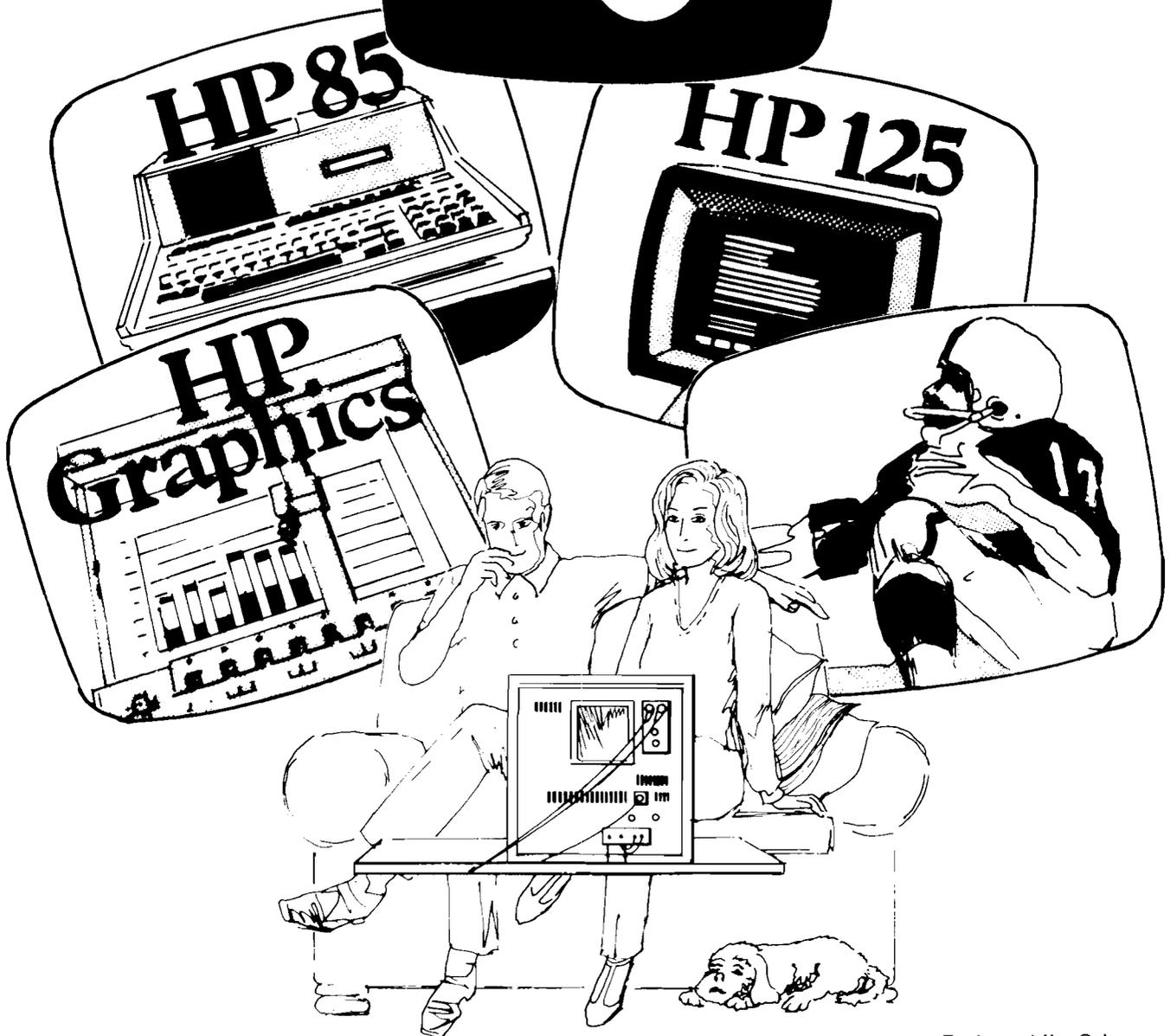


Computer News

For HP Field Personnel
September 15, 1981



For Internal Use Only

Computer News

Vol. 6, No. 20 September 15, 1981

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On the Cover

HP launches its first television advertising campaign this fall on ABC-TV.
For articles about the advertising, see pages 3-4.

HP Computer Museum
www.hpmuseum.net

For research and education purposes only.



CMG

HP Breaks Into Television

By Sheri Godshall/CMG with Russ Berg/Corp

Starting in September, Hewlett-Packard will air five different 30-second commercials on the ABC television network.

The commercials each feature one of five products/product groups:

- The HP 41
- The HP 85
- The HP 125
- Business Computer Graphics
- HP's arrhythmia monitoring system.

HP will run 18 commercials during the fall during "Monday Night Football," "NCAA Football," and the "ABC Nightline" news show. At right is a schedule of the dates the ads are scheduled to appear.

Russ Berg, manager of corporate marketing communications, says the goals of the television advertising in the US are:

- To broaden recognition and preference for the HP brand.
- To convey HP's unique range of measurement and computational product capabilities.
- To intensify buying interest in HP's expanding range of business and personal computers.
- To stimulate strong sales support from HP's expanding network of distribution channels.
- To augment HP's general print and advertising programs.

In addition, television advertising was selected to reach a broad base of customers and prospects, and to take advantage of HP's new products that have a wide market appeal, Russ explains. He also says that HP wanted to advertise in a media that HP's competitors are using. In short, the

goal of the TV advertising is to increase the sales forces' productivity.

The ads are targeted to reach the professional manager who influences the selection and purchase of HP products, Russ says. The sports and news programs were chosen because they have a high concentration of these managers.

Although the first series of television ads will be aired only in the US, Corporate MARCOM is aware of the worldwide potential of this medium.

"We will be looking at other country markets where the market potential is significant and where the television advertising opportunities exist," says Russ.

Pictured on page four are the story boards for four of the five commercials. A videotape including a message from John Young, a welcome from ABC's Howard Cosell, and all five commercials, is being sent to US sales offices and divisions.

Russ says there is no way of knowing at what time during the programs HP's ads will be aired. So stay tuned.

Fall US Television Advertising Schedule

Nightline News		Product	NCAA Football	Product	NFL Football	Product
10/1	Graphics		9/5 Alabama/LSU	HP 41	9/21 Dallas/New England	HP 85
10/8	HP 41		10/10 Oklahoma/Texas	HP 125	10/5 Atlanta/Philadelphia	HP 41
11/15	HP 125		10/24 Notre Dame/USC	HP 85	10/18 Los Angeles/Dallas	Hospital
11/5	HP 85		11/21 Michigan/Ohio	Graphics	10/26 Houston/Pittsburgh	HP 125
11/12	Hospital		11/21 USC/UCLA	HP 41	11/30 Philadelphia/Miami	HP 125
11/19	Graphics		11/28 Army/Navy	Hospital	12/7 Pittsburgh/Oakland	Graphics

Teams subject to change.

Watch our performance on network TV.



HP Graphics

When performance must be measured by results.

If your business is getting ahead, you need a computer that can help you get there.	It's time to consider a computer that can help you.	Our graphics can help you.
and display it with 70,000 pictures.	It's a matter of minutes.	It's a matter of seconds.
Makes data presentation with the power of TV.	It's easy, and when you're done, you're done.	It's a matter of minutes. Our graphics can help you get there.

The HP 125

When performance must be measured by results.

Imagine a computer that can help you get there.	It's a matter of minutes.	It's a matter of seconds.
It's a matter of minutes.	It's a matter of seconds.	It's a matter of minutes.
It's a matter of minutes.	It's a matter of seconds.	It's a matter of minutes.

The HP 85.

When performance must be measured by results.

It's a matter of minutes.	It's a matter of seconds.	It's a matter of minutes.
It's a matter of minutes.	It's a matter of seconds.	It's a matter of minutes.
It's a matter of minutes.	It's a matter of seconds.	It's a matter of minutes.

The HP 41

When performance must be measured by results.

It's a matter of minutes.	It's a matter of seconds.	It's a matter of minutes.
It's a matter of minutes.	It's a matter of seconds.	It's a matter of minutes.
It's a matter of minutes.	It's a matter of seconds.	It's a matter of minutes.

HP 125 & HP 250 Introduced Via Satellite TV

By Jerry Epps/CMG



Rave reviews are pouring in about the teleconference held August 11 to introduce the new HP 125 and HP 250. Field offices from all over the US and Canada report the program created great interest and enthusiasm among the attendees. Approximately 1300 commercial SRs, SEs and managers at 40 HP locations viewed the program. In addition, all of GSD was invited to see the teleconference, complete with popcorn and cokes, in the Oak Room in Cupertino.

The basic telecast format involved a two-part program encompassing a 45-minute introduction to the press followed by a three-hour training session for our field people. Both segments included a question and answer phone-in period.

CMG publicity people coordinated the press conference, the HP 125 and HP 250 product marketing team planned and scripted the program content, the Corporate TV studio set up the satellite network and produced the show, and CMG Training provided the interface to the field and coordinated the overall effort.

HP 125 Press Conference — A Success!

By Lee Bonds/CMG PR

Sky's the limit when H-P introduces a new product

Bits & Bytes
Bruce Entin

HP Unveils Desk-Top Computer

Hewlett-Packard Unveils Desk-Top Computer For Small-Business Firms

Hewlett-Packard 'Network' Aids Sales Pitch

FINANCIAL
Hewlett-Packard to unveil computer

Satellite selling
Reporters nationwide tune in as firm uses private hookup to introduce 2 computers

INFORMATION SYSTEMS
H-P Shows Its Lowest-Cost Business Unit

Chromatics Maps Leasing Program

Thanks to a lot of phone calls and personal contacts by teleconference site coordinators and DMs, we had a good turnout of press people for the introduction of the new HP 125 and 250. First reports are that editors appeared in force in New York, Boston, Toronto, Montreal, Rochester, Palo Alto and Phoenix. A number of other cities reported one or two editors came in to see the show.

Press response from those attending the teleconference was overwhelmingly favorable. The clips above tell the story. Several editors who did not go to the offices phoned questions in to CMG and Corporate PR, resulting

in several more stories. Local TV covered the story in San Jose and Rochester.

Local coverage of the HP 125 and 250 appears to have been best in locations with other computer manufacturers (competition) or technology-sophisticated readers. A number of locations reported no editors and no stories — due to a lack of local focus for the story. We'll be working on this aspect of product introductions in the future, since teleconferencing appears to save newspaper editors, like field salespeople, time and money in discovering what's new from HP.

Third Party News

Third Party Demo/Development System Guidelines

By Joe Rodgers/CMG

Since the introduction of the HP 125, several questions have come up regarding demo development discounts for software OEMs and software suppliers who wish to work with this product. Our standard program will apply to the HP 125. The following guidelines should be helpful:

- **For OEM's**

A Demo/Development system discount should only be approved for OEMs after they have been approved as an OEM for that particular system type and prior to them having ordered that system type under an OEM purchase agreement. As a general rule, all further purchases should be ordered under the OEM's purchase agreement. A current OEM who has already purchased one system type and received a demo development discount on that system may purchase a different system type (i.e., different operating system type) and receive the demo development 28% discount on that system if they qualify through additional development effort. Only one demo development discount will be given for each system type and the OEM must be approved for that product by the Area Computer Manager under the guidelines for qualifying OEMs provided by CMG.

In this situation (multiple product lines) the OEM must sign a Software Development Agreement for each system type he wishes to develop software on.

The OEM must demonstrate to the satisfaction of the Area Computer Manager that it is doing substantial applications development which will leverage multiple HP systems into specific vertical markets.

- **For Software Suppliers**

Software Suppliers may qualify for a demo/development system discount if their Software Supplier Application has been approved by the Area Computer Manager. As with OEMs, Software Suppliers must sign a Software Development Agreement for each system type they intend to develop software on. Unlike an OEM, a software supplier cannot buy additional systems at an OEM discount. However, they may have a legitimate need for more than one system (i.e., one may be a demo unit for trade shows while the second may be installed at the development facility). In a situation like this, the Area Manager can authorize a demo development discount on multiple units.

On the other hand, a software supplier may attempt to operate as a pseudo-OEM, taking the discount on one system and reselling it before requesting the discount on another. This violates the intent of the program. The Area Manager should be sure the Software Supplier actually requires more than one system to support its development objectives.

CSD

1981 Customer Survey

By Steve Morris/CSD

The '81 CSD Customer Survey is now underway. Over 4,000 questionnaires have been mailed to HP computer product users in the US and additional questionnaires will soon be distributed in Canada, Australia and Europe. The purpose of the survey is to gather information about user satisfaction with and knowledge of current HP support products and to gauge customer interest in a number of new products that are being considered for development.

CSO

Availability of Add-On Hardware from CSO

By John Herrgott/CSO

The 2382A Office Display Terminal will be available off-the-shelf from CSO starting in November, by agreement between DTD and CSO. This gives DTD time to ramp up production and establish a normal factory availability.

However, as announced in the September 1 *Computer News*, the 2671A/G Printers will be available from CSO in September, along with the currently available 2621A/P Terminals. 

TCG

New Computer Graphics Seminar Kits

By Phil Walden/TAP

Three new graphics 35mm slide seminar kits are available

SA111 — *Scientific and Industrial Applications of Computer Graphics.*

This seminar kit is a modified version of the graphics presentation used at the Productivity '81 shows. It describes the value and applications of computer graphics. Applications are broken down into three areas: Data Display (graphing), Real-Time Display, and Design Graphics. Real applications are used to illustrate the above application areas. This seminar is a general introduction and the audience should not expect a detailed description of graphics technology.

SA112 — *Elements of a Computer Graphics System*

This seminar describes the various technologies that make up a complete computer graphics system. HP hardware is used to describe the various technologies, e.g., raster displays, plotters, digitizers, etc. Again this is a general introduction to technologies and the audience should not expect in-depth details. However, the speaker should have background knowledge of an HP graphics peripherals.

SA113 — *Introduction to GRAPHICS/1000-II*

This new seminar provides an overview of the powerful GRAPHICS/1000-II family of graphics software. Actual graphics display shots are used to illustrate the high level features of GRAPHICS/1000-II. The speaker should have some experience in using both GRAPHICS/1000-II DGL and AGP-3.

These kits are orderable from DSD through HEART on an override, attention Carol Quinton.

Does AGP-3 = 3D DGL? No!

By Corley Phillips/TAP

Why should a customer pay another \$4,000 over the price of DGL just to get 3D from AGP-3? Because he gets a lot more than 3D! AGP-3 is great for 2D applications, and you don't need a 3D or an interactive design graphics application to cost-justify AGP-3. Here are some sample applications that need the features of AGP-3:

- Multiple output devices from a single-segment program.

Joe customer wants to plot graphs. But before he plots out the graph on an HP 9872, he wants to preview the graph on an HP 2648. Joe could do this with GRAPHICS/1000 Graphics Plotting Software (GPS), except that it takes up more room in his program partition than he'd probably have to segment his program. More over, output on a 2648 from a GPS program is *slow*. With DGL Joe gets faster output, but he would have to segment even the simplest program, since DGL provides for only one output device per partition. But an AGP-3 program can control up to eight output devices simultaneously, all from a single segment, and each additional device does not reduce Joe's program space. So Joe doesn't have to segment his AGP-3 program, and that's worth a lot of money.

- Software text.

Sally customer wants to add labels and titles to the graphs she's plotting. With DGL she can only use hardware text (text generated by the internal device hardware). So the appearance of the text looks different on every device she uses, since hardware text

is, by definition, device dependent. It also means that her device-independent program needs to be slightly modified to compensate for each device, because different character sizes and resolutions of each device wind up causing text to appear in different places on her graphs. The solution is software text, which not only looks better than any hardware-generated text, but also always appears in exactly the same position regardless of which device is used.

Sally could get software text with GPS, but it is slow and she wants to be able to run her programs on HP's new graphics peripherals. Since GPS will not support any new devices, the solution is AGP-3. Sally is a ready buyer because she estimates that making graphs look the same without using AGP-3 will take about one programmer per month, costing her \$4,000 per month, including overhead.

- Segment picking.

Fred customer wants to draw graphs of different data and have the user point at different lines on the graph, which are then analyzed in further detail. With DGL or GPS, Fred's program would have to search through all the data on the screen in order to match the (X,Y) coordinate of the cursor with the closest data point. But with AGP-3, each line representing a data set can be a different segment. AGP-3 automatically tells Fred's program which set of data the operator is interested in. This saves Fred more than one programmer-month of effort.

So you don't need to have a 3D application to justify AGP-3. Multiple devices, software text, and interactive picking are all features that more than justify the cost of AGP-3.

Technical Computers

DSD

Inactivation of RTE-M, Model 20 & Model 25 Systems

By Peter Philipp/DSD

Apparently, the removal of the Model 20 (2174A/B) and Model 25 (2175A/B) Systems from the August CPL as a result of the inactivation of RTE-M was not adequately pre-announced. Consequently, these systems will be made available through October 31 at the July CPL prices, and can be ordered via a HEART override. After that time, these systems will only be available as a special from DSD's Special Engineering group (at a higher price).

Instead of using RTE-M, customers who want a memory based system without a system disc, should order RTE-IVE. (See *Computer News*, December 15, '81, page six for details on RTE-IVE.) Those customers who already have RTE-M may copy it at no charge.

L-Series Sells Into Steel Mill Automation

By Fara Brock/DSD

One of HP's major accounts used a Model 10 L-Series system to automate a rolling mill process which forms steel plates and slabs from hot ingots. The ingots (typically 8' x 4' x 3') are forced through three successive sets of rollers to gradually form the dimensions of the final product. Several process controllers are required to control the mechanisms which determine the line speed of the conveyor, and the width, length, height, and edge formation of the steel.

The Model 10, operating under RTE-XL with IMAGE, is configured to receive sales order information and to download specific fabrication information from its data base to the rolling mills' process controllers.

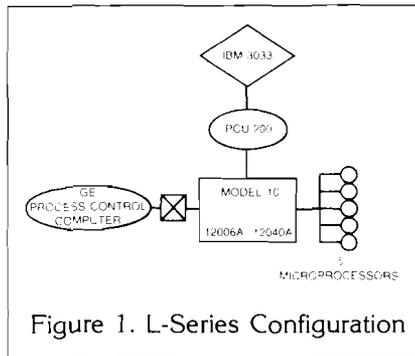


Figure 1. L-Series Configuration

Figure 1 shows this configuration in more detail.

The IBM 3033 is the mainframe which transmits orders to production through the L-Series. Communication is achieved via a PCU-200 protocol converter box manufactured by Air Land Systems. The PCU-200 converts IBM 3270 protocol to asynchronous RS-232 protocol.

A black box was especially designed to accept 8-bit parallel output from the L-Series and to emulate a card reader to the GE Process Control Computer. The GE Computer is driving DC motors according to control functions from the L-Series. The five other process controllers are performing similar tasks, but using RS-232 protocol via a multiplex card.

Deciding Factors

When the HP SR first talked to the engineers on this project, they were planning a less encompassing project using microprogramming on an in-house microprocessor. The company was convinced that the L-Series provided a better solution once the SR pointed out the following advantages:

- Interfacing capabilities to the mainframe and process controllers.
- Distributed Systems growth path.
- High level program development.
- Software capabilities using IMAGE data base management.
- HP's traditional reputation for support and service.

Future Expansion

An order for a 2177C F-Series System was recently placed as an expansion for this application. The system will be DS linked to the Model 10 for production data analysis and for remote data base access. In addition to this system, they have ordered an E-Series System, a 2250 M & C Processor and another F-Series System, all for their factory floor. Further, they are not planning to develop any microprocessors on new projects, but will be using 1000s and 2250s instead.

Teleconference Set for September 29

By John Moss/DSD

Set aside September 29 on your calendar to come to one of 39 teleconference sites in the US and Canada. TCG and DSD will be announcing a variety of new products and capabilities for the HP 1000 L-, M-, E- and F-Series Computers in a teleconference which will run from 9 am to 1 pm pacific time.

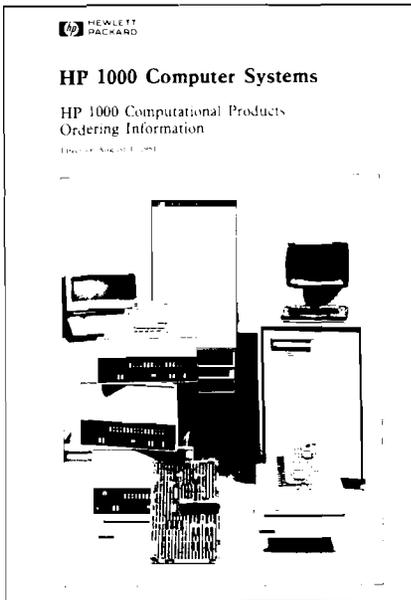
Sales training materials will be arriving in US and CSR offices the week of September 21. Be sure to read them before the teleconference so that you can get the most benefit from the teleconference.

Now HP 1000 Ordering Information Fits Into Your Coat Pocket

By Ted Proske/DSD

The August 1, '81 issue of the HP 1000 Ordering Information booklet has been shrunk to pocket size for more convenient field use. This new smaller pocket edition of the HP 1000 Ordering Information fits into an inside coat pocket, a small binder like the Desktop Computer Sales handbook, or a standard 3-ring bin-

der (using two of the three rings). We trust that you and your customers will find this new compact format easier and more convenient to use.



DS/1000-IV Memory Requirements for RTE-XL

By Helen Fuller/DSD

There seems to be some confusion as to how much memory is required to run the DS/1000-IV subsystem on RTE-XL. The memory requirements listed in the Communications Databook are for RTE-L not RTE-XL. Currently, the Communications Databook is being updated to include the new RTE-XL information. The estimated memory requirements for both a disc based and a memory based RTE-XL are listed in the following two paragraphs. Please note that for any memory based RTE-XL system running DS/1000-IV, it is recommended that more than 128Kb of memory be configured into the system. Then, based on this recommendation, the 512Kb memory card could look very attractive for price reasons. Remember, DS/1000-IV is not supported on RTE-XL until software revision 2126.

RTE-XL — Memory Based

A minimal DS/1000-IV subsystem requires at least 80Kb of memory (Note: this estimate does not include operating system size or user program requirements). This memory requirement represents a minimum capability DS system which only allows you to download and schedule programs, and this minimum capability is not sufficient for most applications. A more typical case is the memory requirement for a full capability DS/1000-IV subsystem which is at least 190Kb. This estimate includes all of the normal DS/1000-IV features. For total memory requirements, add the memory required for the operating system and for any additional programs or subsystems.

RTE-XL — Disc Based

A minimal DS/1000-IV subsystem requires at least 60Kb of memory (note: this estimate does not include operating system size or user program requirements). This minimal configuration should only be considered if performance is not an issue, as needed monitors will have to share the same memory space. For most applications, however, there should be enough available partitions to allow concurrently used monitors to reside in memory simultaneously. This minimizes swapping and assures the fastest network response time. Such a system would require at least 108Kb of memory. Additional memory would permit less contention between user programs and the networking software.

The B.U.S. Has Arrived!

By Randy Englund/DSD

To provide you, our sales force, with improved sales support and phone coverage from DSD sales development, on-line sales engineers are going on the B.U.S. — a *Back-Up* phone Support system. The B.U.S. will operate from 7:30 am to 4:30 pm, including lunch time, with increased emphasis on coverage dur-

ing the peak hours of mid-morning and early afternoon.

This system will help improve our ratio of answering questions from SRs on their first call to DSD. We will attempt this by always having an engineer available to answer questions and avoid the wasted time of "volleyball" phone messages.

This plan was developed by the Quality Circle members, who identified a problem, analyzed and isolated causes and effects, and proposed a solution. The members made their B.U.S. proposal to Marketing Manager Joe Schoendorf and Division Manager Gaylan Larson who gave enthusiastic support for the plan.

Essentially, we have put a multiple-line phone at each sales development engineer's desk so access to common phone lines is possible. Our phone system transfers the call to the common lines when an on-line engineer's phone is busy or not answered within three rings. Each SDE will schedule time on the B.U.S. (two 4-hour shifts per week) to answer general questions or take detailed messages for calls forwarded to the common lines.

You, as a caller to DSD Sales Development, will continue to call your primary regional or major account contact. If that person is not available, another engineer will take your call. We hope you'll find this system helpful to your sales efforts!

RVD

Using the HP 12792A MUX as a Lineprinter Driver

By Glenn Talbott/RVD

As most of you know, the 12792A Multiplexer Interface Subsystem may be used as a printer driver by using the device driver DDV12 in RTE-IVB. A wide variety of RS-232 printing devices may be connected to the multiplexer and used as low-cost

system printers. The device driver allows the use of the column one carriage control familiar to standard lineprinter users.

However, you must keep in mind the limitations of the DDV12-12792A-RS-232 printer configuration. DDV12 is a lineprinter emulator driver; it cannot perform all the functions of a big parallel interface lineprinter on a printing terminal. DDV12 does recognize the following carriage control characters:

- "1" Go to Top-of-Form
- "0" Space one extra line before printing (double space)
- "" Space two extra lines (triple space)

All other characters in column one are taken as single space carriage control. DDV12 does not support the "*" to suppress line feeds.

Another lineprinter function that the 12792A Multiplexer does not support is the ability for the printer to go off-line and then resume printing exactly where it left off. There are two possible reactions to a printer on the 12792A going offline. If the printer uses the ENQ/ACK handshake (like the HP 2631B) the 12792A will continue to send up to 80 characters before stopping. When printing resumes, it will start after that 80th character. If the printer does not use ENQ/ACK handshake (like the HP 2601A) the 12792A will continue to send characters as if the printer were still online.

In some applications, these limitations may prove to be prohibitive and the 12792A should not be sold as a printer driver. In most applications, however, you will find that the 12792A Multiplexer works very well to provide low-cost printing as either a primary system printer in a small system or as a secondary backup printer in a larger system.

DCD

HP 9826 BASIC Enhancements Pack

By Martin Nielsen/DCD

The BASIC Enhancements Pack (P/N 09826-10030) is now available at a price of \$200 (US). This pack consists of a non-scratchable binary program that behaves as part of the BASIC operating system once it is loaded. It offers the following capabilities:

- Driver for the 98628A Datacomm interface
- Support of the 9895 and 8290X floppy drives
- Structured programming (SELECT CASE, DO WHILE, REPEAT UNTIL, LOOP/EXIT)
- Copy (file or media)
- SUSPEND/RESUME INTERACTIVE
- ON KBD.

Availability is immediate.

HP 9826A Used With the HP 3054A

By Bill Follis/DCD

The new HPL and BASIC software options making the HP 9826A Desktop Computer compatible with the 3054A Automatic Data Acquisition/Control System are on the August 1 corporate price list.

Shipment of the HPL option, which includes enhancements enabled by the features in the 9826, will start in September. BASIC option shipments will start in November, and should give a speed improvement due to the 9826's increased performance when running BASIC.

HP 9845 Camera Attachment a Winner

By Ed Brovet/DCD

A surprise hit at SIGGRAPH '81 in Dallas, Texas, was the HP 98777A camera attachment. A number of visitors to the HP booth were familiar with the HP 9845C, but were unaware that a camera attachment is available.

Visitors were amazed at the ease with which the camera attachment is mounted. The 98777A's compatibility with most 35mm cameras or the Polaroid CU-5 camera and gelatin filters was well-received, but the highlight was the automatic *barrel-distortion correction* provided by the hardware.

The price-performance ratio of the HP 9845C is enhanced easily in the customer's mind by demonstrating the HP 98777A camera attachment, which provides a cost-effective way to obtain realistic, quality copies of the CRT display.

HP 9835 and 9845 DataPro Reports Favorable

By Al Sperry/DCD

DataPro's July '81 reports on the HP 9835 and 9845 will help your sales of these products. In addition to giving technical data on the mainframes, options and peripherals, the two reports contain results of user surveys on each desktop showing how typical users feel about HP computers.

Users surveyed indicated 95% overall satisfaction with both the 9835 and 9845, and between 90% and 95% with their ease of operation and programming, based on a weighted average. In the maintenance service area, the 9835 scored 85% and the 9845 scored 92%. Technical support and Hewlett-Packard software ranged from 71% to 85%, with the 9845 getting higher marks than the 9835.

Some trade publications are already quoting these and other recent DataPro reports. According to the *Engineering Computer Applications Newsletter* for July, Hewlett-Packard's 9800 Series desktops rated best in the engineering-oriented category with a "Good" rating. HP's minicomputers also rated "Good/Excellent" in the engineering, math, and scientifically-oriented products, followed by TI, Prime, Wang and DEC.

The DataPro 9835 and 9845 reports show that some established HP customers believe HP is the way to go for single-vendor supply with good support. The reports also show that HP customers are reluctant to change vendors; they would rather go from HP's desktop to an HP mini rather than someone else's mini when requirements demand a hardware change. This certainly reflects, among other factors, the rapport between you and your customers that helps keep HP in top preference in new buying decisions.

BDD

HP 9826A — What a Start!

By Bob Moore/BDD & Jackye Churchill/DCD



Initial sales results for the HP 9826A were even higher than our expectations. Records were broken for first month sales in most areas worldwide, highlighted by a fierce competition between the US and Europe.

At our stake in this competition was a Black Forest cuckoo clock vs a white stetson cowboy hat. The competition came down to the last day, when a final order from the UK sealed the victory with 113 units sold in Europe, against 111 sold in the US.

Results in Japan and ICON were equally impressive, with 42 sold in Japan and 12 in ICON for a worldwide total of 295 — a new record for the first month of a new product.

We want to thank the field for a superb job well done. The excitement and enthusiasm generated during the office tours has paid off in excellent order levels, with even better prospects ahead. The 9826 will undoubtedly be one of the most important products for HP over the next five years.

Special recognition should be given to certain people and countries. The UK outperformed all the regions in the world, with a total of 46 HP 9826s sold. Of those, *Geoff Nightingale* sold 20 to one customer, and *Paul James* sold 10 to another. In the US, *Ed Tarka* of Rochester, New York, sold 11 units to an OEM. *Bob Brancheau* of Atlanta, Georgia, sold 5 9826s to an OEM even before June 1. (Congratulations also, *Bob*, on becoming a DM!) In Richardson, Texas, *Dennis Peters* came through with an 8-unit OEM sale.

Of the 42 9826s in Japan, *Tadao Kin* sold 5 units, while *Osamu Kagaguchi* and *Tsunekazu Tsuji* each sold 4 units.

Jackye Churchill, Product Marketing Manager for desktops at DCD, will formally present the cowboy hat to her counterpart at BDD in Germany, *Bob Moore*, on her trip to Europe in October.

Congratulations to everybody who participated in the successful 9826 introduction.

What one of our customers said about DATACAP/1000

By Claire Hunt/GTO

A large American components company situated in France uses an HP 1000 system with datacapture terminals, DATACAP/1000, IMAGE/1000, and GRAPHICS/1000 to do production tracking. (See Datacapture Application Note No. 407-3 *The Electronic Industry (1)*.) The company is considering expanding the system to manage their maintenance and keep archive records.

In a recent company publication, several managers pointed out the benefits of the system:

- The production manager said that the system's flexibility was its greatest asset. "The HP 1000 helps us greatly with our work; the gain in time spent looking for lots and information is appreciable. We are more sensitive to the problems of inventory and cycle time due to the accurate daily reports." His only regret was that they didn't have more graphics terminals in the production area.
- The production control manager said, "If we were to remove our HP 1000, there would probably be a 20% increase in inventory and a 2-3% loss in the wafer processing yield."
- The maintenance manager said that the coming changeover to an HP 1000 would allow them to access the system with specialized programs.
- An engineer said, "To dress up in white clothing, look for a lot in the production area, and modify a production specification was never particularly rapid or practical. The HP 1000 has eliminated this lost time."

If you'd like to find out more about this article, contact us or your Grenoble Sales Development representative.

Business Computers

BCG

Experience Berlin

By Carol Scheifele/BCG

The '81 European HP 3000 International Users Group Meeting will be held October 5-9 at the Technical University of Berlin in West Germany. This university is 102 years old and has 25,000 students from around the world. At this setting and with an anticipated 450 attendees, the users group meeting promises to be exceptional. The theme is "New Horizons in Data Processing." Specific topics include:

- Installation Management, Accounting
- Data Communications
- MPE-IV Performance
- Software Engineering
- Commercial, Educational and Scientific Interactive Applications

- Data Base Management
- Word Processing

The actual schedule of events follows:

HP 3000 INTERNATIONAL USERS GROUP
BERLIN MEETING, OCTOBER 5.-9, 1981

	SUNDAY 10.04.81	MONDAY 10.05.81	TUESDAY 10.06.81	WEDNESDAY 10.07.81	THURSDAY 10.08.81	FRIDAY 10.09.81
8 A.M.			Registration			
9 A.M.			Registration	Invited Speaker	Sessions	Invited Speaker
10 A.M.		Registration from 9 a.m. to 6 p.m.	General Session	Discussion		Discussion
11 A.M.			BREAK	BREAK	BREAK	BREAK
12 A.M.	Vendors Registration	Technical Interface Meetings	Invited Speaker	Sessions	Sessions	Sessions
1 P.M.		LUNCH	LUNCH	LUNCH	LUNCH	LUNCH
2 P.M.			Session	Sessions	HP Management Roundtable	Sessions
3 P.M.						
4 P.M.		Special Interest Group Meetings	bus-departure	Break	Break	Farewell
5 P.M.			CITY SIGHT-SEEING TOUR	Sessions	Sessions	
6 P.M.						
7 P.M.						
8 P.M.			NOLLE PARTY	THEATRE - Opera Berlin by Night (optional)	BANQUET	

It is imperative to announce this meeting to all HP 3000 customers. User group members have already received the call for vendors, papers, and registration, but there are many non-members who need to be informed of this meeting. Please help spread the word and encourage your customers to attend — especially European ones. Duplicate the following forms for interested parties.

Approximately 20 speakers will present papers, the traditional Management Roundtable will feature top HP managers, and our latest products will be on display at the exhibition. In addition, Klaus-Dieter Laidig, general manager of Boeblingen, will be on hand to present our overall marketing strategy.

REGISTRATION FORM HP 3000 INTERNATIONAL USERS GROUP BERLIN MEETING OCTOBER 5.-9, 1981

Please print clearly

NAME _____
COMPANY _____
TITLE _____
ADDRESS _____
CITY _____
STATE _____
PHONE _____
TELEX _____

Please circle your requirements: IUG Member Non-Member
Pre-Registration Full-Week 1. DM 650.- 2. DM 880.-
 One day only, date _____ DM 190.- DM 250.-
 Several days, dates _____

Additional Payment for Berlin Banquet A1. DM 100.-
 Additional Payment for City Sightsseeing and Nolle Party A2. DM 70.-

Payment enclosed by check _____
 Payment by bank-transfer _____
 ALL PAYMENTS MUST BE MADE IN GERMAN CURRENCY (Deutsche Mark)

Pre-Registration will be accepted until September 15th. Fees for Registration received after September 15th are as follows:

3. Full-Week Registration Member DM 750.-
 one day Member DM 190.-
 4. Full-Week Registration Non-Member DM 980.-
 one day Non-Member DM 250.-

Additional Program Oct 7.

A3. Opera (Munich Philharmonists) A4. Theatre (Kabuki-za, Japanese Theatre) A5. Berlin by Night (Guided Night-Tour)



HOTEL REGISTRATION FORM HP 3000 INTERNATIONAL USERS GROUP BERLIN MEETING OCTOBER 5.-9, 1981

Arrival Date _____ Arrival Time _____
 Departure Date _____
 Rooms Needed _____ SINGLE/TWIN
 Extra bed etc _____
 Please circle your requirements
CATEGORY: SINGLE TWIN
 1. DM 120.- to DM 150.- 1. DM 185.-
 2. DM 90.- to DM 120.- 2. DM 140.- to DM 160.-
 3. DM 50.- to DM 90.- 3. DM 80.- to DM 100.-
 (Rates inclusive of tax, service and CONTINENTAL breakfast)

Hotel reservation will be made on a first-come, first served basis as reservations are received by KOGAG Congress-Organization. Please indicate your 2nd choice, in case your selection is not available.

A one night deposit for each room reservation must accompany this reservation. Reservation and deposit must be received by KOGAG Congress-Organization not later than September 15th.

All payments must be made in German currency (Deutsche Mark)

KOGAG
Congress Organization
P.O. Box 110530
D-5650 Solingen 11
West-Germany

GSD

HP 250 Order Management Software Enhanced!

By Paul Storaasli/GSD

OM/250 is an existing source code software product which provides OEMs with a modifiable package for Order Entry, Inventory Control, Accounts Receivable and Sales Analysis applications designed for durable goods distributors and small manufacturers. OM/250 is currently being updated with the release of several enhancements and bug-fixes.

Order Entry is now a multi-terminal module which allows more than one HP 250 user to enter orders simultaneously.

A new capability, General Inquiry, allows read-only access to several of the data bases at the same time that other OM/250 modules are active.

The integration of OM/250 with FIN/250 has been enhanced to allow concurrent activity with several modules, e.g., while one to five users are entering orders, another user can be working with the Accounts Payable module.

Hardware Environment

A 64Kb user memory partition is now required for OM/250

Modifications include support for the HP 250/30, 7908P disc drive and cartridge tape drive, and the 2622D Personal Workstation. OM/250 remains compatible with previous HP 250 hardware.

Software Environment

OM/250 will be shipped configured for the new OS 4 System Software. However, it can be reconfigured to operate with the previous release of System Software.

Ordering

The enhanced OM/250 will be distributed through the normal chan-

nels to those customers who have software support contracts.

For customers without software support contracts, an upgrade product is available:

Product: 45190U
Price: \$2,500
Contains: Complete 45190A product OS 4 System Software diskettes
Prerequisite: Previous purchase of 45190A

Special Notes

The following items should be kept in mind for OM/250:

- The 65Kb memory requirement is a change from the previous product requirement.
- The term "Multi-User" has not been carefully applied over the past months when informally describing the enhancements being developed. Several people have misunderstood the extent of multi-user support now being released. Order Entry now can support multiple terminals during the *Enter Orders* or *Modify Orders*, but the two functions are mutually exclusive. Other Order Entry functions are still single user or restricted in some way when combined with other OM/250 and FIN/250 functions. The complete description of access rules is very detailed. Check with your SE support person for additional information.
- The OM/250 product is still intended to be tailored and supported by OEMs for specific end-user requirements.

Summary

OM/250 provides OEMs a foundation of modules for Order Management, Inventory Control and Accounts Receivable which can be built into an effective business control

package. Some of these modules allow multi-terminal use of single functions or a combination of functions. Other modules must be modified to provide multi-user support. The target end-user customer is still the hard-goods distributor or small manufacturer. A key ingredient of these businesses is inventory.

HP 250 Has Graphics Intrinsic!

By Paul Storaasli/GSD

HP 250 Graphics Plotting Library (GPL/250) is a collection of BASIC/250 subprograms which allows an HP 250 programmer to generate graphs, charts and other graphical output (including overhead slides) on a variety of HP Graphics Plotters. All charts can be annotated with symbols and text.

A subset of A Graphics Language (AGL), GPL/250 provides user application programs with total flexibility to create, modify, and produce charts. It can enhance a program which periodically generates reports to include customized charts that clarify data or emphasize key points. All capabilities (including chart design and execution) are called from a user-written program in HP 250 BUSINESS BASIC. Over 30 mnemonic intrinsics provide the programmer with an effective means of producing graphic output without having to learn a complex protocol or special language.

For more information refer to:

- Graphics Plotting Library Data Sheet (P/N 5953-3439)
- Graphics Plotting Library Programming Manual (P/N 45260-90064)

Hardware Environment

GPL/250 requires the following HP 250 hardware:

- Any HP 250 Office Computer with 64K user memory partition

Business Computers

(GPL/250 uses approximately 32K of user memory — the additional 32K is available for the user program).

- Asynchronous Serial Interface port.
- HP supported plotting device (RS-232-C interface).
Plotters supported by GPL/250.
HP 7220A/C/S/T* 4- and 8-Pen Graphics Plotter
HP 7221A/B/C/S/T* 4- and 8-Pen Graphics Plotter
HP 7225A/B Single Pen Graphics Plotter with RS-232-C Option
*HP 7220/7221 S/T have automatic chart advance.

Software Environment

GPL/250 is included as part of the HP 250 OS 4 System Software shipped with each HP 250. Customers with an earlier version of the system software can upgrade.

IND

Using DSG/3000 at HP

By Bev Lewis/Corporate

DSG/3000 (Decision Support Graphics) users at HP realize that computer generated graphics provide easy communication, effectively show relationships, save time and provide a means for better retention of information.

DSG/3000 Features

- The device independent software produces business charts in the form of scattergrams, pie and line charts and a variety of bar charts.
- Different chart types can be chosen to find the best method of data representation.
- A basic chart, typically including a title, subtitle, legends, X and Y labels, can be further enhanced with extra text, lines, arrows and boxes.

Users can create custom graphics packages programmatically or use the on-line interactive mode which makes chart creation, updates and production relatively easy for the nonprogrammer.

Some DSG/3000 Uses

At one division, new charts, using DSG because of the transformation feature, are being developed to report daily cumulative actuals and targets for the manufacturing manager.

Corporate Employment uses 25 charts to report hiring statistics for the college recruiting and corporate employment managers. Before DSG, this reporting was done by preparing tables of statistics and hand made graphs — a time consuming effort.

Corporate Information Systems people support a software package created for Paul Ely, called Graphic Support System, which is used as a forecasting tool for decision making.

BGD

European Versions of the HP 125

By Mike Barlow/BGD

The HP 125 has now been introduced worldwide, and will be used by many people as their first computer system. We are, therefore, making every effort to provide local language options where we can justify the investment needed.

At introduction time, the following versions will be available:

- Standard US Version
- Opt 001 Swedish/Finnish Keyboard
- Opt 002 Norwegian/Danish Keyboard
- Opt 005 UK Keyboard.

The changes made are to replace lesser-used USASCII characters with

local language characters on the keyboard, display and the optional internal thermal printer.

Some other keyboard options are shown on the CPL, but we are unable to quote delivery times for these at the moment. As soon as these options are completed, they will be announced and appear on the availability schedule.

Initial demo systems shipped will be US versions, and a number of your users will choose to order this to remain compatible with their HP 3000 terminals. Please ensure that no conversion process is planned from the US version to a local language version, since this would be very expensive for a customer.

Configuring European HP 125s

By Mike Barlow/BGD

The HP 125 uses seven bits internally to describe each character, and one bit to determine whether enhancements are set on. Local language characters are, therefore, provided by utilizing ISO substitution characters, i.e. some lesser-used USASCII characters are lost in order to gain some local characters.

While every effort has been made to ensure that this is a benefit rather than a problem to the end user, there are some occasions when the USASCII character is unexpectedly replaced with another character. For example, Port # 1 would actually appear on the UK version as Port E1, and A\B would appear as A0B on the Norwegian/Danish version. This is something a programmer needs to know.

Make sure you order printers with the correct substitution options, e.g. 2631B Opt 001, 002 or 005. The Roman Extension Set will not work with the HP 125, so do not try to use a printer previously set up for the HP 250. Make sure that you order correct power options for all items in the system. 

DTD

HP 2624B — Forms Cache

By Sean Kelly/DTD

On September 1, '81, DTD introduced the HP 2624B. The 2624B replaced the 2624A and is a superset of the 2624A features.

One of the key new features of the 2624B is its ability to store forms locally in the terminal forms cache.

Rather than transmitting a form to the terminal each time it is needed, all of the forms to be used in a work session can be sent to the terminal at the beginning of the session. When a form is needed, it can be transferred locally from forms storage to the screen by using a single escape sequence. The form sent to the screen is treated as if it came from datacomm. Forms storage/retrieval capability coupled with the local edit check facility, greatly reduces the datacomm overhead needed for data entry applications.

Any characters or escape sequences can be stored in a form. Forms cache memory can be reserved in two ways — through the terminal configuration page or by using an escape sequence. In the terminal configuration page, there is a field called "FormsBufSize (256x)." This field represents the number of 256 byte blocks that will be taken from the video memory and allocated for forms cache memory. If the user wants to reserve 1024 bytes of memory for forms storage, then the number 4 should be entered in this field. If the user wishes to use all memory for the video display, then the number 0 should be entered in the field. This field can also be chosen programmatically. When asking for forms memory, there must be enough remaining space for terminal memory requirements. This includes memory for one page (24 lines non-blank, no enhancements),

and space for the user definable softkeys. With standard 2624B memory, the forms cache will store 31 x 256 byte blocks. With the optional memory available on the 2624B, the forms cache will store a total of 95 x 256 byte blocks.

In data entry applications, forms cache, coupled with the advanced data checking capability, will greatly reduce data communications overhead and increase user productivity.

HP 2624B Multipoint Configuration

By Andy Zaremba/DTD

For many years Hewlett-Packard has offered its customers the ability to run terminals in a multipoint configuration. The advantage of multipoint terminal configurations and MTS system software on HP 1000 and HP 3000 computer systems includes the cost benefit associated with shared communications resources and increased data integrity through sophisticated error checking of transmitted data. With the introduction of the 2624B, HP is now able to offer this multipoint capability at a significantly lower cost than in the past.

Multipoint capability is standard on the 2624B; however, when daisy-chained operation is desired, multipoint communication pods are required.

Product	Capability
13267A	Provides asynchronous multipoint connection to the first terminal in a chain.
13267A Option 001	The same capability as above is provided for synchronous operation.

13268A Provides asynchronous multipoint connection to the second and subsequent terminals in a chain.

13268A
Option 001 The same capability as above is provided for synchronous operation.

Cabling considerations for the pods are straightforward. For remote operation over modems, the 13267 plugs directly into the modem via an RS-232 connector; hardwired applications require a 13232U cable to precede the 13267A. The 13268A pod plugs directly into the 13267A and provides 10 meters of cable between units. For customers requiring additional distance between terminals, 30 meter 13232R cables may be inserted between the pods.

National Languages on the 2X Terminals

By Sarah Jane Militello/DTD

Since national language capabilities differ from terminal to terminal in the 262X family, this guide indicates what you get when you order national language options and how to use them on your terminal.

2621 A/P

Standard: USASCII

*Options 001, 002, 003, **004, 005, 006:

Each option includes the corresponding national keyboard and the appropriate national language ROM. (Example: option 003 includes French AZERTY keyboard plus French ISO characters.)

Usage

In the language menu, one language can be selected from the following list and used if the corresponding language option is purchased.

Terminals

Softkey Label	Language	Keystrokes
D *	German	shift <
DK/N*	Norwegian/Danish	shift roll ^
E / e	Spanish, / is mute	shift roll v
E *	Spanish	shift roll v , roll v
az F e	French AZERTY, " are mute	shift ^
az F *	French AZERTY	shift ^ , ^
gw F *	French QWERTY," are mute	ctl ^
gw F e	French QWERTY	ctl shift ^
S/SU *	Swedish/Finnish	shift <
UK *	United Kingdom	shift >
US	USASCII	shift v

2626A

Standard: USASCII and LINE DRAWING SET

*Options, 001, 002, 003**, 004, 005, 006:

Each option includes the corresponding national keyboard and two ROMs with all available language sets (Roman extension) and math and large character sets.

Option 201:

Option 201 includes the USASCII keyboard, two ROMs with all available language sets (Roman extension), math and large character sets.

Usage

In the global configuration menu, any national language can be selected from the following list and will appear on the display if any of the options is purchased.

Selection	Language
USASCII	USASCII
SVENSK/SVOMI	Swedish Finnish
DANSK/NORSK	Danish Norwegian
FRANCAIS azM	French AZERTY with mutes***
FRANCAIS qwM	French QWERTY with mutes***
FRANCAIS az	French AZERTY
FRANCAIS qw	French QWERTY
DEUTSCH	German
UK	United Kingdom
ESPANOL M	Spanish with mutes***
ESPANOL	Spanish

Roman Extension

If 8-bit ASCII is set to YES in the terminal configuration, and ROMAN EXTENSION is selected as the alternate character set, national characters in the Roman extension set can be used with a **CTL** **N**. Eight-bit mode can only be used with devices which can handle eight-bit.

2622A . 2623A , 2382A

Standard: USASCII and LINE DRAWING SET

*Options 001, 002, 003**, 004, 005, 006:

Each option includes the corresponding national keyboard and one ROM with all available language sets (roman extension) and the line drawing set.

Option 204

Option 204 (not available on the 2382A) includes the USASCII keyboard and one ROM with all available language sets (Roman extension) and the line drawing set.

Usage

In the terminal configuration menu, any national language can be selected from 11 choices (see list in 2626A description above) and will appear on the display.

2624A

Standard: USASCII and LINE DRAWING SET

*Options 001, 002, 003**, 004, 005, 006:

Each option includes the corresponding national keyboard and the appropriate national language ROM.

Usage

In the terminal configuration menu, one language can be selected from 11 choices (see list in 2626A description above) and used if the corresponding language option is purchased.

*Options 001 through 006 have the following correspondence:

001	Finnish/Swedish
002	Norwegian/Danish
003	French
004	German
005	UK
006	Spanish

**Option 003 always includes the French AZERTY keyboard arrangement. A keycap extraction tool is included and the A, Z, Q and W keycaps can be rearranged to French QWERTY.

***With mutes enabled, depressing ^ or ' in French and / in Spanish will hold the cursor and allow overstriking with an acceptable vowel to that language. Mute mode is not supported in block mode. 

BSE

HP 2613A To Be Retired

By Sallie Ewing/BSE

The HP 2613A printer will be removed from the Corporate Price List as of November 1, '81. The HP 2613A is purchased from an outside supplier who is discontinuing production of this printer.

Boise Division has had low volume sales on the HP 2613A since the introduction of the HP 2608A. If you have customers who foresee a demand, their orders need to be entered before November 1.

HP 2680A and TDP

By Steve Simpson/BSE

Does the Text and Document Processor Software Package (TDP) support the HP 2680A? Yes.

Text and Document Processor treats the HP 2680A as a line printer. The same TDP formatting commands that are used for other HP line printers can be used on the laser printer. The features of this software package include automatic centering and justification of text, and multi-column output. The HP 2680A and the IDS/IFS software also allow portrait page orientation so that output can be read like a book. Typewriter-styled print fonts provide high quality print.

To use TDP with the HP 2680A, simply issue this MPE FILE statement:

```
:FILE SLP;DEV=pp;ENV=anyenv
```

In this case, "pp" is the designation for the HP 2680A at your installation and "anyenv" is the name of your environment file which specifies the character set, page orientation, and forms (if any) that you want to use. Next, add the TDP SCRIBE command "\LPTOP O" to your text file. This command instructs TDP that the 2680A will start printing on the first line of the logical page. Then issue the "FINAL COMMAND" as shown: FINAL TO *LP

Boise Bullets

By Bill McGlynn/BSE

• HP 2601 Sound Cover

A sound abatement cover is now available for the HP 2601A letter quality printer from CSO. This cover lowers the db level from 59 dba to 56 dba. Its dimensions are 26" wide x 22¼" deep x 14¾" high. It comes complete with an exhaust fan, a rear slot for continuous forms, and a power outlet for the printer. The product numbers and prices are:

92177E (110V outlet) \$440

92117F (220V outlet) \$450

• 2608A Print Ribbons

Print will occasionally fade from paper when exposed to sunlight for extended periods of time. This is true of virtually all system printer output in the industry including the 2608A's. Although the occasion to use it is rare, we have found a solution to the problem. The optical mark ribbon (OMR) ink for the HP 2608A is made with pigment which is longer lasting than the standard dye. The OMR ribbon is available through CSO under order number 92158M.

• 7970 Mag Tape

Effective immediately, all of our HP 7970 tape drives will be shipped with 3M-777 tape instead of 3M-700.

• 7970B on HP 1000 L-Series

The HP 7970B will not operate on the HP 1000 L-Series because of interface differences. The HP 1000 L-Series is an HP-IB device while the HP 7970B is not. It isn't feasible to upgrade the HP 7970B to an HP-IB device.

• HP 7976A on HP 1000 L-Series

The HP 7976A is presently not supported on the HP 1000 L-Series. If sufficient demand is shown, an investigation will be initiated to consider this configuration. Therefore, please advise DSD Sales Development if you have an interested customer.

• Third Party Printers

We need to know if you are losing sales to third party vendors. Call your Boise sales development engineer if you have had third party printer or tape problems.

HP 2680A Prospecting

By Thad Webster/BSE

A key to your HP 2680A prospecting success will be demonstrating new and exciting non-impact print samples to your prospects. When you have a company initially qualified, measure their interest by asking for several of their current impact printer outputs that you can duplicate improved, non-impact quality.

A customized print sample for prospects is a powerful sales tool. Each of the following HP 2680A sites have trained SE support that can take your prospect's current computer output and convert it to an HP 2680A non-impact output. If not, call on factory marketing resources to get a customized print sample.

Sites: Boise Division; Business Computer Group; Boeblingen General Systems Division; **Europe:** Orsay (France) Sales Office; Winerish (England) Sales Office

Sales Regions: *Eastern:* Rockville and Lexington Sales Offices; *Midwest:* Rolling Meadows Sales Office; *Southern:* Atlanta and Richardson Sales Offices; *Neely:* Los Angeles Airport, Santa Clara and Bellevue Sales Offices.

New Boise Division Marketing Manager

By Ray Smelek/BSE

Chuck Jepson was recently named the new Boise Division Marketing Manager. He is replacing Bill Murphy who has been promoted to Peripheral Group marketing man-



Chuck Jepson

Peripherals

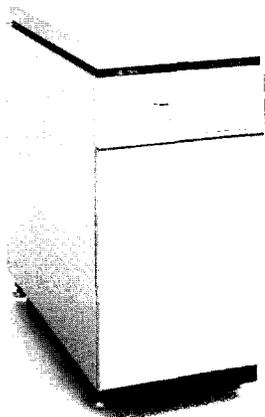
ager. Chuck has over ten years of experience with HP, having held positions in accounting and production management. Chuck has been Boise Division's controller since '76. During this time, he has been involved in the division's new printer product strategies, management of the division's EDP center and the account management program for 2680 Laser Printing System installations.

DMD

Competition for the new HP 7908

By Keith Braunwalder/DMD

In this article we will discuss some of the competition for the new HP 7908 disc/tape drive. We will look at what the other major mini-computer vendors have to offer as an alternative.



The 7908 provides 16.5Mb of Winchester technology disc storage married with an integral streaming mode cartridge tape drive. The tape drive is an excellent solution for backup providing up to 67Mb of compact, removable tape storage. At the same time, the convenient cartridge tape drive is also ideally suited for loading and unloading programs and data (personal I/O).

HP 7908 COMPETITION

Manufacturer & Model	Description	DISC PERFORMANCE		Media Cost for Full Backup	List Price	BMMC
		Ave Access/(MSEC)	Data Transfer (Kb/SEC)			
HP 7908	16.5 Mb Disc 16.7 Mb Tape	50	538	\$ 25	\$ 9,900	\$ 47
7910 + Integral Floppy	12.5 Mb Disc 1.2 Mb Floppy	80	410	\$105	\$10,000	\$ 56
DG 6098	12.5 Mb Disc 1.2 Mb Floppy	70.1	911	\$100 (11 diskettes)	\$ 7,600	\$ 72
DEC (2) RL02	10.4 Mb Cartridge Discs	67.5	513	\$213 for 10.4 Mb	\$12,500	\$128
IBM 4962-3	14.0 Mb Disc	50.1	889	\$200 (24 diskettes)	\$11,080	\$ 76
3580	606 Kb Floppy					
3581	+ Controllers					
Wang 2260BC	10.0 Mb Disc (5 Mb Fixed — 5 Mb Removable Cartridge)	52.5	312	\$200	\$12,000	\$108

To provide a meaningful comparison, we have selected products from Data General, Digital Equipment, IBM, and Wang that provide some solution to I/O and backup, as well as mass storage. We will look at each vendor individually, pointing out both strengths and weaknesses. The most important points to remember are the type of backup and I/O device used, the cost of the media required to back up the disc and, of course, the total price of the solution. The table at the end of the article summarizes each vendor's offering, including their Basic Monthly Maintenance Charge (BMMC).

The *Data General (DG) 6098* is a 12.5Mb Winchester disc drive sold with a 1.2Mb flexible disc drive for backup and I/O. The first thing to recognize is that the 7908 offers 4Mb of additional mass storage. DG's flexible disc provides a good solution for I/O, as long as no more than 2Mb of programs or data are required for input. On the other hand, the flexible disc drive is less than optimal to back up the hard disc. A complete volume backup of the disc requires 11 floppies at a cost of over \$100 and demands extensive operator intervention. Compare that to the push but-

ton backup of a 7908 disc onto a single \$25 tape cartridge. The price of the DG 6098 is \$7,600.

Digital Equipment Corporation (DEC) offers a storage package of two RL02 cartridge discs. Each cartridge provides 20.8Mb, 4.3Mb more than the 7908. The DEC package provides a fast and fairly convenient backup solution, however, not as convenient as the 7908. Also, one 10.4Mb disc cartridge costs over \$200 and is bulkier and harder to handle than the 7908's 4 x 6 inch tape cartridge. The size and cost of the disc cartridge makes it a poor solution for I/O. DEC sells two RL02's for \$12,500.

Wang's 2260BC offers a very similar solution to DEC's, with 5Mb on a fixed disc and 5Mb on a removable cartridge for a total of 10Mb of mass storage. The same arguments hold true with the 2260BC as with DEC's (2) RL02's. The price of Wang's 2260 BC is \$12,000.

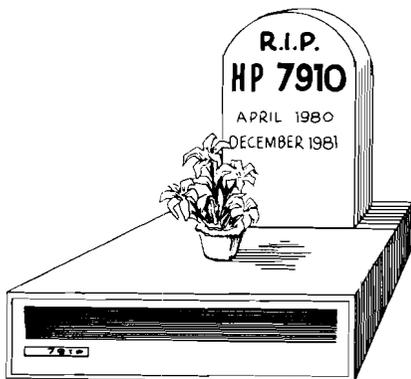
The *IBM 4692-3* has 14Mb of mass storage and a .6Mb flexible disc. This solution is very similar to the Data General 6098. However, some 24 floppies are required to back up the

disc, at a media cost of over \$200. The IBM 4692-3 lists at \$11,080.

The 7908, at \$9,900, is a very strong competitor compared to the products offered by these four vendors. More mass storage, the most convenient and inexpensive backup solution, and a very attractive package are strong incentives that should help in any prospective selling situation.

HP 7910 Obsolescence

By Scott Tuthill/DMD



Advances in mass storage technology have led to Disc Memory Division's introduction of a new entry level storage product, the HP 7908. Intended to replace the 7910, the 7908 offers more mass storage, as well as an integrated cartridge tape drive for backup and I/O. Because the 7908 is priced only slightly higher than the 7910, we expect 7910 orders to decline.

Our current plans are to remove the 7910 from the Corporate Price List on December 1, '81 and to accept the last orders until December 31, '81. Final shipments will be made in late January or February '82. A five year support life will be provided for the 7910.

GLD

Advantages of 5-1/4" Disc Stops

By Rick Spangler/GLD

Unlike 8" disc drives, the motor that spins the disc in the HP 82901M 5-1/4" Flexible Disc Drive stops when the disc is not being accessed. This feature helps to eliminate media wear and extend the life of the bearings and brushes in the motor.

The system waits for 2.5 seconds after an access before stopping so that during frequent accesses, the disc spins continuously with no time spent stopping and starting the motor. The inertia of the disc and motor is low so the disc is up to speed quickly, and operations like head positioning overlap motor start-up.

Access time can be computed from the following table:

Track-to-track	5 milliseconds per track
Head settle	15 milliseconds
Latency (the time for the desired sector to rotate the head)	200 milliseconds maximum 100 milliseconds average
Motor start-up	250 milliseconds

VCD

59,985 Sales Opportunities Worth \$59.9M

By Gene Morel/VCD

The HP 2671A, 2671G, and 2673A are perfect add-ons to your customer's 264X terminals. With an installed base of over 60,000 264X terminals, sales of these printers should be fantastic. And they are. We had over 500 unit orders in July, yet only four orders for the 2640/5 add-on option (#240).

The new 267X Printer Stand that fits on top of the 264X box will be available in September rounding out the perfect add-on sale. Remember, order #240 for use with the 2640 and 2645. For use with the 2647 and 2648, the standard HP-IB interface is used.

Paper Catcher to be Included with HP 263X Pedestal

By Al Grube/VCD

Effective for the October price list, a paper catcher will be included with all printer stands for the 263X Family. The price of the HP 2607A will be increased to \$343, and Option 002, which adds the paper catcher, will be dropped from the price list since it is now standard.

Since most orders for the printer stand (about 90%) included requests for the paper catcher option, significant time and money savings will be realized by packaging the stand and paper catcher together. In addition, paper handling is much more convenient with the catcher installed.

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