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NEWS80S

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For HP Series 80 Users



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WORD PROCESSING ISSUE

WORD PROCESSING FOR THE HP-85 by Dale Flanagan

If you bought an HP-85, you probably didn't buy it for word processing. Despite having a superb keyboard, upper and lowercase input, function keys, special command keys, and numerous other features, there's one aspect of the HP-85's design that stops most people from considering it for word processing: Its screen.

The screen on an HP-85 is approximately 3" by 4". If you've never used one, it's hard to believe how sharp and crisp letters and graphics can appear on a screen so small. Probably a greater limitation on word processing usage is the format of the HP-85's screen, rather than the small physical size. The HP-85's screen will only display 16 lines of 32 characters. This doesn't compare too favorably with the industry "standard" of 24 lines of 80 characters (followed by HP's newer HP-86 and HP-87).

Still, the people who bought the HP-85 for the things that it does do well have a need for word processing too, and it's almost peculiar that for the last couple of years the only word processing program generally available on the HP-85 was HP's own Text Editing Pac. That has changed.

Over the last 6 months or so the number of commercially available HP-85 word processing packages has swollen to 5. In this review we're going to look at these packages, listing their features and the things we liked and didn't like about each.

Except for HP's own Text Editing Pac, each of the new word processors was surprisingly good. They represent a range of word processing features and they also exhibit a variety approaches to "programming around" the small HP-85 screen or using unique HP-85 features. We preferred some packages over others, but we weren't unhappy with any of the newer HP-85 word processors reviewed. Often our preference was based on personal taste and style, and for this reason we decided it would be silly to declare any of the packages as the "best"; What we like in a package may not be what you like. For that reason, we encourage you to study the comparison chart provided, go over our comments, and decided for yourself which HP-85 word processing package will best suit your needs.

TEXT EDITING PAC BY HEWLETT-PACKARD

It's almost embarrassing to include the Text Editing Pac in this comparison. It's sort of like entering your grandfather in the Olympic trials. Even though the Text Editing Pac is only a couple of years old, those few years represent a virtual lifetime in how HP-85 software has progressed.

The Text Editing Pac may have been good in its day, but its performance falls short when compared to the newer programs in this review.

The Text Editing Pac is written entirely in Basic, with no binary programs to help it overcome the limitations of Basic. One annoying consequence of this is that you can't enter commas into a line of text (a standard Basic INPUT statement won't take commas unless they're in a quoted string). You have to pick a comma substitute character (i.e. something like "I and use this character whenever you want a comma. When the text is printed, a comma will be substituted for the character you've chosen.

The Pac is line oriented. All manipulation of text is done by line number or with blocks of line numbers. The maximum line length allowed is 95 characters, and you must control the line length of the output. The program provides no typewriter-like bell to help you with this task, and you must watch the text on the screen to gauge the length (lines one screen wide = 32 characters, lines that overlap to two screens wide = 64 characters, etc.). Obviously, this is not a satisfactory solution to this problem. The Pac instructions suggest using lines only 32 characters long. This is logical, because the Pac assumes you want to use the HP-85 internal printer for text output. The other programs in this test allow you to use the internal printer to output drafts or short notes, but they also allow you to pick an external printer for more professional appearing output. With the Pac, you must either set the "Printer Is" command prior to running the program, or you must modify the program (easy to do because both the editing and printing program that make up the Pac are unsecured and listable).

The Pac does have two things going for it. One is price. It's sold for under \$100, and for this price you get BOTH an HP-85 data tape version and an HP disk version. That's -a-bout \$30 worth of media. The Pac is also the only program that will work on a 16K machine; all the other programs tested need the memory module expansion. Instructions are included in an Appendix on how to modify the program to use the extra memory module for text, if you have it, but the "stock" Pac provides 7K of text storage in a 16K machine.

The Text Editing Pac was the first, and for a long time the only, way of doing word processing on the HP-85. If you're restricted to a 16K machine, or if price is the number one selection criteria, then it should be considered for very light word processing duties. However, in our opinion all the other processors tested will do a better job for your writing needs.

PAGewriter BY DIAMOND TV & COMPUTER SOFTWARE

Pagewriter is a simple word processor that offers several features, especially if you own an HP82905B printer. As with most of the programs in this review, Pagewriter uses a combination of Basic and a custom binary program designed to overcome the limitations of a "Basic only" program.

I'd classify Pagewriter as semi-line oriented, because although all editing is done on the computer's screen without the need to reference line numbers, Pagewriter depends on you to press the END LINE to indicate, logically enough, the end of each line. To help you on this as you're typing in text, Pagewriter allows you to set a bell position that will beep you in ascending tones as you near the end of the line.

Pagewriter makes heavy use of the portion of HP-85 memory reserved for the display of the CRT. This 8K section of memory forms a restriction on the amount of text you can enter, but unlike some of the other programs reviewed, Page- writer has no provision for chaining text files together when printing, so you ... (Story continued Page 8)

NEWS80S HP-85 WORD PROCESSING CHART

PROGRAM	TEXT EDITING PAC	PAGewriter	WRITE/IDEA	TEXT85	DOCUMATE
COMPANY	HEWLETT- PACKARD	DIAMOND TV & SOFTWARE	THRESHOLD SOFTWARE	APPLIED RESEARCH & CONSULTING	APPLIED MICROCOMPU- TER SYSTEMS
PRICE	\$95	\$175	\$ 250	\$300	\$395
MEMORY	16K	32K	32K	32K	32K
ROMS	NONE	PP, AP	PP	PP, AP	PP
DISK VERSION	YES	YES	YES	YES	YES
HP-86/87	NO	NO	YES	NO	NO
TEXT SIZE	7K	8K	8K	6.5K	13.5K
SECURED	NO	NO	YES	YES	YES
BACK-UP	MAKE OWN	MAKE OWN	1 FREE	1 FREE	\$40

CONTROL

FUNCTION KEY	YES	YES	YES	YES	YES
COMMANDS	NO	NO	NO	YES	NO
CTRL-KEYS	NO	YES	NO	NO	YES
HP-85 KEYS	NO	YES	YES	YES	YES
PAUSE	YES	YES	YES	YES	NO
HELP	NO	NO	NO	YES	NO

DOCUMENTATION

PAGES	40	10	69	73	49
INDEX	NO	NO	NO	YES	NO
QUICK REF	NO	YES	YES	YES	YES
TYPE AIDS	NO	NO	NO	NO	YES
TUTORIAL	YES	NO	YES	YES	YES
ORGANIZATION	AVERAGE	POOR	GOOD	AVERAGE	GOOD
DEPTH	AVERAGE	POOR	GOOD	GOOD	GOOD

INPUT/EDIT

TYPE	LINE	SCREEN/LINE	SCREEN	SCREEN	SCREEN
COMMAS, ETC.	NO	YES	YES	YES	YES
INSERT	YES	YES	YES	YES	YES
DELETE	YES	YES	YES	YES	YES
FIND	YES	YES	YES	YES	YES
REPLACE	YES	NO	YES	YES	YES
MERGE	YES	YES	YES	YES	YES
MEMORY LEFT	NO	YES	YES	YES	YES
SPECIAL CHAR	YES	YES	YES	YES	YES

(CONTINUED)

NEWS80S HP-85 WORD PROCESSING CHART

PROGRAM	TEXT EDITING PAC	PAGewriter	WRITE/IDEA	TEXT85	DOCUMATE
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 FORMAT

CENTER	NO	NO	YES	YES	YES
TABS	YES	YES	YES	YES	YES
DECIMAL TAB	NO	NO	YES	YES	YES
GAP	NO	NO	NO	YES	YES
INDENT	NO	NO	NO	YES	YES
UNDERLINE	NO	NO	YES	YES	YES
LITERALS	NO	NO	NO	YES	NO
SUBSCRIPT	NO	NO	YES	YES	YES

 BLOCK

MOVE	BY LINE	YES	YES	YES	YES
DELETE	BY LINE	YES	YES	YES	YES
PRINT	BY LINE	NO	YES	YES	NO

 PRINTING

WIDTH	NO	YES	YES	YES	YES
LENGTH	NO	NO	YES	YES	YES
SPACING	NO	NO	NO	YES	YES
JUSTIFY	NO	YES	YES	YES	YES
PRINT IS	NO	YES	YES	YES	YES
FONTS	NO	YES	YES	YES	YES
STATUS DISP.	NO	NO	YES	YES	YES
PAGE NUMBER	NO	NO	NO	YES	YES
PAGE TITLE	NO	NO	NO	YES	YES
NEW PAGE	NO	NO	YES	YES	YES
CHAIN	NO	NO	YES	YES	YES
SAVE SETUP	NO	NO	YES	NO	YES
KEYBOARD	NO	NO	NO	YES	YES

 OTHER USES

FORM LETTERS	NO	NO	YES	YES	NO
PLOTTER USE	NO	NO	YES	YES	YES

 COMMENTS

LOW COST - ONLY 16K SYSTEM	HP82905B TYPE SELECT PART OF PROGRAM	EASY TO LEARN & USE	INNOVATIVE EDITING SYSTEM	MANY FEATURES - FORMERLY SUPER SCRIBE
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NEWS80S HP-85 WORD PROCESSING COMPARISON CHART

Explanation of Categories on Chart

PROGRAM - Program name.

COMPANY - Company publishing program.

PRICE - Suggested Retail Price for HP-85 tape version of program.

MEMORY - Memory size required to run program.

ROMS - Extra HP ROMs required by program.

DISK VERSION - Disk based version available.

HP-86/87 - Version for HP-86 or HP-87 available.

TEXT SIZE - Size of text that can fit in memory at one time.

SECURED - Is program protected or secured so you can't make copies.

BACK-UP - If program is secured, how much does it cost to obtain a back-up copy of the program?

CONTROL - How control of the program's functions are accomplished.

FUNCTION KEY - HP-85 function keys used, along with function key menu.

COMMANDS - "English language" commands may be entered from a prompt line.

CTRL-KEYS - Control key sequences used to give commands to program.

HP-85 KEYS - Significant use is made of the special keys on the HP-85 keyboard to facilitate program control.

PAUSE - The program's documentation explains how the program may be paused to allow normal HP-85 system's commands to be used.

HELP - Has special help screens in addition to function key menus.

DOCUMENTATION - Describes the documentation of the program.

PAGES - The number of pages in the program's manual.

INDEX - Does the manual have an index (important in long manuals).

QUICK REF - Does the documentation have a quick reference card or section.

TYPE AIDS - Does the program provide stick-on typing aids to identify special keys.

TUTORIAL - Does the documentation give many step-by-step examples for beginners to follow.

ORGANIZATION - Subjective rating of manual's organization, based on use of the manual by a beginner (ratings: Poor-Average-Good).

DEPTH - Subjective rating of the depth of information provided which may be of interest to experienced users (ratings: Poor-Average-Good).

INPUT/EDIT - Information on the characteristics of the program during the input or editing of text.

TYPE - Type of program. Screen oriented programs ignore line length on input or when editing text. Line oriented editors input text line by line.

COMMAS, ETC. - Does program accept commas, quotes and other common characters.

INSERT - Allows insertion of a character when editing.

DELETE - Allows deletion of characters when editing.

FIND - Will find a string or phrase.

REPLACE - Will find and replace a string or phrase.

MERGE - Will merge text on tape or disk with existing text in memory. Allows creation of "boiler plate" documents from stock pieces of text.

MEMORY LEFT - Reports document size or remaining memory before memory full.

SPECIAL CHAR - Has provision for output of special character(s), such as those useful for printer control.

FORMAT - Program features to aid in the format of the printed document.

CENTER - Will automatically center a line of text.

TABS - Provides tab positions for text.

DECIMAL TAB - Will align decimal points in tabbed columns of numbers.

GAP - Allows automatic specification of a gap in the printed text (e.g. space for illustrations, examples, etc.).

INDENT - Allows automatic indentation of text from within the text file.

UNDERLINE - Provides automatic underlining of text, with printers that support this feature.

LITERALS - Provides output of text exactly as it appears on the screen. Useful for special effects in text.

SUBSCRIPT - Provides subscript and superscript, with HP89205B printer.

BLOCK - Functions that work on a block of text, set by the user.

MOVE - Move blocks of text in "cut and paste" fashion.

DELETE - Delete blocks of text.

PRINT - Print specific blocks of text from a larger document without erasing the rest of the text.

PRINTING - Output features when printing the document.

WIDTH - Set and change the line width for the document at output time.

LENGTH - Set and change the number of lines per page at output time.

SPACING - Set and change line spacing within the program (e.g. double spacing).

JUSTIFY - Add extra spaces so right margins are even.

PRINT IS - Set "PRINTER IS" specification from within the program.

FONTS - Supports expanded type, bold face and other type fonts found on the HP89205B printer.

STATUS DISP. - Has a status display of print options set for handy reference.

PAGE NUMBER - Will number printed pages.

PAGE TITLE - Will print page heading (and/or footing) on printed pages, as specified by the user.

NEW PAGE - User can force the start of a new page with a command in the text.

CHAIN - Program will chain multiple text files together, allowing the output of large documents in one printing run.

SAVE SET-UP - Program will save various printer set-up parameters, so they don't have to be reset.

KEYBOARD - Program will allow a pause in operation to get (and print) user input in a document.

OTHER USES - Other uses for program which are explained in documentation.

FORM LETTERS - Creation of form letters, where text is automatically combined with a file of names and addresses.

PLOTTER USE - Use of the program to generate graphics, using an HP plotter.

COMMENTS - General comment on each program. See review text for full comments.

AND NOW...

A WORD FROM THE HP - 85:



If you haven't been using your HP-85 for word processing, you've been spending too much time writing and revising documents! With **DOCUMATE** Word Processing your HP-85/83 can help with all your daily writing chores. With **DOCUMATE** you can:

- Type your documents just as you would on a typewriter but without the bother of dividing your text into lines and pages.
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- Print your documents without typographical errors on any external printer or on the HP-85's internal printer.
- Save your documents on any tape or disk for later revision and reprinting.

DOCUMATE will make all your writing quicker, easier, and of higher quality. Why not look into **DOCUMATE** Word Processing? It may be your best investment since your HP-85!

Advanced **DOCUMATE** Features:

Text Entry and Editing:

Instant display updating during entry and editing/Text automatically shifted for insertion and deletion/Font-size/color positioning/Inclusion searches/Easy to use bolding/underline/audible key click/fully buffered keyboard/On screen underlining/Automatic phrase replacement/Up to 11,000 characters per document screen.

Document Formatting:

Up to 132 characters per line/Easy under selection/Easily configured for any printer/Full format control with 18 commands/Automatic centering, justification, page numbering, etc./Automatic printing of segmented documents/Automatic insertion of variable items

Document Storage:

Up to 42 documents per tape, more on disk/Merging of existing documents to create new ones/Full mass storage operations including naming, saving and initialization

Other Special Features:

Easy menu-driven operation/Adhesive labels for special editing keys/Complete error diagnosis and messages/Comprehensive User's Guide and Training Manual



DOCUMATE Word Processing is referenced under the HP-PILOS program.

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DOCUMATE Word Processing offers unmatched capabilities and convenience of use due largely to its extensive use of assembly language (binary) programming. We urge you to compare this any other word processing package for the HP-85. None are as powerful, reliable, or easy to use as **DOCUMATE**.

Detailed literature on **DOCUMATE** is available upon request. For a full demonstration, see your local HP dealer or inquire about our special evaluation offer.

DOCUMATE may be purchased from your local HP Dealer or directly from Applied Microcomputer Systems for \$495. **DOCUMATE** is available on tape or disk and includes a 90 day limited warranty on parts and software, plus full factory support.

APPLIED MICROCOMPUTER SYSTEMS

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(Continued from Page 2)

will either have to restrict yourself to short letters or memos, or you will have to organize longer work so it can be entered and printed in 8K chunks.

The manual that comes with Pagewriter is a short 10 pages (counting a quick reference chart and appendix). Most of these pages are spent describing the various keys that Pagewriter re-defines for its operation. This manual should be expanded to include more tutorial information on the operation of the program. Although Pagewriter is relatively simple, it is certainly non-trivial and a good tutorial is necessary for bringing the new user up to speed. This is one area where a definite improvement is needed.

In operation, Pagewriter works nicely. It provides use of the function keys to allow you to take advantage of the special features of the HP82905B printer with the press of a key (i.e. expanded type, normal type and emphasized type).

Pagewriter uses special symbols in the text to identify where type styles on an HP82905B printer will change, as well as to identify the end of lines, tabs and other text symbols. In addition to the function keys, Pagewriter also uses some of the special keys on the HP-85 keyboard (e.g. LOAD and STORE) and control keys (for instance, a control-E will position the text cursor at the last character).

Compared to some of the other programs reviewed, Pagewriter is not extremely sophisticated in its features. But it is relatively low in cost and definitely superior to the HP Text Editing Pac, the only program reviewed which had a lower price.

DIAMOND RESPONDS TO OUR REVIEW...

"We recently received your evaluation of Pagewriter. I believe your evaluation efforts are based on fair and impartial judgment. Response from our customers has been very positive on the simplicity and usefulness of our program." Michael Hillbun, Diamond TV & Software.

(NEWS80s NOTE: With his response Mr. Hillbun included a note that a new manual is in process. He also included some notes on undocumented features in Pagewriter, which may be of interest to current or potential owners of Page-writer).

(To merge a document from mass storage, move the cursor to the point where the new text is to begin and press the LOAD key).

(Pressing the RESLT key gives the location of the cursor, the number of character spaces left in memory, and the position of the last end-line)

(To move a block of text, position the cursor at the end of the block and press CTRL-X, then move the cursor to the beginning and store the block in memory using function keys K1, K2 or K3. Then position the cursor to the insert point and use CTRL-R to recall the text in the new position. Deleting a block of text is somewhat similar. CTRL-X is used to mark the end of the block, then move the cursor to the beginning of the block and press the DEL key).

WRITE/IDEA BY THRESHOLD SOFTWARE, INC.

When you talk to the people at Threshold Software about Write/Idea, you're liable to be greeted with an enthusiasm that borders on the manic. After you use the program for awhile, you realize that they have some justification for their enthusiasm. It's a very good program.

I liked Write/Idea very much, primarily because it was so easy to learn and use. The programmer of Write/Idea, Marvin Parsons, seems to have made a special effort to use the special command keys of the HP-85 in a logical manner. If you want to load a textfile into memory, you press the LOAD key. If you want to store it, you press the STORE key. Other functions work in a

similar fashion, taking advantage of the many special keys found on the HP-85 keyboard.

The program is screen oriented. You keep typing text and when you hit the right hand side of the screen, the remaining letters for the word you're typing are continued on the next line. This takes a little getting used to, but this wrap around technique is not especially bothersome after you've worked with it awhile. To indicate a paragraph, you press the CONT key. A vertical bar symbol appears on your screen to let you know that a paragraph will appear in your output text. You must also occasionally press the END LINE key. This cleans up the screen by removing any characters you've deleted (by pressing the DEL key, naturally) and it also displays the amount of memory used and the remaining memory. For this last bit of information, Write/Idea assumes that every 5 bytes used is a word, and actually reports memory used and available in terms of "words". This struck me as an unnecessary but not objectionable complication. Up to 3000 characters (1600 "words") can be entered at any one time.

Write/Idea allows you to chain text files together, so the amount of text that can be held in memory is not restrictive. The program also allows the creation of form letters, which is a very handy feature in some applications. To do this, you must enter the various names and addresses to be used into a special Write/Idea text file, and you have to write your form letter with "dummy" names and addresses.

Selected blocks of text can be printed, and the same facility that allows you to identify blocks of text for printing can be used for block movement and deletion.

You can set the printer number, line length, lines per page, and left margin from within the program (accessed with a function key). You can also have the program justify text. As with all programs reviewed in this article, the justification is handled by adding extra spaces, and Diablo, Qume or NEC printer "proportional" justification is not handled.

The program allows you to pause its operation by pressing the pause key. The documentation calls this out as a convenient way of setting up special interfaces or giving "control" commands to HP intelligent interfaces.

I was surprised to see that line spacing (i.e. double spacing, triple spacing, etc.) couldn't be set from the print options provided. The people at Threshold suggested using the pause key to access an HP intelligent interface, and giving end-of-line "control" commands to cause the printing to come out double spaced. This will work, but the rest of the program is so easy to use that this solution to a common output requirement came as a surprise to me.

The Threshold people are proud of the fact that Write/Idea can be used to control an HP plotter, and in fact they provide several files with the program that can be used for making fancy borders with an HP plotter. I don't own an HP plotter, so I can't comment on how easy the program is to use in this application, but I must say that the samples of overhead projector masters they sent me, made with Write/Idea and an HP plotter, were very professional looking.

Write/Idea has a nicely done, 63 page manual. It starts with some simple lessons on the use of the program, and advances to more complex topics. These advanced topics include decimal tabbing (i.e. how to enter columns of numbers so the program will automatically line up the decimal points for you when it prints them out), as well as how to use Write/Idea to inspect the contents of a data file (such as a Visicalc file).

The manual doesn't have an index. It's my personal feeling that any manual of more than a few pages should have an index, to make it easy to go back and check on topics. The program does come with a quick reference card, however, and a lot of questions can be answered by looking at this card.

Overall, I feel Write/Idea is an excellent word processing program for the HP-85. You can tell that real effort has been put in to integrate the program with the HP-85's keyboard and normal method

of operation. This ease of use, plus the many nice features, form the real strengths of this particular package.

THRESHOLD RESPONDS TO THE REVIEW...

“In general, I found both the review and the chart to be fair assessments of our product. I would like to mention, however, that the absence of some of the more esoteric word processing features from the program is the result of a deliberate effort to produce a program with the following characteristics (especially for the HP-85):

“Easy to learn and use, even if you only use it once a week (try that with some of the big Word Processing programs), for novices, one-finger typists, first-time word processing users, etc.

“Usable with the tape drive, or with only one disk drive; a program which resides entirely in memory, so that the program disk can be removed from the drive after loading.

“Non-specific with regard to printer and interface type.” Valerie Vann,
Threshold Software.

TEXT85 BY APPLIED RESEARCH AND CONSULTING

Text85 is an ambitious program in both concept and execution. It provides a host of innovative features in a well-programmed package.

Most programs provide for the use of the HP-85's special function keys or the entry of various commands. With Text85 you get both. You can press a function key to have TextB5 print a file, for instance, or you can type in the command “PRINT FILE. In fact, you can even enter “PRINT 2 COPIES FILE” and Text85 will do that, too. This kind of flexibility in having the program adapt to your style of operation (instead of vice-versa) is truly impressive, and just one of the many clever ideas found in this particular package.

We were sent a pre-production version of this program to test, so our comments should be taken with this in mind, but even with a pre-production version of the program, we were obviously impressed. The approach to HP-85 word processing taken by Text85 is slightly different from any other package in this review. Although the program is screen oriented, each of the various components of a document are identified as “elements”, and each element carries format specifications. For instance, a typical business letter would have the address! salutation as a separate element, the introductory paragraph as another element, perhaps a chart of some kind as another element, another paragraph of text as another element, and the closing information as the final elements of the document.

Where Text85 is very powerful is in combining these various “elements” to produce complex output. The manual teaches you how to create forms, for ins tance, which may be stored in blank form and called back into memory from tape or disk for later filling in. Along with this form you might also have a complex equation printed, complete with sub and superscripts (if you have an HP89205A or B printer). You can also prepare elements called “literals” which will print out exactly what you see on your screen. You can even specify that you want these literals to be two or three screens wide, so you can have complex banners or form headings, if you wish.

All this fancy formatting takes time to create, but once created you can save the elements to your mass storage for later use and re-use. Text85's file manipulation facilities make this much easier, because you can create what's called an “extended file.” This is a file with common names with file numbers attached (e.g. NAME1, NAME2, NAME3, etc.).

word power



WRITE:IDEA
for the HP 83, HP 85,
HP 86 and HP 87
is listed under
the HP+ program



**THRESHOLD
SOFTWARE
INC.**

1837 Ingate road, suite e
sacramento, california 95815
(916) 926 8189

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You selected your HP series 80 personal computer for its scientific and technical capabilities. Now, WRITE:IDEA expands your HP system to encompass word processing applications.

WRITE:IDEA is a sophisticated, flexible, easily mastered word processing program to enable the production of documents from conception through finished hard copy. Reports, articles, letters, manuscripts, anything requiring word manipulation can be input and edited with simple commands and interfaced to any HP series 80 compatible printer. You can even make projection slide transparencies of notes, tables, or outlines using a peripheral plotter like the new 7470A. All this with a portable system you can carry to conferences, seminars and meetings.

WRITE:IDEA extends the power of your HP series 80 to increase its flexibility and productivity. An investment in WRITE:IDEA gives you a program that:

- TURNS YOUR HP SERIES 80 INTO A PORTABLE WORD PROCESSOR
- PROVIDES QUICK, CONVENIENT SINGLE TOUCH EDITING COMMANDS
- FEATURES FULL CURSOR CONTROL/SEARCH-REPLACE/GLOBAL SEARCH/FILE MERGE/BLOCK MOVEMENT/FILE INSERTION/CENTERING/JUSTIFICATION/DECIMAL & NORMAL TAB AND MUCH MORE
- PROVIDES FLEXIBLE FORMAT COMMANDS FOR PROFESSIONAL PRINTOUTS
- INTERACTS WITH ANY SERIES 80 COMPATIBLE PRINTER AND THE NEW 7470A PLOTTER

WRITE:IDEA COMES ON EITHER A 5.25 INCH DISK OR A TAPE CARTRIDGE WITH COMPLETE INSTRUCTIONS AND REFERENCE MANUAL.

PRICE: \$250 — \$300 FOR THE HP 86/87

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You can move the contents of these files, insert material, or delete material using TEXT85 commands.

When printing, Text85 provides you with more impressive versatility. We've mentioned literals, equations and form output, but you've also got the ability to plot a graphics file. This is a graph created by another program, processed and saved by a Text85 utility program named GFILE. If you have an HP89205A or P printer, you can then use Text85 to print or intermix this chart with other text.

The Text85 documentation covers the many features of this program, but we felt that the manual could be organized better. The documentation starts on a subject and pursues it until all aspects have been covered. Then it goes on to the next subject. We believe it's easier to learn a system if the basics are covered first in a step-by-step tutorial for beginners. After the fundamental operations are covered, then the more advanced features can be covered. Text85 does have an "Advanced Applications" chapter at the end of the manual, but what we considered to be very advanced features are also intermixed in the earlier chapters. With a program as innovative as Text85, the documentation is key to learning to understand and use the system, and the current Text85 documentation can (and should) be improved in future printings.

Overall, Text85 has a series of features which show both original thinking and significant programming effort. We've used the word innovative many times, and it's not often you come across a truly innovative piece of work. We liked several of the programs tested in this review, but we found Text85 especially delightful because of all the new discoveries made as we worked our way through the manual.

APPLIED RESEARCH AND CONSULTING REPLIES TO THE REVIEW...

"Text85 originated from my own requirements for technical writing. I was also challenged by the idea that such a program should operate on the user's terms, and not the other way around. The willing servant, if you will. The resulting 'intelligent' program controller has made possible a highly structured program accommodating many features and refinements.

"How is it possible to do serious word processing with a 32 column screen and 32 kbytes of memory? Some of the critical 'means' for Text85 have been:

- 1) The AP ROM implementation of string arrays allows elements of unspecified size; only the total text is limited by the overall array dimension. This is a natural match to the makeup of pages (paragraphs, columns, headings, etc.). This text "block" orientation of Text85 (WP programs are typically line oriented) is key to the effective use of the small screen and the extensive block edit capabilities of the program.
- 2) The SCAN function numbers and displays the first line of each element for quick identification; for many editing purposes this is as good (or better) as seeing the whole page on a screen.
- 3) The Extended file concept provides large document capability with minimal memory and file access requirements.

"The operation manual, designed for the 'character' of the Text85 program, is functionally organized. Major sections are Getting Started (recently revised), Writing, Editing, Printing, and Filing. The manual is thoroughly indexed and includes a handy Quick Reference Guide.

"I would like to strongly encourage those readers contemplating word processing, whatever hardware or WP software you may ultimately choose. A good word processor is a super tool for your communication productivity." Thomas Ligon, Applied Research and Consulting.

(NEWS80S NOTE: Mr. Ligon included a copy of the revised "Getting Started" section of the Text85 manual with his response. In our opinion this revised introduction is greatly superior to the original manual provided us, and should make learning Text85 a good deal simpler).

DOCUMATE BY APPLIED MICROCOMPUTER SYSTEMS

“Documate” was marketed as “Super Scribe” by Applied Microcomputer Systems, but at the end of our test we received word that Applied had changed the product name to avoid confusion with another program, and that it had made several other changes. One of the most important changes involved lowering the price of the program (always welcome!) and solving several major problems involving conflicts with ROMs.

Our test was conducted on the “Super Scribe” version of this program, but Applied Microcomputer has told us that the two programs are almost identical except for: (1) All conflicts with the I/O ROM have been resolved (see below) and (2) Any and all ROMS may be installed.

During our test, we had an immediate problem, because we couldn’t get the program to run on our HP-85. A memory full error greeted us, because the program wouldn’t run with the combination of ROMS we have in our computer. Each HP-85 accessory ROM you plug in steals a little bit of RAM for initialization and scratch-pad use, and in its efforts to squeeze the maximum amount of text space, the program didn’t allow enough spare RAM to handle all combinations of ROMS.

We removed some of the ROMs in our HP-85 and got the program running. In the meantime, Applied Microcomputer sent a revised copy of the program to us by return mail. This revised version performed erratically when we tried to run it with the I/O ROM plugged into our computer. Whenever we wanted to run the program, we had to remove the I/O ROM from the computer, which we rated as a major annoyance. We’re happy to hear that the “Documate” version of the program solves this problem.

After all this, we were glad to finally get the program running because it has several interesting features. When you first start Documate, you’re asked to make a choice on what printer you want to use. Documate keeps the set-up specifications for several printers on a data file, and you can pick one of the printers listed or set printer specifications to suit your printer/interface combination, if it’s not one of the choices listed. Any printer set-up you create becomes one of the choices available to you the next time you run the program.

The program is screen oriented. When you press the END LINE key, the program displays “<END LINE>” on the screen. In fact, when you specify other format and output features, similar messages appear for you. The other word processors use special symbols available as part of the HP-85’s character set to indicate the same sort of format instructions (such as a vertical bar symbol for end-of- line). Documate’s “<END LINE>” method is unambiguous, and much easier for novice users to remember. After we used the programs for awhile, however, we tended to prefer the special symbol scheme because we soon learned what each symbol meant. With the spelling out of format commands in Documate, the screen tended to become cluttered with format commands, and the HP-85’s screen is really too small to be cluttered up. This is a matter of personal preference, however, and you may appreciate the clarity of the “<END LINE>” type of format command, instead of having to remember the meaning of special symbols.

Documate has many output commands which we found very useful for the production of complex documents. With Documate you can force a new page, for instance, which is very useful for starting document sections at the top of pages. You can also specify that you want a “gap” in your text. This allows you to clear some space for illustrations or examples.

Another interesting command found in Documate is the “GET” command. This can be embedded in your text so you can pause the printing of a document as you enter information to be printed from the keyboard. This is very handy for form-type letters and other uses.

The documentation for Documate has many interesting aspects to it. It's the only documentation that assumes you know nothing about your computer. It outlines how to get your HP-85 running, including how to plug in the power cord! At the back of the manual, Documate has recommended training procedures and seven exercises or lessons on how to learn the system. To help you remember the uses for the function keys and such, Documate even gives you a strip of stick-on labels with the uses for the function keys spelled out. This typing aid is supposed to be stuck to your HP-85, to help you operate the system.

Documate's manual is obviously designed to help the total novice to data processing or word processing. For this reason we were surprised when the program allowed us to wipe out a document in memory by pressing the CLEAR key, without first asking us if this is what we really wanted to do. Yes, it's a dumb mistake. And no, we never did it again. But losing all our text was a mighty harsh way to learn that this was one dumb mistake to avoid, when a programmed double-check of important operations could prevent this. Some of the other programs tested, especially the ones in this price class, double-checked for fatal errors like this.

Overall, Documate impressed us with its manual, learning aids, and output features for long documents. The things which caused the majority of our dissatisfaction with the 'Scribe' version of this program have evidently been eliminated with the Documate version.

APPLIED MICROCOMPUTER SYSTEMS RESPONDS TO THE REVIEW...

"I have just received your review of our word processing package and am generally pleased with its contents. However, please consider the following information which you may wish to include in the review:

"1) Special characters can be sent with the 'XMIT' command which is imbedded in the text. This is a new feature of Documate.

"2) Superscripts and subscripts can be printed by using the XMIT command to give a half line feed.

"3) The 'CLEAR' key may be dangerous to the novice, however it is no worse than the adjacent 'RESET' key. Therefore it was decided that a double-check was not needed.

"4) I would prefer that you did not dwell on the ROM and memory problems since these have been eliminated in the current version. These items occupy a conspicuous part of the review and may leave a (falsely) negative impression with the reader.

"5) The program can be used with a plotter, but only to produce text. This can be done by using the set-up control string to set the plotter to the printer mode. Graphics can later be drawn on the same sheet with a separate program, if desired.

"These notes should bring your review up-to-date with the new version of Documate' Peter Smart, Applied Microcomputer Systems.

WORD/80 - HP'S NEW WORD PROCESSING SOFTWARE

Hewlett-Packard has announced a new word processing system for the HP-86 and HP-87 called WORD/80. A sample was not available for testing as this issue went to press, but some details on the program were provided.

WORD/80 is a product designed for the generation of memos, letters and reports. The system consists of two parts:

- (1) An EDITOR which is used to create, type, print and store documents.

Word Processing with TEXT85

- Letters and memos . . . knock them out when you need them - say the right thing at the right time
- Presentations and monthly reports . . . save your time for the real work while keeping everyone well informed
- Proposals, articles, manuals . . . communicate most effectively with columns, tables, equations and graphics!

TEXT85 and the HP 83/85 . . . made for each other.

With TEXT85, you will have state-of-the-art WP capabilities: Smart paging and pagination, Easy Columns and Column move, Highlighting with both underlines and bold type, Auto pagination, Headers and Footers . . . the unique format Graphics plus Equations and Form features. TEXT85 works with any series 80 compatible printer (and plotters), although some print enhancements are printer-dependent. All features including graphics, on the HP 8380S A or B (11" X 8 1/2") currently under development.

TEXT85 \$300.00

(Specify tape or 5 1/4" disk. Specify printer)

Dealer inquiries welcomed.



Menu/Command functions include ENTER, SET, FORMAT, EDIT, READ, MOVE, INSERT, ADD, MERGE, DELETE, PRINT, PLOT, TOP, GET, SAVE, SCAN, WINDOW, REPLACE, COUNT, END, HEADER, FOOTER, JUSTIFY, TAB, COPIES, LIST, NUMBER and REMARK



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Requires AP and PP ROM



SOFTWARE by TENSEGRITY, INC.

1. Mail List & Labels Pac for HP-83/85.....\$145.00
2. Mail List & Labels Pac for HP-87.....\$145.00

Both Mail list pacs will enhance your communications productivity. Within a few minutes of receiving your program you will be able to ENTER, EDIT, PURGE, SEARCH, SAVE FILES, GET FILES, ZIPSORT and OUTPUT data. Data is organized as FIELDS, RECORDS & FILES. A field has up to 32 characters. A record has 5 fields. A file has up to 100 records. A disc will hold over 1000 records. Multiple records can be linked by placing user defined classification characters anywhere within any field. The destination of the OUTPUT can be your CRT, any printer, a named data file, or a plotter. Multiple copies of the same record may be printed if desired. Any size label will work. A utility program called Zbatch is included to ZIPSORT up to 1000 records (addresses) at a time. The HP-87 version also does alpha sorting and takes advantage of HP-87 features, especially the binary program, UTIL/1. Programs are packaged in the standard HP program boxes. 600 label samples are included.

3. CADD/87 Computer Aided Drafting & Drawing for HP-87.....price to be announced

CADD/87 has been under development since early 1980 and should be available Fall 1982. Some of CADD/87 features include: LINES, VECTORS, CIRCLES, ARCS, POLYGONS, BOXES, TEXT, SYMBOLS, GRAPHICS CURSOR, PLOTTER OUTPUT, GRAPHICS EDITING...and much more. If interested, contact us to get on our CADD/87 mailing list.

4. Nicolet Digital Oscilloscope to HP-85 interface program.....\$150.00

Transfers 8192 12 bit data points from scope to HP-85 in 1.3 seconds. Formats data points for the HP Series 80 Waveform Analysis Pac. Stores formatted or un-formatted data on tape or disc. Plots waveforms on HP plotters or CRT.

TENSEGRITY, INC. 2424 ADDISON ST. CHICAGO, IL 60618 (312) 935-9714

(2) A FORMATTER used to format and print files created by the Editor.

The Editor features on-screen editing with full keyboard editing control. Special function keys are utilized to select additional editing capabilities and to access selections for formatting settings. Editor features include margin and tab settings; word wrapping; global search and replace; text blocks selectable by lines or columns; block copy and deletions; block moves; file merging and dynamic file size; and output to printer, CRT display and disk.

The Editor is designed to provide capabilities needed by professionals on a daily basis. These are accessed in an interactive "what you see is what you get" on-screen manner.

The Formatter provides capabilities for applications requiring elaborate document formatting. The Editor is used to embed Formatter commands within the document which are implemented when the Formatter is run. Some of its capabilities include indentation; variable spacing between lines; page headings and footings; page numbering; numbered and unnumbered sections headings; table of contents printouts of section headings and page numbers; underlining, emphasized printing and other printer control codes; mixed text and graphics displays; chaining of files; and support for alternate or foreign character sets.

WORD/80 requires an HP 86/87, 96K of memory, a disk drive, and a printer. Not all printers may be able to support WORD/80's special print and graphics features, but we're assuming that the HP82905B printer will handle the various print features listed in the material provided to us. Retail price of WORD/80 is \$250.

AND FOR YOUR DATA NEEDS... HP'S NEW FILE/80

Along with the information on WORD/80, we received information on a new HP data management product called FILE/80. This is supposed to be a solution oriented file management system designed to provide the user an efficient method of managing files and producing useful output from the information in the files. The management is a combination of adding new records, searching for existing records and modifying or deleting them. Interaction with the information files are designed to optimize the use of machine features and on-screen menus create a friendly user interface. FILE/80 has four functional parts to it:

1. Create and Query sets up the data file and provides the ability to access, add, modify and delete information or records.
2. Output Creation generates output formats for reports, labels or form letters that you want to generate from the file. Once created, formats may be stored in a sorted order for future use.
3. Output Generation actually produces the output that was specified by Output Creation's formats.
4. Utilities are provided to redefine a data file after creation (i.e. increase the size, change the format, etc.). A utility is also provided to attempt to recover a data file which has been "corrupted."

FILE/80 has Multiple Indexed Keys, which are selected by the user for rapid record retrieval. One unique Primary key with up to four fields and four Secondary keys with one field each may be defined. Reportedly retrieval using these keys takes only a few seconds, but we'll provide you with more information on this when we've had a chance to test the program.

FILE/80 requires an HP-86 or HP-87 with 96K of memory, two disk drives, and a printer for hardcopy. The price for this package is also \$250.

AND BETWEEN THE LINES IS A SMALL SURPRISE

In the material provided to us on WORD/80 and FILE/80 was the notation that both programs will be available on 5 1/4" diskette AND 3.5" media. That last piece of information was interesting, because we haven't seen any official announcement that HP was offering the new 3.5" diskettes for the Series 80, although the computer trade papers have announced that HP was inking deals to acquire the new, smaller diskette format.

The 3.5" diskettes come in a rigid plastic envelope, so I suppose that they shouldn't be classified as "floppy" diskettes. The drive occupies 1/4 the space that a 5 1/4" floppy drive requires. 3.5" floppies are capable of storing 500-875K, but we believe HP will not support this much storage capacity when they release their 3.5" drives.

The HP 3.5" disks are the same format as the ones produced by Sony. We believe they are compatible with the current 5 1/4" diskettes, which means 270K of storage. The advantages for the 3.5" diskettes include smaller physical size and a higher data transfer rate (due primarily to the faster disk rotation speed of 600 rpm for the 3.5" diskettes, as opposed to around 300 rpm for the 5 1/4" diskettes). Supposedly the 3.5" diskettes are more reliable, too.

The adoption of 3.5" diskettes by HP is another indication that HP computers of the future will be physically smaller than most of the ones currently available. When the "official" announcement of the new disk size for the Series 80 is announced, we'll be able to provide you with more information.

UCSD PASCAL AND FORTRAN FOR THE HP-86 and HP-87 by Dale Flanagan

December 1st happens to be my birthday. By coincidence, December 1st is the day that HP has chosen to give HP-86 and HP-87 owners a "present" by introducing the UCSD p-System for the Series 80 (UCSD Pascal and UCSD p-System are trade marks of the Regents of the University of California). This gives 86/87 owners 3 operating systems to choose from ("native mode", CP/M, and the p-System), as well as access to Pascal and Fortran-77.

I learned Pascal several years ago on the UCSD Pascal implementation on the Apple II. I liked the system, but I hated the implementation. I eventually gave up programming in Pascal and went back to Basic, causing some computer scientist types to doubt my sanity. These individuals were able to use Pascal on mini computers, however, and they didn't have to put up with the Apple's small disk capacity, slow disk performance, the constant compiler swapping that had to be done when compiling a Pascal program in the Apple II's 64K, the many bugs found in the original Apple II implementation, and the abysmal original Apple II UCSD Pascal documentation. I'll have to admit that I did learn the Pascal programming language from this experience, but I also had an incredible amount of frustration. As I said, I liked the system, but I hated the implementation on the Apple II.

With the introduction of Series 80 UCSD Pascal I look forward to picking up my Pascal education. The Series 80 implementation will directly support 128K of user memory, and any extra memory you may have over this will be converted to a "RAM Disk". This means that any memory over 128K on your HP 86/87 will look to you like any other mass storage device; you can catalog it, transfer to and from it, etc. The difference, of course, is that these transfers will be lightning fast, because you'll be transferring from RAM instead of an actual diskette. Even without the electronic or RAM disk, the Series 80 diskettes have the capacity and speed to make program development on the Series 80 a pleasure, compared to what I was used to with the Apple II.

In case you're not familiar with Pascal or the UCSD p-System, the Pascal language was defined several years ago by Niklaus Wirth, and named for the French philosopher and mathematician, Blaise Pascal. Pascal was originally proposed as a computer teaching language, and it has several features designed to make structured programming easy (and in some cases mandatory). Unlike Basic, Pascal is not a language where you can sit down and dash off a quickie program: You're forced to think about the program, its variables and the data types you want to use. This trait can be annoying if you're used to working with Basic, but it becomes very attractive if you're designing large or complicated programs. You're "forced" to do what you should be doing anyway, no matter what language you program in!

As implemented in the UCSD p-System, Pascal is actually interpreted (like the Basic in our Series 80s). The Pascal program is compiled to what is called "p-code", which is the native code for an imaginary (or "pseudo") machine. The p-code interpreter then translates this p-code into the actual machine instructions needed by the computer running the system. This may seem like the long way around to do things, but it's actually a very clever concept that lets you have tremendous portability for both the UCSD Pascal system, and for the programs you write. Despite being interpreted like Basic, p-code programs usually run a little faster than Basic programs, although some benchmarks will have to be run to see if this is the case with the Series 80.

With the UCSD system you get a superb text editor.. one of the best program writing editors I've ever used. You also get a filer utility, a symbolic debugger, a macro assembler, a linker and the compilers. The Series 80 will have the Pascal and Fortran-77 compilers (there's also a Basic compiler, but no one seems to use it, and HP Basic is very powerful so another Basic isn't needed). Series 80 Pascal also has program chaining, input/output redirection, dynamic overlays, dynamic memory allocation, direct serial i/o support and high resolution graphics using "Turtlegraphics". You can mix Pascal, Fortran and Assembly language routines in the same program, if you wish, and with the assembler the 86/87 softkeys are supported.

I'm not a Fortran programmer, so I'm going to have to look for reader feed-back on the Series 80 Fortran implementation. But with Pascal we plan to provide more coverage to you, because I believe that the power of the HP 86/87 will be nicely suited to the UCSD Pascal implementation, and that Pascal could become an important development tool for the Series 80 programmer. If you want to learn more about Pascal, I recommend "Programming in Pascal" by Peter Grogono (Addison-Wesley). Also of interest is "Pascal User Manual and Report" by Niklaus Wirth and K. Jensen (Springer-Verlag), although I believe the Grogono book is much better to learn from.

RAMBLING by Dale Flanagan

WORDS, WORDS, WORDS! This issue we concentrate on word processing for the HP-85. Five different word processing programs are covered, complete with a comparison chart for easy reference. Several of these programs surprised us. They were very smooth in their operation and they had worked around the limitations of the HP-85 quite nicely. None were as powerful as the ubiquitous Wordstar program (available to HP-86/87 users with the CP/M module), but few people actually need all the options and goodies in Wordstar, and many find Wordstar confusing and hard to learn.

We also bring you first word of HP's new entry into the word processing derby: Word/80. This system has an editor program and a formatter program. I usually prefer a combined word

processing system, instead of the editor/format ter type, but this is a matter of personal preference. Our story was written based on some preliminary information provided by HP, and we hope to bring you a more comprehensive review in a later issue.

OUR EDITORIAL SCHEDULE is now only a few weeks behind, and by the first issue of 1983 we plan on being back on our normal quarterly publishing calendar. Recent buyers of software or back issues may have noted that our turnaround time for orders is now down to a week or less, thanks to some extra help we've hired. We recently made arrangements to get some additional help on secretarial chores, too, so we have hopes of getting our shamefully behind correspondence current soon. Once again I'd like to thank you for your kind words and support. I'd especially like to thank those of you who have taken the time to tell our advertisers that you've seen their ads in NEWS80S when you've contacted them for more information or to order.

WHAT'S IN A NAME? Well, we pronounce our publication's name as "News Eighties". It's a reference to the Series 80 and also to the decade we find ourselves in. The corporation that publishes News80s and our HP and other computer software is Joseki ("Joe-seck-ee) Computer Corporation. Joseki is a Japanese word which comes from the game of "Go" (which is where the name "Atari" came from, by the way. Atari means "Check" as in chess). Joseki is an opening move, and it also has the connotation of being a good move. We often receive letters addressed to "Mr. Joseki", but the most imaginative concept of how we got our corporate name came from the individual who thought that our company was founded by an hispanic couple with the names "Jose" and "Kitty"!

RIGHT BEFORE DEADLINE we received word on a slew of HP product announcements. These included the "official" announcement of the 3.5" diskette (our unofficial article is right on, except that the 3.5" disk holds 286K instead of 270K), plus word of a Series 80 Speech Synthesis module that's packaged in the same size case as the Series 80 modem. The speech synthesis module uses a TI 5220 LPC chip, and it comes complete with software for creating, reviewing and editing phrases (provided on 5.25" and 3.5" diskette). Price is \$395. The HP-86/87 Matrix ROM has just been released, and the 86/87 Advanced Programmer's ROM is promised for January. A new ROM called MIKSAM (Multiple Indexed Sequential Access Method) for the 86/87 was also announced for December, and this looks extremely interesting. For under \$200 you get 13 new Basic commands that help you to create and maintain a customized B-tree based file management system. conceptionally, a MIKSAM file is a list of key record number pairs sorted in key order. You can expand or shrink the file, while maintaining a very efficient method of retrieval, addition or deletion of individual key values.

For 86/87 owners with the CP/M module, HP has also sent word that the Aardvark Tax Planning software is available through Series 80 dealers. The Personal Tax Plan is \$140, and it examines federal tax liabilities for 1982- 1985, allowing the user to play "what if" games to see the effects of various alternatives on federal tax liabilities. Aardvark tax software has been tested and approved for HP-86/87 by Touche Ross & Co., one of the big eight accounting firms. The Personal Tax Plan will soon be available for 86/87 Pascal.

For professionals, HP is also offering the Aardvark Professional Tax Plan (on CP/M) for \$350. This includes the features of the Personal Tax Plan, and it's aimed at individuals that provide tax consulting. For Pascal only, HP also offers Estate Tax Plan (\$1200) and Fixed Asset Accounting (\$1200). Estate Tax Plan is aimed at trust officers and professionals that manage estates, and Fixed Asset Accounting is aimed at small to medium sized businesses, accountants and tax preparers.

FEEDBACK by the Readers

FRANK H. BLAIR of El Paso, Texas sends the following:

```
10 CLEAR @ DISP "ABC" @ PAUSE @ DISP "DEF"
20 DISP ,, "GHI" @ END
```

"Key in and run the above program. Press 'RUN' and you get display of both strings in line ten, followed by a pause. Key 'CONT' and get the string in line (the double comma is a line skip). This program demonstrates that a PAUSE" an end-of-line command.

"Dale Flanagan's PACK'R might well test for this word in looking for reasons not to add onto a program line so as to avoid unexpected results.

"A trick that will increase the density of the pack is to have a pass (used first) that removes spaces from the program lines. The rules for this are not the same on the HP-87 and the HP-85. I am able to pack lines that unparse to about 3-1/2 lines on the HP-85 CRT, indicating that the limit on line length applies to anything the machine can parse."

(NEWS80S: The following program line has been added to all pre-recorded versions of PACK'R sold after November 15, 1982. You may want to add it to your copy of PACK'R, if you bought it prior to that date or keyed it into the computer from the listing in issue #3).

```
1445 IF POS(B$, "PAUSE")<>0 THEN L=1
```

PACK'R for HP-85

PACK'R is a fantastic utility that takes an HP-85 Basic program and removes all remark statements and combines as many statements per line as possible.

The result? A more compact, faster running program that has more data space and that takes up less space on disk or tape.

The exact amount of program compression and program speed-up will vary from program to program, but in test we've had size reductions of 25% and speed improvements of 7%.

Basic program and binary program on HP-85 data tape, complete with instructions, only \$39.95!

See coupon on opposite page.

SC CALC

A Program For calculating The Three Phase And Ground Fault Short-circuit currents In Industrial And commercial Electrical Distribution Systems.

- * Per ANSI and IEEE Standards
- * Maximum 375 buses
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n@w s80 s

**The Microcomputer Journal
For HP Series 80**

**News80s ran for 12 issues between 1982 and 1984
(#1, #2, Special Issue and #3 thru #11).**

**It was an independent newsletter edited by Dale Flanagan for:
HP-83, HP-85, HP86 and HP87 Personal Computer users.**

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Issue #2 (Special HP-87 Issue; HP87 Tech Specs, HP87 User View, Rambling; 12 pages) - \$ 3.00 North America, \$ 4.50* elsewhere.

Special Issue 1982 (FOIL'D program listing, HP86 Introduction, LOADBIN, reprint of Assembler ROM and HP User view from issues #1 and #2) - \$ 1.50 North America, \$ 3.00* elsewhere.

Issue #3 (PACK'R program listing; Anatomy of Basic; What's CP/M?; 16 pages) \$ 3.00 North America, \$ 4.50* elsewhere.

SOFTWARE FOR HP-85 (All programs on data tape)

FOIL'D (Makes overhead projector foil masters, report covers, etc. using an Epson or HP89205A printer. May be modified for other printers. Basic and binary programs) - \$39.95 North America, \$44 elsewhere.

PACK'R (Compresses HP-85 Basic programs, removing remark statements and combining as many lines as possible for a more compact, faster running program. A "must" for any HP-85 programmer. Binary and Basic programs) - \$39.95 North America, \$ 44 elsewhere.

TEBS (Time and Expenses Billing System. Designed specifically for the single practice consultant, programmer or professional who bills on a time and expenses basis. Provides time/activity record and billing invoices. Files organized by client. Billing can have minimum time charge and premium rates. Not recommended for multi-person firms. 32K Memory and I/o or Printer ROM required. Binary and Basic programs) - \$ 95 North America, \$100* elsewhere.

\$ _____ SALES TAX (CA residents add sales tax on programs only - no tax required on back issues or subscriptions)

\$ _____ < TOTAL ENCLOSED (Payable to Joseki Computer Corporation).

* Foreign orders payable in U.S. currency or International Money Order. Subscriptions and orders outside North America shipped via Air Mail.

SPECIAL SERIES 80 WORD PROCESSING ISSUE!

- * FIVE HP-85 WORD PROCESSING PROGRAMS REVIEWED
 - TEXT EDITING PAC
 - PAGEWRITER
 - WRITE/IDEA
 - TEXT85
 - DOCUMATE

* FIRST WORD ON HP'S NEW WORD80 WORD PROCESSING SYSTEM

* UCSD PASCAL FOR THE HP-86 AND HP-87

* HP'S FILE/80 DATABASE PROGRAM

* SMALL SURPRISE - A 3.5" DISK!

* SEE "RAMBLING" FOR MORE NEW PRODUCT INFORMATION

INSIDE:

5 WORD PROCESSOR REVIEWS FOR HP-85

HP'S NEW WORD80 FOR HP-86/87

PASCAL FOR THE SERIES 80

3.5" DISK DRIVES FOR SERIES 80