

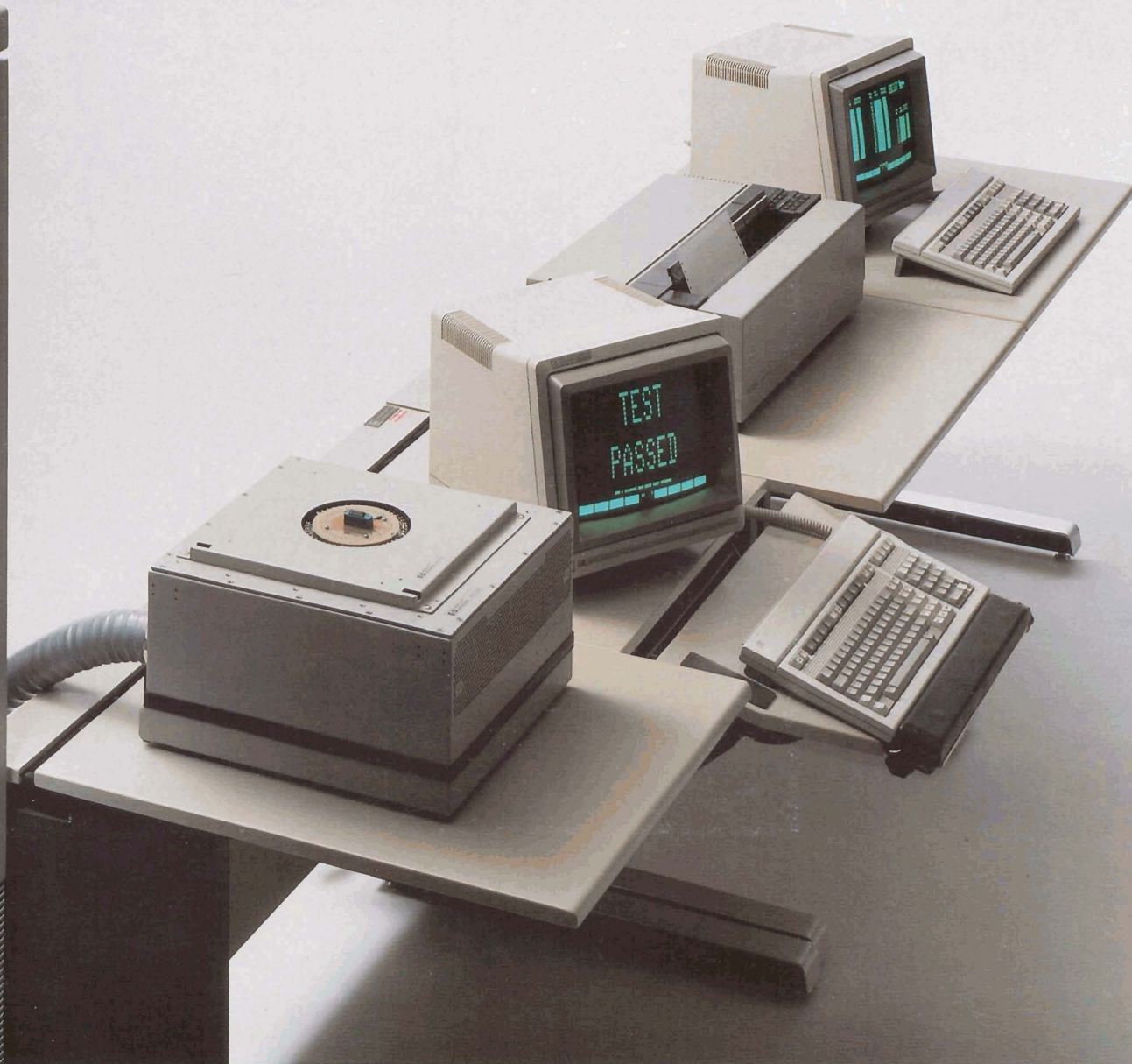
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Semiannual Index

Computer News

For HP Field Personnel Worldwide
May 15, 1985

New HP 9430 Memory Test System

HP Measurement Technology plus Computer Power



For HP Use Only

Computer News

Vol. 10, No. 14

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Computer News is published biweekly for Hewlett-Packard field personnel to help you sell HP computers, computer-related products, and computer-based systems by *organizing, summarizing, and highlighting* marketing information about new and existing system solutions.

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On the Cover

The new HP 9430 Memory Test System from Boeblingen Instruments Division represents HP's first step into the area of testing semiconductor memories. This system combines high accuracy and stability with great software productivity under the control of an HP 9000 Series 200 computer. See article on p. 29.

MARKETING & INTERNATIONAL SECTOR

US Field Operations

European Operations

Intercontinental Operations

Major Accounts Marketing

Corporate Marketing

MIC Marketing Information Center
FRD Finance and Remarketing Division
CSD Customer Support Division
PRSD Product Support Division
ASD Application Support Division
DMK Direct Marketing Division
CPC Corporate Parts Center
TPM Third Party Marketing

COMPONENTS, MEASUREMENT & DESIGN SYSTEMS SECTOR

Microwave & Communications Group (MCG)

SPD Stanford Park Division
NMD Network Measurements Division
SAD Signal Analysis Division
SPK Spokane Division
CTD Colorado Telecom Division
QTD Queensferry Telecom Division
MTD Microwave Technology Division
QMO Queensferry Microwave Operation

Electronic Instruments Group (EIG)

NJD New Jersey Division
SCD Santa Clara Division
BID Boeblingen Instrument Division
YID YHP Instrument Division
YCD YHP Computer Operation
ICD Integrated Circuits Division

Design Systems Group (DSG)

FSD Fort Collins Systems Division
FEO Fort Collins Engineering Operation
LSD Logic Systems Division
LDO Logic Design Operation
COL Colorado Springs Division
BCD Boeblingen Computer Division
LSD Lake Stevens Instrument Division
BEO Boeblingen Engineering Operation
TSC DSG Technical Software Center

Component Group

MSD Microwave Semiconductor Division
OED Optoelectronics Division
OCD Optical Communication Division
SAO Southeast Asia Operation

Corporate Engineering

INFORMATION SYSTEMS & NETWORKS SECTOR

Information Systems Group (ISG)

CSY Computer Systems Division
CSY-R CSY Roseville Operation
BGD Boeblingen General Systems Division
OPD Office Productivity Division
GCO Guadalajara Computer Operation
APD Administrative Productivity Division
IRO Information Resources Operation
APO Administrative Productivity Operation
FSO Financial Systems Operation

Information Networks Group (ING)

RND Roseville Networks Division
IND Information Networks Division
GND Grenoble Networks Division
CNO Colorado Networks Operation

Information Technology Group (ITG)

CID Cupertino IC Division
FID Fort Collins IC Division
NID Northwest IC Division
IHO Information Hardware Operation
ISO Information Software Operation

Personal Computer Group (PCG)

RTD Roseville Terminals Division
PCD Portable Computer Division
HCCO Handheld Computer & Calculator Operation
GPCD Grenoble Personal Computer Division
POD Personal Office Computer Division
PSD Personal Software Division
PCDO Personal Computer Distribution Operation
PCGO Personal Computer Group Operation
HPPR Puerto Rico Operation
PCS Singapore Operation
BPC Brazil Operation

Peripherals Group (PG)

BOI Boise Division
DMD Disc Memory Division
GLD Greeley Division
CPB Computer Peripherals Bristol Division
SDD San Diego Division
VCO Vancouver Division

MANUFACTURING, MEDICAL & ANALYTICAL SYSTEMS SECTOR

Manufacturing Systems Group (MSG)

DSB Data Systems Division
AMSO Advanced Manufacturing Systems Operation
MPD Manufacturing Productivity Division
SPNO Semiconductor Productivity Network Operation
LID Loveland Instrument Division
PAO Panacom Automation Operation
MTD Manufacturing Test Division
LMSO Lyon Manufacturing Systems Operation

Analytical Group

AVD Avondale Division
LAS Laboratory Automation Systems Operation
SID Scientific Instruments Division
WAD Waldbronn Division

Medical Group (MED)

AND Andover Division
BMD Boeblingen Medical Division
MCM McMinnville Division
WAL Waltham Division
HCP Health Care Productivity Operation
MSC Medical Supplies Center

Corporate Manufacturing

HP Computer Museum
www.hpmuseum.net

For research and education purposes only.



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GENERAL

Inacomp Computer Centers to sell HP peripherals

Karen Rohack/PCG

Inacomp Computer Centers, a national retail computer chain, has signed an authorized peripheral dealer contract to sell HP's plotters and printers in their retail outlets nationwide. Inacomp, which operates in five states with a combination of 50 company-owned and franchised retail outlets, will carry the HP LaserJet and ThinkJet printers and the HP 7470, 7475, and 7550 plotters.

"Focus Cubes" available once again

Jeff McNair/FSD

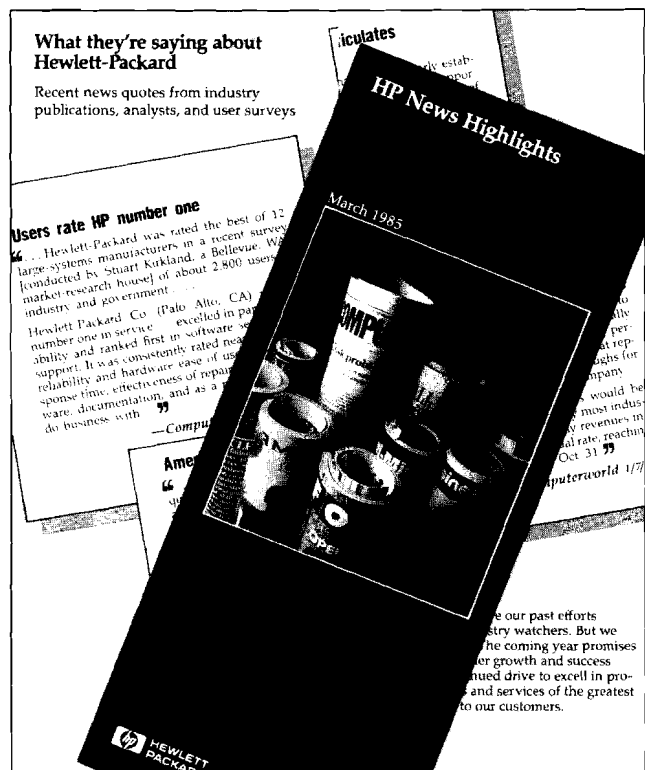
The popular "Focus Cubes," the plastic cubes containing an NMOS III chip, are available once again. In the past, these cubes have been used as gift paperweights for customers and VIPs. Cubes may be ordered on a first-come, first-served basis as follows:

Contact Sarah Moya at COMSYS 4000, and provide your name, mailing address, quantity, department number, and account number. The cubes are \$5 each. Phone orders will not be accepted, and orders without account or department numbers will not be processed.

Good news highlights from HP

Jerry Epps/ISM

It's always nice to hear the good news about ourselves. So we've just published a "News Highlights from Hewlett-Packard" brochure to keep you informed as to what the media is saying about us. The folder spotlights some of the recent positive news quotes from editors, analysts, and customers concerning the products, programs, and progress at Hewlett-Packard.



You'll find these news quotes upbeat and encouraging. Perhaps you can use them to enlighten some of your prospects and customers as to just how strongly HP is positioned and regarded by other customers and the media.

You may wish to include the brochure (P/N 5954-0449) in your upcoming direct mailings. It is available now from the Literature Distribution Center. Since only a small quantity was printed, you should place your order immediately.

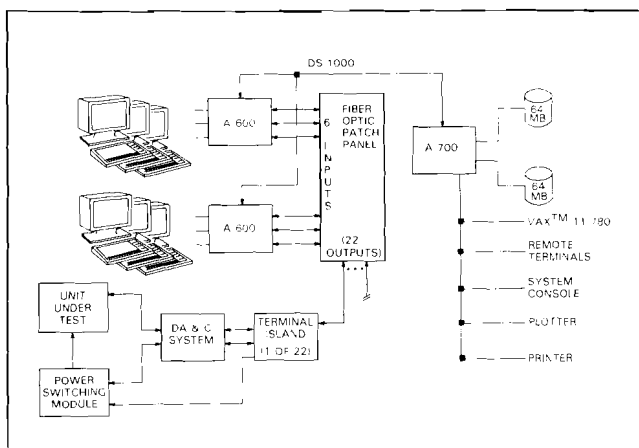
SALES SUCCESSES

Sales Successes *reports on successful sales strategies and HP solution installations.* Computer News *welcomes contributions for this column from the field and divisions alike.* Articles should be brief, informative, and contain the following information: (1) A description of the customer and the problem, (2) the competition's answer to the problem, (3) HP's solution and why the customer chose HP, and (4) who to call for more information about the sale. Also welcome would be some information about the amount of the sale and the solution's implementation date.

GE automates testing of rotating electrical machinery using HP 3054C

Conrad Proft/LID

Mike Dickey, of the Cleveland, Ohio, sales office, has made an impressive effort in creating another successful HP 3054C application. Six HP 3054C systems are being used to automate the testing of rotating electrical machinery at General Electric's Transportation Systems Business Operations' Propulsion Equipment Engineering Laboratory in Erie, Pennsylvania. Friction Windage, Heat Runs, Seal Tests, and Saturation Core Losses are among the types of tests being performed at this facility.



Block Diagram of GE's Laboratory

The laboratory tests large AC and DC machines in the 10 to 3600 hp (7.5 KW to 27 MW) range. In the past, the entire process of testing was completely under manual control with manual data acquisition and data reduction. In the interest of greater productivity and testing quality, GE has integrated an impressive amount of HP 1000 computers, instruments, and custom hardware.

GE has constructed six test stands, which contain an HP 3497A, 3456A, 3498A, 37203A HP-IB Extender, and various operator-input and alarm functions. Each test stand can be connected to the computers and machinery at one of the 22 test stations or ports. Fiber-optic runs under the floor give good noise rejection, signaling speed, and absolute isolation of the computer system from the high-voltage DC and broadband AC on the test floor.

The complement of computers includes the system host, an HP 1000 A700, and two real-time test control computers, both HP 1000 A600s. The A700 provides general functions of data reduction, data-base management, overall scheduling of tests, and resource management. For a test setup, the required test program is downloaded from the A700 to one of the A600 computers. Once a test is initiated, the control computer runs independently. Each A600 computer can run up to three tests.

The objective was to almost totally automate the facility and to provide quality, unattended test, and fast turn-around time. Quantity and precision of data acquired has far surpassed previous manual practice. Unattended testing cuts down on the operator discomfort during acoustic noise testing, allows running of tests during off-peak power hours, and improves test throughput for a fixed capacity facility by using second and third shifts. Turnaround time for a given test was significantly reduced because data reduction is now performed by a computer.

The competition for this system did not really have a company name. The competition was resistance to change. GE has been performing manual testing of these machines for 30 years and was skeptical about automating the facility. It has taken HP about five years to convince GE that the solution was possible. The first system quoted was an HP 3052A system controlled by an HP 9825A computer. This evolved into an HP 1000 L-Series computer and 3497A when it was determined that multiple test stands would be desirable. Finally, the current solution was proposed.

The total HP solution was about \$215,000. The instrumentation alone contributed just over \$100,000. The success of this installation has provided Mike with leverage in several other areas of GE: Robotics, automatic gauging of diesel engine cylinder walls, control of DC drive motors, and small motor (less than 100 hp) and generator testing.

Although HP has no real competition in the Rotating Machinery test facility, there are competitors such as NEFF, Keithly, and GE's own Programmable Logic Controller (PLC) products present in the other areas. In particular, GE's Series Six PLC is already being used for small DC motor and generator testing. However, the accuracy, quality, and high performance provided by HP equipment in the Large Machinery testing area has been eroding the competition's edge. HP has always been known as a good supplier of quality measurement equipment, but this application has proven once again that HP can also offer solutions.

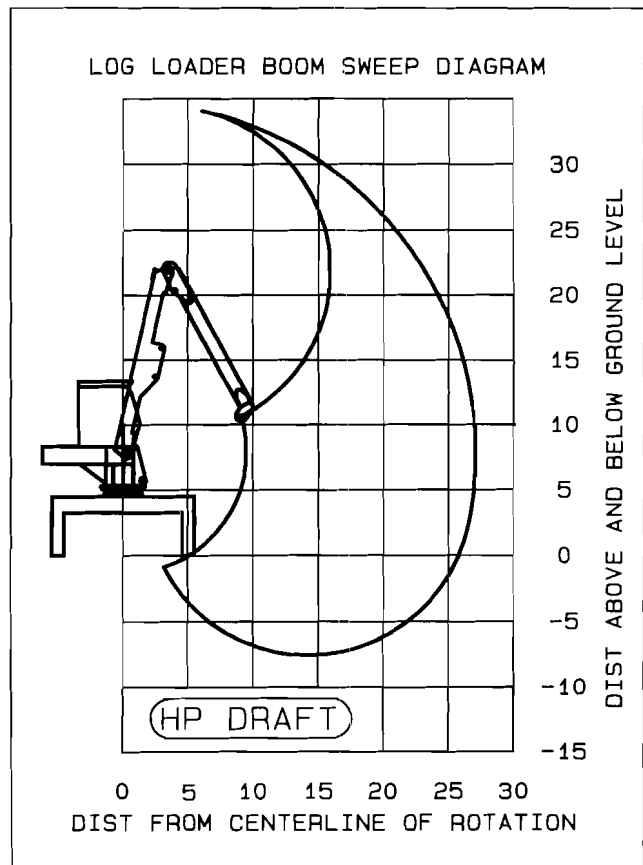
For more specific information, please contact Mike Dickey at the HP Cleveland Office.

HP Draft capabilities improve productivity and design for large equipment manufacturer

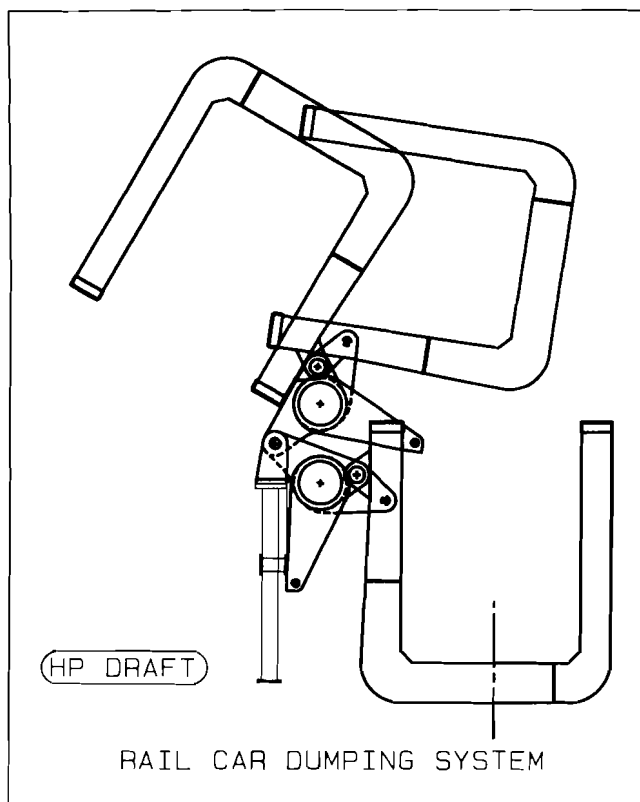
Darrell Wight/LSID

Peerless, a division of Lear-Siegler, installed the first HP Draft CAD system at their Paragould, Arkansas, facility in August 1984. Peerless manufactures rail car dumping systems, log handling equipment, plus other similar equipment. They have other facilities in Oregon and British Columbia.

After a minimum of on-site training, the CAD neophytes at Peerless were more productive on HP Draft than on their drafting boards by the second week. With this initial success, Peerless soon ordered an additional system for their design engineers to help them solve complex design problems.



Peerless uses geometric analysis to solve design problems in products such as rotating beds on trailer dumping systems or multisegment booms for log handling equipment. This analysis is done using traditional trigonometric methods requiring hours or days to approximate the motion and position of the equipment as it is used. With HP Draft, this kinematic analysis is done in a matter of minutes with basic HP Draft commands such as "Rotate" and "Cumulative Rotate". True positioning is determined eliminating interferences allowing better design optimization. HP Draft analysis improved the performance of one system by showing the designer that he could increase the rotation of his truck bed by five degrees, allowing better material flow. From a complete system layout, the positioning and kinematic movements can be analyzed and improved. Danny Stafford, design manager at the Arkansas plant, said "We did our first drawing of a rail car dumper system in the second week we had HP Draft. The drawing took about 2½ hours to draw, translate, and rotate. The information we received from this drawing would have taken at least three days to get to using our conventional trigonometric methods."



The success at the Arkansas facility resulted in an order for two more HP Draft systems for the Peerless facility in Oregon. The Oregon facility is carrying the process one step further. With the purchase of a Weber N/C programming system, HP Draft drawings can be passed directly to the shop floor. This CAD/CAM integration not only reduces design-to-manufacturing time but eliminates errors and increases expensive capital equipment up time. Needless to say with one system growing to four within five months, Peerless is pleased with their HP Draft systems. Designer productivity has increased four to five times. Other benefits include design freedom, accuracy, and control. Expansion of their HP Draft system network is also planned at their British Columbia facility in the coming months.

Probably the most important HP Draft feature to Peerless was that it was so easy to learn and use. Being their first CAD experience, they could not afford the frustrations involved with a long start up time. At the same time, they are continually impressed with the power of the system and are using new features to enhance their design process.

As it was with Peerless, the success criteria for HP Draft is to find a \$20 million to \$100 million company looking to automate their design staff. Usually, these accounts will have a design staff of under 10 engineers. The ease of use and power of HP Draft make it a great fit for these first-time CAD users. As witnessed by Peerless in Oregon, smaller accounts also appreciate the growth potential to true CAD/CAM with ability to link their design staff directly to the shop floor with the HP Draft-N/C systems CAM integration provided by HP OEM's Weber N/C Systems, Inc., and CAP/CAP Corporation. For customers who are looking for finite element analysis, HP Draft also links to the HP FE package. *Give the Boeblingen Engineering Operation team at Lake Stevens Instrument Division, 206-335-2000, a call for more information on using Peerless as a reference for your HP Draft sale.*

Series 68 sales continue to increase

Carol Tillock and Karen Dozier/CSY

Sales of the HP 3000 and particularly the Series 68 have been very strong this year. As a matter of fact, Series 68 sales for the first quarter of 1985 were 34 percent higher than the first quarter of 1984.

Part of this success is due to solution selling and HP's emphasis in vertical markets. The right software solution plus the ease-of-use, reliability, and power of the Series 68 form a winning combination for new system sales.

Educating schools on the Series 68

HP recently sold a Series 68 to a new customer: a prestigious school district in California that wanted a system to support administrative and office needs. It was a tough sale because the customer was initially interested in DEC. Also, the customer had no previous experience with Hewlett-Packard or our third-party supplier of administrative software for schools, Pertaine Systems, Inc.

The customer decided on HP because of the integration of the Pertaine software with HP office products, the combination of the laser printer and DSG graphics for forms generation, HP support (especially Office Assist), and a Project Center Support Plan put in place by the Applications Engineering Operation to work with Pertaine for software support.

The Series 68 meets the needs of city government

The managers of a growing city of 120,000 put out an RFP for a system to provide public safety records, an integrated library, and utility billing and receivables. HP and IBM were both in the running for the sale.

The customer preferred the ease of use of the Series 68, but wanted the "Public Safety Records and Information" software supplied for IBM systems by A. L. Roark. The sales rep found out that Roark had considered rewriting the application for the HP 3000, and used the opportunity to help convince them to become a software supplier for HP.

The customer bought both the hardware and software they preferred, and HP got another third party software supplier. HP won the sale because of the HP 3000's ease of use and reliability; HP's support; and HP's extensive third-party software program; which includes "Utility Billing and Receivables" from Computer Systems and Applications, "Integrated Library System" from Electronic Memory, and "Public Safety Records and Information" from A. L. Roark. (For more information about third-party software suppliers, contact your local vertical marketing specialist.)

In addition to the successes in vertical markets, sales reps are using other new approaches which are landing some great business.

Transform/3000 program sells Series 68s

The Transform/3000 Program has successfully leveraged a significant number of HP 3000 sales this year. The growth path to the Series 68 is a major reason customers are converting from IBM System 34s to HP 3000 Series 4X systems. In addition, customers are converting multiple System 34s to a single Series 68.

For example, a California division of a major manufacturing and mining company converted two IBM System 34s to a Series 68. This satisfied the customer's increasing user needs without the massive effort it would have taken to grow with IBM. The change was especially attractive for them since their corporate headquarters in the midwest has a network of HP 3000s in place.

The sales rep made the sale based on the following HP benefits: the ease of conversion from IBM to HP using Transform/3000, HP's remote data communications products (Network Services/3000), and reduced training and maintenance costs of a single vendor.

The growing number of solutions like these from HP and our third-party suppliers solve the needs of our customers and sell Series 68s. Use them to help leverage new HP 3000 Series 68 sales.

Bringing the best together: Dupont and The Portable

Laura Simpson/PCG

On March 12, 1985, I attended a national sales meeting for Dupont's Biomedical Department's Diagnostic Systems Division sales force. The meeting was a gathering of the national sales organization from around the country in Miami, Florida, at Doral Country Club, for a week of information sharing. There was also something each rep gained from this meeting that they weren't expecting. That's where The Portable came into the picture.

Leslie O'Brien a personal workstation sales rep in the Valley Forge office, had been working with Dupont's Information Resources Group for the Biomedical Department to help run a pilot project using HP Portables to automate their sales process. The pilot project lasted for three months with three Diagnostic Systems sales reps, one in Florida, Georgia, and Virginia. The pilot was very successful and there was a rumor among the other reps that it would be implemented around the country. However, no one knew for sure, and some were even told that it certainly would not happen at this national sales meeting.

On the second day of the sales meeting everyone attended a session entitled "Sales Force Enterprise." This spectacular event was one of the highlights of the week. Dupont put on a thrilling multimedia pre-

Sales & Customer News

sensation that sent chills up your spine. They began with the Star Trek theme, showing the starship Enterprise, and then The Portable came on the screen and the sales reps caught on. The entire room was filled with cheers and applause. After the multimedia presentation the lights came on in the room and the National Sales Manager of the Diagnostic Systems Division of the Biomedical Department unveiled The Portable system cases and instructed the sales reps to come forward to receive their HP Portable.



Dupont sales reps becoming familiar with their new sales automation tool.

The next hour and a half was spent introducing the sales reps to their new productivity tool. They were amazed at the ability of the preloaded Lotus™ 1-2-3™ spreadsheet that was created by one of the pilot sales reps. That evening and the next, Leslie and I joined the Information Resources Group in a hospitality suite set up by Dupont so that the sales reps could ask questions about The Portable. The reaction of the group was obviously very positive due to the number of sales reps that came in with questions about their new Portable.

If you have any questions about the Sales Force Automation market or think that you have an account that has potential in this area and would like to use Dupont as a reference, please contact your PCG Sales Development Engineer. See the table below for the engineer in your area. *The information in this article is confidential to HP.*

PC Sales Center Regional Contacts

Sales Center	Contact	Extension
<i>Eastern</i>		
New York/		
New England	Harry Uy	4302
Philadelphia/		
Rochester	Tom Offutt	4819
New Jersey/		
Baltimore/		
Washington	Betsy Thomas	2171
<i>Southern</i>		
West/Raleigh	Laura Simpson	4488
Gulf Coast/East	Jeff Wong	4494
<i>Midwest</i>		
East	Karl Darr	4484
Midwest	Andy Gee	3285
Central/West	Mary Ellen Kassotakis	4814
<i>Neely</i>		
Los Angeles/		
Southwest	Diane Bassett	2090
Southbay/Central/		
Northwest/		
Rocky Mountain	Farhang Oshidary	5153

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CUSTOMER SUPPORT

HP Grenoble offers maintenance training

Jacqueline Vessiller/Grenoble Training Center

HP offers comprehensive maintenance training programs for many of its computer systems — from the low-priced desktop computer systems, to the HP 1000 technical computers and HP 3000 Series for business applications.

Hardware maintenance training teaches technical skills for cooperative support

Maintenance courses taught at three training locations, two in the US and one in Grenoble, France, provide in-depth technical instruction for Cooperative Support Customers.

These courses teach maintenance and repair techniques for the HP 1000, HP 3000, HP 250, HP 9800 product lines and supported peripherals.

A balance of theory and practical, hands-on experience provides maintenance personnel with the skills needed to troubleshoot, repair, and maintain these products. Documentation to the major sub-assembly level is supplied to each student.

Maintenance courses — Grenoble 1985

Course No.	Description	No. of days	Start date
91304A	Mac disc drives	4	June 3
91303A	21MX/HP 1000	8	July 15
35131A	HP 1000 A-Series	8	September 16
35024A	CS 80 disc drive	4	September 30

For more information and data sheets, contact Jacqueline Vessiller at HP Grenoble Training Center. Her phone number in France is 76-62-53-66.

Support Product Numbers explained

Barb Lawler/PRSD

There have been a lot of questions about Support Product Numbers (SPNs) when they are used in the new version of Quotes (7SODA). What are Support Product Numbers? What are the valid SPNs? What are the definitions of these SPNs?

The purpose of Support Product Numbers is to provide a uniform and simple way of identifying, quoting, maintaining, and managing support offerings. Think of it as a more straightforward method of presenting the support which has always been offered. Using SPNs eliminates the necessity of using a mnemonic (SMMC, BMMC, and so on) when referring to support. Each SPN is a unique product number. It is a combination of a hardware product/option number and a unique support suffix number, connected by a plus sign (+). There is a unique support suffix for each support service offered. For example:

P/N with support suffix	Support
2392A+02A	SMMC support for HP 2392A terminal
2392A+02D	FMMC support for HP 2392A terminal
32542B+02B	BMMC support for 32542B, HP 3000 Series 42
32542B+02G	GMMC support for 32542B, HP 3000 Series 42

On the next page is a listing of each valid SPN for PT02 hardware support. Included is its Support Type, Support Type Description, and whether it is a monthly (M) or per-incident (O) charge.

Support suffix	Support type	Support description	Charge type
02A	SMMC	Standard Maintenance — 4-hour response, 8-9 coverage.	M
02B	BMMC	Basic Maintenance — next-day response, 8-5 coverage.	M
02C	PMMC	Product On-Site Maintenance — next-day response, 8-5 coverage.	M
02D	FMMC	Field Repair Center Maintenance — return to HP coverage.	M
02E	DRC	Dealer Repair Center — HP repairs at dealer location.	M
02G	GMMC	Guaranteed Uptime Maintenance — 7 days, 24 hours, 99% uptime.	M
02H	HMMC	Hardware Subscription Service — use P/N 99042A.	M
02J	TMMC	Technical Assistance Service — use P/N 99043A.	M
02L	VRC	Volume Repair Center — volume price for on-site workstation support.	M
02P	DCS	Dealer Co-op Support — use with P/N 99045A, dealer repairs HP product.	M
17A	Install	Product Installation charge.	O
17B	Site Prep	Environmental Survey prior to installation.	O
17C	Site Plan	Environmental Planning prior to installation.	O
17D	STREP	Standard Repair Charge — fixed time and material charge — workstations.	O

The above table is a complete list of Support Products offered by Computer Discipline, PT02. You may encounter other SPNs on PT02 products; these will be offerings from other discipline's support groups. Watch *Computer News* and *Support Update* for infor-

mation regarding new Support Services/Products to be introduced later in FY85.

If you have further questions about these Support Product Numbers, contact Barbara Lawler at Product Support Division Product Marketing.

How to figure usage into LaserJet printer support

Barb Lawler/PRSD

There have been several questions recently from the field regarding how to charge for usage on the HP 2686A LaserJet printer. The following information should help to clarify this area.

- The base MMC price for the HP 2686A covers usage up to 4,000 pages per month.
- If the customer's usage is between 4,000 to 8,000 pages per month, Option U02 is added onto the base product MMC.
- If the customer's usage is between 8,000 to 12,000 pages per month, Option U03 is added onto the base product MMC.

Here is an example:

	PMMC	FMMC
<i>Customer usage to 8,000 pages</i>		
HP 2686A	\$ 39	\$ 20
HP 2686A		
Option U02	100	50
Total MMC	139	70
<i>Customer usage to 12,000 pages</i>		
HP 2686A	39	20
HP 2686A		
Option U03	236	118
Total MMC	275	138

The usage option charges are high in proportion to the base product; you will find this true of the laser printer station (HP 2680A) also. Briefly, the reason the usage option pricing is so expensive is because (according to Boise Division) the HP 2686A is only designed to handle up to 4,000 pages per month. After the 4,000 page barrier, the product failure and wear increases dramatically.

If you have additional questions about quoting maintenance for the HP LaserJet printer, contact Barbara Koepplinger at Product Support Division Product Marketing. For additional questions about the failure rate on this product for high-volume usage, contact Boise Technical Support.

SPECIAL OFFERS

Promotion programs and special offers announced in Computer News may not be valid outside of the US. Before promotions are valid in other countries, they must be announced by the Country Marketing Organizations.

Leverage 3000 upgrade program update

David Wertheim/CSY-R

As you know, on April 1, 1985, HP introduced the Leverage 3000 program to encourage customers with older HP 3000s to upgrade to current products. We're offering these customers significant discounts and return credits for acting now. Customers seem to be very excited about the savings they can realize through this program.

Some issues have come up that you might want to take note of. The Series III is *not* part of this program (even though the figure on page 1 of the field training manual indicates that it is). This is a typographical error. We've had a number of programs in the past for Series III customers, and this program is specifically designed for the other systems that have not had attractive programs in the past.

There also needs to be some clarification regarding the use of existing terminals with the Series 37 upgrade. Since the Series 37 uses an ATP connection (3 pin), and the upgraded systems use 25-pin connections, any existing terminal needs either a new cable, or an adapter cable to be connected to hardwired ATP ports.

Terminal	P/N
HP 264X	92219F
HP 262X (port 1)	92217E
HP 262X (port 2)	13242-60010
Adapter cable	30152-60001

Optionally, for customers that are price sensitive, cable modification kits are available. To do their own modification they will need the 92229A crimp tool, and 92224A connector kit (which contains connectors for four cables).

Update to FRD's "Six-Pac" special

Nancy Chou/FRD

For North America only

Due to demand for low-cost, cosmetically-refurbished terminals, Finance Remarketing Division (FRD) has revised the "Six-Pac" quantity discount special.

P/N	Description	FRD price		"Six-Pac"		End of support life
		US list price	Factory base price	US list price	Factory base price	
HP 2382A*	Display terminal	\$950	\$925	\$750	\$725	January 1990
HP 2621B* Opt. 050	Display terminal with printer	995	960	795	760	No date set
HP 2623A* Opt. 050	Display terminal with printer	2,500	2,450	2,300	2,250	No date set
HP 2626W*	HP Word terminal	2,300	2,250	2,100	2,050	August 1989

Note: Effective May 15, 1985, the popular HP 2622A block mode terminal previously advertised under this quantity break will no longer be included in this program. However, FRD will honor all currently outstanding HP 2622A quotes.

See p. 45 of the March 1 issue of *Computer News* for details about this quantity discount special.

 **hp**

Leverage your LaserJet printer successes

Jim Lucas/BOI

Every day we hear more success stories about the HP LaserJet printer and your ability to use HP's small laser printer to penetrate new accounts. Some of the most profitable situations involve sales reps who have closed major accounts or OEM deals with the HP LaserJet printer. After you close a deal like this, you have the opportunity to leverage more printer sales.

Your unique advantage in these situations is the Printer Command Language (PCL). PCL is our four-tiered printer command set used by Vancouver and Boise Divisions and implemented on all printers designed after December, 1983. (For detailed information on PCL, please refer to the February 15, 1985 *Computer News* article entitled "PCL explained.") Once your customer purchases the HP LaserJet printer, the door is open to sell the HP ThinkJet, HP 293X, and HP 256X printers since they all speak the PCL language.

The HP LaserJet printer can help you penetrate difficult accounts, and PCL can help you sell more printers. If you would like to learn more about PCL's features and benefits, contact Jim Lucas at HP Desk 4600/M2.

The easiest solution is to purchase the paper stock from DMK and give it to a local printer to attach the letterhead. If the volume is large enough, or the specifications unusual enough, you can recommend moving a little closer to the source. Although we consider DMK as the primary resource for inkjet paper, we recommend you contact any of the paper suppliers listed below for custom paper needs. These suppliers also offer paper that has been tested and approved by HP. The list is still growing, as inkjet printing and paper become the standard for convenience printing.

HP approved paper distributors

Hewlett-Packard Direct Marketing Division	800-538-8787 408-738-4133 (in California)
Duplex Products	800-521-0190 408-249-9566 (in California)
Moore Business Forms	Consult the Yellow Pages under Business for the local Moore Business Forms sales office.
Standard Register	Consult your local Yellow Pages
Hammermill	800-621-5199 312-923-5855
Pine Tree Products S.C.M.	313-923-4400 Consult your local Yellow Pages

Inkjet paper grows in availability

Joe Barbera/VCD

Inkjet paper is no longer a specialty item. As more and more manufacturers and distributors are adding inkjet paper to their product lines, it is becoming a more and more standard product. This is due in large part to the huge success of the HP ThinkJet printers.

Our own Direct Marketing Division (DMK) is still the best source for regular inkjet paper. We have been getting many requests for paper supplied with custom letterheads, special forms, labels, and so on. DMK cannot supply these customized items at this time. There are, however, two alternatives you can offer your customers.

Cable linking HP ThinkJet printer to IBM PC available

Helen Harbin/DMK

Direct Marketing Division now carries the 92219K cable which allows the IBM PC to run with HP's ThinkJet printer. The nine foot (2.7 meter) cable connects the HP ThinkJet printer (with Centronics interface) to the parallel interface port of the IBM PC. US list price is \$50 each.

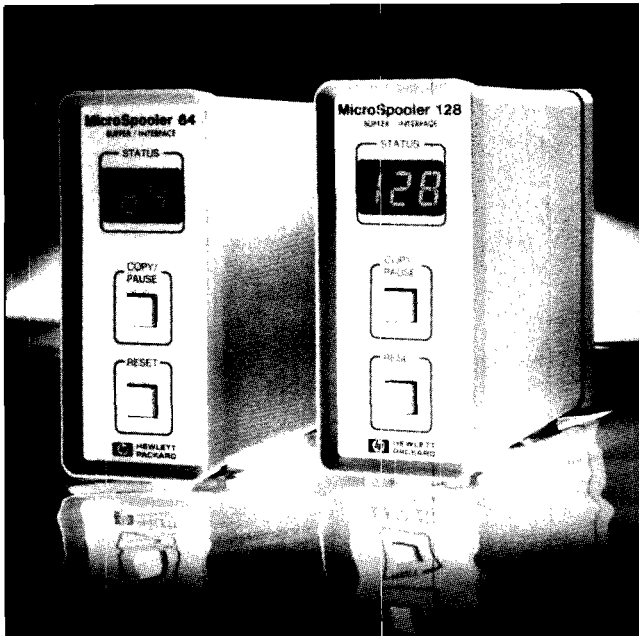
If your customers need extension cables, refer them to page 16 of the new *Spring/Summer '85 Computer Users Catalog*. For fast service, customers should call DMK's Direct Order phone numbers listed in the Computer Supplies section.

MicroSpoolers eliminate the wait

Paul Jurata/DMK

For US only

With the MicroSpooler™ 64 and the MicroSpooler™ 128, your customers can print or plot off of their HP Touchscreen or other personal computer without having to wait. Each MicroSpooler accepts data from your computer at up to 5800 characters per second and stores it until your printer, plotter, or modem is ready. It then relays the data at the fastest pace the peripheral device will accept, which means while the MicroSpooler is sending your data to a printer or a plotter, you can start on the next job.



MicroSpooler 64 and MicroSpooler 128, orderable only from DMK, eliminate the wait between printing or plotting one file and working on the next one.

With 64K bytes of buffer memory, MicroSpooler 64 is perfect for correspondence and short text tasks. MicroSpooler 128 has 128K bytes of buffer memory and is ideal for transmission of more complex and advanced documents as well as scientific and business processing applications.

Typically, 20 pages of text copy can be transferred from a CPU or personal computer to a printer in 21 minutes without a MicroSpooler and only 8 seconds with a MicroSpooler. Data from a CPU or personal computer typically takes 4 minutes to transfer to a plotter without a MicroSpooler and only 1.5 seconds with the MicroSpooler.

Features

- Easy-to-operate controls allows users to interrupt and resume operations or clear the buffer memory. Internal switches let users set, and then forget, baud rates, protocols, and handshaking parameters.
- An easy-to-understand digital readout continually updates and displays the amount of memory in use and indicates system status. (One initial command allows the user to print or transmit up to 256 duplicate copies.)
- Easy to install using existing standard printer or plotter cable and a 31391A (RS-232-C 25-pin end-to-end) cable.

Both MicroSpoolers are compatible with the RS-232-C versions of the HP 2601, 2602, 82905, 82906 and ThinkJet printers, and the HP 7470A and 7475A plotters. Fully supported by the manufacturer, Consolink® Corp., MicroSpooler 64 and MicroSpooler 128 are available in the US only.

P/N	Product	US list price
92205V	MicroSpooler 64	\$395 each
92205W	MicroSpooler 128	495 each
31391A	RS-232-C cable (or equivalent)	70 each

For fast service, customers should call Direct Marketing Division's (DMK) direct order phone numbers listed in the Computer Supplies section. *Note: these products can be purchased through DMK only.*

MicroSpooler™ 64 and MicroSpooler™ 128 are trademarks of Consolink® Corporation.

Consolink® is a US registered trademark of Consolink Corporation.

Security modem prevents unauthorized access to computers

Paul Jurata/DMK

For US only

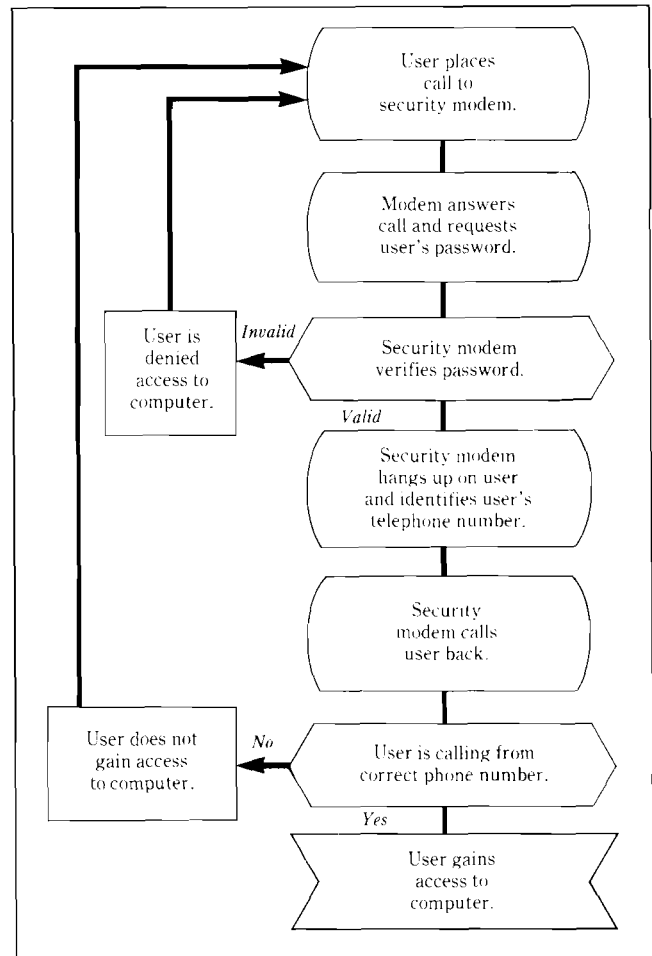
Unauthorized access to your customers' computer files can be prevented by a security barrier. The new 92205G security modem, manufactured by Cermetek and available through Direct Marketing Division (DMK), creates an electronic security barrier that allows only authorized callers to gain access to the computer. It requires callers to know a password and be at a specified phone number to receive the modem's return call before access to the computer is allowed.



The security modem from Cermetek prevents unauthorized access to your computer files.

How the modem works

When an access call is made, the security modem asks callers for their user ID password. If the password is valid, the modem instructs the caller to hang up and wait for a return call. The modem then calls the phone number linked with the password stored in the modem's memory. The security modem can store passwords and call-back numbers for up to 25 users. (See chart.) For an even more elaborate security system, the security modem can be set up with two phone-line jacks — one for accepting calls and one for call-backs. The phone number for the outgoing line can be kept secret to prevent interception of the call-back by a sophisticated security breaker.



Security modem offers round the clock protection.

Security options available

Users can select from four different security levels:

- No security
- Password only
- Password and call-back on one line
- Password and call-back on a second line

Other security measures provided:

- An audit trail listing both valid and invalid attempts to access the computer
- Capability to prevent unauthorized outbound calls from the host computer by employing a dial-out password
- Required use of a physical key to change security levels, passwords and call-back numbers

The security modem also can be used as a standard Bell 212A or 103 modem and is fully compatible with

the Hayes Smartmodem 1200 and 2400. Complete on-line support is available from the manufacturer, Cermetek.

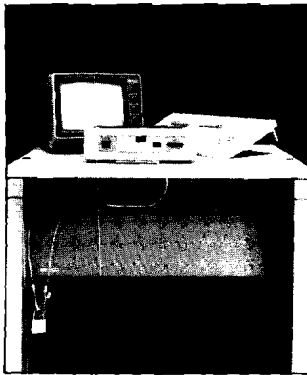
P/N	Description	Quantity	US list price
92205G	Security modem	1 unit	\$695/each
		2-4	665/each
		5+	635/each

The security modem may be purchased only via DMK's direct order phone numbers listed in the Computer Supplies section.

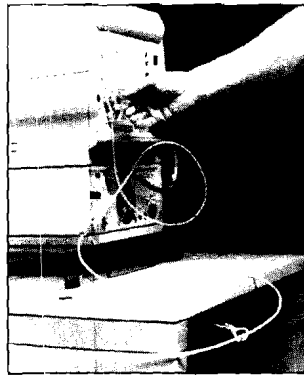
New security kits help prevent theft

Jim Kinney/DMK

In response to customers who have been asking for ways to secure their personal computers and peripherals, Direct Marketing Division (DMK) has come up with two different security systems to deter theft — the plate lock and screw lock security kits.



The plate lock security kit is made for small peripherals.



The screw lock security kit is ideal for the HP Touchscreen personal computer and HP 9133 disc drive.

Plate lock security kit

The 92172G plate lock security kit is ideal for the HP ThinkJet printer, the HP 9121 or 9122 disc drive, keyboards, and other small peripherals. It eliminates the need for bolts, connecting rods, electrical connections, as well as the need to drill holes into a piece of equipment or stick unsightly adhesive mats to table tops. Installation is easy. An adhesive-backed aluminum mounting plate (3½" x 3½"), with 2,000 pounds of gripping strength, is attached to the bottom of the equipment. A tamper-resistant, five-foot steel cable is permanently attached to the plate. A two-foot cable (also provided in the kit) is looped around a desk or workstation table leg. The plate cable and the loop cable are then locked together with a padlock. Once secured, the equipment can be moved around on the work surface, but not out the door.

P/N	Description	Quantity	US list price
92172G	Plate lock security kit	1-2 kits	\$29/each
		3-9	26/each
		10+	23/each

Screw lock security kit

The 92172H screw lock security kit can be attached to any equipment with an exposed screw on its rear panel area. Examples are the HP Touchscreen personal computer and the HP 9133 disc drive. The kit comes with three screw locks and cables that can secure up to three pieces of equipment.

Simple installation procedures consist of removing a screw lock and mounting the lock and cable with the previously removed screw, and inserting the lock tumbler and locking it with the key. One screw lock can accommodate two cable rings, so various pieces of equipment can be daisy chained together. Two three-foot and one six-foot cable are provided. The short

Personal Computers

cables are used to hook equipment together and the longer one to loop around the leg or cross-member of a workstation table. If the equipment has to be transported, the security cables can be removed easily.

P/N	Description	Quantity	US list price
92172H	Screw lock security kit	1-2 kits	\$49/each
		3-9	46/each
		10+	43/each

For fast service, customers should call Direct Marketing Division's direct order phone numbers listed in the Computer Supplies section.

The HP Integral PC now on the A-50 contract

Kermit D. Yensen/PCD

In order to support sales of the HP Integral PC to accounts that rent personal computers to customers for short-term use and evaluation, the Integral PC now appears on the A-50 contract at one (1.00) functional unit.

Correction

In the March 15 issue of *Computer News*, in the article entitled "Vertical software for the HP Touchscreen personal computer," the phone number of Acme Visible Records was listed incorrectly. The correct number is 804-823-4351.

Also in this issue

Bringing the best together: Dupont and The Portable

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How to figure usage into LaserJet printer support

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ATPs preferred connection for personal computers

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GENERAL

HP 260 introduction a success

Lynne Ovington/BGD

March PL10 order performance demonstrated the dramatic impact of the HP 260 introduction.

The US led the way in quota achievement with 119 percent while Europe attained 112 percent of quota. Worldwide, 227 orders resulted in 107 percent of sales quota.

In the US, the Neely Sales Region broke all records and placed \$360,000 of PL10 orders to reach 262 percent of quota. Spain was Europe's top performer, contributing 50 orders. The entry level HP 260 Model 15 proved very popular with small businesses in Spain.

Strong order performance in Switzerland, Italy, Germany, and Holland added to the March sales success of the new HP 260 system.

Congratulations to all OEM sales reps who worked hard to make March a successful month for their districts and their HP 260 OEMs.

110 and 150 baud removed from ATP

Hans Nilsson/IND

Starting July 1, line speeds of 110 baud and 150 baud will no longer be offered on the ATP (advanced terminal processor) for the HP 3000 Series computers. No new ATPs will have the functionality to operate at these speeds.

The ATPs currently in operation at these speeds will be supported for five years, until July 1, 1990. We encourage customers to convert their low speed devices to speeds of 300 baud or above. No future serial terminal and printer controllers will support speeds below 300 baud.

If this is a significant problem for your customers, please contact the Systems Marketing Center.

Also in this issue

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COMMERCIAL EDP

HP Rapid/3000 update — for now and the future

Bart Coddington/CSY

HP Rapid/3000 has been one of the more successful software products in HP's history. Transact is the second largest selling language and has been since its introduction three and a half years ago (COBOL is obviously first). Sales of Transact most likely exceed any other high-level application development language on the HP 3000.

HP is approaching its 3,000th Rapid sale in the near future.

Because of these impressive sales statistics HP's customers have a considerable investment in Rapid-based applications. This reality is an important factor in determining the direction of the Rapid products.

One concern that has come up is the migration of Rapid to the next generation of computers. The Rapid Team is making the migration for these customers one of the smoothest (if not the smoothest) in moving to a completely new hardware architecture. To achieve this, the customer will be buffered from the differences in subsystems and operating systems. The payback to customers is the assurance that HP is protecting the millions of dollars in Rapid-based applications.

Watch for further announcements as we approach the magic 3,000th sale on the HP 3000.

New enhancements to Rapid/3000

Bart Coddington/CSY

The latest release of Rapid (A.02.02) has been completed. Many new features have been added as well as a number of customer reported problems have been fixed. New manuals are also part of the release that is being distributed on T-delta-1 MIT.

The release is being backed up by advertising in *Interact*, *The Chronicle*, and *Super-Group* (see copy of ad on this page).

New features

- Rapid's user interface (Transact, Report, Inform) can be localized into any of the languages supported by HP's Native Language Support (NLS).
- For Transact — Improvements have been made in the interface with the locking and logging features of Image. We have increased the use of the data dictionary by allowing automatic generation of the list register from data in Dictionary/3000.
- For Inform — Modifications to existing cataloged reports is a new option.
- For Report — The addition of IF-THEN-ELSE logic now gives Report a great deal more power in defining complex reports.

RAPID/3000 UPDATE

**Hewlett-Packard announces
80 improvements to its
RAPID/3000 application
development tools.**



 Hewlett-Packard

New Rapid/3000 customer training courses

Betsy Stolte/ASD

HP Rapid/3000 software can cut programming time in half. And Rapid training cuts the time it takes to begin using these productivity tools effectively. This new series of three courses is designed to get your customers up to speed quickly and ensure proper implementation and utilization of Rapid on their HP 3000s.

The first course, *Dictionary-Inform-Report/3000*, has been updated to reflect the latest software enhancements released on the T-Delta-1 MIT. For example, this comprehensive four-day course shows application programmers and data-base administrators how to generate COBOL and Pascal data-type definitions from the dictionary. They'll also learn how to generate Inform reports using data from different data sets, as well as how to use the new IF-THEN-ELSE logic in Report.

The revised *Transact/3000* course features an increased emphasis on hands-on programming labs. During this five-day class, your customers will progress from writing simple to more complex data management applications. They'll use Transact to control, manipulate, and display data, and become familiar with using VPLUS with Transact.

The third course, *Advanced Transact/3000*, is a new class for experienced Transact programmers, designed to provide them with more sophisticated programming skills. After attending this course, your customers will know how to interface Transact with other languages, Image data bases, and KSAM files, and how to evaluate the impact of different coding methods on usage of the MPE stack. Most importantly, they will be able to use Transact effectively to write larger production systems.

For more information on these courses and their availability, contact your nearest Application Engineering Operation Training Center.

Product	Description	US list price
35031C	Dictionary-Inform-Report/3000	\$640
35014B	Transact/3000	800
51402A	Advanced Transact/3000	925

Look for the advertisement running in April, May, and June (see "New enhancements to Rapid") and the new course flyer now available from Literature Distribution Center (P/N 5954-0147).

HP TurboIMAGE/3000 articles appearing in *The Chronicle*

Tim Shetler/CSY

Alert your customers to a series of three HP TurboIMAGE/3000 articles appearing in the April, May, and June issues of *The Chronicle*, an independent newspaper for HP computer users. The articles, which were written by members of the TurboIMAGE product team, will help clarify the new features of TurboIMAGE and suggest ways to maximize their benefits. The article topics are TurboIMAGE overview (April), performance improvements (May), and recovery options (June).

If you don't receive *The Chronicle*, you can request copies of the articles by contacting Karen Poe, HP Desk 6600/18, COMSYS 6600, TELNET 125-3765, or 408-725-8111, ext. 3765. Please call before 12:00 noon Pacific Standard Time.

HP Copycat/3000 poster available

Lil Blankinship/DMD

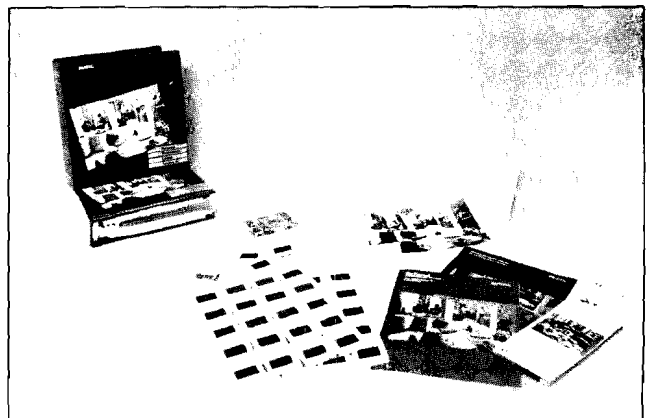
By now all domestic sales offices should have received a copy of the new HP Copycat/3000 poster. If you would like additional copies of the poster, send your request including name and address via HP Desk to Lil Blankinship/HP4800/MK and we will see that you get your copy.

OFFICE SYSTEMS

Seminar Kit for Personal Productivity Center

Brenda Greeley/ISG

If you are selling office systems and your office does not yet have a Personal Productivity Center Seminar Kit, order one now. The Seminar Kit can be ordered as a complete package, or as individual components, depending on your needs. If you are planning a seminar, you will probably want the complete kit. If you just need presentation materials for delivering HP's office systems' strategy to individual accounts, 35mm and overhead slides and script can be ordered separately. Feedback from those who have used the materials has been excellent. The material is thorough and professionally produced.



The Personal Productivity Center Seminar Kit.

Targeted primarily toward large companies (\$40 million plus), the presentation addresses general industry trends and customer needs as well as HP's strategy and products optimized to meet those needs.

The complete kit includes:

- Slide set (35mm and overheads)
- Presentation script
- Camera-ready copy for seminar invitations
- Seminar planning worksheets which include planning schedule; equipment, facilities, and literature/sales aid checklists; and a seminar evaluation form.
- *HP in the Office* folder (available in packs of 50)
- Samples of available sales literature.

An update incorporating the new PPC product information announced this month will be available in July. If you already have the kit, you will be notified by mail as soon as it is available.

To order the Seminar Kit, call Helene Cranstoun, TELNET 125-7617 or 408-973-7617, or send a message to Helene via HP Desk HP4700/13 or COMSYS 6650. Specify your name, entity/sales region (or COMSYS code), department/location code or sales office, account or I/O number, mailing address, telephone number, and desired shipping method. Your office will be billed for the cost of the kit (\$250 for the complete kit) and freight charges.

Videotape of PPC demo now available

Lauren Wilkens/ISG

You can now order a video demonstration highlighting the key integrated capabilities of the Personal Productivity Center (as of the October 1, 1984, announcements). The 7½-minute video demonstration focuses on the interaction between a workgroup manager using the HP Touchscreen personal computer and the workgroup secretary using the HP 2628A secretarial workstation. Products shown include HP DeskManager, HP Word, HP Spell, HP AdvanceLink, HP Message, and Series 100 VisiCalc™.

Capabilities highlighted include:

- Touchscreen P.A.M. access to HP 3000 applications
- Ability to transfer data from the HP 3000 to a personal computer application
- Ability to mail personal computer files using HP Message
- Transparent MemoMaker-to-HP Word conversion

In just a few minutes, the viewer can get a good sense of the power and integration provided by HP's Personal Productivity Center. A live demonstration is always more impressive, but for large groups such as seminar attendees, or for a single customer situation where a live demonstration of the PPC is not possible, the videotape provides a suitable alternative.

The videotape is now available through HEART from the Corporate Parts Center.

P/N	Tape	US list price
90351HZ	¾" Umatic format	\$30.00
90351HV	VHS format	27.60
90351HW	Beta format	27.60

VisiCalc™ is a US registered trademark of VisiCorp.

An update on HP Telex II

Richard Hull/OPD

HP Telex II is a communications product that provides access to the Public Telex Network from any HP 3000 that supports MPE-IV and above. Its features and benefits include:

- Stand-alone operation — HP Telex II provides a flexible telex management system, easily adapting to the changing requirements within an organization.
- HP DeskManager integration — with this feature, remote offices with only a telex machine can be part of a company's electronic mail network. Additionally, HP Desk integration provides the capability of telex distribution, filing, and printing for every HP Desk user on the system.
- Programmatic access — Users of HP Telex II can produce their own application programs to send outgoing telexes and/or intercept incoming messages.

Ordering information

HP Telex II consists of a software package for the HP 3000 and a device that links the HP 3000 to the Telex Network (Telex Interface Unit).

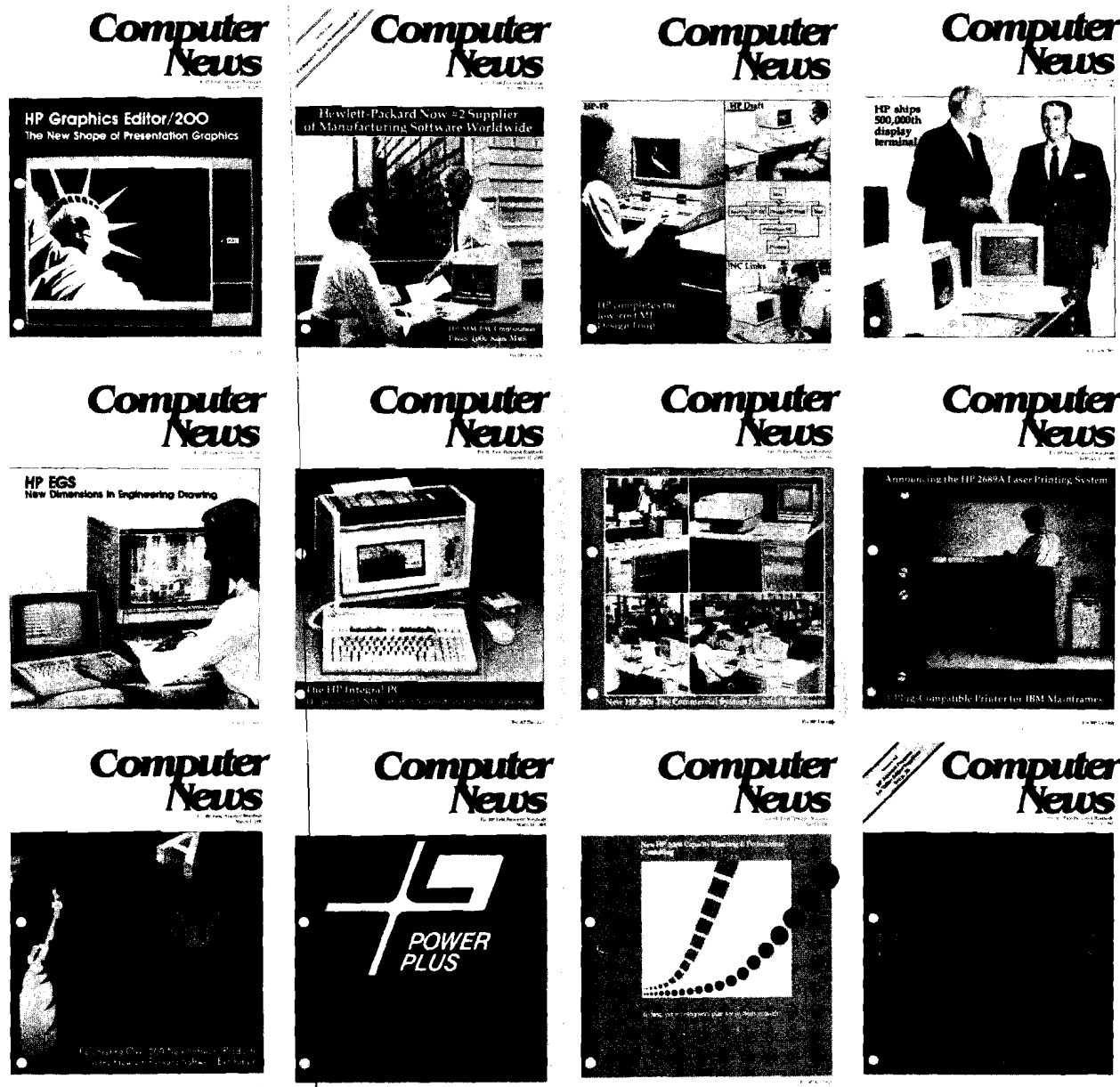
Due to the complications of gaining the relevant approvals and providing hardware support for this unit in all of the European and Intercon countries, the Telex Interface Unit (TIU) is only supplied as an HP component in the US. Customers in other regions should be put in contact with the authorized TIU supplier, as detailed in the local datasheet.

Computer News

For HP Field Personnel
May 15, 1985

Index to Volume 10

Issues 1-12



For HP Use Only

Computer News

Index to Vol. 10, Issues 1-12

Editor
Roman Kichorowsky

Assistant Editor
Darleen Brettes

Computer News is published biweekly for Hewlett-Packard field personnel to help you sell HP computers, computer-related products, and computer-based systems by *organizing, summarizing, and highlighting* marketing information about new and existing system solutions.

Introduction

Darleen Brettes/Corporate Marcom

This index includes all articles that appeared in *Computer News* from November 1, 1984, to April 15, 1985.

The articles in the index are listed in the same format as the magazine.

MARKETING & INTERNATIONAL SECTOR

US Field Operations
European Operations
Intercontinental Operations
Major Accounts Marketing
Corporate Marketing
M/C Marketing Information Center
FRD Finance and Remarketing Division
CSD Customer Support Division
PRSD Product Support Division
ASD Application Support Division
DMK Direct Marketing Division
CPC Corporate Parts Center
TPM Third Party Marketing

COMPONENTS, MEASUREMENT & DESIGN SYSTEMS SECTOR

Microwave & Communications Group (MCG)
SPD Stanford Park Division
NMD Network Measurements Division
SAD Signal Analysis Division
SPK Spokane Division
CTD Colorado Telecom Division
QTD Queensferry Telecom Division
MTD Microwave Technology Division
QMC Queensferry Microwave Operation
Electronic Instruments Group (EIG)
NJD New Jersey Division
SCD Santa Clara Division
BID Boeblingen Instrument Division
YID YHP Instrument Division
YCD YHP Computer Operation
ICD Integrated Circuits Division
Design Systems Group (DSG)
FSD Fort Collins Systems Division
FEO Fort Collins Engineering Operation
LSD Logic Systems Division
LDO Logic Design Operation
COL Colorado Springs Division
BCD Boeblingen Computer Division
LSD Lake Stevens Instrument Division
BEO Boeblingen Engineering Operation
TSC DSG Technical Software Center

Component Group
MSD Microwave Semiconductor Division
OED Optoelectronics Division
OCD Optical Communication Division
SAO Southeast Asia Operation

Corporate Engineering

INFORMATION SYSTEMS & NETWORKS SECTOR

Information Systems Group (ISG)
CSY Computer Systems Division
CSY-R CSY Roseville Operation
BGD Boeblingen General Systems Division
OPD Office Productivity Division
GCCO Guadalajara Computer Operation
APD Administrative Productivity Division
IRO Information Resources Operation
APO Administrative Productivity Operation
FSO Financial Systems Operation
Information Networks Group (ING)
RND Roseville Networks Division
IND Information Networks Division
GND Grenoble Networks Division
CNC Colorado Networks Operation
Information Technology Group (ITG)

CID Cupertino IC Division
FIC Fort Collins IC Division
NID Northwest IC Division
HIC Information Hardware Operation
ISO Information Software Operation

Personal Computer Group (PCG)
RTD Roseville Terminals Division
PCD Portable Computer Division
HCCG Handheld Computer & Calculator Operation
GPCD Grenoble Personal Computer Division
POD Personal Office Computer Division
PSD Personal Software Division
PCDC Personal Computer Distribution Operation
PCGO Personal Computer Group Operation
HPRP Puerto Rico Operation
PCS Singapore Operation
BPC Brazil Operation

Peripherals Group (PG)
BDI Boise Division
DMD Disc Memory Division
GID Greeley Division
CPB Computer Peripherals Bristol Division
SDI San Diego Division
VCO Vancouver Division

MANUFACTURING, MEDICAL & ANALYTICAL SYSTEMS SECTOR

Manufacturing Systems Group (MSG)
DSD Data Systems Division
AMSO Advanced Manufacturing Systems Operation
MPD Manufacturing Productivity Division
SPNO Semiconductor Productivity Network Operation
LID Loveland Instrument Division
PAQ Panacom Automation Operation
MTD Manufacturing Test Division
LMSO Lyon Manufacturing Systems Operation

Analytical Group
AVD Avondale Division
LAS Laboratory Automation Systems Operation
SID Scientific Instruments Division
WAC Waldbronn Division

Medical Group (MED)
AND Andover Division
BMD Boeblingen Medical Division
MCM McMinnville Division
WAI Waltham Division
HCP Health Care Productivity Operation
MSC Medical Supplies Center
Corporate Manufacturing

MARKETING

General

FORTTRAN 77 self-paced training course available	Nov 1	4
Finance and Remarketing division now open to customer visits	Nov 1	4
HP to be at SCAN-TECH 84	Nov 1	4
Photos from current HP literature available	Dec 1	4
Certified quality for remarketed products	Dec 1	4
New rental program for HP computer products	Dec 1	5
Tradeshow booth available	Dec 1	5
PPC, Series 37, quality manufacturing ad kits now available	Dec 15	4
HP signs with Santa Barbara Development Labs	Dec 15	4
New CIM brochure provides 10 steps to success	Jan 1	4
First international users group conference for all HP computer users	Jan 1	4
Remarketing in review	Jan 15	4
FRD advertises in <i>Interact</i> and <i>Interface</i>	Jan 15	5
Quick Quoter saves SRs time	Feb 1	4
New recruiting presentation now available	Feb 1	4
The system rental program: questions and answers	Feb 15	4
Chairman of the Board David Packard to speak at Washington D.C. conference	Mar 1	4
HP Reference Service now on sale	Mar 1	4
Computer language lab to become expert in language conversion tools	Mar 1	5
Data General Competitive Brief summary	Mar 15	4
Rental program highlights	Apr 1	4
Quality brochure on refurbished equipment now available	Apr 1	5

Third Party

Language solutions through ISVs	Nov 1	5
First ISV conference a smashing success	Nov 1	6
Pilot OEM product training program gets positive results	Nov 1	6
Two creative financial solutions for British OEMs	Jan 15	5

Third-party solutions highlighted at Financial Services Conference	Feb 15	4
Litpak and Application Notes: sales aids for third party reps	Mar 15	4
Corporate Third Party Program to survey software suppliers	Apr 1	5

Major Accounts

"Hewlett Packard in the 80s" strategy presentation in demand	Mar 1	5
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PERSONAL COMPUTERS

General

Media discount for third party software vendors	Nov 1	7
Dealer survey shows HP floppy discs #1 choice	Nov 15	4
PCG 800 line refers customers to dealers	Jan 15	6
"PPC Inputs" will answer your questions	Mar 15	5
PCDO moves to San Jose	Apr 1	6

HP-75

Expansion pod for the HP-75	Nov 15	5
New application note for HP-75 users	Dec 1	6

Series 40

Replace HP-97 orders with HP-41 systems	Feb 1	5
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Series 70

Programming HP 3421A with HP-71B, HP-75D	Dec 15	5
Data communication software for the HP-71	Jan 1	5
Australian insurance company uses HP-71B	Feb 1	5
HP-41 Translator Pac for the HP-71 Handheld Computer	Mar 1	6
AMPI™ Statistics Library Pac for the HP-71	Mar 1	6
New literature portfolios focus on industrial applications of HP-71 and HP-75	Apr 15	4

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Series 80

Some HP Series 80 software to be obsolete
Series 80 is alive and well for FY85
Price increases on Series 80 products
Perfect Pack and Perfect Writer/Speller for
HP-86 and HP-87 obsolete May 1

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Apr 15 5

Series 100

New course for HP Touchscreen personal
computer
HP Software Catalog—the answerbook for
software solutions
A no-risk sampler for Infocom™ adventures
Dual-sided microfloppy now available
Price decrease announced for the HP 2674A
internal printer
DSN/Link 150 to be obsolete on January 1, 1985
The Portable featured in small business
promotion
The Portable's success at large pharmaceutical
company
HP signs personal computer agreement with
CSU
Introducing VT100 Terminal Emulator
SpelBound—A low-cost education game for
children
New service training for the Dealer Cooperative
Support Program
Support information for Series 100
products
Subscribe to the *Series 100 Communicator*
Now Diagraph can draw HP equipment
Picture Perfect graphics now available
for HP 120/125
New personal computer software
Programmer's Tools for The Portable
WordStar® brings powerful word processing
to The Portable
More edu-tainment news—Sargon III and
Adventure
Save \$25 on personal solutions software packs
Infocom software prices drop
Touchscreen thermal paper—convenient new
packaging

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WordStar/MailMerge/SpellStar price reduction
PFS:WRITE now available for Touchscreen
personal computer
Five hundred software products offered for
Touchscreen personal computer
New upgrade kit gives full Touchscreen
capability to HP 150A
Disc drive upgrade paths for HP 150A systems
Peachtree accounting series for HP 120,
125 to be obsoleted
Save space with new keyboard park
HP announces the Lattice C compiler for
MS™-DOS computers
Microsoft® Word equals performance
PFS:GRAPH now available on the HP
Touchscreen personal computer
A free PFS:software demonstration disc
available
HP Forms Master helps programmers with
interface design
Pascal and GW-BASIC: one version for HP
Touchscreen and The Portable personal
computers
3Com support issues
Positioning EtherSeries/150 customers
for HP AdvanceNet
COMDEX/Fall'84 a big hit for HP Touchscreen
personal computer ISVs
Remarketed HP 120s and 125s
discontinued
The Portable—confidence in your battery power
HP 150 upgrade paths
Disc drive upgrade path for HP 150A systems
Languages and tools available for HP
Touchscreen personal computer
Context MBA price reduction
HP IBM 3278 Emulation Accessory helps
sell HP Touchscreen personal computers
Hardware support price reductions for
HP Touchscreen personal computer
New software products for HP Touchscreen
and The Portable personal computers
New acoustic coupler for The Portable
Save \$25 on Personal Solutions software packs

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WordStar® for The Portable	Feb 1	6	Printed personal computer graphics expands the market for business graphics	Mar 1	11
New interactive fiction from Infocom	Feb 1	7	Drawing Gallery and Charting Gallery compared to HP 3000 graphics	Mar 1	12
HP Touchscreen and The Portable software price increases	Feb 1	8	Introducing HP software for the IBM PC	Mar 1	13
HP Touchscreen personal computer to IBM connection becomes localized	Feb 1	8	The Graphics Gallery and TextCharts/IBM PC offer new high-quality fonts	Mar 1	13
HP LaserJet printer support under MultiMate, WordStar®, and MS™ Word	Feb 1	8	Expanded software offering increases sales opportunities	Mar 1	14
MicroPlan and MicroPlan Consolidation at new reduced prices	Feb 1	9	ExecuDesk integrates select HP software packages	Mar 1	15
Old WordStar® products to be discontinued	Feb 1	9	New, expanded HP Software Catalog	Mar 1	16
Save 34% on popular HP Touchscreen personal computer accessory	Feb 1	10	New copy protection implemented in Graphics Gallery, Executive, and IBM PC software products	Mar 1	16
HP 9144A utility problem with Context MBA/HP Touchscreen	Feb 1	10	Volume discount promotion for HP Touchscreen personal computer software	Mar 1	17
HP 125 software obsolescence	Feb 1	11	Picture Perfect provides the power to chart all of your data	Mar 1	17
No Symphony™ for The Portable	Feb 15	6	VT100 Emulation available for HP Touchscreen personal computers	Mar 1	18
Introducing Dow Jones Spreadsheet Link for the HP Touchscreen and The Portable personal computers	Feb 15	6	HP-HIL support for HP Touchscreen and Touchscreen MAX personal computers	Mar 1	19
HP LaserJet printer/Microsoft® Word promotion	Feb 15	7	Probe someone's mind with Mind Prober™ on The Portable	Mar 1	19
PFS:WRITE receives four-star rating from Software Digest	Feb 15	7	TextCharts/IBM PC helps sell plotters	Mar 15	5
Books on PFS software now available	Feb 15	8	The Graphics Gallery and Executive MemoMaker available in North America only	Mar 15	5
High-quality forms can be created with Diagraph	Feb 15	8	ExecuDesk does not support HP AdvanceLink and HP Message	Mar 15	6
Dustcover available for the HP Touchscreen personal computer	Feb 15	8	Lotus™ 1-2-3™ revised version required for the HP Touchscreen personal computer Model 150B	Mar 15	6
HP 125 software to be obsolete	Feb 15	9	Recommend Graphwriter® for presentation graphics on the HP Touchscreen personal computer	Mar 15	7
The Graphics Gallery brings professional business graphics to HP Touchscreen personal computers	Mar 1	7	A Diagraph advantage: scaled drawings on the HP Touchscreen personal computer	Mar 15	7
How The Graphics Gallery can help you sell HP solutions	Mar 1	9	Vertical software for the HP Touchscreen personal computer	Mar 15	8
The Graphics Gallery memory requirements	Mar 1	9	New engineering software for HP Touchscreen personal computer	Mar 15	8
Charting Gallery/Executive MemoMaker package targets installed base	Mar 1	9	New book on the HP Touchscreen personal computer published	Mar 15	9
The Graphics Gallery obsoletes Series 100/Graphics	Mar 1	10	Another success for HP's IBM Terminal Emulator	Mar 15	9
Charting Gallery replaces Series 100/Graphics in HP PPC Touchscreen Pack	Mar 1	10			
Executive MemoMaker obsoletes MemoMaker on HP Touchscreen personal computer	Mar 1	10			
The Graphics Gallery promotional materials available	Mar 1	11			

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Programming languages and tools available for The Portable	Mar 15	10	Sales Development Group formed	Dec 1	10
Demonstrate HP terminal emulation and file transfer on The Portable	Mar 15	10	Another DA/C promo seminar	Dec 1	10
Introducing HP's new PC Instruments	Apr 1	6	Data Acquisition Selection Guide	Dec 1	11
Data acquisition software for PC Instruments	Apr 1	8	New data acquisition course	Dec 1	11
HP-IB I/O Library turns personal computers into instrument controllers	Apr 1	8	Data Acquisition and Control Peaking Seminar scheduled	Dec 15	10
PC Instruments use HP-Plus software program and sales	Apr 1	9	Another HP 2250 Peaking Seminar scheduled	Dec 15	10
Tune in to NPT teleconference on April 18 for PC Instruments	Apr 1	9	Data Acquisition training schedule for February	Dec 15	10
PC Instruments demands innovative marketing and sales	Apr 1	9	New semiconductor industry brochure now available	Dec 15	11
Customer literature available for PC Instruments	Apr 1	10	Loveland support just a phone call away	Jan 1	12
Announcing personal-computer-based acquisition system	Apr 1	11	New data acquisition application note	Jan 15	11
New version of CONDOR available	Apr 1	12	DA&C reading list	Feb 1	12
New educational software for the HP Touch-screen personal computer	Apr 1	12	New schedule for DA&C peaking seminar	Feb 1	12
Get in shape with HEALTH-AIDE™ on The Portable	Apr 1	12	HP 2250 seminar scheduled for April	Mar 1	20
The Portable software update	Apr 1	14			
Complete bilingual PC solution in Arabic and Hebrew	Apr 15	5	HP 1000		
WordStar® upgrades explained	Apr 15	6	Introducing HP PMC-ASSIST	Nov 1	12
Terminal Emulation Accessory saves customers money and space	Apr 15	7	HP PMC/1000 is a success in R&D	Nov 1	13
HEALTH-AIDE™ not available from HP	Apr 15	8	PMC/1000 user's group forming	Nov 1	14
The Black Jack™: For modems and HP Portables on the road	Apr 15	8	New HP Laboratory Automation Systems	Nov 1	14
Special volume discount offer on The Portable	Apr 15	9	LABSAM and LABQUEST/3350 manage resources and information	Nov 1	14
New Education Discount Program sales aids available	Apr 15	9	New HP-IB for HP 1000 A-Series	Nov 1	15
			New X.25 ROMs	Nov 1	15
			How to order HP 1000 Sales Aid Kits	Nov 15	10
			IMAGE/1000-II and Pascal	Nov 15	11
			HP 1000 A-Series support in the HP 7914ST cabinet	Dec 1	11
			New features for PMC/1000	Dec 15	11
			HP 1000 M-Series available until January 15, 1985	Dec 15	12
			HP QDM/1000 has a new look	Jan 1	12
			Use Ordering Guide Configuration Checklist when ordering HP 1000	Jan 1	13
			HP 1000 Series A600 + and A700 gain 256K bytes RAM	Jan 15	11
			HP 1000 A600 + Option 012 replaced by Option 014	Jan 15	12
			HP 92077A RTE-A data sheet update	Jan 15	12
TECHNICAL COMPUTERS					
<i>General</i>					
CAE/CAD periodicals	Nov 1	12			
HP 35030A line conditioner obsolescence	Nov 15	10			
Binders omitted from BASIC 3.0 Language System shipments	Nov 15	10			
HP offers long-term instrument support	Dec 1	10			

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Revised HP 1000 A-Series data book	Jan 15	12	HP 98626A RS-232 interface off CPL in February 1985	Nov 15	12
New customer training course for HP PMC/1000	Jan 15	13	HP-FE optimizes design environment	Dec 1	12
New sales aids for HP PCIF/1000	Feb 1	13	HP's ME Design Loop speeds design, analysis, and production	Dec 1	12
HP ATS/1000 user training classes rescheduled	Feb 1	13	HP-Draft—a true CAD/CAM system	Dec 1	13
Sugar refinery run by HP 1000 with HP 2250	Feb 1	14	HP-Draft ASSIST helps close sales	Dec 1	14
Interex/HP 1000 users conference scheduled on April 9-12	Feb 15	10	ME CAD sales literature	Dec 1	14
HP 1000 E/F-Series hardware price increases	Feb 15	10	Mechanical CAD Sales Center has moved	Dec 1	15
Aids for selling manufacturing solutions	Mar 1	20	Announcing Data Grapher/200	Dec 1	15
\$70,000 PCIF installation pays for itself in one month	Mar 1	20	HP TechWriter adds new features	Dec 1	16
RTE-A table space limits on HP 1000	Mar 15	11	HP EGS customer training course	Dec 1	16
Correction to HP 1000 A-Series databook and ordering guide	Mar 15	11	Programming in C language on the HP 9000	Dec 1	17
New version of HP 1000 A-Series 8-channel MUX released	Apr 1	15	HP Model 216A taken off CPL	Dec 1	17
New version of HP 1000 A-Series downloadable MUX released	Apr 1	15	LAN software available to upgrade to HP-UX	Dec 15	12
VC + not supplied with 2196C/D SPU for HP 1000 Model 26	Apr 1	16	Revisions to Pascal 3.0, BASIC 3.0	Dec 15	13
How to pace the HP 2250	Apr 1	16	New rack-mount kit for HP 35721 monitor	Dec 15	13
New power for RTE and the HP 1000	Apr 15	10	HP CAD/CAM a success at Swiss Data Fair	Dec 15	13
HP 9000			HP EGS enhancements increase user productivity	Jan 1	13
Announcing HP Graphics Editor/200	Nov 1	15	HP EGS field tour and sales aids	Jan 1	14
A new low-cost text editor for the HP Series 200	Nov 1	17	HP 9000 Model 550: more computing power per engineer	Jan 1	15
HP EGS—A picture is worth a thousand shipments	Nov 1	18	Sales aids for HP 9000 Model 550	Jan 1	15
New 14-inch monitor now supported on the HP Model 220	Nov 1	18	Series 500 adds hardware floating point CPU	Jan 1	16
HP Mouse enhances user interface	Nov 1	18	HP-UX sales way up in 1984	Jan 1	16
New HP 9845B/C and HP 9825T ROM expand mass storage selection	Nov 1	19	Demand grows for UNIX-based systems	Jan 1	16
Correction to <i>Series 200 Hardware Technical Data Sheet</i>	Nov 1	19	UNIX-based systems competition	Jan 1	17
HP Series 500 third party hardware	Nov 1	20	New application software for HP-UX and the HP 9000	Jan 1	18
HP 9000's low cost-of-ownership	Nov 15	11	HP-UX slide presentation available	Jan 1	18
HP-UX 4.0 needed to run LAN9000	Nov 15	11	HP 9000 Series 500 HP-UX operating system support	Jan 1	19
			System LX now on Corporate Price List	Jan 1	19
			HP 3054A software runs on BASIC 3.0	Jan 1	19
			Rotary control knob now a separate product	Jan 1	20
			A reminder to watch the HP Integral PC teleconference January 10, 1985	Jan 1	20
			Introducing the HP Integral PC	Jan 15	13

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The HP Integral PC—a powerful multitasking controller	Jan 15	15	New Pascal System Internals Documentation available	Mar 1	25
The HP Integral PC can communicate	Jan 15	15	New HP EGS ad to appear this spring	Mar 1	25
HP Integral PC offers full support of peripherals	Jan 15	16	HP Integral PC does not support HP EGS	Mar 1	25
Localized version of the HP Integral PC available	Jan 15	17	Correction to HP 9000 Application Briefs	Mar 1	25
Application software for the HP Integral PC	Jan 15	17	Terminal emulator upgrade offer begins April 1	Mar 15	11
Ordering the HP Integral PC and accessories	Jan 15	19	HP EGS opens new markets, leverages sales	Mar 15	12
HP 9000 and HP 64000—total solution to microprocessor product design	Jan 15	19	HP 98640A Analog Input now functions better with the HP 9816	Mar 15	12
Calculator/HP-UX now available	Jan 15	21	Incorrect ID PROMs shipped in HP 9000 Model 217s	Mar 15	13
Applications for HP Data Grapher/200	Jan 15	21	Memory manufacturing moves to Puerto Rico Division	Mar 15	13
HP 9845B, 9878A, and 9825B/T now obsolete	Jan 15	22	Product order number for new HP-UX Applications Brochure	Mar 15	13
New HP EGS manuals	Jan 15	22	Announcing TK!Solver®/HP-UX for HP 9000 Series 200 and HP Integral PC	Apr 1	17
HP 3054A software support on HP 9000 Series 200 controllers	Jan 15	23	Introducing Picture Perfect for HP 9000 Series 200 workstations	Apr 1	18
Introducing Multiplan/HP-UX for HP Integral PC and Series 200 computers	Feb 1	14	HP 3054A system software for Series 200 controllers	Apr 1	18
HP Integral PC carrying case and all-purpose jacket	Feb 1	15	<i>HP 9000 Data Communications Supplement</i> correction	Apr 1	18
HP-Design Revision 05.00 now available	Feb 1	16	HP-UX Technical BASIC now available	Apr 15	10
HP-Draft sales continue to climb	Feb 1	17	HP-UX Technical BASIC performance	Apr 15	11
EE solutions for Series 200	Feb 1	18	HP-UX Technical BASIC compatibility	Apr 15	11
Async terminal emulator price increase	Feb 1	18	New high-performance graphics system introduced	Apr 15	12
New Series 200/500 site prep manual	Feb 1	18	New graphics system introduced at Computer Graphics '85	Apr 15	13
HP 97076 discontinued	Feb 1	18	HP 9000 Series 500 upgrade offer extended	Apr 15	13
HP 9915A modular computer to be obsolete	Feb 1	19	HP 9000 language system obsolescence	Apr 15	14
MicroTrak™/HP-UX now available for the HP Series 200 and the HP Integral PC	Feb 15	10	HP 9000 Series 200 BASIC and Pascal now on double-sided media	Apr 15	14
HP 9825 desktop computer to be obsolete May 1	Feb 15	11	New Series 200/Integral HP-UX software sales aids	Apr 15	15
MemoMaker/HP-UX now on HP 9000 Series 200 and HP Integral PC	Mar 1	21	LEX word processing now available for HP Integral PC	Apr 15	15
Announcing Management Solution/HP-UX for HP 9000 Series 200 and HP Integral PC	Mar 1	22			
HP 9000 Series 200 now emulates a variety of terminals	Mar 1	22			
Changes in HP 9000 Series 200 and Series 500 terminal emulator offerings	Mar 1	23			
Introducing two new games for the HP 9000 Series 200	Mar 1	24			
HP-COACH support for new HP 9000 Series 200 software products	Mar 1	24			

BUSINESS COMPUTERS

General

Preferred solutions flyer available	Nov 15	13
New ad highlights integrated solutions	Dec 15	14

HP 250

HP 250 Model 35 to be obsolete	Feb 15	12
Upgrading HP 250 users to operating system B.07	Feb 15	12
HP 250 no longer supports HP-IB 2932A printer	Mar 1	27
HP 250 manual set changes	Mar 15	14

HP 260

The HP 260: HP's new commercial system for small businesses	Feb 1	20
Three models for HP 260 small business computing system	Feb 1	21
Introducing the HP 260 Model 15 and Model 24 packages	Feb 1	22
Ordering the HP 260 Model 55	Feb 1	23
All-new HP 260 literature available	Feb 1	23
New HP 260 manuals	Feb 1	23
How many devices can you connect to the HP 260?	Feb 15	13
New HP 260 data sheets available	Feb 15	13
New HP 260 literature in stock	Mar 15	14
HP 7906H disc not supported on the HP 260 system	Mar 15	15

HP 3000

MPE-V/P Delta-1 has shipped	Nov 1	21
MPE-V/P Delta-1 supports the latest HP 3000 software	Nov 1	21
How MPE keeps time on the Series 37 after a system failure	Nov 1	22
New protection for IMAGE data bases	Nov 1	22
No 110 baud support on ATP37	Nov 1	23
HP Series 4X rental successes	Nov 1	23
HP Dictionary/3000 improves programmer productivity	Nov 15	13
Desktop CAD system sells HP 3000	Nov 15	14

Expanded PBX support for HP 3000	Dec 1	18
HP 3000 Series 48R competes successfully against IBM 4341	Dec 1	18
HP 3000 network ordering structure—a sales advantage	Dec 15	15
HP 3000 compatibility leads to big sale	Dec 15	15
Rental program appeals to start-up companies	Dec 15	16
HP 9144A backup limits increased for HP 3000	Jan 1	21
Remote dial-up modem for HP 3000 users	Jan 1	21
Math symbols, linedraw, and barcode now available on the HP 2688A	Jan 1	22
Barcode and linedraw for the HP 2687A	Jan 1	22
HP 3000 graphics supported on HP 2565A and 2566A printers	Jan 1	22
Deluxe VisiCalc(R)/3000 replaces old version	Jan 15	24
HP Inform/3000 and the HP 3000 Series 37	Jan 15	24
How to position and sell DS/3000 and X.25/3000 Link	Jan 15	24
HP solutions for the retail markets	Jan 15	25
HP Toolset demo kit available	Jan 15	26
HP 3000 Series 37 Special Financing wins a sale	Jan 15	26
HP 3000 Series 37 sales video available	Jan 15	27
Price change for HP 3000 Series 37A upgrade to 37XE	Jan 15	27
Remote Support Credit for HP 3000 ends February 1	Jan 15	27
HP SNA IMF completes HP SNA/3000 family	Feb 1	24
Coordinated delivery program now includes HP 3000 software	Feb 1	25
First European PBX for HP 3000 certified	Feb 1	26
HP Series 37 customer installability notes	Feb 1	26
HP-Draft now links to HP 3000	Feb 1	27
New ICEBREAKER promotional bundle from FRD	Feb 1	28
HP 3000 Series 68 console update	Feb 1	29
Support Link II replaces original Support Link	Feb 15	14
New HP AdvanceNet overview presentation available	Feb 15	14
HP IBM 3278 Terminal Emulation Accessory helps sell HP 3000s	Feb 15	15
HP 37230A and 30037A to become obsolete	Feb 15	15

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1984 Data Pro survey results available in HP 3000 sales training manual	Feb 15	16	Fast availability of HP 3000 Series 37	Mar 15	23
Local area networking for the HP 3000 now on CPL	Mar 1	27	New data sheets for the HP 3000 Series 37	Mar 15	23
Faster HP 3000 graphics software supports new devices and fonts	Mar 1	27	Remarketed HP 3000 Series 44 used in steel business	Mar 15	24
OCR now available for HP Word and TDP/3000	Mar 1	28	Upgrade all HP 3000 Series IIs by August 1	Mar 15	24
Rapid/3000 sales aids available	Mar 1	29	Free brochures for HP 3000 value-added suppliers	Mar 15	25
HP 3000 Series 37 outclasses IBM System/36	Mar 1	29	New Capacity Planning and Performance Analysis products help sell HP 3000s	Apr 1	19
New product structure and pricing for HP 3000 Series 37	Mar 1	30	HP Caplan: new capacity planning for the HP 3000	Apr 1	19
Ordering the new HP 3000 Series 37 System Package	Mar 1	32	HP Trend: high-level resource planning and load balancing	Apr 1	20
New 1M-byte memory card for HP 3000 Series 37	Mar 1	32	HP Snapshot: to maximize current system performance	Apr 1	21
HP 3000 Series 48R breaks new ground in the auto business	Mar 1	33	Custom Performance Consulting: a personalized performance solution	Apr 1	21
Remarketed Series 4X prices have never been better	Mar 1	33	The difference between AEO and ISMC services	Apr 1	22
PowerPlus: A total systems approach to increased performance	Mar 15	15	T-Delta-1: HP 3000's next integrated release	Apr 1	22
TurboIMAGE improves performance of IMAGE/3000	Mar 15	15	New HP Menu for HP 3000	Apr 1	23
Database Tools for fine-tuning TurboIMAGE performance	Mar 15	17	INP cables for HP 3000 Series 37 now on CPL	Apr 1	23
HP Copycat/3000 increases system availability	Mar 15	17	HP 3000 Commercial Sales Rep Training Course now available	Apr 1	24
HP Copycat/3000 and HP 7935H disc drive bundle discount	Mar 15	18	How to connect HP 2392A terminal to HP 3000 Series 37	Apr 1	24
LAN/3000 Link and NS/3000 added to HP AdvanceNet family	Mar 15	18	Dictionary/3000 enhancements	Apr 15	16
Announcing LAN/3000 Link	Mar 15	18	Series 37 pricing structure update	Apr 15	17
Announcing NS/3000 networking software	Mar 15	19	Part number changes for Data Management publications	Apr 15	17
Introductory NS/3000 and LAN/3000 upgrade special	Mar 15	19	Designing and Optimizing Applications: a new course for your installed-base customers	Apr 15	18
LAN/3000 and NS/3000 literature is available	Mar 15	20	Credit offered for INP to LAN/3000 link upgrade	Apr 15	18
CSO supports LAN/3000 with fast availability	Mar 15	20	FRD streamlines HP 3000 system options	Apr 15	19
New HP 3000 capacity planning and performance consulting products on the way	Mar 15	20	ADCC credit reduction	Apr 15	19
HP 3000 Series 37/37XE and T-MIT achieve manufacturing release	Mar 15	21			
HP 3000 product line provides customer installability	Mar 15	22			

Financials

HPFA's financial software now bundled	Nov 15	14
HPFA Customer Profile #0000024	Nov 15	15
HPFA now available on HP Series 37	Dec 15	16
HP Production Cost Management	Jan 1	23

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HP PCM beta test is a success	Feb 15	16	The Interactive Office Pack replaced by new product	Jan 1	25
APO Quality Council shows first results	Mar 15	25	Customer seminar kit for Personal Productivity Center	Feb 1	31
HPFA customization wins a \$440,000 deal	Apr 1	25	HP TelexII links HP PPC to the telex world	Feb 15	17
Application Link accesses financial data on the HP 3000	Apr 1	19	New HP PPC product information guide now available	Feb 15	18
Manufacturing			Targeting the Office is now in the field	Feb 15	18
HP MM/PM update: Types of manufacturing	Nov 1	24	HP AdvanceLink cannot be used with HP ListKeeper	Feb 15	19
HP MM/PM update: HP #2 worldwide in manufacturing software sales	Nov 15	15	Sell the new HP-OFFICE-ASSIST	Mar 15	26
Procter & Gamble buys 1,000th package of HP MM/PM	Nov 15	16	Consultants applaud HP at OAC'85	Mar 15	26
HP Maintenance Management seminar video-tape now available	Nov 15	16	HP TDP/3000 for the in-house publishing market	Mar 15	27
Solutions through HP Maintenance Management-ASSIST	Nov 15	17	HP PPC products shipped on time as promised	Apr 1	26
HP Maintenance Management-ASSIST price change	Dec 15	17	New HP PPC demonstration pack available	Apr 1	27
Semiconductor Productivity Network program releases enhanced software	Jan 1	24	Demonstration pack for HP Convert/WPS available	Apr 1	27
Large turnout at recent SPN user group meeting	Jan 1	24	Demonstration pack for HP Word available	Apr 1	27
SPN sales aids now available	Jan 15	28	HP Convert/WPS converts Wang documents into HP Word format	Apr 15	21
Excellent HP 3000 Series 37 performance results for HP MM and PM	Jan 15	28	Santa Barbara Laboratories executive workstation update	Apr 15	21
MPN now expanded with HP Production Cost Management	Feb 1	30	Feedback needed on office workstations	Apr 15	21
HP Maintenance Management SR training now available	Feb 15	17	Cost Justification Guide delivered	Apr 15	22
How to qualify an HP JIT customer	Mar 1	34	Distribution		
HP PCM meets manufacturing business needs	Mar 1	34	Pre-sold HP SFD/3000 prospects	Nov 15	18
Why customers demanded HP Production Cost Management	Mar 15	26	Distribution products customer training schedule	Nov 15	18
PL-10 helps managers weather downturns	Apr 1	25	HP SFD/3000 tested on HP 3000 Series 37	Dec 1	19
How to qualify customers for division JIT tours	Apr 1	26	New HP Distribution Solutions brochure available	Dec 1	20
More resources for JIT customer support	Apr 15	20	Distribution Sales Seminar to be held	Dec 1	20
			National Paper Trade Association show generates leads	Dec 1	21
			IRO's Distribution Sales Seminar	Jan 1	25
			IRO at the NPTA Software Seminar	Jan 1	25
			HP at National Office Products Association trade show	Jan 1	26

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1982 Census of Wholesale Trade now available	Jan 15	28
New Distribution Management products and manuals available	Jan 15	29
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User exits enhance HP SFD/3000	Feb 1	32
Load scheduling improves system performance	Feb 1	32
Updated distribution products slide show available	Feb 1	33
HP SFD/3000 and OM/3000 customer training schedules	Feb 1	33
Ordering HP SFD/3000 and OM/3000 for the HP Series 37	Feb 1	33
1984 SIGSFD Users Group meeting a success	Feb 15	19
Call IRO to learn more about HP Distribution Solutions	Feb 15	20
New electronics distributors directory available	Feb 15	20
HP Distribution Solutions customer featured in HP's national ad campaign	Mar 1	36
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HP doesn't certify Micom data switches	Nov 1	25
DS and X.25 support explained	Nov 15	19
Software Materials Subscriptions for Network Links simplified	Nov 15	19
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MCI Mail: a multivendor, private X.25 Network	Dec 15	18
New HP 2334A connects workstations at lower cost	Dec 15	19
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Networking sales tools	Dec 15	21
New version of HP Series 500 8-channel MUX released	Jan 1	32
Available documentation on new HP 2334A MULTIMUX	Jan 1	32
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18150JA software: an advancement in X.25 certification testing	Jan 15	30
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New HP 4925B Bit Error Rate Test set has V.35 interface	Mar 1	39
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X.25: <i>The PSN Connection</i> booklet available	Apr 1	31	Graphics products support of the HP 7550A plotter	Nov 15	21
Mass Storage			New plotter software directory available	Dec 1	24
New sales aids for add-on mass storage	Nov 1	26	Plotter Note explains configurable memory	Dec 1	24
Megabyte Express program extended	Nov 15	20	New plotter cable data sheet	Dec 1	24
HP 7911/12/14 prices have been reduced	Dec 1	22	New disposable drafting pens for HP 758X and 7550 plotters	Jan 1	33
HP 7908 to be obsolete	Dec 1	23	Answers to your HP 7470/7475 questions	Jan 1	34
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Disc drive credit reduction	Dec 15	21	HP 7475A now has drafting capability	Feb 1	36
New backup for HP 7914 disc	Jan 1	27	HP plotter support on HP software	Feb 1	37
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Two new mass storage solutions available	Jan 1	30	New sales literature for plotters	Feb 1	38
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Winchesters with single-sided mass storage obsolete March 1, 1985	Feb 1	35	Plotter family flyer positions five products	Apr 1	33
Price reduced on remarketed HP 7925	Feb 15	23	New plotter sales literature	Apr 1	33
Tape drive cabinet options to be obsolete March 1	Feb 15	24	SDD needs information about CalComp plotters	Apr 1	34
Order additional Mass Storage Sales Reference Manuals from LDC	Feb 15	24	Publicize your customer's plotter applications	Apr 1	34
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The HP 7945A Express Service	Apr 15	27			

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HP printers penetrate OEM and major account markets	Nov 15	21	New large-character font cartridge for HP 2934A business printer	Feb 15	27
Five new international character cartridges for HP 2934A printer	Nov 15	21	Eliminating HP 293X competitors	Feb 15	27
Laser printer memory prices reduced	Dec 1	25	IDSFORM supported on HP 262X terminals	Feb 15	28
HP 256X family phases out HP 2608X, HP 2611A, HP 2619A	Dec 1	25	IBM PC graphics capability for HP LaserJet and ThinkJet printers	Feb 15	28
New options for the HP 256X family	Dec 1	26	HP LaserJet printer ISV and third-party support update	Feb 15	29
HP 2934 printer demo configuration	Dec 1	26	LaserJet/Wang PC application note available	Feb 15	29
HP 2674A: a great second printer for \$295	Dec 15	22	Printer Command Language explained	Feb 15	30
Automatic sheetfeeder saves time and effort	Dec 15	22	Printer upgrade program now available	Mar 1	43
New LaserJet software development program for ISVs	Dec 15	23	Tips on selling the all-new HP 2685B printer	Mar 1	44
HP 2933A factory data printer obsolete January 1	Dec 15	23	Quoting service prices to HP LaserJet printer customers	Mar 1	45
More HP 2631s now available	Dec 15	24	HP-IB Extender upgrade kit required with HP 2680A	Mar 15	30
New demo cartridge for HP 2934A now available	Dec 15	24	HP 2680A Option 500 restructured	Mar 15	31
New HP 2685B laser print station now available	Jan 1	35	HP 2611A and 2619A removed from the CPL	Mar 15	31
Re-introducing the HP 26096A Digital Camera System	Jan 1	36	HP 2565A Arabic character set obsolete	Mar 15	31
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HP 2565A and 2566A OEM sales reference manual generates orders	Jan 15	32	HP 2685 print station availability constraints	Apr 1	36
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HP 2687A functionality comparison	Feb 1	39	HP 2689A new product training kit distributed	Apr 15	28
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Output Design Service centers help sell laser printer products	Feb 15	26			

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New 2392A display terminal brochure and ad	Nov 1	30
New terminal cabling manual available	Nov 1	31
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HP 2392A price increase	Dec 1	28	Software Selection Guide available	Jan 1	38
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HP ships 500,000th display terminal	Dec 15	25	HP product support life extended to 10 years	Apr 1	38
More selling opportunities for HP 2392A	Dec 15	25	New HP Documentation Index available	Apr 1	38
HP 2392A and HP 2622A—A comparison	Dec 15	25	Self-paced mentored training for personal computer products	Apr 15	29
Industrial terminal design featured in <i>HP Journal</i>	Jan 1	37	Customer Hardware Maintenance training only a call away	Apr 15	29
Option 094 for HP 2392A not available	Jan 1	37	Three new Response Center tools	Apr 15	29
New cabling included in HP 3081A shipments	Jan 15	33			
Option 021 and 022 availability for HP 2625A and 2628A terminals	Jan 15	33	<i>Supplies</i>		
HP 262X Pod Adapter for HP 2625A and 2628A terminal customers	Jan 15	34	<i>Computer Users Catalog</i> offers total solution	Nov 1	33
New industrial bar code wands now available	Feb 1	40	IBM Software from CSO available only in US	Nov 15	25
SCAN-TECH'84, a successful show for bar codes in manufacturing	Feb 1	41	HP Design Plus System furniture for new HP 3000 computers	Jan 1	38
Why this OEM chose HP for bar codes	Feb 1	42	Get organized with CSO's new media and documentation storage cabinets	Feb 15	33
Bar-coded badges available for the HP 3081A industrial workstation terminal	Feb 15	31	CSO becomes Direct Marketing Division	Apr 1	39
One last chance for HP 2703A terminal customer training	Feb 15	32			
"Six Pac" promotion on used workstation terminals	Mar 1	45	<i>Price Changes</i>		
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New product numbers for self-paced maintenance training	Nov 15	24			



Please send undelivered *Computer News* copies to COMPUTER NEWS, 20BV, 3000 Hanover Street, Palo Alto, CA 94304

HP Telex II is now available in the following countries: Australia, Belgium, Finland, France, Germany, Holland, Hong Kong, Singapore, South Africa, Switzerland (available soon, subject to successful completion of tests), UK, and US.

It is planned to introduce the product in the following countries, subject to gaining PTT approval for the HP version TIU: Canada, Italy, Spain, and Taiwan.

Please note that because HP Telex II communicates via a Telex Interface Unit it cannot be used to log on to an Electronic Mailbox (Easylink) via the telephone network. For further information, contact the relevant application center manager.

ATPs preferred connection for personal computers

Chrysa Caulfield/IND

The ATP's (advanced terminal processor) technical strengths allow HP to develop more sophisticated personal computer products by focusing on the ATP as the strategic terminal connection. The ATP offers several advantages that can be used to help position the ATP relative to the ADCC (asynchronous data communications controller). The ATP's hardware buffering, software buffering, and direct memory access features have greatly improved data integrity and have virtually eliminated data overruns. The ATP utilizes less SPU time than the ADCC, which improves system performance. RS-422 is supported on the ATP. And finally, the ATP conserves I/O slots by providing 12 ports per board compared to 4 ports per ADCC.

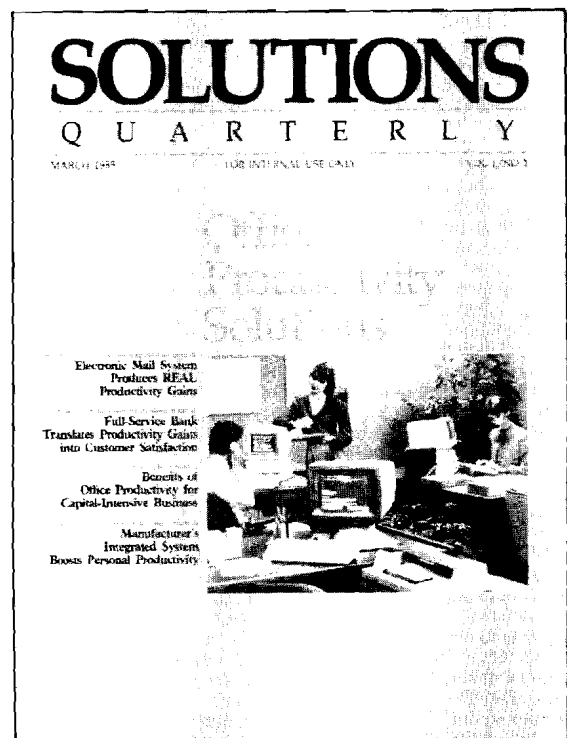
If your customers' long-term plans include PC networking and resource sharing, please guide them toward buying ATPs or upgrading from ADCCs to ATPs in the future.

Please refer to the ATP field training manual and the *HP 3000 Data Communications Products Specification Guide* for additional ATP information. The ADCC to ATP upgrade program is described in the *HP 3000 Data Communications and Data Management Products* field training manual dated January 1984.

Solutions Quarterly now available

LeeAnne French/ISG

Congratulations to Leroy Johnson, Colleen Berry, Katie Glenn and Dave Lyons for their contributions to strengthening HP's position in the office marketplace. Each of these sales reps has worked closely with their customers to ensure that they achieve the real productivity gains that they sought when choosing an HP office solution. In fact, these customers have been so successful with their implementation that they are willing to share their experiences with us in *Solutions Quarterly*, a magazine of office application stories.



The first edition of *Solutions Quarterly* has been distributed to sales force 15 and the office trained support engineers. The first edition is intended for *internal use only*, as it includes specific account information.

As the name implies, *Solutions Quarterly* will be published quarterly. Future editions will be published,

pending customer approval, in a format appropriate for distribution to installed accounts and prospects.

If your customers are enthusiastic about their office productivity gains, and would like to see their name in print, please contact LeeAnne French at 408-973-1919, ext. 6152, or HP Desk 4700/15.

Using the HP 7550 in a local area network

Bill Higley/SDD

Here's an example of using an HP 7550 as part of a local area network.

Company: Merrill Lynch Mortgage Capital, Inc.
Installed by Automated Trading Systems.

Application: Internal reports and presentations of forecasts, projects, and various statistical analyses.

Current system: IBM PCs connected to a Novell S-System local area network. HP LaserJet printers as workstation and spooled network printers and HP 7475s as workstation plotters.

Need: Additional graphics capabilities to meet increasing demands.

Result: By spooling to the HP 7550 on the local area network, the customer was able to increase graphics capabilities for a relatively low cost. The HP 7550's fast speed, multiple-copy capabilities, and minimum operator attendance increased the customer's productivity.

Field Engineer: Neil Leshner, Manhattan Sales Office

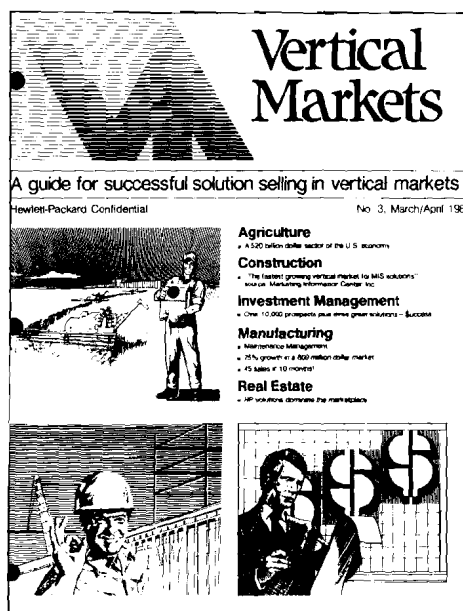
Note: *The HP 7550 is also supported on the 3Com LAN. Support on additional LANs is being pursued and is expected in the near future. Contact your San Diego Division regional support engineer for the most up-to-date information.*

VERTICAL MARKETS

Vertical Markets Newsletter — a new sales tool

Sandra Brandon/ISG

The *Vertical Markets Newsletter* is a new selling tool designed to give you information to enable you to (1) select markets, applications, and third parties where HP is most likely to be successful, and (2) help identify and qualify prospects for those applications.



The March/April issue focuses on real estate, agriculture, investment management, construction, and manufacturing marketplaces and offers solutions from 10 companies.

To be added to the distribution list, send your name, address, phone number, sales office, and COMSYS code to Sandra Brandon, Hewlett-Packard, 10520 Ridgeview Court, 49C, Cupertino, CA 95014, 408-973-1919, ext. 6080, or HP Desk 4700/17.

Back issues of the newsletter can be ordered from the Literature Distribution Center in Palo Alto.

P/N	Issue
5953-3981	December 1984
5953-3982	January 1985
5953-3983	February 1985
5953-3984	March/April 1985





HP 1000 A900 firmware update to fix SQRT problem

Mark Beswetherick/DSD

There is a problem with the square root instruction (SQRT) on all HP 1000 A900 computers with serial prefix 2451 or earlier.* This corresponds to all computers shipped prior to about April 1, 1985.

In these systems, SQRT gives erroneous results for certain operands. The problem is solved by updating a bank of the base set firmware. A Service Note (2139A-9, 3/1/85) has been written that instructs the customer engineering organization (CEO) to update all A900s that have this problem.

To help ensure that customers are aware of the problem and get the update, we are sending a letter to the installed base, which asks them to contact their sales office to schedule a time for the update to be installed.

The updated firmware also makes the A900 compatible with the upcoming A-Series I/O Extender products. For this reason, it is important that all defective A900s get this update, even if your customer is not using SQRT.

Please let your A900 customers know about this problem and ask them to set up a time with their customer engineer to have the update firmware installed.

Likewise, if you get a call from a customer as a result of the letter, you should refer the customer to a customer engineer to schedule the update.

For a copy of the letter sent to the customers, contact Mark Beswetherick at Data Systems Division, TELNET 157-2898, or 408-257-7000, ext. 2898.

**The serial prefix is the first four digits of the computer serial number. The serial number is on the right rear door of the 20-slot box, or just behind and to the left of the left rear door of the Micro/1000 package (just behind and above the top rear door if the Micro/1000 is oriented vertically).*

Also in this issue

GE automates testing of rotating electrical machinery using HP 3054C

6



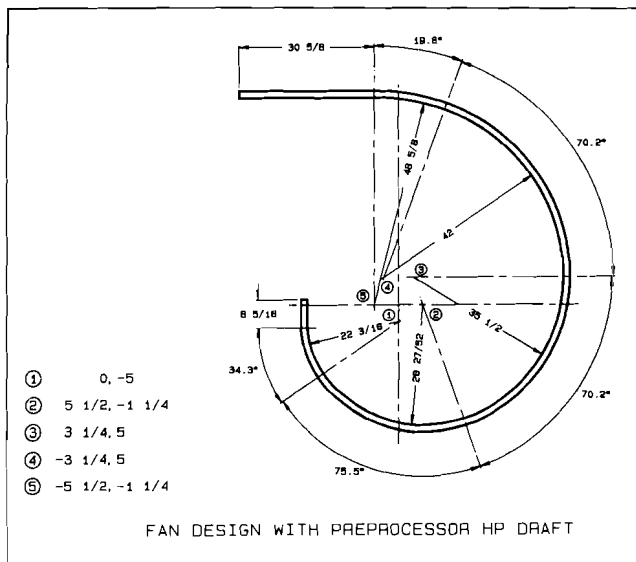
HP Draft pre- and post-processor optimizes design and drafting applications

Ulrich Mahle/LSID

HP Draft, HP's proprietary 2D mechanical engineering (ME) design and drafting system has gained wide acceptance among ME engineers and drafts people because of its ease of use, powerful command set, and completeness. Specific applications and unique customer design problems can further benefit by using HP Draft's powerful pre- and post-processing capabilities. Pre and post processors are user-written modules that are linked to HP Draft and can be activated through the tablet overlay. The programming language is HP BASIC using subroutine calls of HP Draft. Because it is an interpreted language, it is easy for anyone to take advantage of this HP Draft macro language. Here are three typical pre- and post-processor solutions:

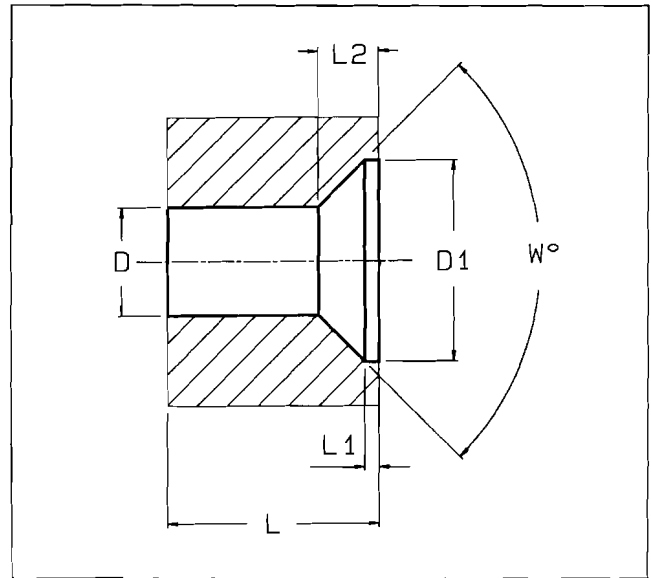
Customer problem I: Fan design

Even though fan geometry is of a complex nature, the design methodology is always the same; fan parameters are centerpoints of arcs and the arc angle. An HP Draft pre-processor program consisting of six lines provided a superb solution to this repetitive design task. It now takes a draftsman three minutes to generate a new fan geometry according to customers' specifications.



Customer problem II: Parametric library parts

Fifteen lines of user-written code were necessary to completely describe this countersink hole. The input parameters are diameter D and length L. Activated through a touch on the HP Draft menu overlay, the operator is prompted to input D and L and according to specifications, the countersink hole is placed on the drawing.



Working with parametric parts is a mass-storage-efficient way of dealing with standard libraries though it offers any degree of freedom to the size of the shapes.

Customer problem III: Which drawings on my data base contain the library part labeled "XXX"?

About 20 lines of code were necessary for this database search coded in HP BASIC and HP Draft post-processor subroutine calls. A typical customer problem, and a quick and easy solution with HP Draft.

If you are not sure whether your potential HP Draft customer's application will benefit by using custom-written pre- and post-processors, give the Boeblingen Engineering Operation US team a call. We'll help you determine the feasibility and approximate productivity gains.

New HPL-to-BASIC translator now available

Pat Hafford/FSD

A new HPL-to-BASIC 3.0 translator is now available from Oswego Software, of Oswego, Illinois. According to the Oswego data sheet for the translator, "testing on the program has shown that it translates more than 90 percent of the over 250 commands in HPL, leaving only those which have no related or similar function in Series 200 BASIC intact for translation by hand."

For details about the translator, which sells for \$775, contact: Oswego Software, 507 North Adams, Oswego, Illinois 60543, 312-554-FLOP.

HP-UX applications support international keyboards

Ann Sudduth/PSD

Several of the new personal productivity software packs for the HP Integral PC and the HP 9000 Series 200 HP-UX computers now support international keyboards using the Roman eight character set. The software packs include:

P/N	Software
45524G/H	MicroTrak™/HP-UX
45515G/H	TK!Solver®/HP-UX
45420G/H	MemoMaker/HP-UX
45413G/H	Calculator/HP-UX

Although the applications and manuals are not localized, users can provide input to the program using foreign language characters and keyboards.

TK!Solver® is a US registered trademark of Software Arts Products Corporation.

MicroTrak™ is a US trademark of SofTrak™ Systems.

TK!Solver book now available

Sharron Viger/PSD

TK!Solver®/HP-UX is a leader in a new category of software, the Equation Processor or Equation Solver. TK!Solver is a single-box solution available on the HP Integral PC and HP 9000 Series 200 HP-UX systems. Now there is a book on TK!Solver that will help your customers get the most from their TK!Solver systems.

The TK!Solver Book by M. Konopasek and S. Jayaraman Osborne uses examples and illustrations to explain the TK!Solver information sheets, command structure, and functions that allow the reader to communicate with the computer at the level of mathematical models and relationships, rather than by writing and running programs.

This book is recommended for TK!Solver users. It is available from Direct Marketing Division, P/N 92235B, and costs \$21.95.

TK!Solver® is a US registered trademark of Software Arts Products Corporation.

VisiCalc for HP 9000 Series 200 obsolescence

Sharron Viger/PSD

VisiCalc®, the electronic spreadsheet software for the HP 9000 Series 200, will be removed from the Corporate Price List, effective October 1, 1985. The following part numbers are included in this obsolescence:

P/N	Description
98810A	VisiCalc stand-alone
98810M	VisiCalc/Right to Reproduce
98811A	VisiCalc/SRM

VisiCalc will continue to be supported by HP-COACH until October 1, 1990.

VisiCalc® is a US registered trademark of VisiCorp.

New HP 9000 Series 500 application briefs

Jeff McNair/FSD

Fort Collins Systems Division (FSD) has completed another application brief in its series on the interfacing of other manufacturers' equipment to the HP 9000 Series 500 computer. The current brief covers the Versatec V-80 printer/plotter.

The complete list of briefs now available includes:

P/N	Description
5957-7945	Versatec V-80 printer/plotter
5957-7936	Tektronix 4107/4109 Computer Display
5957-7937	Tektronix 4115B Computer Display
5957-7938	Raster Technologies Model One/80
5957-7939	Silicon Graphics IRIS 1000

In each case, FSD has tested the basic hardware/software needed to permit the device in question to operate with a Series 500 computer and then described it in the brief. HP and FSD do not actually support the device or its connection. All briefs may be ordered from Direct Marketing Division.

Memory price changes for HP 9000 Series 200

Cathleen Hendershot/FSD

Effective April 1, 1985, Fort Collins Systems Division (FSD) lowered the price of the 1M byte RAM board and the 001 options for the HP 9000 Series 200 computers. The changes are listed below.

P/N	Old price	New price
98257A (1M byte RAM)	\$ 4,180	\$ 3,300
98257P (50 ct. 98257A)	204,000	137,175
9816S Opt. 001	3,350	2,470
9817H Opt. 001*	2,520	1,640
9837H Opt. 001*	2,520	1,640
9826S Opt. 001	2,520	1,640
9836S Opt. 001	2,520	1,640
9836CS Opt. 001	2,520	1,640
9920S Opt. 001	2,520	1,640
9817L*	10,375	9,495

**All localized language versions are supported.*

Dust gasket available for HP 9000 Model 236A

Pat Sheridan/FSD

A CRT dust gasket is now available for the HP 9000 Model 236A. This is the same assembly currently available on the Model 236C. The gasket consists of: CRT Dust Gasket (P/N 09836-46700) and Gasket Clamp (P/N 09836-41200).

The dust gasket parts must be ordered and installed by your customer engineer.



New HP Memory Test System provides high accuracy under modular program control

Martin Kellner/BID

The new HP 9430 from Boeblingen Instrument Division is a general-purpose memory-test system with a new user-friendly software structure for test-program development. With its modular, expandable design, the HP 9430 provides a fully-integrated system of hardware and software that is built to satisfy memory-test demands long into the future.

The system architecture provides the power to test semiconductor memory devices in manufacturing and incoming inspection/evaluation environments. It is a complete, compact, stand-alone system that requires no external host computer and no special environmental conditioning.

The HP 9430 combines extremely accurate signal timing and long-term stability, giving the customer more dependable test results, better test/data correlation and increased manufacturing yield.

High performance and compact design

All hardware, including controller and mass storage, are contained in one single cabinet, plus testhead. The HP 9920U system controller, running under the HP-UX* operating system, offers a multiuser, multitasking environment for program development and device test. A 24 or 55M byte disc drive (HP 7942A, 7946A) stores the system and application software. The HP 9430 can be configured with up to four terminals, and programs can be developed even while testing is in progress.

All drivers and comparators are located in the testhead close to the device under test (DUT) to ensure high-quality waveforms at the device pins and precise data collection. The HP 9430 offers data driver skews better than ± 400 picoseconds and edge placements within ± 600 picoseconds. This allows verification of access times with an accuracy usually found only in larger and more expensive systems. Typically, the system performs to an overall timing accuracy of ± 1.8 nanosecond, giving a high level of confidence in device characterization.

Calibration of timing and levels is required only once per year, without the need for an external fixture, and typically takes less than four minutes. Standard and custom address patterns can be generated at a 10 MHz cycle rate with the system's algorithmic pattern generator. Up to 16 Mwords of address range and a 12-bit data width ensures test capabilities for next generation devices.

Optionally available are a Truth Table for ROM testing and Catch RAM (November) for enhanced error control and bit mapping.

Key hardware benefits

- High accuracy and waveform fidelity ensure precise device characterization, allowing the user to reduce guardbands and increase yields.
- The long-term stability contributes to high uptime.
- A computer as an integral part of the HP 9430 makes each test system an intelligent stand-alone solution.
- Reliability of design results in a one-year calibration cycle.

HP 9430's software architecture contributes to ease of use

A new modular software design allows the customer to break down the various programming tasks into individual modules, reducing the complexity of programming and shortening the learning curve. Patterns, pin assignments, descrambling, and timing information are set up in independent softkey-driven editors and are linked together into a complete test program using the Test Plan Language (TPL).



Display of device pin connectors and machine channels in the Pin Editor.



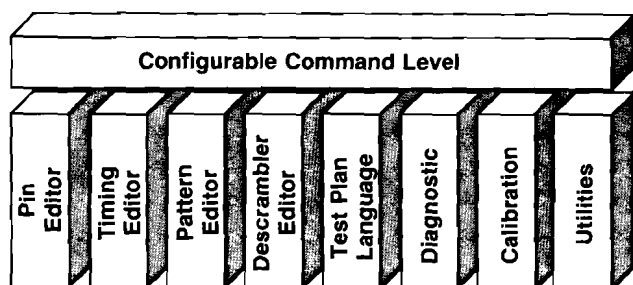
Combined display of two consecutive timing cycles in the Timing Editor.

Test & Measurement

The final result is a test program that is concise and self-documenting, so that it can be read, understood, and maintained by people other than the original programmer.

The HP 9430 features a software base that is composed of an HP-UX operating system, interactive editors, and a test plan that contains application-oriented routines. This set of routines was especially developed for this tester as a pure superset of ANSI Pascal.

A convenient user interface, called the Configurable Command Level, shelters the user completely from the HP-UX operating system. This means that the user does not need to have any knowledge of UNIX™ operating systems to develop tests and run them on the HP 9430.



The HP 9430's modular software structure significantly reduces test program complexity and speeds up program generation.

Application-oriented, hardware-independent program development

User-defined names rather than machine terms can be assigned when developing test programs. Thus, parameter sets become reusable and may be applied to different programs.

The HP 9430 can be employed for device testing even during development or modification of test programs. Hardware simulation techniques eliminate the need to have actual access to the tester hardware when debugging files. The debugger allows the programmer to enter or modify procedures and values without time-consuming recompilation of the entire program.

Graphic display enhances user interface

The visual feedback of pins, timing, patterns, and status information facilitates program verification and debugging. With a few keystrokes, instant display of the DUT wiring, timing cycle, or memory cell status is possible. This graphics capability is further enhanced by the HP 9430's data-analysis functions, available in

November 1985. These functions include bit map, schmo plots, wafer map, bar chart, and so on, and help the user to make effective use of all data collected during the test of memory devices.

Key software benefits

- Engineers who understand devices can develop test programs quickly and easily. There is no need for extensive programming experience.
- Program modifications using the debugger are possible without recompilation, saving the programmer considerable time during debugging.
- Editor contents can be applied to several test programs, hence reducing the overall programming efforts.
- High-resolution graphics displays provide visual feedback of editors, system status, and test data.

Product introduction and support

The HP 9430 Memory Test System appeared on the April 1 Corporate Price List. The public introduction of the HP 9430 will take place during the Semicon West '85 trade show in San Mateo, California, on May 21. A major story is in preparation for *Electronics Test* magazine, and other electronics publications are planning to run feature articles.

Semiconductor Test Marketing Centers have been established at Boeblingen, Santa Clara, and Takaido (sales headquarters in Japan) to provide you with worldwide support. Your contacts are Dirk Walter (Boeblingen), Ed White (Santa Clara), and Mitsuhiro (Mitch) Honda (Takaido).

Support engineer training was held in Boeblingen in February; sales rep and customer engineer training took place in the Marketing Centers in April/May.

Available HP 9430 literature is as follows: Product Brochure (P/N 5952-9567), Data Sheet (P/N 5952-9568), Ordering and Configuration Guide (P/N 5952-9569), and Support Services Brochure (P/N 5952-9570).

The cost of a typical one-head system starts at about \$110,000, and deliveries will begin in June. Ordering and configuration information is contained in the guide listed above.

**HP's implementation of UNIX operating system
UNIX is a trademark of AT&T Bell Laboratories*

HP offers HP-IB instrument control with MS™-DOS personal computers

Paul Maybaum/ISL

Do you have customers interested in using their HP Touchscreen personal computers to control instrumentation? Are you unsure of what to say to someone wanting to connect HP instruments to IBM personal computers? Are your customers uneasy about using third-party software to control HP instruments with personal computers because of lack of support? Would you like to be able to talk to someone who is knowledgeable about both personal computers and instruments? Then let's talk about two new products that will solve these problems.

The new products from New Jersey Division, the HP 14857A and HP 61062AA, provide the HP Touchscreen personal computer and IBM PC with the capability of controlling HP-IB instruments. The HP 14857A HP-IB Command Library for the Touchscreen sells for \$300 and provides software on a 3½-inch disc. The HP 61062AA HP-IB Interface and Command Library, priced at \$400, delivers software on a 5¼-inch disc and an HP-designed HP-IB interface card that plugs into the IBM PC.

The software provides over twenty different commands that can be used in either GW BASIC (BASICA on the IBM) or MS-Pascal. These commands are similar to the high-level commands already implemented on the HP Series 80 and HP 9000 Series 200 computers, so customers experienced with those computers should feel very comfortable with the library.

In addition, we have implemented a number builder that allows data to be read directly from or into real variables (including arrays) without having to do string conversion. This feature simplifies programming. No competitive library on either the Touchscreen or the IBM personal computers has this capability.

Performance does not suffer, either. Our objective was to do better than the HP-85, and in most cases we accomplished it. (See "HP-IB command library performance.")

Of course, no product is perfect, and there are some additional capabilities that we are considering for future releases. Our biggest concerns involve support of compiled BASIC and providing the ability to handle interrupts.

We have most of the major competitive software in-house and have assembled a competitive analysis in the following articles. Our data indicates we have better functionality, better performance, better quality, and a lower price than the competitive alternatives. With support from HP COACH and the HP Response Centers we should compare favorably with any competitor.

HP-IB Command Library uses IBM PC to control instruments

Mark Burak/ISL

Thanks to the HP-IB Command Library, your customer can now use an IBM personal computer to control HP-IB instruments. Present computers supported are the IBM PC, PC XT, and PC AT. Designed to run under MS™-DOS, the Library provides access to most standard IEEE-488 control lines and bus commands.

The Library for the IBM PC, HP 61062A, consists of a plug-in HP-IB card and a 5¼-inch disc. The disc contains the Library software, and the card provides the HP-IB hardware interface. The Library commands are supported by two languages — BASIC and Pascal. They are used interactively with the user's application programs.

With the card installed, users can connect a standard HP-IB cable between the IBM PC and the instruments. The Library files can be copied from the Library disc to a working disc (a fixed disc is convenient if you have one) and accessed when needed.

The commands are implemented as assembly language subroutines in BASIC and functions in Pascal. When a command is encountered, its subroutine or function is called to execute it. For example, to output a string in BASIC, the following IOOUTPUTS command would be used: 1100 CALL IOOUTPUTS (DVM,INFO\$). In this case, the IOOUTPUTS command is called to send the INFO\$ string to device DVM. In Pascal, this command would be executed as a function call, ERROR := IOOUTPUTS (DVM, INFO), where ERROR is the function's return variable and INFO is the string.

As a part of the Library package, a manual is included that contains instructions on installing the HP-IB card and the Library files, and programming with the Library in BASIC and Pascal. In addition, complete syntactical references are provided for both languages, as well as programming examples.

HP-IB Command Library performance

Paul Maybaum/ISL

Competitive analysis

The HP-IB Command Library for MS™-DOS provides HP-IB instrument control capability to personal computers that run under MS-DOS. This group of computers includes, but is not limited to, the HP Touchscreen personal computer and the IBM PC, PC XT, and PC AT. Other HP-IB interfacing products on the market offer a solution for either the HP Touchscreen personal computer or the IBM PC, but not both. This is a great advantage in areas where both computers are being used and HP-IB capability is needed.

The HP-IB Command Library is designed for full compatibility with HP PC-IB — the PC Instruments bus from New Jersey Division. This means a mixture of HP-IB instruments and PC Instruments can be controlled from the same program. No other HP-IB interfacing product offers this capability.

We have tested the following HP-IB interface products.

Company and product name	US List price	Target system	Supported languages	Number of commands
Hewlett-Packard HP 14857A HP-IB Library	\$300	HP 150	Interpreted MS-BASIC, MS-Pascal	25
Optimatic Solutions, Inc. HP-IB Enhancement Library	450	HP 150	Interpreted and Compiled MS-BASIC, Pascal, FORTRAN	17
Demand Systems, Inc.* HP-IB Driver Utility package for HP Touchscreen personal computer	295	HP 150	Interpreted and Compiled MS-BASIC	20
Hewlett-Packard HP 61062A HP-IB Library (includes plug-in card)	400	IBM PC	BASICA, MS-Pascal	25
IBM** Personal Computer Interface Bus Adapter plus Guide to the GPIB Adapter Programming support	395 (hardware) 85 (software)	IBM PC	BASICA, Compiled BASIC, C, FORTRAN	33
National Instruments** GPIB-PC board plus GPIB-PC software	385 (hardware) 75 (software)	IBM PC	BASICA, Compiled BASIC, C, FORTRAN, Pascal and assembly	31
Capital Equipment Corp. CEC-010000 IEEE 488 interface board	895	IBM PC	BASICA	11
IO Tech, Inc. MAC488 Bus Controller	595	Macintosh	Interpreted BASIC	26

*The Demand Systems Library was found to lack many of the functions needed for a high-quality benchmark program; therefore, it is not included in our performance evaluation.

**The IBM product is from National Instruments and varies only slightly from their product.

Performance

The performance of the HP-IB Library is compared here to other computers. The Nelson Benchmark used for the values shown below uses an HP 3437A systems voltmeter and a 3495 relay scanner to measure the voltage at each node of a biased resistor network. This benchmark represents a typical measurement loop in a small data acquisition system and checks the ability of each computer to do quick reads of an HP-IB device as well as data conversion, looping, and tolerance testing.

	Nelson Benchmark	Output 1 byte	Output 255 bytes	Enter -12.34	Enter -1.234567E-06
HP Touchscreen with HP-IB Library	800	15.3	19.0	21.0	26.5
HP Touchscreen with Optimatics	900	15.5	111.5	21.0	27.0
IBM PC AT with HP-IB Library	349	7.1	11.2	10.8	13.2
IBM PC AT with IBM card	740	13.7	26.0	27.8	30.7
IBM PC AT with IBM card	740	13.7	26.0	27.8	30.7
IBM PC AT with CEC card	364	2.2	18.2	14.7	18.1
IBM PC XT with HP-IB Library	841	17.6	23.8	26.2	31.5
IBM PC XT with IBM card	1,855	33.7	36.1	71.0	78.4
IBM PC XT with CEC card	720	4.9	19.2	38.1	46.1
HP Series 200 (HP 9836 with BASIC 2.0)	81	1.4	5.1	1.9	2.4
HP Series 80 (HP 86B)	1,663	40.1	136.5	28.5	34.6
HP 207 Integral PC	1,170	38.1	126.0	25.7	42.8

Note: all timings are in milliseconds.

HP-IB Command Library compared to the IBM PC GPIB Adapter

Julie Funk and Mark Burak/ISL

Both Hewlett-Packard and IBM now offer instrumentation control for HP-IB. How do the two compare?

IBM offers the Personal Computer General Purpose Interface Bus Adapter (PC-GPIB). The PC-GPIB includes an interface card (\$395) and accompanying software (\$85) that supports BASICA, Compiled BASIC, Lattice C, FORTRAN 2.0, and Professional FORTRAN.

HP offers the HP-IB Command Library for MS™-DOS which provides control over IEEE 488 instruments with an IBM PC, PC XT, or PC AT. The HP product includes an HP-IB interface card and software for \$400. The HP-IB Library supports BASICA and MS-Pascal.

Each package provides a variety of features. PC-GPIB contains statements for entering data from a device and storing it either in program variables or in a disc file. Similar functions are available for transmitting data, as are asynchronous transfer and DMA capabilities. Only string data can be transferred.

The HP-IB Command Library permits the user to transfer string data, numeric data, or arrays of numeric data. The built-in number builder and number formatter remove the burden of conversion of numeric to string data and increase effective data-transfer speeds.

In each product the user has control over I/O termination characteristics such as timeout, EOI, character match, end of string sequence, and byte count. With the PC-GPIB, this can be done through use of a configuration program executed prior to the user program, which establishes a correspondence between device name, address, and the characteristics mentioned above. The HP-IB Command Library allows specification of an end-of-string sequence of up to eight characters.

Both packages also allow users to generate their own HP-IB command sequences to perform, for example, multiple device addressing. Both IBM and HP provide commands for serial and parallel polling, statements which control the IFC and REN lines and commands to transmit standard IEEE 488 bus commands such as LLO and DCL. IBM also provides an automatic serial polling and response queueing facility invoked at each function call. PC-GPIB implements full non-controller capabilities, whereas the HP product requires that the personal computer be system and active controller at all times.

The HP-IB Command Library and PC-GPIB provide error- and status-handling facilities to the user. HP provides a numeric error representation and accompanying string message. Additionally, a status function exists allowing the user to determine certain interface status conditions. The capability also exists to determine the reasons for termination of the last data-input statement. IBM maintains an error variable, a status variable that can be interrogated to determine the status of the SRQ line, and a count of the number of bytes transferred on the previous transaction.

Although the PC-GPIB offers more functions, benchmarking has shown the HP-IB Command Library to operate at approximately twice the speed of the IBM product (see "HP-IB Command Library performance"). The benchmarks used included byte output rates for string transfers, real-number input, and a hybrid program representing a typical data-acquisition application.

HP advantages

- Better performance (about two times IBM).
- Numeric I/O capabilities.
- Single-command numeric array I/O.
- Compatible with HP PC Instruments.
- Single-vendor solution for personal computer and instrumentation customers.

IBM advantages

- Non-system controller capabilities.
- DMA and direct file transfers.
- Separate configuration program.
- Interactive control facility.
- Support of more programming languages.

HP-IB Command Library compared to HP-IB Enhancement Library from Optimatic Solutions

Julie Funk and Mark Burak/ISL

The HP-IB Enhancement Library (HPEL) from Optimatic Solutions and the HP-IB Command Library from Hewlett-Packard give the HP Touchscreen personal computer instrument control capabilities. A version of the HP-IB Command Library is also available for the IBM PC family.

HPEL sells for \$450 and supports Interpreted and Compiled BASIC, Pascal, and FORTRAN. For security, an "authorization module" is included which must be attached to an HP-IB connector in the instrument system. The HP-IB Command Library sells for \$300 and supports GWBASIC and Pascal from Microsoft.

The data-entry facilities in HPEL allow the user to enter string data, a single byte of data, or a word (two bytes) of data. The HP-IB Command Library permits the user to directly enter string data, numeric data, or arrays of numeric data. Analogous functions are available for data output. A built-in number builder and number formatter relieve the user of the need to convert data between string and numeric formats.

With each product, the user has control over I/O termination characteristics such as timeout interval, EOI mode, character match for data input, byte count and multiple-character end-of-string sequences for data output.

Both packages allow users to generate their own HP-IB command sequences. Both provide serial poll capabilities. The HP-IB Command Library also provides parallel poll capabilities. Each has functions that control the IFC and REN lines as well as commands to transmit standard IEEE 488 commands such as GTL and DCL. Neither provides non-controller capabilities.

The HPEL provides detailed error messages that include information about termination of the last data transfer, such as termination due to EOI sensed true. The HP-IB Command Library, on the other hand, provides more generalized error messages and a separate function to determine transfer termination reasons.

Benchmarks have shown performance of the two products under some conditions to be very similar, with the HP-IB Command Library having a small advantage. This includes low-end data-string transfers, an integrated instrument application and simple numeric data entry. The HP product is the clear performance leader for longer data strings. At a string length of 255 bytes, the HP-IB Command Library is over five times faster than the HPEL.

HP advantages

- Numeric I/O capabilities.
- Single-command numeric array I/O.
- Compatible with HP PC Instruments.
- Lower cost.

Optimatic Solutions advantages

- Per-device control over I/O termination characteristics.
- Multiple-character EOS on input permitted.
- Support of more programming languages.
- Software security.

HP-IB Command Library support

Van J. Walther/ISL

In order to meet the various needs of our customers, the HP-IB Command Library support will come through several channels. This support will consist of SF-15 AEO (Application Engineering Operation), CompuServe, ODIN-ISD, STARS, and the Response Center AEO. ODIN, from ISD, is a field software update service.

SF-15 AEO provides the traditional support engineer support to the customer. Their training will be part of the S428 Course. Consult the ISD training calendar for dates and locations.

The CompuServe user-group bulletin board/data base will become a nationwide clearing house for user

ideas, application notes, answers to common questions, and a source for application programs for the Library. Customers can log on to CompuServe and browse through this material for a minimal charge. The notes, questions and programs can also be downloaded into their computer. (See "CompuServe provides HP-IB user forum.")

ODIN-ISD and STARS provide the means for support engineers to report customer problems back to the factory where they can be corrected. They also make it possible to quickly receive updates to the software.

Finally the Response Centers will provide a means for the customer to find an answer to their systems questions from an expert team of trained and knowledgeable support personnel.

CompuServe provides HP-IB user forum

Van J. Walther/ISL

CompuServe, an excellent low-cost, data-base service, now contains support information for the HP-IB Command Library for MS™-DOS users. On CompuServe, the HP Users Forum now includes a special subtopic in its data library dedicated to PC Instruments, including HP-IB instruments supported by the Library.

The CompuServe customer can get to this Forum by simply typing "GO HP", whereupon the user moves to the HP Series 100 Forum menu page, HP-1.

At that point users have several options. They can leave or read messages, join a conference in session, peruse the data library, read bulletins, or even receive instructions on how to use the Forum.

To get into the Data Library, type "DL". The Data Library menu allows the user to choose one of seven subtopics, ranging from General Interest to System Utilities. Subtopic 7 is PC Instruments.

In the PC Instruments subtopic, the user will find application notes, newsletters, sample programs for both the PC Instruments System and the HP-IB Command Library, and answers to the most often asked questions. These can be easily downloaded to the user's disc or printer using a data communications program.

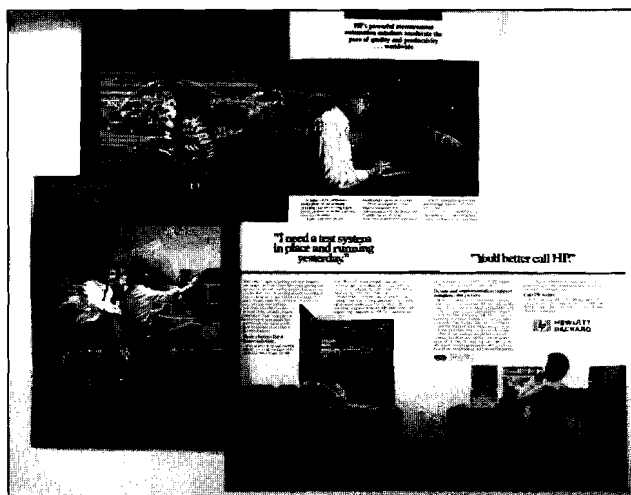
This new technique provides our customers with an inexpensive and up-to-date method of quickly answering their questions, passing on information to other users, and sharing their ideas and successes.

Long-awaited controller brochure/ad now available

Debbie Feig/FSD

The ad and supporting brochure developed to help you sell more measurement automation solutions are now available.

The emphasis in both the ad and the brochure is on the speed with which HP measurement automation solutions get into action. The ad, which emphasizes that HP has the measurement automation tools that your customers need, is appearing in a number of major publications.



The brochure, designed as a comprehensive response piece to the controller ad, brings together HP's complete spectrum of controller families. The many features that contribute to the ease and speed in developing and implementing HP systems are discussed.

HP has been a leading supplier of HP-IB-compatible instruments and computers over the past decade. This leadership position has been a key element of our profitability and growth in both the instrument and computer businesses.

However, as personal computers begin to infiltrate the controller arena, it is critical that we remain highly visible, touting the many advantages and benefits of going with HP as an experienced, single-vendor solution.

The brochure is available from Corporate Literature Distribution Center, P/N 5953-9532.

Reprints of the ad are available through Fort Collins Systems Division Marcom. Place orders through Sarah

Moya, COMSYS 4000. Please include name, address, department number, and account number. No phone orders please.

Following is a schedule of the actual publications and the appearance dates:

Publication	Dates
EDN	March 12, April 11, May 16, September 5, October 3
Electronic Design	February 21, June 27, July 11, August 22
Machine Design	March 21, May 30, July 11, September 26
Electronic Business	April 15, June 15, August 15, October 15
Production Engineering	April 1985, June 1985, August 1985, October 1985
Electronics Test	April 1985, June 1985, August 1985
Test & Measurement World	March 1985, May 1985, July 1985, September 1985

A-Series gives power and flexibility to ATS/1000

Mike Nissim/DSD

ATS/1000 (Automatic Test System for the HP 1000) is the most powerful general-purpose test system made by HP. It consists of an HP 1000 controller, one or more matrix, VHF, or modular switches, and the instruments of the customer's choice. ATS/1000 is a semi-custom-made system, integrated and functionally tested at Data Systems Division (DSD). It can test both analog and digital functions on sophisticated avionics, radio, microwave, guidance, and other systems, boxes, or subassemblies. The average selling price of ATS systems ranges between \$200,000 and \$500,000. These test systems are sold to either manufacturers of complex electronic subsystems for production test, or to their large customers (like the Navy, or commercial airlines) for maintenance testing.

Previously, ATS systems have only been available with HP 1000 E- or F-Series as controllers. Now you may place orders for ATS systems which use the powerful HP 1000 A900 CPU as a controller. These new ATS/1000 systems offer faster test throughput, are easier to use, and feature improved flexibility and configurability.

Product availability

DSD will start shipping A-Series ATS systems in January 1986. Sales cycle and product availability times for ATS products are long. We need to start selling the A-Series ATS immediately in order to have orders to ship in January 1986, when ATS will complete porting over to the A-Series.

Additional information

Switching capability — Switching is a critical function within an automatic test system. ATS/1000 offers a complete set of standard switching capabilities including matrix switching, modular switching, or VHF switching for signals of up to 500 MHz, to support a wide range of point counts. Special switching can be provided for signals up to 26.5 GHz.

Digital test capability — State-of-the-art capability in digital test is available using Interface Technologies' DTU and Lexico's digital test software. Lexico is an HP Plus software vendor.

Available software — An Autoconfigurator will be provided with A-Series ATS systems. This builds the system configuration tables and simplifies system generation and future system expansion by the customer. Device subroutines are provided to interface with HP and non-HP instruments. Referenced HP Plus third parties also offer ATLAS compilers (a language specifically designed for electronic test systems) and Test Executives, often needed by the customer.

Performance enhancements — The A-Series offers significant performance improvements over the previous ATS product line, as well as easier operation. Performance depends on the language used in writing the test application. The A-Series compiled BASIC/1000C improves performance by a factor of approximately two times over BASIC/1000D. FORTRAN 77 on the A900 can be three to five times faster than the E-Series equivalent. Improved performance means higher productivity for both the operator and the test equipment.



Available services — DSD will consolidate all the instruments the customer requires. They will be racked and cabled to both the CPU and to a patch panel, the interface between the unit under test, and the ATS system. At the customer's request, DSD will also provide the test suite that will exercise the ATS system itself and its operation.

If you have a qualified customer who wants to find out more about A-Series ATS/1000 systems, please call Dave Kline at the Cupertino Technical Sales Center or your sales center contact. We want to help you close an A-Series ATS sale.

HP to provide MATE systems in the future

Mike Nissim/DSD

MATE is an Air Force standard for automatic test systems which defines the CPU base instruction set (MIL STD 1750A), the MATE Operating System (MOS), the compilers (ATLAS and JOVIAL), the test executive, the HP-IB commands used to communicate with instruments (CIIL), as well as the physical interface between the test system and the device under test.

MATE is an evolving standard whose purpose is to better manage the hardware and software related to automatic test. The use of standard software development tools and standard hardware interfaces is expected to result in economies in operator training, system maintainability, and software development costs.

We offer a microprogrammed A900 that runs the 1750A instruction set, and one of our customers is in the process of porting the MATE operating system, editors, compilers, and other subsystems, which will become public domain shortly. Additionally, the A900 is superior to the other MATE CPU — the Sperry 1630 airborne computer, which features a hard-wired backplane — thus no future system expansion capability.

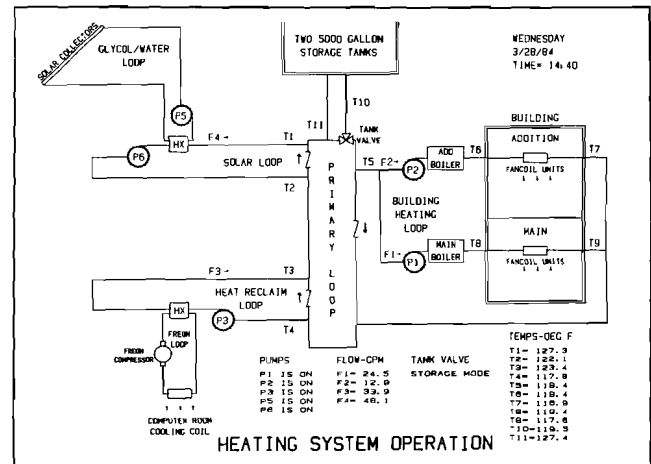
Several HP divisions are converting their instruments to have CIIL capability. We are looking forward to becoming a one-stop shopping center for MATE systems. For more information on MATE, contact Stan Brock for instruments compatibility, and Dave Kline for ATS systems compatibility, at the Cupertino site.

New applications note on HP 3497A

Gary Pinkerton/LID

Loveland Instrument Division (LID) has a new application note available, entitled *Solar Heat and Reclaim System Evaluation*. This note was written by the Platte River Power Authority to summarize the evaluation of their heating system using HP 3497As.

The heating system circulates hot water (about 120 degrees F or 49 degrees C) through heating coils to maintain space temperature in the 2,300 square foot building. The accompanying diagram shows how the process is set up, including location of pumps, valves, heat exchangers, and temperature monitoring points. Three sources provide hot water to the building: (1) a bank of 58 active solar collectors, (2) a heat reclaim condenser which removes "reject" heat from the computer room, and (3) two electric boilers that back up the solar and heat reclaim systems.



The objectives of the monitoring project were as follows:

- Determine, as accurately as possible, the contribution of the solar and heat reclaim system to the building's heating requirements.
- Provide information to accomplish "fine tuning" of the heating system to attain maximum energy savings and evaluate the impact of energy conservation measures on building energy use.

This application note explains in detail how these objectives were met, and gives practical information on hooking up the systems sensors. The concepts, equations, methods of analysis, and data manipulation are also discussed.

Call your regional support engineer for a copy.



HP Integral PC adds new dimension to biotechnology lab

Bill Hodges/PCD

Using the new HP Integral PC, scientists at HP Genenchem* have begun automating microtitration, a fundamental process in genetic engineering and other disciplines of biotechnology, with a combined hardware and software product called TiterCalc.

Microtitration, as it is currently performed in most laboratories, is a tedious process. Highly-skilled laboratory personnel spend an average of one half-hour to manually transcribe data from ELISA (Enzyme Linked Immunosorbant Assay) readers. With no check against the possibility of transcription errors, they then spend about 45 minutes on each microtitration plate performing repetitive statistical analyses.

With TiterCalc, this process is performed in less than two minutes — acquiring, displaying, manipulating, and storing data from ELISA readers with assured accuracy. The result is significantly decreased product development time.



TiterCalc, the first product from HP Genenchem, is the initial module in a planned system for automated microtitration. The product acquires, displays, processes and stores data from microtitration plate readers.

HP Genenchem chose the Integral PC over IBM, Apple, and other HP PCs for its multitasking capability under HP-UX, Personal Application Manager (PAM), HP Windows, the internal RAM disc, and the integrated design of the Integral PC giving it a very small footprint for crowded lab workbenches. A variety of available programming tools from Portable Computer Division allowed HP Genenchem to swiftly compile their software using workstation Pascal on an HP 9000 Model 217 and HP-UX C on the Integral PC.

With the powerful multitasking capability of the Integral PC, users can compare old and new data or monitor the acquisition of data from an ELISA reader in a background window while working on a lab report in a foreground window. In fact, multitasking means that with additional software, TiterCalc's hardware will be able to control the modules HP Genenchem adds to its automated microtitration system.

As a further investment in accuracy and productivity, an optional bar code reader attached to the Integral PC's HP-HIL interface will soon be available. By simply passing the wand over a bar code on a microtitration plate, users will instruct TiterCalc to reference stored plate formats, calculations, and report formats — producing a complete report with the results. Not only does this minimize the risk of incorrect plate formatting or data calculations, it eliminates redundant keystrokes. The TiterCalc system, including the HP Integral PC, ELISA reader interface, and application software, costs \$8,300.

**HP Genenchem, S. San Francisco, California, develops and manufactures instrumentation for the biotechnology industry. The company was formed in July, 1983, as a joint venture between Hewlett-Packard and Genentech, a leader in the field of recombinant DNA technology. The combination of the Integral PC and TiterCalc is HP Genenchem's first product.*

UNIX™ is a trademark of AT&T Bell Laboratories



GENERAL

FRD's Used Workstation Program update

Rhonda Willens/FRD

When your customers have special needs for computer workstation products but don't have the budget, the Finance and Remarketing Division's (FRD) Used Workstation Program can offer them the lowest-cost alternative.

Used computer workstation products are easy on your customer's budget and at the same time give you the advantage of receiving quota and commission credit. The Used Workstation Program offers cost savings of 15-70 percent on current and hard-to-find discontinued (not obsolete) products, a standard HP 90-day warranty, cosmetic refurbishment on all products, quick turnaround-shipments upon receipt of sales order at FRD, a discountable purchase agreement, and a price that includes freight and packaging.

Remember, the next time your customer is looking for computer workstation products and price is the key issue, call Rhonda Willens at TELNET 720-4165 or 408-720-4165 to reserve your product. Quantities of these products are limited so please call to reserve an item before making a quote. The following list shows pricing effective May 1, 1985, for domestic sales.

MAY 1985

Pricing for used workstation equipment

Terminals			Desktop Computers		
P/N	List price	End of support	P/N	List price	End of support
2382A*	\$ 950	01/90	9815A*	\$ 1,160	06/90
2621A*	725	08/87	9815S*	1,460	08/88
2621B*	895	No date set	9825A*	3,540	11/90
2621P*	825	08/87	9825B*	4,900	No date set
2622A*	1,100	01/90	9825S*	4,620	11/90
2623A*	2,400	No date set	9825T*	6,000	No date set
2624B*	2,550	No date set	9826A*	7,600	No date set
2626A*	2,200	No date set	9835A*	6,000	No date set
2626W*	2,300	08/89	9835B*	5,250	No date set
2627A*	4,950	No date set	9836A*	10,000	No date set
2628A*	2,650	No date set	9845B*	9,000	05/95
2645A*	2,250	05/95	9845C*	19,500	No date set
2647A*	3,200	06/89			
2648A*	2,500	05/95			
2647F*	6,200	05/95			

Terminal Options

(Opt. 050)	\$100	(except where noted)
Integral printers on terminals		
(Opt. 007)	700	
Integral dual cartridge unit		

Printers			Plotters		
P/N	List price	End of support	P/N	List price	End of support
2601A*	\$2,200	No date set	7220C*	\$ 850	01/95
2608A*	7,500	No date set	7220T*	3,192	01/95
2631B*	1,495	No date set	7221C*	1,700	01/95
2631G*	1,995	No date set	7221T*	3,510	01/95
2635B*	3,000	No date set	7225B*	800	05/88
2671G*	1,095	No date set	7470A*	876	No date set
2673A*	1,750	No date set	9872C*	1,610	01/95
2932A*	2,120	No date set	9872T*	3,150	01/95
2933A*	2,375	No date set			
2934A*	2,450	No date set			
7245B*	3,120	05/88			
82905A*	335	12/87			
82905B*	395	No date set			
82906A*	395	No date set			
9876A*	4,000	No date set			
Misc.			Workstation Discs		
P/N	List price	End of support	P/N	List price	End of support
13222N*	\$ 60	N/A	82901M*	\$ 745	No date set
Cable			9130A*	725	08/89
9111A*	1,950	No date set	9133A*	2,500	No date set
Graphics Tablet			9134A*	2,280	06/89
			9135A*	2,500	06/89
			9885M*	1,500	09/94
			9885S*	1,100	09/94
			9895A*	3,800	No date set
			9895A*	2,890	No date set
			W/Opt.010		

Note: When placing an order for product and pricing, please use the product number listed including the asterisk (*).

End of support information supplied by HP CSG Service Price Book PT02 MMC Prices Micro-Fiche dated May 1, 1985.

NETWORKS

Upgrades to AdvanceNet LAN for HP 9000 Series 500

Joe Bonner/CNO

Current 2285A LAN customers who want to upgrade to the new Network Services/9000 Series 500 (NS/9000) and LAN/500 Link interface card have been provided with a convenient upgrade package. This upgrade provides your LAN customers with the HP AdvanceNet network architecture, and the industry LAN standard IEEE 802.3.

NS/9000 is based on the AdvanceNet architecture; therefore, Series 500s running NS/9000 and HP-UX 5.0 cannot communicate with Series 500s running the 2285A LAN software on versions of HP-UX 4.0 or earlier without this upgrade. Series 500s running 4.0 may coexist on the same LAN cable as Series 500s running 5.0 and NS/9000, but they cannot communicate. To ensure compatibility with AdvanceNet products, 2285A customers should be upgraded to the new LAN software as soon as possible.

NS/9000 allows communication with other Series 500 systems running NS/9000 and HP-UX 5.0 or with HP 3000 systems using the Network File Transfer service over an IEEE 802.3 LAN. Although the NS/9000 software can communicate using either the 27125A LAN/500 interface card or the 2285A LAN hardware, upgrading to the new LAN/500 interface card is also strongly recommended.

The LAN/500 Link interface card offers performance and reliability improvements in a smaller package. Preliminary performance benchmarks have revealed a 60 percent increase over the previous 2285A LAN product in throughput for file transfers using the Network File Transfer and Remote File Access capabilities.

Upgrades to NS/9000 and HP-UX 5.0 are provided with the software support distribution for those HP 2285A customers on software material support services. For those customers not on support services, a 40 percent discount off the regular price for NS/9000 is available.

A \$700 discount off the \$2,200 purchase price of a 27125A LAN/500 card is available for customers who trade in their 2285A LAN unit to their local sales office. The HP-IB card and cable used with the 2285A

LAN unit should not be returned, and can be used for other purposes by the customer. The Ethernet transceiver and transceiver (branch) cable may be used with the LAN/500 interface card. In this case, order the Ethernet card connector cable with the interface card (27125A option 001).

Ordering Information

P/N	Description	US list price
50953A	NS/9000 Series 500 for Single-user HP-UX	\$1,700
Opt. 001	Previous revision upgrade	— 600
Opt. 022	Linux ¼" tape (must specify)	NC
50954A	NS/9000 Series 500 for Multiuser HP-UX	4,000
Opt. 001	Previous revision upgrade	— 1,600
Opt. 022	Linux ¼" tape (must specify)	NC
27125A	LAN/500 Link with IEEE 802.3 card connector cable	2,200
Opt. 001	Ethernet card connector cable	NC
Opt. 010	2285A LAN unit trade-in	— 700

Full details on the upgrade are provided in the LAN/500 and NS/9000 sales training manual.

MASS STORAGE

HP 7945A Express Service program delayed

Lil Blankinship/DMD

Demand for the 7945A disc drive has been so great that shipments to customers cannot keep up with it. Disc Memory Division has therefore been forced to delay the 7945A Express Service Program. This service, which offered your customers 72-hour delivery under certain circumstances, was announced in the April 15 issue of *Computer News*. We will offer the 72-hour express delivery at a later date. Watch *Computer News* for reactivation of the program.

DMD needs information about third parties

Dave Gerhart/DMD

There is increasing activity by third parties trying to penetrate the disc business on Hewlett-Packard systems.

Disc Memory Division (DMD) is in the process of benchmarking the performance and capabilities of the Fujitsu 410M byte disc drive that is integrated with a MAC-type controller. This configuration looks like multiple HP 7925s to the system and is being marketed by Systems Industries (SI).

In order to totally evaluate SI's offering, we need your help. Please let us know any customer comments on SI's discs regarding pricing, delivery, performance, throughput, reliability, service, and support.

Call DMD at 208-323-DISC.

How to transport 794X disc drives

Henry Weiss/DMD

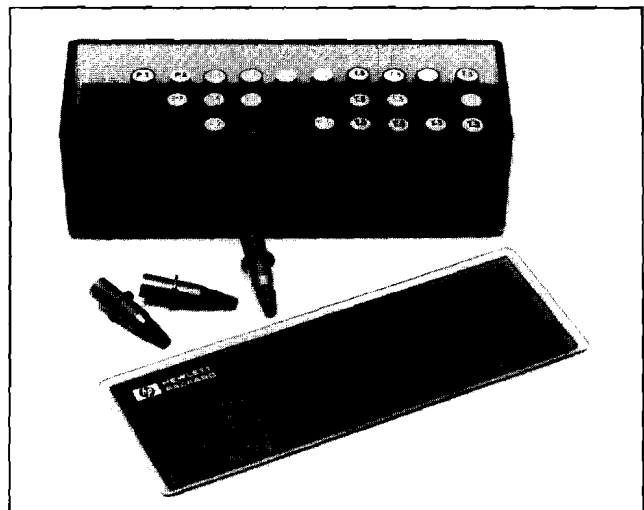
We have evidence that suggests problems with HP 794X drives when they are moved (transported) without proper handling and packaging. Therefore, we strongly suggest you take appropriate care when transporting any of the 794X family of disc and disc/tape drives from one location to another. Although these drives are small and relatively easy to move, they should be placed in their original shipping cartons if you are moving them either across town or across country. Do not ship these drives racked in any system cabinet. Once they have arrived at their final destination, the drives should be reinstalled per the procedure in the owner's manual and the system software should be reloaded. Details for ordering a new shipping container if the original one is lost are contained in the owner's manual.

PLOTTERS

New personal pen organizer available

Russ Gordon/DMK

Ensure that your customers spend their time plotting, not looking for pens. Our new personal pen organizer keeps plotter pens organized and within easy reach. Made of smoked acrylic, this compact organizer fits conveniently in a desk drawer or looks attractive on the desk.



The new personal pen organizer allows your customers to keep track of their plotter pens.

Up to 30 paper-writing pens, overhead-transparency pens, or short-body drafting pens can be stored vertically for easy identification. High-density foam holds the pens securely in place.

Have your customers take advantage of our quantity discounts and order a personal pen organizer for every plotter user in their office.

P/N	Product	Quantity	US list price
92177V	Personal pen organizer	1-2	\$34.75 each
		3-9	31.75 each
		10+	29.50 each

If your customers need a pen organizer for their graphics workstation or for their long-body drafting pens, be sure to refer them to our workstation pen organizers on page 128 of the *Spring/Summer 1985 Computer Users Catalog*.

PRINTERS

How to find qualified leads for laser printers

Matt Cuson/BOI

Sometimes it can be tough finding the name of a key contact person in a particular account. We want to make your job easier, so here's a list of sources of information on the IBM installed base. You may already have access to this information in your office.

- Computer Intelligence Corporation
Attn: Gary Gorton
3344 North La Jolla Boulevard
La Jolla, CA 92037
619-450-1667

HP has a contract with CIC which gives us on-line access and unlimited use of the data for a small charge. On-line access is available in that the data is updated monthly based on phone surveys. Call them for more information.

- International Data Corporation
5 Speen Street
Framingham, MA 01701
617-872-8200

Although this is not as expensive, it is similar to CIC. However, the information is not considered as valuable as CIC, so no contract was signed.

- Directory of Top Computer Executives
Applied Computer Research, Inc. - Distributor
602-995-5929

Printed directory. Cumbersome to use for direct mailings but great for "Dialing for Dollars" campaigns.

- Directory of Computer Installations
Louis & Associates, Inc.
P.O. Box 225828
Dallas, TX 75165-5828
713-790-3178

- Computer Directories, Inc.
5300 Hollister Road
Suite 230
Houston, TX 77040
713-690-3178

- Dunn's Marketing Services
Dunn & Bradstreet Corporation
800-526-9018

- DP Index for Computers
Horner Associates
999 Commercial Street
Palo Alto, CA 94303
415-494-6814 (Horner — the distributor)
415-494-7210 (DP Index Co. — publisher)

Local companies may also compile listings of the installations in the immediate area. Check the Yellow Pages under Market Research and/or Mailing Lists.

Note: For European and Intercon sales reps, International Data Corporation has foreign offices and some IBM installed base information is available. In most cases, a research company will be able to provide the best data.

Laser printer sales tools

Matt Cuson/BOI

To help you sell more laser printers into IBM accounts, Boise Division has a large number of sales tools to help you qualify prospects, overcome objections, and present the benefits of HP's laser printing solutions. Contact your literature distribution center to get your copies.

P/N	Description
(Mailed in January)	HP 2689 sales reference manual
5954-2252	HP 2689 data sheet
5954-2264	HP 26029 data sheet
5954-0758	HP 2689 print sample
5954-2253	HP 2689 brochure
5954-2265	HP 2685B data sheet
5953-7106	HP 2685 brochure
5953-7126	HP 2685 GIM
5953-7120	HP 2680 print sample
5953-7116	HP 2680 data sheet
5952-9460	HP 2680 brochure
5953-7125	HP 2680 GIM
5954-0790	HP 2680 cost justification
5954-0787	Variable density print sample
5953-7110	HP 2680 paper specifications
5953-7119	Application note: post-processing equipment
5953-7118	Application note: heavy paper
5953-7121	Document processing on the HP 2680
(Mailed in January)	ODS folder
5953-7109	Laser printer folder (grey)



DMK DIRECT ORDER

DMK Fast Phones — the easy, direct way for your customers to order supplies, accessories, media, furniture, and software.

Location	Telephone Number
Austria	(0222) 2500615
	(0222) 2500616
Belgium/Luxembourg	(02) 762 32 00
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	(02) 816640, ext. 258
Finland	(90) 4550211
France	(6) 928 32 64
Greece	(01) 6473360-1
Italy	(02) 92 36 91
	(06) 5 48 31
Middle East	
Athens	(01) 808-0359
Norway	(02) 171180
South Africa	
Johannesburg	(011) 8025111
Cape Town	(021) 537954
Durban	(031) 284178
Spain	(01) 6384013
Sweden	(08) 7502028
Switzerland	(057) 31 22 54
	(057) 31 22 59
The Netherlands	(020) 470639
United Kingdom	(0734) 697201
United States	800-538-8787
California	408-738-4133
West Germany	01303322



□ Price Changes

REINHARDT, HELMUT
GERMAN SALES REGION
HPGR 8300

Computer groups price changes effective May 1, 1985

These prices, effective May 1, 1985, appear on the Corporate Price List on that date, available in your office. Prices are US list unless otherwise noted. Orders at old prices will be honored at the factories for 30 days (or 60 days in the case of government quotes, see exception, III. GSA) after the effective date of an increase. All quotations, either verbal or written, shall be made at the new prices upon the effective date of the new price list. Customer should be notified that that their order will be honored at the lower price if it is received within the 30-day grace period. Price decreases are effective immediately and in-house orders shipped 5 working days prior to the announced decrease date will be billed at the new lower price.

Product No.	Description	Old Price	New Price
22843B	Opt. 022 Using Dictionary/3000	\$ -0-	\$ 500
2566A	Opt. 210 HP 1000 M/E/F-Series subsystem	535	410
2687A	Text laser printer	9,300	12,800
32120A+65C	HP Word PIA	3,650	2,800
32452A	PPC prof. system	48,510	45,310
32452A	Opt. 001 Memory option	6,500	4,000
32452AU	PPC prof. system (UK)	48,510	45,310
32452AU	Opt. 001 Memory option	6,500	4,000
32453A	PPC workgroup system	60,771	57,615
32453A	Opt. 001 Memory option	6,500	4,000
32453AU	PPC workgroup option	60,771	57,615
32453AU	Opt. 001 Memory option	6,500	4,000
36570A+65C	HP Desk PIA	2,800	2,200
45420G	MemoMaker/HP-UX	195	150
92077A+H41	RCS-RTE-A	-0-	45

Product No.	Description	Old Price	New Price
92077A+H42	RCS-RTE-A	\$ -0-	\$ 45
92077A+T41	AMS-RTE-A	-0-	45
92077A+T42	AMS-RTE-A	-0-	45
92077A+V22	Tape cartridge	-0-	30
92077A+V41	Flexible disc	-0-	75
92077A+V42	5-inch flexible disc	-0-	75
92077A+V50	800 bpi magnetic tape	-0-	30
92077A+V51	1600 bpi magnetic tape	-0-	30
92077A+W22	Tape cartridge	-0-	30
92077A+W41	Flexible disc	-0-	75
92077A+W42	5-inch flexible disc	-0-	75
92077A+W50	800 bpi magnetic tape	-0-	30
92077A+W51	1600 bpi magnetic tape	-0-	30
92205A	Hayes 1200 modem	550	650
92210F	Desktop shelf	215	200
9817LU	HP-UX system	9,495	10,375
98611A+H42	RCS-HP 98X6 BASIC RAM	50	45
98611A+H43	RCS-HP 98X6 BASIC RAM	50	45
98611A+H44	RCS-HP 98X6 BASIC RAM	50	45
98611A+S42	SMS-HP 98X6 BASIC RAM	20	15
98611A+S43	SMS-HP 98X6 BASIC RAM	20	15
98611A+S44	SMS-HP 98X6 BASIC RAM	20	15
98611A+V42	5-inch flexible disc	5	-0-
98611A+V43	5-inch ext. flexible disc	5	-0-
98611A+W42	5-inch flexible disc	5	-0-
98611A+W43	5-inch ext. flexible disc	5	-0-
99108E+H00	RCS-Computer Aided Engineering	150	400
99108E+T00	AMS-Computer Aided Engineering	310	725
99108E+V00	Additional system-CAEE/500	65	150

hp

