HEWLETT PACKARD

Issue No. 2

HP 125 Communicator

Introducing HP PLUS

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Contents

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Notes from the Editor

Welcome again to the **Communicator 125.** This magazine presents information about your HP 125 which we think will interest you: application hints, programming tips, new product information, and helpful solutions to some common problems. Each issue is composed of the sections "About Applications," "Programmer's Potpourri," "File Management," and "Hardware Headlines." These sections contain articles which explain features of your HP 125 and its peripherals. The articles span several levels of expertise ranging from the casual user to the experienced programmer. The **Communicator 125** is another way we at General Systems Division and Hewlett-Packard express our support to you, the HP 125 owner.

There are also several features in each issue, including "New Product Review," "Programming Challenge," and "Customer Corner." The articles in New Product Review present an overview of the new products for the HP 125. The Programming Challenge for this issue is a BASIC programming problem—can you solve it? The Customer Corner feature was created for article contributions from you. Our thanks to George Concaildi of Hewlett-Packard's Rolling Meadows (Chicago) office for this issue's contribution.

If you wish to contribute to Customer Corner, send your article to the following address:

Communicator 125 — Editor
General Systems Division
978 E. Arques Avenue
Sunnyvale, CA 94086 USA

Your contributions are quite welcome, but there are some restrictions. If you submit a program to the **HP 125 Communicator,** you agree that the program is not confidential and that HP may use, duplicate, modify, publish, and sell the program without obligation or liability to you or anyone else. If HP publishes the program in the **HP 125 Communicator,** it will acknowledge you as the author. Any material that you send us may not be returned. We look forward to including your articles in the **Communicator 125.**

Hope you enjoy this issue of the **Communicator 125.**

New Product Review

HP PLUS for the HP 125

Hewlett-Packard is launching a program to provide users with additional software for the HP 125. It is known as HP PLUS (Program to Locate User Software). We have joined with selected software vendors to make enhanced versions of their software available to HP 125 users. In addition, Hewlett-Packard and the vendor have worked together to supply software with these characteristics:

KEY APPLICATION AREAS — Hewlett-Packard has researched both user needs and the software market to identify the key applications areas in which we can meet your needs.

ENHANCED — Hewlett-Packard and the suppliers have enhanced and engineered the software to make full use of the screen management and softkey features of the HP 125. As appropriate, the capability has also been added to easily create files compatible with other HP 125 applications software.

HIGH QUALITY — First, as part of the qualification process, we have stressed quality in our evaluation and have spent a considerable amount of time testing every product. Next, we have worked with the vendors to develop improved documentation and standardize packaging.

SUPPORTED — Hewlett-Packard has ensured that quality support is available on each of these packages. In most cases, this is handled by having these packages covered under the standard support services available from Hewlett-Packard. However, in some cases, Hewlett-Packard has determined that the vendor has more support skills for that particular application. In these cases, Hewlett-Packard has contracted with the vendor to provide end-user support at no additional cost.

HEWLETT-PACKARD MANUFACTURED — We have made an agreement with the vendor so that the product can be manufactured and tested by Hewlett-Packard and shipped directly to you either with the HP 125 or later as an add-on.

We are pleased to bring out our first packages under this program, as well as to introduce the vendors of these fine products to HP 125 users. The vendors and their products are:

CONDOR COMPUTER CORPORATION
CONDOR® / Series 20 Database Management System

BPI SYSTEMS, Inc.
General Accounting/125

MICROPRO INTERNATIONAL CORP.
WordStar® /125
SpellStar™/125
MailMerge™/125

You will find more details about each of these packages elsewhere in this issue of the **HP 125 Communicator.** They are available either through your local Hewlett-Packard Sales Office, your local authorized HP 125 computer dealer, or the Hewlett-Packard Computer Supplies Operation.

HP PLUS Program Offers Top DBMS Capability

What Is Condor Series 20?

Condor Series 20 is a powerful and easy-to-use Data Base Management System (DBMS) that allows you to keep track of information ranging from customer lists, mail lists, survey tracking, accounting, inventory control, fund management, etc. Condor Series 20 consists of two products: Condor 20-1 and Condor 20-2. The essential difference between the two is that Condor 20-2 allows the user to relate multiple data bases.

Relational DBMS

Condor 20-2 is a relational DBMS, and therefore does not require you to make advance decisions concerning which data items will be used to access the data base

and the relationships between data items. Instead, every data item (or "field") can be used to access the data in ways anticipated by the user. If your application or requirements change, a few simple commands will allow you to change the relationships between data items dynamically.

With the Condor Series 20 DBMS, you can retrieve organized information from your disc, respond to inquiries by using simple commands, sort and compute totals/statistics, combine groups of information in new ways, and quickly summarize the data into useful reports.

Application Development

Both Condor 20-1 and 20-2 can be used to create custom applications controlled by help-menus. You create "automated" applications by linking commands. In addition, a posting command allows you to post a transaction data base to a master data base.

Easy to Use

With the Condor Series 20 data base system, you can literally create a useful data base in minutes and immediately begin entering and reporting information. In addition, function keys and edit keys are used extensively.

Interaction with Other Hewlett-Packard Applications

You can extract information from your data base and output it to a Word/125 file (or Graphics/125 for creating color graphs and transparencies). If you want to do a mailing to your customers, Condor Series 20 can pass the information to Word/125 to insert the customer's name and address in the letter and even print out mailing labels. Condor Series 20 can manage your mailing list by selecting specific customers and passing this information to Word/125 for MailMerge. You can access the Condor Series 20 data base from either a VisiCalc® /125 spreadsheet, or a host computer with the help of Link/125.

Product Review

Condor 20-1 Product No. 45550A
An extensive data base management report and transaction processing system.

Condor 20-2 Product No. 45550E
A complete data base management development and operations system. Contains all the commands of Condor 20-1 (45550A) plus additional commands for more advanced relation of multiple data bases.

Condor Upgrade Product No. 45550K
Upgrades Condor 20-1 to Condor 20-2.

The above products are available on both 5¼-inch and 8-inch discs and include the reference manual.

For more information, contact your authorized HP 125 dealer or local Hewlett-Packard Sales and Service Office.

WordStar/125 Family For the HP 125

Hewlett-Packard is proud to announce a new family of word processing products for the HP 125: WordStar/125, SpellStar/125, and MailMerge/125.

These products combine all of the popular features of WordStar, SpellStar, and MailMerge by MicroPro International Corp. with user-friendly:

- cursor movement keys
- display control keys
- text editing keys
- softkeys

The standard WordStar software includes the ability to:

- Create documents as large as your disc. (Portions of text are brought into system memory as required.)
- Enter paragraphs of text at high speed; when a word hits the right margin, it is automatically moved to the next line.
- Move the cursor anywhere in your text using control sequences.
- Perform editing (replacement, insertion, deletion) using control sequences.
- Search for and replace text.
- Scroll horizontally for documents more than 80 columns wide.
- Copy, move, and delete whole lines or columns of text.
- Print with enhancements such as boldface, underline, and strikeout.
- Print subscripts and superscripts.
- Print combined characters (such as an accent over a character).

In addition, with WordStar/125 you can take advantage of the features of the HP 125 and:

- Move the cursor using the arrow keys on the keyboard.

- View other sections of your text using the display control keys (NEXT PAGE, PREV PAGE, ROLL UP, ROLL DOWN).
- Edit text using the text editing keys (INS CHAR, DEL CHAR, CLEAR LINE, INS LINE, DEL LINE).
- Use user-friendly softkeys to make use of all of the other features of WordStar.

  Example: To save a file on disc and exit:

  a. With WordStar you would type: CTRL-KX

  b. With WordStar/125 you could type: CTRL-KX *or* you could press the softkeys:

File & exit	SAVE & EXIT

SpellStar/125, a spelling checker program that runs with WordStar/125:

- Proofs your text and compares it with a 20,000-word dictionary.
- Lists and flags misspellings.
- Allows you to correct misspellings.
- Adds words to the main dictionary or to a supplemental dictionary that you create.

MailMerge/125, a multipurpose merging program that runs with WordStar/125:

- Produces form letters from a standard letter and a list of names and addresses.
- Produces letters with special words and phrases, unique to each addressee, inserted into the body of the letter.
- Prints mailing labels and envelopes.
- Produces boilerplate documents.

Both SpellStar/125 and MailMerge/125 are accessed from WordStar/125 by pressing a softkey.

Product Review

WordStar/125 Product No. 45560A
Includes a self-paced training manual, a quick reference card, and a reference manual.

SpellStar/125 Product No. 45561A
Includes a reference manual.

MailMerge/125 Product No. 45562A
Includes a reference manual.

The above products are available on 5¼-inch and 8-inch discs. For more information about these products, contact your dealer or local Hewlett-Packard Sales and Service Office.

Accounting Package Offered on HP 125

General Accounting/125

A new HP PLUS software package, General Accounting/125, now offers a solution to several of the accounting problems of the small business, including the need for financial reports upon request. General Accounting/125 is an easy-to-use but comprehensive accounting system designed such that users don't need prior computer experience to systematize their business. The owner's manuals and computer's messages are written in clear, ordinary business and accounting language. They contain step-by-step instructions concerning every phase of system operations.

The General Accounting System includes integrated leaders for Accounts Receivable (containing up to 800 customer accounts), Accounts Payable (containing up to 200 vendor accounts), and payroll accounting.

Package Pluses

In addition to reducing clerical bookkeeping time, timely financial reports allow better control over important areas such as accounts receivable and accounts payable.

The difficult tasks of accounting and statement preparation are accomplished by simply making entries in selected journals. The posting of ledgers and the closing of books are completed entirely by the computer system. Thus, financial reports can be produced at any time.

The system automatically generates an audit trail which provides a continuous tracking of all transactions. Totals on the financial and sub ledgers may be traced back to the general ledger, and the journals are easily identifiable folio references.

Journals, Reports, and Ledgers

General Accounting/125 is a double-entry bookkeeping system providing automatic double-entry control in all six journals and registers. (These journals post automatically to the ledgers.) The six available journals include General Journal, Cash Disbursements Journal, Invoice Register (for companies using cash registers to record sales), Cash Receipts Journal, Merchandise Purchases Journal, and Cash Sales Journal.

After completing journal entries, the proper ledgers are automatically posted, financial statements are prepared, and the books are "closed." The important A/R and A/P ledgers are totally integrated with the system.

The ten reports and ledgers available in the system include: Balance Sheet, Profit and Loss Statements (up to 10 depts.), General Ledger, Accounts Receivable Ledger (showing each customer's monthly transactions and balance), Accounts Payable Ledger (unpaid invoices in chronological order), Payroll Ledger (monthly, quarterly, and year-to-date summaries), Numerical Payee List, and the Alphabetical Payee/Customer/Vendor Lists.

Support

Although purchased from Hewlett-Packard or an authorized Hewlett-Packard dealer, General Accounting/125 is supported directly by BPI Systems, Inc. in Austin, Texas. The package includes phone-in support from BPI with separate lines for end-users and dealers.

Product Review

General Accounting/125 Product No. 4552A
General Accounting/125 is available on both 5¼-inch and 8-inch discs and includes the reference manual.

Hewlett-Packard "Referenced" Products

In addition to the HP PLUS program, Hewlett-Packard also evaluates other manufacturers' software and hardware that promises to increase the flexibility and productivity of the HP 125. These products are tested with the HP 125 and, if found suitable, are referred to our HP 125 users. Although referenced by Hewlett-Packard, we neither guarantee nor support the product. The first two such products are described below.

Peachtree Accounting Software

Peachtree Software, Inc. has adapted their advanced accounting software (and other office-oriented software) for the HP 125. This software also comes under the HP PLUS program, however, it is neither distributed nor supported by Hewlett-Packard. As "referenced" software, it has been given "Hewlett-Packard's stamp of approval" for use on the HP 125. A more powerful, flexible package, the Peachtree Accounting Series includes General Ledger, Accounts Receivable, Accounts Payable, Inventory Control, Invoicing, and Payroll.

For more information, contact your authorized Peachtree Software dealer or:

Peachtree Software Incorporated
3440 Peachtree Street N.E.
Atlanta, Georgia 30326

3270 Conversion Units Allow HP 125/IBM 3270 Capabilities

Now you can interface the HP 125 to IBM mainframes that require IBM 3270 format data. IBM 3270 data differs from HP data in two ways; IBM's data is stored in EBCDIC (Extended Binary Coded Decimal Interchange Code) format as opposed to Hewett-Packard's ASCII. IBM uses both binary synchronous (bisync) and SDLC for their communications protocol as opposed to the HP 125's asynchronous protocol. Therefore, protocol conversion boxes are necessary to convert HP 125's asynchronous ASCII format and protocol to IBM's bisynchronous EBCDIC.

The protocol conversion unit is attached to the communications line between the HP 125 and the IBM mainframe. It intercepts the data being transmitted on the line and converts it to the proper format and protocol. The HP 125 requires no hardware changes and no special software when used as an IBM 3270. The conversion unit is attached via the standard RS-232 line and performs all of the conversion task. The IBM mainframe thinks that it has a standard IBM 3270 terminal attached. The HP 125 retains its full terminal and computer characteristics.

For remote access via modems, the conversion boxes may be placed either near the mainframe or the HP 125. They may also be connected locally using hardwired installations.

Use of the protocol conversion boxes does not affect the HP 125's local processing personality. The protocol conversion and IBM 3270 terminal personality only come into effect when the HP 125 is placed in remote mode and is connected to the IBM mainframe.

Currently, the following vendor offers HP 125 capability on their conversion units:

Datastream
115 Space Park Drive
Santa Clara, California
(408) 727-2980

Announcing HP 125 International Systems

For those of you who require local language systems, Hewlett-Packard now offers five international keyboard options for the HP 125: Swedish, Norwegian, U.K., German, and Spanish. All of the international keyboards allow the user to both input and output local language characters.

Table 1 indicates whether or not a particular application is supported on an international system:

Contact your dealer or local Hewlett-Packard sales office for more information on the international HP 125 Systems.

	Swedish	Norweigian	German	U.K.	Spanish
Graphics/125	No	No	Yes*	No	Yes*
VisiCalc®/125	Yes	Yes	Yes*	Yes	Yes*
Word/125	No	No	No	Yes	No
Link/125	Yes	Yes	Yes*	Yes	Yes*
Basic/125	Yes	Yes	Yes	Yes	Yes
WordStar/125	No	No	Yes*	Yes	Yes*
Condor Series 20	Yes	Yes	Yes	Yes	Yes
General Accounting/125	No	No	No	No	No

Table 1. Supported Applications on International Systems

*In addition to the ability to input and output local language characters, a Spanish or German user will be able to utilize local language versions of VisiCalc/125, Graphics/125, and Link/125. These systems will also offer fully translated softkey-driven versions of WordStar, one of the most popular CP/M®-based word processing packages.

About Applications

Making Graphs from VisiCalc/125 Worksheets

Introduction

Creating graphs with GRAPHICS/125 from VisiCalc/125 worksheets is easy once you have some practice at it. Keep in mind that the data structure required by the GRAPHICS/125 menu is the structure you need to use.

General Rules for Modifying the Worksheet

You probably will not be able to store the worksheet to a disc file for later use in GRAPHICS/125 without customizing it. In general, the things to keep in mind are the following:

1. Since Pie and Bar chart menus allow only one set of labels, you should save only one set of labels from your VisiCalc/125 worksheet. Also, multiple columns and rows of labels overwrite each other in the Pie chart menu.

2. Both axes of a Linear chart require numeric input, so don't save columns or rows of alphanumeric labels for use in the charts. For example, if you intend to use years as labels, make sure you enter them as numbers into the worksheet.

3. Delete all blank rows and columns.

4. Delete comments or any non-numeric data other than the set of labels you have chosen.

What Kind of File Should I Put the Worksheet In?

When you store the information to a disc file, you have two choices: you may store the worksheet in either a VisiCalc/125 DIF™ file or a VisiCalc/125 print format file.

The exact structure of the DIF file is unimportant to this discussion, but if you do store the worksheet in a DIF file, it must then be referenced in a GRAPHICS/125 menu as a type "V" file.

If you store the worksheet in a print format file, you are storing it in row and column format and it must be referenced in the GRAPHICS/125 menus as file type "R" or "C" (for row and column, respectively).

How do these methods compare? For Pie and Bar charts, neither method has an advantage over the other, however, as you will see later, the DIF file offers some advantages for plotting Linear charts.

Is My Data Row or Column Oriented?

The row or column orientation of the data must be specified when creating DIF files. It must also be known or specified in the GRAPHICS/125 menus. How do you know if your data is row or column oriented?

If the labels or values for an attribute run horizontally across the screen, it is row-oriented. For example, if months of the year run horizontally across row 1 and sales values for each month run across row 2, the data is row-oriented:

	A	B	C	D	E
1		JAN	FEB	MAR	APR
2	SALES	2000	3000	3500	4000

If the labels and values for an attribute run vertically down the screen, it is column-oriented. For example, if the names of a company's products are listed in column A1 through A5 and the sales for each of these products is correspondingly listed in column B1 through B5, it is column-oriented.

	A	B	C	D	E
1	NUTS	70000			
2	BOLTS	70000			
3	WASHERS	85000			
4	NAILS	50000			
5	TACKS	3500			

Use of Print Format Files

When you store the worksheet in a print format file, its orientation will be the same as on the screen. Therefore, if it was row-oriented and you intend to use the print format file as input to Pie or Bar charts, you must identify the file in the Pie or Bar menu as being row-oriented. This is done by specifying *"R" in the "File Type" field* (see Figure 1). Similarly, if the worksheet was column-oriented, you must identify the file in the Pie and Bar menus by specifying *"C" in the "File Type" field.* If you intend to store worksheet data in a print format file for later use in plotting Linear charts, keep in mind that the data **must** be set up and stored in **column** format.

Use of DIF Files

Here is where the DIF file comes in handy. Data that appears row-oriented on the worksheet can be stored in a DIF file as column-oriented data. When using the VisiCalc/125 command (/S#) to store to a DIF file, remember that VisiCalc/125 asks if you wish to store the file in row or column format (R or C). By specifying "C" you can actually rotate what appears to be row-oriented data into column-oriented data.

If you wish to use DIF files for Pie and Bar charts, simply store the data in the same orientation as it appears on the screen.

Pie Chart Specification

Although the Pie chart program only uses one set of values (which would come from one row or column) you may store as many rows or columns as you wish. Remember that the Pie chart menu asks you which row/column the labels and values come from.

This is because the Pie chart menu allows you to specify exactly which row or column the labels and the values are to come from. This is done with the *"Label In"* and *"Value In"* fields (see Figure 1). If the labels were in the first row (or column), put a "1" in the "Label In" field. If the values to plot against the labels were in the second row (or column), put a "2" in the "Values In" field. If you stored one row (or column) of labels and several rows (or columns) of data, then you can plot successive sets of data against the same set of labels simply by changing the "Values In" field to specify which row (or column) you want to plot.

Bar Chart Specifications

Unlike the Pie chart menu, the Bar chart menu does not give the user the opportunity to indicate which row (or column) the labels or values are coming from. The Bar chart program uses row (or column) 1 for the labels and successive rows (or columns) are used to fill the five values per label, so no matter how many value rows (or columns) you store, the Bar chart program can only use the first five sets of values.

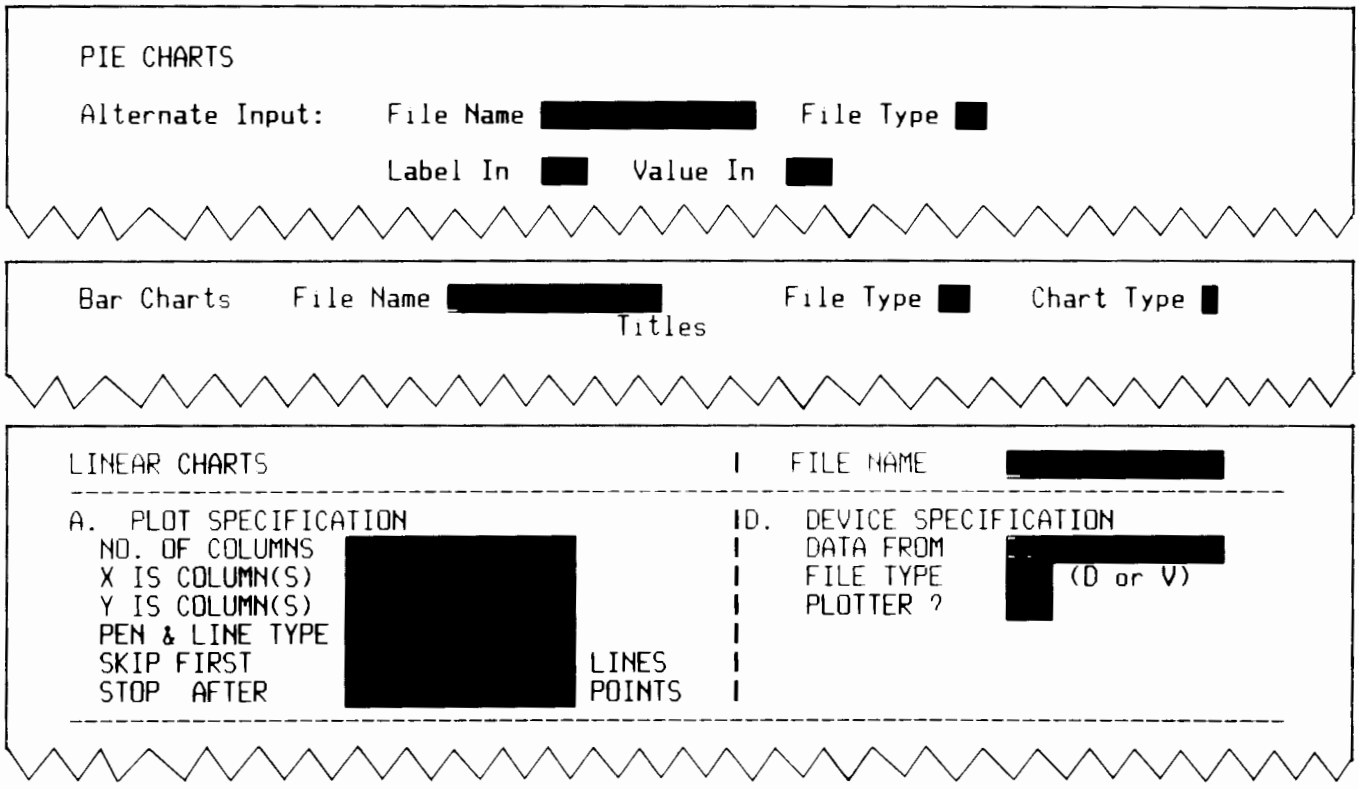

Figure 1. Graphics/125 menus

Linear Chart Specifications

Note that in the **Plot Specification** section of the Linear charts menu there are two fields: *"X is Column(s)"* and *"Y is Column(s)"* (see Figure 1). These fields are used to indicate which column the X and Y data is coming from. This is a simple matter to determine if the original data was set up in the worksheet in column orientation. But what if the data was row-oriented and then stored to a DIF file in column format? No problem—row 1 becomes column 1; row 2 becomes column 2 and so forth.

Actually Plotting (Refer to Figure 1)

To plot a Pie or Bar chart from data contained in a file, do the following:

1. Type in the name of the file in the *"File Name"* field. If the file is a DIF file, you do not need to specify the extension .DIF. However, if the file is a print format file, you **must** specify the extension .PRF, otherwise the Pie or Bar program will look for a .DAT file.

2. Type in the file type in the *"File Type"* field:
   V = VisiCalc/125 DIF file
   R = Row-oriented print format file
   C = Column-oriented print format file

3. If plotting a Pie chart, fill in the *"Label In"* and *"Value In"* fields as described above.

4. Press the GET DATA softkey.

5. Press the PLOT softkey to perform the plot.

To plot a Linear chart from contained in a file, do the following:

1. Type the file name in the *DATA FROM* field of the DEVICE SPECIFICATION section of the menu. Use the file extension .DIF or .PRF as appropriate.
   NOTE: The *FILE NAME* filed at the upper right corner of the menu is not used here. It is used only with GET DATA and GET MENU operations.

2. Type the file type ("V" for a .DIF file or "D" for a .PRF file) in the *"File Type"* field. The "D" means "display"-oriented, which is the same as row/column-oriented.

3. At this point you are ready to do a direct plot from the file without executing a "GET DATA." In fact, you must do a direct plot from a .DIF file or if your print format file contains more than 23 values per column.

4. Now press the AXIS and PLOT softkeys to perform the plot.

WORD/125 and VisiCalc/125 Go Together

After spending half the day using VisiCalc/125 to figure your net profit, wouldn't it be nice to now use that information in a letter to your stockholders?

You can incorporate your worksheet into your WORD/125 document very easily. Here are the steps to follow:

- While in VisiCalc/125, give it the command to print to a file:
  /PF
- Enter the file name. The file type will be 'PRF'.
- Exit VisiCalc/125 and go into WORD/125.
- While in WORD/125, go to 'command mode' and perform the following steps:
  Press 'disc functions'
  Press 'READ A FILE'
  Enter the file name that was used in VisiCalc/125 and the file type 'PRF'. Your data from VisiCalc/125 will be read into your work area.

You can then write your letter with your worksheet right in the document rather than attaching a sheet at the end.

The only restriction is that the VisiCalc/125 worksheet cannot be wider than the boundaries of your letter. If it is, WORD/125 will wrap the data around to the next line.

Printing the Formulas from VisiCalc/125 Worksheets

Have you ever wondered if the formulas of your VisiCalc/125 worksheet can be printed out for examination? This is quite easy to do using the storage command (/S). Simply do the following:

1. Type /SS to enter the storage command.

2. When VisiCalc asks for a file name, respond with one of the following instead of a file name:
   - SER: (If printing to a serial printer)
   - HPB: (If printing to an HP-IB printer)
   - INT: (If printing to the internal printer)
   - GEN: (If printing to the general list device)

3. Complete the command as usual by typing a carriage return.

The formulas for the worksheet will be printed on the printer that you specified.

Printing Multiple Copies From WORD/125

Have you ever wanted to print multiple copies of the same document without repeatedly homing the cursor and pressing two or three softkeys? Well, there is an easier way.

The following command can be entered on the command line:

n p/t/i carriage return

Where: n = number of copies
p = print
t = print from top of document
i = allow manual intervention

For example, if you want 25 copies of a letter, enter:

25 p/t/i carriage return

Upon striking the carriage return, WORD/125 will place the cursor at the top of the text and print the first copy. WORD/125 now waits for you to insert a new sheet of paper. When ready, strike the space bar and WORD/125 will print the next copy. Continue this procedure until all copies are done. After the last copy is printed, the command disappears from the command line.

If you have a continuous printer, you may print out all copies of the document without manual intervention as follows:

1. Place a ".e" to produce a form feed at the end of the document.

2. Delete the "i" parameter from the end of the command, i.e., "25 p/t".

More on Search and Replace in WORD/125

In the first issue of the **HP 125 Communicator** we printed an article on how to use the 'Search and Replace' function when looking for enhanced text. Since then we have received more questions involving the use of the 'Search and Replace' function. Here are some of the Questions that we have been getting and what the Answers/Solutions are:

Q: When I do a search and replace it does not find phrases.

A: When a word automatically wraps around to the next line, the space between the last word on the first line and the first word on the second line is not 'coded' as a space by WORD/125. In order to improve your chances of finding a phrase you can use the 'Wild Card' capability built into Search and Replace. The 'Wild Card' is the question mark—'?'.

Example: To search for "XYZ Company"

In COMMAND MODE do the following:
1. 'search & replace' function key (f4)

2. SEARCH FOR: XYZ?Company

3. REPLACE WITH: ABC Corporation

By using a question mark instead of leaving the space, the phrase 'XYZ Company' will be found even if it is on two separate lines.

Q: How do I do an automatic Search and Replace?

A: If you know that you want all occurrences of a word to be changed you can get WORD/125 to do it without prompting you each time it finds the entry being searched for. Instead of using the 'search & replace' softkey you would type in your own command. The command format is:

T/S#/old word/new word

Where: T = position cursor at top of text

S = Search and Replace command

= number of times to search

old word = word(s) to search for

new word = word(s) to replace 'old word'

New Documentation Available for WORD/125

Several new documents related to the operation of WORD/125 (shown in the table below) are now available. These documents should prove to be quite useful to anybody currently using WORD/125, whether a novice or experienced user.

Part Number	Description	Print Date
45533-90008	WORD/125 Tab and Index Set	4/82
45533-90009	WORD/125 Quick Reference Guide	4/82
45533-90010	Getting Started With WORD/125	6/82
45533-99001	Update to WORD/125 Reference Manual	2/82

Table 1. New Word Documentation

WORD/125 Tab and Index Set provides chapter tabs and an extensive index for the existing WORD/125 Reference Manual.

WORD/125 Quick Reference Guide, a pocket-sized folding card, summarizes each category of WORD/125's operations. It also provides a concise list of Y and YT table entries, dot commands, and inline characters—an invaluable tool for any experienced user.

Getting Started With WORD/125 is a self-teaching guide designed with the beginner in mind. It consists of three lessons which walk the user through the following procedures: starting off, entering text, editing, storing a permanent copy of a document on disc, printing a document, and deleting a document previously stored on disc. Special HELP sections are interspersed throughout the lessons, describing how to avoid many of the common pitfalls that a novice can expect to encounter. Each lesson concludes with review questions and tearout reference material. An appendix addresses ten of the most often-asked questions about more advanced features of the product.

The **Update to WORD/125 Reference Manual** describes the changes made to the WORD/125 installation procedure and HP 125 Welcome Menu for the release of version A.01.20 of the operating system.

For Customers with HP 125 Base SIS

Those of you who subscribe to the 45530K HP 125 Base System Information Service (Base SIS) will automatically be mailed each one of these new documents. If you wish to order additional copies of these documents (or do not have Base SIS), read on.

Available in Kits

Rather than making these new documents available individually, the two special kits shown in Table 2 below have been created for your ordering convenience.

Description	Kit Number
1. WORD/125 Documentation Update	45533-60001
2. WORD/125 Quick Reference	45533-60002

Table 2. Word Documentation Kits

The WORD/125 Documentation Update Kit consists of one of each of the four new documents—the WORD/125 Tab and Index Set, the WORD/125 Quick Reference Guide, Getting Started With WORD/125, and the update to the WORD/125 Reference.

The WORD/125 Quick Reference Kit consists of five WORD/125 Quick Reference Cards.

Ordering Information

To order the WORD/125 documentation kits directly, consult the information enclosed in the back of this issue of the **Communicator.**

Programmer's Potpourri

Chaining From One Executable Program File to Another

If you are writing an assembly language program to be executed in the Transient Program Area (TPA), you may sometimes want to chain to another .COM file. This can be done by calling an extended system function before executing a jump to address zero (JMP 0000H) to perform a CP/M® warm-boot.

During a CP/M warm-boot, the Console Command Program (CCP) is re-loaded. Normally, once the CCP is running, it looks for a 'WELCOME.COM' file on the current disc and executes it. 'WELCOME.COM' is the program that displays the Welcome menu on the screen. But you can specify to CP/M that another assembly language (.COM) file or another command is to be executed instead.

You can set the CCP to look for another file instead of 'WELCOME.COM' file with extended system function call 122 (SF122). Before invoking SF122, you need to set up an information buffer. The first byte of the buffer is the length of the command string to be passed to CCP; the remainder of the buffer contains the string itself. This buffer can be allocated anywhere in the TPA and it should not be larger than 128 bytes.

For example, if you want to run BASIC at the end of your assembly program, you have to set up the information buffer as follows:

```
BUF DB 5, 'BASIC'
```

At any convenient place before the 'JMP 0000H' instruction in your program, you can call SF122 with the address of BUF stored in a designated register pair. Then when your program executes the 'JMP 0000H' instruction to warm-boot CP/M, BASIC.COM will be invoked instead of the standard 'WELCOME.COM' program. (For more information on how to use SF122, please refer to Chapter 10 in the HP 125 System Reference Manual.)

A BASIC Subroutine Library

To increase productivity, many programmers collect a variety of 'utility' routines and programs to perform specific tasks. To be most useful, these routines should be designed so they can be treated as 'black boxes.' That is, given a specific set of input parameters, a particular routine will return a specific set of return parameters or take a specific action.

By following this criteria, the applications programmer can use any routine simply by knowing what task a routine performs and what information the routine expects on entry, or returns on completion. The programmer does not need to understand the inner workings of each routine in order to use them.

Some languages, such as PASCAL, actually provide 'libraries' of routines which can be 'linked' into user applications to perform specific tasks. However, interpretive languages such as BASIC/125 do not use 'run-time' or 'link-time' libraries. If the user wishes to standardize on a set of functions, he must provide his (or her) own.

The HP 125 has a variety of advanced features which can be used to make user applications easy to use. To help you take advantage of these features, you can profit from a 'BASIC/125 Library' of subroutines such as the one listed in Figure 1. The routines provided are hardly 'all-inclusive,' and there are always other ways of addressing any problem. They are meant to serve as a starting point so you can build your library of useful routines which will be useful to you.

For clarity, all of the library subroutines are near the beginning of the program. Therefore any program which uses the library, requires that the 'Main Program,' or principal entry point, be located at line 5000.

```
1000  'BASIC/125 PROGRAM FUNCTION LIBRARY
1010  'SAVE"BASLIB",A
1020  'NOT A SUPPORTED PRODUCT OF HEWLETT-PACKARD
      COMPANY
1030  'REF: 6.1   DATE: 8/1/82      AUTHOR:Hewlett-Packard
1040  'First initialize all program variables and functions
1050  BELL$=CHR$(7):LF$=CHR$(10):CR$=CHR$(13):ESC$=CHR$(27)
      :BACK$=CHR$(8):HOME$=ESC$+"h":CLR$=ESC$+"J"
1070  LFOFF$=ESC$+"&k0A":MOFF$=ESC$+"&k0M":BELON$=ESC$
      +"&k1D"
1080  KOFF$=ESC$+"&j@":KON$=ESC$+"&jB":
      KLOCK$=ESC$+"&jS":KUNLK$=ESC$+"&jR"
1200  'Define Functions
1210  DEF FNC$(R,C)=ESC$+"&a"+STR$(R)+"r"+STR$(C)+"C"
1230  DEF FNK$(K,K$)=ESC$+&f0a"+STR$(K)+STR$(LEN(K$))+
                                          "d1L"+K$+CHR$(20$K)
1240  DEF FNUP$(A$)=CHR$(ASC(A$)+(32*((ASC(A$)>96) AND
                                          (ASC(A$)<123))))
1250  WIDTH 255
1260  GOTO 5000      'Main program always starts at 5000.
1300  'Subrouting: INKEY - Input a key, set flag if softkey
1310  FLAG=0:C99$=INPUT$(1):C99%=ASC (C99$) - 20:
            If C99%>0 AND C99%<9 THEN FLAG=C99%
1320  RETURN
1350  'Subrouting: GETSFK  - Accept softkey only
1360  GOSUB 1300:IF FLAG=0 THEN PRINT BELL$;:GOTO 1360
1370  RETURN
1500  'Subroutine: ECHO  - Print character in C99$
1510  PRINT C99$;:RETURN
2200  'Subroutine: ERROR  -  Error handling routine
2210  PRINT"ERR = ";ERR;" ERL = ;ERL
2220  STOP
5000  'Main Entry Point
```

Figure 1. BASIC/125 Subroutine Library

Looking at the entire code listing can be quite frustrating, so we will instead approach the listing in three sections: variable definitions, functions, and subroutines. In this way, each routine becomes a unique, identifiable unit.

Variable Definitions

Since 'escape sequences' are used to control many of the advanced features of the HP 125, a typical program will often require the repeated 'printing' of these escape sequences whenever a feature is to be enabled.

By storing many of the more common escape sequences and characters in string variable, you can simplify the programming effort and make your code more legible at the same time.

The library presented in Figure 1 above uses the string variable definitions shown in Figure 2 to perform the tasks indicated. For further information about any of these sequences, refer to the HP 125 System Reference Manual.

Variable	Definition
BACK$	ASCII 'Backspace' character
BELL$	ASCII 'Bell' character
BELON$	Enable bell
CLR$	Clear screen to EOS
CR$	ASCII 'Carriage Return' character
ESC$	ASCII 'Escape' character
HOME$	Move cursor to Row 0, Col 0
KLOCK$	Lock softkeys on screen
KON$	Turn on 'User Keys' display
KUNLK$	Unlock softkeys on screen
LF$	ASCII 'Line Feed' character
LFOFF$	Disable 'Auto Line Feed' mode
MOFF$	Disable 'Modify Mode'

Figure 2. String Variable Definitions

Note that some of the above definitions are used to establish the HP 125 configuration to a 'known state.' Printing the 'BELON$' variable as part of an initialization routine will assure that the 'BELL$' character, when printed, will cause the system to 'beep.' This can be disabled by an escape sequence not shown here.

When either the 'Auto Line Feed' or 'Modify Mode' is enabled the HP 125 behaves in a special way: Most BASIC programs are not prepared to deal with such behavior. To be certain that neither of those modes is enabled while your program is running, print both the 'MOFF$' and 'LFOFF$' variables. These can be printed in the same 'PRINT' statement as the 'BELON$' variable.

In addition, a program may 'lock' a set of softkey labels on the screen. As with the variables mentioned in the previous two paragraphs, the 'KUNLK$' variable should be printed to 'unlock' the keys in case they are already locked. The 'KLOCK$' variable can be used to 'lock' your softkeys on the screen at a later point in your program.

From this brief discussion, you can see another possible utility 'subroutine': an 'Initialize' routine. To print these 'set-up' variables, you can execute:

```
5005 PRINT BELON$;KUNLK$;LFOFF$;MOFF$;
```

This assures that the HP 125 is in a 'known state' and that your program can anticipate how the HP 125 will behave for each statement of your program.

Function Definitions

The variable definitions presented above are most useful for those escape sequences which are fixed. The 'HOME$' variable, when printed, will always position the cursor at the upper left-hand edge of the screen. To combine this feature with 'erasing' the screen, the 'CLR$' variable can also be printed. That is:

```
5010 PRINT HOME$;CLR$;
```

This sequence will always erase the screen and leave the cursor at the top of the display.

Some sequences are, however, a little more complex, in that they require one or more 'parameters.' That is, while the desired feature is fixed, any of several different values may be desired at various points throughout the program.

The escape sequence which positions the cursor to a particular point is an example of such a feature. Each time you wish to move the cursor to a particular position on the display, you will use the same fundamental escape sequence. However, each position requires you to specify a unique row and column as part of the escape sequence.

By using BASIC's function definition feature, you can easily design functions which, when executed, will control the HP 125 in some way. The function definitions presented here will allow you to: position the cursor to a specified row and column; define a key label for any of the HP 125 User Function keys; and 'upper case' any ASCII character entered by the user. This last function is an enhanced version of the 'Programming Challenge' solution presented in the previous issue of the **Communicator.**

Notice that the softkey control function ('FNK$') presupposes the use of the subroutines presented in the next section of this article. If you should modify the 'INKEY' routine, be sure to make appropriate changes to 'FNK$.'

Note that both FNC$, used to position the cursor, and FNK$, used to define softkeys, are 'PRINT'ed. Because of the way in which the BASIC/125 language defines the 'PRINT' statement, be sure to follow two guidelines:

First, be certain that a 'WIDTH' statement is used prior to execution of either function. for example,

```
1250 WIDTH 255
```

Tells BASIC that no automatic 'Line Feeds' are to be inserted to compensate for the 80 byte width display. If such 'unexpected' controls were to occur, the effect of the escape sequences could be unpredictable.

Second, be sure to follow each 'PRINT'ing of either function with a semi-colon. This will prevent BASIC from inserting an automatic 'Carriage Return/Line Feed' after the 'PRINT' statement.

Here are the function definitions:

FUNCTION: FNC$(R,C)

TASK: Position cursor to row 'R' column 'C'

Sample use:

```
PRINT FNC$(20,0);
```

The above statement causes the cursor to be positioned at row twenty, column zero.

Note that this function treats the upper left-hand position as row zero, column zero. The values for row and column displayed on the screen treat that position as row one, column one.

FUNCTION: FNK$(K,K$)

TASK: Define Key 'K' with label 'K$' and definition of CHR$(20+K).

Sample use:

```
PRINT FNK$ (8, "EXIT");
```

The above example causes user-defined softkey 8 to be labeled 'EXIT' and defined as the ASCII character 28 decimal. This arbitrary definition is required for use with the subroutines 'GETSFK' and 'INKEY' described below.

Note: Be certain that the softkeys are not locked when using this function. If they are, because the KLOCK$ variable was previously printed, no changes will occur. Generally, the format of this function use will be:

```
PRINT KUNLK$;FNK$(1," NEXT ");
KLOCK$;
```

This unlocks the softkeys, defines the label and definition, and locks the softkeys on the screen. By using such a sequence, the programmer can be certain that the desired softkey lables are available to the user.

FUNCTION: FNUP$(A$)

TASK: Return the upper-case equivalent of A$ (or the first byte of A$ if the length of A$ is greater than 1 byte.

Sample use:

```
IF FNUP$(A$)="Y" THEN 300
```

Using this function can automatically 'upper case' any string character.

Subroutines

The tasks described above as functions are particularly adaptable to functions because they can be performed with single BASIC statements. There are many other useful tasks which require more than one statement, so these are often implemented in subroutines.

Because BASIC/125 allows only 'global' variables, and does not support passing of parameters, the variables used within each subroutine must be carefully defined. The variable 'I', if used within a subroutine, will destroy any value which might have been associated with 'I' prior to the subroutine call.

The subroutines presented here expect certain variables to contain particular values. For example, the 'INKEY' routine does not require values pre-defined upon entry, but it will return the ASCII character typed at the keyboard in the variable 'C99$' and a value in the variable 'FLAG'. The details of each subroutine are presented in the 'Inputs' and 'Returns' field which accompany the routines.

The subroutines presented are by no means exhaustive: further, any particular application may not require all subroutines. However, the routines presented represent the beginnings of a general-purpose library.

INKEY LINE 1300

INPUTS: None

RETURNS: C99$: ASCII character typed
FLAG : Zero or softkey number

USES: C99$, C99%, FLAG

CALLS: None

INKEY accepts a single byte input from the console. If the byte represents a user-defined softkey (ASCII values 21 through 28 inclusive), the softkey number is returned in 'FLAG.' If the byte is not in that range, the ASCII character is returned in 'C99$' and 'FLAG' is set to zero.

INKEY does NOT echo the character to the display. Use the subroutine 'ECHO,' described below.

SUBROUTINE: GETSFK Line: 1350

INPUTS: None

RETURNS: FLAG: Softkey pressed (1 thru 8)

USES: FLAG, BELL$

GETSFK is used to accept only softkey input from the user. Any ASCII character not in the range of 21 through 28 will 'beep' the terminal and be refused.

GETSFK uses INKEY to accept characters. Once called, GETSFK will not return until one of the eight user-defined softkeys has been pressed.

SUBROUTINE: ECHO LINE: 1500

INPUTS: C99$

RETURNS: None

USES: C99$

CALLS: None

ECHO displays the ASCII character stored in 'C99$' to the CRT display. It complements INKEY for those characters which are to be displayed on the screen.

Summary

This has been intended to provide a starting point for you to build your own library of routines. Future issues of the **Communicator** will contain additional subroutines, functions, and variable definitions which you may want to add to your library. If you have a routine which is particularly useful, or if you have a modification to any of the supplied routines, feel free to contribute it for a future issue.

To be certain that your library will be compatible with any future additions, be sure to maintain the line numbers as shown in the program listing (Figure 1).

File Management

Sort and Back Up Operations With Large Data Bases On Dual 5¼-Inch Disc Drives

Since the SORT program in Condor Series 20 uses a temporary file during the sorting process, it is possible that there will be no room for this temporary file when the data base plus other files or data bases occupy more than half the disc. Furthermore, there will be no room on the system disc for this file because the Condor/125 software takes up most of the space.

It is possible to use a formatted blank disc in the A drive for the temporary file by doing the following while running the Condor program.

1. Type the command COPY **B:SORT.DBM** = A:SORT.DBM to copy the file SORT.DMS to the B drive (this is the drive with the data base on it).

2. Remove the working disc from the A drive and insert the blank formatted disc in the A drive.

3. Type the command **LOGDISC A:** to tell Condor that drive A is now on line.

4. At this point the A drive should be the current drive. Now run SORT from the B drive as follows:

   B:SORT database. . . . . .

The SORT program will use the blank disc on A for the temporary file. When finished, the data base will be re-written in sorted order to the B drive. You may now remove the blank disc from the A drive and re-insert the working disc.

An identical technique is use to back up a data base that resides on the B drive (refer to the above discussion):

1. Use the Condor COPY command to copy the file COPY.DBM to the B drive.

2. Remove the working disc from the A drive and insert a formatted blank disc.

3. Use the LODGISK command to tell Condor that drive A is now on line.

4. Run the COPY program from drive B as follows:

   B.COPY newdatabase = olddatabase

5. Remove the backup disc from drive A and re-insert the working disc in drive A.

Using COPY DISC To Back Up Data Files On Drive B

Do you want to know a simple way to back all your data files from the B drive of a 5¼-inch disc? This can be done by keeping in mind the fact that the COPY utility can run without the operating system disc being in the A drive. This allows you to insert a blank disc in A and run COPY to copy files from the B drive to the A drive.

1. Bring up the Welcome menu.

2. Press the UTILITIES/125 softkey.

3. Press the DISC COPY softkey.

4. Change the menu as follows:
   Change source drive to B
   Change destination drive to A
   Change COPY to **DATA**

5. Remove system disc.

6. Insert blank formatted disc in A drive.

7. Proceed with the copy program—all data files (but not Hewlett-Packard Applications) will be copied from the B disc to the A disc.

8. Re-insert the system disc in A.

Hardware Headlines

Does Your HP 82905B Seem to Stutter?

If it seems like your HP 82905B is not handling line feed and form feed commands correctly, please read on. Sometimes the printer ignores the line or form feed command and then seems to surprise you with unexpected paper advances after you try to fix the "problem." This may happen any time that you send a line feed or form feed to the HP 82905B (i.e., when usig the HP 125 as a terminal or typewriter pressing the ADVANCE FORM or ADVANCE LINE function keys or in applications).

This line feed and form feed problem is really just a misconception of how the printer works and is not a problem at all. The HP 82905B has a buffer, or holding area, in which a single line or form feed is held until the next set of commands bump them out. For instance:

If you...
Press the ADVANCE LINE (or ADVANCE FORM) function key once

The Printer...
does not respond...

If you...
Press the line feed (or form feed) function key again

The Printer...
responds with 1 line feed (form feed).

Likewise if, in a document, you are trying to create a blank line with a line feed or force the end of a page with a form feed, the printer seems to ignore the command. But, when the printer gets the characters for the next line or page, it advances the line or page and then prints the characters. If there was a form or line feed at the end of the characters, the form/line feed command is in the printer's buffer awaiting the next characters or commands.

If you need to simply adjust the page or move to a clean page, use the FF (form feed) or LF (line feed) buttons on the printer. To do so...

a. Press the ON LINE button until the light is off.

b. Press the FF or LF button to move the paper to the desired position.

c. Press the ON LINE button again so that the light is on. You are now ready to print.

The HP 82905B has the special feature of holding a line or form feed until more data moves the command from its buffer. Learning to use any printer's features may seem awkward at first, but using the features often reduce the amount of time you spend with your printer.

HP-IB Time-Out On The HP 82905B

The HP 82905B printer is a low speed, general purpose HP-IB printer that is used on the HP 125. Combining flexibility with low cost, it is an attractive peripheral on your system. There is, however, an incompatibility that exists in some applications of the printer on the HP 125.

The HP 125 is designed to be as friendly as possible. One of its features is the ability to let you know if any peripheral connected via the HP-IB (your discs, plotters, and some printers) is ready or not. Anytime the HP 125 sends some information to one of these devices, it expects an acknowledgement back within a fixed period of time. This process is called a "handshake," and is the way the HP 125 knows that the peripheral successfully received the information.

Since the HP 82905B is a low-speed printer, it takes a few seconds to perform a "form feed" (sometimes referred to as a page eject). In fact, it takes around 10 seconds to perform one on this printer. That is where you might have some difficulty.

During the normal use of an HP-IB printer, the HP 125 expects an acknowledgement within 10 seconds. However, the 82905B printer normally takes just **over** 10 seconds to perform a form feed in certain situations, and therefore a "timeout" occurs. The HP 125 then reports the error, "*HP-IB printer error," and requires that you press the RETURN key to continue.

What can you do to avoid this situation? There are several alternatives.

- First, if your page length is less than 11 inches, you can issue an escape sequence to tell the printer that the page length is shorter than the default 11 inches. The 10 second form feed is for an 11 inch long page, so a shorter page will result in a quicker form feed. The escape sequence is:

  ESC?1#P; where "#" specifies the number of lines per page.

- Second, if your page length is 11 inches or more, issue several line feeds before the form feed, or if you print some text on the current page, the form feed does not have to eject an entire page, and will therefore take less time.
- The next alternative is to not issue a form feed. Instead, line feeds can be printed to get to the top of next page. The partial BASIC program in Figure 1 illustrates this:

```
100 ' Assume the variable LINES contains the number
120 '    of lines already printed on the current page.
120 ' Assume the variable PAGELEN contains the
130 '    number of lines that can fit on the page.
140 '
150 ' Note that ASCII 12 is in the LINE FEED
160 '    charactaer.
170 LPRINT STRING$(PAGELEN-LINES,12);
180 '
190 ' The printer is now at the top of new page.
```

Figure 1. Using Line Feeds in Place of a Form Feed

If you have any questions, contact your HP dealer or local HP Sales and Service Office.

Feature Articles

Customer Corner

Computing Internal Rate of Return

It is still possible to calcualte this frequently used business factor even though VisiCalc/125 does not have an intrinsic Internal Rate of Return function.

The Internal Rate of Return (IRR) of an investment is equal to the discount rate that produces a net present value of zero. By using the @NPV function, you can determine the true IRR within a few iterations.

Do the following:

1. Enter the initial investment and cash flow with their proper signs into the worksheet.

2. Use the @NPV function to evaluate the present value.

3. If NPV is greater than 0 (i.e., positive), increase the discount rate until NPV is equal to zero. The resultant discount is identical to IRR.

4. If NPV is less than 0 (i.e., negative), decrease the discount rate until NPV is equal to zero. The resultant discount is identical to IRR.

Please refer to the Pen and Ink section of this issue for a correction to the VisiCalc/125 manual regarding @NPV.

HP 125 Programming Challenge #2

This month's challenge is to write a BASIC function which, when printed, will display the specified character string centered either on the CRT screen or on a printer. The programmer will specify the actual title string and the width of the output device. For example:

```
2000  'Program Segment to Print Title
2010  TITLE$="ACCOUNTS RECEIVABLE
      REPORT"
2020  PWIDTH=80
2030  PRINT FNT$(TITLE$,PWITH)
```

There are several ways to approach this function: use whichever one seems most appropriate for you.

Solution to Programming Challenge #2

While many solutions are possible, one of the most direct involves use of the SPACE$ function. This function returns a string of ASCII 'space' characters: when concatenated with the desired title, a line of output suitable for printing is generated.

The function definition which solves the challenge is:

```
100 DEF
FNT$(A$,W)=SPACE$(INT((W-LEN(A$))/2))+$A$
```

Using the 'STRING$' function also generates such a string.

Notice that this solution does not function properly when the title is longer than the desired device width. Can you solve this problem within the function?

Software Status Bulletin

The Software Status Bulletin is a cumulative list of all problems that have been reported on the HP 125. All new problems reported since the last issue of the Communicator are marked with a *.

WORD/125 Rel: 02.00

Problem Description: 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.

Problem Description: 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 Description: In WORD/125, 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), the bottom of the screen will be filled with unwanted characters.

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 Description: 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 Description: 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 Description: 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 Description: 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.

GRAPHICS/125 Rel. A.01.00

Problem Description: 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.

Problem Description: The labels on the linear charts are rounded to the nearest tenth. For examples 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.

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

Workaround: Sort the segments with the sort option.

Problem Description: When you are making a bar chart, 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.

Problem Description: In Pie Charts, the labels will be plotted over exploded segments in certain instances.

Workaround: Use the auto sort option or avoid exploding segments.

Problem Description: When using stacked bar charts in GRAPHICS/125, 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.

*Problem Description: 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 Description: Labels on linear charts are rounded to nearest tenth, i.e., 0.25 is plotted as 0.3.

Workaround: Fixed in version A.01.01

*Problem Description: Graphics 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.

*Problem Description: After plotting many slides, SLIDE program loses inverse video and seems to "lockup."

Workaround: EXIT from GRAPHICS then re-enter to do the slide over again.

GRAPHICS/125 REL: 01.01

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

Workaround: Ignore message and press return.

*Problem Description: 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.

*Problem Description: 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.

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

Workaround: Use a label with less characters.

*Problem Description: GRAPHICS/125 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 HP 7225 and 7470. The user will have to change the pens manually as required. Specifying pen 9 when using the HP 9872C causes pen 1 to be selected.

*Problem Description: The backward apostrophe (ASCII 96) cannot be plotted in SLIDE.

Workaround: Substitute the single quote character.

BASIC/125 Rel: 05.21

Problem Description: The HP 125 firmware contains an error that causes the "Esc d" escape sequence to be processed incorrectly. (The Esc d" sequence allows simulation 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.

CP/M (BIOS 1.2)

*Problem Description: Upon using extended system function call 125 to send 80 character message to message window, the 80th character is lost and window is displayed in inverse video.

Workaround: Limit messages to 79 characters.

Pen and Ink

This article presents corrections to the HP 125 manuals. Just pencil in these corrections to update your HP 125 manuals.

VISICALC/125 Rel: 02.00

Correction Description: On page 5-8 of the VISICALC/125 manual, change the exponentiation example on the top of the page to read 2∧5 [RETURN].

Correction Description: Page 6-3 of the VISICALC/125 manual incorrectly states that the [CTRL] E command can be used to edit replicate commands. In fact, replicate commands cannot be edited with [CTRL] E. Strike the sentence "As with any other entry. . . by using [CTRL] [E]."

Correction Description: Page 9-3 of the VISICALC/125 manual states that the "∧E" causes the character that follows to be an escape character. This is not true. Modify the text to say that "∧E" sends an escape character.

Correction Description: The first example on page 5-16 incorrectly states 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."

WORD/125 Rel: 02.00

Correction Description: Artwork is missing from the bottom of page 1-13 of the WORD/125 manual. 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.

Correction Description: On page iii of the WORD/125 manual, change the manual title to read "System Reference Manual" instead of "Software Reference Manual."

Correction Description: On page 2-9 of the WORD/125 manual, 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 Rel: 05.21

Correction Description: The BASIC/125 manual states on page 3-80 that the default text width on the screen is 72 characters. Change the number to 80 characters instead of 72.

Correction Description: On lines 1020 and 1030 in the example on page H-4, place a "$" after the "ESC."

System Reference Manual

Correction Description: Page 15-18 of the HP 125 System Reference Manual incorrectly describes the XTHL assembly mnemonics; XTHL has no paramenters; it exchanges the HL register pair with the top of the stack.

On 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.

Correction Description: On page A-7, change the Key Code A9 from "enhance Linergins" to "Enhance Line"

Correction Description: On page 10-11, change the maximum length of Subfunction 123 (window message string) from 79 to 80.

GRAPHICS/125 REL: 01.00

*Correction Description: Page 6-15, under description of number interpretation: "beTw E" should read "between E."

GRAPHICS/125 REL: 01.01 Manual Revision 3/82

*Correction Description: On page 6-12, fourth line, and the following 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.

GETTING STARTED

*Correction Description: 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."

International—HP 125 Software, Update, and Manual Ordering Information

This is a summary of ordering information for the HP 125 software, updates, and manuals which are available through Hewlett-Packard Sales and Service Offices and Authorized HP 125 Dealers. For each software product, ordering information is given for:

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- Software Update Kits. . . to provide an updated version or replace damaged media.
- Manual Updates. . . to obtain revised manuals or change pages for your manuals.

Software Update kits contain the latest software and any manual updates issued since the original version; they are provided at a nominal cost in exchange for your original master disc. To replace damaged media, Software Update Kits are available for all HP 125 software packages—check with your Dealer or HP office.

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The items listed—plus quality media and operating supplies—are available through your Authorized HP 125 Dealer or your Hewlett-Packard Sales and Service Office.

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Issue #1 includes the following major articles:

- "Single and Multi-line Page Headings with WORD/125"
- "Searching for Enhanced Text in WORD/125"
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