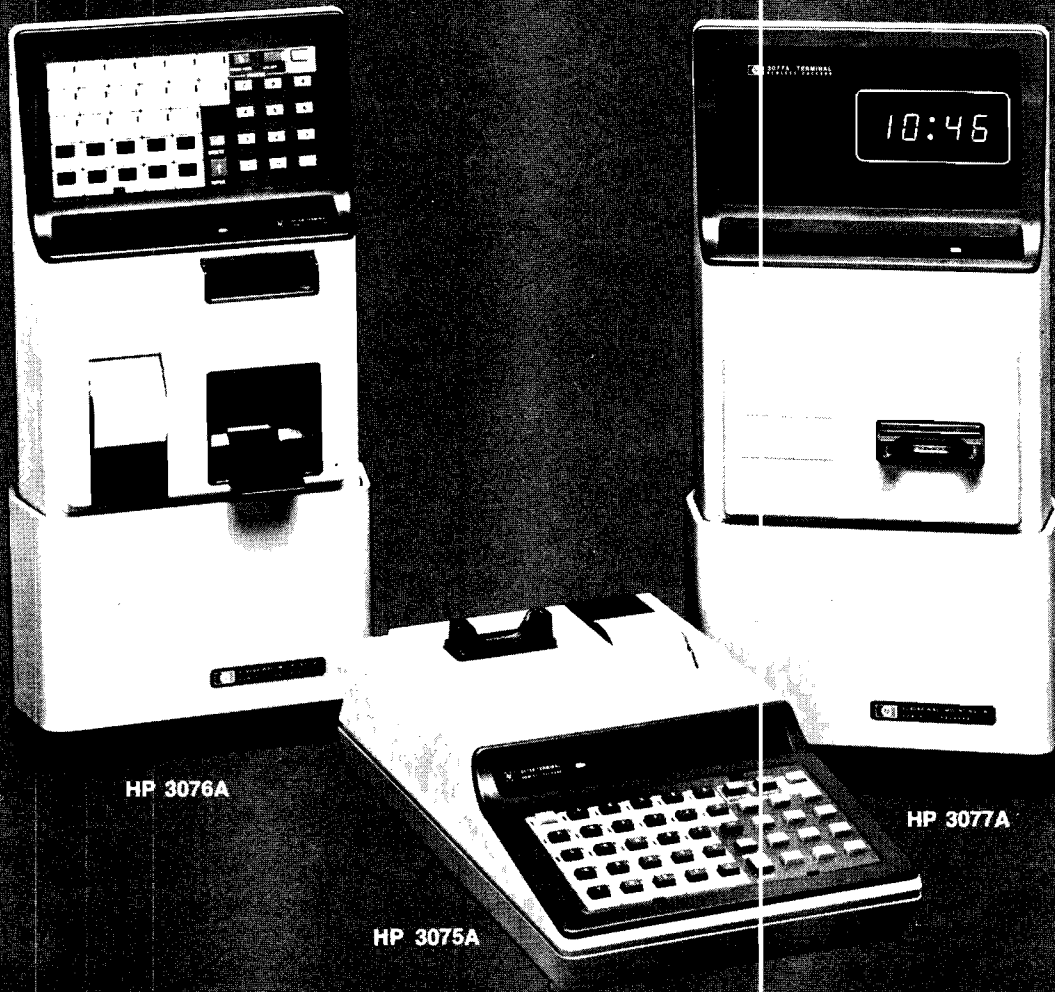# COMPUTER SYSTEMS NEWSLETTER

For HP Field Sales Personnel

HEWLETT **hp** PACKARD

Vol. 4, No. 5
Jan. 8, 1979

A New Family of
Data Capture Terminals
from HP Grenoble

HP 3076A

HP 3077A

HP 3075A

In This Issue...

BOISE DIVISION NEWS

Division News

Boise MVP Awards
By: Thad Webster/Boise

As you will recall from your own Regional Sales Meeting, the Boise Division has recognized the "Most Valuable Player" for Boise Division product sales in 1978 from each region. The recipient was awarded a handsome edition of the *Idaho* book, full of colorful Idaho photographs, as well as an engraved plaque. We entend a hearty congratulations to these salespersons for their outstanding contributions!!

Ed Case	Kalamazoo, MI	Midwest — East
A.C. Wood	Kansas City, MO	Midwest — West
Wayne Churchman	Richardson, TX	Southern
Jim Banisch	Rockville, MD	Eastern
Alfred Hagedorn	Munich, Germany	HPSA (Germany)
Ross McBeath	Winnersh, U.K.	HPSA (U.K.)
Aad Van Den Kieboom	Amsterdam, Netherlands	HPSA (Netherlands)
Peter Almgren	Stockholm, Sweden	HPSA (Sweden)
Gilles Bastien	Orsay, France	HPSA (France)
Ray Fisher	Ottawa, Ontario	Canada
Paulo Chamoun	Sao Paulo, Brazil	ICON
Tom Seitzler	Santa Clara, CA	Neely

Product News

2607 "Bytes the Dust"
By: Robert McCaleb/Boise

This is just a friendly reminder that Boise Division has obsoleted the HP 2607A line printer, effective November 1st. It has been replaced by the 2608A, with initial deliveries scheduled for February 1979. Orders for 2607's can no longer be accepted.

Price Increases on Option 300's
By: Steve Richardson/Boise

Effective January 1, Option 300 for the 2613A, 2717A, and 2618A has been increased from $450 to $650. This brings the price in line with Option 300 on the 2608A printer and covers installation charges. The Option 300 on the 2631A is still $550. The difference is that there is less installation time needed to install a 2631A than our other line printers.

Small Price Increases in Mag Tape Line
By: Gene Morell/Boise

There will be minimal price changes to the Magnetic Tape line effective January 1, 1979. The only increases will be to the 13190A and 13194A multi-unit cables which will increase $125 and $100 respectively. The 13190A will now list for $500 with the 13194A selling for $550.

HP-IB Cables Now Bundled On Mag Tapes and Printers
By: Steve Richardson/Boise

Responding to inputs to simplify the ordering of peripherals on the HP 300 and HP 3000/33, Boise now will bundle HP-IB cables with its peripherals. Effective on orders after January 1, 1979, all HP 300 and HP 3000/33 options for printers and magnetic tape units include the needed HP-IB cables. The 2608A and 2631A Options 330 and 333 include a 2-meter cable and have had the price increased by $65 to include this cable. (This will not mean a price increase to your customer as this is the same price as the stand-alone cable.) The Option 426 to the 7970E now includes a 6-meter cable but the price has not changed. (This means your customer saves $85.00.)

Do-It-Yourself with 26092A Support Kits!
By: John Klonick/Boise

Boise Division is pleased to announce the availability of a support kit for all 2631A printers and 2635A terminals. Designated as a 26092A, this service kit will allow interested customers to perform maintenance and repair of their 2631A's and 2635A's. Each service kit can support approximately 25 units at a single location. Ordering information for these kits is as follows:

Item	Description	List Price
26092A	Customer service kit for the 2631A/2635A printer/terminal. (At least one main frame option (001 through 003) and at least one interface option (039 through 046) must be specified.)	$ 1,000.00
Opt. 001	Supports 2631A printers with parallel interfaces.	1,025.00
Opt. 002	Supports 2631A printers with serial interfaces.	1,050.00
Opt. 003	Supports 2635A terminals with serial interfaces.	1,150.00
Opt. 039	Adds 8-Bit differential I/O printed circuit assembly	300.00
Opt. 040	Adds RS232 Minimum I/O printed circuit assembly.	340.00
Opt. 041	Adds RS232 Maximum I/O printed circuit assembly.	365.00
Opt. 042	Adds current loop I/O printed circuit assembly.	380.00
Opt. 044	Adds 8-Bit TTL I/O printed circuit assembly.	300.00
Opt. 046	Adds HP-IB I/O printed circuit assembly.	400.00

For example, a 26092A, with Options 001, 044, and 046 would consist of a service kit suitable for supporting any 2631A printers with two parallel interfaces: 8-Bit TTL (264X type) or HP-IB. List price of this kit would be $1,000 + $1,025 + $300 + $400 = $2,725.

All versions of the support kit also include a full set of service documentation. Note that the kit is discountable (as an accessory) on schedules A1, A3, and A4. Current availability is 6 weeks. Please contact your Regional Sales Development Engineer for additional details.

Using the 2631G with a 2647A
By: Mary McNally/Boise

For those of you who may not have read all of your NPT Tour kits yet, (I assume there are a few!), the 2631G field training manual contains instructions on the use of the 2631G with a 2647A. The purpose of this article is to introduce a change to the procedure for dumping *graphics* from the 2647A to the 2631G. Please note the following:

To dump the graphics memory to the 2631G:
   a. Press the "COMMAND" key.
   b. Since the desired command is not in this list, press the "NEXT" key for additional commands.
   c. Press the "TRANSFER" key.
   d. Select "GRAPHICS" as the source device.
   e. Select "HP-IB" as the destination device. Insert the appropriate HP-IB address as indicated by the switches on the 2631G.

To clarify the distinction between HP-IB and SHARED PRINTER, please note that, in graphics dumps, HP-IB *must* be used. When printing alphanumerics data, either device code will work. The SHARED PRINTER code causes a page of header information to precede the output, followed by a page of trailer information. To eliminate this overhead, HP-IB may be selected as the destination device.

Now would be a good time to note these changes in your Field Training Manual, don't you agree?

Paper Basket Qualifier
By: Thad Webster/Boise

The new wire paper basket, 26093A, was announced December 1, 1978, for use on the 2630 Family of printers. Before all of you rush out to get those orders, please read this qualifying information.

The paper basket is not UL approved when installed on a stand-mounted 2630 Family printer. This configuration is too unstable for safety regulations. Only order the wire basket for table top 2631, 2635, and 2639 printers.

Again, the product number is 26093A. The cost is $50.00. The CPL does note that this product should not be ordered with a pedestal.

New: Forms Design on 2621A
By: Thad Webster/Boise

Boise's Special Manufacturing Department has released a new character set for the 2631A character printer. Called a Forms Design Character Set this new option is similar to the Line Draw Character sets on the HP 264X CRT terminals and HP 2631G printer.

As you will note on the sample forms below, the new 2631A Forms Design Character Set prints a dashed line horizontally instead of a solid line. This is due to the difference in architecture between A and G models. The dashed lines do not detract from the appearance of the form and may even add a bit of flair.

Option S11 may be specified when ordering a 2631A or the additional character set may be ordered separately as 26094A Option S11. The U.S. list price for this option is $150.00.

HP 2631G Line Draw Character Set Sample

HP 2631A Forms Design Character Set Sample

DISC MEMORY NEWS

Product News

7925M/S Support on HP 1000
By: Kevin Magenis/DMD

In the first half of '79, DSD will provide full RTE support of the 7925. In the interim, when circumstances dictate there are two *unsupported* alternatives.

The 7925 can be placed on the same controller with the 7906 or 7920, but it will function in a degraded manner. It can be used solely as a peripheral disc (i.e., file storage only) with utility of only 48 of 64 sectors available per track.

Secondly, the 7925 can be placed on a separate controller. Usage is still limited to a peripheral disc but all 64 sectors per track are accessible if these changes are made. The user must make a copy of the disc driver and track map table, rename them, and regenerate the system adding the renamed modules.

Because these methods are unsupported, customers who have software support trouble with the 7925 will be charged for all service calls. The best alternative is to wait until it is supported by DSD. If you have any questions, please contact me.

GOOD SELLING!

Hardware Modifications Forthcoming
By: Steve Germain/DMD

Have you ever lost a sale because your product didn't meet the required safety standards? I'll bet not, and DMD intends to keep it that way!

RFI emission and product safety standards are receiving more and more attention on a global basis as consumer-oriented agencies grow in awareness of the hazards associated with poorly designed EDP equipment. Although we have never experienced any difficulty with our disc drives, we have set our sights on complying with the toughest known standards — VDE, within the Republic of Germany. (All DMD disc drives are currently UL and CSA recognized, listed, or certified.)

We are now in the final phases of introducing several modifications into our 7906, 7920, and 7925 disc drives to comply with the stringent VDE product safety and RFI emission standards now in effect. Beginning in *April 1979*, all 7906 disc drives shipped from this factory will have been designed to meet the VDE 0730 safety standard. Model 7920 and 7925 disc drives will follow suit in the third quarter of this fiscal year.

The above products were successfully tested for RFI emissions by VDE in September of this year in conjunction with HP Systems, Model 300 (Amigo) and HP 3000 Series 33 (Toothpick). These disc drives are currently listed on the FTZ (German Post Office) license, covering those systems, in accordance with German RFI requirements. Our first submittal to VDE for safety will occur in March-April 1979.

Briefly, modifications to the drives and related components include:

1. New power supplies have been designed for the 7906, 7920, 7925, and the 13037 disc controller.

2. A new main cable harness within the 7906 will be used that eliminates a long AC power line run from the front to the rear of the disc drive.

3. The present power module assembly will be modified to include an instrument on-off switch, line filter, and fuse. This assembly will be physically located on the enclosure power panel for the 7906M/S, 7920M/S, and the 7925M/S. 7906M/SR versions will have a power module assembly attached to the prefilter assembly bracket.

4. Multi-unit, data, and interface cables will be modified to include another layer of shielding with grounding lugs.

DATA SYSTEMS NEWS

Product News

Introducing the New 91731A Asynchronous Multiplexer Software
By: Tony Russo/DSD

Remember all of those headaches you used to have when your customers wanted a multiplexer on the HP 1000? Well, relief is just a 91731A away!

Starting on January 1, 1979, Data Systems will offer the 91731A software subsystem for the 12920B Asynchronous Multiplexer. This standard product will replace the "specials" version software previously required to support the 12920B Asynchronous Multiplexer.

As you know, at $2000, the 12920B 16-channel multiplexer is an extremely cost-effective way to support many widely scattered HP terminals at low speeds over asynchronus communication lines.

Features

Some of the features of the new 91731A software include:

- Supports up to two 12920B multiplexer interfaces, up to 16 channels per 12920B.

- Program development and/or application program execution on RTE-IV systems.

- Application program execution on RTE-M111 systems.

- Supports 2621A/P, 2631A, 2635A, 2640B, 2645A, and 2648A terminals and Bell type 103A2 and 212A Data Sets and Vadic VA3400 modems.

- Block mode data transfer capability.

- Hardwired or full-duplex modem communication support.

- Supports 2645A/2648A mini-cartridge tape units and/or auxiliary printers.

- Individually programmable channel characteristics.

- Split-speed operation with 264XA/B terminals.

- Defined subsystem performance characteristics.

You will notice that these features differ somewhat from the capabilities of the "specials" version software. The major differences are:

- No half-duplex modems on the 91731A.

- 91731A is compatible with RTE-M111 and RTE-IV *only*.

- 91731A supports current HP terminals only (2621A/P, 2631A, 2635A, 2640B, 2645A, 2648A).

- No system console support with 91731A.

- No current-loop support with 91731A.

- No user-written logical drivers with the 91731A.

- Bell type 212A data sets supported with the 91731A.

- 91731A supports PAUSE mode.

- 91731A has a time-out parameter for modem line initializaiton.

- DVS00 now supports a smart backspace capability (no echoed "←" back on backspace).

  (See the 91731A Data Sheet for more information)

User Benefits

A standard multiplexer software subsystem offers your customers some substantial benefits over a "specials" version:

1. **Increased Supportability**
   With a standard product like the 91731A comes greater product knowledge and familiarity both in the field and in the factory on-line support area. This naturally results in more effective customer support.

2. **Improved Documentation**
   Standard products have defined documentation standards to comply with, and the 91731A is no exception. In addition to a field training manual (to be issued soon) and a published data sheet, the full compliment of standard HP documents is available. These include a User's Guide (91731-90001), a Software Numbering Catalog (91731-90002), and a Configuration Guide (91731-90003).

3. **Proven, Data-sheeted Performance**
   In the development and quality assurance cycles at the factory, solid performance results have been determined so that user's expectations can be accurately

set. This helps to eliminate the unhappy situation where a quoted configuration is not adequate for a customer's application.

Maximum throughput for the 91731A/12920B Multiplexer Subsystem is as follows (all figures are aggregate throughput):

M-Series	590 characters/second
E-Series	1000 characters/second
E-Series with HS Memory	1200 characters/second

How to Order the 91731A

The 91731A software subsystem is prices at $250 and comes only on mini-cartridge (option 020). The 91731A + 020 package includes:

1. 91731A software on mini-cartridge
2. 91731A User's Guide (91731-90001)
3. 91731A Software Numbering Catalog (91731-90002)
4. 91731A Configuration Guide (91731-90003)

Also available is the Software Subscription Service (91731S + 020) at $10/month and the Comprehensive Software Support (91731T + 020) at $20/month. Both of these products are supplied on mini-cartridge only.

Note that the 91731A is a Type II software product which means customers may copy the software once for each HP 1000 computer purchased.

With the introduction of the 91731A standard software product, we anticipate that the specification and support problems associated with the prior "specials" 12920B asynchronous multiplexer software will disappear. We think you'll agree!

12560A Digital Plotter Interface Obsolescence
By: Mike Scott/DSD

Some of you may recall my letter in the May 1, 1978 CS Newsletter discussing our plans to obsolete the 12560A Digital Plotter Interface Card. The 12560A was originally designed to interface to the CalComp Model 563 or 565 Digital Incremental Plotters, both of which are now obsolete. Although CalComp and several other plotter vendors (Zeta Research, Houston Instruments) still offer plotters that can interface to the 12560A, the vendors offer a preferable method of interfacing their plotters to the HP 1000.

The plotter vendors I spoke with strongly recommend their own controller in addition to a plotter. The controllers sell for $1K–$3K and interface to a computer via RS-232C or a parallel I/F like HP-IB. The controller does the character generation, includes a buffer, and generally offloads the CPU from the drudgery of controlling a slow output device. The 12560A tends to be a CPU hog and not an efficient way to control a plotter. Should the customer and plotter vendor have difficulties interfacing to the HP 1000, DSD's

Special Engineering Group can offer their services for a fee. Before turning to a non-HP plotter vendor, you should encourage your customers to look closely at the graphics plotters offered by HP's San Diego Division such as the 7221A, 7225A, 7245A, and 9872A.

The 12560A will be removed from the Corporate Price List February 1, 1979 Obsolescence will take place after that and the normal five-year support life will commence. The CalComp plotter driver DVR10 and graphics library will be removed from the 92062 RTE Drivers Package after the last 12560A has been shipped.

7225A Graphics Plotter Now Supported on GRAPHICS/1000 Graphics Plotting Software
By: Mike Scott/DSD

The January 1, 1979 (1901) software release of the 92840A Graphics Plotting Software will add support for San Diego Division's 7225A Graphics Plotter. GRAPHICS/1000 now supports six versatile and cost-effective graphics peripherals:

Softcopy Devices

2648A Graphics Terminal

Hardcopy Devices

7221A Graphics Plotter (RS232, 4-Pen, 11" × 17")
7225 Graphics Plotter (HP-IB with 17601A, 1-Pen, 8-1/2" × 11')
7245A Graphics Plotter/Printer (HP-IB, 8-1/2" Thermal roll paper)
9872A Graphics Plotter (HP-IB, 4-Pen, 11" × 17")

Input Devices

9874A Digitizer
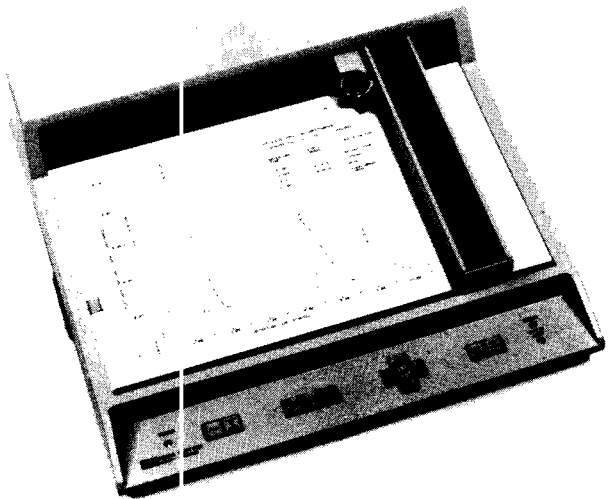
The 7225A "Miniplotter" was recently introduced by the San Diego Division to provide a lower cost solution to the need for professional hard copy graphics. This 18 pound (8 Kg) desktop plotter produces notebook size graphs on

8-1/2" × 11" or ISO A4 sheets. The user can manually change the single pen to produce the same high quality multicolor plots available from the larger (11" × 17") HP plotters, the 9872A and 7221A.

HP-IB Personality Module — 9872A Compatible

The 7225A has the I/O flexibility to be adapted to different computers and controllers. By changing a user "plug-in" unit, called a Personality Module, the 7225A will provide the appropriate interface, language, and graphics capabilities. With the HP 1000, the 17601A Personality Module provides an HP-IB interface for the 7225A. The 7225A/17601A would then connect to the 59310B HP-IB card in the HP 1000 and use RTE driver DVR37.

The 7225A with the 17601A Personality Module can be run with software written for the 9872A plotter. Since there is only one pen with the 7225A, calls to the GRAPHICS/1000 PEN subroutine will generate different line styles (i.e., Pen 1 = solid line, Pen 2 = light solid line, etc.) unless a call to the LINE subroutine has been made. The HPGL (instruction set understood by the 7225A) command for selecting pen velocity (VS) is ignored since the 7225A has a single plotting speed. The table below summarizes how the 9872A and 7225A compare.

7225A and 9872A Comparison

Feature	7225A/17601A	9872A
Paper Size	216 × 279mm (8½ × 11") or ISO A4	280 × 432mm (11 × 17") or ISO A3
Multicolor	Single pen changed manually	Automatic pen selection
Resolution	.032mm (.0013 inch)	.025mm (.001 inch)
Plotting Speed	25 cm/second	User selectable 1 to 36 cm/second
Character Speed	3 cps	3 cps
Price	$2600	$4750

Sales Opportunities

The 7225A/17601A should really appeal to those customers that have insufficient budgets for the larger 9872A ($4750) but can afford the 7225A/17601A ($2600). The 7225A Graphics Plotter sells for $1850 and the 17601A Personality module sells for $750. Both products *must* be ordered to have a complete plotter. The 7225A and 17601A have already been added to the A1, A3, and A4 exhibits of the purchase agreement. You should include the Product Support Option 952 (no charge) in order to assure proper quota credit and commission.

Sales Support

The 7225A/17601A is so similar to the 9872A that there is no need for New Product Training. DSD's literature (Configuration Guide, peripherals Data Book, Software Data Book, etc.) will not be updated until Spring, 1979. In the interim you should use the attractive 8-page full color brochure (5952-2881) and a 6-page data sheet (5952-2879) available in your office to provide propects with a strong sales story.

The 92840A Graphics Plotting Software User's Manual (92840-90001) is being updated for the January, 1979 (1901) PCO so that customers who have SSS (92840S) or css (92840T) will receive both the software and manual updates. Customers who already have the 92840A software but not the software support (92840S/T) will have to purchase another copy of the 92840A software if they want 7225A GRAPHICS/1000 support. You should convince your customers who have changing graphics requirements that software support services are a good investment.

Announcing Double Precision (64-Bit) Floating Point Capability For F-Series Computer, FORTRAN

By: Bill Elmore/DSD

An important enhancement to the HP 1000 F-Series computer, double precision (64-bit) hardware floating point operations, is fully supported as of January 1, 1979. This new capability is the result of enhancements to FORTRAN and the RTE library, which are summarized below.

- Double precision (64-bit) instructions for addition, subtraction, multiplication, division, and all floating point-integer conversions.

- Execution at hardware speed in F-Series floating point processor.

- Full FORTRAN support of all double precision operations.

- FORTRAN enhancements allow double precision execution at the same speed as today's extended precision (48-bit) operation.

- Double precision versions of all mathematical functions has been added to FTE Library.

- Software equivalent arithmetic functions allow double precision operations on HP 1000 E-Series and M-Series computers.

  and best of all

- No hardware changes required for existing F-Series computers!

- No price change!

What is Double Precision?

Floating point numbers are represented inside the computer as a fractional part (the mantissa) times an exponent. The precision of the floating point number is determined by the length of the mantissa. For example, a single precision floating point number consists of two 16-bit words of which 23 bits represent the mantissa. This provides approximately 7 significant decimal places of precision.
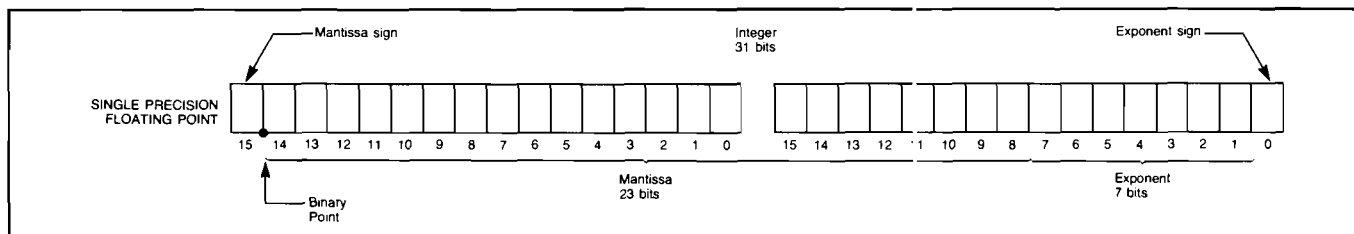
If more than seven significant digits are required, extended precision format is available. An extended precision floating point number consists of three 16-bit words and uses a 39-bit mantissa for 11 significant decimal digits of precision.
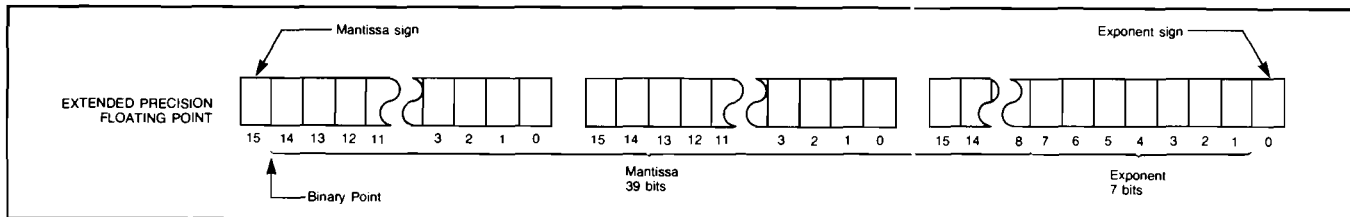
And now comes double precision which uses four 16-bit words to represent a floating point number. Double precision has a 55-bit mantissa with a precision of 17 decimal digits.
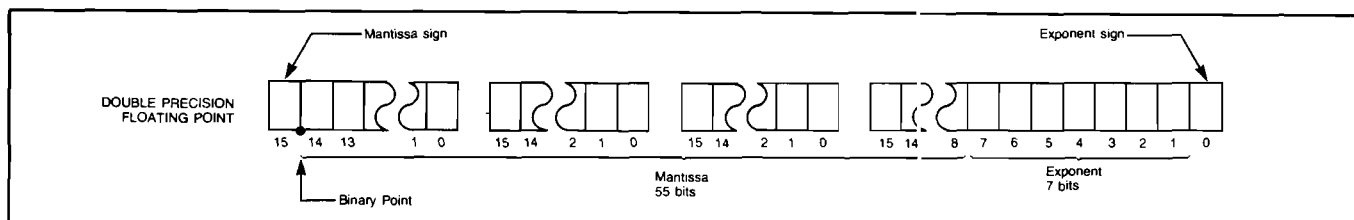
HP Computer Museum
www.hpmuseum.net

For research and education purposes only.

The table below summarizes the differences between single, extended, and double precision.

	Single Precision	Extended Precision	Double Precision
Word length	2 words (32-bits)	3 words (48-bits)	4 words (64-bits)
Approximate precision	7 significant digits	11 significant digits	17 significant digits
π	3.141593	3.1415926536	3.1415926535897932

Double precision floating point operations are also available on HP 1000 M-Series and E-Series computers through the use of software equivalents of the new F-Series instructions. The table below summarizes the offering of floating point capabilities for HP 1000 computers.

HP 1000 Floating Point Capabilities

	Single Precision	Extended Precision	Double Precision
F-Series	Hardware	Hardware	Hardware
E-Series	Firmware	Firmware (Optional)	Software
M-Series	Firmware	Firmware (optional)	Software

Execution Times

Shown below are execution times for single, extended, and double precision floating point operations.

	Single Precision	Extended Precision	Double Precision*
Add/Subtract	4.9-7.8	10.6-14.0	10.4-14.7
Multiply	6.2-6.5	12.5-13.3	13.1-13.6
Divide	6.1-9.4	12.5-17.7	13.6-20.4

*An enhancement to the FORTRAN Compiler allows double precision operations in FORTRAN to execute at the same speed as extended precision operations with the present Compiler.

Ordering Information

If you now have . . .	You should order . . .
A HP 1000 F-Series Computer	A new Operating & Reference Manual (P.N. 02111-90001) to tell you how to use new double precision instructions. No hardware or firmware changes required.
An RTE system with either SSS or CSS.	Congratulations! You will receive an enhanced FORTRAN Compiler and RTE Library routines that provide double precision floating point capabilities along with the corresponding software manual updates.
An RTE system but no software services.	Order 92067A-001 to get a totally up-to-date version operating system.

January 1 Price Changes
By: George Taylor/DSD

Add to your list of New Year's resolutions a commitment to advise your customers of the latest price adjustments effective January 1, 1979. We have had to raise the price of several cabinets and related products due to increasing costs of sheet metal, primarily aluminum. Some CPU accessory prices have also been raised to bring them in line with profit objectives.

Remember that it is HP policy to honor outstanding quotes for 30 days.

Product Number	Description	Old Price	New Price
1)12672B	5.25 in. Deep Storage Drawer	$ 300	$ 350
1)12674B	Slide out writing surface	360	400
1)12679B	Support Rails	35	40
1)12680B	1.75 in. Blank Panel	15	35
1)12681B	3.50 in. Blank Panel	15	35
1)12682B	5.25 in. Blank Panel	15	35
1)12683B	7.00 in. Blank Panel	15	35
1)12684B	8.75 in. Blank Panel	15	35
1)12685B	10.50 in. Blank Panel	15	35
2)12944B	Power Fail Recovery System for 2108M, 2109E or Computer	600	700
2)12990B	Memory Extender	3,500	4,500
2)12991B	Power Fail Recovery System for 2112M, 2113E, 2117F CPU or Memory Extender	600	800
2)13304A	Firmware Accessory Board for E-Series Computers	300	400
1)29402B	56 in. One Bay Cabinet	1,150	1,400
1)29421A	Desk Style Cabinet	1,600	1,800
1)40010A	Lifting Fixture	60	100
2)59310B	HP-IB Computer Interface Card	600	675

1) = Cabinets
2) = Computer Accessories

Computer Museum

Division News

HP Model 10 Contest Corner
By: George Fernandez/DSD
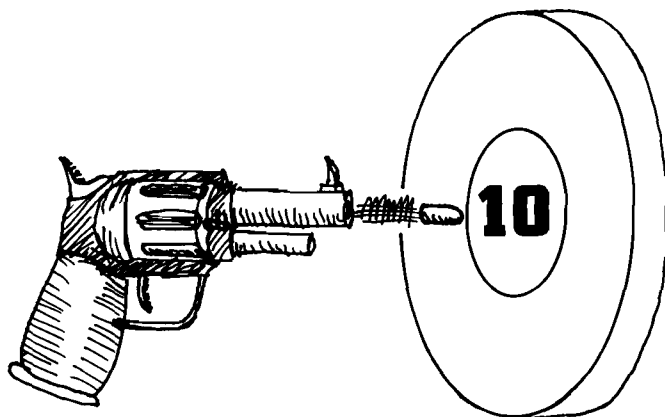
The HP 1000 Model 10 Contest is off to a smoking start!!!!!

During the period 1 November 1978 through 31 July 1979, the ten (10) Sales Representatives selling the most HP 1000 Model 45's will have, for a three (3) month period, their very own Model 10.

If an order is between two (2) or more Sales Representatives, each Sales Representative will be credited with a fraction equal to the commission split percentage on the order. In case of ties, a drawing will be held to break the tie. Decisions of the Judges (factory) will be final.

The HP Model 10's will be factory loaners and will be shipped in early August, 1979 to the attention of the HERO's (winners). All costs associated with this contest will be borne by the factory.

Through December 14, 1978, the following HERO's had sold more than one (1) HP Model 45:

Walt Staves – Neely
Jim Kessey – Neely
Joe Cinque – Eastern
Ian Fullerton – HPSA

The Ultimate Demo
By: Dave Hoffman/DSD

For those of you who witnessed the multi-terminal demo at DSD during the Regional Sales Seminars, the problem during the quiz game was caused by a very simple (but inconspicuous) programming bug. A FORTRAN array was dimensioned incorrectly causing the "system time" to overlay a byte pointer. This problem caused the quiz game to dump garbage to the terminals exactly one hour after system bootup (making it extremely difficult to reproduce).

After that problem was solved, members of our lab team gave us some valuable tips to improve terminal response time. It turned out that the execution priority of our demo application program was set too low. In a nutshell, we were swapping 24 programs in and out of 2 partitions — hardly conducive to optimum performance. After this change, system response was an impressive 2 to 5 seconds for 24 concurently active terminals!

Like a fine wine, the demo improved with age. Additional enhancements were added to the light show. We capped off the final demo with a blinking Christmas tree wishing a very Merry Christmas to all of you!
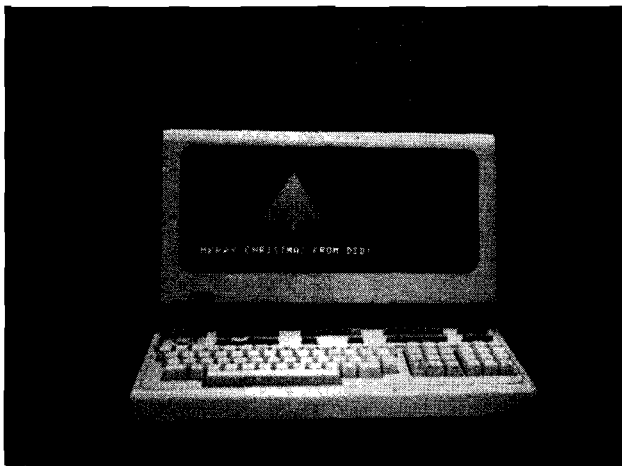
Qualify Your Customer Before Training
By: Joe Schoendorf/DSD

We have had a number of training instructors from our various training centers complain of really unqualified customers in their classes. To quote *Harvey Bernard* of Eastern Sales Region, "These poor souls hinder other students and are, themselves, frustrated by material beyond their abilities. Worst of all, these people will be difficult to support. Help us and other training centers by making sure, wherever possible, that customers have the background to profit from a course. RTE students, for example, *must* know FORTRAN." Previous RTE or minicomputer experience is helpful.

Sales Aids

GRAPHICS/1000 Color Brochure Being Developed
By: Mike Scott/DSD

GRAPHICS/1000 has proven to be a very successful product addition to the HP 1000 family. To help you do an even better job of selling GRAPHICS/1000 we are working on a color brochure. The brochure will describe the software, the supported graphics peripherals, how GRAPHICS/1000 can help in most HP 1000 applications, plus some great color pictures. If you have any inputs or know any customers that would like to contribute a picture or plot of an actual GRAPHICS/1000 application, please give me a call. This brochure should help for customer presentations, seminars, and mailings. Expect to see this GRAPHICS/1000 brochure around February.

★★★

New Distributed Systems Data Book Supplement
By: Ted Proske/DSD

To support the introduction of the new 91731A Asynchronous Multiplexer Subsystem Software, we've just published a new supplement to the HP 1000 Distributed Systems and Communications Data book. This 8-page supplement, litera-ture stock number 5953-3093, provides a new four-page data sheet on the 91731A software and a revised 12920B 16-channel Asynchronous multiplexer data sheet, which now includes a new connection diagram on a third page. Half-bulk quantities of this new supplement have already been sent to your office to support sales of this new communications capability.

Revised Compatibility Guide is Better Than Ever
By: Ted Proske/DSD

A new HP 1000 (formerly DSD) Compatibility Guide, literature stock number 5953-3094, effective January 1, 1979 has been published and sent in quarter-bulk quantities to your office. In response to your requests, we've now set up three categories of compatibility: Y for Yes, N for No, and NT for Not Tested. In addition, we've added a more compact, more comprehensive table and connections diagram for interface-per-terminal configurations; an updated multipoint connections diagram; and an asyn-chronous multiplexer connections diagram to make it easier to check compatibility of terminal configurations.

14   FOR INTERNAL USE ONLY

We Need Your Help with the HP 1000 Compatibility Guide
By: Ted Proske/DSD

Have you had a problem with compatibility in an HP 1000 Computer or System lately? Did you check the compatibility guide? If the guide was wrong, or misled you in any way, please let me know about it here at DSD, (408) 257-7000 x 2154, so I can debug the guide and keep some other FE or SE from getting burned by the same problem. We'll appreciate it here at DSD because we want our sales aids to be as helpful and trouble-free for you as they can be. And it will help the field do its job better, too.

Yes, Your Customer Can Use an HP 1000 as an IBM 3270 Emulator
By: Alic Rakhmanoff/HPG

The great advantage of IBM 3270 emulators over RJE 1000 (which is an IBM 2780 emulator) is the possible interaction between IBM application programs and HP application programs. The IBM 3270 gives you a real INTERACTIVITY!!

For example, your customer can access an IBM database (IMS, Total ...) from the HP 1000. In fact this application has already been done by an Italian Software House, named ALCOR, for their customer, Ciba-Geigy. This customer has an IBM 370/145 with OS/VS1, ENVIRON 1 multi-tasking system and Total database and bought an HP 1000/40 with RTE-IV and IMAGE/1000 database. Ciba-Geigy has a stock control application for pharmaceutical products. They use IMAGE/1000 to validate data entry locally and when the data is correct, they access from the HP 1000 the Total database on the IBM by using the 3270 emulator.

If your customer needs a similar interactivity between HP 1000 and IBM computer, we have a solution for you.

ALCOR company can provide an IBM 3270 emulator for HP 1000 to *European* customers (they plan to cross-licence their emulator with an American Software House for North American customers).

Following are the specifications of this emulator:

Name: AL70

IBM requirements:	IBM 370 (or 360)CPU.
	IBM 3704 (or 5) or 2701 data adapter.
	BTAM access method.
	IMS or CICS or ENVIRON multi-tasking monitor.
HP 1000 requirements:	1000 Series CPU.
	RTE IV, III, II.
	HP 12620A breadboard interface.
	HP 12621A and 12622A interface cards.

The AL70 emulator is offered by ALCOR for $10,000 in any European country and they will provide training and installation at the customer's site.

The Ciba-Geigy installation is an excellent reference in Milano that your customer can visit.

For any information on AL70 emulator, please contact

Aldo Laurentini
ALCOR Corso Francis 32,
Torino 10100
Italy.
Phone (0) 11-746662 or 773145

In This Issue ... Cont.

DATA TERMINALS NEWS

Division News

DTD Sales Development—A New Look
By: Steve Stark/DTD

One of the characteristics of a successful business is growth and DTD is certainly living proof of this. Our Sales Development team has grown from just a few people to a staff of twelve in a relatively brief period of time: As we look to the future, it would appear that this trend will continue.

In anticipation of this growth, we have instituted several changes in our organizational structure which should enhance our ability to provide high quality sales support. The thrust of these changes was to divide the Sales Development team into three smaller groups of Regional

Marketing engineers with each group reporting to a (divisional) Region Sales Manager. This new organizational structure is shown on the accompanying chart.

We have asked *Bill Swift* and *Rich Ferguson* to assume the roles of Eastern Region Sales Manager and Western Region Sales Manager respectively. *Bill* has been with HP for over five years and has been part of the DTD Sales Development team for the last eighteen months. *Rich Ferguson* has been with HP for five years and is no stranger to sales development, having been one of the original DTD Marketing Engineers. He is currently the HP 2647A Product Manager. Both of these individuals will bring considerable skill and experience to their new job assignments.

We hope that you will all join with us in wishing *Bill* and *Rich* good luck in their new endeavors.

PRODUCT SALES MANAGER
Steve Stark

— *Soni Hogan*

EASTERN REGION
Sales Manager
Bill Swift

— Northern ESR
Craig Clark

— Central ESR
Bill Swift

— Southern ESR
Mark Willner

— Eastern SSR
Kalli Louis

— Western SSR
Tim Haney

CSR/ICON REGION
Sales Manager
Steve Stark (Acting)

— *Eric Grandjean*

WESTERN REGION
Sales Manager
Rich Ferguson

— Northern NSR
Mike Tarens

— Central NSR
Randy Norris

— Southern NSR
Wendi Brubaker

— MSR-E/MSR-W
Martin Gonzalez

— T. B. H.

Data Terminals Now on GSA Contract

By: Mark Willner/DTD

Effective January 8, 1979, Data Terminals is on GSA contract GS-006-01529. It is a class 70 GSA contract and runs until September 30, 1979. Part C of the contract is of specific interest to Data Terminals. The maximum order limit is 149 terminals of the same type or $300,000. Three main discounts are available. On a non-system purchase with a 30 day return to HP warranty, the discount is 21%. If the terminals are purchased with a Type A system and with the same services as the system (installation, 90-day on-site warranty, standard performance, liquidated damages), the discount is 13%. If you waive the standard performance and liquidated damages, the discount is 16%. Prices are as of the December 1, 1978 Corporate Price List. Freight is FOB-destination and the warranty starts at the time of delivery/acceptance.

If you have any questions specific to DTD products, contact *Mark Willner/DTD*. All other questions contact *Walt Reichert/CSG*.

Beware of TNT . . . (But Be Aware Of It)!!

By: Christian Graff/HPG

T.N.T. is the name of the new course we put together in Grenoble to implement the strategy of the Computer Systems Group for FY'79 and to help you sell more terminals from DTD, Boise and Grenoble. T.N.T. stands for "Terminal Newcomers Training" and is designed, as its name indicates, for newcomers to the wonderful (and exploding!) world of terminal products . . . i.e., for you if you are a neophyte or an experienced F.E. in search of more information on the subject.

The training session takes place in Grenoble, lasts a week and covers the products from the three divisions DTD, BOISE and GRENOBLE, with emphasis on product understanding and demonstration.

The first session will be given in January and the following ones at regular intervals.

Now that you are aware of TNT, give me a call if you want to know more about course contents and schedules.

Product News

First Two 2647A's On Their Way!

By: Rich Ferguson/DTD
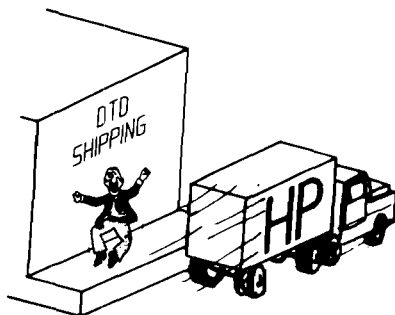
Yes! You heard it right, the first 2647A's pictured here shipped to customers recently. This is just the beginning too. One of our top priorities is reducing our substantial backlog and improving our availability.

Many thanks to the people who made it all possible, especially considering the complexity of the product with all of its features.

Speaking of complexity, did you know that the 2647A has more memory in it than the HP 3000 had when it first shipped? Amazing but true! The capabilities of this product really make a solid continuation to a market where HP is growing at an exceptional rate.

THE 2647A IS THE *REAL* THING, GO SELL IT!

Sales Aids

Direct Mail Material
By: Rich Ferguson/DTD
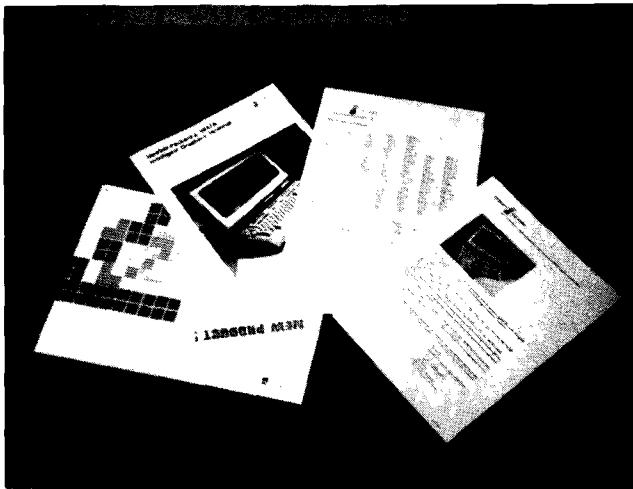
So you say you want to do a direct mailing from your local sales office for graphics products. Great! DTD has made it easy for you.

The following materials are available from Corporate literature distribution, and shown in the picture.

2647A Flyer 5953-2013
2647A Reply Packet 5953-2015

When you order the above, you will receive:

1. 2647A Envelope
2. 2647A Flyer
3. 2647A Introduction Letter
4. Sales and Service Offices list
5. Separate Reply card

All you have to do is add the address label and postage. DTD will process the leads for you in the normal way. If you have a special requirement, call your sales development contact.

No Peripheral Sharing On The 2648A Terminal
By: Kalli Louis/DTD

Isn't it great that HP now has hardcopy! With this great new feature, DTD was eager to incorporate it into their two graphic terminals, the 2648A and the 2647A.

Behold, a star rose in the West. And wise salesmen followed the star. Thus, the shared peripheral interface card (13296A) was born.

The shared peripheral interface card inside a 2647A allows a "zoomed" display raster dump, peripheral sharing, etc. This isn't the case when you put a 13296A card inside a 2648A terminal.

There are certain limitations of the functions of the shared peripheral card on the 2648A. This is due to the decision not to change the Main Code ROMs of the 2648A. These limitations are as follows:

1. When doing a raster dump, the entire image memory will always be dumped, even if the display is being "zoomed."

2. No peripheral sharing is allowed. It is not possible to connect multiple 2648's to a single printer. It is not possible to connect a 2648A to a 2647A network.

3. It is not possible to copy raster data from tape to display and printer simultaneously.

4. All records written to or from an HP-IB device must not be longer than 256 bytes.

5. When reading from an HP-IB device, only ASCII characters are allowed (no binary data). The record must end with a line feed character.

6. Multiple printers; i.e., peripherals are allowed. Multiple controllers (terminals) are not allowed. Each device should have a separate HP-IB address.

2621A/P Configuring Cables
By: Wendi Brubaker/DTD

Orders for the new 2621 are pouring in. Keep up the great work!

Many of the orders are coming in without cables. This could be due to three possible causes: the 2621 is connecting to a 12966A using option -005, someone forgot to order it, or the customers are making their own cables. In the first case, we are all squared away. Hopefully, no one is forgetting to order a cable, so let's move on to the third situation.

The 13222N and C are the two standard cables for the 2621. They consist of an RS-232 connector, a fifty pin connector, and of course, a cable. These pieces can be purchased from HP or from outside vendors. The RS-232 connector kit is HP part number 5061-2405 and can be used for either a male or female connector. Since we have not set up a kit for the 50 pin connector yet, let me give you the Amphenol part number, which is 57-30500.

As far as the cable goes, the 1322N uses HP P/N 8120-2398 and the 13222C uses the 8120-1950. If your customer wants to order cables elsewhere, we recommend getting 26AWG (or greater) low-voltage computer cable and an overall shield. The number of wires will depend on the application. Some situations only require data in, data out, and ground. After you decide which lines your customer needs connected, the next question is how to wire it up. The following chart should help you on that point.

Description	RS-232 PIN#	50 PIN Connector
Transmit signal element timing	24	7
Ring Indicator	22	9
Transmitted data	2	12
Request to Send	4	13
Data Terminal ready	20	14
Secondary Request to Send	11	15
X16 Clock out	25	34
Data Rate Selector	23	40
Transmitter Timing	15	41
Received Data	3	42
Receiver Timing	17	43
Clear to Send	5	44
Data Set Ready	6	45
Received Line Signal Detector	8	46
Secondary Received Line Detector	12	47
Signal Ground	7	48
X8 Clock In	16	49
X16 Clock In	24	50

That should put you well on your way to configuring your own cable for a 2621.

GOOD LUCK!

How to Order a Terminal And Get the Cables Too!
By: Craig Clark/DTD

Everyone knows that cables are not consignable items, but terminals are. So when you place a HEART order for a consignment unit and need cables, a second I2 HEART order must be generated. To help us supply you with terminals and cables in the same time frame, please use the special instructions section of each order to cross-reference the order. For example, on the consignment order, note that cables are required and which HEART order number they have been requested on, and likewise on the cables order, let the coordinator know that these cables are required to complete a consignment order and indicate the HEART order number. With this information, we will do everything possible to supply you will all the equipment you need.

2647A And 7245A-001
By: Michael Tarens/DTD

Hello, raster dump fans! Based on the number of telephone calls I have been receiving, there seems to be great confusion on how to effectively use the raster dump capability of the 2647A with the 7245A. Let's take a look at how these devices should be configured and then how they interact together.

The 2647A requires nothing other than the HP-IB board (13296A) and the connector cable in order to provide hard copy raster dump capability. The 7245A requires more user involvement. There is a 3-position switch on the back that must be set to the far left. This enables the 7275A to be

HP-IB addressable as a *plotter or a printer* and can talk or listen. The next step is to set the address of the 7245A. The address switches on the rear panel provide a choice of up to 30 different plotter addresses. The switches are binary, thus with switch 1 and switch 3 in the *up* position, the address is 5. Let's select 6 as our plotter address. (Hint: switches 2 and 3 up).

Now, for the fun part! Let's make both devices work together. The 7245A will accept 3 types of information: Vector (in the form of HPGL commands)

ALPHANUMERIC
RASTER

There are two ways of passing information from the 2647A to the 7245A. The first is programmatically (via BASIC) passing information to the 7245A. The second is via the command channel. To copy alphanumeric data from the display to the 7245A, the sequence would be:

COPY FILE FROM DISPLAY TO HP-IB #7

To copy a raster dump of graphics memory to the 7245A, the sequence would be:

TRANSFER ALL FROM GRAPHICS TO HP-IB #7

These two commands require some explanation. The 'COPY' function will transfer ASCII data consisting of 7 bits + 1 status bit for all eight bits. This is consistent with ASCII format. The 'TRANSFER' function will transfer data 8 bits at a time with no status. The graphics memory is *not* ASCII format and constitutes just on and off bits, thus a 'transfer' is necessitated for proper interpretation by the 7245A.

Next—why address '7'? Well, as it turns out, although the physical address is '6', the 7245A operates in two address modes. When operating in alphanumeric or raster dump mode, the 7245A HP-IB address will actually be N + 1 or in this case, 6 + 1 = 7. When operating in vector HPGL mode, the address is N or 6.

As can be seen, the 'COPY' vs. 'TRANSFER' and address '6' vs. '7' may not only be confusing, but will also actually inhibit the proper transfer of information and cause the HP-IB line to hang up. Thus, it is important to use and become familiar with the operation of both devices. (Use the following table as a quick reference guide to make the 2647A and 7245A talk amiably to one another.

Data	7245A Address	Command
Vector Plot (HPGL)	N	PROGRAM
Alphanumeric	N + 1	'COPY' or program
Raster Dump	N + 1	'TRANSFER ALL' or program

A note of caution: If you have more than one peripheral on the HP-IB line be certain the 7245A has an open address above its physical address to accommodate N + 1.

GOOD LUCK! SELL GRAPHICS!

Strapping The 13296A Board For Use In A 2647A
By: Mark Willner/DTD

We have had a lot of questions about how to set the more than 20 switches on the 13296A (Shared Peripheral Interface) board for proper operation with the 2647A.

The answer is that you need only touch 6 of the 24 switches. The other 18 switches should remain unchanged regardless of your configuration.

The first five switches (B4–B0) select the HP-IB address of the terminal. The last switch (SC) selects whether or not the terminal is the system controller.

Switch	Open	Closed	Comments
B4	16	0	
B3	8	0	
B2	4	0	ADD OPEN SWITCHES TO COMPUTE ADDRESS
B1	2	0	
B0	1	0	
SC	Yes	No	SYSTEM CONTROLLER?

The most common shared peripheral configuration will include a single 2647A. In this configuration, the terminal should be the system controller with an address of 29.

One Terminal In Network

BANK 1:			BANK 2:			BANK 3:		
1	—	Open	1	PL6	Closed	1	TA	Closed
2	—	Open	2	PL5	Open	2	LA	Open
3	A4	Closed	3	PL4	Open	3	B4	Open)
4	A11	Open	4	PL3	Open	4	B3	Open)
5	A10	Closed	5	PL2	Open	5	B2	Open) ADDR = 29
6	A9	Closed	6	PL1	Open	6	B1	Closed)
7	ATN	Open	7	PL0	Closed	7	B0	Open)
8	ATN2	Open	8	FC	Closed	8	SC	Open SYSCTL = Yes

For multi-terminal configurations, you should start with address 29 and work your way down, sequentially, EG:

# Terminals	Term #	Address	System Controller
1	1	29	Yes
2	1	29	No
	2	28	Yes
3	1	29	No
	2	28	No
	3	27	Yes
Etc.	—	—	—

There can only be one system controller in a multiple terminal configuration. It must be the lowest addressed terminal.

All peripheral devices (printers, plotters, digitizers, etc.) must have addresses less than that of the system controller.

Shared peripheral devices (9871A, 2631A, 2631G) must have addresses between 0 and 7.

KEEP SELLING SHARED PERIPHERAL CONFIGURATIONS!

2647A/7245A System Features
By: Craig Clark/DTD

Through the shared peripheral interface bus, the 2647A can utilize all three of the 7245A's operating modes: Printing, high resolution vector plotting, and raster graphics printing. The 7245A is unique in that it offers all three capabilities in one unit.

1. **DOT MATRIX PRINTING**

   Using the command window to issue the following command, the contents of alphanumeric memory are printed on the 7245A (home cursor)

   *COPY ALL FROM DISPLAY TO HP-IB # (X+1)

   (Where X is the HP-IB address set on the back panel of the 7245A. On the 7245A, the plotter and printer have different HP-IB addresses. The plotter address is X and the printer address is X+1.

   Using the following command window sequence, alphanumeric data coming from a computer is printed on the 7245A and also displayed on the screen.

   *ASSIGN DESTINATION TO DISPLAY, HP-IB # (X+1)
   PRESS: RECORD, RETURN

2. **VECTOR PLOTTING** (Coordinate plotting with straight lines.) Using Multiplot and answering Yes to the plotter question, the 7245A will operate as a vector plotter producing the same high resolution graphics offered with the 9872A. In order to maximize Multiplot graph size, the X and Y axes are rotated 90° to produce an 11" (horizontal) X 8½" (vertical) graph. Using AGL/BASIC in the terminal, the 2647A/7245A can also produce high resolution graphs just like the 2647A/9872A system.

3. **RASTER GRAPHICS PRINTING**

   With option #001 on the 7245A, plots and labels in 2647A graphics memory can be copied on the 7245A. This same raster graphics capability is offered on the 2631G. The 7245A-#001 produces raster screen copies that have 106 dot/inch resolution. The 7245A produces a smaller, higher resolution graph than the 2631G (72 dots/inch). Some customers will prefer large raster actual size (2631G) and others will appreciate higher resolution raster plots (7245A-#001.)

You Asked For It—You Got It! Compatibility!
By: Randy Norris/DTD
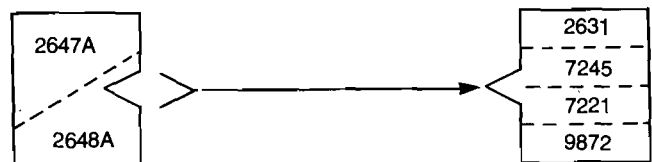
There appear to be some compatibility questions regarding graphic terminals, printers, plotters and 9874 digitizer. Because of a coordinated marketing effort between divisions, we have a fantastic new graphics publication, P/N 5952-2884. This publication should already be in your office and contains a product compatibility matrix on the page facing the inside back cover.
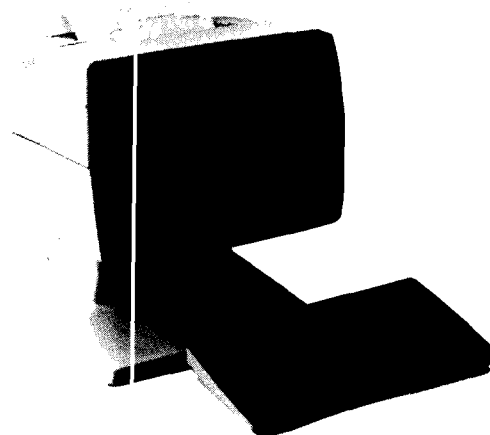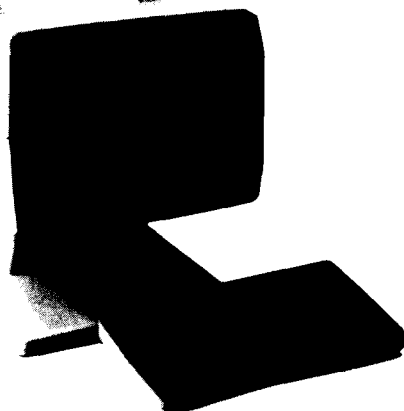
Division News

Old Faces In New Places
By: Tom Kelley/FCD

As an old year must end and a new one begin, so will people and their jobs evolve. At FCD, the new year will see *Alex Sozonoff* winging his way back to his beloved Europe — his new role: CSG Sales Manager for Europe. Stepping in to fill the mad Russian's shoes as FCD Marketing Manager, effective November 16, is *Pete Hamilton*.

A reformed "labby", *Pete* brings a wealth of experience with him — experience that will allow him to pick up where *Alex* left off and carry the FCD Marketing effort into a new era. Most recently a Section Manager in the FCD Lab, he had responsibility for HP 250 software development. Prior to his Lab duty, *Pete* was the division's Product Marketing Manager. In addition, *Pete* has HP field experience as a Medical Sales Rep. (Neely) and Medical DM (Chicago).

FCD welcomes *Pete* to his new role and looks forward to continued success in marketing both HP 250's and peripherals. We also thank *Alex* for his efforts in making the HP 250 introduction a success and wish him the best in his new assignment.

You Called It a Winner, So Did They
By: Jim Geer/FCD
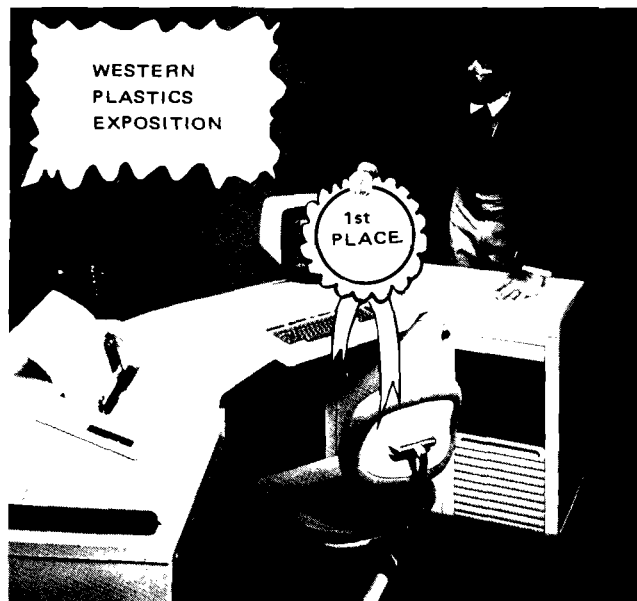
The HP 250 walked away with first-place honors at a design and art show held recently in Anaheim, California. The judges agreed with what many of you had been saying for some time — the system's product design is tops.

The show, held at the Western Plastics Exposition November 14–16, placed office equipment products in competition with each other. The products were judged on three elements:

- Overall industrial design.
- Attention to human factors.
- Use of plastics.

A show spokesman praised the HP 250 designers for a job well done. "It shows overall design excellence and close attention to meeting human needs. The broad use of plastics and how it takes advantage of numerous complex molding techniques also deserves mention."

The judges for the show were as worthy of note as the products being considered. One, *Jean Otis Reinecke*, is considered a senior practitioner in the world of Industrial Design. Another is a professor of plastics technology art and two others are company presidents.

The Western Plastics Exposition, organized by individuals involved in the use of plastics in their products, offers a forum where both old and new technologies can be explored. Over 12,000 people attended the Exposition and its Design and Art Show.

Product News

LK 3000 — The Utility that Lets the HP 250 And an HP 3000 Talk
By: Terry Anna/FCD

Now Hewlett-Packard's smallest business computer, the HP 250, is even more versatile thanks to a new BASIC language program called LK 3000. It's designed to link the smaller computer to its big brother, the HP 3000 operating under MPE III.

Key Points

The following summarizes some important, nice-to-know facts about LK 3000:

- The program is a supported utility from FCD (the new release operating system — Version 1.1 — will have LK 3000). The documentation for operating LK 3000 is supplied in the TIO/250 programming manual, Part Number 45120-90001.

- The program utilizes the new Asynchronous Serial Interface hardware (45120A or 45251 through 45257, Option 120), plus the TIO software driver (DROM).

- The program turns what used to be a stand-alone system into an asynchronous terminal to be utilized in a distributed system, and is thus appealing to large companies that need periodic distribution of data processing operations.

- In keeping with the HP 250's "easy to use" personality, softkeys are utilized and are especially expeditious in file-to-file transfer. Moreover, the program provides asynchronous capacity to allow:

- The HP 250 to act as a remote terminal to an HP 3000 (emulating 264X series terminals) for interactive operations.

- The transfer of ASCII data files between the HP 250 and HP 3000.

- The transfer of ASCII files of programs between the two computers.

Practical Application

LK 3000 is already being put into practical use by Hewlett-Packard. FCD Product Management now uses the HP 250 to get all of its HEART order data from the division's HP 3000, then uses the HP 250 for sales analysis and forecasting.

LK 3000 Details

The HP 250 may be connected to the HP 3000 by using either a Bell 103 modem or a direct connection, with these requirements:

- The Asynchronous Serial Interface, Part Number 45251A through 45257, Option 120 (TIO software utilities included), or Asynchronous Serial Interface, Part Number 45120A.

- An HP 3000 — The Asynchronous Terminal Controller is included in all systems running under MPE III.

Cable requirements in the modem connection are as follows: the HP 250 needs Cable 45111A (4.5 meters), the HP 3000 needs Cable 03000-30062B (7.6 meters); for direct connection: the HP 250 needs the same cable as under modem, the HP 3000 needs Cable 45113A (10.5 meters).

Operation

In order to operate the data-communications link between the two systems, you must:

- Run LK 3000 to establish the data link.

- Log on the HP 3000 computer.

- Enter the desired subsystem; that is, EDITOR, FORTRAN, COBOL, BASIC, etc., or use the HP 250 softkeys to transfer data files or program files.

The transfer of program files is completed in this way: convert the HP 3000 program file to an ASCII file, which will be an acceptable BASIC program on the HP 250. Next, transfer that file to the HP 250 as a data file. Finally, convert the transferred data file into an HP 250 PROGRAM file.

Data files are transferred as follows: create a DATA file on the HP 250; it is now possible to send it to the HP 3000 as an ASCII data file. Conversely, ASCII data files on the HP 3000 are transferred to the HP 250 as DATA files.

The database structures of the HP 250 and HP 3000 are closely compatible. If, however, you wish to transfer information in a database or a data set, you should write a separate BASIC program to read the data set. Then, using PACK/UNPACK, you can write an ASCII file with the appropriate information to be transferred.

How to Order

To get the LK 3000 utility, order on IOS with these part numbers. The cost of each is $5.50.

United States	45251-13000
French	45252-13000
German	45253-13000
United Kingdom	45254-13000
Swedish	45255-13000
Danish	45255-13050
Spanish	45256-13000
Italian	45257-13000

Sales Aids

HP 250 Sales Literature (Or, "The Dickens" You Say)
By: Jim Geer/FCD

By now almost everyone recognizes the distinctive sales literature produced for the HP 250. So it seems appropriate to take time to review the pieces and how each fits into the distribution/usage plan. The pieces available, via standard literature distribution channels, are:

● HP 250 Product Brochure	5953-3400
● Flyer/Handout	5953-3401
● OEM Supplement	5953-3402
● Support/Services Supplement	5953-3403
● Price/Configuration Guide (Revised)	5953-3410D
● (Above with prices deleted)	5953-3411
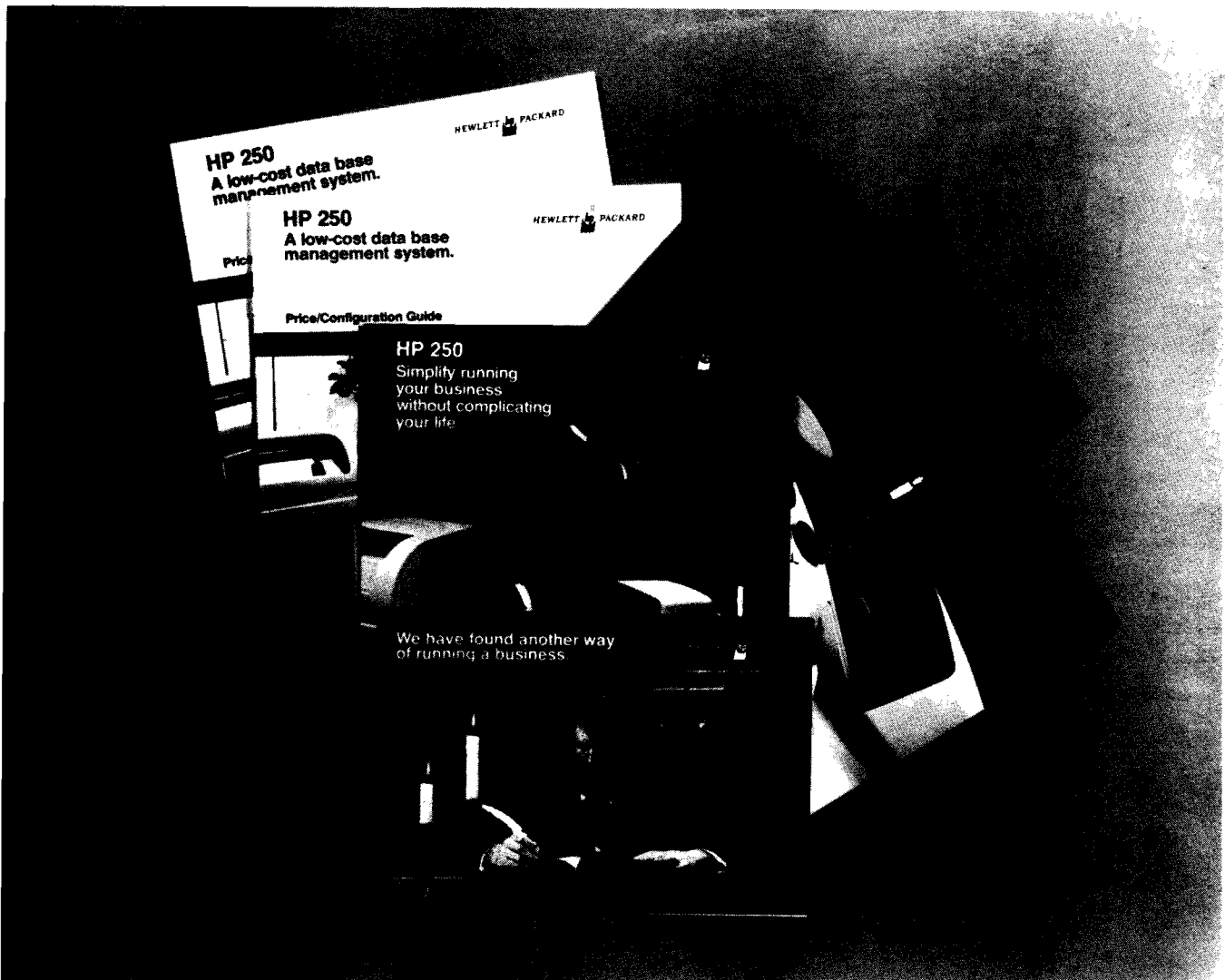
Local language versions of these pieces, prepared by BCO Marcom, are available in Europe.

This literature's modular design lets you tailor information packages to meet each prospect's level of interest and need — i.e., flyer only, brochure, brochure with selected supplements, etc. The supplements also provide a way of incorporating future system enhancements, as they develop, into existing literature packages. Each sales piece has a specific purpose.

Flyer/Handout

Intended as an interest generator, it grabs a reader's attention using a novel theme supported by colorful photography. The next contains teaser information which stimulates the reader to seek more detail. The flyer is our cost-effective tool for mass distribution (i.e., direct mail, etc.).

HP 250 Product Brochure

The product brochure provides the non-technical overview necessary to keep a prospect's interest alive and prospering. It is a very high quality piece (4-color throughout) and thus quite expensive. So, as *Scrooge* himself might utter, "Use it wisely to help persuade prospects to purchase — not for lead generation (direct mail, etc.)." The pocket found inside the brochure's rear cover holds supplementary information pertaining to the system nicely, making it an integral part of the package.

OEM Supplement

This piece offers a slightly more detailed look at the HP 250 in terms of third-party needs — system resale potential to end-users and tools to ease software development efforts. It is intended for use with, and fits into, the product brochure's pocket.

Support/Services Supplement

This supplement briefly covers service plans, training and support available for the HP 250. It is directed primarily at the computer professional in key accounts and at the OEM. It too fits into the brochure's pocket.

Price/Configuration Guide

This brochure is intended primarily for the Sales Representative's use as a handout during calls on customers. It contains general specifications, lists and describes options, and provides brief product descriptions and part numbers, along with other pertinent ordering information. The Price/Configuration Guide has been kept inexpensive (black and white, etc.) because of the need for frequent changes and revisions. Two versions are available, the domestic version with U.S. prices quoted and the international version with prices deleted.

HP 250 Manuals ... Some Good Books For Dickens
By: Al Jackson/FCD

The HP 250 manuals are available in two convenient packages. The standard manual set shipped with the HP 250 is available as the Documentation Kit (45251-87901) If you're interested in only the programming manuals, order the Programming Manuals Kit (45251-87902). All items are now available both packaged and separately from CPC (Division 15). Here's the price of each kit and item:

Documentation Kit (45251-87901)	**$120.00**
System Operator's Guide (45251-90000)	10.00
QUERY/250 Operator's Guide (45251-90005)	10.00
Programming Manuals Kit (see below)	—
Programming Manuals Kit (45251-87902)	**$100.00**
BASIC/250 Programming (45251-90015)	40.00
IMAGE/250 Programming (45251-90020)	20.00
QUERY/250 Programming (45251-90021)	5.00
REPORT WRITER/250 Programming (45251-90022)	10.00
FORMS/250 Programming (45251-90023)	10.00
SORT/250 Programming (45251-90024)	10.00
Manual Index (45251-90045)	5.00
Syntax Reference Booklet (45251-90050)	5.00
Binder, BASIC (9282-0685)	10.00
Binder, System Software (9282-0686)	10.00

General operating instructions and all error codes are collected for the system operator on a set of tabbed, plastic cards. The cards and operating system discs are kept in a binder called the Quick Reference:

Quick Reference Kit (45251-62500)	**$ 40.00**
Card Set (45251-90070)	30.00
O.S. Disc Envelope (9222-0654)	2 00
Binder (9282-0688)	10.00

```
    Operating                              Programming
   Instructions                           Instructions
        |                                       |
        v                                       v
  +------------+      +-----------+      +-------------+      +-----------+
  |  System    |      |  Quick    |      |   BASIC     |      |  Syntax   |
  | Operating  |----->| Reference |<-----| Programming |----->| Reference |
  |   Guide    |      |45251-62500|      | 45251-90015 |      |45251-90050|
  |45251-90000 |      +-----------+      +-------------+      +-----------+
  +------------+                               |
        |                                      |
  +-------------+   +-----------+      +-------------+      +-------------+
  | Application |   |  QUERY    |      |   QUERY     |      |   IMAGE     |
  |  Software   |   | Operating |<-----| Programming |<---->| Programming |
  |  Operating  |   |   Guide   |      | 45251-90021 |      | 45251-90020 |
  | Manuals *   |   |45251-90005|      +-------------+      +-------------+
  +-------------+   +-----------+
                                      +-------------+      +-------------+
                                      |REPORT WRITER|      |    SORT     |
                                      | Programming |<---->| Programming |
                                      | 45251-90022 |      | 45251-90024 |
                                      +-------------+      +-------------+

                                      +-------------+
                                      |    FORMS     |
                                      | Programming  |
                                      | 45251-90023  |
                                      +-------------+
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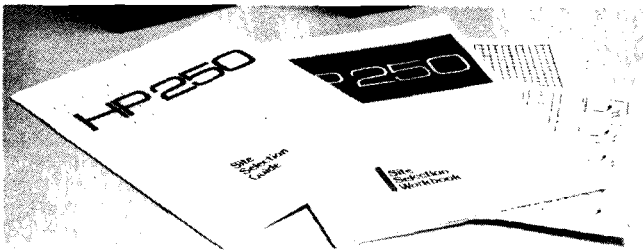
* Provided by Applications Software Supplier.

HP 250 DOCUMENTATION SCHEME

Each customer receives a site selection workbook to help plan for system installation. Extra copies are available from CPC by ordering part number 45251-87903 for $10.00.

The new HP 45120A Asynchronous Data Communications Interface will be shipped with these manuals (available January 1979):

TIO/250 Programming Manual (45120-90001) $ 10.00
45120A Interface Installation Note   5.00
  (45120-90065)

Inquiry Handling — We're In This Together
By: Jim Geer/FCD

Lead generation can create some problems for sales and marketing personnel. And, as leads often play a major role in a product's success, they deserve close attention.

The primary market for the HP 250 is OEM's and major accounts. To generate interest and awareness for the product, we advertise in key trade and business publications. In addition to telling OEM's and major accounts about the product, our advertising demonstrates a willingness to promote the HP 250 to the market as a whole.

So end-users learn about the system as we troll for vendors. They often ask for more information on the product and/or even request that an HP sales representative contact them. And so "Catch-22" begins. We're trying to set up an OEM distribution network. To do so we advertise the product. Then the end-user sees the ad and wants to buy — but our OEM network isn't in place to service them.

What should we do, file the end-user lead in the circular file beneath our desk? I hope not, as it does little to promote HP's good image in the market.

So What Does Happen?

Factory Marketing responds to all inquiries with product literature (see "Response Fulfillment — Who Gets What, When" in this issue), a thank-you letter and a commitment to providing follow-up. (The letter also suggests they might want to call their local HP sales office.) As soon as the literature package gets mailed, Marketing forwards the leads to the RSM's for dissemination to you, the local sales representative, for follow-up.

The Soup Thickens

Could the lead then get dumped at this point? After all, many of you have no OEM's ready to handle the leads. Again, we hope not. Your following up with the prospects and politely suggesting they wait until such a vendor is available to support their needs should work in some cases.

Ah, you say, what about all the exceptions? Those problem types who think they can develop their own applications. Should we tell them pointedly that HP *does not* sell directly to end-users? Again, that's bad P.R. And enough bad-mouthing could create big problems for our company and its business computer ventures. And maybe, just maybe, the prospect does have the necessary skills.

So why not clearly explain our support policies (no hand-holding, etc.) and clearly define the terms of any purchase. If they agree to o*ur* conditions, why not make the sale? Or, an independent software house could be the answer. In any case, our concern for their success could avoid problems now and prove beneficial in the future.

Remember, OEM's want partners and products that make their job easier — and a good image is one critical element. Also, in the future, our OEM's will want and need all the leads we can supply. Yes, this means some extra effort but it's time well spent.

Response Fulfillment — Who Gets What, When
By: Jim Geer/FCD

Bingo Leads (Unqualified)

This response device requires little effort on the part of the prospect and, so, invites large numbers of inquiries (many from tire-kickers). Each RSM receives a computer printout listing that Region's unqualified leads (weekly). Factory Marketing sends the prospect an inexpensive response package consisting of:

- HP 250 flyer
- Cover letter
- "More Info" reply card
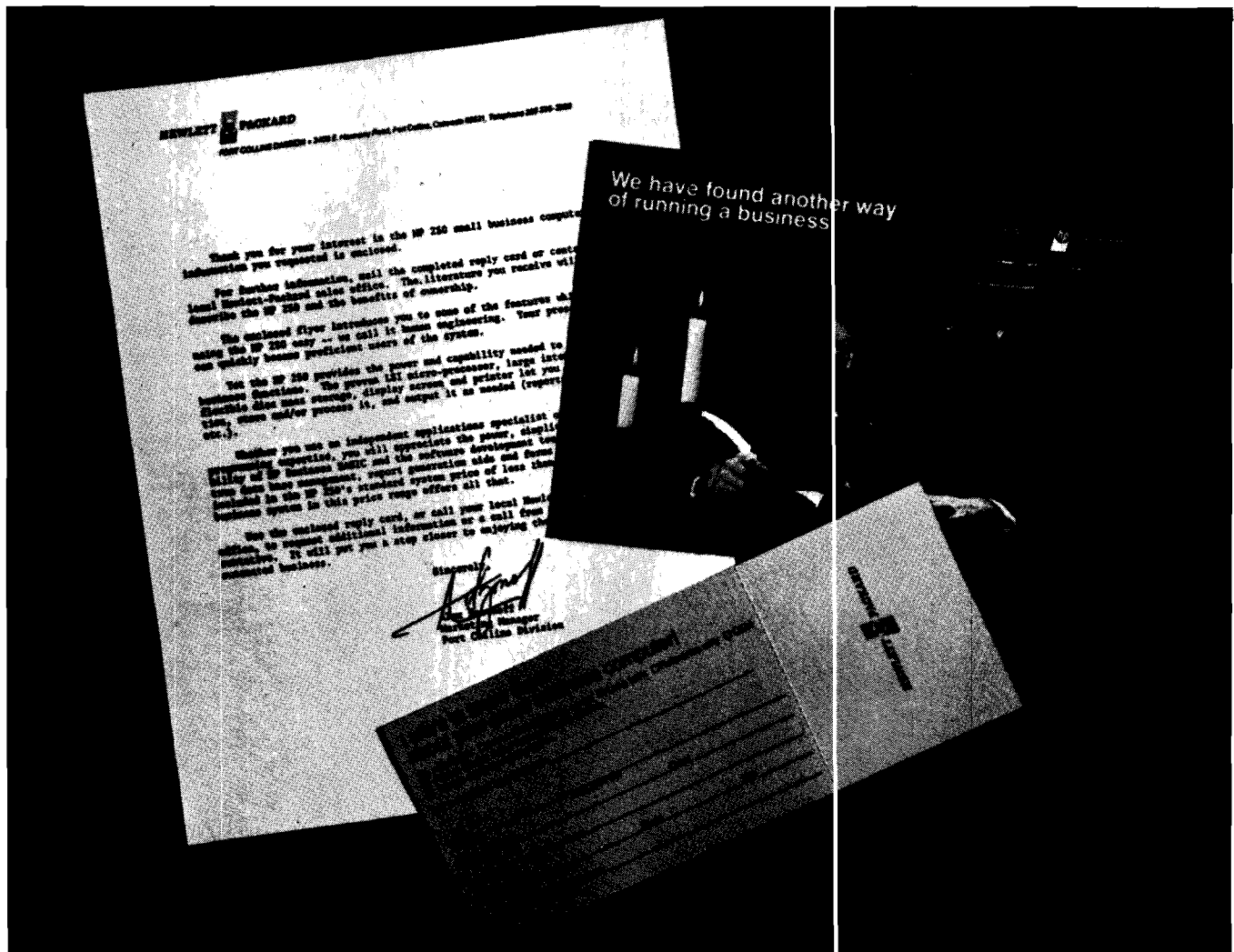
Reply Cards (Qualified)

Prospects returning the "More Info" reply card (from the bingo-response package) receive additional literature from FCD. Once the literature goes out, the reply cards are mailed to the RSM's (weekly) — with "please contacts" TWX'd immediately. This literature package contains:

- HP 250 product brochure
- Cover letter
- "Please Contact" reply card
- Sales office listing
- OEM Supplement (identified OEM prospects only)*

Letterhead/Coupons (Qualified)

Even though the first contact from a prospect, a letter generally indicates immediate need or interest. Thus letter/ coupon inquiries receive the same response package as reply cards (above), with one addition — the HP 250 flyer which they have not seen. All letters/coupons go to the RSM's weekly, with requests for contact TWX'd immediately.

*A copy of all OEM leads also goes to *Ron Vernon*, Sales Development Manager, for reference and/or so that he can offer his services in developing these accounts.
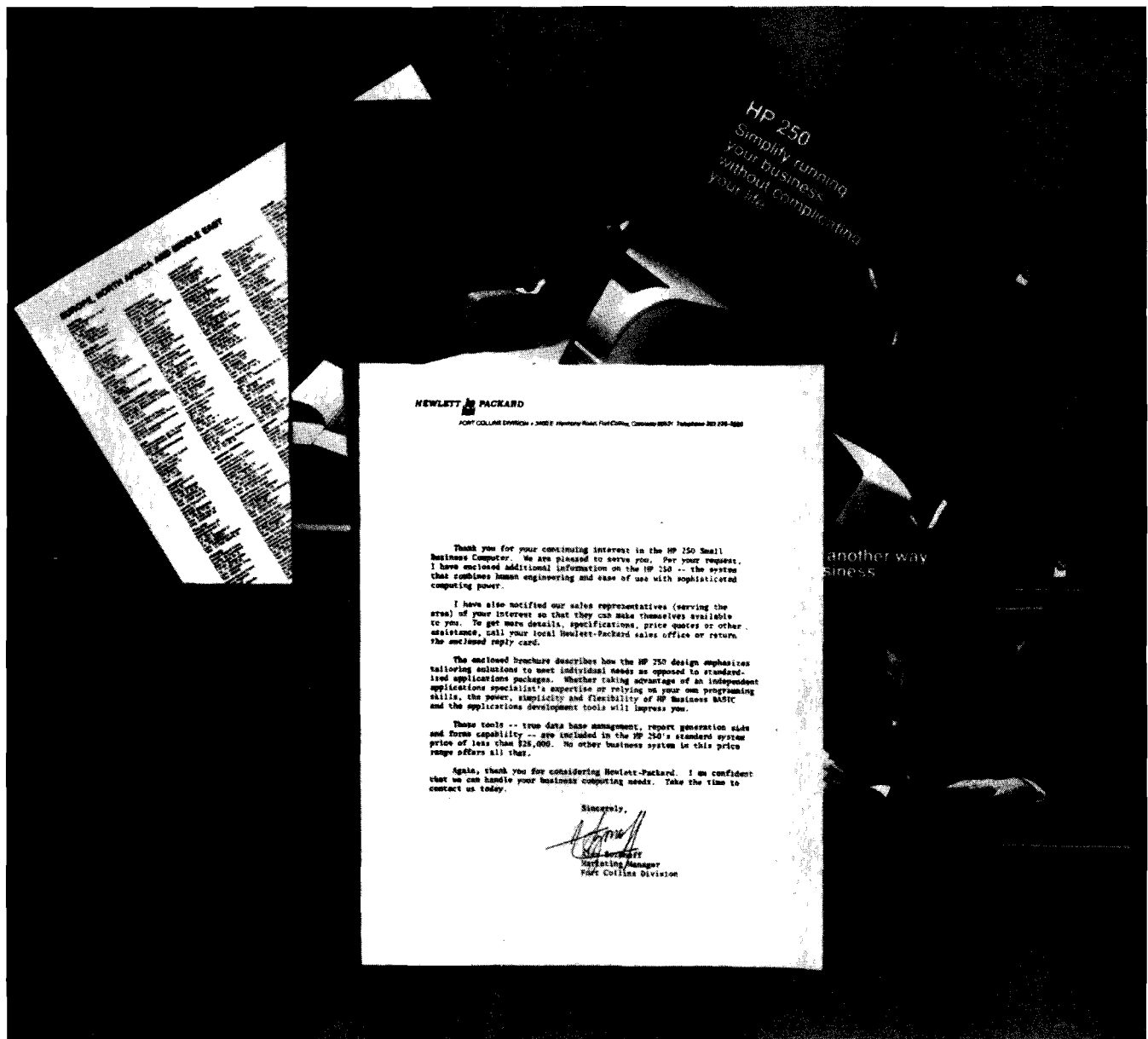
GENERAL SYSTEMS NEWS

Product News

Remote Maintenance Tools for HP 3000 Series 33 Featured in Press Stories

By: Rich Edwards/GSD

You and your prospects have probably read a lot about the newest HP 3000 — the Series 33 — in the business and trade press since October 3. The Series 33 along with the HP 300 (AMIGO) have been featured in a wide variety of publications including: *Wall Street Journal, Computerworld, Electronic News, Business Week, Datamation, Electronics, Datapro Mini News, Infosystems, Dataquest, Computer*

Systems News, Electronic Engineering Times, and *Computer Decisions.* HP systems were featured on the cover of Auerbach's *Mini-Observer* and in about 25% of the December issue! Numerous overseas publications have also picked up the announcements from press releases and local press conferences.

What new features of the Series 33 particularly intrigued the press? The same features your customers have shown a lot of interest in — the new maintenance tools, including the remote system/maintenance console. The best summary of these features is in the new edition of the HP 3000 GIM (General Information Manual). The entire hardware description appears in Appendix D from which the following is reprinted:

Remote System Verification Program (RSVP)

The Series 33 was designed to be both extremely reliable and easy to service. The packaging makes all system components as accessible as possible. The power supplies and flexible disc units are mounted on sliding "rails" for easy removal and servicing. All power distribution is through quick release connectors rather than cumbersome screw terminal strips.

A totally new feature that enhances serviceability both in hardware and software is the use of the system console as the maintenance console. Through a new Maintenance Interface board and maintenance mode software loaded through a data cartridge in the system console, HP field personnel will have a complete maintenance display in English and octal values on the system console. Values such as the constants of all registers, dynamically selected memory contents (16 words at a time), and system status displays are available quickly from keystrokes entered on the console keyboard.

The first use of the maintenance console is by the customer: a system self-test is provided with the HP 3000 Series 33 on a terminal data cartridge. In less than two minutes the diagnostic will check out all hardware components involved in a system "cold-load". Faults are isolated to the module level, with concise, yet easy to understand messages printed on the console CRT display. Because of the simplicity and ease of use of this self test, you must run the system self-test prior to calling Hewlett-Packard for hardware maintenance.

If a service call is necessary, HP Customer Engineers and Operating System Specialists can use the console CRT display to inquire into the status of diagnostics initiated from the console system and even into the status of hardware registers for detailed trouble shooting.
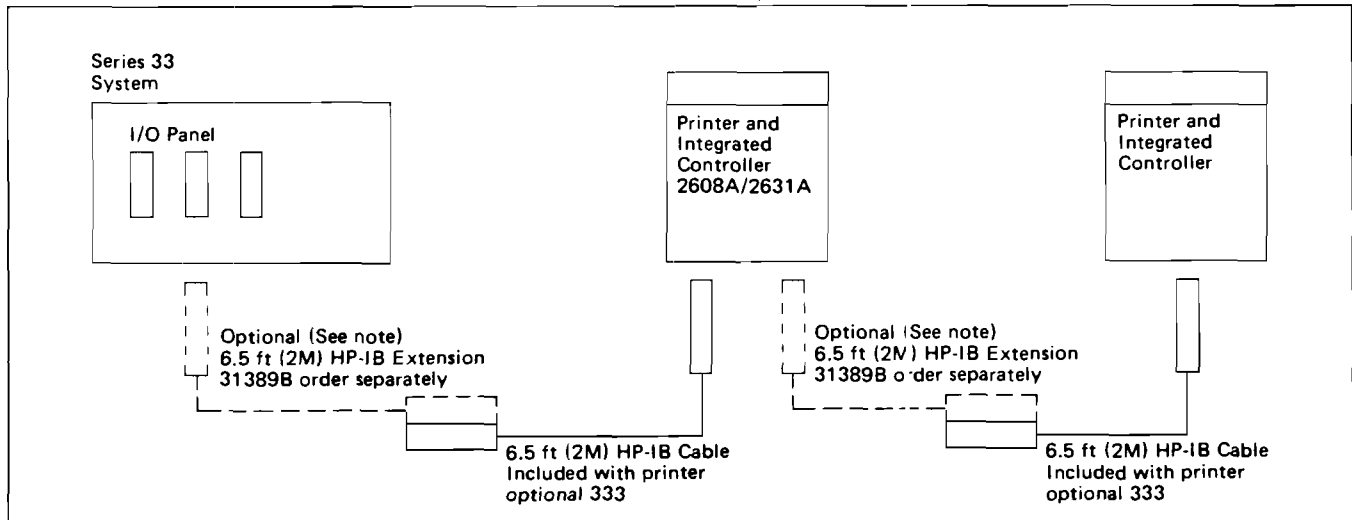
Making this new maintenance console even more valuable is the ability to transmit the display and control functions to a remote HP 2645 terminal via a modem and telephone link. With this facility, the CE on site can call the HP Service Office and have a Specialist get "on-line" to the system over the telephone via the remote system console/maintenance console. The CE loads the remote maintenance code data cartridge into the console (15 seconds), then switches the modem (user-supplied) to the console using a switch built into the terminal junction panel to establish the telephone link. The Specialist now has a duplicate display of the Series 33 system console/maintenance console display, with the ability to send the CE and/or system manager messages that are not transmitted to the computer. This "remote maintenance console" facility is a standard part of all Series 33 systems. You are required to have a Bell 103 type modem (300 baud) or Bell 212 (1200 baud) for use in connecting the console to the phone line. Throughout the procedure, complete control over access to the system remains with you. As a back-up capability to the system console, the system front panel is hardwired to perform console control commands (only) as well.

Ordering Series 33 Peripherals — The Simpler the Better!

By: Chosen Cheng/GSD

It is now a simple matter to order line printers and the master magnetic tape drive for an HP 3000 Series 33. As of January 1, 1978, Boise Division will include a standard length 6-meter HP-IB cable with every master magnetic tape drive and a standard 2-meter HP-IB cable with every 2608A or 2631A line printer. This means that you need not order HP-IB cables separately — a change from the procedure described in the HP 3000 Computer Systems Price/Configuration Guide dated 10/78.

We will update the next issue of the Price/Configuration Guide, but in the meantime here is an abbreviated summary for your records. Option 333 for printers has increased by the $65.00 price of the HP-IB cable. Option 426 specifying master magnetic tape drive has not changed in price.

Extension HP-IB cables may be ordered under the 31389 series of product numbers. Extension cables are used only with line printers. The total length of HP-IB cables on the line printer link is limited to 6 meters. Thus, with a 2-meter cable included with each line printer, if your customer wanted to configure two printers, a 2-meter extension cable could be ordered.

Comments from NPT- and recent sales managers meetings have been very positive on the Series 33 and your sales have been proof of how well the Series 33 has been received by our customers.

GOOD SELLING!

Magnetic Tape Drives

7970E		1600bpi, 45 ips Mag Tape Drive. Must order option 426 for master or 421 for slave drive. 9 track phase encoded, 115V/230V switch; 50/60 Hz. Power Cord supplied.	8,885.00	70.00
	426	Specifies HP-IB Master drive. Includes lo-boy cabinet and HP-IB integrated controller. 2 meter HP-IB data cable is included.	3,115.00	23.00
	421	Specifies HP-IB Slave drive. Includes lo-boy cabinet and multi-unit cable (20 ft).	-105.00	-3.00

Line Printers

2631A		180 cps Dot Matrix Printer. Must order option 333. Pedestal stand not included.	3,150.00	31.00
	015	230V, 50 Hz	0.00	0.00
	333	Series 33 option with HP-IB interface and 2 Meter cable	290.00	0.00
		Additional Products		
26098A		**Pedestal Stand for 2631A**	275.00	0.00
	001	Add casters	15.00	0.00
	002	Add paper catcher	50.00	0.00
		02631-60060 ribbon cartridge — qty 1	15.00	0.00
		qty 6	72.00	0.00
		qty 12	126.00	0.00
		Note: Print head is included in Monthly Maintenance Charge.		
2608A		**400 lp m Dot Matrix Printer.** Must order option 333. 128 character USASCII set. Includes enclosed stand with caster, paper basket. Monthly maintenance charge allows three levels of monthly usage.	9,250.00	
		Level 1: 1-69 print hours		62.00
		Level 2: 70-130 print hours		71.00
		Level 3: 131-360 print hours		125.00
	015	230V, 50 Hz	0.00	0.00
	110	Add sound cover	150.00	0.00
	333	Adds HP 3000 Series 33 HP-IB interface, 2 Meter Cable, documentation, and installation.	565.00	0.00

HP-IB Cables

31389A		HP-IB Cable. 1M (3 ft)	60.00	0.00
31389B		HP-IB Cable. 2M (7 ft)	65.00	0.00
31389C		HP-IB Cable. 4M (13 ft)	75.00	0.00

For information on interactive display terminals and printing terminals, refer to the appropriate section in this price list.
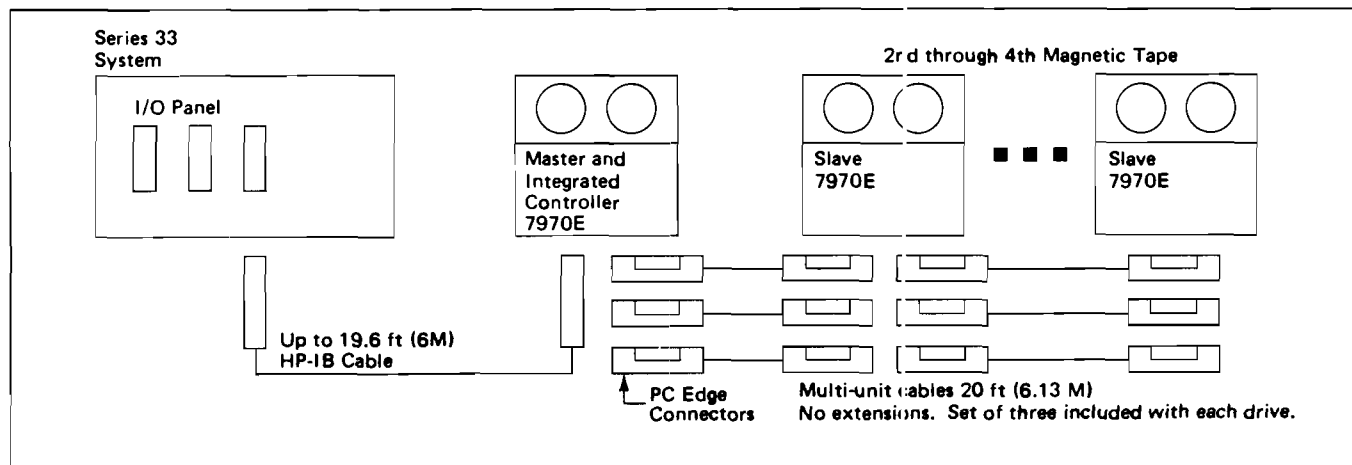
Printers

```
Series 33
System

I/O Panel                    Printer and            Printer and
                             Integrated             Integrated
                             Controller             Controller
                             2608A/2631A

   Optional (See note)          Optional (See note)
   6.5 ft (2M) HP-IB Extension  6.5 ft (2M) HP-IB Extension
   31389B order separately      31389B order separately

         6.5 ft (2M) HP-IB Cable      6.5 ft (2M) HP-IB Cable
         Included with printer        Included with printer
         optional 333                 optional 333
```

NOTE: Choose optional extension cables so that the total
        length of HP-IB cable on the line printer link is
        19.6 (6M). With two printers, each with its own
        cable included, a single HP-IB extension of 2M
        can be ordered.

Magnetic Tapes

```
Series 33
System                                      2rd through 4th Magnetic Tape

I/O Panel          Master and        Slave              Slave
                   Integrated        7970E              7970E
                   Controller
                   7970E

   Up to 19.6 ft (6M)
   HP-IB Cable

        PC Edge          Multi-unit cables 20 ft (6.13 M)
        Connectors       No extensions. Set of three included with each drive.
```

QUERY and MFG/3000: A Powerful Combination
By: Frank Kopish/GSD

You all know the benefits of QUERY in generating reports: The ability for non-programmers to retrieve data from an IMAGE database, sort it and format reports. But, QUERY has other benefits to the world of transaction processing.

Have customers asked you if MFG/3000 provided same-as bill of material transactions or mass change transactions and you said no?! Well, never fear because you can do them with QUERY and *still* have an audit trail in MFG/3000.

Transactions are the basic input into MFG/3000 for new database information or database changes. Each transaction is identified by a code that describes to the MFG/3000 programs what action is to be taken. Normally, transactions are input via the terminal by use of the formatted screens but files can be used with the batch jobs, EDCMAINT.EDCJCL and IOSMAINT.IOSJCL as an alternate source of transactions.

Users can utilize QUERY to build transaction files and feed these transactions through the appropriate batch jobs into MFG/3000. This approach provides the user with the total system verification and processing auditability of MFG/3000 needed to control the materials environment. True, QUERY could be used to directly update or change the database, but such changes lose visibility and recoverability in the case of system malfunctions.

The entire procedure can be simplified by creating XEQ files for QUERY, which eliminates the number of commands a user needs to enter.

By using QUERY procedures to create this and other MFG/3000 transactions, the dependency on programmers to write transaction programs is eliminated and the full control capabilities of MFG/3000 auditability are maintained.

Several customers have used QUERY and QUERY procedures to augment the MFG/3000 capabilities. If you have any questions concerning this and other techniques, talk to your local Industry Specialist.

SELL MFG/3000 and QUERY!

Backup on an HP 3000/33
By: Rich Edwards/GSD

The Series 33 is the first HP 3000 to be sold without a magnetic tape in the base configuration. As many of you have configured larger systems the question of system backup has been raised. I'd like to review some of the many possible configurations with some short notes on backup. Discuss these with your System Engineer for further details.

Base System — 7906, No Mag Tape

Single 7920, No Mag Tape
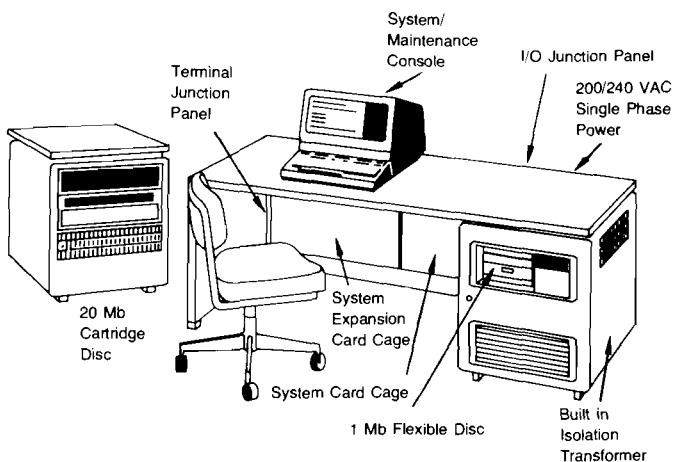
The 7906 can be configured as 2 volumes: Put the system on the fixed disc and use the cartridge as a private volume (PV). BACKUP: Sysdump or :STORE the system to the PV as a serial disc; the data on the PV can be backed up to 10 flexible discs.
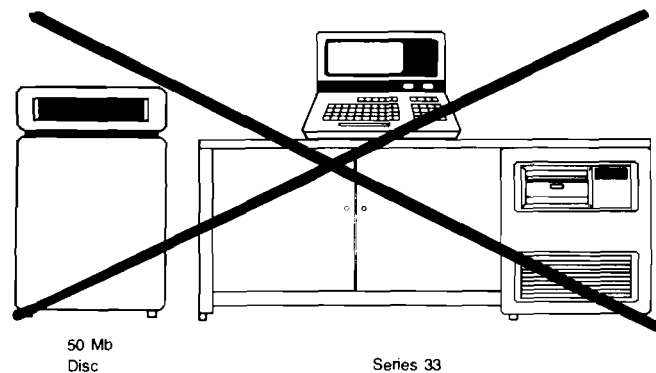
DON'T SELL — NO REASONABLE BACKUP
(50 flexible discs is NOT acceptable)

Single 7925 System, No Mag Tape

120 Mb
Disc   Series 33
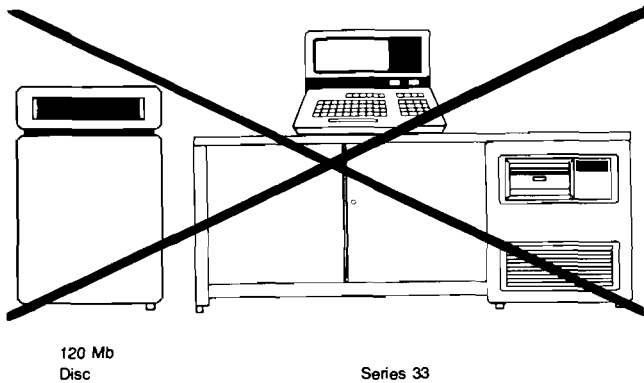
DON'T SELL — NO REASONABLE BACKUP
(120 flexible discs is NOT acceptable)

Dual 7906 System, No Mag Tape

Terminal
Junction
Panel

System/
Maintenance
Console

I/O Junction
Panel

200/240 VAC
Single Phase
Power

20 Mb
Cartridge
Disc

System
Expansion
Card Cage

System Card Cage

1 Mb Flexible Disc

Built in
Isolation
Transformer
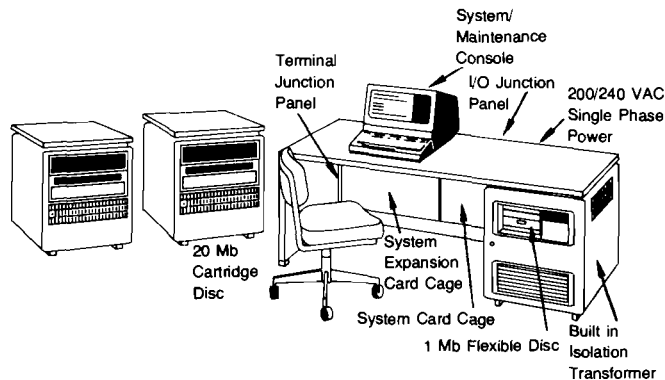
BACKUP: See base system, above, and add the additional
disc as two volumes in either private or system domain.

Dual 7920/7925 System, No Mag Tape

79XX   79XX   Series 33
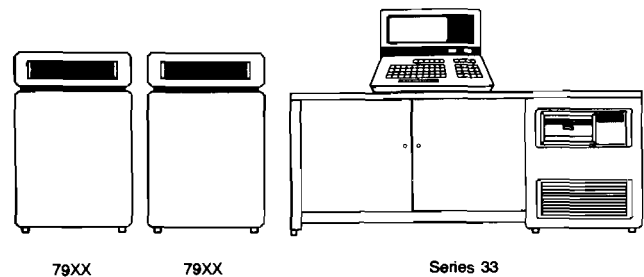
This configuration s OK IF the second disc is to be used
exclusively for backup. BACKUP: Sysdump or :STORE the
system volume to the private volume used as a serial disc.

In those two disc configurations with data on both discs,
a combination of Sysdump/:STORE and a new COPY
command in the Series 33 version of the stand-alone disc
utility, SADUTIL, is used for backup. The SADUTIL program
is not foolproof in use by unsophisticated users since it
requests the FROM and TO device numbers but does not
ensure that the TO device is a "scratch" pack. You should
consult with your System Engineer regarding the applicability
of this backup method before proposing it to a particular
prospect.

Three or More Discs — No Mag Tape

79XX   79XX   79XX   Series 33
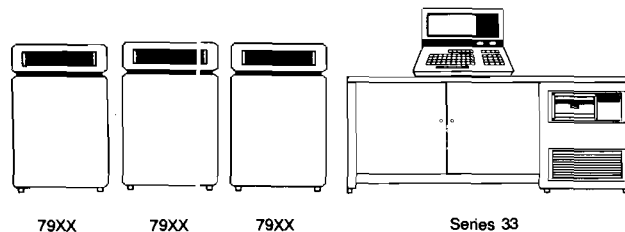
BACKUP: Configure one disc as a system disc and the
other two as private volumes. Use SYSDUMP or :STORE to
backup to one of the private volumes.

1 – 8 Discs with Mag Tape

79XX   79XX   Series 33

1600 bpi
Magnetic
Tape
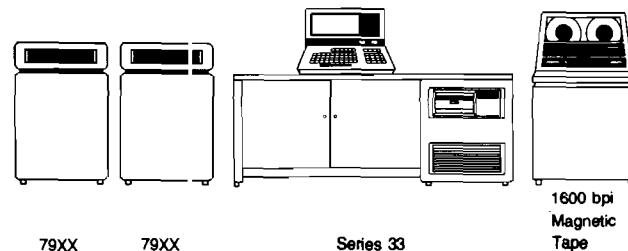
BACKUP: Use mag tape and/or the backup described above
for correct disc configuration.

Backup is a very important operation in any installation. With the Series 33, as you can see, you can now offer your customers a wide choice in both procedures and media:

    7902 1Mb flexible disc
    7906 10Mb cartridge
    7920 50Mb disc pack
    7925 120Mb disc pack
    Magnetic Tape

Remember that magnetic tape is the cheapest media available for backups today. While magnetic tape drivers are optional on the Series 33, they provide an excellent backup capability.

Look into backup with your prospects when configuring a system to ensure a successful installation and smooth operation.

GOOD SELLING!!

Sales Aids

New Distributed Processing Overview Kit

By: John Chisholm/GSD
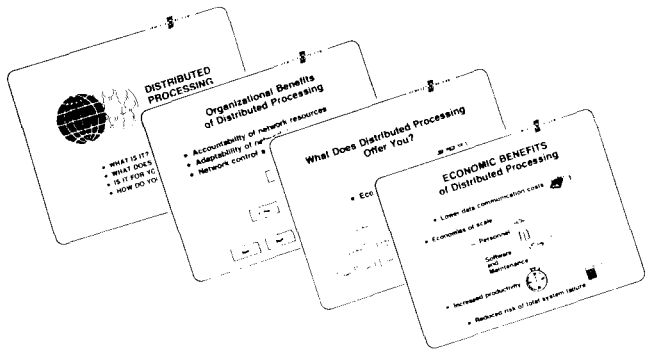
What is Distributed Processing? Why should I, a DP Manager or General Manager, be interested in it? Is it right for my company? If it is, how do I implement it?

A lot of customers, and potential customers, are asking these questions. So we have put together a kit to let you show them what Distributed Processing is all about.

The kit consists of a set of 27 slides (your choice of overheads or 35mm; with script and hard copy) and presents an overview to distributed processing. The presentation is directed towards medium and upper level managers who are more concerned with broad management issues than technical detail. You have told us that these key managers — "generalists" rather than "specialists", are very often the people who decide whether or not to buy an HP computer.

"Distributed Processing Overview" is intended as an "objective" presentation with no reference to HP or DS at all. It may, however, be followed very naturally by a DS/1000 presentation.

Our experience says that people tend to believe whoever was the first person to explain something to them. Do not miss the opportunity to be the first sales representative to give your accounts a clear understanding of what Distributed Processing is all about!

How To Order

Rudann Ramsey at GSD has asked all DM's to let her know how many copies (35mm and/or overheads) of any new slide kit produced by GSD they would like. If your DM has done this, the requested number of kits of "Distributed Processing Overview" will be sent and billed automatically in the next few weeks. DM's who have not done this will be sent and billed for one copy each of the 35mm and overhead kits.

Additional sets of the Distributed Processing Overview kit may be ordered by Part Number 30000-90127 ($50.00) for the overhead slide kit, and Part Number 30000-60006 ($30.000) for the 35mm slide kit.

The DS/3000 Customer Presentation kit (with 67 slides) is still available in overheads. Additional sets may be ordered by Part Number 30000-90128 ($125.00).

GOOD SELLING!

In-Depth IBM 8100 Report Available

By: Steve Zalewski/GSD

A report comparing the HP 3000 and IBM's new 8100 Distributed Processing System has been prepared. Rather than summarize the 8100 here, and to keep some degree of confidentiality, the report has been sent out to all DM's.

If the 8100 were available today, it would be a formidable competitor; in late 1979, the 8100 will not be as strong against the HP 3000 with the product improvements scheduled for 1979 introduction. The 8100 is where IBM will be in 1980; we are there now and intend to be far beyond that by 1980.

With the 8100, IBM has given their approval to distributed processing and will be educating the marketplace on the merits of distributed processing. This should expand the overall size of the market, offering more sales opportunities for HP 3000's. See your DM for the 8100 report and good selling.

General News

IMAGE/3000 Listed Again On Datapro Honor Roll
By: Orland Larson/GSD

IMAGE/3000 has again earned a place on the Software Honor Roll according to Datapro Research Corporation. This announcement may be seen on the front page of the December 18th issue of *Computerworld*. You will find all the details in the December issue of *Datamation* (which was not available at press time).

We'll have the complete story for you in the next issue.

HP 300 — Offering Benefits to a Large Company
By: Dave Iuppa/GSD

Can a large multinational company implement a world-wide sales office system on a computer that doesn't support communications?

Yes, if the system is the HP 300!

A Bay-area based company will start with its European offices: a Series III in one regional office, a Series 33 in the second and HP 300's in each major sales office.

Development will begin soon on two HP 300's now on order. Over the next year systems will be installed in the sales office. Then sometime between 18 and 24 months from now, the systems will be interconnected in a true distributed system network.

No promises were made to the customer. But given our announced commitment to support DS on the HP 300 and frank discussions with AMIGO program management, the customer felt confident that Hewlett-Packard could best satisfy his needs.

If you have a large customer planning a similar network, consider selling the HP 300.

Most distributed systems take more than a year to implement and with HP's proven performance in DS and the advanced features of the HP 300, many customers may choose the HP 300 for such applications.

To arrange the support needed to make this kind of big deal possible, contact your regional HP 300 sales support person.

HP General Systems Users' Group Educational Special Interest Group
By: Ralph Manies/GSD

After reviewing the various user activities that the GSD Customer Relations group supports, we concluded (along with users) that educational users of GSD products would best be served by establishment of a special interest group, under the HP General Systems Users' Group. Thus, in place of publishing an Educational Newsletter, GSD Customer Relations resources will be directed toward helping the General Systems Users' Group establish an educational special interest group.

During the past year, the HP General Systems Users' Group, under the leadership of its Executive Board, has made significant progress in building a structure that provides for meaningful user-to-user and user-to-vendor dialogue. With over 1,000 members, a full-time Executive Director, excellent publications and well-planned meetings, the Group is ready to provide additional activities and services for specialized groups of members, such as educational users . . . all that is needed is your customer participation.

Current members of the HP General Systems Users' Group will receive information on an educational special interest group from the Executive Board; if you have a customer who is interested have them contact:

Tom Harbron (Chairman, Users' Group Executive Board)
Anderson College
Anderson, In. 46011
317-644-0951 Ext. 331

or

Rella Hines (Executive Director)
P.O. Box 18313 E-W-I Branch
Baltimore, Md. 21240
301-768-4187

CSB News

HP 300 Orders are Pouring In
By: Edgar Rosset/CSB

The HP 300 has been successfully introduced in Europe and within the first few weeks of public existence we received orders from a variety of European customers. The customers interested in the HP 300 are software houses, service bureaus, manufacturers, chemical companies, and even a supermarket chain.

On top of this super start of HP 300 sales we are especially proud here in Europe having booked the first order for an HP 300 world wide. This first AMIGO system is going to talk in its mother language as it is sold to a customer in Spain.

As soon as *Antonio Ariza* from our Barcelona office had sufficient information on the HP 300, he contacted the prospect, knowing that they were looking for a system comparable to an IBM System/34. Having been in the hydraulic machine business for about ten years, this particular customer had experienced long and sometimes painful problems in dealing with customers. They decided to resolve their importing and exporting problems with a computer. Their solution (an IBM System/32) proved to be very efficient. Therefore, the customer decided to go into the turnkey system business, in order to offer this application package to the customs agents market segment. Having had a lot of experience programming in RPG II, they began to take a close look at the IBM System/34.

Antonio's first offer to the customer was an RPG II HP 300. Strong points for the HP 300 system in competition with IBM's System/34 were the OEM hardware discount, the terminal capabilities, the virtual memory concept as well as the ease of programming and ease of use of the HP 300.

The additional capabilities offered in programming the HP 300 in BASIC, like IMAGE and access to the system services, made the customer decide to go for an HP 300 with BASIC language. The customer signed with HP an OEM contract for 7-8 HP 300 systems. They expect that within the next three months they will sell two to three systems.

All these activities centered around the HP 300 seem to be very promising and indicate great potential for the future. Congratulations and many thanks to all who helped make this happen.

Y felicitationes muy especiales al vendedor del primer "AMIGO", *Antonio Ariza.*

HP GRENOBLE NEWS

Division News

New Market Development Manager
By: Pierre Ardichvili/HPG

More than any other product line of CSG, our data capture terminals need application expertise to be successful. Where to sell them; whom to contact in the target accounts; where in the plant are they most needed; when and how can they save money to the customer and how much; and thanks to which of their features? All these questions don't necessarily have obvious answers to all of us!

To help you and us make a big step forward in this direction, I have appointed *Guenter Kloepper* Market Development Manager for Product Line 69.

In this position reporting to me, he will have two main responsibilities:

a. Motivate and support the two sales development teams working for PL69, i.e., *Steve Stark's* and *Francis Marc's* groups, respectively for the U.S. and Europe.

b. Be CSG's expert in the application of Grenoble's terminals to data capture problem solving in CSG's target accounts.

Guenter's very practical approach to things has already generated an application of product tracking with an HP 1000 system, DATACAP software, and 3070B's here in our factory in Grenoble. The system was on the air in less than two months.

Pretty soon he will come up with an applications manual for data capture terminals (a tool for you and a tutorial on factory data capture which you can leave with your customers), several application notes based on real cases, customer reference lists, and demo packages.

You will hear from him many times this year. Meanwhile *Steve Stark's* and *Francis Marc's* Sales Development Groups are your contact for day-to-day support.
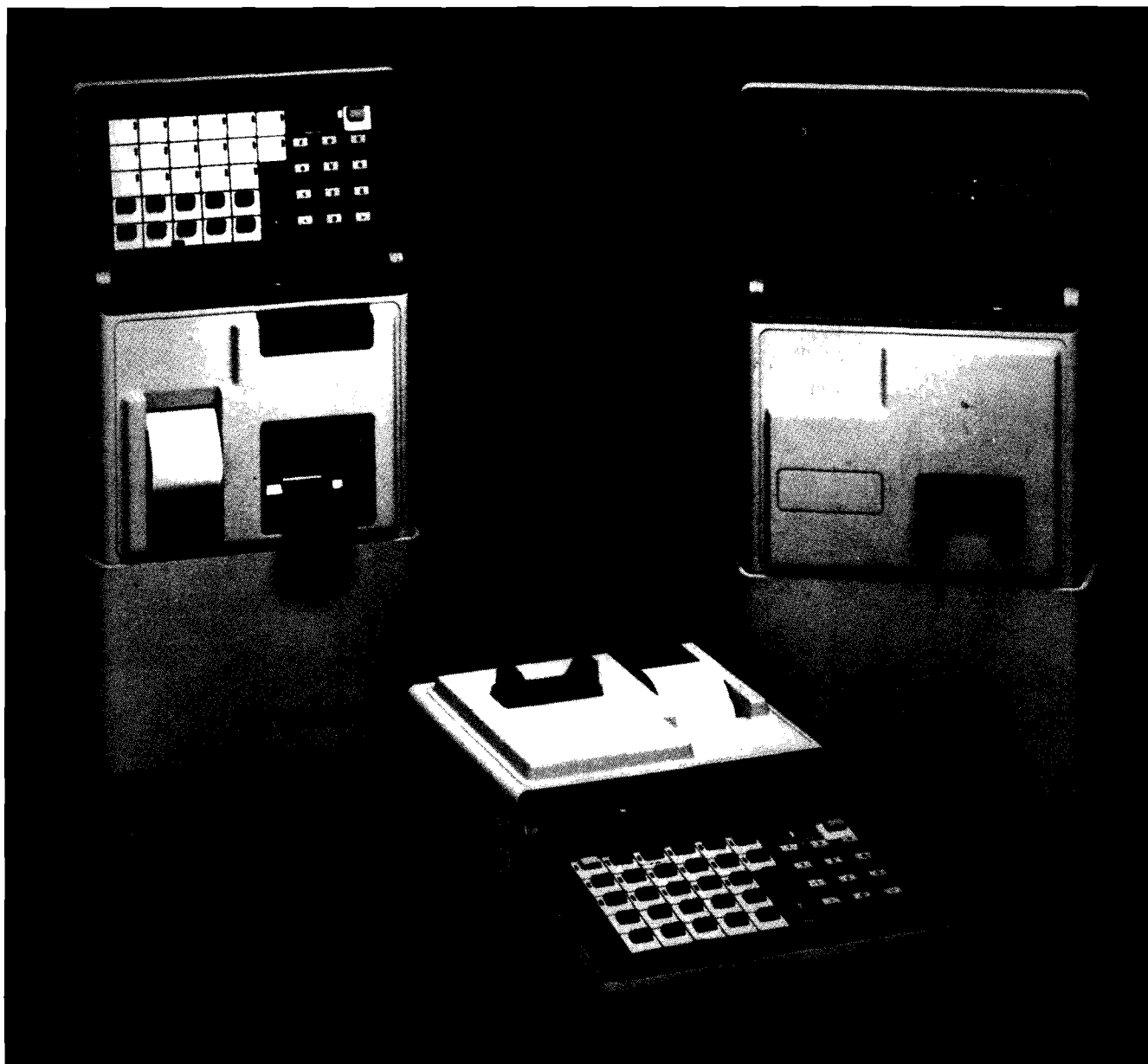
Invest some of your time in selling factory data capture terminals. It's good money to collect and the premium is systems sales.
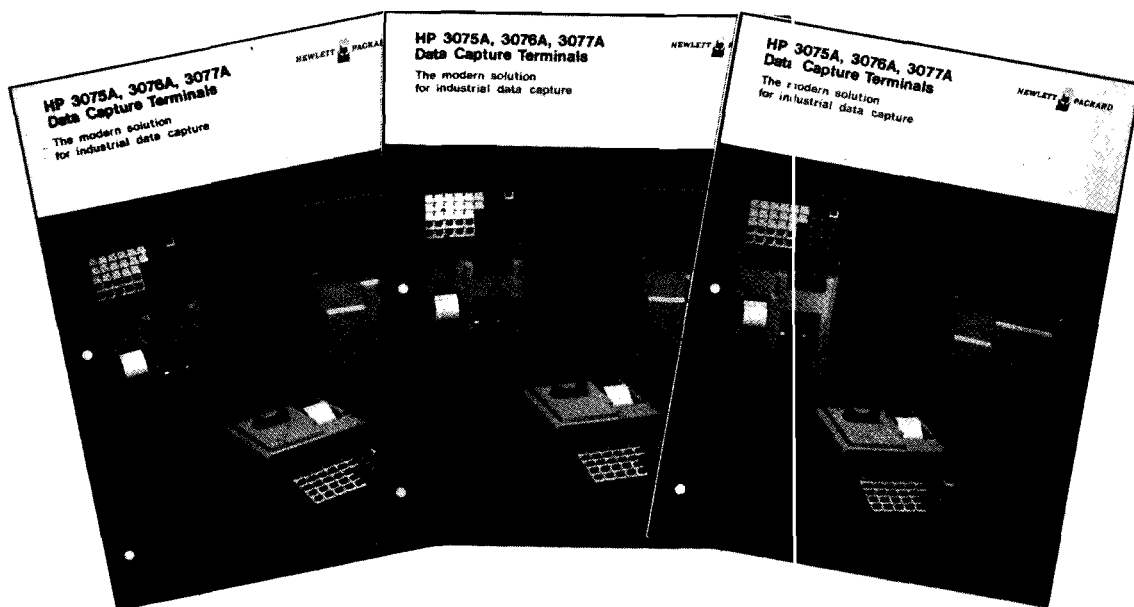
New Product News

The New Data Capture Terminal Family
By: Cyril Yansouni/HPG

| HP 3076A | HP 3075A | HP 3077A |

Over the past two years Grenoble lab and marketing people have been visiting key customers (your key customers) to find out their requirements in the fast growing/changing market of factory data capture.

The new 3075A, 3076A and 3077A terminals with their range of options combine all these requirements into a powerful terminal family with . . .

60 WINNING COMBINATIONS
ON THE PRICE LIST NOW

The valuable feedback gained from having the 3070A and 3070B out in the marketplace has enabled us to develop a family of terminals with exactly the features that you and your customers asked for:

- Alpha display option—you've got it (24 characters)!

- Alpha keyboard option—you've got it (all 26 letters)!

- RS-232C datacomm—you've got it (264X compatible)!

- Tough wall mounting—you've got it (with quick change feature)!

- Reader for badge with clip—you've got it (type V badges)!

- Large time display—you've got it (0.8" high characters)!

- Modem operation—you've got it (half/full duplex)!

- Relay output contacts—you've got it (30 volts/2.5A)!

- Modularity—you've got that too (we can build 60 combinations)!

These new terminals are a 100% fit for the Computer Systems Group target market; they are a visible demonstration in hardware terms of our group commitment to manufacturing applications.

Bulk distribution of data sheets and training material is being made right now and should be in your hands by mid-January. All district managers should have received an invitation to order demo units during December. These will be shipped during January and February. First customer shipments are now being made to selected test sites and normal customer shipments will occur in March.

Since there is no complete CSG NPT tour scheduled during January or February, we are holding a series of mini-NPT halts at selected sites in North America and Europe. We hope to see you at one of the stops. If you are unable to attend an NPT Tour presentation and you have any questions, or would like to have someone visit one of those key customers, don't hesitate to contact your friendly terminals sales development person at Grenoble or DTD.

GOOD READING.

The HP 3075A, 3076A, 3077A
Data Capture Terminals
By: Peter Stuart/HPG

The HP 3075A is a desktop terminal.
The HP 3076A is a wall-mounted terminal.
The HP 3077A is a time reporting terminal.

Features:

- Modularity, choice of
  — numeric or alphanumeric display
  — numeric or alphanumeric keyboard
  — multifunction reader
  — type V badge reader
  — alphanumeric strip printer

- User-definable prompting lights

- User-definable special function keys

- Time clock (HP 3077A only)

- Built-in self test

- Choice of data communications
  — multidrop using Data Link
  — multidrop (compatible with HP 264X asynchronous multipoint terminals)
  — point-to-point

- RS-232C/CCITT V24

- High speed data transmission
  — up to 9600 baud

The HP 3975A and 3076A Data Capture Terminals

The HP 3075A Desktop terminal and HP 3076A Wall Mounting terminal (with Cradle) are both workstations equipped with user-definable special function keys and prompting lights. These can be individually defined for specific tasks.

The user-definable keys and lights are labelled with their specific functions. This enables people with little or no experience of using computer terminals to operate these terminals with no special training.

The terminals' modular construction and wide range of options enable them to be built in over 50 different combinations. Thus each terminal can be configured to suit the required application.

"Primarily designed for use in manufacturing environments" does not mean they are restricted to the shop floor. They are also perfectly adapted for applications in finance, order processing or any department with a data processing requirement.

The 3077A Time Reporting Terminal

The HP 3077A is a time reporting terminal equipped with a large time display and a type V badge reader (or optionally a multifunction reader).

Optional Modules

004 Alphanumeric Keyboard.
26 alpha keys organised in alphabetic order.
Keys can be alpha and special function keys (SFK's).
SFK's can be programmed as terminators.

005 Alphanumeric Display.
24 positions (written left to right).
Displays 64 upper case Hollerith characters.
Blink capability.
Protected field operation.

007 Multifunction Reader.
Reads plastic badges type III.
Reads punched cards and marked cards.
Reads in Hollerith or IMAGE mode.
Up to one badge/card per second.
Time-out for motor.

008 Type V Badge Reader.
Reads clip type badges.
Reads up to 15 badges per second.
Reads in Hollerith or IMAGE mode.
Equipped with disposable plastic insert.
Accepts badges inserted either side up.

009 Alphanumeric Printer.
Prints 20 characters per line.
Thermal printing.
Automatic printing on receipt of 20 characters.
Has 180 character local buffer.
Built-in text formatter.
Auto paper-loading facility.
Print inverting feature.

The Future for the Grenoble Data Link
By: Doug Chance/CSG

During the Grenoble Division review last year we realized that the Data Link which was under development for use with the new Data Capture Terminal family had some broader implications for the group.

Firstly with its compatibility to the Data Terminals 264X family we were in the process of creating another multidivisional data communications capability. Then we saw that the link really did offer certain attractions in connecting terminals and other relatively low data rate devices in a simple, low cost, inherently reliable, multidrop manner.

Since that time a number of HP divisions both within and outside of the Computer Systems group have been looking at the link and as a result have decided to develop link-compatible products. CSG products under development and planned for introduction over the next 12 to 24 months will, in the future, permit us to market the link as a general purpose Factory Data Link.

In the meantime the link will be marketed as an attractive method of connecting HP terminals to HP computer systems.

Who Buys Factory Data Capture Terminals and Why?
By: Peter Stuart/HPG

For at least the past two years, if you had attended the APICS (American Production and Inventory Control Society) annual conference, you would have heard and seen that the common theme was MRP (Materials Requirements Planning). And of course it is no accident that the software packages (which we have available within the Computer Systems Group), are aimed right at such applications.

However, at the October 1978 conference, additional themes were emerging, namely "Real Time Shop Floor Control", "Real Time Dispatching", "Real Time Data Collection".

What this all means is that those companies that implemented MRP systems some time ago are now starting to run up against some of the limitations of typical systems, such as:

Costs of Data Collection—(Amount of information required from shop floor has increased, not decreased).

Lack of Timeliness—(Finding out a week later that parts should have been ordered a week earlier).

Errors on Data Input—(Garbage in = Garbage out). And of course it is again no accident that HP now has a terminal family to help the customer solve such problems.

The prospects typically fall into one of two categories:

- those that have batch-oriented systems and want to improve the method of collecting data without changing the way they subsequently process the data.

- those that have batch-oriented systems and are moving to real-time systems and need to have real-time data input direct from the shop floor.

The common factor, of course, is that they are already using computers extensively in their manufacturing operations (it is obvious that there is no point in getting up-to-the-minute data from the shop floor if you do not have systems to use such data in a meaningful manner).

But why buy special purpose Factory Data Collection Terminals instead of general purpose (e.g., CRT) terminals?

There are two basic reasons:

- to obtain a product which stands up to a tougher environment.

- to obtain features which improve the ease of use and accuracy of data capture.

If you look at the products on the market today, you will quickly realize that the first reason is not very significant. If it was, you would expect Factory Data Capture terminals to be ruggedized versions of conventional terminals with the same

sort of features. Furthermore, the Factory Data Capture terminals from all the suppliers have badge and card readers, which confirms that the most significant reason is in fact to obtain unique features considered important for fast, easy and accurate data collection.

Naturally, it makes sense to build such features into a product which stands up to a tougher environment than a conventional office, but we should always remember this is not the primary reason for purchasing Factory Data Capture terminals.

In summary: Established users of computers in manufacturing are the ones who buy Factory Data Capture terminals. They are bought for the features which permit fast, easy and accurate data entry.

Of course, we are not alone in recognizing the significance of this fast growing market area, as witnessed by the acquisition by NCR of Data Pathing and by Honeywell of Incoterm, or the recent introductions by IBM. In fact, all of them were present at the October 78 APICS conference in Florida, showing their equivalents of the 3075A/76A/77A.

However, from what we saw of them, you can be confident that we are well placed to win.

Applications

## Three Products for Data Capture
By: Marc Nodier/HPG

Now you have not only one, but a family of three products to help our customers solve their data capture problems.

With the 3075A, 3076A and 3077A you have the right solution to many data capture requirements in a manufacturing environment.
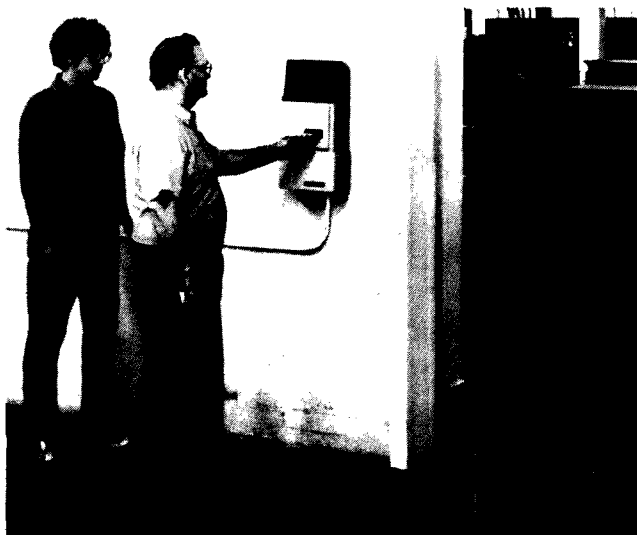
Here are just four of the applications where our new, powerful series of terminals will prove to be the ideal tool.
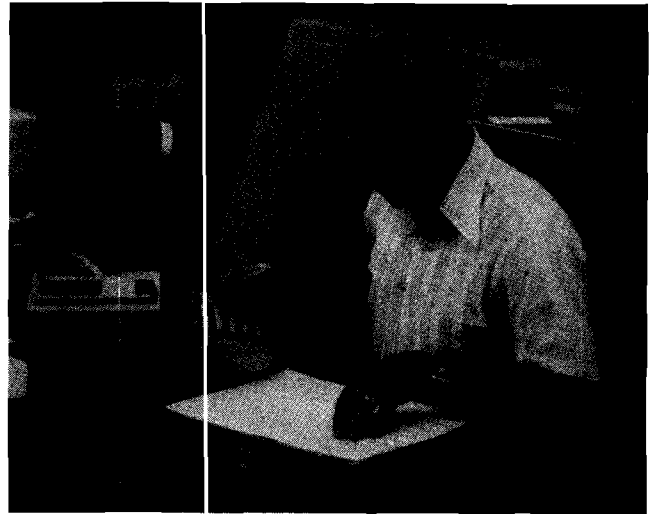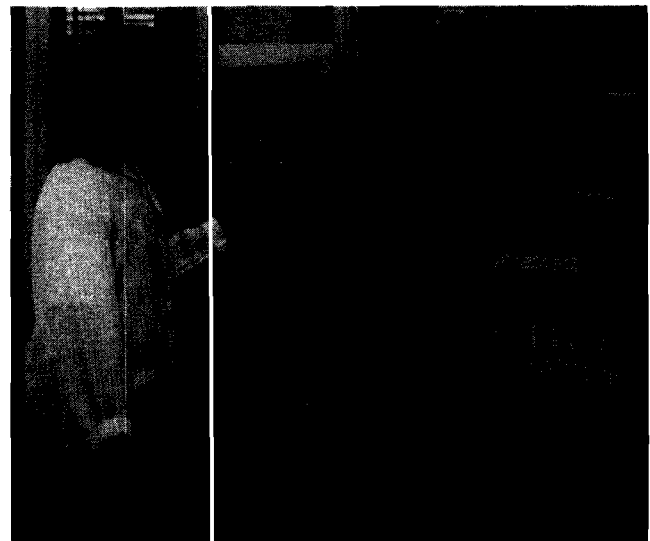

Inventory Control.
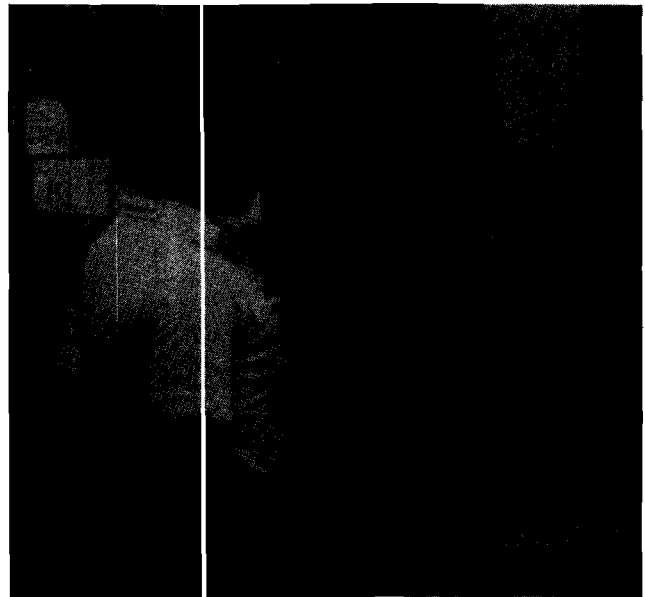
Shipping.

Labour Data Reporting.

Contrcl of Access to Restricted Areas.

Competition

The "Also-Rans"
By: Marc Nodier/HPG

The powerful 3075A, 3076A, and 3077A Data Capture Terminals are aimed at a market in which, as you know, there are a few key competitors: IBM, DEC, Data Pathing, (NCR), and Incoterm, (Honeywell).

Quite frankly, and you will be able to judge for yourself by reading the field training manual, our terminals really come out stronger in most cases. This is mainly thanks to your valuable inputs which allowed us to design outstanding products.

Below is a short summary of the advantages and disadvantages of these competitors' products compared to our own terminals' capabilities.

	Competitor	Advantages	Disadvantages
IBM:	New 3630 plant communication includes 3641 Reporting terminal (versions B & C)	— optional magnetic badge reader — according to IBM designed to work in really tough environments — IBM image	— not truly interactive — high prices — limited multidrop — no desk-top version — no true time reporting station available
DEC: RT 801: RT 803:	DPM (Distributed Plant Management) time & attendance basic work station	— "Appear" more rugged — DEC Dataway (like our Data Link)	— Extremely expensive ($3500 to $8000) — no desk-top version — no optional alpha keyboard — slow card reader
Data Pathing: 102: 103/107: 133: New 107 not yet released.	time entry station Multifunction terminal display station	— well established in industry — magnetic badge and card options	— limited multipoint capability — higher prices (on average) — difficult to produce key labels — sold with NCR systems
Incoterm: 301: 303: 304:	time and attandance station labour distribution terminal (wall mounted) labour distribution terminal (desk-top)	— good range of products (similar to ours). — cheap time and attendance station	— old design — expensive keyboard and display solution — no multidrop — expensive card reader

With their — GREATER MODULARITY (remember, 60 combinations of options!)
— BEST PRICE/CAPABILITIES RATIO
— POWERFUL DATA COMMUNICATIONS POSSIBILITIES

The 3075A, 3076A and 3077A ARE VERY COMPETITIVE!

Sales Aids

Read All About Them!!
By: John Willett/HPG

The following is a list of all the exciting new sales and service literature for our exciting new 3075A, 3076A and 3077A Data Capture Terminals. A copy of each of the first four items, in an attractive binder, is already on its way to you. Literature is common to all three terminals, thus you only need one set. Extra supplies of sales literature (5953-XXXXX numbers) are available from Palo Alto; service literature from CPC Mountain View (for USA and ICON); PCE Boeblingen (for Europe).

- Technical Data Sheet (pub. no. 5953-0122)—all the technical information you need to answer those awkward questions.

- Applications Data Sheet (pub. no. 5953-0123)—a full-color, 8-page handout packed with real applications information/photos to start the ball rolling. Can be used as a mailing piece.

- Field Training Manual—all the answers you need to close the sale and keep the others out. Includes product information, installation requirements, environmental tests performed, applications, competition, etc.

- Quick Reference Guide (HP Part no. 03075-90001)—a handy, pocket guide that contains condensed maintenance, programming, terminal configuration, and status information. Saves your customer from having to to carry a heavy manual around.

- Applications Manual "A Guide To Data Capture" (available at end of February pub. no. 5953-0124)—everything your customer will ever need to know about data capture terminals. Tells him how to apply the terminals to his business, together with the practical considerations involved, and gives examples.

- Reference Manual (HP Part no. 03075-90011)—contains the complete information on terminal installation, operation and routine maintenance. It also includes a

detailed description of the data communications and device control. If you're really stuck for the answer, it's in the Reference Manual.

- Service Manual (available at end of January, HP Part no. 03075-90021)—contains detailed information to service the terminals down to component level.

In addition to the above literature, there will be an HP 3074A Data Link Adapter operating and service manual which will be available around the end of March.

Further items planned for the near future include slide sets, posters and a demo kit.

If you have any question, problems, or special requirements concerning literature on the new terminals, or any other PL 69 product, please get in touch with me.

Service News

3075A, 3076A, 3077A
Product Support Strategy
By: Georges Ouin/HPG

Our product support strategy, based on component level repair, plus the high reliability of the new terminals enables us to offer an attractively low BMMC. Look at these numbers!

Product Reference	BMMC
HP 3075A	$ 8
HP 3076A	8
HP 3077A	8
Option 001 (for HP 3077A)	0
Option 004 (for HP 3075A/3076A)	0
Option 005 (for HP 3075A/3076A)	0
Option 005 (for HP 3077A ONLY)	2.5
Option 007 (for HP 3075A/3076A)	3
Option 008 (for HP 3075A/3076A)	3
Option 009 (for HP 3075A/3076A)	3
HP 3074A	1
HP 92904A	0

Make sure your customer understands the bench level repair policy and buys at least one spare unit. This will enable him to exchange a faulty unit immediately and return it to HP for repair.

In a matter of minutes the system will be 100% operational again thus eliminating unacceptable delays in his manufacturing operation.

If you have any questions on support, please do not hesitate to contact us.

CS GROUP NEWS

CSG News

Third-Party Use of the HP Name and Logo
By: Tom Casalegno/CSG

The field is experiencing more and more requests for use of the HP name and logo in third-party brochures, data sheets, and advertisements.

The attached guidelines were generated by HP Corporate Marcom and are provided to you for your initial handling of such requests from third parties.

Guideline for Third-Party Use of the HP Name and/or Logo

OEM or other customer companies may wish to advertise or promote the fact that certain portions of their products are manufactured by Hewlett-Packard. In general, the use of our name and logotype is acceptable under the following conditions:

1. They are a legitimate customer for the products referenced — which should be verified with the manufacturing division.

2. Layout and copy meet HP's standards for truth and ethics and have an over-all appearance that is consistent with HP's style.

   a. The HP Logotype should be used in a dignified manner. e.g., not located on balloons, flags, etc.
   b. The identity of the sponsor of the material should be clear.

Approval for third-party use of the HP name and/or logo can be obtained from Corporate Marketing Communications, usually within 48 hours. Layout and copy (roughs acceptable) should be submitted to Connie Chase, Corporate Advertising, Bldg. 19L, Palo Alto, California.

CSG Region Seminars a Great Success
Bob Lindsay/CSG

As we enter 1979, the Christmas and New Year's holidays have blurred the memories of the eight Region Seminars held last fall in California between October 15th and December 15th.

A total of over 850 persons from all eight CSG sales Regions came to the Bay Area to attend their own Regional program: (MSR/E — October 16–20; MSR/W — October 23–27; SSR — November 6–10; ESR — November 13–17; HPSA — November 27 — December 1; CSR/ICON — December 4–8; NSR — December 11–15).

A typical week started with a one-day CSG Management Review of Region business with Region management; followed by a day for all the attendees either at DSD for Technical Specialists or at GSD for Commercial Specialists; a day with the Peripherals Divisions; and a final three-quarters of a day with CSG/CSD Management. Every Region had a welcome reception when they arrived, a day of celebration in the 60 × 180-foot tent, and their own Region Awards function.

Twenty issues of the *CS Newsletter* would not be sufficient space to include half the memorable pictures that were taken during all eight of these Region Seminars: here's one page to give you a glimpse of some of the things that happened.

Recent Articles on HP Computer Applications
By: Bob Ingols/CSG

Listed below are some recent articles on HP computer applications which appeared recently. You and/or your customers may find them helpful to a current sales situation. The stories result from leads provided from the sales force, so continue to let me know of your customers with solid applications.

Application Article Appearances

Article Title	Magazine	Issue	System	Customer	Application
1. Instrumentation Aids Oil Shale Experiments	Petroleum Engineer International	Nov. '78	HP 1000	Laramie (Wyoming) Energy Research Center	Data gathering for oil well exploration.
2. Lighting Manufacturer Uses Low Cost Computer System	Lighting Design & Application	Nov. '78	HP 1000	Gardco Co.	Manufacturing management, financial reporting, engineering
3. Radio Maker Gets More Than Expected After Switching to Computerized Quality	Quality Progress	Nov. '78	HP 1000	General Electric Mobile Radio Dept.	QA testing of two-way radios
4. Computer Systems Simulate Braking Conditions for 300 - Car Trains	Computer Design	Oct. '78	HP 1000	Westinghouse Air Brake Co.	Testing and design of railroad brake systems
5. Merger of Minis Leads To Big Savings	Modern Office Procedures	Sept. '78	HP 3000	Star Forms	Sales/Finance management, reporting for business forms manufacturer.
6. Switch to Mini-Computer Cuts Costs, Turnaround time.	Marketing News	Sept. 8, 1978	HP 3000	Computers for Marketing	Statistical analysis of market research data.
7. New Computer Increases Profits by Improving Inventory Control	Sporting Goods Business Monthly	Oct. '78	HP 3000	Munson Sporting Goods	Inventory control of 13,000 stock items.
8. Drug Company's Mini Speeds Animal Testing Procedures	Minicomputer News	Nov. '78	HP 1000	Upjohn Company	Laboratory data collection and analysis to test new drugs for safety.
9. Use of Minicomputer Controls Inventory, Productivity	Buyer's Purchasing	Dec. '78	HP 1000	Hughes Aircraft	Stockroom and accounting system for Industrial Products Division.

Corporate Training & Management Development

NEW VIDEOTAPE
I N F O R M A T I O N

New Videotapes from Corporate Training
By: Chuck Ernst/Corp.

Title: Using Mark Sense Cards (Color)

Audience: HP customers: manufacturing managers,
                    school directors and hospital managers.

Purpose: To show customers the advantages of
                    pencil marked cards, and make them
                    aware of the various applications of
                    the pencil mark card being used by
                    other customers.

Content: This program covers some typical
                    applications and benefits of using mark
                    sense cards. It is intended for
                    HP customers interested in increasing
                    the flexibility of their data capture
                    systems or who are planning to replace
                    their punched card systems. It also will
                    be of benefit to customers unfamiliar
                    with mark sense cards.

                    Four HP customers explain why they use
                    mark sense cards to help solve their
                    data collection problems. It was
                    recorded at a manufacturing plant,
                    hospital, utility company and a college.
                    It features the HP 726X Optical Mark
                    Reader and the HP 307X Data Entry/Data
                    Retrieval Terminal.

Time: 13 minutes

Part Number: 90765Z

Date Released: September 1978

Title: The Next Challenge (Color)

Audience: Upper division college students
                    majoring in engineering, science and
                    technology; also, placement office
                    personnel responsible for career
                    guidance of graduating students.

Purpose: To support HP's college recruiting
                    efforts by describing HP's product
                    groups and the career opportunities
                    within the various technical funciton
                    areas.

Content: In this program, filmed in various
                    locations across the U.S., eight
                    HP engineers and scientists discuss
                    their feelings about their jobs and the
                    working environment at Hewlett-Packard.
                    In an informal style, the discussion
                    includes the transition from school to
                    business and industry, typical responsi-
                    bilities of new engineers, and the
                    problem solving environment and
                    support that Hewlett-Packard provides
                    for its people.

Time: 28 minutes

Part Number: 90809Z

Date Released: September 1978

How To Order: Transmit a HEART (COCHISE) 12 order
                    to Video Products, Product Line 95,
                    Division 0700, Palo Alto. These
                    programs are not for sale to customers.