardware and software price for a ten-user HP StarLAN network (PC server), assuming 10 existing HP Vectra or IBM PCs and an HP Vectra for use as a PC server, is $949 per user. HP StarLAN includes network diagnostics software.

The price of the network hardware and software for a ten-user PC Support/36 system on the Token-Ring, assuming an existing S/36 and 10 IBM PCs, is $1,945 per user. This includes the Workstation Feature (#6248) providing users with up to five concurrent S/36 workstation sessions, and the IBM LAN Manager Program.

The network hardware and software price for a ten-user ECF system on the Token-Ring, assuming an existing 9370 processor and ten IBM PCs, is $3,880. This is the price for the less expensive, low-end 9370 models 20 and 40, and includes the IBM LAN Manager Program.

The price of the network hardware and software for a ten-user HP StarLAN and Resource Sharing system, assuming an existing HP MICRO 3000XE and 10 HP Vectra or IBM PCs, is $1,863 per user. This includes five copies of HP AdvanceLink Vectra PC, providing terminal emulation and file transfer for five PCs, and network diagnostics software. None of the above analyses include the cost of wiring, which is significantly higher for IBM cabling than for HP StarLAN cable.

*Note: All **prices** are **U.S.** list for comparision **purposes***

*(1)* **PA** *Report* (Forrester Research. Inc., March 1987), p. 16.
*(2)* *"IBM's* **TRN** *Performance," Local Area Communications* (Gartner Group, Inc., January 8. 1986). Products file P-139-206.1

*MS™-NET is a U.S. registered trademark of Microsoft Corporation.*

*Networks*

# PRICE REDUCED ON HP STARLAN USER LINK KIT

The price of the HP StarLAN User Link Kit (50905F) for HP Vectra and IBM PCs was reduced on October 1. This price reduction will increase the attractiveness of our already popular HP StarLAN networking products.

HP StarLAN is Hewlett-Packard's twisted-pair local area network (LAN) that provides access to HP's distributed data processing and Personal Productivity Center (PPC) services. HP StarLAN is a flexible networking solution that fully integrates PCs and HP 3000s – providing a complete office automation solution.

With HP StarLAN for PCs, users have access to disc and file sharing, printer sharing with spooling, unattended backup and restore, and terminal emulation with file transfer from personal computers to HP 3000s. Users can also transparently share discs and files, and obtain printer sharing with spooling and plotter sharing with spooling on a personal computer server.

The HP StarLAN User Link Kit includes both hardware and software that allows connection of HP Vectra PCs or IBM PC/XT/AT personal computers to a twisted pair LAN.

This HP StarLAN price reduction makes Hewlett-Packard's office-networking offering even more attractive by offering the following benefits:

■ Low-cost networking – which is now even lower

■ Superior scaleability – an excellent and convenient growth path for changing needs

Superior flexibility – through easier adds, moves, and changes

HP StarLAN is a member of the OfficeShare Family of networking products, and provides superior PC/mini integration. Many consultants recognize HP as the leader in this area.

# DTC OPTION CHANGES REFLECT NEW THINLAN STANDARD

Effective October 1, the HP 3000 Distributed Terminal Controller (DTC) will be restructured to reflect HP's move to ThinLAN for the standard LAN connection for business office networking solutions. When HP's LAN products were first introduced, ThickLAN was the only media option available. Since then, advances in LAN technology led to the addition of the ThinLAN option, which offered easier installation and maintenance, greater reliability, and lower cost. Recently, with the addition of the ThinLAN Hub and the new 10Mbps-10Mbps LAN Bridge, ThinLAN is the preferred solution for computer room LAN connections even when customers require ThickLAN for longer distance connections.

Under the new product structure, the standard DTC product (2345A), which previously specified ThickLAN as the default, now requires that a LAN connection option be specified. Users wanting ThickLAN connections should now order the new ThickLAN Opt. 240. As before. users wanting ThickLAN connections without the MAU or

AUI should order Opt. 241. and users wanting ThinLAN should order Opt. 242. Orders placed under the old structure will be shipped as ordered. ThinLAN remains an option for the DTC rather than the default. so the transition will be easier for users. The switch to ThinLAN as the default for the DTC is planned for mid 1988.

Users ordering the DTC will fall into three categories: new LAN users, current ThinLAN users, and current Thick-LAN or mixed LAN users. Users in the first two groups should order ThinLAN. Users in the third group may choose to stay with ThickLAN, opt for a mixed ThinLAN/ThickLAN network using the ThinLAN hub or the new 10Mbps-10Mbps LAN Bridge, or retrofit their current ThickLAN connections with new ThinLAN hardware. Your HP sales rep can help you decide which option is best.

**DTC price adjustments**

In keeping with the switch to ThinLAN as the recommended media for the DTC, prices for the standard 2345A product and options will be adjusted so that the ThinLAN option is free. This means that the standard 2345A product will have its price cut. while all of the LAN attachment options will have their prices raised. These price changes will not affect the cost of either the ThinLAN or Thick-LAN DTC.

**New DTC product structure effective October 1**

| Product No. | Description |
|---|---|
| 2345A | Distributed Terminal Controller (DTC) for MPE XL-based systems. Must specify ThinLAN (242) or ThickLAN (240 or 241). |
| Opt. 240 | Configure DTC for ThickLAN operation. MAU and 6M AUI cable. |
| Opt. 241 | Configure DTC for ThickLAN operation. No MAU or AUI provided. |
| Opt. 242 | Configure DTC for ThinLAN operation. Provide BNC T-connector. |

**No NCC form required for DTC-only ThinLAN sites**

For MPE XL systems shipped after System Release, there will be no requirement for a Network Configuration Checkout (NCC) form or NISP form for configurations where a single 900 Series HP 3000 is connected to–one or more DTCs over a ThinLAN cable,

and no other hardware is attached to the LAN. Of course, if NS 3000/XL is installed, an NCC form or NISP form is required. Also, NCC forms will continue to be required for both ThinLAN and ThickLAN DTCs at 900 Series HP 3000 Controlled Release sites.

Contact your HP sales rep for more information.

*Networks*

# UNIQUE POWER AND VERSATILITY – INTRODUCING THE HP 4954A PROTOCOL ANALYZER



In an evolving series of datacommunications test solutions for both wide-area (WAN) and local-area (LAN) networks, the HP 4954A joins the family of disc-based analyzers introduced earlier this year: the HP 4972A, HP 4951C, and HP 4952A. With the introduction of the high-performance HP 4954A protocol analyzer, Hewlett-Packard now offers a complete range of protocol analyzers to meet users' needs for local-area and wide-area network monitoring, performance analysis, and simulation.

One of the most significant features of the HP 4954A is its flexibility. Its versatility lies in its combination of high-speed operation, extensive mass storage, multiprotocol handling, programming adaptability, and expansiveness provided by various hardware and software solutions.

High-speed state-of-the-art multiprocessor design guarantees reliable, sophisticated analysis and simulation of full duplex bit-oriented protocols to 72 kbps and data capture of bit-oriented protocols at lower-line utilizations up to 256 kbps.

Extensive mass storage is provided with an integral 20-Mbyte hard disc and 613-Kbyte 3%-inch floppy disc. Any HP 4954A file may be autoloaded at power on to instantly configure the protocol analyzer for your individual needs. The mass storage capacity of the HP 4954A can be further extended through HP-IB subset 80 disc drives. Set-up menus, user-written programs, and buffer data stored to floppy disc may be shared with the HP 4951C and HP 4952A. The internal 256-Kbyte data capture buffer can be expanded through the integral hard disc up to 20 Mbytes.

Multiprotocol testing capabilities can monitor, analyze, and simulate popular protocols such as X.25, SNAISDLC. Bisync, Async, DDCMP, X.75, HDLC, BSC-framed X.25, and character oriented synchronous protocols. X.21. and CCITT#7/CCS7 support is also available through easy-to-use application software.

*continued on next page*

With its numerous application software packages, this high-performance analyzer can act as an X.25 network performance analyzer, or an SNA, X.21 or CCITT#7 development tool. The operation of the HP 4954A can be tailored to address current and future technologies through software and hardware enhancements.

Custom measurements and tests are easy to perform with softkey-driven entry of monitor and simulation programs with triggering based upon datacom events. The HP 4954A gives you programmatic control of send strings, timers, and counters.

The unique power and versatility of the HP 4954A make it a highly competitive product in today's datacom test market.

| Product No. | Description |
|---|---|
| HP 4954A | Protocol Analyzer (includes one interface pod referenced by option number) |
| Opt. 100 | Adds RS-232ClV.24 interface pod |
| Opt. 101 | Adds RS-449 interface pod |
| Opt. 102 | Adds V.35 interface pod |
| Opt. 103 | Adds MIL-188C interface pod |

*Application software*

| | |
|---|---|
| HP 18352A | X.21 State Simulator |
| HP 18355A | CCITT#7/CCS7 Analysis |
| HP 18360A | SNA Emulation Language |
| HP 18361A | 3270 Device Exerciser |
| HP 18362A | LU 6.2 Node Exerciser |
| HP 18370A | X.25 Network Performance Analysis |

*Printers*

# ANNOUNCING THE HP RUGGEDWRITER 480 PRINTER – FAST, RELIABLE, 24-WIRE IMPACT PRINTING

Hewlett-Packard is pleased to announce the HP RuggedWriter 480 high-performance printer (PIN 2235). At 480 cps draft and 240 cps letter quality, the HP RuggedWriter 480 printer is the fastest 24-wire printer on the market. With 20,000 hours mean time between failures (MTBF), it is incredibly reliable; the typical competitor has an MTBF of only 5,000 hours. It provides exceptional value to both the HP systems user and the PC user with high-volume or shared-printing needs.

In addition to speed and reliability, the HP RuggedWriter 480 printer provides value through its triple paper path. Tractor feed, adjustable from 3 inches to 15 inches, and a manually fed cut-sheet path come standard. An optional automatic cut-sheet feeder is also available. Users can switch from continuous forms to the sheet feeder and back with the press of a button; there's no need to unload paper or remove the sheetfeeder mechanism.

Twenty-four-wire print quality is substantially better than 9- or 12-wire print quality, but not up to laser quality. However, both HP and independent market research show that many of the target customers for the HP Rugged-Writer 480 printer think 24-wire print is suitable for external correspondence. The advantages of 24-wire printing include low cost of ownership and the ability to print on computer paper and multipart forms in addition to cut sheets.

The HP RuggedWriter 480 printer is an excellent fit in the office or small business where one printer must handle many tasks – letters on cut-sheet paper, spreadsheets on computer paper, and multipart forms. The HP RuggedWriter 480 printer can also be dedicated to transaction applications: purchase orders, shipping documents, or invoices.
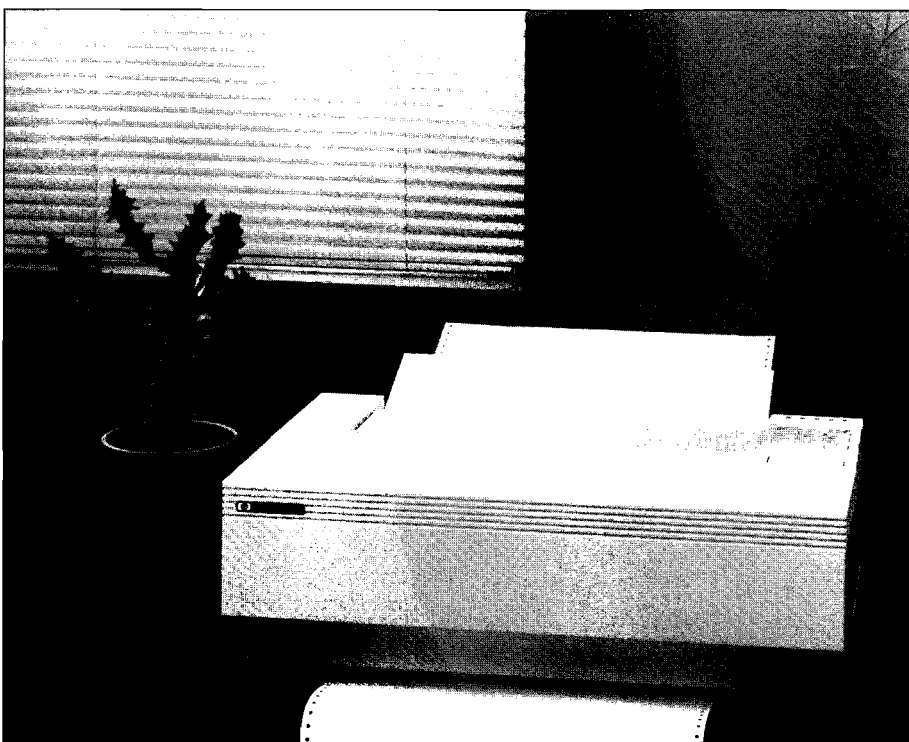
The HP RuggedWriter 480 printer is supported on the HP 3000 (as a remote spooled printer), HP 1000. HP 9000, HP 260. HP 239X terminals, HP Vectra and Touchscreen PCs, and on the IBM PC and PSI2 families and conipatibles. It understands PCL level lll and Epson LQ- 1000 escape sequences. supporting most popular PC and HP system software.

*Printers*

# HP's RUGGEDWRITER 480 PRINTER OUTPACES THE COMPETITION

The new HP RuggedWriter 480 printer offers performance that is unmatched in the serial impact dot matrix printer market place. With a speed of 480 characters per second (cps) draft and 240 cps letter quality. there is no faster 24-wire dot matrix printer available. But, we didn't stop there. Reliability is always a key concern with users. and the HP Rugged-Writer 480 printer delivers with a 20,000 hour MTBF, significantly better than the industry's current competitive offerings.

A triple paper path enhances the product's feature set by providing the ability to print up to four-part tractor paper, cut sheets fed from a cassette tray, or hand fed single sheets **without having to remove the tractor paper.** While conipetitive printers allow the user to back the tractor paper out of the paper path to print on cut sheet, the HP RuggedWriter 480's coresident paper path provides ease of use through a simple front panel keypad or software control. After all. why not let the printer do the work for you'?

Because the printer was designed with a focus on modularity, the HP RuggedWriter 480 printer uses a minimum number of screws and fasteners, and offers a breakthrough in product serviceability. An under one hour MTTR will minimize downtime and maximize satisfaction.

The extremely low cost of consumable~çoupled with a ribbon life of 5 million draft characters, makes this printer's overall cost of ownership superior to most direct competition on an annual basis.

When you need 24-wire printer solutions with outstanding price/performance. reliability second to none, ease of use, revolutionary serviceability, and low cost of ownership, the HP Rugged-Writer 480 high performance printer is the answer.

*Printers*

# HP LASERJET PRINTERS COMPATIBLE WITH IBM's PERSONAL SYSTEM/2 FAMILY

The HP LaserJet family of printers, including the HP LaserJet 2000 printer, has been tested and found to be compatible with IBM's new Personal System/2 computers. Models 30, 50, and 60 were tested using IBM PC DOS 3.3 and the standard IBM serial/parallel interface.

All models use a 25-pin serial interface instead of the 9-pin interface used on the IBM PC/AT. Connecting to the serial interface requires the HP 17255D serial cable and use of two MODE commands:

MODE COM1:9600,N,8,1,P

MODE LPT1:=COM1

These are the same commands required for serial connection to an IBM PC, PCIXT, PCIAT, or HP Vectra PC. Refer to the HP LaserJet Printer Owner's Manual or HP LaserJet Series II Getting Started Manual for additional information on these commands.

Connecting to the parallel interface is the same as with any IBM PC or compatible computer. Use either the HP 24542D or HP 92219K parallel cable and enter the following MODE command:

MODE LPT1:,,P

Soft fonts were also tested and found to work correctly. Although HP's soft font products are currently not offered in the 3%-inch IBM PS/2 disc format, two solutions exist. An optional 5¼-inch external disc drive can be used with the PS/2 system, or the fonts can be transferred from the 5%-inch format currently available to the 3%-inch PSI2 format using IBM's Data Migration Utility. HP is currently investigating the new PS/2 format. Until we investigate, remember that soft fonts currently sold in the 3½-inch format are for HP Touchscreen1150 PCs only – they are not compatible with IBM's 3%-inch disc format.

No information is yet available on the Model 80 PS/2 computer or on IBM's Operating System/2. As these products become available, more information will be provided.

For more information, contact your local HP sales rep.

*Printers*

# NEW FONT OFFERINGS FOR HP LASERJET PRINTER FAMILY

Hewlett-Packard is proud to announce a wide array of new font offerings and utilities. This article highlights:

- An enhanced cartridge font, two new cartridge fonts, and one soft font that adds a new dimension of font capabilities to HP LaserJet printers.
- New font utilities.
- New packaging for HP LaserJet printer font and memory board products.

Information on future enhancements.

## New 48-point soft fonts for HP LaserJet Series II and LaserJet 2000 printers

The Helv Headlines soft font (PIN HP 33412AG) offers four new faces that will be useful in many desktop publishing applications: Serifa™, Helv Condensed Black, Helv Condensed Black Italic, and Helv Outline. This is HP's first set of "hand-crafted" 36- and 48-point Bitmap fonts exclusively for the HP LaserJet Series II and LaserJet 2000 printers. All HP LaserJet family printers (LaserJet PLUS, LaserJet 500 PLUS, LaserJet Series II, and LaserJet 2000) can use the additional fonts in the following point sizes: 14, 18, 24. and 30 points.

Two utilities are included with the HP 33412AG product: MakeFont and FontLoad. MakeFont installs any selected typeface of the Helv Headline product onto a PC in the desired orientation, point size and symbol set.

Roman-8, ECMA-94, Latin I, PC-8, PC-8 DIN, Code Page 850, Legal, and several ISO symbol sets are supported. *Note: Symbol set limitations exist for the HP LaserJet PLUS and LaserJet 500 PLUS printers.*

FontLoad, a user-friendly font utility, makes it easy to download any installed soft font. Mouse control, soft keys, and help menus make this program a snap to use.

FontLoad will be available as a separate product early next month. The Helv Headlines soft font is available immediately and includes both utilities (PCLPak is not included).

## New HP LaserJet Series II and LaserJet 2000 printer font family

Two new font cartridges, the HP 92290S1 and 92290S2, were developed for use exclusively with the HP LaserJet II and LaserJet 2000 printers.

The HP 92290S1 (see following article) completes the internal family of HP LaserJet printer fonts with a Courier Italic 12-point, 10-pitch font. A full family of 10-point, 12-pitch Courier (Roman. bold, and italic) offers European users an added bonus: 80 columns of information on A4 paper (see following article).

The HP 92290S2 offers the TmsRmn and Helv fonts in an HP LaserJet Series II and LaserJet 2000 printer format. It also includes fonts in 8-, 12-, and 14-point sizes. The 92290S2 will be introduced early next month.

PC-8 (also referred to as IBM-US) and PC-8 DIN character sets map the characters found on existing IBM and compatible PCs directly to the 92290S1 and 92290S2 cartridges. Because the original HP LaserJet and LaserJet PLUS printers do not understand PC-8 symbol mapping, the 92290S1 and 92290S2 cartridges are only compatible with the HP LaserJet Series II and LaserJet 2000 printers. Special packaging colors have been chosen to identify these new font cartridges.

## Improved Microsoft cartridge

The popular HP 922862 Microsoft® 1 cartridge has been expanded. European customers now have access to the most versatile selection of TmsRmn and Helv fonts available on an HP LaserJet printer cartridge. Based on HP's TmsRmn and Helv soft fonts, this cartridge continues to offer kerning for all HP LaserJet printers. Roman, bold. and italic styles are available from 8-point Roman to 14-point bold. The international characters are found in the Roman-8 and 8 bit ECMA-94 Latin I symbol sets (see article in September issue of *HP Channels*). The name has been slightly modified to: HP 922862 Microsoft IA. This cartridge is immediately available and supersedes the Microsoft 1 font cartridge. Because existing applications remain unchanged, there will not be a trade-in program.

## New HP LaserJet printer font and memory board packaging

Look for HP's new attractive packaging currently being implemented on all HP LaserJet printer font and memory products. Apart from the bold new graphics on the front. more product information is now available on the back of the package. Also, the strong plastic mold will offer better product protection. Prices remain the same for our existing products – just new and exciting packaging on the same great products.

## Ordering information

| Product No. | Description |
|---|---|
| 92290S1 | Courier Document 1 |
| 92290S2 | TmsRmn/Helv Report |
| 33412AG | Helv Headlines |
| 922862 | Microsoft IA |
| 33407B | FontLoad |

## Summary

HP's full font offering dramatically enhances the HP LaserJet printer's following font skills.

- European characters are available in all fonts.

- PC-8 symbol sets are available in the HP 33412AG, 92290S1, and 92290S2 fonts.

- Hand-crafted 48-point fonts are available for the first time.

- New utilities (MakeFont and FontLoad) simplify the installation and downloading of soft fonts.

- New packaging provides more print samples and better protection for your font and memory-board products.

If you need more information about these products, contact your local HP sales rep.

*Serifa™ is a trademark of Fundicion Tipographica Neufville, Sa.*

*Microsoft® is a registered trademark of Microsoft Corporation.*

*Printers*

## ANNOUNCING THE HP 92290S1 FONT CARTRIDGE

A new HP font cartridge, the HP 92290S1, was listed on the HP Price List August 1. This font cartridge was developed exclusively for use with the HP LaserJet Series II and LaserJet 2000 printers.

Below are some of the features

- A full family of 10-point, 12-pitch Courier fonts allows 80 columns on A4 paper, useful for European users.

- A 12-point Courier italic completes the Courier family that is internal to the printer.

- The PC-8 character set or IBM-US (as designated on the HP LaserJet Series II printer) allows the user to directly map all characters found on the IBM PC or compatibles to the HP LaserJet Series II printer.

- With the correct software, the HP LaserJet Series II and LaserJet 2000 printers can create all the HP-supported ISO symbol sets.

The HP LaserJet Series II and Laser-Jet 2000 printers understand the unique symbol mapping of the PC-8 character set. It is important to note that the HP LaserJet, LaserJet PLUS, and LaserJet 500 PLUS printers do not understand this mapping. In other words, the HP 92290S1 is *only compatible with the HP LaserJet Series II and LaserJet 2000 printers.* A warning disclaimer will be printed on all labels for this product. In the future, expect to see other new font products developed specifically for the HP LaserJet Series II and LaserJet 2000 printers.

For further information, contact your local HP sales rep.

*Terminals*

## EGA TECHNICAL REFERENCE MANUAL AVAILABLE

The Enhanced Graphics Adapter (EGA) technical reference manual, PIN 45983-90011, is now available. The manual is available from HP's Direct Marketing Division (DMK).

The EGA technical reference manual provides technical information on the HP EGA card. Topics include the modes of operation of the HP EGA card, the BIOS functions, the major components, and programming information including examples. In addition, detailed information is presented on each of the EGA registers.

This manual is intended for use in the development of software products that will use the HP Enhanced Graphics Adapter (PIN 45983A). It assumes that the reader is familiar with assembly language programming on the 80286 or similar microprocessor, and understands the fundamentals of video display terminology.

Supplies

# HP DIRECT OFFERS ENHANCEMENTS FOR HP RUGGEDWRITER 480 PRINTER

Users excited about how quickly and quietly HP's new RuggedWriter 480 printer produces draft- and letter-quality output will be even more excited to learn they can get supplies for it easily through HP DIRECT.

*Printer ribbons* – designed by the same engineers who built the HP RuggedWriter 480 printer. Each ribbon is guaranteed to print up to 3,000 double-spaced pages of black text in draft mode.

■ *Printer stand* – for ease and space economy. Users can store as many as 250 sheets of continuous-feed paper under this stand, or use it to feed paper directly from the carton.

■ *Sheet feeder accessory* – for easy, automatic plain-paper printing. It holds up to 100 sheets at a time, and once it's snapped into the printer, it's an integral part.

■ *Font cartridge accessory* – includes Prestige Elite 12, Letter Gothic 12, TmsRmn PS, and Helv 10, plus 16 Kbytes of RAM to allow for downloading, and to act as a buffer.
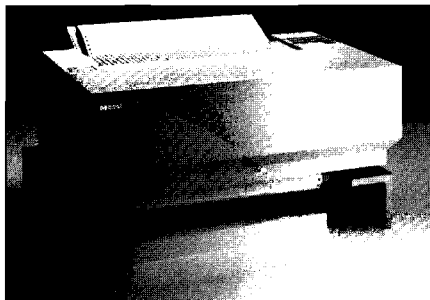


*The durable HP RuggedWriter 480 printer stand can accommodate up to 250 sheers of continuous-feed paper on top of a desk, or guide a box of paper directly from the carton.*

Ordering these products through HP DIRECT is easy – in the U.S., call 800-538-8787 between 6 a.m. and 5 p.m. PST. Users outside the U.S. should refer to the complete list of HP DIRECT phone numbers included at the end of this section. Product ordering information is as follows.

| Product No. | Description |
|---|---|
| 92156S | Printer ribbons |
| 92166A | Printer stand |
| 12239A | Sheet feeder accessory with U.S. letter-size paper tray. |
| 12239B | Sheet feeder accessory with European A4-size paper tray |
| 12235A | Font cartridge |

Supplies

# EVERYTHING YOU NEED FOR THE NEW HP PAINTJET COLOR GRAPHICS PRINTER

HP's new PaintJet printer combines the advantages of a printer and plotter into one machine, allowing users to produce colorful overhead transparencies, detailed engineering drawings, and near-letter-quality text quickly and easily. Users can get the supplies they need for this new printer just as easily through HP DIRECT.



*The HP PaintJet print cartridges produre up lo 330 shades of color on paper designed to intensify colors. Here, the printer is shown on our acrylic desktop printer/plotter stand. with an HP QuietJet printer wire paper catcher attached.*

For example, we offer a streamlined, acrylic desktop stand designed expressly for HP's new printers and plotters. This stand increases work surface space while providing handy paper storage. What's more, it controls paper flow by routing cables out of the paper flow and enhancing the flow of fanfold paper over its edge. The stand also accommodates our HP QuietJet printer paper catcher. This paper catcher

attaches easily to the back of the stand to automatically fold output into neat stacks, with a connecting chain enabling it to hang at a 30-degree angle or lie flat on a desk.

Our HP PaintJet printer dust cover protects your users' equipment from dirt, dust, and spills. Tailored to fit the exact dimensions of the HP PaintJet printer, it's constructed of durable, 100-percent cotton fabric that's water-repellent, yet light enough to discourage moisture from becoming trapped inside. Even when folded or rolled for storage, it resists wrinkles.

We offer black and color print cartridges you can use together to produce an array of 330 shades of color. The color cartridge contains yellow, magenta, and cyan ink. They're long lasting, disposable, and designed for easy maintenance.

Our HP PaintJet printer paper was designed to intensify ink colors and help them dry instantly. Because its surface is virtually dust free, there's no floating paper dust to clog print cartridges and cause printing problems.

HP PaintJet printer transparency film is also specially designed – it's coated to enhance controlled dot spread. Slides can be used after only five minutes, but when left to "ripen" for one or two hours, colors intensify. Plastic sleeves are provided to protect images from fingertips and control color development.

How do you order these products? It's easy: in the U.S., users call 800-538-8787 between 6 a.m. and 5 p.m. PST. Users outside the U.S. should refer to the complete list of HP DIRECT phone numbers included at the end of this section. Product ordering information is as follows.

| Product No. | Description |
|---|---|
| 92269A | Desktop printer/plotter stand |
| 922616 | HP QuietJet printer wire paper catcher |
| 922502 | HP PaintJet printer dust cover |
| 51606A | HP PaintJet printer black print cartridge |
| 51606C | HP PaintJet printer color print cartridge |
| 51630P | Z-fold HP PaintJet printer paper, 8.5 × 11 in. (216 × 279 mm) finished size. 250 sheets per pack. |
| 51630Y | Cut-sheet HP PaintJet printer paper. 8.5 in. × 11 in. (216 × 279 mm) finished size. 250 sheets per pack. |
| 51630Q | HP PaintJet printer transparency film, 8.5 × 11 in. (216 × 279 mm) finished size. 50-sheet box includes 50 plastic sleeves. Required film for HP PaintJet printer. |

# NEW DISC STORES 1.44 MBYTES OF DATA ON A SINGLE HIGH-DENSITY DISC

Disc technology has advanced to the point where twice as much data can be stored on one 3%-inch microfloppy. HP DIRECT now offers such a disc, designed to provide users with 1.44 Mbytes of formatted capacity for reliable data storage and more simplified backup.
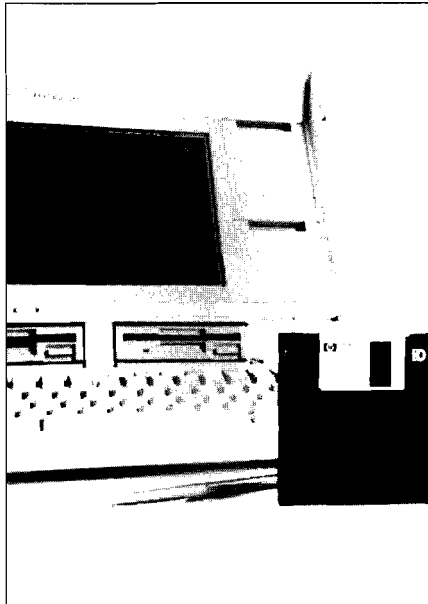


*This 3¹/₂-inch microfloppy disc stores 1.44 Mbytes of formatted data for the new HP Portable Vectra PC.*

Users can use this 1.44-Mbyte disc with most industry-standard high-density drives, including the new HP Portable Vectra PC. This new, fully powered personal computer features two built-in 1.44-Mbyte disc drives. It also runs industry-standard software and supports the entire HP family of printers and plotters.

However, these discs should be used with 1.44-Mbyte disc drives only. Loss of data will occur if high-density discs are used in lower capacity drives.

## Ordering information

In the U.S., users should call 800-538-8787 between 6 a.m. and 5 p.m. PST. Users outside the U.S. should refer to the complete list of HP DIRECT phone numbers included at the end of this section.

| Product No. | Description |
|---|---|
| 92192X | 3%-inch high-density, double-sided, unformatted, 1.44-Mbyte (formatted capacity) microfloppy discs, box of 10. (For use with high-density drives only.) |

# WIRE PAPER CATCHER FOR HP THINKJET PRINTER NOW AVAILABLE

HP DIRECT's new HP ThinkJet printer paper catcher can keep your printer output tidily folded into neat stacks, undisturbed by printer cords. The catcher attaches directly onto the back of the HP ThinkJet printer stand (92261S) or the terminal-top HP ThinkJet printer stand (92171X); a connecting chain enables it to hang at a 30-degree angle or lie flat on a desk.



*The HP ThinkJet printer paper catcher attaches directly onto the back of a printer stand and hangs at a 30-degree angle.*

Ordering this product through HP DIRECT is easy – in the U.S., call 800-538-8787 between 6 a.m. and 5 p.m. PST. Users outside the U.S. should refer to the complete list of HP DIRECT phone numbers included at the end of this section. Product ordering information is listed below.

| Product No. | Description |
|---|---|
| 92261R | HP ThinkJet printer wire paper catcher |

## DMK direct order phone numbers

DMK Fast Phones — the easy, direct way for you to order supplies, accessories, media, furniture, and software from Direct Marketing Division.

| Location | Telephone Number |
|---|---|
| Australia | (03)895-2645 |
|  | (03)895-2615 |
|  | (03)895-2815 |
|  | (03)895-2861 |
| Austria | (0222)2500-614/615/616 |
| Belgium/Luxembourg | (02)762 31 11 |
| Canada | |
| Toronto Local | 416-671-8383 |
| Ontario | 1-800-387-3417 |
| Quebec | 1-800-387-3417 |
| British Columbia | 112-800-387-3154 |
| Other Provinces | 1-800-387-3154 |
| Denmark | 04 30 16 40 |
| Finland | (90) 887 2361 |
| France | (1) 69 288 390 |
| Greece | (01) 6726090 |
| Italy | (02) 9236 9702 |
| Japan | |
| Sagamihara | 0427 59 1311 |
| Osaka | 06 304 6021 |
| Middle East | |
| Athens | (01) 6828811 |
| Norway | (02) 246090 |
| South Africa | |
| Johannesburg | (011) 8025111 |
| Cape Town | (021) 537954 |
| Spain | (91) 6374013 |
|  | (91) 6370011 |
| Sweden | (08) 7502400 |
| Switzerland | (057) 31 22 53 |
|  | (057) 31 22 54 |
|  | (057) 31 22 59 |
| The Netherlands | (020) 547 6606 |
| United Kingdom | (0734) 697201 |
| United States | 800-538-8787 |
| West Germany | (0130) 3322 |

## SOFTWARE PACKAGES AVAILABLE AND WANTED

If you have a software package available for cross-licensing, or are looking for a package to cross-license, this section will help you. Your entry will appear for two months: the most recent additions are shaded. To list your company in the Cross-Licensing Classifieds (at no charge), see the address at the end of this section.

### Software Packages Available

**Industry:** *Cross industry.*

*Abstract:* CASQUE is a revolutionary (as opposed to evolutionary) development in computer security. The system's range of application spans the entire spectrum of computing from single stand-alone to multisite, multiterminal remote accessed networks.

System independent, it copes with all operating systems with any application in any language, or on any machine. The system is dynamically configurable and can provide escallating levels of security with progressively stricter restrictions and access. In highly sensitive settings, access could be restricted to a particular authorized person operating a single operating pmgram or database, at a specified terminal for a time slot as brief as a few minutes. A user's status may be further refined to 'read only' or degrees of 'write access'.

Transputer development systems. Low-cost parallel processing with OCCAM concurrent programming language. Comes with compilers for C, Pascal, and FORTRAN. Fits most computer systems. Each processor has the ability to process 10 million instructions per second.

**Company Name:** Energy Soft Computer Systems, Ltd

**Address:** Peel House, Peel Road
Skelmersdale, Lancs.
WN8 9PT, England

**Phone:** +44 695 31473/22810/33310

*Telex Number:* 677467 CHACOM

*Contact Person:* Robert **D.** Thurston

*Type of Distributor Wanted:* Open

*Geographic Coverage:* Worldwide

**Industry:** *Cross industry – BASIC language compiler and interpreter*

*Abstract:* NKR BASIC implements the new ANSI X3.113, the Federal FIPS PUB 68-2, and the European ECMA-116 standards for BASIC. The new FIPS PUB 68-2 standard replaces the obsolete FIPS PUB 68-1 based on the old ANSI Minimal BASIC X3.60 standard for the language. This powerful updated language is offered by NKR as an interpreter and compiler, and is available on the HP 9000 Series 300. The interpreter incorporates a powerful debugger and comprehensive HELP facility, and the compiler produces native code for fast execution.

The new ANSI BASIC remains easy to use, but incorporates advanced features that include matrix operations, complete set of arithmetic. string and matrix functions, flexible file structures, structured programming (with true recursive subroutines and functions), and a variety of data types. It is a sophisticated language, and promotes portability for BASIC applications.

Both compiler and interpreter may be purchased as a set, and are priced at $1,800 (U.S. list). A comprehensive user manual is included. Substantial volume discounts are available for volume purchases. Biannual pmduct updates may be purchased for $200, and a hotline service is offered. Non-U.S. prices are slightly higher.

NKR BASIC is the standard portable solution for BASIC, and is available on several other systems in addition to the HP 9000 Series 300.

*Companv Name:* NKR Research

*Address;* 4040 Moorpark Avenue, Suite 209
San Jose, CA 95117
USA

*Phone:* 408-249-2612

*Contact Person:* Faruq Ahmad

*Type of Distributor Wanted:* Open

*Geographic Coverage:* Worldwide.

**Industry:** *Cross industry – dBase Database **Language application
development***

**Abstract:** QUANTUM is a utility program designed for use by
developersiprogrammers who work in the dBase or dBase look-
alike pmgramming environment. The program is designed to
speed up the tasks that the programmerianalyst needs to perform.
Features include the production of professional-quality system
documentation, such as 'drawing' a representation of a system
hierarchy, analyzing database and index relationships within a sys-
tem. Quantum can also locate program bugs, build procedure
files, perform word processor-like global searchichangeidelete,
print out programs, and properly indent code. The software is cur-
rently available in German, English and Spanish versions along
with fully translated user documentation and promotional
materials.

We are interested in arranging dealerships for our Quantum Soft-
ware product on an exclusive country basis. We are also prepared
to make source code available as part of a nondisclosure
agreement.

An Oracle and Mantis version will be available by the end of
November 1987.

Language: Pascal, Assembler. Supported Environments: MS-DOS
2.11 and greater UNIX® operating system.

*Company Name:* Brigitte Neese & Associates CC
                 Systems Consulting Gmup Ltd.

**Address;** P.O. Box 89601. Lyndhurst. 2106
            South-Africa

            Hohentwielstrasse 10, 5000 Köln 41
            West Germany

**Phone:** (South Africa = 27) (area code = 11) 786-0248
(West Germany = 49) (Area Code = 221) 437-737

**Telex:** 426448 SA

*Contact* **Person:** Stephen Banhegyi (South Africa)
                    Friedrich-Karl Thiel (West Germany)

**Geographic Coverage:** Worldwide

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**Industry:** *Cross-industry*

**Abstract:** CEACTI is a computer services company.

Some examples of their available software packages are listed
below.

- GESTOR: Time and Attendance Management system is a soft-
ware product for management of human resources of a firm. It
manages debit/credit work hours of employees, absences, off-
site work, simulation of estimated work force, absences to which
the employees are entitled (holidays, training, sickness etc.), and
overtime. GESTOR is available in English, French, German,
and Dutch versions. More than 60 commercial, industrial, and
financial companies in different Eumpean countries use this
system.

GESMOD: Shop-Floor Manpower Management enables an ana-
lytic decomposition of working hours on the factory floor. Data
acquisition on the manufacturing level by means of data capture
terminal C 2000 is the objective of this system. The user can see
at a glance how much time has been spent on a job and which
employees were working on it. Gesmod information can be used
to update an accountancy or production management system.

GESAC: Access Control System controls the access of people in
a protected area. during free hours, according to their work
schedule.

INTEGRAL 3000: Integral 3000, developed in fourth-generation
languages is a real tool box that most medium size companies
seek. Integral 3000 is an integrated information system for the
following areas: commercial management, stock, purchase,
work-in-process control, accounting, maintenance management,
finance and budgeting, cost management, and materials
management.

CEACTI hardware is listed below.

- Data Capture Terminal C 2000 and its waterproof Version 2001
– equipped with a simplified numeric and alphanumeric key-
board. a special set of "function" keys, and a users' memory of
16 Kbytes to 32 Kbytes. Its badge reader can be magnetic bar
code, WIGAN effect, or punch card. Transactions can be
accomplished using the badge reader and simplified keyboard
data entry. Battery and charger assure operation security of ter-
minals (two to five hours autonomy according to the type of
reader).

CONCENTRATOR C 2000: Up to 24 data capture terminals can
be connected to a concentrator C 2000 which is connected to a
port of CPU. Thus, the concentrator C 2000 helps to economize
the ports of CPU.

*Company **Name:*** CEACTI

**Address:** Head office:
            4, Rue Viete
            B.P. 3053
            79012 Niort Cedex

**Phone:** 49 73 02 80

**Telex:** 790639F

**Branch offices:** 44000 Nantes
                   108, Route de Rennes
                   **Phone:** 40 30 88 69140 29 88 26

                   94700 Maison Alfort
                   16 Av. Charles Martigny
                   Z.I. Les Petits Haies
                   **Phone:** 48 99 61 85

**Contact Person:** Mr. Michel Rivault, Director
                   Mr. Raymond Derbord, Chief of Pmduction

**Type** *of* **Distributor Wanted:** Open

**Geographic Coverage:** Canada and U.S.A

**Industry:** *Cross industn*

**Abslract:** Collect-94'" is a software development environment that handles compiling, execution. emulation, and decompiling of BASIC-like code. It is a fourth-generation language that has a wide variety of built-in functions including: edited field input. menu operation. XMODEM, and Kermit protocol file transfers. serial port control. string manipulation, and file operations.

Currently, Collect-94 is being used for data collection, inventory control, shipping and receiving, and route accounting. The development environment runs on the IBM PC or compatible PCs and the HP 150/Touchscreen PC. The operating environment is the HP-94 handheld industrial computer. Both the development and operating environments can be ported to other machines.

**Company Name:** Audax Corp

**Address:** 2675 University Avenue
St. Paul, MN 55114
U.S.A.

**Phone:** 612-646-8896

**Contact Person:** Susan Firestone

**Type of Distributor Wanted:** Open

**Geographic Coverage:** Worldwide

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**Industry:** *Cross industn – Decision support, financial modeling*

**Abslract:** IFPS/Plus is an easy-to-use financial planning tool that provides managers, financial specialists. marketing executives, and strategic planning groups a decision support system to help them analyze information for making better decisions faster. This nonprocedural, 4GL language allows users to model their applications using their own terminology for self-documentation and ease-of-use. The users can also interrogate the results with powerful tools such as: What-if analysis. Goal Seeking. Sensitivity, Impact, Monte Carlo Risk Analysis, Analyze. and Universal Consolidation. A full complement of report writing, data tile management. and command language capabilities are also included. A Data Transfer package is available for converting reports and other readable formats into the desired IFPS/Plus format.

IFPS/Plus and the Data Transfer Extension is a self-contained program that executes under the control of the MPE operating system in either a batch or interactive mode in the HP 3000 environment.

**Company Name:** Execucom System Corporation

**Address:** 9442 Capital of Texas Hwy, North
Arboretum Plaza One
Austin. TX 78759
U.S.A.

**Phone:** 512-346-4980

**Contact Person:** Bill Arkell

**Type of Distributor Wanted:** Open

**Geographic Coverage:** Worldwide

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**Industry:** *Cross industry – Any sales or service-related activity*

**Abstract:** SALESMAN is a standard package designed to suit any organization engaged in a selling-related activity. It has been designed by sales representatives with maximum flexibility and ease of use in mind. The package should appeal to decision makers in large and small corporations where the cost of sales staff is soaring, competition is growing intense, and the gathering of market intelligence is often too difficult. Runs on any HP 3000.

**Features:** Prospector and Tracker – for mailingitelephone sales/
quality control
Customizer – provides own page layouts
Informer – focuses on the information needed
Viewer – views the selected information
Microwindow – outputs central data to spread sheets
Communicator – lap top links from remote field force

**Company Name:** Coggon Computers South Ltd

**Address:** CCS Ltd
Sutton Street
Bath
BA2 6NW
United Kingdom

**Phone:** 011 44 225 445353 (from U.S.A.)

**Contact Person:** Dick Booth or Bryan James

**Type of Distributor Wanted:** OEMs

**Geographic Coverage:** Worldwide

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You can list your company in the **Cross-Licensing Classifieds** (either Software Packages Available or Software Packages Wanted) by sending the information in the format used here to:

Hewlett-Packard Company
Value-Added Channels Development
Attn: Marilyn Rauchle
19091 Pruneridge Ave.
Building 46UV
Cupertino, CA 95014
U.S.A.

Entries will run for two months. The most recent additions are shaded. Be sure to send the information in at least one month before you wish it to appear.

**How to get your name added to the distribution for HP** *Channels*

If you work for a company that is a value-added business for Hewlett-Packard and want to receive your own copy of *HP Channels,* call Hewlett-Packard and have your sales rep send your name and the information requested below to Tracy Wester.

**HP sales reps only:** To add new U.S. or Canadian accounts to the distribution for *HP Channels,* please send Tracy Wester the following information (on HP Desk 0000153 or to the address listed below): company name address, phone number, contacts' name/title, and HP sales rep name, COMSYS number, and engineer code. For accounts outside of the U.S. or Canada, contact Tracy Wester to get the name of the person who handles the distribution of *HP Channels* in your country.

Please address editorial correspondence to Tracy Wester at address listed below.

# *HP CHANNELS*

*Hewlett-Packard Company*
*Tracy Wester, Editor*
*Corporate Marketing Communications*
*3200 Hillview Avenue, Building 16L*
*Palo Alto, CA 94304-1298 USA*

**HEWLETT PACKARD**