HEWLETT PACKARD

Issue No. 3

HP Series 100 Communicator

Introducing the HP 120 and the HP 125 B

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Notes From the Editor

Welcome to Issue #3 of the Series 100 Communicator

This magazine presents information about your HP Series 100 computer which we think will interest you: application hints, programming tips, and helpful answers to some common questions. The Software Status Bulletin section is a current list of all known problems with available solution information. The articles span several levels of expertise—ranging from the casual user to the experienced programmer. In addition, we briefly describe new Series 100 products and how they affect you as a Series 100 owner.

How To Receive the Communicator
There are three ways to obtain copies of the *Series 100 Communicator:*

- A *Communicator* subscription is included as part of the Series 100 System Information Service. This service includes phone-in consulting and appropriate manual updates. To order, call your HP Sales and Service Office—ask for the "SE Administrator."
- You may subscribe to the Communicator alone, by ordering the HP 45530N Series 100 Software Notification Service from the SE Administrator at your local HP office.
- Individual copies, including back issues, are available from your dealer or from HP's Computer Supplies Operation. See the "Ordering Information" section in this issue for details.

How to Become a Contributor
Much of the material in this issue came from users and HP field support people. If you would like to contribute, address your article, program, suggestion, or question to:

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We look forward to bringing your ideas to the attention of the world-wide Series 100 user community through the *Series 100 Communicator.*

Contents

Feature Articles

Departments

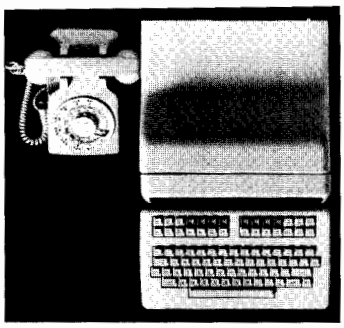
Announcing the HP 120 Personal Office Computer

With the addition of the HP 120 system to the existing HP 125, we now are the Series 100 family!

The HP 120 has the same dual microprocessor architecture, CP/M® operating system, and intelligent terminal features as the HP 125. The HP 120 and the HP 125 use the same programs, application software, data files, and peripherals so that you may easily mix HP 120 systems with the HP 125s in your organization. The small size and streamlined appearance of the HP 120 makes it particularly attractive to professionals and managers in large and small businesses.

New documentation, software, utilities, and peripherals are also being announced with the HP 120. In addition, there is a "B" model of the original HP 125. All of these products are briefly described in this *Communicator*—along with details of how you can take advantage of these improvements on your HP 125A.

Footprint

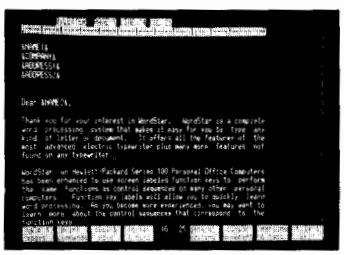


The HP 120 is specifically designed to minimize the space taken up on a desk. The display and electronics are contained in a single package which takes up no more than a cubic foot of space. New 3.5 inch disc drives fit underneath the system processing unit, and a specially designed keyboard is exactly the width of the display unit. The entire system—keyboard, display, system electronics, and disc drives—takes up only the same amount of desk space as an open looseleaf binder. For portability, carrying cases are available to transport the system.

Cable Management

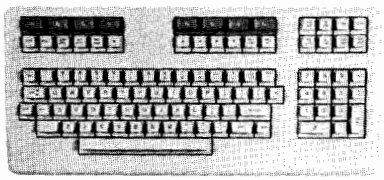
Special cables are shipped with the HP 120 to reduce the amount of cable needed to connect the system. An additional power cord connects the HP 120 to the main disc drive—so that only a single switch must be turned on to supply power to the system. The short HP-IB cable supplied is exactly the length needed to connect to the disc drive underneath the system.

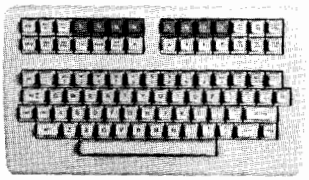
High Quality Display



Characters on the HP 120 are clearly defined for easy readability. A new 9-inch display with a dark background provides a high level of contrast between characters and the screen. Intensity can be adjusted by a user-accessible control on the rear panel. Green or white phosphor colors are available. Special accessories are available to tilt the display and swivel the system, minimizing glare and allowing the user to adjust the system for comfortable use.

Ergonomically Designed Keyboards





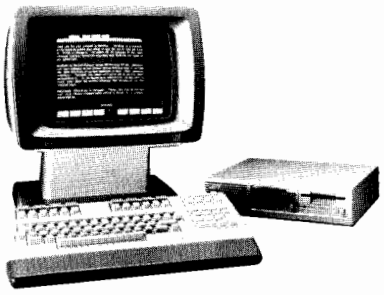
Two keyboards are available on the HP 120; both have been carefully designed to resemble a typewriter in both layout and "feel". The new small HP 120 keyboard has the same typewriter, editing, cursor control, and function keys as the current HP 125 keyboard. The optional extended keyboard has a numeric keypad for applications where numbers need to be entered rapidly. Keys have been individually sculpted and rows on the keyboard have been stepped for touch typing applications. An optional snap-on palmrest is available on the large keyboard—and will be available soon on the small keyboard.

In short, with the addition of the HP 120, you now have a choice of two packaging designs for the Series 100 Computers. The smaller size of the HP 120 is ideal for managers and professionals; the larger display size of the HP 125 is recommended for more screen-intensive applications, such as word processing and program development.

The U.S. model is available now; international versions will be available in early 1983.

Contact your Authorized HP Personal Computer Dealer or your local HP Sales and Service Office for further information.

Introducing the "B" Model of the HP 125



The HP 125 now has a "B" version. The HP 125B, product number 45500B, incorporates several of the new features introduced with the HP 120:

- **Improved Keyboard.** The HP 125B uses an extended version of the HP 120 keyboard. The key positions on the 125B are the same as on the 125A, but the new keycaps are "sculptured" to make typing more comfortable—the "home" keys are dished for easy location by touch.
- **New Utilities.** Standard utilities have been added or enhanced to simplify disc functions.
  - —An improved version of the Install utility now lets you install non-HP packages—so that they have labelled function keys in the WELCOME menu.
  - —Series 100/BACKUP allows files larger than 248K bytes to be backed up. BACKUP is a menu-driven utility designed to save large amounts of data on several smaller-capacity discs. BACKUP also allows the user to copy data files between discs. For data transfers which require more than one destination disc, information is stored in a special format designed to compact large amounts of data. Data stored in the compacted format cannot be read by any program until restored by BACKUP.
- **82905B National Character Support.** The HP 125B supports the national character set capabilities of the 82905B dot matrix printer.
- **New Improved Documentation.** HP 125Bs will ship with the new Series 100 Owner's and Installation manuals—as described in another article in this issue.

By ordering an Operating System Update Kit, you can make your 125A functionally compatible with the 125B. For information, refer to the article "Ordering Software, Manuals, and Updates" in this *Communicator.*

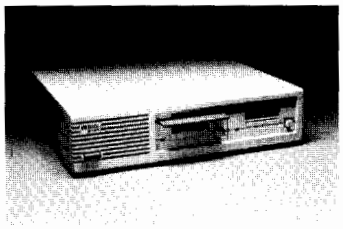
The HP 125B will be available in early 1983.

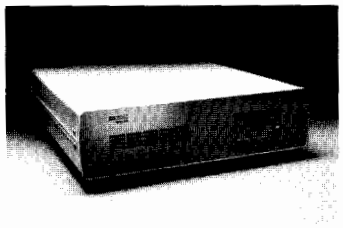
Contact your Authorized HP Personal Computer Dealer or your local HP Sales and Service Office for further information.

New Peripherals Supported on HP 125A

Three new disc memories, a low cost letter-quality printer, and an automatic sheet feeder are now supported on the HP 125A, the HP 125B, and the HP 120.

Mass Storage





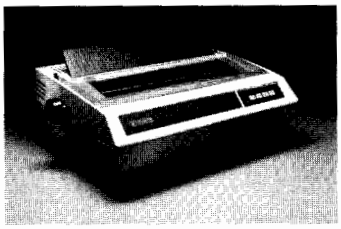
HP introduces micro-floppy discs! These 3.5 inch disc drives provide additional features at a reduced cost. The size of both the discs and the disc drives has been greatly reduced. The 3.5 inch discs are more protected than 5.25" media and therefore are less likely to be damaged. In addition, the performance of the disc drives has increased. Operations to read and write data on a disc on a Series 100 take less time, so the overall performance of the system is improved.

There are three new micro-floppy disc drives being introduced:

Product	Description
9121S	Single 3.5 inch micro-floppy (248K)
9121D	Dual 3.5 inch micro-floppy (496K)
9133A	Winchester System (4.4M bytes) with single micro-floppy back-up (248K)

The new 9121D dual 3.5 inch micro-floppy disc drive is fully supported on the 125A. The 9121S single disc drive can be added to a system which already has one or more disc drives. The 9133A Winchester System with integral micro-floppy can be used as well.

Printers



The new 2602A printer offers a low-cost solution for the preparation of letter-quality documents. The bi-directional print speed is 20 to 25 characters per second. The 2602A is supported by both Series 100/Word and WordStar/100. The new 2601A dual-bin sheet feeder (26010A) is supported as a single bin feeder by WordStar. Both bins can be used with Series 100/Word.

To add these new disc and printer capabilities for your HP 125, contact your Dealer or HP Office.

Introducing Series 100/DSN/Link

Series 100/DSN/Link is a new file transfer program that allows you to link your Series 100 Personal Computer to an HP 3000 as part of HP's Distributed Systems Network.

Series 100/DSN/Link incorporates error checking, binary as well as ASCII file transfer, and the ability to customize interfaces to host programs. It also has efficient host disc utilization; and it can read Series 100/Word and WordStar/100 formats, print local program listings, and process escape sequences.

With Series 100/DSN/Link (also referred to as DSN/Link), you can take advantage of the friendly user interface on the Series 100 to:

- transfer files to and from the HP 3000.
- view a local directory or delete local files while running DSN/Link.
- create and execute a local command file to provide customized programs or to transfer files in batch mode.
- log your interaction with the host computer to your Series 100's printer, a file on the Series 100's disc, or both.

In order to use DSN/Link, verify with your system manager that your HP 3000 has operating system MPE IV C.00.20 (or later) installed. On an HP 3000 Series 64, the MPE Version must be D.00.20 or later.

To order Series 100/DSN/Link, product 45534B, see your Authorized Dealer or HP Sales Representative. Refer to "Ordering Software Packages" in this issue for details.

If you presently have Link/125, you may wish to upgrade to Series 100/DSN/Link. Refer to "Ordering Updated Software and Manuals" for information on how to exchange your disc.

Enhanced Presentation Graphics Package Now Available

In response to requests from the many who presently have the GRAPHICS/125 package, we have altered some of the operational aspects of the existing product and added several new features. The result is Series 100/Graphics (Version A.01.02), an application that is one of the most versatile graphics products on the market.

New Features

The new version's enhancements and changes include:

- Plotting up to twelve segments in a pie chart. The previous version only allowed up to ten segments.
- Improving the default scaling values calculated for the Y-axis on bar charts. (You can still specify your own if you wish.)
- Making it easier to set tabs on the Data Page of linear charts by adding SET TAB and CLEAR TAB softkeys. Previously, control sequences were used to set tabs.
- Providing the ability to draw vertical text slides on the HP 7470A and 7225B plotters.
- Allowing you to alter the size of a text slide, by specifying your own graphing limits (setting P1 and P2). Previously, the slide program set these for you.
- Providing the ability to draw subscripts and superscripts on a text slide by adding two new options to the size field of the slide program.

SUBSCRIPTS AND SUPERSCRIPTS

$2H_2 + O_2 \text{ ---> } 2H_2O$ Chemical Formulas

$A^2 + B^2 = C^2$ Mathematical Formulas

See below[1] Footnotes

1 See how easy it is to do subscripts and superscripts.

- Simplifying the process of mixing text size, fonts, and pen colors on a text slide by adding a new option (the Append option) to the justification field.
- Improving the friendliness of the error messages. Now when a problem occurs, the error message will provide a more meaningful description, making it easier for you to determine the nature of the error.

Several other changes have been made as a result of the service requests we have received. Check the Software Status Bulletin Section of this *Communicator* to see a list of problems that were fixed in this new version of Series 100/ Graphics.

New Documentation For Series 100/Graphics

A new reference manual, the Series 100/Graphics Reference Manual, has been written to reflect the new features of the product. This manual is in the new Series 100 manual format.

A Quick Reference Card has also been added to the standard documentation included with the Series 100/Graphics software. Designed for more experienced users, it is especially useful for determining shading patterns, line types, and text styles.

How to Obtain Series 100/Graphics

Refer to the "Ordering Information" section of this issue for further information.

New Manuals for the Series 100

Along with the introduction of the HP 120 and related software and peripherals comes a completely new set of manuals for the Series 100 Personal Office Computers.

New Format

In addition to describing the new product features, the manuals have taken on a new format. Manuals shipped standard with each system and with application software products (VisiCalc®, Graphics, Word, and DSN/Link) have the following format:

- Smaller page size—5½"x8½" rather than 8½"x11". Though smaller, these manuals are more readable because of the high-quality type used.
- Individual binders for each product—each product now has its own customized, cloth-covered, silk-screened binder. As a result, documentation for a given product is more easily accessible.
- A more useful package—the binder fits into a slip case which makes for easy storage on a shelf. Each binder also contains a plastic disc envelope, in which you can store the Master Disc for that product.

New Manuals

The manuals have been rewritten and updated to describe new features. In addition, Tutorial Manuals, Quick Reference Guides, and a computer-aided instruction disc are now available.

Manuals Shipped With Every System

New installation guides have been written for both the HP 120 and HP 125. Superseding the *Getting Started With Your HP 125* manual, these installation guides use pictures and step-by-step instructions to help you properly install a Series 100 Personal Computer.

The all-new *Series 100 Owner's Manual* replaces the existing *HP 125 Owner's Manual* and *HP 125 Utilities Manual*. Rewritten and restructured to better address the needs of a non-technical user, the Owner's Manual also describes the software enhancements (including the new BACKUP and application installation programs) in the new A.02.00 version of the Operating System.

Included with the standard manuals is an instruction disc, known as the Series 100 Computer Tutor, which teaches basic concepts to get started with the system and also verifies that your system has been properly installed. The benefit of the Computer Tutor is that a first-time user can learn about the HP 120 or HP 125 through hands-on experience.

Application Software Manuals

In addition to reformatting and updating manuals for the new Series 100/ VisiCalc, Graphics, Word, and DSN/Link products, we have added some tutorial manuals and quick reference guides.

The current documentation for VisiCalc/125 has been restructured into a tutorial manual, a reference manual, and quick reference guide. The tutorial manual, entitled *Getting Started With Series 100/VisiCalc*, guides you through the operation of the program. The *Series 100/VisiCalc Reference Manual* provides a detailed summary of all commands and functions associated with VisiCalc. The *Series 100/VisiCalc Quick Reference Guide* provides a pocket-sized summary for the experienced user.

For Series 100/Graphics, the original Graphics/125 manual has been restructured and rewritten to include all of the features described in the article "Enhanced Presentation Graphics Package" in this issue. This manual, entitled *Series 100/Graphics Reference Manual*, also has several new appendices including how to plot Series 100/VisiCalc files, using graphics to your advantage, and an expanded troubleshooting section. In addition, a *Series 100/ Graphics Quick Reference Guide* has been added.

In the last issue of the *Communicator*, we described the new documentation available for the Word/125 product including a tutorial and a quick reference guide. For the Series 100/Word product, all of these manuals have been reformatted and updated. The manuals include *Getting Started With Series 100/ Word*, the *Series 100/Word Reference Manual*, and the *Series 100 Word/Quick Reference Guide.*

The existing Link/125 manual has also been reformatted and re-written to reflect the changes made to Link/125 for the Series 100/DSN/Link product. This new manual is entitled the *Series 100/DSN/Link Reference Manual.*

How Do I Get These New Manuals?

Since the manuals have been updated to reflect changes made to the software products, *it would not be of much use to have the new manuals without the new software.* In addition, we still cannot make additional copies of application software manuals available to customers.

The Series 100 Software Update Program is a procedure by which you mail in a Master Disc for a product and receive the most current software and relevant manual updates for a small fee. (Of course, you continue to run using your installed copies of the product from your Work Discs.)

By taking advantage of this program, you can keep your old manuals—plus obtain a copy of the new software with the new manuals. For example, suppose you purchased WORD/125 last January. With it, you received the WORD/125 Master Disc and WORD/125 manual. Now, by mailing in your WORD/125 Master Disc and paying a nominal fee, you will receive the new version of the Series 100/Word software, plus *Getting Started With Series 100/ Word*, a *Series 100/Word Reference Manual*, a *Series 100/Word Quick Reference*, a cloth-covered binder, and slip case. See the "Ordering Information" section in this issue for further information.

HP PLUS

To provide users with additional software for HP personal computers, standard CP/M programs from selected software vendors are being made available. Each of these programs will run on all of the HP personal computers with a CP/M operating system. These are industry standard software packages, supported by the original designer, that run on the Series 80 and Series 100.

MILESTONE®, for project planning and management; DATEBOOK II™, for professional scheduling; and PERSONAL DATEBOOK™, a personal calendar, are our first standard CP/M offerings. These products are available either through your local Hewlett-Packard Sales Office, your local Authorized HP Personal Computer Dealer, or the Hewlett-Packard Computer Supplies Operation, as described under "Ordering Information".

MILESTONE

For the management of small- to medium-sized projects, MILESTONE helps project leaders clarify the tasks at hand and communicate schedules and priorities.

MILESTONE uses Critical Path Method (CPM) techniques to treat projects as a series of activities in project planning. As changes are made in the project plan, MILESTONE automatically redetermines which steps must be done on time to keep the project from falling behind schedule. Each change automatically updates the project and displays the new schedule on the screen allowing you to see the new critical paths.

Once the project is underway, MILESTONE uses the Program Evaluation and Review Technique (PERT) to track project progress.

What is a Critical Path?

Critical-path-network-analysis is a technique originally devised in the late '50s. The basic technique is to divide a complex project into a series of smaller and more easily understood tasks and then to analyze their timing to see which ones are critical to the overall completion of the project—critical in the sense that any delay in a job on the critical path results in a delay of the entire project.

There are basically two methods of critical path analysis, PERT and CPM:

- The acronym "PERT" stands for "Program Evaluation and Review Technique." It treats a project as a series of *events* occurring in a time sequence and is a good tool for reporting the progress of a project.
- "CPM" stands for "Critical Path Method" (not to be confused with the operating system known as CP/M). In contrast to PERT, CPM treats a project as a series of *activities* and is useful for planning a project.

MILESTONE combines the best features of these critical path techniques into a package that is inexpensive, runs on a personal computer, and is simple to use. It is designed to expand the application of critical path analysis to areas where, because computers were formerly so expensive, it would never before have been considered. It is not designed to replace some of the more sophisticated PERT and CPM implementations with features such as resource leveling and schedule optimization.

In small-project management, the primary purpose of planning is to help the project leader clarify the task at hand and to help communicate this to others. For these two reasons, MILESTONE stresses interactivity and comprehensive reporting.

Internally, MILESTONE treats your project as a series of activites. Each activity has a name, duration, capital cost, mix of manpower, and an associated list of other activities that must be completed first. The list of associated activities provides a thread that MILESTONE uses to link all jobs together into an overall project schedule. Every time you add a new activity or make a change to an existing one, the entire schedule is recomputed and the results are immediately redisplayed on the screen.

How Can I Use It?

For our purposes a *project* is simply any task made up of steps that must be performed in sequence. After dividing a project into its composite steps, MILESTONE can help you plan, schedule, and control the project.

Specifically, here are some of the things that you can do:

- Find out which activities are time-critical and can't be delayed.
- Discover which activities have slack time and can be delayed if necessary without delaying the entire project.
- Prepare a detailed cost estimate based upon a summation of each activity's individual equipment and manpower expenses.
- Change an activity and instantly see the impact on the overall project schedule.
- Investigate the tradeoffs between manpower, dollars and time.
- Keep track of your project's progress by periodically updating the schedule to reflect changes in the plan and completed activities.
- Communicate your plan to others by giving them a clear picture of what is expected of them—and when.

By defeating its critical path option, it can also be used as a sophisticated planning calendar to:

- Create an activity calendar to keep track of your vacation time, business trips, conferences, and special meetings.
- Plan your organization's projected workload for the coming year.
- Allocate the rental or other use of equipment or resources.

Among the six examples included on the product disc are:

- A simple construction project making use of capital and manpower costs.
- A business plan for opening a retail store.
- Federal Pre-sentence Investigation: A Federal probation officer outlines the steps in conducting an investigation.
- Recreational Vehicle Rental: By disabling the "Find critical path option", MILESTONE becomes a tool for scheduling the use of a piece of equipment.

Specifications:

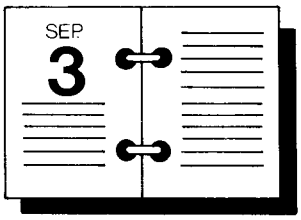
Capacity	126 activities
Skills	Nine manpower categories with different costs per time-unit
Time Units	Can be measured in hours, days, weeks, months, quarters, or fiscal quarters. You can define your normal working hours, working days, and holidays
Duration	Up to 32,767 time units
Reports	Three reports including a large time schedule chart made by aligning strips from the printer

Ordering

MILESTONE is available for the HP Series 100 (and HP Series 80) as Hewlett-Packard product number 45580A. Support is provided by the program developer, Organic Software, of Livermore, California. Refer to the "Ordering Information" section in this *Communicator* for ordering details.

DATEBOOK II and PERSONAL DATEBOOK

DATEBOOK II



DATEBOOK II is a standard CP/M software package from Organic Software that enables an individual to manage time just like an office appointment book. The software package is designed for medical, legal, real estate and other professional offices or corporate departments where time management or scheduling are critical to efficiency.

DATEBOOK II can help you with these common professional scheduling tasks:

...find an appointment slot for a client in a very tight time schedule. Define a few parameters and DATABOOK lists all possible openings until you pick an acceptable one.

...find an open conference room or available company car.

...find a convenient time for a staff conference. DATABOOK solves this problem by automatically finding a time when all staff members are free.

...print a schedule for each staff member every morning.

Specifications

DATEBOOK maintains appointments for up to twenty-seven people, in nine groups of three. For example, a group could be three attorneys in a law practice or for three rooms in a dental office. You specify the names of the people, or rooms, the first time you run DATEBOOK, in addition to the basic time interval of 10, 15, 20, or 30 minutes.

Up to 40 appointments are allowed for each calendar day and are kept in 28 day (four week) blocks. You specify how many of these blocks you need.

The range of time for which DATEBOOK can keep appointments depends on several factors: the capacity of your disc drives, the number of disc drives you have, the number of people you are scheduling for, and how heavily each person's time is scheduled. Here are two examples:

- Large Group Capacity
  A typical large group application is in an executive or professional office where a receptionist is responsible for scheduling several people. Each person typically has a relatively light appointment load which is not scheduled very far in advance. In this case, DATEBOOK is used most efficiently by forming three person "groups".

  On the HP Series 100, one data disc can contain 28 days of appointments for 24 people (eight three-person groups). This assumes that the average person has no more than 120 appointments over the month. In addition, each group has a special list of up to forty appointments that can be scheduled at any time beyond the normal range.

- **A Long Range Application**
  A typical long range application is in a medical or dental office with a heavy load scheduled long in advance. Each doctor schedules time into three different examining rooms; therefore, a DATEBOOK "group" consists of three rooms for one doctor's use.

  On the HP Series 100, one data disc can contain 252 working days of appointments for one person in three rooms. With this structure, the disc can contain up to 3500 appointments over the year.

PERSONAL DATEBOOK

PERSONAL DATEBOOK offers many of the advantages of DATEBOOK II but is designed for the individual who keeps a personal calendar.

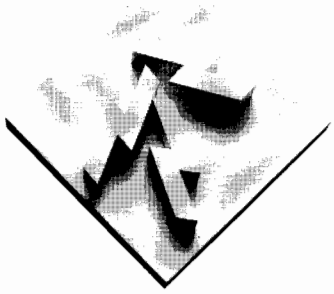
PERSONAL DATEBOOK can maintain appointments for up to nine people; the group feature is not included. The overall capacity is the same as with a similar DATEBOOK II configuration, but PERSONAL DATEBOOK shows more of the person's schedule on the screen at one time.

Ordering

DATEBOOK II and PERSONAL DATEBOOK are available for HP Series 100 (and HP Series 80) systems as Hewlett-Packard product numbers 45581A and 45582A, respectively. Support is provided by the program developer, Organic Software of Livermore, California. Refer to the "Ordering Information" section in this *Communicator* for ordering details.

Two Choices Available for 3270 Emulation

Overview



As announced in the last issue of the *Communicator,* synchronous communications capability is available on the Series 100 via DataStream's T7 3270 protocol converter. The unit offers 7, 11, or 15 RS-232 ports.

Now, a less expensive alternative (offering 2 ports) is available for users who do not require large numbers of Series 100 systems linked to their mainframe host. Local Data, in Torrance, California has announced support of the Series 100 on their DataLynx 3270 protocol conversion unit.

As with the DataStream unit, HP has successfully tested the unit with the Series 100; we are "referencing" both products. "Referencing" means that HP has found that these products work in a typical test environment. The units are available directly from the manufacturers; we can neither guarantee nor support them. As a service to the Series 100 community, we use the reference process to bring non-HP products to the attention of HP Series 100 users.

Functionality

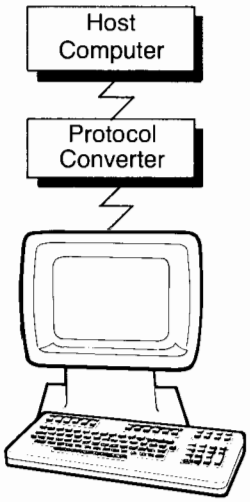
The DataLynx uses the Series 100 in *terminal mode only;* it does not allow host system interactions with CP/M programs on the Series 100 or use of Series 100 devices (i.e. plotters) other than the display and keyboard.

However, the DataLynx/3270 has been programmed to take advantage of the Series 100's intelligent terminal characteristics. For example, the DataLynx/3270 downloads and sets Series 100 function keys to implement the following common IBM functions: PA1, PA2, PA3, CLEAR, ERASE INPUT, ERASE EOF, INSERT, DELETE.

Technical Background

IBM 3270 data differs from HP data in two ways: IBM stores data in EBCDIC format rather than HP's ASCII. IBM uses binary synchronous protocol rather than HP's asynchronous protocol. Therefore, a protocol conversion box must convert the Series 100's ASCII format and asynchronous protocol to IBM's bisynchronous EBCDIC for the Series 100 to function as an IBM terminal.

Configuration



The Local Data DataLynx/3270 conversion unit is attached to the Series 100's standard RS-232 communications port and performs all of the conversion task. The Series 100 requires no hardware changes or special software when used as an IBM 3270. The IBM mainframe thinks that it has a standard IBM 3270 terminal attached. The Series 100 retains its full terminal and personal computer characteristics. The protocol conversion and IBM 3270 terminal personality only come into effect when the Series 100 is placed in remote mode and connected to the IBM mainframe.

The DataLynx/3270 may be placed near the mainframe for access by the Series 100 via a modem. It may also be directly connected to the Series 100 and then attached to the IBM mainframe via a leased line.

HP Testing

HP tested the combination of a Local Data DataLynx/3270 protocol converter and the Series 100 personal computer with the following host system configurations:

—TSO under MVS/SP 1.1, using ACF/VTAM 2.1 and ACF/NCP 2.1

—CMS under VM/SP 1.08, using EP

In all cases, the EBCDIC Bisync communications protocol was used, with the DataLynx emulating an IBM 3276 controller with 3278-2 terminals. The DataLynx was the only controller on the line, which was operated at 9600 bps in point-to-point mode; multipoint operation was not tested. Terminal speed was set at 9600 bps and parity was set at even.The testing was all performed using line drivers. Since the lines were essentially error-free, there was no testing of the DataLynx's ability to handle line errors. No tests were performed for dial-up modem use or printer support.

Under the above conditions, the Local Data DataLynx/3270 performed as advertised, providing full IBM bisynchronous 3270 capabilities on the Series 100. The documentation for the DataLynx/3270 fully describes its capabilities and installation.

Usage and Configuration

1. Although a simple procedure, installation and configuration of the DataLynx in an office environment requires opening the DataLynx's cabinet and changing a number of switches and jumpers.

2. Terminal speed and parity settings of the Series 100 must match the port settings on the DataLynx; there is no automatic detecton or adjustment of speed or parity. For good response time, the fastest terminal speed possible on the host should be used.

3. The DataLynx automatically initializes the Series 100's terminal strap settings when the user identifies the terminal type (125) in response to a prompt message. The settings are AbCGH1. The DataLynx does not set the "Hndsk" straps, so the user should set the "X" strap, enabling XON/XOFF. The "E" (for ENQ/ACK) can be left on as well, since XON/XOFF and ENQ/ACK do not conflict in normal usage. When the Series 100 is returned to local mode, the straps must be returned to normal settings.

4. The protocol conversion tables cause all display fields to use HP normal intensity. Therefore, the IBM 3270 screens on the Series 100 appear slightly different than they appear on IBM 3277 terminals, but the differences are minor. Functionality is not impaired.

Support

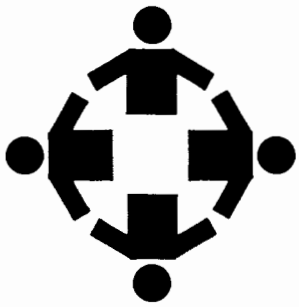
For further information and support, contact:

Local Data
2701 Toledo Street, Suite 706
Torrance, California 90503
Phone (213) 320-7126
Telex 182518

For information and support on the 7-, 11-, or 15-port DataStream converter, contact:

DataStream
1115 Space Park Drive
Santa Clara, California 95050
Phone (408) 727-2980

Series 100 Users Group



A Users Group for the HP Series 100 is being formed. Any individual or organizaton having an interest in using the HP 125 or HP 120 is invited to join. The purpose is to make the Series 100 more useful to individuals and organizations by exchanging ideas, tips, techniques, and software.

The Series 100 Users Group will emphasize use of the system in a business environment by professionals to solve business problems. The objectives of the group are:

- Establish a Contributed Library of public domain software (first release is scheduled for March, 1983).
- Publish a regular newsletter.
- Hold monthly meetings and sponsor interesting speakers.
- Support professional development of Series 100 users.

As with the users groups for other HP systems, this organization is independent of the Hewlett-Packard Company.

For further information, or to start a chapter in your area, contact:

Rick Hencken
Data Processing Manager
Marine Terminals Corporation
289 Steuart Street
San Francisco, CA 94105
(415) 986-6576

Disc Formats on the HP Series 100

A disc must have been written in a "supported" hardware and software format before it can be used on a given computer.

There are two aspects to disc formatting—hardware and software. The hardware-dependent part of a disc's format is determined by the controller electronics in the disc drive. The software aspect of a disc's format is related to the operating system and utilities used with the disc. If a disc was written in a supported *hardware* format but an unsupported *software* format, such as an IBM 3740-type disc, a utility is needed to read and convert the data from the IBM disc to a CP/M disc. If a disc was written in an unsupported hardware format, then it cannot be used on the system at all.

This article covers:

- Series 100 hardware disc formats
- Series 100 software disc formats
- the most common format conversion situation—IBM 3740 format.

Hardware Formats

There are five types of *hardware* disc formats supported by the Series 100. They are:

- HP format – 5¼" double sided, double density media from the HP 82901 disc drive
- HP format – 3½" single sided, double density media from the HP 9121 disc drive
- HP format – 8" double sided, double density media from the HP 9895 disc drive
- HP format – 9134/9135 fixed disc
- IBM 3740 format – 8" single sided, single density media from the HP 9895 or other compatible disc.

If a disc is in any of the above hardware formats, then the disc controller can access data on that disc. However, to use standard CP/M utilities and to access data files from the Series 100, a disc must have a valid CP/M *software* format as well.

Software Formats

The Series 100 FORMAT utility is used to program the software format on a disc. An important function of the FORMAT utility is to organize a disc into sectors. A small area between any two sectors is called the Inter-Record Gap; it is used to store information such as track and sector addresses which identify the next sector. FORMAT writes the track and sector information in the Inter-Record Gap. This information is accessed only by the disc controller—the computer does not see it.

A valid CP/M Software format has the directory and data files in an organization which CP/M understands. For example, if a user wants to read the disc directory of an HP formatted 8" disc, CP/M informs the disc controller to fetch the directory from track 2 sector 0–15 instead. Therefore, if a disc does not have an assumed software format, then CP/M cannot access information on the disc correctly. (Refer to the System Reference Manual for more detailed information on the track and sector allocation.)

Reading IBM 3740 Format Discs

Occasionally, you will have data on a disc which is not in a software format supported on the Series 100, but is in a hardware format supported by the Series 100. This would be the case with a disc formatted by a key-to-disc 3740-type system. The IBM 3740-type system creates the disc directory on track 0 sector 7 of the disc, which is different from the CP/M format. Although the disc controller can access data on this disc, CP/M will tell the disc controller to read data from track 2 sector 0–15 instead of where the directory is actually located. Moreover, the Series 100 uses ASCII data representation on discs, while most IBM 3740-type media use EBCDIC data representation.

To properly interpret data files on an IBM 3740 disc with IBM software format, you must use a conversion program. Several utilities are commercially available which transfer data from an IBM 3740 formatted disc to a CP/M formatted disc and vice versa. Once data has been transferred from the IBM disc to a CP/M disc, the CP/M operating system and its transient utilities can read and write to those IBM files.

New CP/M Compatible Software Catalog Available from Digital Research

CP/M®

A new guide to CP/M Software has been published by Digital Research, the creator of the CP/M operating system. Entitled "The CP/M Compatible Software Catalog," it lists a variety of application software products produced by independent vendors.

Contents

The catalog is divided into three parts:

1. Domestic & International Vendors (listed alphabetically)
2. Languages
3. Specific Application Programs

Although the index does not include all of the thousands of independent software vendors who write CP/M compatible software, it is a representative sample. Products are described in detail, and vendor names, addresses, and phone numbers are included.

Ordering Information

To obtain copies of the catalog (costing $10.00 in the U.S.; $20.00 elsewhere), contact Digital Research's Customer Service Department in Pacific Grove, California at (408) 649-3896. You may also send a check to:

Customer Service Department
Digital Research, Inc.
P.O. Box 579
Pacific Grove, CA 93950
(add 6% sales tax if ordering in California)

In Europe, contact:
Paul Bailey
Vrijbuiterhof 13
2132TL Hoofddorp
The Netherlands
Phone: 31(2503)10365

Software suppliers or HP Series 100 OEMs who have written CP/M programs should contact Nan Bomberger at DRI in California for inclusion in the catalog.

Note

Although many of the packages listed in the catalog run on the HP 125, it is best to *check with the vendor before purchasing* to verify compatibility. See "Non-Series-100 CP/M Programs—Will They Run?", (excerpted from the new Owner's Manual) in this issue of the *Communicator.*

Non-Series-100 CP/M Programs—Will They Run?

Many CP/M programs can be used on a variety of computers and terminals. Check to see if a particular CP/M program will work properly on a Series 100 by asking the questions covered in this article. Your dealer or vendor should be able to answer these questions.

1. Is the application designed for use with the standard CP/M operating system?
   Standard CP/M _____ Non-standard CP/M _____

2. Does the application require configuration, depending on which computer it is used on?
   No configuration _____ Configuration _____
   If the program is designed for standard CP/M (question 1), and requires no configuration, it should run on a Series 100. If the program has a configuration menu, see questions 3 through 11.

3. Does the terminal configuration list computers and let you pick one? If so, is the HP 125 or HP 120 included in the list of computers?
   List includes Series 100 _____ Series 100 not included _____
   If the program configures by using a list (not containing the HP 120 or HP 125), the program probably won't run on a Series 100.
   If the program configures by asking you to select features, ask questions 4 through 11.

4. When using applications, cursor control sequences are often required. (A cursor control sequence positions the cursor on the screen.) A Series 100 cursor control sequence has a control code, row number, control code, column number, control code.

   QUESTION TO ASK: Can this program use a cursor control sequence such as:

   ESC & a 1 0 c 1 2 R

   This sequence positions the cursor at column 11, row 13 on the screen.
   YES _____ NO _____

   QUESTION TO ASK: Can the row and column numbers in this program be represented as ASCII characters? (In the example above, the column number would be a one and a zero, not a ten.
   ASCII _____ NUMERIC _____

5. When the application program performs each of the screen control functions on the left (below), can it be configured to use the HP control sequence on the right?

Function	HP Control Sequence
Home up	ESC h
Clear to end of screen	ESC J
Clear entire screen	ESC h ESC J
Clear to end of line	ESC K
Insert line	ESC L
Delete line	ESC M
Insert character on	ESC Q
Insert character off	ESC R
Delete character	ESC P

Can use escape sequences _____ Can't use escape sequences _____

6. Are display enhancements done character by character, or by turning display enhancement on and off? A Series 100 turns display enhancement on and off—if the program doesn't do this, you may be able to use the program by setting the enhance sequence to null (not using enhancements).
   On and off _____ Character by character _____

7. Does the program move CP/M 'down' in memory to allow memory above the operating system to be used for an activity such as spooling? If so, the Series 100 ROMs won't be able to find CP/M. The program will not run under any circumstances.
   CP/M not moved _____ CP/M moved _____

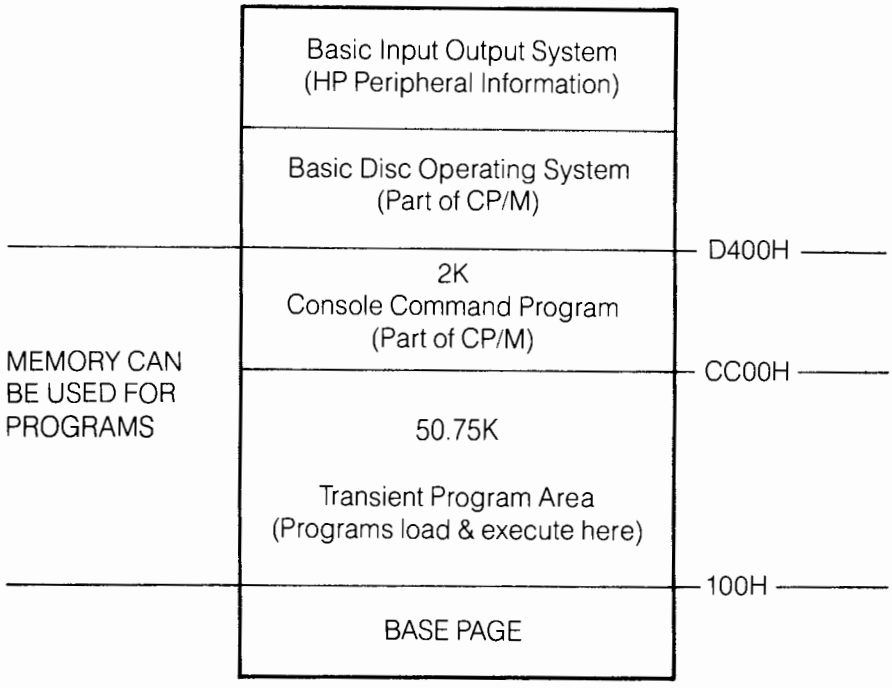
8. Does the program use port I/O to communicate to a physical device other than a disc drive? If so, it won't find the printer or plotter it's looking for, and nothing will print or plot because a Series 100 uses device mapping. You may be able to purchase consulting time to adjust the program to use system calls.
   No port input/output _____ Port input/output _____

9. Is the program disc available in HP format? If not, the only other option is to buy the program on an 8 inch disc in CP/M IBM 3740 format, and pay a consultant to convert it to a 5¼ inch disc. (If you have our own 8" disc drive, try to run it before calling; it may run with no adjustment.)
   HP format _____ Non-HP format _____

10. Does the program include its own driver, bypassing the operating system? Unless it was specifically written for the HP 125 or HP 120, the program may not run.
    Uses system driver _____ Has its own driver _____

11. Does the program load and execute more than 53K of code at a time? If so, it will use part of the room needed for the operating system, and the program won't run.

    If you are asked specific questions by a dealer or vendor as to what part of memory can be used to execute a program, refer to the diagram and sample answers below.

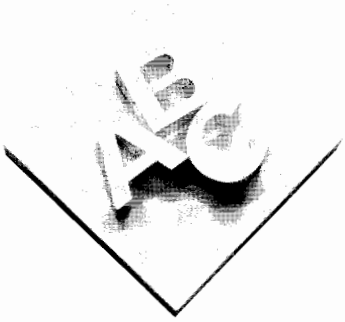


    If you are asked why a program can use (in addition to the TPA), the CCP section of memory, the answer is as follows. The CCP is the part of CP/M that lets you use CP/M directly; the "A>" prompt activity is done in the CCP. When a program is running, you can't do "A>" activities, so the CCP part of memory can be overwritten. The BIOS and BDOS parts of memory are parts of the operating system that are always needed.

If possible, ask a dealer to try the program you are considering on his HP Series 100 system. If it runs on his system, it will run on yours.

If you checked any boxes on the right, reread the explanation to see if any additional steps can be taken to make the program work on a Series 100.

Long Documents in Series 100/WORD



The Series 100/WORD page counter has a 255-page limit. It restarts at zero after that. To number long documents consecutively beyond 255, follow this procedure:

As you approach page 255, go to single sheet printing so as to catch page 255 (or stop at a convenient place before you reach it). Then, enter ".H2.<" and reset the YT line to print *both* title and page number (option 3). Change the position of the number and title to be identical—"00", "22", or "33". Reset the page number to drop the 100's digit. The printer will then overlay the "title" and the page number giving the correct sequence.

NOTE

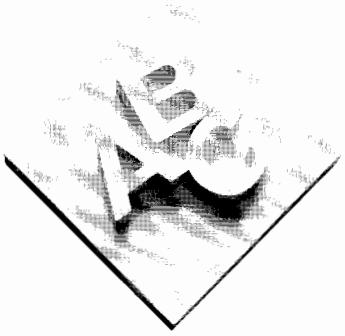
For 300–309, 400–409, etc. the title must be "30.<", etc. for 10 pages, then drop the middle zero.

The period character is critical. The title function does not recognize final spaces and will print the "3", "4", etc. at the margin if two spaces are put in before the <. The period is the smallest, least noticeable character that will determine where the true margin is to be.

If the page number is set in the table at 256 or higher, WORD gives an "Invalid Entry" signal when you try to execute a print command. This can be surprising and very puzzling if you do not know what the problem is.

[Thanks to Robert Belden of San Diego, California for this article.]

Series 100/WORD: Y and YT Table Gymnastics



Question:
Can an alternate YT table be set in Series 100/WORD?

Answer:
Unlike the Y table, there is no automatic alternate YT table. However, an alternate could be put in the holding buffer and recalled as needed.

Question:
Do all .Y Table entries have to be repeated over and over if multiple .Y statements are used in a document?

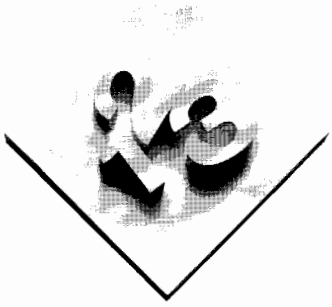
Answer:
If you are inserting a new Y Table in the Text, and no change is being made on a variable, a single "/" can be typed into the variable location, for example, if you format a letter that contains tabular information, you will want to turn off proportional space when the Table is printed:

1. Text requires proportional space:
   .Y 1 54 0 0 0 1 0 65 8 12 1 1 35 5

2. Table requires standard spacing:
   .Y / / / / / / / / / / / / 0 / /

3. Return to proportional space for text:
   .Y / / / / / / / / / / / / 1 / /

Correction — Plotting From Series 100/VisiCalc



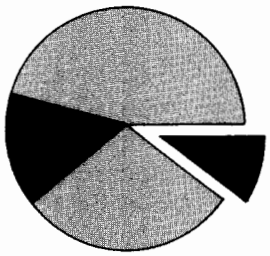
In issue #2 of the *HP 125 Communicator* there is an article on plotting graphs from Series 100/VisiCalc files.

The paragraph "Use of DIF Files" states that row oriented VisiCalc data can be stored by column to set the data up for the linear chart program. This is not correct. The rule is to always store the data as it appears on the screen. Row-oriented data should be stored by row to a DIF file—the linear charts program will figure it out and rotate the data into columns when it makes the plot.

Likewise, the next-to-last sentence under the paragraph titled "Linear Chart Specifications" should have the following deleted:
"...In column format."

Using Graphics To Your Advantage

Introduction



This article gives some rules-of-thumb for using graphics effectively. Use these guidelines to answer questions about which charts to use. These are only guidelines, not hard and fast rules; use your judgment with these guidelines when special cases arise.

The key to using Series 100/Graphics effectively is knowing:

- your audience and what you want to tell them
- the type of chart that best presents your information
- the organization and central statement for each chart

General Rules-of-Thumb

Simplicity

The first commandment in producing charts is: "Keep It Simple." A chart simplifies the analysis of data, as long as there is not too much data. If the chart is cluttered or there are too many different trends to see, simply break the chart up into several smaller ones. Avoid presenting abstract material such as theories or plans.

Too much or unnecessary text tends to distract viewers from the data. Thus, the chart should contain only text that is necessary for the viewer to understand the data. Conclusions from the data, strategy, and recommendations should be printed elsewhere for the data to have the greatest impact.

Know Your Information

You should know the information you are trying to present. You should also have a good understanding of your audience. Determine what your audience needs to know. Construct a theme sentence for your chart describing the relationship you want to project. Such a theme indicates the type of chart you should use to present your material.

Select the Right Chart Type

The type of chart you use depends on how you want to analyze the data. For example, you may wish to see the trend of a single set of data as a function of time or some other parameter. Or, you may wish to compare several different sets of data. Or, you may wish to see how the components of data compare.

In choosing which chart to use, be sure to ask yourself the following questions:

- What am I trying to see? A trend of a single set of data, a comparison of trends for several sets of data, or the component breakdown?
- Is the data irregularly or regularly spaced? What is the range of the data? If the range is very wide, perhaps logarithmic axes are required.
- How many points are in each data set? How many data sets?

Line charts are a convenient way of comparing several different sets of data or looking at a trend for a single set of data. For comparisons, line charts can be used to show several values side-by-side over the same period of time or other continuous variable.

Bar charts allow you to easily see the trends of totals while breaking up data into components. They allow you to compare groups at specific points in time. Stacked bar charts can be useful for portraying percentages.

Pie charts are used when the component breakdown is of interest. They should not be used for showing absolute magnitudes. Any theme sentence mentioning the relation of a part to the whole indicates a pie chart (or stacked bar chart). Be careful not to crowd too many values on this type of chart. Comparisons are possible, but more difficult, when pie charts are used. One suggestion—make several pie charts (one for each time period or variable point). Keep the segment arrangement consistent; do not sort the segments.

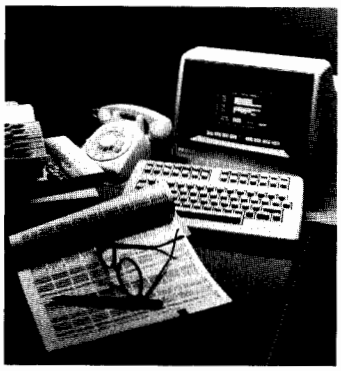
In summary, keep the following in mind when preparing a chart for presentation:

- Present only one main idea with each chart.
- Keep your charts as simple as possible.
- Avoid unnecessary subtitles and footnotes.
- Leave grid lines off of presentation graphics, unless absolutely necessary.

Remember, you may be presenting the data in a new light to your audience.

Condor Tips

Data Base Restructuring



The example of restructuring a data base on page 9–15 of the Condor® Series 20 Manual will not work with database item values containing commas. This is because the READ command presently interprets commas as item delimiters. The correct procedure should be:

```
COPY TEMP = CARDFILE
WRITE TEMP TEMPFILE [B]
EMPTY TEMP
DEFINE TEMP
READ TEMP TEMPFILE
FORMAT TEMP
LIST TEMP
COPY CARDFILE = TEMP
DESTROY TEMP
DESTROY TEMPFILE
```

The FORMAT command must be used to change the item names and to increase the number of underscores that define the item size. Note that the data has been read back into the database before using the format command.

The same problem occurs when reading data into a database from the HP 3000 via LINK/125—any items with embedded commas will not be read properly unless enclosed in quotation marks.

Search Operations

You can have embedded blanks in item names if you enclose the item names in quotation marks ("ITEM NAME") when using them in search operations.

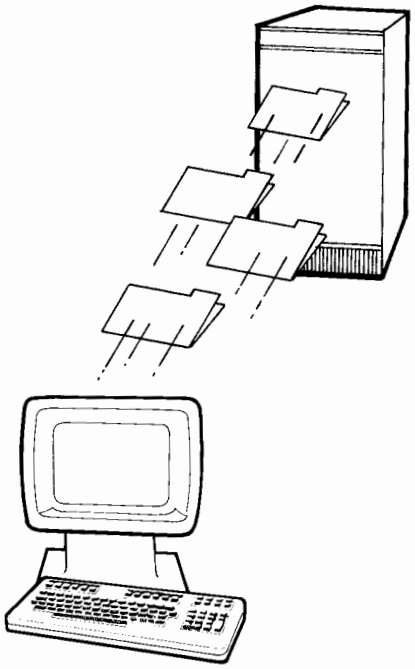
COMPUTE Command

Before using the COMPUTE command, carefully study pages A-12 through A-14 of the Reference Manual. Note in particular that the result of COMPUTE operations must not produce results greater than 4 bytes. Also, because of the manner in which dollar items are handled internally, multiplication and division must be done as follows:

```
TOTAL = DOLLAR1 * DOLLAR2/100
TOTAL = DOLLAR1/DOLLAR2 * 100
```

(You are actually converting cents to dollars.)

HPMAIL Delivers Series 100/VisiCalc Reports



A network of HP 3000-series business computers can communicate via an electronic mail package called HPMAIL. An HP Series 100 in REMOTE mode can be used as a terminal on an HP 3000 system. Apart from all the usual benefits of using HPMAIL to communicate with other HPMAIL users in a network of HP 3000 systems, one feature of the Series 100 that has been found to be especially useful is the ability to use LINK to send VisiCalc reports through HPMAIL.

The method to use depends on whether or not the recipient is also going to be using VisiCalc to continue working with the data:

- If the VisiCalc report is needed for information only, output the VisiCalc spreadsheet to disc as a print file (command sequence /PF). Then use LINK to transfer the file to an HP 3000, where it becomes an MPE file. Next, log on to HPMAIL with the Series 100 in REMOTE mode and compose the message in which the VisiCalc report is to be included. Specify a distribution list, add some text, and then copy the VisiCalc report from the MPE file into the message using HPMAIL's 'COPY TEXT FROM' command. This procedure allows the recipient to read the message directly—VisiCalc report included—on any HPMAIL-compatible terminal.
- If the recipient does need to be able to manipulate the VisiCalc data sent in the message, the procedure is similar except that you can send the VisiCalc file in VC format (command sequence /SS) and use HPMAIL's 'COPY FROM' command. The recipient (who must have a Series 100 with VisiCalc) then follows the reverse procedure to copy that part of the message containing the VisiCalc report to a VisiCalc file.

This facility of HPMAIL is used regularly within HP to exchange financial reports and forecasts between locations in the United Kingdom and California. We find it a quick and efficient way of passing on information.

[Our thanks to Steve Kimberley, Controller at HP's Computer Systems Pinewood operation in the U.K., for this information.]

Adding Your Application Program To The Welcome Menu

One of the key features of the Series 100 Personal Office Computers is the ability to run software packages simply by pressing a softkey. Applications designers can develop friendlier systems by installing the programs they create into the Welcome Menu.

Version 2.00 of the Welcome Program (for Series 100 products) provides a new, friendly way to install user-written software. Version 1.20 of the Welcome Program (for the HP125A only) requires a somewhat more complex procedure for installing custom programs. The installation procedure described in the HP125A System Reference Manual requires the use of DDT, which is included with the Programming Package.

This article describes an improved procedure to install user software with verson 1.20 of the Welcome Program. It only requires BASIC, and is considerably more straightforward than the method described in the manual.

Generally, two things have to happen to create a Master Disc. First, there must be a file on the disc with filetype '.wel'. This file contains certain information needed to perform the installation (i.e. file count, softkey label, application size, etc). The second thing that has to happen is that all files that are to be copied to the work disc during installation need to be marked. Specifically, the high order bit on the first byte of a master file name must be set to '1' if it is to be copied.

This procedure uses two BASIC programs to perform the necessary functions. The first program, called 'BUILDWEL', builds the '.wel' file, and the second program, called 'HIBITON', marks the files to be copied.

```
PROGRAM BUILDWEL
10 REM THIS PROGRAM BUILDS A FILE WITH FILETYPE ".wel" THAT
20 REM CONTAINS THE INFORMATION NEEDED FOR INSTALLING PROGRAMS
30 REM
40 REM IT FIRST PROMPTS FOR THE INFORMATION AND THEN BUILDS ONE
50 REM LONG STRING OF 256 BYTES THAT HAS ALL INFO IN THE CORRECT
60 REM LOCATIONS.  FINALLY, IT WRITES THE STRING TO A FILE WITH
70 REM TYPE '.wel'.
80 REM
100 ON ERROR GOTO 5000
200 INPUT "FILE NAME>",FILNAME$
250 FILNAME$=FILNAME$+".wel"
300 OPEN "O",1,FILNAME$
500 PRINT "HEADER MESSAGE (UP TO 80 CHARACTERS)"
600 LINE INPUT HEADER$
700 INPUT "NUMBER OF FILES TO BE COPIED>",NUMFILES
800 INPUT "SOFTKEY LABEL>",SKLABEL$
850 INPUT "STORAGE SIZE>",STORESIZE
1100 INPUT "COMMAND TO RUN PROG>",RUNCOMMAND$
1200 OUTSTR$=HEADER$
1300 OUTSTR$=OUTSTR$+SPACE$(80-LEN(HEADER$))
1400 OUTSTR$=OUTSTR$+CHR$(NUMFILES)
1500 OUTSTR$=OUTSTR$+SPACE$(47)
1600 OUTSTR$=OUTSTR$+SKLABEL$
1700 OUTSTR$=OUTSTR$+SPACE$(16-LEN(SKLABEL$))
1750 LSB=STORESIZE MOD 256
1760 MSB=STORESIZE - LSB
1800 OUTSTR$=OUTSTR$+CHR$(LSB)+CHR$(MSB)
1900 OUTSTR$=OUTSTR$+CHR$(LEN(RUNCOMMAND$))
2000 OUTSTR$=OUTSTR$+RUNCOMMAND$
2100 OUTSTR$=OUTSTR$+SPACE$(50-LEN(RUNCOMMAND$))
2200 PRINT#1,OUTSTR$
2300 CLOSE #1
4000 END
5000 IF ERR=64 THEN PRINT "BAD FILE NAME"
5100 GOTO 200

PROGRAM HIBITON
100 ON ERROR GOTO 1000
200 INPUT "FILE NAME>",OLDNAME$
300 IF OLDNAME$="END" THEN 9999
400 NAME OLDNAME$ AS "TEMP"
500 NEWNAME$=CHR$(ASC(LEFT$(OLDNAME$,1))+128)+MID$(OLDNAME$,2)
600 NAME "TEMP"AS NEWNAME$
700 GOTO 200
1000 IF ERR=53 THEN PRINT "FILE NOT FOUND"
1100 IF ERR=64 THEN PRINT "BAD FILE NAME"
2000 GOTO 200
9999 END
```

Now, the installation procedure is as follows:

1. Format a disc and copy the operating system onto that disc. Put this disc in drive A. It will eventually be your Master Disc.
2. Using PIP, copy to the disc drive all files that are needed by the application program (i.e. installation files, data files, message files, and the program file.)

3. Build the '.wel' file.
   - Put a BASIC disc in drive B
   - A>B:BASIC
   - Put the disc containing program BUILDWEL in drive B
   - LOAD "B:BUILDWEL.BAS"
   - RUN

   This program will prompt you for six inputs.

   FILE NAME—A valid file name with no drive or file type qualifier
   HEAD MESSAGE—Any string up to 80 characters long
   NUMBER OF FILES—Number of application files (decimal)
   SOFTKEY LABEL—Up to 16 characters (interpreted as two rows of 8 characters each)
   STORAGE SIZE—Total size of all files (in K)
   COMMAND TO RUN PROGRAM—The CP/M command that must be issued to start the program

   For Example:

   ```
   FILE NAME>FINANCE
   HEADER MESSAGE (UP TO 80 CHARACTERS)
   Finance/125  Version 1.0  10/15/82
   NUMBER OF FILES>12
   SOFTKEY LABEL>FINANCE/125
   STORAGE SIZE>200
   COMMAND TO RUN PROGRAM>FINANCE
   ```

4. Set the high order bit of the first byte of the filename of each file that is to be copied over during the install process:
   - Put disc containing HIBITON in drive B
   - LOAD "B:HIBITON.BAS"
   - RUN

   This program will prompt you for the names of files that need to be marked. Enter each file name with its file type. Use all caps. Do not enter the drive qualifier. When you are done, type END.

   For Example:

   ```
   FILE NAME>FINANCE.COM
   FILE NAME>INSTALL.COM
   FILE NAME>SETUP.FIL
   FILE NAME>MESSAGE.FIL
   FILE NAME>ERRORS.FIL
        .
        .
        .
   FILE NAME>END
   ```

5. Exit BASIC by typing SYSTEM

6. The disc in drive A is now your master disc. Try installing from it!

Using Softkeys on Non-HP Systems

When defining user keys for REMOTE operation, have you found that the keys only seem to work once? For example, if one key is defined to send the letters "MAIL" to the host, does it work only the first time you press the softkey? You may need to check your terminal configuration "strap settings" on the Configuration Menu.

The state of the G and H straps has no effect on LOCAL OP SYS operation, and no effect in REMOTE MODE for most operations. However, there are three cases where the G and H straps must be considered when in REMOTE mode to non-HP 3000 computer systems:

- A Long Data Transfer occurs when the user presses ENTER after typing a line.
- Terminal Status Requests include terminal and printer status and cursor sensing requests.
- A User Softkey Transmission occurs when the user presses a softkey which has been previously defined by the program.

Long Data Transfers usually apply only in special cases, and with particular applications. Status Requests typically occur as a result of a program sending a special sequence of characters to the HP 125 terminal. These two cases won't usually cause you any problem.

However, you very often may be able to benefit from using User Defined Softkeys with your remote system. When you wish to use them with non-HP-3000 remote systems, you will probably need to set the G and H strap appropriately.

For the most part, the G and H straps should be set to 'GH' in the terminal configuration screen. You can do this by exiting the WELCOME menu to CP/M, and then pressing the AIDS key on the keyboard. Key f8 is labeled 'config'. Press it to see the Configuration Menu. On the second line, near the right,you will see the letters 'g' and 'h' (if they are already in upper-case, (capital) letters, you need go no further). Move the cursor under one of these letters; and press NEXT SELECTION. Do the same with the other letter. Press AIDS to return to CP/M. This can also be done under program control with the following escape sequence.

ESC & s 1G
ESC & s 1H

This forces the terminal processor (TPU) to transmit data without any block transfer. Most non-HP host systems require such a setting.

If the G and H straps are incorrectly set, your softkeys will only work the first time one is pressed. The Series 100 will beep the next time you press a softkey: it is awaiting a special character from the remote system to enable the next transmission.

Pressing RESET once will allow another softkey transmission; but again, subsequent softkey presses will result in beeps. The solution is to change the G and H straps as described above.

Programming Challenge #3

Question

It is often desirable to enter data from the HP 125 screen into a disc file under program control. This feature is similar to the printer functions available via the AIDS key. How can this be implemented in BASIC/125?

Answer

The HP 125 has an ENTER escape sequence which performs a function similar to that of the ENTER key. However, the two are not identical. By using the cursor positioning escape sequence followed by this ENTER sequence, you can read a line directly from the display.

The escape sequence which performs the ENTER function is:

ESC d

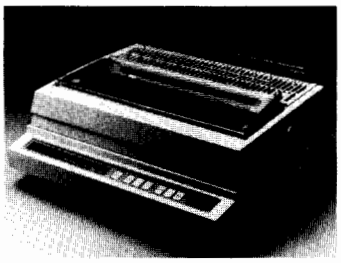
This causes the HP 125 terminal to transmit text from the line on which the cursor is located. Text starts at the left margin. (The ENTER key, on the other hand, only sends data from the Start of Text column defined in the configuration menu).

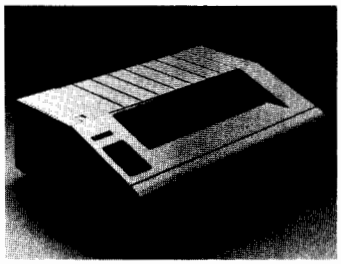
A simple BASIC/125 program to enter text from any line of the display is shown below. By expanding on the general concept, and by using the cursor positioning control sequence, you can write a more complete program to read from multiple lines of the display.

```
10 PRINT "Position the cursor to any line and"
20 PRINT "press the 'ESC' key:"
30 'Scan for the ESC key
40 A$=INPUT$(1) : IF ASC(A$)<>27 THEN 40
50 'ESC pressed!
60 PRINT CHR$(27);
70 LINE INPUT "d",BUF$
80 'Line of text now in BUF$
   ...
```

Notice that the ESCAPE character is printed on one line (line 60) and the 'd' is printed as part of the 'LINE INPUT' prompt. This is done to overcome the method BASIC/125 uses to check for Control-C. Normally, most escape sequences can be PRINTed with a single statement.

Changing Printer Characteristics While Using the System





How do I get my 82905B printer into compressed print mode while I'm using BASIC? Can I get expanded character print with my 2601? This article answers these and other questions and describes how to control characteristics of your printers while using Word, VisiCalc, BASIC, or Local Mode.

The printers discussed are: 2601A, 2631B, 2671A, 2673A, integral thermal printer (HP 125 only), and 82905B. The five printing modes detailed are: Normal, Expanded, Compressed, Expanded-Compressed, and Emphasized. The following table shows the size of the characters for each mode.

Print Mode	Characters per Inch
Normal	10.00
Expanded	5.00
Compressed	16.20–16.67
Expanded-Compressed	8.25– 8.33
Emphasized	8.33–10.00 + Bold-faced print (underline on 2671A)

The process of altering a printer's mode requires that an escape sequence be sent to the printer. Different printers may require different escape sequences to obtain a specific mode. For instance, to set normal printing, the 2601A expects ESC ">" where "ESC" is the escape key. On the other hand, the 82905B expects ESC "&kOS".

Each different application (Word, VisiCalc, etc.) has its own method of sending an escape sequence to the printer. Descriptions of the process used in each application follow. (Be sure to set your selected printer as the current printing device in the system configuration menu.)

Word: "#nn/" is embedded in Word text and sent to the printer. "#" tells Word you want to send an ASCII character directly to the printer, "nn" is the ASCII decimal equivalent for the character, and "/" is the ending delimiter. So, to send ESC (escape key) to the printer, "#27/" should be embedded in your text. (See Word Reference Manual for further description.)

VisiCalc: A setup string is sent to the printer. To send a setup string from VisiCalc, type /PP" and then enter the string to be sent. ("?E" is the representation for the escape key. For additional information on setup strings, see the VisiCalc Reference Manual.)

Local: A character string is sent from the HP 125 or HP 120 screen directly to the printer with the system in Local mode. (If unfamiliar with placing the HP 125 or HP 120 into Local mode see the Owner's Manual.) Set the system to Local mode, then home the cursor and clear the display. Next, turn on Display Functions mode by pushing the "Display Functions" softkey so that an "*" appears in the function key label. Enter the string to be sent to the printer—the escape key will show upon your screen as a small symbol. Now, turn off Display Functions by hitting the softkey again, then home the cursor. Press the AIDS key on the keyboard and then the "printer control" softkey. To send the string to the printer, press the "Copy Line" softkey.

BASIC: A string is sent to the printer using the LPRINT command. The escape key is represented by CHR$(27) where 27 is the ASCII equivalent of ESC. To send ESC "A" to the printer, your command would appear as:
LPRINT CHR$(27) + "A"

Important Notes:

1. Expanded, Compressed, and Expanded-Compressed modes by definition are changes in character formation, not spacing between characters. Thus, these modes are not available on daisy wheel printers such as the 2601A. Character spacing may be manipulated by commands that are found in the 2601A Owner's or Reference Manuals.

2. Emphasized mode on the 2601A is cleared when a carriage return is performed by the printer. As a result, every line to be printed must be set for emphasized mode. Since the "Copy Line" softkey automatically issues a carriage return, emphasized mode cannot be obtained on the 2601A if setting from Local mode.

3. Other printing capabilities exist for all of these printers. With some printers, print modes may be obtained by setting hardware switches. See respective Reference or Owner's Manuals for details.

Now that you know how to send escape sequences to your printer using four different applications, the following table will tell you how to set your print modes.

Application	Print Mode	82905B	2671A/2673A	Integral	2601A	2631B
Word	Normal	#27/#38/#107 /#48/#83/	#27/#38/#107 /#48/#83/	#27/#38/#107 /#48/#83/	#27/#62/	#27/#38/#107 /#48/#83/
	Expanded	#27/#38/#107 /#49/#83/	#27/#38/#107 /#49/#83/**	N/A	N/A	#27/#38/#107 /#49/#83/
	Compressed	#27/#38/#107 /#50/#83/	#27/#38/#107 /#50/#83/	N/A	N/A	#27/#38/#107 /#50/#83/
	Expanded-Compressed	#27/#38/#107 /#51/#83/	N/A	N/A	N/A	#27/#38/#107 /#51/#83/
	Emphasized	#27/#38/#107 /#57/#83/	#27/#38/#100 /#68/	N/A	#27/#87/	#27/#38/#107 /#54/#83/
VisiCalc	Normal	^E&k0S	^E&k0S	^E&k0S	^E)	^E&k0s/S
	Expanded	^E&k1S	^E&k1S**	N/A	N/A	^E&k1S
	Compressed	^E&k2S	^E&k2S	N/A	N/A	^E&k2S
	Expanded-Compressed	^E&k3S	N/A	N/A	N/A	^E&k3S
	Emphasized	^E&k9S	^E&dD	N/A	^EW	^E&k6S
Local*	Normal	ESC &k0S	ESC &k0S	ESC &k0S	ESC >	ESC &k0S
	Expanded	ESC &k1S	ESC &k1S**	N/A	N/A	ESC &k1S
	Compressed	ESC &k2S	ESC &k2S	N/A	N/A	ESC &k2S
	Expanded-Compressed	ESC &k3S	N/A	N/A	N/A	ESC &k3S
	Emphasized	ESC &k9S	ESC & dD	N/A	N/A	ESC &k6S
Basic	Normal	CHR$(27) + "&k0S"	CHR$(27) + "&k0S"	CHR$(27) + "&k0S"	CHR$(27) + ">"	CHR$(27) + "&k0S"
	Expanded	CHR$(27) + "&k1S"	CHR$(27) + "&k1S"**	N/A	N/A	CHR$(27) + "&k1S"
	Compressed	CHR$(27) + "&k2S"	CHR$(27) + "&k2S"	N/A	N/A	CHR$(27) + "&k2S"
	Expanded-Compressed	CHR$(27) + "&k3S"	N/A	N/A	N/A	CHR$(27) + "&k3S"
	Emphasized	CHR$(27) + "&k9S"	CHR$(27); "&dD"	N/A	CHR$(27) + "W"	CHR$(27) + "&k6S"

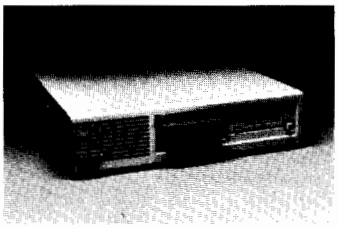
Notes:

1) ESC = escape key
2) Expanded, Compressed, and Expanded-Compressed modes are manipulations of character formations and are therefore available only on dot matrix printers.
3) See the reference manual of each printer for a description of other available print formats.

* No spaces should exist between ESC and the rest of the string. It is dispayed with a space for reading clarity.

** 2673A only

Using the HP 9121 Disc Drive With Your HP 125A



The 9121S and 9121D are HP's new compact micro flexible disc drives that use 3.5 inch media. With their small size and low cost they are an attractive addition to your HP 125A computer system. There is, however, a minor incompatibility between the HP 125A and 9121 that may appear when first powering up the 125A.

The problem occurs after accessing the disc one or more times and then doing one of two things: 1) powering off and on the 125A without powering off and on the disc drive, or 2) pressing the Power-On Test. If one of these two situations occur, the 125A responds with:

*Disc did not identify at address 0
Press RETURN to clear

This happens because of some timing restrictions in the 125A firmware (this has been resolved in the 125B firmware). As the 125A powers up, it sends a request to the disc to read its directory. This ensures that there is a disc drive present and that the disc drive has an operating system on the disc. It takes the 9121 a maximum of 1.5 seconds to accomplish this task. However, the 125A will only wait about 1 second before it decides that there is no disc drive.

If this happens to you, simply press RETURN as prompted and the system is back up and running.

Software Status Reports

	The Software Status Bulletin is a cumulative list of all software problems that have been reported on the Series 100. New entries since the last issue are marked with a star.
U.S. Operating System—Release A.01.20	*__Problem:__ When WELCOME is Read Only, an attempt to install an application will cause WELCOME to fail with a write to R/O file error. __Workaround:__ Change WELCOME.COM to a R/W file (i.e. STAT WELCOME.COM $R/W).
	*__Problem:__ WELCOME does not update the softkey label if the application is reinstalled with a changed label. __Workaround:__ None
	*__Problem:__ If application disc has a "R/W" file with the same name as an "R/O' file on the work disc, WELCOME fails on a "WRITE TO R/O" file error. Because WELCOME tries to recover from an error file every time it runs, WELCOME will keep aborting each time it is run. __Workaround:__ None
	__Problem:__ Upon using extended system function call 125 to send an 80-character message to message window, the 80th character is lost and the window is displayed in inverse video. __Workaround:__ Limit messages to 79 characters.
Block-Format—Release A.02.00	*__Problem:__ After Block-Format has loaded, the loader program quits without resetting the User Key labels. __Workaround:__ Reset them yourself in the User Key menu.
VisiCalc/125—Release A.02.00	*__Problem:__ If a space terminates a value entry, only 2 backspaces instead of 3 are required to clear the line. __Workaround:__ If value entry is accidentally terminated by typing a space, use / E or Ctrl-E to edit the number.
	*__Problem:__ Sending a set-up string to an HP-IB printer which is turned off or disconnected may cause VisiCalc to hang. Reset may not be able to clear the condition. __Workaround:__ None
	*__Problem:__ VisiCalc fails if escape sequences are turned off prior to VisiCalc being invoked. __Workaround:__ None

*Problem: Entering a non-digit character during value entry causes VisiCalc to assume that entry mode is being transmitted.

Workaround: This is consistent with information in the manual, including the function of the ";" key. If a non-digit is accidentally pressed during value entry then /E or Ctrl-E can be used to allow further editing.

---

*Problem: Certain cell definitions which are syntactically incorrect can be entered. This is inconsistent with most cases, where incorrect syntax is not accepted.

e.g. @ NPV(1,2)
@ Lookup (aq...cl.)

Ranges are accepted for values and vice versa.

Workaround: If an incorrect definition is accepted, ERROR is displayed in the cell to warn the user that a problem exists.

---

*Problem: If the RETURN key is held down after the /SL command, VisiCalc will load the first VisiCalc file on disc but not display the filename.

Workaround: The first RETURN sent on the blank edit line causes a catalog of the disc to be requested. Since the RETURN is an auto-repeat key, another RETURN character is sent, before the first filename is displayed, and causes the first file to be loaded. Don't hold down the RETURN key.

---

*Problem: Illegal exponents result in incorrect values.

Workaround: Don't use exponents larger than 127.

---

*Problem: When replicating a column and the target range is smaller than the source range and at the edge of the worksheet, the replicate will wraparound and destroy the data in the target column.

Workaround: None

Problem: An equation that is larger than the VisiCalc edit line will not replicate properly. Only half the equation is replicated.

Workaround: None

---

*Problem: When saving a VisiCalc file to a bad or worn-out disc, the system will hang until a hard reset is performed, thus losing all the data.

Workaround: None

---

*Problem: Repeating label fields are not saved and retrieved correctly in DIF® files.

Workaround: None

Graphics/125—Releases A.01.00 and A.01.01

Problem: Allows embedded blanks in filenames, but these files cannot be processed with CP/M commands DIR, ERA.

Workaround: The blank must be substituted with a question mark. Example: ERA FILE 1 should be ERA FILE?1. Fixed in Release A.01.02.

Problem: Pie segment labels are not positioned properly when the segment approaches 0.5%.

Workaround: Sort the segments with the sort option. Fixed in Release A.01.02.

Problem: In pie charts, the labels will be plotted over exploded segments in certain instances.

Workaround: Use the auto sort option or avoid exploding segments. Fixed in Release A.01.02.

Problem: When using stacked bar charts, small solid slices are not always drawn in the correct place on the bar chart. The slice is most often drawn too high on the chart or, if small enough, may not be drawn at all. This problem occurs because solid slices in stacked bar charts are drawn a "fraction of an inch" short, so that the solid portion does not bleed on the other sections of the bar chart. If the small slice is smaller than this "fraction of an inch", the slice is positioned in the wrong place.

Workaround: Avoid graphing bar chart segments of very small size. Fixed in Release A.01.02.

Problem: If a solid (shade #7) segment of a stacked bar chart is less than 0.5% of the chart's range, the small solid segment may be drawn too high—causing the segment above to be drawn on top of the smaller segment.

Workaround: Rescale your y-axis so that the smallest segment is greater than 0.5% of the chart's range. Fixed in Release A.01.02.

Problem: In bar charts, if the x-axis labels are too long they will write over one another when plotted.

Workaround: Either use fewer bars per chart or use shorter text in your labels. Fixed in Release A.01.02.

Problem: The labels on the linear charts are rounded to the nearest tenth. For example the values 0, 0.25, and 0.50 will be plotted as 0, 0.3, and 0.5.

Workaround: Use numbers which are accurate to one decimal place. Fixed in Release A.01.01.

Problem: In SLIDE, when Roman characters are plotted on the same line with normal characters, they are slightly raised above the normal characters.

Workaround: Fixed in version A.01.01

Problem: After plotting many slides, SLIDE loses inverse video and seems to lock up.

Workaround: EXIT from GRAPHICS by typing 'EXIT' then re-enter to do the slide over again. Improved in Release A.01.02.

***Problem:** Italic characters (from slide) are considerably shorter than other characters of the same designated size.

Workaround: Fixed in Release A.01.01.

Problem: The SLIDE program will ask for pen number 0 when using the one-pen plotter (7225).

Workaround: Ignore message and press return. Fixed in Release A.01.02.

Problem: Allows the user to specify pen number 9 when only 8 pens are valid.

Workaround: Treat pen 9 as a valid pen number. This allows the user to specify up to 9 pen numbers on the HP7225 and 7470. The user will have to change the pens manually as required. Specifying pen 9 when using the HP9872C causes pen 1 to be selected. Fixed in Release A.01.02.

Problem: The top of a bar on a bar chart touches the border on some normal and comparative charts.

Workaround: Define the Y-axis labels such that the bars don't reach the border. Fixed in Release A.01.02.

Problem: The default Y-axis scaling on some normal bar charts is too large, therefore the bars may be very small.

Workaround: User can set own scaling to values that will produce satisfactory results. Fixed in Release A.01.02.

***Problem:** Bar charts won't plot when YMAX is less than 20% greater than YMIN.

Workaround: Choose values with greater than 20% differential. Fixed in Release A.01.02.

Problem: Part of the last letter of a label on a linear chart may not be drawn on the X-axis.

Workaround: Use a label with fewer characters. Fixed in Release A.01.02.

***Problem:** Backslash and underscore aren't plotted in Roman or Italic fonts by Slide.

Workaround: Use normal or slanted Font for these characters. Fixed in Release A.01.02.

Problem: All slides must be plotted on 8½ by 11 media.
Workaround: Fixed in Release A.01.02.

Problem: Vertical slides could not be made on the 7470A or 7225B plotter.
Workaround: Fixed in Release A.01.02.

Word/125—Release A.02.00

Problem: Print format table entries go to "32" when filename is too long. WORD/125 does not reject filenames or filetypes that are longer than CP/M filenaming conventions allow. Entering a too-long filename results in the following:

a. The size of the file is listed in the directory as an impossibly high number (e.g. 520K on a 256K byte disc).
b. All of the Y Table values are changed to 32.

Workaround: Make sure that all filenames used in WORD/125 follow CP/M filenaming conventions. Fixed in Release A.02.02.

Problem: A line is printed at the wrong location with two column print. The two column print macro will occasionally print the last line of the first column in the second column. Also, dot commands are not always handled correctly.

Workaround: Some of the two column macro problems can be avoided by using a "manual method" for creating two columns of text rather than using the macro. "Manual method" instructions are as follows:

1. Imbed a .Y command at the top of the document to specify the width and length of the first column.
2. Use the J command to find the start of the second column.
3. Imbed a .T (to reposition the page) and a .Y (to format the second column) at the beginning of the second column. The .T command works only with printers capable of negative line feed, such as the HP 2601A.
4. Repeat steps 1, 2, and 3 for the entire document.

Problem: Bottom of screen filled with unwanted characters if the cursor is on the line below the last line of text (not in column one) and the cursor is homed down (moved to column 1 with the home key).

Workaround: To clear the unwanted characters from the screen, complete the following steps:

1. Go to Command Mode.
2. Type "Z" and then press the RETURN key. This will display the screen to set tabs.
3. Press the ESC key to exit from the tab screen.
4. Go to Edit mode.

Problem: Tabs set past column 80 on the screen are not always set correctly. If the screen is set to a line length of 150 and tabs are set between columns 80 and 150, the tabs will not stay where they are set on the screen. Most often an extra tab appears at column 81 on the screen.

Workaround: If you must set tabs past column 80, realize that you will have an extra tab at column 81.

Problem: When printing decimal tabs in proportional spacing, the right margin is no longer aligned.

Workaround: Place a .Y statement before and after the tabbed section. Replace each value (except the proportional spacing value) in the .Y statement with a slash. In the .Y statement before the tabbed section, turn the proportional spacing "off" (0); after the tabbed section, turn proportional spacing back "on" (1).

Problem: When using a character-oriented print routine, hyphenated phrases (e.g., phone numbers) may be split at the end of a line.

Workaround: Enhance the hyphen, then turn off the enhancement with the !7 command prior to the hyphen. Remember to reset the enhancements after the hyphen.

Problem: There is a discrepancy between file sizes reported by WORD and those reported by the CP/M command "DIR".

Workaround: The file sizes reported by CP/M are correct.

***Problem:** With line length set to 70, approx 75 characters are entered on a line, some wrap to next line. This 2nd line ends with a carriage return. There is an unindentified 3rd line. Changing the line length to 79 pulls up the 2nd line to the end of the first (properly), but doesn't get rid of the "INDENT TO TAB", as the 3rd line is now the 2nd line, "INDENTED".

Workaround:

1. Start with line length set to where you intend it ultimately to be.
   OR
2. Fix it up afterwards with "CLEAR INDENT".

***Problem:** When WORD/125 encountered the sequence "?!?!" in a document "?!" was used as a value for the Y-Table Special Character entry. The entry was changed from 0 (bold) to 15. (This is illegal—no 15 entry exists).

Workaround: Don't use characters immediately after "!" or (2) replace "?!?!" with "? ! ? !" or (3) replace "?!?!" with "?! !H?!".

***Problem:** Cursor motion keys don't work as expected on "Indent to tab" lines when changes have been made on the line.

Workaround: Watch the cursor and position it where you would like it.

*Problem: The MailMerge macro will not allow an item to be used more than 9 times within a letter. A letter with 11 references to @ 1 of a customer file will print only 9 of them.

Workaround: Use 9 references or less. Or, change line 66 of file "mmerge.wpm" that starts off "9s/@%4". Change the "9" to a number greater than or equal to the number of times a variable is referenced.

---

*Problem: Decimal tab does not always terminate properly. Simple case to show problem:

1. Type on screen: 1234567890<
2. Put cursor on middle "6" 6
3. Type ?Z followed by "aaa" 1234567890<
4. Hit down arrow once (5) go to Command mode, type Z, ESCAPE (6) the "aaa" is gone.

Workaround: Terminate Decimal tab with other than up or down arrow.

Link/125—Release A.02.00

*Problem: Link does not handle the page break conventions used by MicroPro's WordStar. The first character of each page is lost. If the first line of the page is empty, the transfer may hang.

Workaround:

1. Make a copy of the file using PIP option (Z) to clear the 8th bit
2. Leave a dummy blank at the start of each page.

BASIC/125—Release A.05.21

*Problem: Overflow error 'hangs' basic. "Print 2^127" intermittently hangs, reports syntax error, or reports overflow. "Print 2^128" works, and larger numbers seem OK.

Workaround: Avoid this value.

HP 125 Firmware

*__Problem:__ Soft reset doesn't set "DC1 received" flag.
__Workaround:__ None

---

*__Problem:__ The HP 125 may fail to send the second DC2 if two block transfers are stacked up, such as when the user presses ENTER and the host program issues a cursor position request. Some host programs send a cursor position request after an ENTER to better understand what data is being sent. Does not occur when Block/Format is loaded.
__Workaround:__ None

---

*__Problem:__ There are cases where the keyboard is locked by a host program and is released by the firmware prematurely. This happens when the host requests status bytes or cursor position. There is an unconditional keyboard unlock after these short block transfers.
__Workaround:__ None

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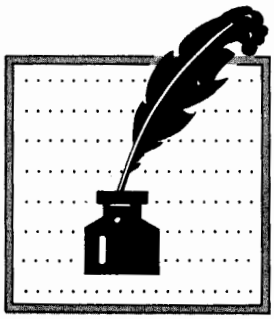
*__Problem:__ The NEXT PAGE key does not disable enhancement set for the previous page.
__Workaround:__ None

__Problem:__ The "Esc d" escape sequence is processed incorrectly. (The "Esc d" sequence allows emulation of the ENTER key function.) This problem is not clearly visible when trying to execute the escape sequence from a BASIC/125 program. The cursor stays on any blank line.
__Workaround:__ Press the RETURN or ENTER key to clear the cursor from the blank line.

Pen and Ink



This article presents corrections to the Series 100 manuals. Just write in these corrections to update your manuals. New entries since the last *Communicator* are marked with a star.

Getting Started With the HP 125 (7/81; Updated 2/82)

Page 4-6: Table 4 states that the 2601A printer should be configured with the Xon/Xoff field set to "Recv". Change "Recv" to "Xmit".

VisiCalc/125 Reference Manual (7/81; Updated 2/82)

*Page 1-11: Under the paragraph "Cells and Cell Contents" it states that a VisiCalc cell can contain up to 255 characters. Wrong; a cell can contain up to 125 characters.

Page 5-8: Change the exponentiation example on the top of the page to read 2^5 [RETURN]).

Page 5-16: The first example incorrectly describes the use of the NPV function. The example should read "@NPV(B8.B2.B6) + B1" not @NPV(B8,B1.B6). Also the result at B10 on the worksheet should read "288.2545" not "250.6561".

Page 6-3: Incorrectly states that the [CTRL] E command can be used to edit replicate commands. In fact, replicate commands cannot be edited with [CTRL] E. Delete the sentence "As with any other entry...by using [CTRL] E."

Page 9-3: States that the "^E" causes the character that follows to be an escape character. This is not true. Modify the text to say the "^E" sends an escape character.

*Page A-3: The @NOT function description should end with "the value W if B is false" *not* "the value W if V is false".

*Page B-11: Line 1130 should be "INPUT T". Line 1150 should end with a "J" not an "I". Line 3030 should have a semicolon before "NV" not a colon.

*Page B-12: Line 5030 should read "OPEN 2,F$". The REM statement after line 6620 should be line 7000. Line 7020 should read "IF T1 <> −1 THEN 9000".

Graphics/125 Reference Manual (7/81; Updated 3/82)

Page 6-12: Fourth line, and the following line before the sentence that begins "now the 24 months...": "Units between X tics should be changed to 1". Also delete the 24th row of data shown in the example—only 23 rows can be entered on the screen.

Word/125 Reference Manual (7/81; Updated 2/82)	Page 1-13: Artwork is missing from the bottom of the page. Drawings for the "up arrow" and "down arrow" cursor control keys should be inserted in the blank spaces at the bottom of the page. Draw the keys in, using the keys on page 1-7 of the WORD/125 manual as examples. Page 2-9: In the middle of the page, the text reads: "See the information on marks in Chapter 5 for more information". Change the reference to Chapter 6 instead of Chapter 5.
BASIC/125 Reference Manual (7/81)	*Page 3-64: Line 100 in the example should be: 100 PUT #1, CK% rather than 100 PUT #1,CK# Page 3-80: Default text width on the screen is 72 characters. Change the number to 80 characters instead of 72. Page H-4: On lines 1020 and 1030 in the example, place a "$" after the "ESC".
System Reference Manual (7/81)	Page 10-11: Change the maximum length of Subfunction 123 (window message string) from 79 to 80. Page 15-18: In the table listing XTHL and its definition, delete the word "Data" (beside it) and change the definition to read "Exchange the data on top of the stack with the contents of the HL register pair". Page A-7: Change the Key Code A9 from "enhance Linergins" to "Enhance Line".
Condor Series 20 User's Manual (2/82)	*Page 6-11: Delete the comma just after "ORDERS" in the JOIN command. In the two PROJECT commands, change "TOTAL" to "AMOUNT". In the second PROJECT command change "COMPANY" to "FIRM". *Page 8-5: First paragraph, last sentence should have the words "Bar charts and " deleted. Add a sentence to this paragraph as follows: "For Bar charts, the database to be plotted may contain a label item and up to 5 value items per record." *Page 8-5: The tabulate command in the first example should read: "TABULATE ORDERS BY REGION AND COMPUTE TOTAL AMOUNT[S]" *Page 8-5: Include the following between the PROJECT and SORT commands of the second example: "NOTE: The item MONTH must be numeric because the linear charts program accepts numeric values only."

Ordering Information — International

This is a summary of ordering information for the Series 100 software, updates, and manuals which are available through Hewlett-Packard Sales and Service Offices and Authorized Series 100 Dealers.

The section is divided into four topics:

—Ordering *Communicator* back issues... to improve your Series 100 knowledge.

—Ordering software packages... to add additional capabilities to your system.

—Ordering updated software and manuals... to provide an updated version of software or manuals.

—Replacing damaged media... to obtain a new copy if a Master Disc has been damaged.

All of the items listed—plus quality media and operating supplies—are available through your Authorized Series 100 Dealer or your HP Sales and Service Office.

Back Issues of the Series 100 Communicator

Issue #1 includes the following major articles:

—"Single and Multi-line Page Headings with Word"
—"Searching for Enhanced Text in Word"
—"Making Invisible Characters Visible in Word"
—"Directory Scrolling in VisiCalc"
—"Sending Escape and Control Codes to a Printer from VisiCalc"
—"Warning: PASCAL"
—"Backing Up From HP 9134 and HP 9135 Disc Drives"
—"Things You Should Know About Random Access Files"
—"HP 9895—HP 9135 File Transfer"
—"Does Your 2601A Printer Print only in Column 1?"
—"Electronically Reading a Disc Reference Number"

Series 100 Communicator Issue #1—U.S. 5955-3930
Series 100 Communicator Issue #1—Intl. 5955-3937

Issue #2 includes the following major articles:

—"Hewlett-Packard Referenced Software and Hardware"
—"Making Graphs from VisiCalc Worksheets"
—"Word and VisiCalc Go Together"
—"Printing Formulas from VisiCalc Worksheets"
—"Printing Multiple Copies From Word"
—"More on Search and Replace in Word"
—"Chaining from One Executable Program File to Another"
—"A BASIC Subroutine Library"
—"Sort and Back Up Operations with Large Data Bases"
—"Using COPY DISC to Back Up Data Files on Drive B"
—"Does your HP 82905B Seem to Stutter?"
—"HP-IB Time-out on the HP 82905B"
—"Computing Internal Rate of Return in VisiCalc"

Series 100 Communicator Issue #2—U.S. 5955-3943
Series 100 Communicator Issue #2—Intl. 5955-3947

Additional copies of this current issue are also available:

Series 100 Communicator #3—U.S. 5957-6203
Series 100 Communicator #3—Intl. 5957-6213

Ordering Software Packages

To add one of the software packages to your system, order a product and media option as shown. Be sure to specify one of the three media options—630, 650, or 680.

Description	Product No.	Option	Price
Series 100/VisiCalc®	45531B		
Software on: 3.5″ Micro-Disc		630	
5.25″ Mini-Disc		650	
8″ Flexible Disc		680	
Series 100/Graphics	45532B		
Software on: 3.5″ Micro-Disc		630	
5.25″ Mini-Disc		650	
8″ Flexible Disc		680	
Series 100/Word	45533B		
Software on: 3.5″ Micro-Disc		630	
5.25″ Mini-Disc		650	
8″ Flexible Disc		680	
Series 100/DSN/Link	45534B		
Software on: 3.5″ Micro-Disc		630	
5.25″ Mini-Disc		650	
8″ Flexible Disc		680	
Series 100/BASIC	45535A		
Software on: 3.5″ Micro-Disc		630	
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Series 100/Programming Package	45536A		
Software on: 3.5″ Micro-Disc		630	
5.25″ Mini-Disc		650	
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Software on: 3.5″ Micro-Disc		630	
5.25″ Mini-Disc		650	
8″ Flexible Disc		680	
Series 100/Condor 20-2**	45550E		
Software on: 3.5″ Micro-Disc		630	
5.25″ Mini-Disc		650	
8″ Flexible Disc		680	
Series 100/Condor 20-1 to 20-2 Upgrade Kit	45550K		
Software on: 3.5″ Micro-Disc		630	
5.25″ Mini-Disc		650	
8″ Flexible Disc		680	

WordStar®/100	45560A	
Software on: 3.5″ Micro-Disc		630
5.25″ Mini-Disc		650
8″ Flexible Disc		680
SpellStar™/100	45561A	
Software on: 3.5″ Micro-Disc		630
5.25″ Mini-Disc		650
8″ Flexible Disc		680
MailMerge™/100	45562A	
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8″ Flexible Disc		680
Series 100/BPI General Accounting	45552A	
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PERSONAL DATEBOOK™	45582A	
Software on: 3.5″ Micro-Disc		630
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8″ Flexible Disc		680

Ordering Updated Software and Manuals

Software Update Kits contain the latest software and any manuals or manual updates issued since the original manual; they are provided at a nominal charge in exchange for your original Master Disc.

To replace damaged media, Software Update Kits are available for all Series 100 software packages—including the products which have not been updated. Refer to the next section of this *Communicator* for media replacement ordering information.

If a manual is updated independently of the software, the manual update is automatically sent to subscribers on the corresponding HP System Information Service (SIS). Since each of the new 5½"x8" manuals requires a matching version of the associated software, they are made available as Software Update Kits.

Operating System (Current Version A.01.02)

—Op Sys and Utility Software Update Kit.

If you have an Operating System disc labeled "HP 125" (rather than "Series 100"), order this kit to obtain the new 5½"x8" Owner's and 125B Installation Manuals, the improved WELCOME utility, and the new Series 100 Computer Tutor.

If you have Operating System A.01.10, ordering this kit will also add support of the 9134/9135 fixed disc drive to your system, and provide the Block/Format Utility.

Series 100 Op Sys & Utility Update Kit:

3.5" Micro-Disc 45900-13800

5.25" Mini-Disc 45900-15800

8" Flexible Disc 45900-18800

One original Operating System disc must be exchanged for each Op Sys and Utility Update Kit ordered. (Future Op Sys Update Kits will always include the Utility and Computer Tutor discs current at that time—but only the Op Sys disc will have to be returned.) Available in January, 1983.

—Additional copies of the Owner's and Installation Manuals are available. If you do not have the new Operating System, we recommend that you purchase the entire Software Update Kit—so that your new manuals will match your software.

Series 100 Owner's Manual Set 5061-3211

HP 125B Installation Manual Kit . . . 5061-3212

HP 120A Installation Manual Kit . . . 5061-3213

Series 100/VisiCalc (45531B—Current Version A.02.00)

Order this kit to obtain *Getting Started With Series 100/VisiCalc*, the *Series 100/VisiCalc Reference Manual*, the *Series 100/VisiCalc Quick Reference Guide*, and the latest version of the software. Available in January, 1983.

Series 100/VisiCalc Update Kit:

3.5" Micro-Disc . . . 45531-13800

5.25" Mini-Disc . . . 45531-15800

8" Flexible Disc . . . 45531-18800

Series 100/Graphics (45532B—Current Version A.01.02)

If you have version A.01.01, order this kit to obtain the *Series 100/Graphics Reference Manual*, the *Series 100/Graphics Quick Reference Guide*, and the latest version of the software.

If you have version A.01.00, order this kit to add the 7470A plotter to your system.

Series 100/Graphics Update Kit—Available in January, 1983:

3.5" Micro-Disc . . . 45532-13800

5.25" Mini-Disc . . . 45532-15800

8" Flexible Disc . . . 45532-18800

Series 100/Word (45533B—Current Version A.02.02)

Order this kit to obtain *Getting Started With Series 100/Word*, the *Series 100/Word Reference Manual*, the *Series 100/Word Quick Reference Guide*, and the latest version of the software. Available in January, 1983.

Series 100/Word Update Kit:

3.5" Micro-Disc . . . 45533-13800

5.25" Mini-Disc . . . 45533-15800

8" Flexible Disc . . . 45533-18800

Series 100/DSN/Link (45534B—Current Version A.01.00)

If you have Link/125, you may wish to upgrade to Series 100/DSN/Link. (Refer to the article under "New Products for your HP 125" for details.) Available in February, 1983.

Series 100/DSN/Link Upgrade Kit:

3.5" Micro-Disc . . . 45534-13810

5.25" Mini-Disc . . . 45534-15810

8" Flexible Disc . . . 45534-18810

For each kit ordered, return one original Link/125 disc. (Use your working copy until the new disc arrives.)

**For each kit ordered, return one original disc of the same product. (Use your working copy until the new disc arrives.) If 20 or more assorted Software Update Kits are ordered at the same time, the price is discounted by 35%; no other discounts apply to Update Kits.*

Replacing Damaged Media

To replace damaged media after the warranty period, Software Update Kits are available for all Series 100 software packages—including the products which are still at the originally-released revision level. The kits contain the latest software and any manuals or manual updates issued since the original manual; they are provided at a nominal charge in exchange for your original Master Disc.

		Order Part Number			Price Code,
Product	Rev.	3.5" Disc	5.25" Disc	8" Disc	Note
Op Sys—HP125B	A.01.20	45900-13800	45900-15800	45900-18800	3,4
VisiCalc	A.02.00	45531-13800	45531-15800	45531-18800	1,4
Graphics	A.01.02	45532-13800	45532-15800	45532-18800	1,4
Word	A.02.02	45533-13800	45533-15800	45533-18800	1,4
Link/125	A.02.00	45534-13800	45534-15800	45534-18800	1,6
DSN/Link	A.01.00	45534-13820	45534-15820	45534-18820	1,7
BASIC	A.05.21	45535-13800	45535-15800	45535-18800	1
Prog. Pkg.	A.01.00	45536-13800	45536-15800	45536-18800	1
Condor 20-1	A.01.00	45550-13800	45550-15800	45550-18800	1
Condor 20-2	A.01.00	45550-13801	45550-15801	45550-18801	1,5
BPI G/A	A.01.00	45552-13800	45552-15800	45552-18800	2
WordStar	A.01.00	45560-13800	45560-15800	45560-18800	1
SpellStar	A.01.00	45561-13800	45561-15800	45561-18800	1
MailMerge	A.01.00	45562-13800	45562-15800	45562-18800	1

Key to Price Codes:

1—
2—
3— } Check with your dealer or HP office for prices in your country.

Notes:

4—Refer to details under "Ordering Updated Software and Manuals", earlier in this section.

5—Either a Condor 20-2 disc or a Condor Upgrade disc may be exchanged for the Condor 20-2 disc.

6—Link/125 disc exchanged for Link/125 disc.
Refer to "Ordering Updated Software and Manuals" to upgrade Link/125 to Series 100 DSN/Link.

7—Series 100/DSN/Link disc exchanged for Series 100/DSN/Link.
Refer to "Ordering Updated Software and Manuals" to upgrade Link/125 to Series 100 DSN/Link.

**For each kit ordered, return one original disc of the same product. (Use your working copy until the new disc arrives.) If 20 or more assorted Software Update Kits are ordered at the same time, the price is discounted by 35%; no other discounts apply to Update Kits.*

Popular Supplies for HP Personal/Desktop Computers and Peripherals

HP 125 Personal Office Computer

92160B Thermal Paper
Black Print (Box of 24 rolls)

HP 2601A Daisywheel Printer

92151C Multistrike Ribbon Cartridges
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92151D Fabric Ribbon Cartridges
(Box of 12 cartridges)
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Fan Fold (Box of 2400 sheets)
92157C Printer Paper
Microperforated Fan Fold
(Box of 2400 sheets)
92252-series Plastic Print Wheels
96 character (Box of 6 wheels)

HP 2602A Daisywheel Printer

92151H Multistrike Ribbon Cartridges
(Box of 12 cartridges)
92157A Printer Paper
Fan Fold (Box of 2400 sheets)
92157C Printer Paper
Microperforated Fan Fold
(Box of 2400 sheets)
92262-series Plastic Print Wheels
98 character, USASCII (1 each)
92263-series Plastic Print Wheels
98 character, International (1 each)

HP 2631A/B Dot Matrix Printer

92155A Ribbon Cartridges
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92157C Printer Paper
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HP 2671A/G, 2673A Thermal Printer

92160B Thermal Paper
Black Print (Box of 24 rolls)
92160N Thermal Paper
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5060-6810 Multi Color Pen Package
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9280-0588 Plotter Paper
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Fan Fold (Box of 2400 sheets)
92157C Printer Paper
Microperforated Fan Fold
(Box of 2400 sheets)
92154P Print Head

HP 82901M/S, 82902M/S, 9130A, 9135A 5¼ inch Disc Drive

92190A Flexible Discs
Double Sided (Box of 10 discs)

HP 9121D/S, 9133A 3½ inch Disc Drive

92191A Flexible Discs
Single Sided (Box of 10 discs)

A full list of HP computer supplies matched to your system for optimum performance is shown in the HP Computer User's Catalog (U.S.—HP Pub. No. 5953-2450D; International—5953-2450.)

In the U.S., for current prices or a copy of the catalog, call 800-538-8787. In California, Alaska, Hawaii call (408) 738-4133.

Or, contact your local HP sales and service office.

Authorized HP Dealers generally stock quality Hewlett-Packard supplies and can provide them immediately.

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