National Microware Sales Planner
Sales Time Management Support

■ PROFILE

Function • provide support for sales record keeping, prospect tracking, forecasting, and expense reporting activities.

Computers/Operating Systems Supported • 8-bit systems running the CP/M operating system, or 16-bit MS-DOS or IBM PC-DOS systems such as the IBM Personal Computer • hard disk systems may not be supported.

Configuration • CP/M systems require 64K bytes of RAM; MS-DOS/PC-DOS systems require 128K bytes of RAM; two floppy disks required; the IBM PC/XT requires special support from the vendor with the current version of Sales Planner.

Current Version/Version Reviewed • 1.1/not specified on diskette.

First Delivery • December 1983.

Number of Installations • approximately 500.

Comparable Products • Techland Systems SHOEBOX.

Optional Associated Software • none.

Price • $295 retail price.

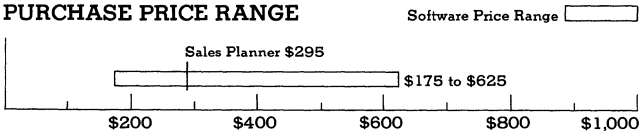
Vendor • National Microware; 2102 Business Center Drive, Irvine, CA 92715 • 714-752-2344.

■ ANALYSIS

One solution to the problem of making computer technology useful to professionals, specialists, and organizations who are not trained in data processing is the "vertical application package." This is a product which is designed to support all of or a large part of the important tasks of some particular profession or specialty. Target applications for such packages are typically ones where the value of the individual's time is high, and sales is certainly such an area.

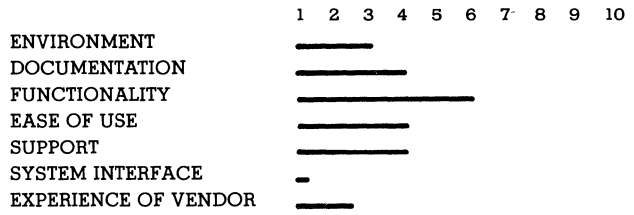
The Sales Planner is designed to provide a sales office or outside salesman computer assistance in the key tasks of product price management, appointment management, sales record keeping, expense tracking, and prospect/customer list maintenance. These functions are performed in an integrated mode using common operating procedures. While the package performs these functions, it seems directed to a specialized sales environment more likely to be found with independent, outside salespersons than with businesses.

PURCHASE PRICE RANGE



NATIONAL MICROWARE SALES PLANNER PRICING • open bar shows the typical range of prices for **SALES TIME MANAGEMENT** software used in a corporate environment • the vertical line within the bar graph indicates the price of **SALES PLANNER**, the evaluated product, relative to the price range of similar products.

PRODUCT QUALITY RATINGS*



*For an explanation of rating criteria, please refer to the Spreadsheet Features section in the Software Evaluations (805) report.

Sales record management, like sales itself, is a highly variable task. Most corporations will have some form of sales support system as a part of order entry and expense reconciliation. For those who have no such system, Sales Planner may serve a useful purpose. For larger businesses, the restrictions on the volume of information maintained, the format and type of data associated with each category, and the lack of facilities to integrate data with other systems will probably combine to prohibit effective use.

☐ Strengths

Because its operation relates almost entirely to the support of sales activity, most sales personnel will find Sales Planner easy to understand and to use. The lengthy instructions which are presented with each task further enhance this beginner orientation.

The major record-keeping tasks of a salesperson are ALL supported by the Sales Planner. Prospect and customer information is maintained, call reports are generated, appointments are recorded, sales figures and targets are maintained, and a complete expense record is provided.

Although the parts of the Sales Planner are integrated and intended to be used as a package, the separate parts can still be useful individually. For example, salespersons in the electronics industry will find that the number of products supported by the product and price maintenance portion of the system are too limited; that portion can be omitted and the rest of the package functions unimpaired.

☐ Limitations

The current version of Sales Planner has no support for organizations with multiple salespersons. Instructions on how to overcome this problem are available on request from National Microware, but there is no indication in the documentation that such support is available. A future version is planned to support multiple sales users.

Sales Planner is limited in its capacities. On a typical PC or PC-compatible with dual double-sided diskettes, a salesperson could reasonably expect to support a prospect/

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customer list of about 300. Only 100 products can be supported, and the product list does not naturally divide itself to list products with many options and features.

Prospect/customer coding is somewhat simplistic for many uses. A single-character primary and single secondary code do not permit a good hierarchical structure, particularly where several mutually-independent characteristics of a prospect are important.

Perhaps because it is based on the run-time package of Ashton-Tate's dBase II rather than being programmed directly, Sales Planner is slow in execution. The trade-off of execution speed for speed in development of a system is a good one for ad hoc user-generated reports but a poor one for packaged software.

■ HANDS-ON EVALUATION

We set Sales Planner up for a small sales office in a Northeastern U.S. city, supporting three salespersons and a secretary/receptionist. Each salesperson must have a unique system, but this appears to be within the terms of the license agreement.

We quickly learned a key lesson: DON'T USE THE DISTRIBUTION DISKETTE TO SET UP A SALESPERSON. Once you have installed a salesperson with a diskette, it is personalized for that person and cannot be used to install someone else. If you want to support multiple salespersons to one system, you MUST copy the program once for each salesperson. This IS a violation of the license agreement. We called to get clarification on this, the result of which will be discussed in another section.

The building of the salesperson record disk is handled by a section of utility programs which are not otherwise needed and are thus packaged on a separate disk. Thinking to save some time and having double-sided diskettes with plenty of space for the programs, we put both disks onto a single "program" diskette. It doesn't work. One critical problem is that the program run in the "build my files for later use" on the utility disk and the program to support the entry of normal sales activity on the system disk HAVE THE SAME NAME. Perhaps other files do as well, but it doesn't matter; one was enough.

Moral: You copy your distribution diskette before you install any salespersons. You never combine the utility disk and the system disk.

☐ User Interface

Sales Planner uses a primary menu interface for major function selection. Each major function (account data, calendar, etc) has its own secondary menu, and from that menu a specific entry/change form is selected. The selection of functions and the entry of data is somewhat slow but generally satisfactory.

Menus: A main menu permits the selection of six major functions, each represented by a secondary menu with an average of six selections. Numeric selection numbers are used to choose an operation, and alphabetic characters select special functions or request returns to the prior menu level. Menus may not be bypassed.

Control characters: The Ctrl key may be pressed in conjunction with the S, D, E, and X keys to request cursor movement left, right, up, and down, respectively. The PC arrow keys also perform these functions.

Function/special keys: Not used.

Command language: None.

Positive feedback: Most commands will cause a change in the screen form or a menu change when accepted. Data will appear at the current cursor position when keyed. There is some high-level editing of data, but no specific messages to indicate correct entry has been recognized.

Status display: No general status line is provided. Each major type of data entry has a unique form, and information which relates to, for example, a specific account will normally be entered in a form which displays the basic account information.

Help facilities: No on-screen Help is provided. No templates or command summary cards are included with the product.

☐ Environment

The basic requirements for Sales Planner are a CP/M system with 64K bytes of RAM or an MS-DOS/PC-DOS system with 128K bytes of RAM. The system MUST have two disk drives labeled A: and B:. This means that the IBM PC/XT is NOT supported by the current version of the program. A special "fix" to the program can be made to support the XT, however, and is available from National Microware on request.

There are two diskettes supplied with Sales Planner: one is used for the operation of the system generation portion and is called the "utility disk"; and the other is called the "system disk" and is used for normal entry of sales activity. The program/file names collide on the two disks, so they cannot be combined. This is of particular importance if you happen to have a hard disk system which uses a non-IBM disk and which segments the hard disk to an A: and B: address. The documentation says this will work. Good luck.

The instructions say that only a single copy of the system can be made, but there does not seem to be any form of copy protection employed.

Files must be pre-allocated in terms of expected number of records, a task which is not difficult but for which the penalties in case of error may be severe. We guessed right, fortunately.

☐ Documentation

We have always preferred documentation which either leads you systematically through the functions in a single manual and follows with a reference section, or else uses two separate manuals. Sales Planner seems to prefer the "put it in order of importance" school. Section A defines the basics on how to get a system set up, but for critical information it passes the user to an appendix and to section C. Section B gives the normal data entry instructions, section C handles the set-up of the system, and section D is the appendices.

The documentation seems thorough; with many screen charts which help define what should be happening at the

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point being discussed. Unfortunately, we found that there were cases where the sequence of events described did not match reality. One example is during the set-up of a salesperson. The instructions mention in passing the process of "naming" a data disk and assigning a password.

They never mention the screens associated with that, and they never tell you how to define a second salesperson on the same system.

In both the setup and data entry parts of the manual, the material is organized according to the menu choices of the program rather than in any functional way. While the activities represented by the menu are generally self-explanatory, it would have been helpful to include a step-by-step setup and entry example to help associate the various fields and tasks. One sample might have saved us some problems. You are asked to enter a year-to-date sales figure in the entry of a customer record. If you plan to retroactively enter sales data, entry of zero in this field is required or the older sales information will "double up."

No quick reference chart or operating aids are provided, making the manual the constant companion for anyone who is not going to use the system daily. Some of our salespersons who travelled out of area for several days at a time found that they had to waste time in finding something in the manual when a single reference card would have done. In defense of the omission, there is significant on-screen documentation with the product.

☐ Functionality

Starting off with Sales Planner is the worst part of the system. We learned the hard way that you must make a program disk copy for each user. The utility disk is then used to set up the basic account structures for each.

A data disk for each salesperson can contain information in three basic areas: expenses, prospect/customer lists, and product data. Other information such as call reports and appointment schedules are built as needed. If all areas are used, a data disk may require about five minutes to set up. You are given encouraging little prompts during the parts where nothing much happens but disk noise.

The use of the product in an environment with multiple salespersons was apparently never envisioned by National Microware. If three such persons all work for the same company it is logical that the expense categories and product information would be common. You might also expect some input on how to handle multiple territories, with different customer lists. No such luck. We suspected that the proper files could have been copied from one disk to the other, but our sales staff was unable to handle this without some encouragement from a manual. Setup for us was therefore exceptionally tedious.

Once the data disk is set up, salespersons begin to use the system, or so it is hoped. We tried to get everyone off to a good start with a little primer on it, but only two of our three could make it except at our monthly meeting. The results were about the same with or without our little speech—those who heard it forgot the material by the time they came to use the product.

The first step for any salesperson was to add prospect and customer data to the list. This included three sets of contacts in each company, and the definition of a primary and secondary code which could be used for selection for promotionals or special sales calls. The task of entering these names was given to the receptionist, so each salesperson had a prospect file ready-made. We also entered the calls for the month retroactively, since we had progressed only three weeks into the new year. This caused a problem with year-to-date sales, which can be pre-set to a value. We preset sales AND entered history, which caused some excitement on performance until we found out what had happened.

Prospect file data serves to tie in sales, calls, and appointments. A salesperson making an appointment would enter the name of the company and the date and time. A remarks field allowed designating the person with whom the appointment was made, so it is not restricted to the three contacts shown on the prospect record. The prospect information is displayed during the process of entering appointment information to confirm a correct choice. Appointments are more than just stored; you can list them for any day in the future and are reminded of them when you start the system for the day.

Calls are used to generate call reports, and the data entered can include a summary of what happened. A call count is displayed on the account history. To record a call, a salesperson indicates the name of the account and the date of the call. The name of the contact may (and in our case SHOULD) be entered. Two lines of remarks are permitted, and a date and subject for follow-up appointments may be set. Calls can be reported and displayed on the terminal, but it is difficult to get rid of one. In fact, we found it impossible.

Sales data entry is of limited usefulness because the system limits the total products it tracks to 100. We had far more than that, but one salesperson tried the product system on the most popular 100 products sold. The sales information was helpful, but not enough to justify the work of entering the data into the system. The format of the sales entry assumes essentially unrelated products, and might be of a benefit to sales organizations with a small fixed number of products.

Expense information got mixed reviews. We set up our own category codes for the entry of sales expense, but the number of separate expense items was limited and we quickly filled up our allocated space. There is a provision to clear the data, but we found it desirable to have our receptionist/secretary do that when the expenses were summarized. The only way we were able to discipline the sales organization to use the expense system was to require it as the expense reporting vehicle. While the salespersons did not report any specific deficiencies, they seemed to feel that the system did not reduce their work in this area over manual reporting.

Changing and deleting data was generally felt to be a major deficiency of the package. Expense calls could be deleted up to a certain date, but not individually. If you made a mistake, you could void the entry by changing the data, but the record remained.

The system supports the generation of some specialized reports, such as an expense detail or expense summary.

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These reports were useful to the extent that the data we could keep with the system was sufficient for our reporting, but there were no options in formatting the data. Letter writing, a supported feature, was felt to be too primitive in features for practical use. The label and selection function were adequate for picking out accounts for mailing or for calling on.

☐ Ease of Use

Sales Planner is designed to be easy to use, but we did not find it so. In the first place, the documentation did not give the users a comfortable idea of the relationship between the different menus, thus we were always in the wrong place to do what we wanted.

A second problem relating to menus is the lack of consistency in the way choices are made. In one part of the program, the entry of data relating to call reports is selected by entering the first letter of the type of report; "C" for call. In another portion, however, the menu items are numbered consecutively and call reports happen to be the third choice.

The Ashton-Tate product around which Sales Planner is built has an option to require a carriage return at the end of a field if the data keyed is the exact length required. An audible alarm accompanies this, which can be disabled through an undocumented menu option. While the feature is useful in preventing the system from running away with an erroneous selection on a single-character entry such as a menu selection, its use in the data entry areas creates confusion because the same tone results from entry of a bad character. In all, we could have done without it.

Menu painting is painfully slow in Sales Planner, probably because of the nature of the underlying database product. Given the fact that National Microware wanted extensive and attractive menus, the slow display is more than just annoying—it actually slows entry of such things as expenses.

☐ Support

We called National Microware to ask about the one-salesperson problem, and were immediately asked who our dealer was. When we asked why they had to know, the answer was that the product is SUPPOSED TO BE FOR A SINGLE USER. We pointed out that the license said ONE SYSTEM, and were again asked for our dealer name. We responded that we would BUY one copy for each salesperson if we could just be told how to transfer the product and expense category information. We were told to call back when we knew the name of the dealer.

We finally took the step of calling the vendor and identifying our reason for using the package (and the fact that we were running a demonstration copy which they provided for us.) They explained that the reason for their hard line was that east-coast distribution was not yet fully active, and they thought that an illegal copy had been made.

National Microware also told us that the problem with the hard disk usage and the single-user orientation would be corrected in future versions of the product.

LCNS: license fee.

☐ System Interface

There are no instructions on using Sales Planner files with other programs, or the reverse. The printed output of the program can be directed to a serial port through DOS, and this can permit a user to send text form data to a mainframe system.

☐ Vendor Experience

National Microware is a new company. The latest copies of buyers guides and directories do not list it, and an annual software review of a personal computer magazine did not list the company or the product.

■ PRODUCT OVERVIEW

☐ Terms & Support

Terms • Sales Planner is available from National Microware on a purchase license basis, through selected computer and software retailers; mail order distribution is limited at this time, and east coast users should probably contact the vendor • WE RECOMMEND THAT ALL CORPORATE PURCHASERS DEAL DIRECTLY WITH THE VENDOR UNTIL NEW RELEASES RESOLVE THE PC/XT AND MULTIUSER ISSUES OUTLINED IN THIS REPORT.

Support • vendor claims full telephone technical support.

☐ Component Summary

Software elements include: SP—the Sales Planner program and Ashton-Tate's dBase II runtime system. Unfortunately the SP program name was given to the database initialization program on the utility disk and to the main program on the system disk. The DBF and program files for the dBase II run time system are provided on both diskettes.

National Microware Sales Planner:

$295 lcns

☐ Computers & Operating Systems Supported

The Sales Planner supports 8-bit systems running the CP/M operating system, or 16-bit MS-DOS or PC-DOS systems.

☐ Minimum Operating Requirements

Minimum memory requirements for CP/M systems are 64K bytes; MS-DOS and PC-DOS systems require at least 128K bytes. Two floppy disks are also required.

☐ Features

Capacities • a double-sided diskette can support a system for approximately 100 products and 300 prospects/customers.

Sales Functions Supported • account identification, call reporting, appointment scheduling, expense reporting, and sales reporting.

Number of Salespersons Supported per System • one, if license restrictions are taken literally.

Sharing of Product, Expense, or Account Files • not covered in documentation or provided for specifically in program menus.

Output Media for Reports • printer is required for some reports; others may be routed to display or to printer.

Entry Format • full screen data forms, display of which is very slow.

Printed Report Options • sales, expenses, calls, etc may be printed in detail or summary form; letters and labels may also be printed; formatting of letters is under user control, but other printed outputs are in fixed format.

• END

Norton Computing—Norton Utilities
Operating System Utilities

■ PROFILE

Function • provides commands for viewing and updating disk/diskette files and directories.

Computers/Operating Systems Supported • requires 64K bytes of RAM plus 1 or 2 single- or double-sided diskette drives; also supports hard disk with 10M-byte formatting • requires monochrome display or color/graphics board and monitor.

Current Version/Version Reviewed • Version 2.01/Version 2.01.

First Delivery • information not available.

Number of Installations • information not available.

Comparable Products • no known comparable major products.

Optional Associated Software • none.

Price • $80.

Vendor • Norton Computing; 2210 Wilshire Blvd, #186B, Santa Monica, CA 90403 • 213-399-3948.

■ ANALYSIS

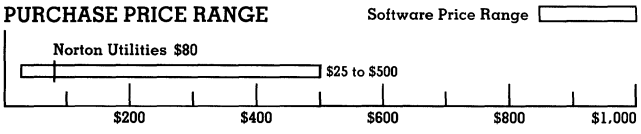
The Norton Utilities provide additional functionality to the IBM Personal Computer operating system, PC-DOS. The areas which are strongly supported are those which IBM and Microsoft left out of their repertoire, namely, commands which deal with viewing and updating the floppy diskette, hard disk files, and directories.

There are 20 separate programs included in the package. They range from one that will sound a "beep" on the system speaker to ones that will aid in data recovery. In general, our technical staff was pleased with the overall functionality of the various programs.

Norton has added a large amount of human engineering to the utility programs. They make use of the full screen with color, if available, to aid in the readability and professional appearance of the displays. For the most part, the user can operate the utilities without reference to the manual, but to do so would deprive one of the insight the suggested uses provide.

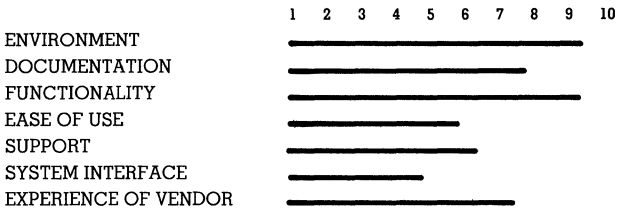
The only potential drawback that we see with this package is one that constantly confronts the microcomputer world: the user is not protected from himself. These utilities allow the user to modify any sector on a floppy disk or hard disk that can be read by DOS and can be used to correct problems that arise or to create new ones. We recommend companies consider carefully those who will be using the utilities before dispersing these tools to those without the knowledge to use them wisely.

PURCHASE PRICE RANGE



NORTON COMPUTING—NORTON UTILITIES PRICING • open bar shows the typical range of prices for **OPERATING SYSTEM UTILITIES** software used in a corporate environment • the vertical line within the bar graph indicates the price of **Norton Utilities**, the evaluated product, relative to the price range of similar products.

PRODUCT QUALITY RATINGS*



*For an explanation of rating criteria, please refer to the Software Evaluations (805) report.

☐ Strengths

The most important contribution that the Norton Utilities makes is in the area of data recovery. Norton provides a FILEFIX program that checks a diskette for problem sectors by reading the file and writing only the good sectors. It also restructures those files with damage for later salvaging. The damaged files may then be processed without a disk-read error and the lost sectors replaced. A utility is provided which will recover erased files. Another file recovery utility, SECMOD, allows the user to modify the data on a disk file. This program has a corresponding program which allows the modification of sectors on IBM format hard disks. These functions are all strong tools with which a competent technical staff can effectively recover damaged or erased diskettes.

The documentation provides clear instructions on how to use each program. It is styled after the DOS manual and contains separate paragraphs for purpose, format, type, and remarks.

The examples provided are meaningful and help the neophyte through some of the more technical areas. Norton exhibits the unusual ability to discuss some rather technical material in a manner and language which is generally very easy for anyone to comprehend. They take the time to explain the technical background information in layman's terms.

The utilities embrace the capabilities of the machine they support. Instead of drab, single-line commands, they make use of a full screen with colors, if available, and list all of the options. The user may even turn off the color if it is too much of a distraction. The programs generally project a menu with each activating key and provide a brief de-

Norton Computing—Norton Utilities
Operating System Utilities

scription of what it does. If the user should make an error in keying parameters, for instance, meaningful error messages are given stating not only that an error has been detected, but also the steps necessary to correct the problem. In short, the Norton Utilities have considered user as well as system needs in producing a humanly engineered product.

☐ Limitations

Some of the utilities included are of questionable value. The clear screen program, for example, has no value when used with DOS 2.0, which has its own clear screen command.

The power of some of the utilities is a two-edged sword. In the hands of a competent technician, the disk modification program can become like a surgeon's scalpel cutting away the "dead" sectors and saving the diskette. In the hands of someone else, they can become like the maniac's switch blade, slashing the living and the dead with equal relish. This is not a problem with the utilities per se; they must have the power to perform their function. We suggest that the wise users will exercise caution in their dissemination and use of the product.

■ HANDS-ON EVALUATION

When we first opened the package we were struck by the unusual appearance of the enclosed diskette. It has a write-protect notch on each side and a second synchronization access hole on the diskette (the small hole near the large central hole of the diskette). This is because the diskette is two-sided rather than double-sided. Each side is recorded upon, but in the standard 160K-byte drive format, which all versions of DOS can read. In order to use the second side, the diskette must be removed, turned over and replaced. We copied ours to a double-sided diskette just for ease of use. As the directions suggest, we put the utilities in our "B" drive, inserted another diskette in our "A" drive (in this case our working copy of DOS 2.0), and keyed "DISKLOOK". Norton has provided a .BAT file which will invoke the floppy diskette viewing program, known as "DL." Up came a multicolored screen giving us the option of viewing the diskette in the "A" drive. Because we really wanted to see the files with the "hidden" or "system" attributes turned on, we pressed the F4 function key and began to stroll through the diskette directory. Sure enough, the first two files on the diskette were marked "hidden and system"; the next one, COMMAND.COM, was not. We found each utility well documented in the manual and on the screen and a pleasure to use.

☐ User Interface

The Norton Utilities provide several system utilities not supplied with DOS. They use a combination of menu displays and function key commands to add functionality to the operating system. Every attempt has been made to make these utilities more user-friendly than DOS. There is even a key to change the display mode should it be unreadable on your monitor.

Menus: Menus are used when appropriate. The "Disklook" utility, which allows the user to view the data on diskettes, employs a menu structure to control its flow. There are generally only two levels of menu in even the more complex utility programs.

Control Characters: None.

Function/Special Keys: Function keys are generally used to activate menu selections. In most of the utility programs, the function keys which represent valid functions for the program context are highlighted, indicating they may be selected.

Command Language: None.

Positive Feedback: Command invocation generally results in a change in the menu or in the display, indicating command acceptance. Where a utility is being used to alter disk contents, a change in the displayed text will indicate the keying of a substitute data character.

Status Display: The application is rich with information about the system. Highlighting and textual information is used to display status. The disk look utility, for example, displays the information on the current directory entry, as well as the data in both hexadecimal and ASCII. The extents represented by the file are indicated symbolically on a disk map.

Help Facilities: Generally the F1 function key will invoke the help facility. This causes a return to the main function menu in most utilities.

☐ Environment

The utility programs will run in 64K bytes of RAM and require no special equipment. They will make good use out of whatever display system is present and in use. The programs are designed to explore and exploit the nooks and crannies of the IBM PC and IBM PC/XT. PC compatibles, if they support the same file structure, such as COMPAQ, are also supported.

☐ Documentation

The Norton Utilities are supported by a soft-bound stapled manual entitled "IBM-DOS Supplement Key Utility Programs for Enhancement of IBM/PC-DOS". The only real drawback with the documentation is that the individual command instructions are firmly attached to the manual. We had hoped that they would be detachable and hole-punched so that we would be able to install the pages in our DOS manual.

The internal format of the documentation consists of an introductory section containing installation and set-up information, and then the individual instructions for each command. The bulk of the manual is comprised of the instructions presented in a format almost identical to that found in the DOS manual: Purpose, Format, Type, Remarks, and a new section entitled "Suggested Uses". Throughout the manual, helpful suggestions are presented which assist the user in tailoring the product to his or her liking.

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Operating System Utilities

☐ Functionality

We found the DiskLook utility to be the most helpful in the short time we have had the product. A member of our staff was having difficulties in executing the working copy of another product. It seems that standard DOS commands DIR and CHKDSK had been run and had verified that the appropriate files were present and there was no problem with the diskette. However, the program would not run. We executed the DiskLook utility and examined the contents of the problem file, finding the data within to be comprised entirely of the hexadecimal value F6. What had happened was that the diskette had been created using one version of DOS, and the CHKDSK program from another version of DOS had been run which "cleaned up" the file. The point is that our technical staff was able to examine the data and render a judgement, in this case, "recreate the working copy," in a minimum of time. The time saved on this operation alone almost justified the purchase price of the package. The DiskLook utility has a counterpart called HardLook, which provides the same file viewing capabilities for the IBM 10 megabyte format hard disk system, or other **identically formatted** hard disk systems.

We also found the programs BATHIDE and FILEHIDE, which change the file attributes, to have an effective use. With these programs, we were able to protect the batch files, which were created for senior executives, from being accidentally erased. In fact, we caused the files to be completely "invisible" to the normal DOS utilities to discourage tampering. We were also able to protect standard parameter files in the same manner. BATHIDE provides a simple format to "hide" a file, or marks it as read only. It can also do the reverse. FILEHIDE gives the user complete control over each of the 3 attributes affected: System, Hidden, and Read-Only.

The LABEL utility is also useful. The only way to change a label in DOS 2.0 is to reformat the diskette, a severe process since the entire diskette is reinitialized. Earlier versions of DOS 2.0 do not support the use of diskette labels, and DOS 2.0 does not support them on diskettes with the old 8-sector format. It helped us to keep track of diskettes irrespective of the external labels. It also allowed us to format a number of diskettes ahead of time and label them appropriately when they were used.

Our technical staff was able to find good use for the "LOST DATA" utilities provided in the package. The FILEFIX program was used to save time in recovering data from a damaged diskette. We were able to reconstruct everything except an unreadable portion with a minimum of time loss. The UNERASE program allowed our technicians to recover an entire diskette which the operator had erased. (There is also a hard disk version of this program.) They were able to sit with the user and recreate the file names using the sector modification program to recover the names. (The erase command destroys the first character of the name of each file that it acts upon.) Norton has also provided a hard disk version of the sector modification program called "HM," short for hard disk modification.

We were not able to test the Special Search and Recovery (SSAR) program under actual conditions, since none of our word processing programs obliged us by writing over the directory and file allocation table areas of the diskette. However, our technical staff did simulate the disaster, and found the program to be effective in recovering the text data.

Three programs are included which affect the display screen. One of them, CLEAR, is a holdover from the deficiencies of DOS 1.1 (and earlier versions) which does not have a command to clear the screen. DOS 2.0 has this. The other 2 programs, REVERSE VIDEO and SCREEN ATTRIBUTES, are still viable under DOS 2.0. REVERSE changes the normal display from white letters on a black background to black letters on a white background. While this reverse video is supposed to be easier on the eyes, the consensus of our staff was that it was harder. The screen attribute program allows the user to specify both the background color and the color of the text. We liked red on black best but it is of little practical value since most programs reset the display.

We were also unable to find an acceptable place for the "BEEP" program, which generates a sound via the speaker in the computer. The vendor suggests its inclusion in batch files to signal the user that the computer needs attention. We found that if the operator really cared, he would be ready and waiting. We found the TIMEMARK more helpful. It requires that batch files be created which include the start and stop options bracketing the operation to be timed; it then reports the amount of time spent on the operation. We were able to use TIMEMARK to see an improvement in results in some programs that performed a large number of file accesses after we reorganized the files on the diskette with DISKOPT disk optimization program.

The FILESORT utility allows the user to customize the order of data files on the diskette if the standard sequence provided by DISKOPT is not to his liking.

Finally, the Norton Utilities provide a streamlined method for converting assembler language programs into modules which can be accessed in the BASIC computer language via the BLOAD command. It is named appropriately, and reduces the number of steps required to make the assembler language program BASIC-ready.

☐ Ease of Use

Being naturally curious, we had a member of our technical staff try out each of the different commands, except the ones requiring a hard disk (the system we used had none.) He found no surprises! We then opened it up to the rest of the staff (with technical supervision of course!). They experienced no difficulty with the mechanics of the commands. The documentation both in the manual and on the screen is explicit. It is very easy to use. We were able to modify sectors on the diskette and experienced nothing to cause us to ask "Are you really sure?"

The utilities also make good use of the function keys. This, coupled with the brief statement of the purpose of each

Norton Computing—Norton Utilities
Operating System Utilities

key right on the screen, really makes the package easy to use.

☐ Support

The external packaging for this product states "Behind these programs isn't a faceless corporation—it's a man. A man who knows what he is doing."

While we found no real problems with any of the utilities, we thought we would call and see if there really was a Peter Norton. There is, and he is quite personable. His phone number and address are included in the documentation.

☐ System Interface

The programs in the Norton Utilities are all the "external" type DOS commands. They may be invoked in the same manner as any other DOS commands by simply entering the file name. They are not resident, and require that the programs be loaded from the diskette each time they are used. Since they are utility programs, they may affect **any** system, but there is no specific interface with any of them.

☐ Vendor Experience

Peter Norton is also the author of the book "Inside the IBM/PC" and the column "The Norton Chronicles" in PC magazine.

■ PRODUCT OVERVIEW

☐ Terms & Support

Terms • the Norton Utilities are available for purchase only from Peter Norton, through computer dealers, software dealers, and mail order firms throughout the United States.

Support • support is provided by dealers and the vendor • telephone consulting offered by Norton.

☐ Component Summary

The package includes a series of files and programs. The software elements consist of: DISKLOOK—a batch file to start the DL program with drive "A" as the parameter; BATHIDE—a program to control the system, hidden, and read-only file attributes; BEEP—a program to sound a tone on the system speaker; BLOAD—a program to convert COM-type programs into the format required by the BASIC BLOAD command; CLEAR—a program to clear and reset the display screen, useful for DOS 1.1 and earlier; DL—a DiskLook program which allows complete access to the diskette files; DISKTOP—a program to optimize the access of files on a diskette; FILEFIX—a program to recover readable portions of a damaged diskette; FH (FILE HIDE)—a program to modify the system, hidden, and read-only file attributes; FILESORT— a program to rearrange the directory of a diskette; HL (HARDLOOK)—a program comparable to DL (DiskLook) for hard disks; HM (HARDMOD)—a program comparable to SM (Sector Modification) for hard disks; HU (HARD UNERASE)—a program which recovers erased files from hard disks, comparable to UE (UNERASE) for diskettes; LABEL—a program to add, change and display internal diskette labels; LPRINT—a program to print ASCII text files with or without line numbers; REVERSE—a program to change the display to black letters on a white background; SCRATR—a program to control the display attributes of the monitor; SECMOD—a program to read, display, and change diskette sectors; SSAR—a program to recover text data from damaged diskettes; TIMEMARK—a program to calculate and display elapsed time and display the date and time; and UE (UNERASE)—a program to salvage erased files.

The Norton Utilities:

$80 lcns

LCNS: license fee.

☐ Computers & Operating Systems Supported

The Norton Utilities package runs on the IBM PC or PC/XT. It supports operating system DOS 2.0 or lower.

☐ Minimum Operating Requirements

Minimum requirements are 64K bytes of memory and 1 or 2 single- or double-sided diskettes; a hard disk with standard IBM 10M-byte formatting is also supported. The package also requires a monochrome display or color/graphics board and monitor.

☐ Features

System Functions Added • file attribute (hidden, system, and read-only) control, disk data display, a file recovery program, a disk label maintenance utility, and an unerase function that restores files that have been erased via the DOS erase command.

Level of User Expertise Required for Use • programmer or highly experienced user required.

Safeguards Against Accidental Data Loss • none; the user may alter critical data and thus make a diskette unreadable.

Primary Application in Office Environment • restoration of files accidentally deleted or erased, or recovery of data from a damaged diskette.

• END

Online Business Systems Wylbur/PC
Editor/Word Processing Package

■ PROFILE

Function • editor/word processor.

Computers/Operating Systems Supported • IBM Personal Computer, Compaq, Chameleon, Hyperion/PC-DOS or MS-DOS.

Configuration • 80K bytes of RAM, a single- or double-sided, diskette drive, monochrome or color/graphics monitor, modem with appropriate communication port, and a printer.

Current Version/Version Reviewed • Version 6.0; in March Version 7.0/Version 1.0 (Demonstration Diskette).

First Delivery • 1977.

Number of Installations • 135.

Comparable Products • Owl Micro-Communications Ltd. Owl Editor.

Optional Associated Software • none.

Price • $500 retail; volume discounts.

Vendor • Online Business Systems (OBS); 115 Sansome Street, San Francisco, CA 94104 • 415-391-9555.

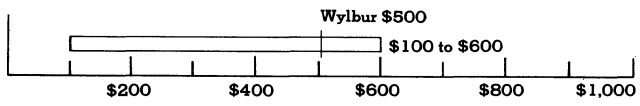
Canada • Distributors: Comtek Data Systems, Ltd.; Suite 701, 280 Albert St, Ottowa, ON K1T 5G8 • 613-236-1487 • for Manitoba provinces further west, contact OBS in San Francisco, CA.

■ ANALYSIS

Wylbur/PC will be especially welcomed in those corporations that already possess and are trained on the mainframe version of the product because the command structure on the PC version is almost identical to that of its mainframe "parent." Only an occasional difference in format is found and those are largely because of the physical differences in keyboards between the IBM 3270 series dumb terminal and that of the IBM PC/XT.

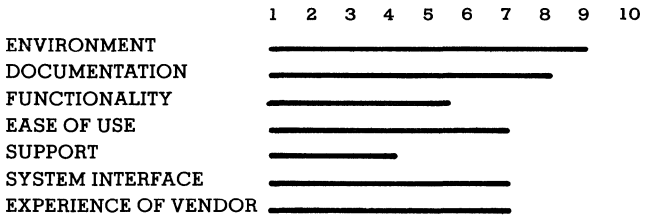
The speed with which the PC version executes will lull the user into thinking that they are working on a large computer in all except the most time-consuming functions, such as performing complicated logical operations. Naturally, additional speed is much more evident in an environment where the mainframe computer is besieged by all manner of resource-expensive applications, (especially online inquiry and retrieval systems or database applications) rather than one in which it is only working at partial capacity.

PURCHASE PRICE RANGE Software Price Range



ONLINE BUSINESS SYSTEMS WYLBUR/PC PRICING • open bar shows the typical range of prices for **WORD PROCESSING** software used in a corporate environment • the vertical line within the bar graph indicates the price of **WYLBUR/PC**, the evaluated product, relative to the price range of similar products.

PRODUCT QUALITY RATINGS*



*For an explanation of rating criteria, please refer to the Word Processor Features section in the Software Evaluations (805) report.

The communication capability of Wylbur/PC to other computers while maintaining an active session on the personal computer adds greatly to its utility. Clearly, this product is designed to interface with the corporate user rather than merely serve as another editor for the personal computer.

☐ Strengths

Wylbur/PC is a product built and designed to emulate its mainframe parent, and in this lies its greatest strength. To those on the staff familiar with the mainframe computer version of Wylbur, the commands, documentation, and key settings of the personal computer version are so similar that one can become proficient with the product very quickly. Those sitting down to do editing on the personal computer for the first time will find the time necessary to learn to use the basic features of this product short because of a logical and well-documented command structure. The transition from beginner level to utilizing the full power of the product is smooth.

Wylbur/PC's ability to communicate with its mainframe parent is a plus in the computer professional environment. The similarity of data format and commands allows the computer programmer with a personal computer to extend the scope of his operations to remote sites. It becomes possible to edit the programs without tying up the resources of the main corporate computer. Once the editing is complete, it is a simple matter to transmit the revised version of the program to the mainframe computer.

Another very important point, often overlooked by the corporate user, is ease of communication with a mainframe, and in this area the product was more than adequate. Wylbur/PC can maintain a communication link while flip-flopping between the mainframe session and the personal computer session. This feature enables a user to retrieve a file from the mainframe computer, edit it while on the personal computer, and then turn around and send it back

Online Business Systems Wylbur/PC
Editor/Word Processing Package

to the mainframe computer without the time consuming necessity of re-establishing communication (dialing the number, establishing the communication link, and following the protocol necessary to enter the application), which can take several minutes.

Wylbur/PC can easily accommodate either large or small files. Access time is not significantly increased when a large file is edited. Wylbur/PC takes advantage of all of the memory available, which allows even very large documents or programs to be edited with ease. Indeed, when used with an internal (RAM) "disk drive," the difference is not noticeable. Searching for a specific group of characters is fast whether in a 5-line file or in a thousand line program.

☐ Limitations

Wylbur/PC is primarily a program editor, not a word processor. As such, it does not provide the ability to imbed exotic text, or printer control features such as bold print or underscoring by the use of special keys. Nor will Wylbur/PC do automatic margin control or spelling checks. The user is, of course, able to place printer control characters by using the ALT key and the numeric keypad as described in the PC DOS manual.

The inability to redefine the program function keys (PFK) when in basic mode is also a departure from mainframe Wylbur and hence, a weakness in the product. (This deficiency was explained by OBS's technical staff as a result of the change from DOS 1.0 to DOS 2.0; its solution is currently under investigation.)

There is an underlying feeling that this product is really meant only for the "old" mainframe Wylbur user and not for the individual personal computer user. The exact meanings of the sometimes terse explanations of a command in the Command Section of the documentation, while apparent to the computer professional, were found elusive for the novice user.

■ HANDS-ON EVALUATION

Our technical staff installed the product and ran it through its paces to test the basic installation integrity. The installation process was simple: load DOS and type "wylbur." The preparation of a production diskette was equally simple, although a separate installation procedure was not included with our demonstration copy.

We found that 1000 lines with little on the lines took only 14K bytes of active area. On the other hand, 1000 completely filled lines used 52K bytes of active area. From this our technicians surmized that the product condenses or "tabs" repeating characters to optimize space utilization. Including DOS, but not the active area to be used, the product loaded in at 78K bytes of internal RAM.

Our secretarial staff read the beginning sections of the manual and were then asked to perform some basic typing functions. They "USE"ed a file, "REV"iewed it, searching for special character combinations, and since there is not a spelling checker currently available with Wylbur/PC, we also had them "UPD"ate the misspelled words which our technical staff had left behind. They also "MOV"ed sentences and paragraphs to different sections of the document. Within an hour, sufficient confidence had been attained by our staff, even those unfamiliar with the mainframe version of the product, to use the basic features of the product without reference to the manual for guidance.

The only major function we were not able to test was to "SAV"e the document to disk, since this is a demonstration version of the product with that feature disabled.

The task of using Wylbur/PC in communication was performed by our professional staff. A communication link was established on the first try. With a little practice, it soon became apparent how easy it was to switch between the mainframe and PC sessions. Loading a file from the mainframe also went quickly and without incident. But because the product tested was a demonstration version, we were unable to send a file from the PC to the mainframe because the command was disabled.

Our primary use of Wylbur was in the entry of program source files and data, but we did try the product as a simple word processor as well.

☐ User Interface

Wylbur/PC provides the corporation already using Wylbur as a text/editor on the mainframe computer with a comparable version for its personal computer users. By mirroring its mainframe counterpart so closely, the impact of education and support to those corporations is minimized. Users not possessing the mainframe version will find it a powerful editor rich with features, but only a fair word processor.

Menus: Screen displays and "exec" files can be created by user as menu functions; however, the basic command structure of product does not employ them.

Control Characters: Character strings of user's own choosing may be used to represent any other character string including commands.

Function/Special Keys: Product allows definition of 40 function keys for user use—none are pre-defined.

Command Language: Commands can be grouped in "exec" files and then executed as a unit.

Positive Feedback: Successful completion of commands noted unless suppressed by user. Suppression available on command-by-command basis.

Status Display: The top line of screen is a command area where a prompt "COMMAND?" is displayed. The line below this is a ruler showing column positions.

Help Facilities: Help for command syntax is available at any time by keying HELP.

☐ Environment

The product can be used on a single-sided disk system with a minimum of 80K bytes of RAM. Additional memory is utilized very effectively by the product to hold larger documents or files in its active area. Any monitor can be used, but the product does include a "Color" command permitting the user to reset default color values. A modem

Online Business Systems Wylbur/PC
Editor/Word Processing Package

would be necessary for any communication of files to another computer—the modem type is independent of this product. Finally, any previously integrated printer system, should be acceptable.

We tested Wylbur/PC using an IBM PC with 512K bytes of RAM, a double-sided diskette drive, a color/graphics monitor, and a 1200-bps Racal-Vadic modem. During our tests internal RAM was configured at 320K bytes and later, reconfigured to 160K bytes. We also tested, using an IBM XT with 256K bytes of RAM, a double-sided diskette drive, color/graphics monitor, Epson printer, and a Hayes 1200-bpi external modem.

Wylbur is not copy protected and may be moved to hard disk or installed on diskettes of either 160K bytes or 320K bytes using DOS 2.0 without difficulty.

☐ Documentation

The documentation for Wylbur/PC consists of a manual divided into 6 sections. These contain: an explanation of the differences between mainframe Wylbur and Wylbur/PC, what you need to know before starting, getting started, a main reference section providing detailed instructions on a command-by-command basis, a primer with tutorial on writing "execs" (a facility for creating files of commands), and a few words on the product's extended functions, such as communication, random file access, and screen building. Two appendices are provided: Appendix A is a glossary of terms and concepts used throughout the manual, while Appendix B provides a listing of error messages and their causes.

For the first-time user, the section detailing how to get started proved easy to understand and instantly rewarding. Screen displays were used generously throughout to illustrate a wide variety of commands and their uses. However, the lack of examples in the command section made it difficult but not impossible for our secretarial staff to utilize the power of some commands without assistance.

The Wylbur/PC documentation closely resembles that of mainframe Wylbur both in style and content. As one of our professional staff members said after perusing the product documentation: "Not only did I find the commands to be almost identical to (Mainframe) Wylbur, but also the manual itself is what I would expect to find on top of my 3278-2."

Since Wylbur was originally a mainframe product, its developers have documented it in such a way as to insure comprehension in a corporate environment.

☐ Functionality

Our secretarial staff indicated that this product will never replace their favorite word processor for the creation of letters, memos, and the like. Its "what-you-see-is-what-you-get" attitude makes the formatting of documents tedious. But they were able to use the product to enter in program source code with little difficulty. They noted that movement of individual lines or blocks of text was easily accomplished by using the "move" command. This proved especially useful for times when the programmer has left cryptic notes for certain sections on the last page to be moved to the front. They also found the global search and search/replace features very helpful for updating variable names when a "new" copy of a file definition surfaced after a meeting. With this feature specific columns or lines can be changed by restricting the commands used by also specifying ranges of lines or columns.

Our programming staff found the full screen editing and rational cursor control a godsend while they updated their programs. When a file is placed into the active area and "update" is specified, Wylbur/PC enters full screen mode, allowing complete cursor control via the arrow and page control keys on the numeric keypad. They discovered that column width goes out to 232 and is controlled by using the left and right arrow keys in conjunction with the CTRL key, which is very useful in viewing test results that are larger than the 80 characters of the screen.

The programmers were also able to support short cuts to their normal processing by defining up to 40 function keys (the ten function keys marked F1 through F10 alone and in combination with the ALT, shift, and CTRL keys) or by tailoring the names of the commands normally used by the product—something more convenient. At any time the value of the keys can be displayed and/or changed. The redefinition of keys, a useful feature in the mainframe version, was not available in Wylbur/PC at this release.

Wylbur/PC possesses approximately 90 commands to perform its functions, but our staff found that they only use about a dozen on a regular basis. The commands are entered on the top or "command" line of the screen and perform a function directed at data in the active file, for system information such as time or space available, or for accessing external files. The commands themselves are common-sense types such as "move" or "copy" or "save".

Wylbur has the ability to accept command sequences written in a special "exec" language and execute them when requested. This feature is sometimes called a "macro" capability. Whatever the name, our technical staff found it easy to use for the more mundane functions, such as defining program function keys and also for more complex tasks such as providing a listing of the directory of Wylbur members from which the one wanted could be selected. They found it to be reasonably efficient—one benchmark timed 23 exec statements executed in 1 second. The "HELP" function provided, accessible at any time without affecting the work currently being done, was found particularly useful when employing the more esoteric uses of a command, especially while building an "exec".

☐ Ease of Use

Wylbur/PC is easy to learn and understand intuitively. First of all, a "help" function exists that shows how a command can be used. This function is available at all times, even when in the midst of editing a document in the active area; the help display does not affect your work so that when our professional staff wanted to change a particular column using different columns on the same line for 16 successive lines, they were able to get the proper syntax without disrupting their work or searching for a manual. Second, most of the commands are mnemonic. For instance, to place a file in the active area our secretaries keyed "USE

Online Business Systems Wylbur/PC
Editor/Word Processing Package

member" in the command line. To look at the file in the active area, they typed, "review" or "rev". Insert a line? They typed "insert (range)" or "ins (range)".

Our technical staff enjoyed setting the program function keys to perform various functions. They created several versions of simple "exec" files to define the 40 keys for various staff members. They also helped other staff members to define their own commands; for example, if you tire at typing "sho date" to have the date displayed on the screen, they would include "def date as" "sho date'," then by typing "date", display the date. You can use the "exec" function to make Wylbur appear as another text editor—recognizing a foreign command set.

One note is appropriate at this point on redefining keys. Unlike the mainframe version of Wylbur, the redefinition of function keys is only acknowledged when in "window" mode, that is to say when using the active area as opposed to basic mode, when one is not. Other than this one departure from the expected norm, our entire staff found Wylbur/PC relatively easy to learn.

☐ Support

Wylbur/PC represents an initial foray into the personal computer software market by Online Business Systems. In answer to our inquiry, they indicated that separate support and marketing groups are in the process of being formed to offer direct support to the product.

Future updates or releases would be made available to registered users for a fee of $35 to $40 per copy. When questioned about availability, they said Wylbur/PC will be released sometime near the end of January or the beginning of February 1984.

OBS has a good reputation for support and dependability for support of the mainframe version of Wylbur.

☐ System Interface

We did not experience any difficulties in using text files created by other editors or on other machines. We were able to receive and edit files sent from an IBM mainframe using Wylbur an VM/CMS. We were unable to send files back since that command was not active on our demonstration copy of the product.

☐ Vendor Experience

A first time entry into the personal computer software market, OBS has nonetheless been around for many years serving its Mainframe Wylbur clients. Their staff is professional and courteous. OBS is the licensed software agent for Stanford University.

LCNS: license fee.

■ PRODUCT OVERVIEW

☐ Terms & Support

Terms • upon questioning, OBS indicated that for corporate clients needing more than 10 copies, volume discounts could be expected; updates or new releases will be made available to their registered users for a nominal fee of $35 to $50.

Support • support groups are being set up; updates and new releases available to registered customers for $35 to $40 per copy.

☐ Component Summary

The demonstration version of Wylbur/PC that was reviewed came on a single diskette containing the following files: WYLBUR.EXE, the program loaded into memory at startup; LOGON.WYL, an exec that is used at startup much the same as AUTOEXEC.BAT is in DOS; HELP.DAT, a help function while executing Wylbur/PC; COMMEXEC.WYL, an exec to aid in establishing communications with a Mainframe Wylbur.

Other files demonstrated the use of execs, random file accessing, and screen building.

Wylbur/PC: **$500 lcns**

☐ Computers & Operating Systems Supported

Wylbur/PC will run on the IBM PC and on the Compaq, Chameleon, and Hyperion computers under PC-DOS or MS-DOS operating systems.

☐ Minimum Operating Requirements

Wylbur/PC requires 80K bytes of RAM memory, a single- or double-sided diskette drive, a monochrome or color/graphics monitor, a printer, and a 1200-bps modem.

☐ Features

Display Type • full print-image display; only basic editing features supported • typical word processing features such as "bold" or "enhanced" printing are not directly supported.

Display Feature Utilization • special display attributes not used or required, since product is not intended to support special print features such as bold or underscore.

Command Structure • commands are English words or abbreviations that are representative of operation to be performed; extensive user redefinition possible of command mnemonics is supported • user may also define all 40 function key variations.

Error Recovery • no automatic backups are made; user may save file on command without exiting program; block deletes may be reversed.

Block Operations • move, copy, and delete functions with range supported • powerful change command present which supports columnar, multi-line, and mixed operations, i.e., CHANGE (column range) USING (line range) COLS (column range) in (line range), NOLIST [REPEAT] is useful in combining columns from one line into another.

Merge/Print Functions • copy command supports full or partial combining of member with active area text.

Spelling Check/Aid • none.

Multiple-Window/Multiple-Document Support • no direct support; however, different segments of text in active area can be displayed on screen at same time.

• END

Palantir Software Palantir
Word Processor Package

■ PROFILE

Function • word processor.

Computers/Operating Systems Supported • IBM PC, IBM PC/XT, Compaq, Compaq Plus, Corona/PC-DOS, MS-DOS, or CP/M.

Configuration • 56K bytes of RAM, 2 single- or double-sided, double-density floppy disk drives or hard disk; monochrome display or color/graphics board and the appropriate monitor are supported as are numerous printers.

Current Version/Version Reviewed • Version 2.0/Version 1.15.

First Delivery • January 1982.

Number of Installations • 5,000 plus.

Comparable Products • Microsoft Word, Lifetree Software Volkswriter.

Optional Associated Software • none.

Price • $395 for IBM PC version; $450 for CP/M systems.

Vendor • Palantir Software, Inc; 3400 Montrose Boulevard, Suite 718, Houston, TX 77006 • 713-520-8221.

Canada • Dealers: Computer Horizons; 30 Selkirk Crescent, Regina, SK S4S 6J4; 306-586-3809 • Sigma Information; 620 Jarvis Street, #1906, Toronto, ON M4Y 2R8; 416-884-6700 • NAPAC; 370 Donald Street, Suite 100, Winnipeg, MN; 204-956-2636.

■ ANALYSIS

Palantir is a decendent of Magic Wand (which has since been updated to become PeachText). This makes it, like WordStar, a program transported from an 8-bit CP/M environment. As such, its command structure was originally designed to be customized for one of the many types of terminals CP/M systems commonly used. This customization is not carried into the IBM version, but the tendency to write instructions in a way that avoids direct references to specific keys is. It relies on menus for major processing control, function keys for some commands, and control character sequences for imbedding print options, as well as the entering of other commands.

It currently contains most of the functionality that one expects to find in a good word processor and, in addition, has a "programming language" called Mailout, which provides the capability to alter the document as it is being printed. It also provides the means of merging files, entering data from the keyboard, and controlling the portions of the document to be printed. It is usable by a data processing-oriented secretarial staff, but requires occasional technical assistance for the more complex functions.

The next release, 1.2, is touted to offer "an integrated package line for office productivity" which will accompany the Palantir Filer, the Palantir Speller, and the Palantir Grammar Checker. It is to include such new features as "hot-zone" hyphenation, "find" line or page, and the facility for executing another program from within Palantir.

There are many excellent features in Palantir, some found in few other products. Its CP/M structure requires some adjustment for individuals not used to "generic" key references, but the functionality is worth the extra effort.

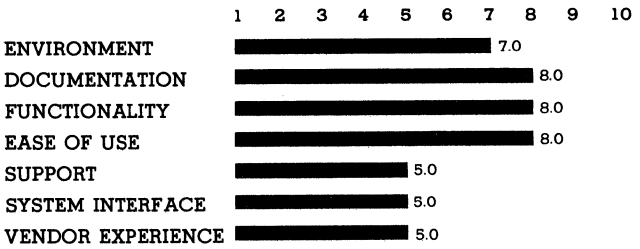
☐ Strengths

The feature which sets Palantir apart from the rest of the word processors is the implementation of the mail/merge function. They have expanded it such that it not only provides the capability of altering a document based on data stored on a separate file, but also allows the user to enter data from the keyboard during printing. In addition, conditional statements, complete with Boolean connectors (AND and OR), have been implemented, turning the mail/merge function into a rudimentary programming language.

Another facet of the Palantir product which adds to its usability is the basic menu structure which controls the major flow of processing. As in other products with superior menu implementations, Palantir allows the user either to use the cursor control keys to highlight the choice wanted, then press enter to select it, or to streamline the operation by simply keying the first letter of the choice.

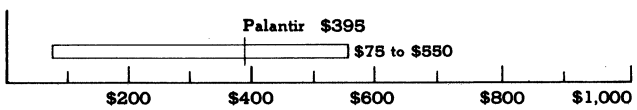
The product further shows its concern for human

PRODUCT QUALITY RATINGS*



*For an explanation of rating criteria, please refer to the Word Processor Features section in the Software Evaluations (805) report. The Overall Package Average is 6.6.

PURCHASE PRICE RANGE Software Price Range ☐



PALANTIR SOFTWARE PALANTIR PRICING • open bar shows the typical range of prices for **WORD PROCESSOR** software used in a corporate environment • the vertical line within the bar graph indicates the price of **Palantir**, the evaluated product, relative to the price range of similar products.

Palantir Software Palantir
Word Processor Package

engineering by providing a "semi-justified" feature which provides an intermediate step between ragged right and right-hand justification. The thought is that full justification implies that the text must have been produced using a word processor while ragged right does not give as professional an appearance, hence, a step in between. From a practical point of view, this allows a document which looks more justified than the traditional ragged right, but which does not produce the empty white space on printers without proportional spacing when long words will not fit at the end of the line.

☐ Limitations

When a product is obviously geared to providing full-functioned, easy-to-use features, the areas which were missed are more obvious. In the case of Palantir, the obvious omission occurs when the user needs to edit, or otherwise process, a file for which the name is unknown. Palantir provides a menu function which will display file directories, but it is not directly connected to the access functions such as "read." Thus, the user is forced to either remember the name or write it down in order to reply to the "What file?" prompt in the read step, rather than simply select the file in question during the file directory step.

Another feature found to be cumbersome is the "search" function. Palantir provides two separate search functions, search by word and search by character. Search by word recognizes the word entered regardless of case and punctuation, but not if it is imbedded in another word. Thus, "apple" is recognized while "crabapple" is not. Search by character recognizes only the specific characters entered; thus, "apple" would be recognized, but "Apple" would not.

The tutorial in particular and the user manual in general suffer from being written in a generic form. Machine-specific keys or key sequences are referred to by a generic name rather than the actual keys needed to perform the function. Because of this, the user must either keep a cheat sheet with the appropriate translations handy, affix the key cap stickers to the keyboard (if you already have several other products with custom key caps, you must purchase alternative keyboards, presumably), or remember that SET really means the F1 function key.

■ HANDS-ON EVALUATION

The instructions for installing the product were explicit; however, they do not support all configurations. The batch files provided for copying files and so forth expect that the system disk will be placed in the "A" drive and copied from there to either the "B" drive or to the hard disk. This is fine for most setups, but will not work for a single-sided "A" drive since the product is supplied on double-sided drives. A working copy of the product will fit on a single-sided drive, but the configuration must be done on a double-sided one.

The tutorial provided is geared to the computer novice. It leads the user along an introductory path consisting of 5 lessons which explain the basic functions. At the end, the user is able to create standard business documents using the product. There are example files on disk to demonstrate the correct use of most functions and features.

Advanced features are what really set this product apart. Specifically, the Mailout feature provides an expanded means of providing tailored output for standard reports, form letters, and the like. The creation of Mailout "programs" is much easier if the individuals using them have a background in logic or computer programming, but it can be used by anyone.

Some of our clerical staff found that getting started with Palantir was very difficult—the generic terminology and lack of reference to familiar PC concepts seemed the culprit. Once learned, the product performed all the tasks assigned to it and generally won over the staff.

☐ User Interface

Palantir uses a combination of menus, function keys, and function key sequences to permit access to all of the facilities of the product. The most commonly used functions, SET and CLEAR, are F1 and F2, respectively. Menu items may be selected by moving the cursor to the desired entry, then pressing the return key, or by keying the first letter of the choice wanted. Complex functions are generally supported by multileveled menus. The net effect is an extremely user-friendly interface with the functionality of a dedicated word processor, marred only by documentation which is not specific to the IBM keyboard layout.

Menus: Command menus are provided for overall control, file access, printing, and help. The ESC key returns the user to the next higher menu or the operating system if entered from the command menu. Items may be selected by cursor position coupled with the return key, or by keying the first character of the selection wanted.

Control Characters: Used in the CP/M version of the product for command entry, but not in the IBM version.

Function/Special Keys: Function keys, especially F1 (SET) and F2 (CLEAR), are used throughout in combination with one additional key to initiate or terminate commands. The additional key is generally mnemonic, such as "H" for Heading.

Command Language: The Mailout function has a rudimentary command language which allows it to process external files, acquire data from the keyboard, and act upon conditional statements. Eleven basic commands are supported.

Positive Feedback: Palantir makes extensive use of positive feedback. It requires a reply to an "Are you sure?" for any destructive command. Keystrokes which are not valid result in a beep from the computer.

Status Display: The status display includes the current direction, the current page, line, and column, and any commands that are active. In addition, a format line is displayed which denotes the current tab settings and line length.

Help Facilities: Extensive Help facilities are available via the Help selection from the main menu. In addition, users may custom-tailor the descriptions offered on the Help file for their own configuration.

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☐ Environment

Palantir is designed to run on a minimum system with at least one double-sided drive. Both the IBM monochrome and color/graphics adapters with appropriate monitors are supported with specific drivers, as are those of the Compaq computer. In addition, Palantir supplies printer drivers for most of the popular printers. Palantir is one of the few products to address the PC compatibles explicitly.

We tested using an IBM PC with 192K bytes of RAM, mixed single- and double-sided disk drives, a color/graphics monitor, and an Okidata Microline 92 printer. Palantir provided 2 printer-drivers for our printer, one for correspondence quality, the other for data processing quality. We used both and found them to be functional. We also tested the product using an IBM PC/XT with 630K bytes of RAM, color/graphics monitor, and IBM printer.

We were forced to modify the installation batch files provided with the product to create the working copy of the program. On our PC, the double-sided drive was the "B" drive, not the "A" drive as expected. With the IBM PC/XT, the batch file reference to the "B" drive causes the XT to go into its "change disk and press any key" mode, simulating a system with both an "A" and "B" drive on the single XT drive. This process is designed to make you lose track of which disk is which within a change or two, so we used the hard disk as an intermediary.

☐ Documentation

The documentation included with Palantir consists of a 3-ring binder which contained a 24-page Information Interface, a 92-page User's Manual, a 39-page tutorial, a page containing the Twelve Commandments of Disk Use, and a 3-page index.

The Information Index is also included in machine-readable form included in the Advanced Use Samples diskette. We would have preferred to have the text of the tutorial in machine-readable form so that it could be tailored to the specific machine on which it would be used, but we realize that the illustrations provided in the tutorial are beyond the capabilities of the product. The lack of specific machine references gives the user a curiously isolated perspective while doing the tutorial. Although the functions described can be performed, the confidence which might be instilled by references to familiar keys and concepts is lacking.

The User's Manual is organized functionally, but it is also written without reference to the specific keystrokes needed to invoke a command. Instead, each command is given a generic name, such as SET or CLEAR, which the user must translate to the proper key(s). Key cap stickers are provided which may be placed on the appropriate keys (with all the other stickers from all the other products whose vendors were similarly disposed). The translation table is contained in the Information Interface section and may be transcribed to the Reference Guide pamphlet. Thus, the user with a problem must first look the function up in the reference manual, determining the Generic key which invokes it, then look up the Generic key on the Information Interface section to determine the real key.

The index of the copy of the manual supplied to us was not synchronized with the manual. Some of the references which we checked were a page off.

☐ Functionality

Palantir contains the standard functions such as full-screen editing, global search and replace, and mail-merge that we expect in a high-quality word processing product, lacking only a spelling checker and a "window" function. The next release, 1.2, will include an interface to the Palantir Speller.

With this product, our clerical staff was able to produce acceptable inter-office memoranda and business correspondence with a minimum of difficulty. In fact, the limiting factor for the preparation of letter-quality documents rests, as usual, with the capabilities of printers and the interfacing to them. Palantir provides printer interfaces to most popular printers, including several letter-quality ones.

Our professional staff had little difficulty in using the product to create portions of a Standard Operating Procedure manual. One of the helpful features for this task was the ability to merge different files together to form a document. This allowed us to create a different file for each office procedure, then combine them all with appropriate page numbering when the manual was printed. And, since the Interface Information section provided on the Advanced Use Samples diskette used the same technique, it was easy to develop the Mailout file necessary to accomplish the task.

Our programming staff found the product to be an acceptable means for the entering of program statements; however, they have been spoiled by using editors with window functions which allow them to view the data names section of a program while entering the procedural portion of the program. They were able to verify that the earlier restriction of file names which did not allow a user-supplied extension has been eliminated with this version. Palantir is an acceptable but not spectacular text editor; its primary advantage in that area would be the fact that users who did both word processing and text editing would not have to learn 2 products.

Our programmers also enjoyed assisting the other members of our staff in using limited programming capabilities of the Mailout feature. They found that the facility for accepting data from the keyboard was helpful for tailoring the "form" document. Our clerical staff was especially appreciative of this assistance since they were apprehensive about their ability to use the feature. Their fears proved unjustified because all staff members were able to become at least minimally comfortable with Mailout. Our staff found that the Mailout feature was very useful in creating personal versions of memoranda which would otherwise have been addressed to a distribution list and included special paragraphs for each addressee.

☐ Ease of Use

One of the most impressive features of this product is the manner in which its menu function is implemented. It shows an attention to human needs which is usually absent in this technical world. Our staff appreciated the ability to step through the choices offered on the menu

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using the cursor keys, especially when they were unsure which option they wanted at the time, and also applauded the foresight which allowed the speed-demons to reach their goal by simply pressing a single key.

There were some gaps in an otherwise excellent structure, however. The menu permits a user to request a file directory of the working disk, a very useful feature for those who tend to enter the word processor before checking the disk directory for the correct name of the document. Unfortunately, Palantir does not permit the user, having seen the correct name, to enter it while on the directory screen. You must exit the directory screen and return to the main menu, often forgetting the name in the process.

Our clerical staff found the documentation organized functionally which aided them in finding all of the instructions necessary to perform a given function in the same general area, while our technical staff found that the Reference Guide pamphlet contained the listing by command with which they were more comfortable.

Our professional staff found the Mailout feature provided an easy means of tailoring a document. With it, they were able to write one general-purpose memo, then, while it was being printed, to add special sections for the appropriate staff members.

There was some confusion in the use of the SET command, which Palantir uses as the way to set special text attributes, formats, mark blocks, etc. The function may be too versatile—our staff seemed to prefer a MARK BLOCK command to a SET BLOCK two-step procedure. Another confusion was the fact that all SETs do not have a terminating CLEAR.

In formatting changed text, Palantir uses a common, but unwieldy, method of requiring that the user enter a specific format command while positioned somewhere in the first line of the paragraph into which new text was inserted. This makes the use of global replace to correct commonly misspelled words less than useful, since each corrected area must be individually reformatted if the new spelling is of a different size than the old.

One final feature is the TYPE command which allows the user to key directly to the printer. It is of questionable value since it does not even allow backspacing. It does, however, allow the user to send control characters and, thus, set the printer for different options.

☐ Support

Designer Software provides an 800 number for registered users of their products. We called because the version of the program which we received did not support the SET function properly. The symptoms were devastating. Either the program filled the keyboard buffer, then refused to recognize any additional keystrokes, or it simply returned to the operating system. Since the SET command is required for all formatting, block, and mailout commands, the program was not functional without it.

We were able to reach them. They took our name and number, and called us back quickly. According to Designer Software, our problem was due to a bad disk, and they shipped a replacement to us via an express service.

☐ System Interface

Instructions are provided for translating WordStar and dBase II files into Palantir format. We followed the instructions provided for dBase II and experienced no difficulties. The instructions include a description of the potential problem which imbedded commas can cause and a suggested remedy to fix them, which we found functional.

The ability to read files created by another product makes transition to Palantir easier, and makes the product more useful in an environment where other users in other areas may be using different programs.

☐ Vendor Experience

The Palantir Word Processor was released for CP/M systems in 1982 by Designer Software. In November of 1983, Palantir Software was formed as the marketing arm of Palantir, Inc which includes Designer Software. The product enjoyed a relatively long life in CP/M 8-bit modified form as Magic Wand.

■ PRODUCT OVERVIEW

☐ Terms & Support

Terms • Palantir is available on a license for purchase only from Designer Software, Inc, through computer dealers, software dealers, or mail-order houses throughout North America, the United Kingdom, Western Europe, Australia, and Asia.

Support • provided by Designer Software for registered users; an 800 telephone number is available.

☐ Component Summary

Software elements consist of the following programs, files, and overlays: WP.COM is the Palantir control program; WPEDIT.WPO is the edit processing overlay; WPEDINIT.WPO is the edit processing initialization overlay; and WPEDIT2.WPO is the edit processing reinitialization overlay. WPEDHELP.WPO is the Help processing overlay and HELP.WPH is the Help data file. WPEDSVRD.WPO is the read, save, and backup overlay; WPEDFILE.WPO is the file menu, erase, copy, and rename overlay; WPEDFD.WPO, WPEDFL.WPO, and WPEDFCD.WPO are the file directory, file inspect, and file new disk overlays, respectively.

WPEDPRNT.WPO is the print function overlay; WPEDPRN2.WPO is the print function overlay continued; WPEDTYPE.WPO is the type to printer overlay; WPEDDOCM.WPO is the define command overlay; WPEDFORM.WPO is the set format function overlay; WPEDCOPY.WPO is the set block and set move overlay; WPEDPAGE.WPO is the pagination overlay; WPEDFIND.WPO is the search and replace overlay; DEFAULT.WP controls the default settings for margins, tabs, etc; and DEFAULT.WPL is the default lexicon.

TERMINAL.WPT is the terminal driver file customized from one of the tailored files denoted by .WPT extension; PRINTER.WPP is the printer driver file customized from one of the tailored files denoted by the .WPP extension; and FONTNAME.WPF is the printer font file customized for various daisywheels, print thimbles, and machines denoted by the .WPF extension.

IBM PC Version:	**$395 lcns**
CP/M Version:	**450**

LCNS: license fee.

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☐ Computers/Operating Systems Supported

Palantir Word Processor supports the IBM PC and PC/XT running PC-DOS. It also runs on the Compaq, Compaq Plus, and the Corona PC with MS-DOS. A CP/M version of the package is also available.

☐ Minimum Operating Requirements

The package requires a minimum of 56K bytes of memory and 2 single- or double-sided, double-density diskette drives or a hard disk. A monochrome display or color/graphics board and appropriate monitor are supported together with many printers.

☐ Features

Display Type • full print-image display; however, the user must reformat each paragraph after it is modified.

Display Feature Utilization • separate monitor drivers are provided for each display type; for the color/graphics display, reverse video is used to denote command lines, and red is used to denote bold or enhanced text.

Command Structure • menus provide access to the various major processing segments of the product such as editing, file processing, and printing; in some instances, secondary menus are present; editing commands such as start bold text or end underline are entered via a combination of function keys and another key; stick-on labels are provided for special keys.

Error Recovery • the "undo" function is not supported; backup copies of the document are created automatically after the document is saved to disk.

Block Operations • blocks are marked via the SET function key, F1, followed by a "B"; SET followed by an "N" names a block; SET followed by an "M" inserts a defined block into text at cursor (reformatting based on the current format line occurs).

Merge/Print Functions • mailout, with its internal command language, provides extensive merge/print capabilities.

Spelling Check/Aid • Release 1.2 is to interface with the Palantir Speller.

Multiple Window/Multiple Document Support • multiple documents may be combined by the Mailout processor into a single print document.

• END

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■ PROFILE

Function • graphics display for business analysis.

Computers/Operating Systems Supported • IBM PC, PC/XT, Epson QX-10, Zenith Z-100, Osborne I • requires PC-DOS, MS-DOS, or CP/M.

Configuration • systems with 8086/8088 processors require 96K bytes of RAM (128K if printed graphs are required), 2 floppy disks, or one floppy disk and one hard disk; 8-bit systems require 64K bytes of RAM • graphics printer, plotter, or color graphics adapter are optional.

Current Version/Version Reviewed • Version 1.00/Version 1.00 for the IBM PC is initial and current version.

First Delivery • August 1983.

Number of Installations • information is not available.

Comparable Products • Redding Group GrafTalk, Software Publishing pfs:Graph.

Optional Associated Software • none required.

Price • $295 retail price; $75 per year for warranty extension.

Vendor • Peachtree Software Inc; 3445 Peachtree Road NE, 8th Floor, Atlanta, GA 30326 • 404-239-3000.

■ ANALYSIS

BGS is an easy-to-learn graphics package with a strong emphasis on business graphics. In addition to the usual line, bar, and pie charts, a number of special business-oriented displays are available. Titling is flexible, with 6 different texts to choose from.

The data to be graphed can be directly entered into the system or derived from the print-image text files produced by a spreadsheet or other program. The system configuration is likewise flexible in terms of plotters supported.

Companies which require hard-copy graphics will probably find that BGS meets their requirements, although the means of plotting data from spreadsheet programs will take some adjustment on the part of the user. Companies who demand on-screen graphics may be limited by the restrictions BGS places on color selection.

☐ Strengths

BGS is easily used, being menu-driven. The menu may be bypassed by knowledgeable command entry, making the structure helpful to the beginner, but not intrusive to the seasoned user. Title, label, and data entry is done from an entry form for ease of use, and a Help function is available.

There is a considerable variety of specialized graph formats available to the business user, going far beyond the traditional bars, pies, and lines. Single- and double-sided bar charts are available, as are critical ratio graphs, histograms, and linear regression analysis. The number of data points which can be graphed is relatively high.

A conversion utility is provided to ease the entry of spreadsheet data into the program, and instructions are included for 3 popular packages. This helps overcome some of the confusion over the non-traditional use of print-image data as input.

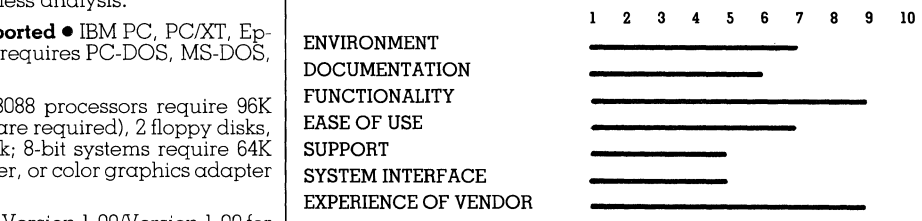
The environmental requirements of BGS are modest, allowing it to run on nearly any PC. Eight different plotters and 2 different color graphics cards are supported, making the configuration flexible enough to match nearly any user environment.

☐ Limitations

The displays generated on the screen, including the menus and command screens, can be very difficult to read due to the color selection function. If the user has a monochrome display with the color board, the resulting shades of green or grey cannot be deciphered except by painfully close inspection. Some colors and fill patterns tend to "drop out" to black even with a quality NTSC monitor, making the printing of a graph an exercise in faith. At best, the screen graphic support is marginal.

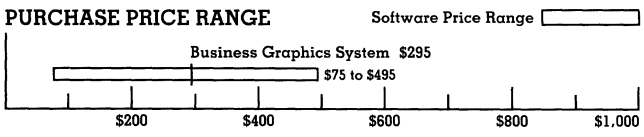
Printer support is also limited. Only the IBM/Epson printer with GRAPHTRAX is supported, and the graph placement options available for plotters are not available for printers. This, in combination with the difficulties in screen graphics, make BGS primarily a plotter-graphics systems.

PRODUCT QUALITY RATINGS*



*For an explanation of rating criteria, please refer to the Graphics Features section in the Software Evaluations (805) report.

PURCHASE PRICE RANGE



PEACHTREE SOFTWARE BUSINESS GRAPHICS SYSTEM PRICING • open bar shows the typical range of prices for **GRAPHICS** software used in a corporate environment • the vertical line within the bar graph indicates the price of **Business Graphics System**, the evaluated product, relative to the price range of similar products.

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■ HANDS-ON EVALUATION

BGS tends to impress from the first. The documentation, including a reference manual, installation and configuration guide, pocket reference, and special supplement on importing spreadsheet data, is thorough and attractive. There are 2 disks supplied, which are not copy-protected, and installation instructions seem detailed, complete, and compact.

Too compact, perhaps. Both the CP/M and the PC-DOS products share the same documentation, so the instructions are mixed. A few times we found ourselves leading our PC down the 8-bit CP/M trail. This dual-purpose aspect of the document is definitely annoying.

Most of the initial enthusiasm for the package dissipated when the system was booted and the program loaded. The package comes configured for a color monitor and color graphics adapter, and the initial color choice is white on a blue background. This proved to be green on a green background for our high-resolution black-and-white monitor. We switched to a 17-inch NTSC color monitor, and still had problems reading the menus. Reconfiguring when you could not read the menus pointed out that the documentation assumes that you can see the screen and is therefore sparse in detail on what the vendor considers "self-evident" entry fields. A few trials got the display to readable form, and an RGB monitor worked from the start.

Once our personnel could read the screen, we got a better appreciation of the features provided. The ability to show histograms, double-sided bar charts, critical ratio charts, and the like, gave the package a lot more functionality than was expected, and some of the financial specialists enjoyed the exercise of trying all the formats possible for the best presentation of their information. Some of the excitement dimmed when the problems with the display cropped up again, making some graphs unreadable or decidedly different in appearance on the screen. RGB proved the best monitor option.

☐ User Interface

Menus: All BGS functions are fully menu-driven. Data entry menus are automatically created by the package when graph characteristics are entered. Higher level menus may be bypassed to speed operation by experienced personnel.

Control characters: Control characters are used to control the cursor during each data entry.

Function/special keys: The cursor control keys may be used in place of control sequences to position the cursor during data entry. Also used are the DEL key to delete characters, and the ESC key to exit the data entry form without saving the data.

Command language: None.

Positive feedback: Feedback is provided in the form of prompts and menus indicating the currect state of the program.

Status display: None.

Help facilities: Help is available from all menus. No help is available during data entry.

☐ Environment

The points which BGS gains for its distribution in non-copy protected form are lost because of the proposed startup configuration. In an effort to make a good impression on the user in the computer store, the vendor appears to have misjudged who the real users of the system would be. The assumption that the user will have a color monitor with quality sufficient to properly resolve white-on-blue display seems unreasonable—it was in our case.

The package is very forgiving on memory and configuration in general. As delivered, with printer support included, the system requires 128K bytes of RAM, but it can be run on 96K systems if the printer support is removed. A single double-density floppy disk seems to work, but the disk will be very heavily allocated. If the disk is used to boot the system there will be no space left for files. There is no indication in the documentation that hard disk is supported or not supported, but moving the package to the hard disk seemed to work properly. Operating speed is not significantly affected by disk type or by memory size.

A configuration option of BGS allows you to select a monochrome display as a monitor, and this seemed, initially, to be a totally foolish move. As it turns out, there are some benefits in opting for this type of monitor. The package would not produce displays which humans enjoy reading on any color monitor except an RGB, and the attempts to do so distracted the operators. Much better (and faster) results were produced after we told everyone to plot the output and forget the display. In monochrome mode, the commands and data entry forms are shown on the screen, but the graphs appear only in hard copy. Color graphics can be supported (with the right monitor) on either IBM's board or the Plantronics board.

We were disappointed by the fact that BGS supported only the IBM or Epson printers. The Epson requires the GRAPHTRAX option. We were forced to rely totally on an HP plotter for our use. Other plotters, such as the Strobe and the Houston Instruments units, are also supported.

☐ Documentation

The documentation on BGS is quite good; extensive and easy to read. It consists of a tutorial and reference manual, a pocket guide (which is too delicate to keep in your pocket for long), an installation and configuration manual, and a special supplement which describes the use of BGS with popular spreadsheet programs.

The tutorial/reference is divided into 5 sections: quick start, tutorial, reference, glossary, and index. The quick start section, intended to help an experienced user remember how to get the thing up and running, is generally useless. The tutorial is much better—leading the user through every aspect of BGS operation in a scenario context which a few of our professionals found too "cute." The scenario concept did give the tutorial a cohesiveness that made learning much easier, however. It also helped introduce the many

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features and functions in a non-intimidating way. The reference section is organized by command, covering every feature with invocation instructions, parameter options, and screen examples. Since the commands are in alphabetical order, there is no table of contents, but an index helps locate a command as long as you know what it is called first. The glossary of terms is superficial and was not useful to any of our staff.

The installation and configuration manual is the only major flaw in the documentation package. While floppy disk installation and initialization are covered in great detail, there is no information on using the package with a hard disk, something which might induce the suspicious to conclude that it would not work. It seemed to, however. The section on the configuration menus leave parts of the menu without explanation, and explanations would have been more helpful during the times when the screen could not be read. More than one of our technical people got tired of squinting at shades of green or blue and took a break during the setup. Another problem was the annoying interleaving of CP/M and PC-DOS instructions. Perhaps a computer which ran either operating system (or both at the same time) might benefit from this, but the diskettes supplied support only one or the other.

☐ Functionality

BGS achieves its highest grades in functionality. There are more graph format choices in the program than in most business packages, and a few users printed graphs just to see what a critical ratio, for example, looked like. Line, bar, and area charts may consist of up to 5 data groups (lines, bars, etc) with up to 10 data points per group, or 2 groups may have 30 data points per group. Bars may be stacked or displayed side-by-side, and there is even a 3-dimensional effect. We found the ability to scale the X and Y axis very helpful when several charts were displayed for comparison. Other packages which scaled automatically often gave distorted pictures by changing the scale from graph to graph.

There are 3 special formats; critical ratio, single-sided bar, and double-sided bar. These can be used to display data for 2 time intervals. The critical ratio graph will display 3 pairs of ratios, and the others will plot up to 10 data points each interval. Both sides of the double-sided graph can be labeled independently, making it an excellent way to relate 2 sets of information over the same time base, such as a plot of business receipts versus the economic indicators. This same graph was done as a critical ratio graph, but this format proved better for such representations as operating revenues versus fixed expenses or sales profits versus advertising expense.

Random data points can be handled with a histogram format, which provides a distribution chart of the data, or with a scatter chart, which uses linear regression analysis to plot the axis of a set of data points and thus predict future values. We found this useful in simple trend analysis. However, the linear technique is limiting and no more complex form of regression analysis is supported. We tried some scatter graphs on sales performance and other financial projections, but found that the correlation coefficient, which is displayed, indicated a low accuracy of projection.

An additional feature of BGS is the word chart. This enables the user to create a graphic image of characters selected from one or more of 6 type fonts available. The text may be colored, slanted on the page, or angled on its vertical axis at user control. This made it possible to do free-form charts for presentations, but the facility was not easily mastered by all.

Colors and area fill patterns for bar, pie, and area charts may be selected from a list of options. There are 9 fill options and a configuration color palette. Lines on a line graph may be drawn with a variety of dots, dashes, or even be omitted leaving only the points. We found that the options in drawing and charting were very complete for our requirements, but they were appreciated only on the hard copy. The display had an annoying habit of turning colors or patterns black.

Hard copy graphs on the plotter may be set in terms of device view, resolution, graph location, and graph size. The instructions for setup are detailed and accurate. A pen change option can be specified to allow color changes.

Data entry into the package can be either directly via an easily used input form, imported from PeachCalc or SuperCalc in special form, or taken from packages such as VisiCalc or Lotus 1-2-3 in print image form. Nearly any source of numbers in column structure can be used in print-image form, making the package adaptable to many programs.

☐ Ease of Use

The menus, once you can read them, make BGS very easy to use. Commands and sub-commands are easily entered, and experienced users can bypass levels of the menu and go directly to the functions they desire. That feature proved very useful after only a few days of experience with the package. All data entry functions are prompted and easily followed, as are all graph option selection functions. The production of simple graphs from directly keyed data proved to be so easy that everyone was able to do it almost without assistance. More complex graphs were just as easy to the personnel who understood the graph format, but the ease of drawing such graph types as scatter graphs caused several office staff members to try scatter graph forms or histograms in appropriate applications.

Taking data from PeachCalc was very easy—you are prompted for each step of the operation and the results are generally what is expected. Complex spreadsheets may contain too many data points for graphing without some condensing.

Using other spreadsheet program data is a bit more complex. The documentation describes the procedure for use with VisiCalc and Lotus 1-2-3. The problems are that other spreadsheets must be saved without labels, and the output file may have to be renamed to be used. All spreadsheet output is assumed to be on print-image files with the ex-

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tension ".PRN". The biggest problem is getting the spreadsheet data into the format expected. The file must consist of rows and columns arranged in the same format as the data entry form for the graph desired. This means that you cannot produce all graphs directly from spreadsheets without rearranging the data. Peachtree recommends that you check the format of the data entry form for the chart desired before you begin spreadsheet entry for the data. Unfortunately, we had the spreadsheet before we had BGS. The entire spreadsheet entry process from any product other than PeachCalc or SuperCalc was less easy to use by the staff and fell into total disuse.

☐ Support

Peachtree charges $75 per year to users who desire to extend their initial warranty, a practice which seems in tune with Peachtree's parent company MSA in the large system area, but not with the microcomputer market. The calls we made with questions were always answered without requesting warranty information, serial number, or even (in some cases) company name. The investment seems unjustified unless the package will form an almost essential part of the company business.

The support personnel were generally helpful and knowledgeable, but they seemed to operate best in the "What does the xyz command do?" mode rather than the "How can I get this spreadsheet into graph format?" mode. Our questions quickly moved out of the former category into the latter, so by the end of the first week of use the support number was not called.

☐ System Interface

The conversion interface supported by BGS can be applied to other personal computer products, or even to data gathered on a minicomputer or micro and sent to the PC over communication lines. We developed a text file on a VAX system and transmitted it to the PC for graphing with BGS; it worked after a few false starts on formatting. If a well-defined group of data elements must be imported from another computer, the BGS format can be produced by nearly any text editor program and adjusted through the text editor or another custom program. We graphed a production report from the DEC system by running the editor on the print-image file and formatting it correctly. Given our wealth of format experience at this point, it worked the first time.

The weakness in interfacing is that the popular DIF format is not supported directly, making the graphing of data from what should be easy personal computer sources just as complex as graphing mainframe reports.

☐ Vendor Experience

As a company of the Management Science America (MSA) group, Peachtree is experienced as a supplier of corporate software. They appear to be addressing the issues of large business use of their programs in an effective way, and can be expected to move to bring the latest developments in product functionality and integration to their software.

LCNS: license fee.

■ PRODUCT OVERVIEW

☐ Terms & Support

Terms • BGS is available from Peachtree Software, Inc on a license purchase basis only; it is also included in some software packages supplied by Peachtree • distribution is through personal computer dealers, software dealers, or mail-order firms throughout the U.S and internationally.

Support • some telephone support is provided at no extra charge; warranty extension is provided at a cost of $75 per annum.

☐ Component Summary

Business Graphics System is a self-contained graphics program which supports the generation of common business graph forms and some special graphs, or the generation of alphabetic text, in any one of 6 fonts. It is supplied on floppy disk, and the disk must be online during execution because of the use of program overlays.

BGS Diskettes:

$295 lcns

☐ Computers & Operating Systems Supported

BGS can be installed on a variety of systems, including the IBM PC or PC/XT running under PC-DOS. It can also operate on the Epson QX-10, Zenith Z-100, or Osborne I with MS-DOS or CP/M, as applicable.

☐ Minimum Operating Requirements

All 8086/8088-based processors require a minimum of 96K bytes of RAM and 2 floppy disks. If printer graphs are desired, a 128K-byte RAM is required. Also, one floppy disk and one hard disk can be substituted in the configuration. An RGB monitor is recommended for best display results. Eight-bit systems require only 64K bytes of RAM. The graphics printer, plotter, or color graphics adapter are optional.

☐ Features

Graph Formats • BGS provides the ability to generate critical ratio, double-sided bar, line, bar, area, and single-sided bar graphs; it also provides the capability for histograms, pie charts, and scatter charts (linear regression analysis); also provided is a "word chart," a display of words in a variety of type styles.

Data Source • data may be input to the BGS program by direct keying, or an existing print-image file conforming to BGS file restrictions may be used as input.

Graph Size & Positioning • graph size and positioning is fixed when the graph is output to printer or CRT; when output is to a plotter, the graph may be sized and placed as desired.

Text & Label Support • graph titles may be created in several fonts; on graphs containing more than one set of data points, each set may be independently labeled; the word chart option allows creation of charts containing up to six lines of text in a number of different fonts, these may be placed and angled as desired.

Image Processing Features • CRT display of graphic images is supported; no special presentation feature is available.

Math/Statistical Features • special graphic formats related to mathematical and financial applications are supported; these include critical ratio graphs, double-sided bar graphs, and linear regression analysis (scatter chart).

Text/Report Integration • none.

• END

Peachtree Software Inc
List & Label Manager

■ PROFILE

Function • list and label management with report generation.

Computers/Operating Systems Supported • IBM Personal Computer, IBM XT running PC-DOS 1.1 or 2.0, Compaq Personal Computer using MS-DOS, other IBM-compatible systems, Texas Instruments Professional Computer, DEC Rainbow and Z-100 by Zenith Data Systems • a CP/M version, requiring 56K bytes of RAM, in both 8-inch and 5.25-inch format is also supported for 8-bit systems such as Altos or Cromemco, and an Apple II+ version is also available.

Configuration • 128K bytes of RAM, 2 single-sided or double-sided drives; hard disk also supported if available; either color graphics or monochrome supported.

Current Version/Version Reviewed • Version 2.1/Version 2.0 for the IBM PC.

First Delivery • January 1981.

Number of Installations • over 100,000.

Comparable Products • MicroPro DataStar and Software Publishing pfs:File.

Optional Associated Software • List Manager can be bought as part of the PeachText 5000 multifunction package.

Price • $250 retail price.

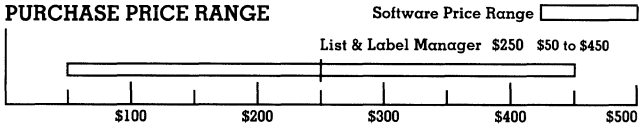
Vendor • Peachtree Software, Inc; 3445 Peachtree Road, N.E., Atlanta, GA 30326 • 404-239-3165.

■ ANALYSIS

List Manager is a simplistic database management system designed to update and maintain small databases such as addresses. It may also be used for any number of other functions with the following restrictions: the number of fields within each record may not exceed more than 14, no more than three key fields may be designated and no more than 32,765 records may be created. The package may be used in conjunction with PeachText to provide the variable data for form letters.

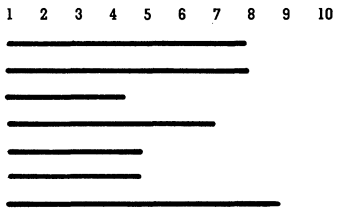
The documentation is presented in a highly professional manner as it is in other Peachtree products. The presentation is clear and concise. The reference manual is supplemented with a tutorial which allows the user to become familiar quickly with the options and procedures of the system.

PURCHASE PRICE RANGE



PEACHTREE SOFTWARE LIST & LABEL MANAGER PRICING • open bar shows the typical range of prices for **LIST MANAGER** software used in a corporate environment • the vertical line within the bar graph indicates the price of **LIST & LABEL MANAGER**, the evaluated product, relative to the price range of similar products.

PRODUCT QUALITY RATINGS*



*For an explanation of rating criteria, please refer to the Word Processor Features section in the Software Evaluations (805) report.

Its ease of use and solid documentation make this package a reasonable selection for both secretarial and professional users. We found, however, that after the novelty wore off, the professional and technical personnel became disenchanted with its limited functionality and wanted to move to a more sophisticated package. The force behind this desire is often curiosity rather than NEED. Non-programming organizations should review their needs and organizational charter to insure that "requirements" for more sophisticated packages will not demand professional assistance.

☐ Strengths

List Manager is menu-driven with an online Help facility which makes it very easy to use. Indeed, the user seldom needs to refer to the manuals for any references. When it is necessary to refer to the documentation, the user will find a well-organized manual with the functions highlighted making them easy to find. Incidentally, the functions are depicted in user form, not couched in technical jargon, thus, when the user wishes to know how to add a record, he or she need only find the highlighted heading "Adding records."

The program also has an interesting feature which allows the data to be input in last name, first name middle initial format for sorting purposes, but be printed in first name, middle initial then last name format. This feature allows a logical sorting of the file by last name while it retains the ability to print it in more human form.

Another human-engineered segment is found in creating the selection criteria for a report. The program prompts the user for an item (the number of the data field), a comparison number (1 is "less than", 2 is "equals," etc) and a value. The selection criteria continues with Boolean ("AND"/"OR") prompts. We found that it was very easy to generate reports using this combination of numbers and values.

Peachtree Software Inc
List & Label Manager

☐ Limitations

The primary limitation of this product is the limited number of data items supported. While 14 items may be enough for most mailing labels or other lists, it is insufficient for serious data base applications. We attempted a small inventory control list here and quickly ran out of fields.

A very close second is the use of special keys. A prime example is the use of the F2 function key as the "next field" key. We found that its close proximity to the "Esc" key and our inadvertent pressing of that instead caused us to lose entire records which we then had to re-key. Our technical personnel were most likely to encounter this problem.

We found that in addition to the fact that all numbers are treated as character data, the choice of upper or lower case for alphabetic data is significant. One of our professionals entered Andrews as "andrews" while in search mode and no match was found.

Users who want data manipulation power almost equal to some programming languages will be disappointed with List Manager, and some applications which might be possible and even highly practical with another package may extend this one beyond its limits. If an application is growing in generally unpredictable directions, this can be a significant problem.

■ HANDS-ON EVALUATION

The installation of List Manager went smoothly. We followed the instructions for copying the diskettes and configuring our working copies. The program is NOT copy protected. Peachtree provides a configuration program which prompts the user through the necessary steps with a minimum of difficulty. We then followed the instructions in the Lesson Plan manual moving the sample files to a work disk and began the tutorial. The tutorial consists of eight chapters each of which leads the user through one of the functions of the program. The actual time needed to finish the tutorial was under an hour.

We then branched out and attempted to enter a list of our own design. It became clear that the number of fields within each record was an annoying constraint. We were forced to redesign our record layout several times in order to accommodate the restrictions. The inconsistency of excellent human engineering in some places and not in others frustrated our staff, but we were able to produce the reports which we wanted. Our primary problem in this instance revolved around our requirement to use four dates. We wanted them to be stored YY/MM/DD but to print MM/DD/YY. We finally made the connection and stored them YY,MM/DD and used the "reverse after comma" command to print them in the desired format. This meant that each date used one field which left ten fields for additional data.

Both our technical and secretarial staffs liked the ease of use which List Manager provides for the generation of mailing labels and other simple lists. They also complimented the human engineering which was evident throughout most of the product.

☐ User Interface

List Manager uses a combination of an entry menu coupled with mnemonic and function key commands for user selection of functions and actions. The status lines on each display show the active function keys and/or provide positive feedback where appropriate. The interface is generally easy to use and not subject to confusion.

Menus: Menus are an integral part of the system. They offer access to the major functions of the product which include file definition, selection, updating, and combining in addition to report definition and production. Selection from a menu is made via entry of a two-character command mnemonic which is based on command name.

Control Characters: None.

Function/Special Keys: Function keys are used to activate cursor movement through an entry form such as the "define file" screen. No template is provided for function key use, and five such keys are defined for List Manager.

Command Language: Selection is handled via a stylized command language which is created in response to prompts. Prompts include identifying an item, specifying a comparison, indicating a value, and, if necessary, adding an action modifier. The structure of the command language is fixed via prompt entry rather than free-form.

Positive Feedback: Confirmation of actions and requests are displayed on the status line for potentially destructive operations. Error messages are also displayed on the status line. Normal command entry and data entry is confirmed by change in the display.

Status Display: The bottom three lines of the screen are reserved for status. Command prompts, function key assignments, positive feedback messages, and error messages are displayed there. In entry mode, the active file name is displayed in the status line, as well as record number.

Help Facilities: The first of the help screens is invoked by keying "?" as a choice for the main menu. The entire help sequence may be viewed by pressing return to each help screen. Pressing the Esc key will return you to the main menu.

☐ Environment

List Manager will run on either the IBM PC or the IBM XT under DOS 1.1 or DOS 2.0. It also requires two disk drives, but will fit on 160K-byte drives. Large data files may exceed the capacity of the 160K-byte diskette.

The PeachText 5000 package, with which the sample we tested was bundled, provided a configuration program which set up the necessary files on the diskette (and for the other PeachText 5000 products as well). The diskettes are not copy protected, so we were able to set up our system in our own way, an advantage if you have PC operating procedures already written.

We tested using an IBM PC with 128K bytes of RAM, two disk drives (one single-sided, the other double-sided), a

Peachtree Software Inc
List & Label Manager

color graphics board and a color monitor using PC-DOS 2.0.

☐ Documentation

The documentation supplied includes a separate tutorial which provided a clear, easy-to-use method for becoming familiar with the various functions which the programs provide. The tutorial is aimed at the novice personal computer user, so it was a little too simplistic for some of the professionals with some PC experience. Its language and presentation provided no problem to either our secretarial staff or to our DP professionals.

The package includes a reference manual in addition to the tutorial. It presents the material in a helpful format utilizing an extended right hand margin to highlight the functions with meaningful titles, such as "Browsing Through the File" and "Indexing by Last Name," supported by detailed text and illustrations of the appropriate actions. The documentation is organized by function. It presents them in the same order that they appear on the main menu screen.

Our only real complaint with the documentation was that it is provided without an index. This meant that, in some cases, time was lost leafing through the manual to locate the description of a function, UF (Update File), for example. As the reference manual is only 25 pages, it did not present an extensive problem. It also provides an appendix which contains suggestions and examples in the use of the package.

☐ Functionality

We used List Manager to create a small inventory control system. We defined product, vendor, vendor address line 1, vendor address line 2, city, state, zip, phone number, date received, date completed, date invoiced, date paid, amount, and the operator's initials. This is the maximum number of fields which may be defined.

We initially chose the standard format for dates when used in sorting, i.e. YYMMDD, but soon found that we were unable to format the display with /s. We still wanted to sort by date, so we changed to YY/MM/DD. This was fine for sorting but unacceptable for the reports we wanted, so as a last attempt we tried YY,MM/DD/ thinking to use the Reverse-After-Comma command to straighten things out in the report. It came closest to what we wanted. The final format of the reversed date was MM/DD/(space) YY. We also found that this could be used upon only one field per report. We finally decided that this particular application might fit better upon another system.

During the above process, we exercised all of the features available for List Manager except using the file created to feed a form letter. We found that all of the functions supported by List Manager worked well, but the constraints of the system were sometimes excessive for the application which we tried to implement. We were not bothered that we were restricted to 32,765 records, but only fourteen fields and a lack of report formatting did annoy us.

Files must be pre-allocated, meaning that the number of records in the file must be known or estimated before the file is built. Users tended to guess high, wasting a lot of space to avoid running out of file space later. Under-estimating is not a serious problem, as the "combine files" routine allows the user to restructure the file (to another one) in an easy manner.

Another potential problem is that within each field, the data is all treated as character type. There is no numeric data type. This caused an intermittent problem for our professionals as they tended to forget the need for leading zeroes (or blanks) in numeric fields.

List Manager provides a helpful feature entitled "Reverse Halves at Comma" designed to allow storage of names in the last name-first name sequence, while allowing the name to be printed/displayed first name first. We also used this feature to allow us to sort dates in year-first sequence, but display it in the more familiar MM/DD/YY format. It may be used upon only one field in each report.

The data entry, file maintenance, and reporting aspects of List Manager are designed for applications where exact control of the format of the report or special conditional processing of records is not required. Compared to "full feature" data base packages, List Manager is primitive, but we found that most non-programming users did not think of their problems or uses in terms which required the complex expression of a package which was nearly a programming language.

☐ Ease of Use

We all found Peachtree's List Manager very easy to use. The functions are all menu-driven with extensive use of prompts. We were able to install the package and get our first application up and running in a few hours. Some of the idiosyncrasies of the package resulted in an unexpectedly long initial learning curve, but that was quickly overcome. It is evident that the designers of List Manager looked beyond the operation of the system and included some human engineering features which add to the ease of use of the program.

We did find that there are still some inconsistencies in the error handling of the program. On one occasion, when we had an almost full disk, the program allowed us to define a new file. After the definition was complete, we received the standard pre-allocation message stating that there was room for TWO records on the disk. Apparently this part of the program realized that a two-record file might not be useful, because the program would not allow us to allocate those two records, or even one record. Once we returned to DOS, cleaned up the diskette and returned, we were able to allocate our file without any trouble.

In general, we found that once the initial application was designed within the somewhat restrictive constraints of the program, actually developing it was easy. The design, however, was something which many of the non-professionals and some of the professionals could not manage without a significant investment in time.

Peachtree Software Inc
List & Label Manager

☐ Support

According to documentation, Peachtree Software provides "a free 30-day introductory support plan with the return of the registration card." They also offer an extended one-year plan which allows access to consultation, amendments and updates, a user newsletter and upgrades in software which may be purchased at any time within the first 30-day period. Phone calls for questions were answered without requiring us to supply any serial numbers or even the name of the vendor, but the support lines were apparently busy because waits of as long as several minutes for a specialist were encountered.

The requirement that the user pay for support on the product after the initial period seemed unreasonable to many users, and the consensus was that the service would not be worth the fee.

☐ System Interface

List Manager interfaces directly with PeachText, another Peachtree Software product for the purpose of providing variable data for form letters. It is also included as an integral part of the PeachText 5000 multi-function package. No other direct interface was mentioned and we tried none.

☐ Vendor Experience

Peachtree/MSA has considerable experience in both the corporate software and personal software area. The integration of List Manager with other products to form a combined product such as PeachText 5000 seems to be a step in making fully functional and separate programs operate in an integrated fashion to improve ease of use. This can be attributed to the MSA corporate influence, a factor which could result in further improvements in the products as the importance of personal computers in business environments continues to grow.

■ PRODUCT OVERVIEW

☐ Terms & Support

Terms • List Manager is available bundled in the PeachText 5000 package or as a standalone package from Peachtree Software, computer and software dealers, and mail-order firms throughout the United States and internationally.

Support • 30-day introductory support plan when registration card mailed in; extend 1-year plan provides consultant service, amendments, and a newsletter • telephone hot-line available.

☐ Component Summary

List Manager is a basic data base program for mailing list development and other simple applications, supplied on floppy diskettes which are required during program load. The product features enable it to function as a mailing list maintenance program, a simple key-file program, or similar applications where a large number of fields per record are not required.

List & Label Manager:

$250 lcns

LCNS: license fee.

☐ Computers & Operating Systems Supported

The List Manager package runs on the IBM PC and PC/XT, the Compaq personal computer, and other IBM-compatible systems using MS-DOS. It also runs on the Texas Instruments Professional, DEC Rainbow, and the Zenith Z-100. A CP/M version is available for Altos and Cromemco 8-bit systems in 8-inch and 5.25-inch format. The CP/M version requires 56K bytes of memory. A version for the Apple II+ is also provided.

☐ Minimum Operating Requirements

Minimum memory of 128K bytes is required together with 2 single-sided or double-sided diskettes. A hard disk is supported and either a color graphics or monochrome monitor.

☐ Features

Record Size Limitations • no more than fourteen fields may be defined for a record; the maximum field size is dependent upon the length of its name and the length of a line; generally it cannot exceed 60 characters; total length of all 14 fields cannot exceed 509 characters.

File Size Limitations • the maximum number of records possible for a file is a function of the media upon which it is to be stored and the size of a record; the system calculates the number of records which may be added to the media and displays it; the user must then pre-allocate the number of records wanted.

Field Size Limitations • the maximum allowed is a function of the length of the display line less the length of the field label; in practice, this means the limit is approximately 60.

Key Field Limitations • one primary and two cross indexes may be defined for each record; any item may be designated as a key.

Screen Format Definition • the product automatically generates an input/output screen for each record; users may not control the screen format directly.

Entry Edit Capabilities • a template record may be established with default values for each field; all fields are treated as alphanumeric for entry purposes; online editing is minimal.

Report Format Definition • reporting facilities include sorting on up to three fields in either ascending or descending sequence, but control break processing is not supported; one field may be reversed at the first comma (useful if last name, first name); selection is permitted via a menu-driven command formatter; it supports simple and compound conditions.

Sort/Merge Capabilities • sorting is possible on up to three fields; the "Combine Files" option of the main menu permits the merging of files.

Query/Selection Capabilities • a prompt-driven command generator is used to provide selectivity; the "wildcard" function is supported by the question mark.

Programming & Batch Processing Capabilities • none.

☐ Other Facilities

PeachText 5000 is a multifunction package sold by Peachtree Software. It includes List Manager, PeachCalc, PeachText, a Thesaurus, and Proofreader.

PeachText 5000:

$395 lcns

• END

Peachtree Software Inc PeachCalc
Spreadsheet Package

■ PROFILE

Function • electronic spreadsheet and mathematical analysis system.

Computers/Operating Systems Supported • IBM Personal Computer, PC/XT, IBM PC-compatible systems, TI Professional, Zenith Z-100, Eagle PC, Eagle 1600; requires PC-DOS 1.1 or 2.0, or MS-DOS equivalent; a CP/M-80 version is also available.

Configuration • 128K bytes of RAM, 2 diskette drives or 1 diskette drive and 1 hard disk, IBM monochrome display or color graphics adapter; printer port and printer normally required • the CP/M version requires 64K bytes of RAM and a single 8-inch diskette.

Current Version/Version Reviewed • 2.1/1.12 for the IBM PC.

First Delivery • March 1983.

Number of Installations • over 100,000.

Comparable Products • Lotus Development Lotus 1-2-3; VisiCorp VisiCalc; Microsoft Multiplan.

Optional Associated Software • PeachCalc included as part of PeachText 5000.

Price • $250 retail price for PeachCalc; $395 for PeachText 5000 which includes PeachCalc.

Vendor • Peachtree Software, Inc, an MSA Company, MSA Personal Computer Products; 3445 Peachtree Road N.E., 8th floor, Atlanta, GA 30326 • 404-239-3165.

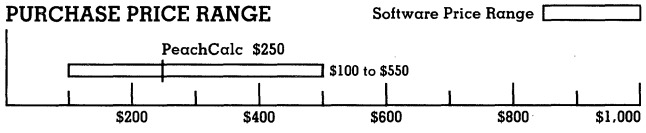
■ ANALYSIS

PeachCalc is Peachtree Software's entry into the field of electronic spreadsheets. PeachCalc possesses most of the features required for the production of business spreadsheet applications, such as forecasting, manpower assignments, and rate-of-return calculations. Although the product is structured much as other spreadsheet packages, PeachCalc is not as easily learned or as easily used as some other popular products.

Technically, a "relative" of SuperCalc, a long-standing entry in the CP/M spreadsheet market, PeachCalc is a mature product whose form and structure were defined based on the industry's acceptance of VisiCalc. The current form of the product is somewhat enhanced from the original design, based on user inputs and further product research.

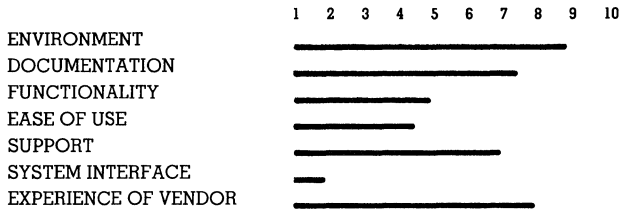
Users who find satisfactory the functionality of an early form of spreadsheet program such as VisiCalc will find that the addition of help functions make PeachCalc easier to learn and to use. Those users who desire additional functionality will have to seek it elsewhere.

PURCHASE PRICE RANGE



PEACHTREE PEACHCALC PRICING • open bar shows the typical range of prices for **SPREADSHEET** software used in a corporate environment • the vertical line within the bar graph indicates the price of **PEACHCALC**, the evaluated product, relative to the price range of similar products.

PRODUCT QUALITY RATINGS*



***For an explanation of rating criteria, please refer to the Spreadsheet Features section in the Software Evaluations (805) report.**

☐ Strengths

PeachCalc has a fully integrated Help function which provides the user with additional information about the operation which is being attempted. If the operator is about to enter a command and instead invokes the Help command by entering a question mark, the screen is cleared and a list of the valid commands with a one-line description is displayed. Upon completion of viewing the Help screen, the user is returned to the screen from which assistance was requested. Similarly, if the Help facility is invoked from within a command, the complete syntax for the command is explained.

The command structure within PeachCalc, although obscure at first, is generally based on the first letter of the command to be performed. Thus, the command "/B" is easily remembered as a way to Blank out something and "/X" is not too obscure as eXecute. The structure of the commands relates in many ways to the pioneer spreadsheet package, VisiCalc.

PeachCalc also has a very good tutorial manual which leads the users through twelve separate lessons of increasing complexity and permits the exercise of the basic commands of the system. The last three lessons give an abbreviated look at the sample business applications, including a projected balance sheet, a break-even analysis and an air-barrier engineering worksheet.

☐ Limitations

There are no significant functional enhancements in PeachCalc over products such as VisiCalc—it is still a "first generation" spreadsheet program. With many more powerful products on the market, it is difficult to justify the purchase of PeachCalc.

Peachtree Software Inc PeachCalc
Spreadsheet Package

PeachCalc does not support the naming of a cell, making the use of non-traditional spreadsheet structures such as invoices more difficult to enter by requiring constant backward references or written notices.

The fact that the command structure of PeachCalc resembles that of VisiCalc makes the divergencies all the more annoying. Most of the commands are compatible, but the formula structure is different, particularly in the use of predefined "functions" such as NPV (Net Present Value). This makes adapting to PeachCalc difficult for VisiCalc users.

■ HANDS-ON EVALUATION

PeachCalc has a physically small and generally unimpressive manual—a departure from the current trend to emulate the IBM book-in-a-box style. The documentation is spiral-bound, however, and stays flat where you put it. It also opens and closes easily, something not always true of the ring-bound material.

Installation of PeachCalc is easy, in large part because it is not copy-protected and thus can be put on diskettes with other programs, made bootable, etc. The package includes a program called PCONFIG which leads the user through a menu set to select system characteristics and printer options. You can reconfigure PeachCalc as many times as necessary as the configuration changes.

Experienced spreadsheet users, who had generally worked with VisiCalc, suffered the expected start-up rejection syndrome and tended to mutter unfavorable comparisons on the command structure while learning. Their problem was the fact that the structures of the products seemed linked in many ways, but diverged in unexpected ways and places. Errors were very common in the early stages. Inexperienced users, particularly those who followed the tutorial, accepted the product easily. The professionals who had previously used VisiCalc and were aware of some of its functional limitations were disappointed to find generally the same limitations in PeachCalc, but all reported that the basic use of the system was easily learned and that the features needed for their tasks were nearly always supported.

The primary positive reaction to PeachCalc was its Help functions; the VisiCalc crew loved the fact that you could get on-screen assistance. The primary negative comment was the lack of functionality of the product relative to new-generation spreadsheet programs.

☐ User Interface

PeachCalc uses a variable size rectangular arrangement of cells called a "worksheet" as the screen basis for its operation. Eighteen commands are provided which contain instructions to control the worksheet. The worksheet interface is generally easy to understand, but there are only minimal on-screen prompts for operator guidance.

Menus: None. The operator must remember the command functions or look them up, either in the reference manual or via the Help facility.

Control Characters: None.

Function/Special Keys: The slash key, "/," is used to signify the beginning of a command.

Command Language: Eighteen commands are provided for controlling the worksheet. Standard mathematical formulas are also supported.

Positive Feedback: The Zap command which allows the user to clear the entire worksheet including protected areas requires confirmation prior to its taking effect. With conflicting commands, however, generally the last one entered takes effect.

Status Display: The bottom three lines on the screen are used to display status, prompt, and entry lines. Included in the status line is information about the active cell including the direction of the worksheet cursor, its location, format, its protection, and contents.

Help Facilities: The question mark key provides access to the Help facility. On-screen help is useful as a command reference, but not extensive.

☐ Environment

PeachCalc runs on nearly all of the PC-compatible computers as well as on the IBM PC and IBM XT. We were unable to find any restrictions on the memory or disk requirements for the system. It ran properly on an IBM PC with two disk drives and 128K bytes of RAM. Disk swapping for single drive systems is supported and a default drive can be changed to any drive letter A through P.

The instructions recommend that you copy the DISTRIBUTION diskette to a working disk. Since the working diskette can be formatted to the highest capacity available on the system, DOS can be installed on the working diskettes to produce a bootable package to give to an operator. This whole task is handled by the configuration program, PCONFIG, provided with the system. The capability to copy the program disks, coupled with the flexibility provided by the commands to reset the default drive assignments, to swap disks, etc, makes PeachCalc very easy to structure to any set-up standards in use at the office.

☐ Documentation

The PeachCalc manual is divided into a tutorial and a reference section, which may be supplied as separate documents or in a combined manual depending on how the copy of PeachCalc was packaged. The tutorial is of very high quality, taking the user from the basics of setting up the session through the complex advanced functions and features of the product. The exercises are well-designed and accompanied by many screen illustrations. The tone of the tutorial is not excessively simplistic, so professionals were able to use it without finding it too basic. We found that those people who went through the entire tutorial were productive with the package TWICE AS FAST as those who did not, and required less support later.

The reference manual is exactly that—reference material. There is a "concepts" section at the start of the document

Peachtree Software Inc PeachCalc
Spreadsheet Package

which some users felt was helpful to read before starting the tutorial.

☐ Functionality

Most spreadsheet packages provide a columnar format for the editing and presentation of data. PeachCalc is no exception. It provides a maximum of 63 columns of 254 entries each; however, this is not attainable on the IBM PC or the PC/XT due to memory constraints. PeachCalc arranges its display in rectangular form starting with A1, that is the first entry of column A, as the upper left corner. The largest possible worksheet would have BK254 as its lower right corner. The user is cautioned to monitor the amount of memory space remaining. Running out of space is not a fatal error, but it will cause additional work in streamlining the worksheet before the user can proceed.

We tested using a 128K-byte RAM system which allowed 57K-byte RAM usable memory. This equates to over 5,700 cells each 10 bytes large. We started with a clean worksheet and copied a number into each column entry starting with A1. We ran out of memory after the W188th entry—no major problem since we were unable to project an application for a worksheet even that size.

PeachCalc provides the ability to move around the spreadsheet via the cursor control keys. It even remembers the last one pressed to allow the user to enter data into one cell and move automatically to the next. We found this to be helpful, but not overwhelmingly so; most packages will recognize a cursor movement command as the termination of data entry into a cell anyway. It further provides a "go to" command which will move the user directly to the cell in question and uses the "home" key to move to the upper left-hand corner of the spreadsheet which may not be in the current display window.

Either alphabetic or numeric data can be entered into a cell. Numbers may be up to 16 digits long and alphabetic data, including mathematical formulas, may be up to 116 characters long. The entry of text data causes the cursor to move to the next cell in the row when a cell is filled, up to the limit of field sizes.

PeachCalc supports most numeric functions including addition, subtraction, multiplication, division, raising to a power, absolute value, arithmetic mean, exponentation, logarithms, integer conversion and trigonometric functions. Also supported are conditional tests including lookups, maximum and minimum, and the "AND" and "OR" conjunctions. The calculation algorithm seems to be complete and correct. We tested the equation F = sqrt (f*f) and got f as an answer. This would indicate that the multiplication routine and the square root routines are both using the same algorithms. (In some cases, the above calculation would yield almost the right answer but not quite, like 1.99999 instead of 2.00000.) We did not, however, make an extensive test of every possible combination of functions.

The functions of PeachCalc were a disappointment. The invocation of a function such as the logical "and" is done via the function keyword "AND." The use of a leading "@," required in VisiCalc, is NOT supported in PeachCalc. Since the packages are very much alike in other ways, this difference caused many former VisiCalc users significant learning problems and was generally rated as unacceptable. One user said, "If you are going to be compatible, BE COMPATIBLE."

Individual cells must be referred to by their column-row designation. It is not possible to name a given cell for use in later calculations, requiring some paper recordkeeping to keep track of odd cell locations. While this paper backup was an acceptable solution to many, some users felt that it was as much work as doing the entire job on the note form. Two additional features address this problem directly. First, the "/T" Title command prevents the designated row, column or both from scrolling. This also prevents the scrolling of all of the cells above and to the left respectively. Second, the "/W" Window command allows the user to display two different sections of the same worksheet simultaneously. The display window on the spreadsheet may be split either vertically or horizontally. Neither of these features was considered an acceptable solution by the users of the product.

The spreadsheet may be saved in part or in total. Multiple spreadsheets may be loaded; however, they will overlay unprotected cells.

The user is also able to create a file of commands which will be interpreted one character at a time by PeachCalc. Therefore, it is possible for the technical and/or professional user to set up special PeachCalc command files which will allow secretarial personnel to maintain a sophisticated spreadsheet without knowing its intricacies. Such an application should be approached with caution because of the relatively primitive error checking capabilities of the language. We successfully destroyed several spreadsheets with runaway command files.

☐ Ease of Use

The makers of PeachCalc have attempted to create a product which is complete and easy-to-use and have generally succeeded. They have chosen to provide a relationship between the actual keys used to invoke the command and its purpose. This is a great advantage to the casual or initial user and it is certainly not a hindrance to anyone.

PeachCalc attempts to anticipate the wishes of the user whenever practical. If the user has determined a direction by using one of the cursor positioning keys, PeachCalc will continue in the same direction upon data entry. This allows the user to enter columnar data vertically without continually repositioning the cursor. It also means, however, that the user must set the direction of the cursor prior to entering or revising the data, but it seems like a small price to pay.

Commands may be entered with all options at one time, or the unsure user may enter part of the command and be prompted for the options. We found this feature to be very helpful in learning the command syntax, and it also will allow each user assistance in learning at their own pace.

Perhaps the most significant factor in assisting the user through an application in PeachCalc is the functionality of

Peachtree Software Inc PeachCalc
Spreadsheet Package

the Help features. The user may request assistance by entering the "?" key. Depending upon where the user is within the man/machine dialog, an appropriate piece of information is displayed. If the user is about to enter a command, the list of commands with a brief description is displayed; if the user has already entered a command, the options for the command are displayed. This feature goes a long way in offsetting the lack of a comprehensive index in the manual.

We found that the entering of commands in a separate file for controlling an operation on the worksheet worked well. However, it required a lot of careful analysis to prevent problems during use. One thing we learned to avoid was commands which MIGHT be invoked at the wrong time. A "clear spreadsheet" command was a good example. We learned to use PeachCalc, the Peachtree word processor, to enter the data. A command file can be a great help in setting up standard areas of a form, and in proper hands it could be a significant productivity tool.

☐ Support

PeachCalc has a 90-day support warranty. An extension of the support package is offered for the entire PeachText 5000 package for an additional $96 annually; support for PeachCalc alone is $75. Our users felt that the investment would not be justified.

The Technical Support Center has an 800 number, but it is not included with the documentation, nor is it available through the 800 information operator. We called the number included in the documentation. Our name and number were taken by the switchboard operator who informed us that a technician would return our call. Our question concerned the manner in which a graphics package could capture the PeachCalc data. We were told that PeachCalc stores its data in its own format. They assured us, however, that they did have a graphics package called Business Graphics which they produced that would process PeachCalc data. We also found out that the 800 number is given out to purchasers of the additional support package. Several of our users called for support, and the "how-to" questions were generally handled well. Application questions were less successful. One of our professionals had a question on applying a command file to a problem, and, after ten minutes of courteous but unhelpful comments from Georgia, remarked, "I wonder if they use this thing down there?" In defense of the support specialists involved, however, we were never able to work out the application ourselves either.

☐ System Interface

PeachCalc is included as a part of the PeachText 5000 package as a selection in the main menu along with their spelling/proofreader and list manager. Command files for PeachCalc can be created using PeachText or another word processor or by PeachCalc itself. We asked about graphic support in addition to the relatively primitive selections offered within the body of the product, but as of yet have received no concrete information.

Interfacing with other products is one of the major failings of PeachCalc. They do not support the DIF file format which has become a kind of spreadsheet standard, so you cannot import or export files to other spreadsheet packages.

☐ Vendor Experience

PeachCalc has been in the field for some time, and Peachtree Software and MSA together are certainly credible microcomputer software suppliers. MSA appears to be working to integrate its microcomputer software into groups of packages which serve a common business need; the resulting collections are often quite powerful.

■ PRODUCT OVERVIEW

☐ Terms & Support

Terms • PeachCalc is available on a license for purchase only, from the Peachtree Software Inc company of Management Science America, through computer dealers, software dealers, or mail order throughout the U.S. and internationally; PeachCalc is also bundled with other Peachtree Software programs including PeachText 5000.

Support • 90-day warranty; support for PeachCalc is $75; support for PeachText 5000 which includes PeachCalc is $96 • 800 telephone number is provided to users who purchase support for the PeachText package.

☐ Component Summary

Software elements include PeachCalc and PCONFIG. PeachCalc is a spreadsheet and mathematical analysis program supplied on a single-sided disk, transferable to hard disk or to another floppy disk without copy protection. The PCONFIG program is used to configure PeachCalc for the specific PC environment.

PeachCalc & PCONFIG:

$250 lcns

☐ Computers & Operating Systems Supported

PeachCalc runs on the IBM PC, PC/XT, and the PBM PC-compatible systems. It also supports the TI Professional, Zenith Z-100, Eagle PC, and Eagle 1600. The package requires PC-DOS 1.1 or 2.0 or MS-DOS equivalent. A CP/M-80 version is also available for the package.

☐ Minimum Operating Requirements

PeachCalc requires 128K bytes of RAM, 2 diskette drives or 1 diskette drive and 1 hard disk. It also uses an IBM monochrome display or color graphics adapter. A printer port and printer are required for normal operation. The CP/M version requires 64K bytes of RAM and a single 8-inch diskette.

☐ Features

Spreadsheet Size • PeachCalc contains columns from A through Z, AA through AZ and BA through BK; rows number 1 through 254; a maximum of 16,002 cells may be used to maximum memory size.

Command Type • single character commands, generally preceeded by a slash (/); command format is very similar to that of VisiCalc.

Financial Functions • NPV (net present value) supported; the program is not rich in functions.

Statistical Functions • MIN, MAX, and AVERAGE are supported in addition to the standard arithmetic operators and trigonometric functions.

LCNS: license fee.

Peachtree Software Inc PeachCalc
Spreadsheet Package

Cell Reference • cell names are not supported; however, a cell may be addressed by its grid (column and row, e.g. A1) reference; ranges are supported.

Window Capabilities • window scrolls in any direction; columns or rows can be locked in place even if the rest of the window is scrolled; window splits in two parts, either horizontally or vertically, and one or both windows can be scrolled at a time.

Range Facilities • commands such as Format (/F) control integers, exponential, general and dollar amounts; global (/G) commands set worksheet options; move (/M) commands move columns or rows; ranges are described by specifying the two end cells separated by a colon.

Print Facilities • ouput command (/O) writes part or all of the worksheet to printer, terminal, or disk file.

Load/Save Facilities • load command (/L) loads part or all of a worksheet at a specified location; only protected blocks are not overlaid; save command (/S) offers options to save all contents on worksheet or values only; user is queried prior to overlaying a file; the worksheet is unchanged by the save operation.

☐ Other Facilities

PeachText 5000 is a multifunction package provided by Peachtree. It includes PeachCalc and Peachtree's List Manager.

PeachText 5000:

$395 lcns

• **END**

Peachtree Software PeachText
Word Processing Package

■ PROFILE

Function • word processing, report production, document development, source program entry.

Computers/Operating Systems Supported • IBM Personal Computer; PC/XT; IBM PC-compatible systems; TI Professional; Zenith Z-100; Zenith Z-100; Eagle PC; Eagle 1600 • requires PC-DOS 1.1 or 2.0, or MS-DOS equivalent; CP/M-80 version also available.

Configuration • 128K byte RAM, 2 diskette drives or 1 diskette drive and 1 hard disk, IBM monochrome display or color graphics adapter; printer port and printer normally required • CP/M version requires 64K bytes of RAM and single 8-inch diskette drive.

Current Version/Version Reviewed • Version 2.01/not indicated on diskette.

First Delivery • January 1980.

Number of Installations • 100,000 plus.

Comparable Products • MicroPro WordStar, IBM Easywriter.

Optional Associated Software • none.

Price • $250 retail for PeachText; $395 for PeachText 5000.

Vendor • Peachtree Software, Inc, an MSA Company, MSA Personal Computer Products; 3445 Peachtree Road, NE, 8th floor, Atlanta, GA 30326 • 404-239-3000.

■ ANALYSIS

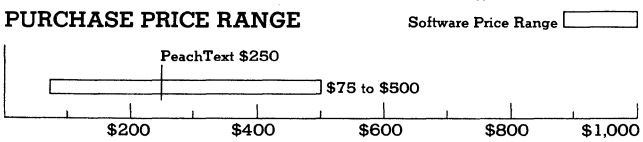
PeachText is an integrated package containing both a thesaurus and a spelling proofreader program in addition to the word processing module. The PeachText package can be further integrated with other Peachtree products, including a spreadsheet program and a database manager. More functionally complex than many word processors, PeachText possesses most of the features required for production document development and maintenance.

As a word processor, PeachText is not as new a product as many would think. The product was first marketed as "Magic Wand" for CP/M computers, and later sold to Peachtree Software, which in turn was bought by MSA.

The integration of PeachText with other Peachtree products produces a "package" which possesses considerably more functionality than most integrated systems, making the combination nearly as powerful as separately purchased software products, but providing menu selection of major system functions and integration of printed output.

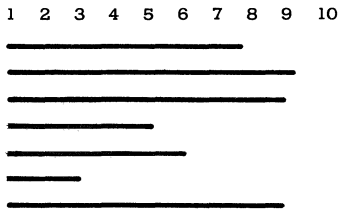
Although the first impression of PeachText is one of complexity, business users should be able to learn the capabilities of the software with practice and reference to the tutorial and manuals, and the functions available should meet all but the most stringent corporate word processing needs.

PURCHASE PRICE RANGE



PEACHTREE PEACHTEXT PRICING • open bar shows the typical range of prices for **WORD PROCESSING** software used in a corporate environment • the vertical line within the bar graph indicates the price of **PEACHTEXT**, the evaluated product, relative to the price range of similar products.

PRODUCT QUALITY RATINGS*



*For an explanation of rating criteria, please refer to the Word Processor Features section in the Software Evaluations (805) report.

☐ Strengths

PeachText has a wide variety of editing and text processing commands, making its scope considerably wider than simple word processing packages. Its integrated thesaurus (supplied by Random House) and spelling checker made it a good choice for general text development, though the vocabularly lacks technical depth.

The documentation, tutorial, and online help facility make the large command universe at least somewhat user-friendly, and "professional users" who work with the package frequently have no problem learning to manipulate all the features.

☐ Limitations

This is a complex word processor. Users of less sophisticated word processors will find PeachText intimidating in its command structure, and there is some lack of cohesive design in the way in which commands are implemented. Some commands will display a menu screen which displaces the text display, causing a loss of operator continuity.

The commands are mechanized at three different levels; some use the appropriate PC key (delete, for example), others use a function key or shifted function key, and still others require use of an ESCAPE and command-line input. This tends to confuse occasional users of the package, and makes remembering commands more difficult. All users, even frequent users, will be challenged to remember the full command set.

■ HANDS-ON EVALUATION

A first look at PeachText, as a part of the PeachText 5000 package which includes PeachCalc, a list manager, Thesaurus, and Spelling Proofreader, caused the system specialist's heart to sink at the sight of so many disks. There are 6 diskettes included, and the prospect of building a system

Peachtree Software PeachText
Word Processing Package

from them promised at least several hours of work. Happily, that proved not to be the case. First, the disks are not copy protected. Users can combine several programs onto a single disk, make the disks bootable, and in general perform the management tasks that businesses with serious interest in PC software will have to do to establish a proper environment.

Installing the package on hard disk is so easy; an appendix in the excellent manual describes the procedure. A configuration (PCONFIG) program provides menu-driven setup of the package for the type of computer and printer available, and the configuration can be reset as required. Different operators with different needs can have their own copies of the program with their own setup, but the program license is for a single computer.

Clerical and technical/professional users were at first cowed by the large number of commands, but all reported that the basic use of the system was easily learned and that the features needed for their tasks were nearly always supported. There was, however, a considerable learning curve for all classes of users.

☐ User Interface

PeachText uses a primary menu to select the major function to be performed and uses control characters, function keys, and character strings to activate individual commands. The product is somewhat complex in structure, and many of the formatting options prove difficult to learn and remember. Screen editing, however, is reasonably easy.

Menus: The main menu contains 8 document commands, 2 disk access commands and 4 special commands which interface the other packages (including Telecommunications, which is sold separately).

Control characters: The control key is used in combination with both conventional alphanumeric keys and with special keys such as ENTER/RETURN. Generally, these function only in data entry mode and are used for such actions as moving to the beginning or end of a document or inserting a "hard" line feed.

Function/special keys: Function keys facilitate movement through text and activate certain complex operations. F2, for example, causes the page to scroll forward while F6 activates the Search/Replace function. There is no function key template.

Command language: Commands may be "stacked" internally or externally which becomes a very primitive control language. Dollar, string, numeric, and system variables are supported. Text formatting commands include conditional statements, making an unusual degree of text control possible.

Positive feedback: In general, positive reinforcement is given for correct actions and potentially destructive commands require confirmation. Correct actions are signalled by menu changes, the appearance of additional prompts, or insertions of characters in text.

Status display: The status screen displays the file currently being worked on, the line width, and the numeric indicators or tab markers.

Help facilities: Keying "?" in response to the main menu prompt allows the user to view several HELP screens. Pressing the Return key will return to the main menu.

☐ Environment

PeachText runs on nearly all PC-compatible computers, as well as on the IBM PC and PC/XT. We were unable to find any restrictions on the memory or disk requirements for the system; it ran properly on a PC with two disks and 128K bytes of RAM. Disk swapping for single-drive systems is supported, and the default drive can be changed to any number A through P, making the package compatible with most of the add-on disks and networked systems.

Not only is PeachText not copy protected, the supplier makes the sensible suggestion that the user copy the distribution diskettes onto working diskettes before use. Since the working diskette can be formatted to the highest capacity available on the system, DOS can generally be installed on the working diskettes. This whole task is handled by a configuration program called PCONFIG. This ability to copy the program disks, coupled with the flexibility provided by the commands to reset the default drive assignment and swap disks, makes PeachText very easy to structure for office use, regardless of the specific configuration.

☐ Documentation

PeachText gives the user a detailed, easy-to-use tutorial manual, and some versions of the PeachText 5000 package include "ATI Training Power," a general tutorial on the integrated package. One of the 6 diskettes supplied already contains files supporting lessons for each section—you request the file and the lesson appears on the screen. This pre-defined set of examples makes it possible to provide instructions on the full scope of the product, and that is what the tutorial does. The lessons are quite detailed, and show even the menu structures of the commands being taught. The ATI Training Power lessons are complete and comprehensive, but lack screen illustrations in the document.

The reference manual is organized by command, and each command description provides the purpose of the command, the way in which it is invoked and used, and the prompt structure associated with using it. The commands are printed in bold green type in the rightmost margin, thus they jump out at the user when the manual is opened.

A reference guide is provided, an 11-page fold-up which the vendor light-heartedly calls a "card," and a "quick start" set of instructions is also given for users who know what they want to do but just don't remember how to get started. We found that the quick start guide was quite popular for setting up a new document because it gave examples of the initial setup, including tabs, margins, etc.

The only negative point in the documentation is the lack of a comprehensive index of functions and commands, in alphabetical order. Users who didn't know whether they wanted a "creating and editing" or a "formatting and printing" feature had to check both places. This tended to be a problem at first, but gradually became unimportant as familiarity increased.

Peachtree Software PeachText
Word Processing Package

☐ Functionality

The full-screen editing features of PeachText are quite good, and the initial user reactions to it were favorable. All of the basic text entry functions are mechanized through the appropriate special key on the PC. Words are wrapped as they are keyed, and cursor movement works as expected. Those working on formatted documents, complained of the lack of a tab ruler or page indicator. Indents also fail to display as they will be printed, although they do print correctly. These few departures from the "what you see is what you get" caused concern when they were detected, and that concern did not abate until the package was used enough to build confidences.

Some functions, like the global search and replace, contained an interesting enhancement which permitted the users to specify the number of times the function was to execute. This was only occasionally useful, but found some favor with users who wanted to change something but expected only a few occurrences. If the limit feature was used, it tended to prevent a slight miskeying from altering the entire document.

The package supports three different modes, TEXT, PROGRAM, and SPECIAL. In TEXT mode, PeachText operates as a full feature word processor. In PROGRAM mode, it can be used for program source entry. SPECIAL mode can be used to individually control features like wordwrap, blank packing, or visible carriage return. The edit mode is set automatically based on the file's extension. This meant that any file with a classical program source extension such as .BAS, .ASM, .COB, etc, was automatically assumed to be PROGRAM mode. This will cause a few surprises in a business which does not program, but the enforcement of system conventions on file naming is probably a good idea in any case.

PeachText also supports "variables," fields which can be replaced at print/merge time for the creation of form letters, and other repetitive documents. String variables allow text substitution, numeric and dollar variables allow numbers to be substituted with special editing and formatting rules, and system variables allow detail control of the form being printed through reference to page number, line number, lines remaining on page, record number, and column number. Variables can be tested with conditionals, so a primitive form of programming can be used in the creation of pages. One user was able to build a very complex form letter and fill it properly from a list file, even though the document included lists of accounts which might run to several pages for some letters. The letter printed with proper structure and pagination regardless of the number of detail accounts. The conditional/variable combination is a very powerful tool for the sophisticated user.

Print support is generally via imbedded print format commands, of which there are many. Pagination, indentation, column tabbing, and other format capabilities may be combined with variables and conditionals to control formatting. Footnotes can be handled almost automatically if proper variable/conditional structure is used. All popular printers are supported, and provision is made to send control strings directly to the printer for special setup. This allowed the switching of a matrix printer into emphasized mode, or to use condensed print for "tight" documents. The special characters are not counted in line formatting.

With the conditional and variable support of PeachText, it is nearly a program language, and a few technical specialists had to be restrained from spending too much time testing the boundaries of its capabilities. Even with specific efforts to find tasks which could not be supported, we could not find a business document sample that PeachText could not produce.

☐ Ease of Use

To say that PeachText is difficult to use is accurate, but the majority of that difficulty is associated with its sophisticated structure and not attributed to poor design. The vendor has obviously tried to make the command structures as simple as possible and to make the command names easily understood.

Screen editing is generally very easy, but the lack of a tab ruler and page indicator was noticed by every user. The fact that most of the display functions track the final form of the document made the cases where it did not all the more obvious, and there were a few. Indents are not shown on the screen, and imbedded print commands, if used, may alter the appearance of the document at print time.

Commands which required the ESCAPE key generally used a short command line on the text display. While these commands were named in a user-friendly way, they were more complex than the basic edit commands. We found that only about 4 or 5 commands of this type were used in the production of simple correspondence, but document production benefited from nearly a dozen. There is no keyboard overlay, so users tended to keep the reference card opened to these.

Major revisions to a report introduced a problem with the mechanism of the "block" functions. The typist found that the selection of a block function caused the text screen to be replaced by an "edit status screen." The function was thus essentially executed "blind"; without being able to see the text while it was happening. This seemed to result in an almost irrepressible urge to peek behind the menu to see what was happening, and slowed block operations considerably.

Printing commands were complex enough that we defined standard forms for as many documents as possible and included the printer commands in the forms. This proved to be a good idea, and it gave documents a consistent structure. The print formatting, including variables and conditions, was the most difficult thing about PeachText to learn, and only about half the users felt comfortable with it.

The use of the Thesaurus and Spelling Proofreader met with mixed results. While the Thesaurus worked, and did provide some useful synonyms, most users found that the disk changing involved in loading it made using a book version of the thesaurus easier. The Spelling Proofreader provides only a small dictionary (27,000 words) but can be user upgraded with new words. Since it only locates possible misspellings and does not automatically correct them, most users were disappointed and tended not to use it. This "it's not worth it" attitude is magnified by the fact that initial use of the checker will involve the entry of a lot of words

Peachtree Software PeachText
Word Processing Package

into the dictionary until the normal vocabulary of the business is represented.

☐ Support

PeachText support seems to try to emulate the support provided by large software vendors—MSA is after all the largest. You are provided 90 days of free support from Peachtree directly, and offered a one-year support plan which includes a user newsletter, update service, and support from the Technical Support Center. The dealer is considered the primary support contact in all cases.

The support extension is $96 per year for the entire PeachText 5000 package or $75 for the word processor alone. Microcomputer user reaction to the plan was a cry of dismay and surprise, but a data center manager commented "What do you expect? You always pay for software support and maintenance."

The Technical Support Center has an 800 number, but it is not included with the documentation. We called the support center with a question on the use of the underscore with an Okidata printer (which will not backspace to overstrike). Our number was taken, and we were called back within an hour. We explained that we could not use their standard underscore with our printer, and remarked that other packages, such as WordStar, did support underscore on the Okidata. The specialist explained that PeachText treated underscore as a function for "specialty printers," meaning word processing printers, and that any support of it on printers such as the Okidata was through the ability to send special strings to the printer. Since that will not solve the problem of underscore with the Okidata, we thanked the specialist and hung up. We were not asked for a serial number or if we had registered the package.

☐ System Interface

The mode capabilities of PeachText give it the ability to process many types of ASCII data files, and we had some success creating test files with PeachText in SPECIAL mode which could be communicated to other computer systems and formatted for use.

The Program Mode files of PeachText are compatible with the line editors and screen editors of all the minicomputers tested, but word processing formats are less compatible. There is no specific information provided on the exchange of information with other computer systems.

The main function menu of PeachText provides a choice for "Telecommunications," but that option is not implemented in the current version of the software. We were told that a communication package would be added to the package shortly, but were unable to get specific details on the features it would provide.

☐ Vendor Experience

PeachText has been in the field for some time, and Peachtree Software and MSA together are certainly credible microcomputer software suppliers. MSA appears to be working to integrate its microcomputer software into groups of packages which serve a common business need, and the resulting collections are often quite powerful. There is also a trend toward the integration of microcomputer software with mainframe systems, a trend which is certain to benefit corporate users.

LCNS: license fee.

■ PRODUCT OVERVIEW

☐ Terms & Support

Terms • PeachText is available on a license for purchase only, from the Peachtree Software Inc company of Management Science America, through computer dealers, software dealers, or mail order throughout the U.S. and internationally • PeachText is also bundled with other Peachtree software in several integrated packages, including PeachText 5000.

Support • 800 telephone number provided for technical support; 90-day free support provided from PeachTree; extra-cost support plan offers a newsletter, update service, and technical support.

☐ Component Summary

PeachText is a word processor and text editor program, supplied on single-sided disk, transferrable to hard disk or to other diskette without copy protection. Random House Electronic Thesaurus is a program which operates in conjunction with the PeachText word processor and includes a synonym dictionary. Spelling Proofreader is a program to check spelling, which operates with a 27,000 word dictionary and provides spelling checking and word dictionary maintenance. Corrections of misspelled words must be made manual. PCONFIG is a program to configure PeachText for the specific PC environment.

PeachText:

$250 lcns

☐ Computers & Operating Systems Supported

IBM PC and PC/XT as well as IBM PC-compatible systems, TI Professional, Zenith Z-100, Eagle PC, and Eagle 1600 computers. It runs under PC-DOS 1.1 or 2.0 or MS-DOS equivalent. A version is also available for CP/M-80.

☐ Minimum Operating Requirements

Software requires 128K bytes of RAM, 2 diskette drives or a single diskette drive and hard disk, a monochrome display or color graphics adapter, and a printer port with printer. The CP/M version requires 64K bytes of RAM and a single 8-inch diskette drive.

☐ Features

Display Type • full print image display, but some imbedded formatting commands will alter the appearance of printed text without affecting the display.

Display Feature Utilization • the product makes no general use of special display attributes.

Command Structure • product uses menus to select primary functions, control character sequences to provide some movement within the document, function keys to perform selected operations, and imbedded command character sequences within the text for most formatting.

Error Recovery • backup document automatically created; there are no "undelete" provisions.

Block Operations • block may be moved, copied or deleted; block markers are defined to set block boundaries before a block operation may be invoked.

Merge/Print Functions • merge file and library functions are available; an extensive set of imbedded functions controls print formatting, making file merging exceptionally powerful; the companion product List Manager can be used to create merge files.

Spelling Check/Aid Support • Spelling Proofreader checks a document for spelling and allows for expansion and creation of dictionary; Random House Electronic Thesaurus provides synonyms.

Multiple Window/Multiple Document Support • none.

• END

Pearlsoft Personal Pearl
Database Filing/Reporting Package

■ PROFILE

Function • provides the means for a non-DP person to enter data, massage the data, and produce reports for mailing lists, inventory control, appointment scheduling, client costing, and other systems requiring multiple related files of data via a relational database system.

Computers/Operating Systems Supported • IBM PC 1 or PC/XT with PC-DOS; PC-compatible systems with MS-DOS such as Compaq and Eagle; DEC Rainbow; Kaypro; Apple III with CP/M card.

Configuration • for 8-bit machines, 52K bytes of memory is required with CP/M Version 2.0 or later; for 16-bit machines, 128K bytes of available memory with CP/M-86, PC-DOS, or MS-DOS are supported; multiple floppy drives are required or a hard disk; a monochrome display with either bold or reverse highlight or a color monitor is supported.

Current Version/Version Reviewed • Version 1.92 for 16-bit machines/Version 1.92 PC for the IBM PC.

Number of Installations • approximately 85,000.

Comparable Products • Ashton-Tate dBase II, Software Publishing pfs:Write and pfs:Report.

Price • $295 retail price.

Vendor • Pearlsoft, Division of Relational Systems International; P.O. Box 13850, Salem, OR 97309 • 503-682-3636.

Canada • Distributor: Citation Software; 1901 Logan Avenue, Winnipeg, MB R2R 0H6 • 204-632-0559.

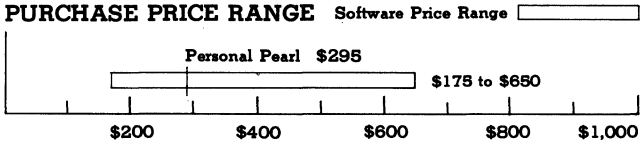
■ ANALYSIS

Personal Pearl is an information management system combining a relational database system with a simple process for designing forms and reports. It expects its users to be people with PCs and business-type applications. The user does not have to have a strong DP understanding to use and operate the functions of the system. However, if the user expects to understand the internals of the system, a strong background is definitely required.

The documentation is very thorough and complete. The package also includes a Welcome program, a simple tutorial, and an advanced tutorial (both accompanied by documentation) so that the user is led through some simple operations and then more advanced features. By the end of the tutorials, the user has had sufficient hands-on experiences to comfortably design a few simple data entry and report forms personally.

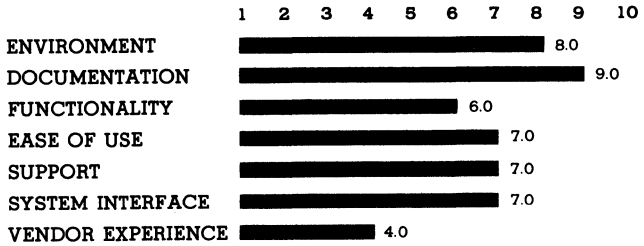
Although Personal Pearl is easy to use and is quite a complex relational database system used on a PC, the applications using it will have to be rather straightforward data entry, with a minimum of data processing, and employing a multitude of printer reports. Ideal applications are mailing labels, inventory control, appointment scheduling, and other applications requiring data from multiple files, and/or multiple sorts. Businesses requiring process-oriented file maintenance, data entry, or reporting will find the programming features of Personal Pearl insufficient for all but the most basic applications.

PURCHASE PRICE RANGE Software Price Range



PEARLSOFT PERSONAL PEARL PRICING • open bar shows the typical range of prices for **DATA MANAGEMENT** software used in a corporate environment • the vertical line within the bar graph indicates the price of **Personal Pearl**, the evaluated product, relative to the price range of similar products.

PRODUCT QUALITY RATINGS*



*For an explanation of rating criteria, please refer to the Data Management Features section in the Software Evaluations (805) report. The Overall Package Average is 6.9.

☐ Strengths

Personal Pearl's strongest feature is its documentation. The book that accompanies the 5 diskettes is several hundred pages long, but is very well organized. It is easy to use, comprehensive, and designed to lead a novice through the acquisition of feature skills, until a level of confidence is achieved.

Personal Pearl is easy to use and offers a great deal of flexibility in the production of reports. Once the data is entered, the user may design a plethora of reports very easily—even reports requiring data from multiple data files.

Another strong point with the package is its ability to produce files for other systems such as word processing systems, SuperCalc, or BASIC programs. This allows the user to utilize Personal Pearl for data entry and data organizing and then permit the other systems to take over to perform the data processing tasks.

☐ Limitations

The chief limitations of the package are its processing limitations. The system is designed to enter data and print data—not process data. There is no practical way to perform calculations or operations based on certain data

Pearlsoft Personal Pearl
Database Filing/Reporting Package

characteristics. The only available processing is the selection of detail lines based on a field's value falling within a specified range. One level of subtotals may be accumulated, but only on a field which is defined as a primary sort field for a print report.

The second limitation, interfacing with other systems, accents the previous processing limitation and, to some degree, diminishes one of the strengths of Personal Pearl—report generation. Because of Pearl's limitations in its ability to perform data processing, it needs to be able to take output from BASIC programs, or other systems, and be able to produce reports from these outputs. By not being able to accept files from other systems, Personal Pearl limits the applications for which it can be used effectively. This, in turn, reduces its usefulness as a report generator, its most valuable and flexible function.

■ HANDS-ON EVALUATION

By the time we actually began using Personal Pearl, we found it very easy to design data entry forms and printer reports. But that was after having read the entire documentation manual.

By the time you have read the documentation (about six hours), gone through the Welcome program (one-half hour), the Easy Tutorial (one and a half hours), and the Advanced Tutorial (two and a half hours), you should feel very comfortable with the system and well prepared to start designing your own applications. The concepts are well presented and clear. Actual use of the screens tends to be rather cumbersome. Most screens include 10 to 15 special functions which are performed by Control keys. These functions are not displayed in either an alphabetical order or a logical order. There were times when we knew what function we wanted to perform, but we had to peruse the entire selection of 15 function descriptions to find out what key we needed to enter.

System responses to Control keys, entering field descriptions, and entering data were rather fast. However, once a data entry form or a report form was to be installed, (that is, when internal files and pointers are generated), response time was very long—even for simple files with few or no relational pointers to other files. This is time consuming because of all the auxiliary files needed for a relational database system, but the user will probably want to be prepared to take a break during the installation phase.

Entry of data into forms defined by others was a task suited to every level of personnel who tried the product, but the creation of the forms was intimidating to many in the organization. The sheer size of the document generated a predisposition that the product was complex, and it took considerable time to dispel that attitude. Some of the staff never became comfortable with the product in generation mode, even though the consensus of the organization was that the product was actually not significantly more complex than many simple database programs.

□ User Interface

Personal Pearl uses a menu-driven interface where functions within each entry area defined by the menus are implemented by control character sequences. There are many different functions, and the explanations of the currently valid keys are normally displayed, making the entry form unnecessarily cluttered. The interface, while requiring some user adjustments, is satisfactory.

Menus: Several layers of menus are used by the user to arrive at the function to be performed. The menus are generally uncluttered and require a single-character selection, the entry being the numeric value associated with the option.

Control Characters: Control characters are used during the entry of forms for data entry, the definition of reports, and the data entry process itself. The control sequences implement such functions as character delete and cursor movement. On the IBM PC, most control functions are also implemented via a function or special key.

Function/Special Keys: Each main operation has its own set of function keys. Their description is presented at the bottom of the screen so that the user can be apprised of their operation. There is little consistency of function between the various areas of the program (form definition, data entry, etc), so the function key assignment is not consistent, making this on-screen key necessary.

Command Language: None.

Positive Feedback: Cursor movement and changes in prompt will accompany the acceptance of data. In the form or report development area, there is considerable online editing of information, and errors are detected and reported immediately. Editing during data entry is limited.

Status Display: The bottom line of the display is active in most modes as a status line. This shows the page, line, and column positions of the cursor and the name of the field in which the cursor is located. If special actions such as saving a form are in progress, a message to that effect is displayed in the lower right of the screen.

Help Facilities: A very good set of Help commands from anywhere in the program is provided. Help is actuated by using one of the function keys. The text of the Help messages is also provided in the reference manual, making it possible to relate the two sources of information.

□ Environment

The environment for Personal Pearl is rather limited. It requires 2 floppy drives or at least one fixed disk. It is distributed on 5 diskettes, which means you are constantly changing the program disk on drive A. Since all program units that share data must reside on the same program disk, size of applications becomes critical. Also, because of the auxiliary files associated with a relational database, files tend to take up more disk space than on regular systems. On 8-bit machines, program memory requirements are 52K bytes, aside from memory reserved for CP/M. On 16-bit machines, the package runs in 128K bytes of available memory.

The hard disk installation process with Personal Pearl is unusually flexible. A system file provides the default drive addresses for each of the 5 basic sections of the product.

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Database Filing/Reporting Package

By editing that file, a user can select the volume assignments, making it possible to configure Personal Pearl to both the standard PC/XT hard disk configuration and to other add-on hard disks as well.

An 80-column monitor is required for Personal Pearl. It can be either color or monochrome; monochrome monitors can have either bold or reverse image to indicate highlights. Although printer reports are formatted from the screen, it is possible to design forms of up to 159 characters across (2 lines of the screen) per print line. The system is also very flexible in allowing print reports to go to the console or a disk file. This option can be changed at runtime so it can be selected every time the report is run.

☐ Documentation

The documentation of Personal Pearl is superb. It is exhaustive (over 400 pages), yet clearly written and very well organized. The manual includes helpful little things often omitted in some documentation, such as character set order for sort sequences, special shortcuts when using a CP/M system, a complete set of menus and their descriptions, a complete listing of all the Help responses, and a thorough screen-by-screen set of pictures.

There are 2 different tutorials. The Easy Tutorial section leads the user through the program giving a few simple examples of designing forms, designing reports, entering data, and producing reports. The Advanced Tutorial goes into some of the more sophisticated options available with these functions (such as sorting and selective printing). The tutorials may be best appreciated after at least a quick browsing of the rest of the documentation.

For those in our staff who did that, using the Welcome program, the Easy Tutorial, and Advanced Tutorial became a review of what had already been read and learned. We would recommend this procedure for all users because the tutorials assume that there are no foul-ups. In some of the exercises, you are expected to fill up an entire screen with formats, and by that time you undoubtedly will make some type of typographical mistake. If you are strictly following the tutorial, you won't know how to correct those mistakes. But if you read the manual completely first, those mistakes can be easily remedied and you can continue with the Tutorials.

The Reference Manual is an exhaustive collection of descriptions of all options available on each and every menu, system file maintenance operations, entire set of system messages and codes, and the disk organization. Those people in our lab who learn best by using a system via hands-on training appreciated the 2 Tutorials. Those in the lab who learn by understanding the whole system and then how the component functions interrelate preferred the Reference Manual. The documentation is well-suited for both types of individuals.

Included with the documentation book was a Personal Pearl Reference Card detailing the system's main programs and Control key commands for designing forms and reports. It also details Control key commands for entering data and producing reports, and formatting data areas and computations, as well as file maintenance programs. This is a handy, concise card that summarizes the functions as described in the Reference Manual. However, we found that most of the people in the lab did not use this card since most of the information was already presented on the screen.

There were minor discrepancies between the written documentation and what actually appeared on the screen. These were not serious, though, and most were evidence of software enhancements in later versions. Although the Welcome Tutorial program was not documented, it contained references to Accounting Pearl, which was not mentioned anywhere in the documentation. We couldn't help but wonder what goodies this was referring to.

Another weakness was a lack of material to provide a sound, conceptual grounding in database concepts. Since the package is a relational database system, a chapter on that topic would have proved beneficial to the non-DP person. Mention of terms such as data dictionary was very rare but could have been presented along with a tutorial on "How to design a data-based application." The user was left to implement the system in an ad hoc and unplanned fashion—certain to be filled with inbred inefficiencies.

☐ Functionality

Personal Pearl is an information management system designed to allow the user to easily design input forms and output reports. Both of these 2 functions, forms and reports, are handled at 2 levels: at the design level and at the operate level. Once the form has been designed, it is used to enter data and to store that data on a file. Reports are used to transfer data from one or more files to the printer, the screen, or another file. The Personal Pearl software package automatically handles the following details: sorting data for reports; indexing records; report generation from multiple files; management of the relational database; transferring data to word processing packages; 4 function calculations; and transferring data to spreadsheet applications. As long as the data does not have to be extensively processed once it is entered, Personal Pearl is a good, easy-to-use software package.

In designing the input forms, the user is first given a blank screen to layout the field labels, as well as the variable data fields. Since the user just types on the screen, it is much easier than many systems which require you to draw it out on a chart in order to know the beginning and ending character positions of each and every field. After the user has set up the input screen, the next step is to define the data fields. Data fields are defined as either numeric, character, or date fields. (Date fields are the only fields which may be edited at time of entry for proper ranges.) Data fields may be entered from the keyboard, computed from 2 or more existing fields, or brought in from a record on an indexed file.

There is a good set of edit commands available to the user at the time of forms design for screen editing. These are used via control key sequences and are displayed at the bottom of the screen. Since there will be up to 15 functions displayed, it would be better if they appeared either alphabetically or in some form of functional order. As it is, it seems to be a random sequence, making it difficult to locate which function key is necessary to perform the desired action. Computed fields may not accumulate, so

Pearlsoft Personal Pearl
Database Filing/Reporting Package

that totals, subtotals, or other incremental fields such as record counts are not allowed during data entry. In general, each entry application develops a single form of record. Multiple record types are allowed via control masks, but with several limitations.

When using these input forms to enter data, all indexing and file maintenance is handled automatically. The only programmed editing available is the entry of numeric data in numeric-only fields, date range, and checks for identical indexes for a file with unique-only index keys.

The lack of processing at time of entry, as well as the lack of decision processing at report time, severely limits the scope of this package. Also, the fact that the system cannot accommodate applications with files on more than one diskette limits the size of applications. One of our lab members tried to set up a Label Application and found out the following: 1) to sort on last name, the last name had to be entered first, but then could not be switched around with the first name (unless it was a separate field, but then it could not occur immediately following the first name with a variable number of characters); 2) no incremental counter was available for total labels by zip code batch; and, 3) if the label was designed to handle 4 lines of an address, the addresses with a blank third line (at least 90% of them) had to print the blank line—it was impossible to print just the lines containing data.

Designing report forms is similar to designing input forms where the user sets everything up on a blank screen as it will appear on the report. Print lines may be expanded to more than 80 characters if necessary (up to 159 characters maximum). Reports may be designed either from the input form, from an already existing report form as a base, or from scratch. Once the data output areas have been defined (as coming from the main file, another file which is indexed, or computed), the sort fields are identified. Five levels of sorts are allowed with subtotals possible on the primary sort field only. (Subtotals of the one field will print out in a trailer line for every break in that one field with a grand total printed out at the end.)

Print reports may be just detail printing of records, or may include headings, details, subtotals, totals, and footings sections. One input form may have multiple reports associated with it. Selection values may be entered at the time of running the report so that only records within a given range are processed. The lab members who tested this system all felt that the reports function was its strongest feature. They wished that other Report Generators could be as easy to use in designing complex reports, or that this product had the processing flexibility to replace other products.

Once a system is set up and installed, it is very easy to modify. For instance, an input form may be altered to include a new field. The form may be changed without losing the data already existing in that file. These changes may involve the index key, deletion of a field, or extending the length or changing the relative position of a field.

☐ Ease of Use

Personal Pearl is relatively easy to use. Parts of it are rather awkward at first (such as the use of control keys), but after a while, the user becomes familiar with the main operations. The Help command is very good, and the full descriptions it provides are a big plus for the product. The first 2 Tutorials in the package are easy to follow and very good at leading the user through the various functions. Unfortunately, the tutorials assume that the user will make no errors, since no procedures to correct mistakes are provided. If the user goes through the tutorials without making errors, the user will undoubtedly be a computer pro already. An argument can be made that the Tutorials are designed to show some of the functions through examples, and cannot cover how to make corrections since it would be impossible to second-guess all the mistakes a user might make.

Actually designing the input forms and the reports is fairly straightforward. One annoying operating aspect is the need to character-space through the entire data area of a field. With all the control functions available, it should be possible to enter a number to define a field length rather than count out the number of characters for each field. For large data fields this is particularly cumbersome, particularly if you follow the recommendation that the underscore (a shifted character) be used as the "fill" character to represent a data position.

Because the various programs are located on multiple diskettes, it is often necessary to change the disks on drive A. For instance, to produce a report, you need to insert the Produce Report disk, start the job, exchange it with the Sort disk, and then later exchange it with the Produce Report disk again to actually get the printout. The system is quite friendly and lets the user know which disk is needed, but a hard disk would unquestionably be preferred. Another minor irritation was that messages to the user will appear in different locations on the screen. Since the screen is often busy with control key descriptions and other information, it sometimes takes a while to see where the message is located. One of our programmers suggested that to make the screen less busy, the function key codes should be stored off the screen until the user wants to see the list. At that time the user could depress a key, be shown the entire selection, and then choose the function key needed.

☐ Support

There is no mention of a customer support policy within the documentation handbook. There was a small piece of paper tucked in the pocket of the manual with errata sheets and a phone number. Even on this paper, the user was requested to contact the dealer first before calling the support number. The support number is in a West Coast area and seems to be manned only during normal working hours. When we did get through, the Customer Support people were busy so we left our name and number, and they called us back within a half hour. The person was knowledgeable and friendly and took the time to answer several questions without hurrying us.

The expressed preference for dealer support of the user is understandable (after all, no one wants to have to pay a staff to stand by and answer questions), but we doubt that many dealers would have the technical expertise to support a product such as this.

Pearlsoft Personal Pearl
Database Filing/Reporting Package

☐ System Interface

Personal Pearl's interface with the outside world is a mixed bag. The fact that output from Personal Pearl can be used by word processing systems like WordStar, programming applications like BASIC, and spreadsheet applications like SuperCalc is good. The fact that these other systems cannot be used to produce input to Personal Pearl is not so good. Because Personal Pearl is lacking in its processing capabilities and strong in its report generating capabilities, it would be better if these roles were reversed. If it could accept data from BASIC or SuperCalc and then generate reports from that data, it would be much more powerful.

The documentation does include a separate chapter on using SuperCalc with Personal Pearl and a couple of pages for BASIC programmers. Although WordStar is mentioned as a word processing interface, there is no specific documentation as to how that is accomplished.

Because the reports may go to a disk file rather than always to a printer, the reports may be transported between PCs. We tried this, and were able to send data to another PC and to a minicomputer with no difficulty.

☐ Vendor Experience

Pearlsoft is a division of Relational Systems International (RSI) Corp and was established in 1980. Personal Pearl is apparently based on Pearl, a product copyrighted by RSI. The program has been in use since 1982. We were unable to get any information on the original Pearl.

■ PRODUCT OVERVIEW

☐ Terms & Support

Terms • Personal Pearl is available on a purchase license basis from Pearlsoft, through computer retailers or software dealers, or through selected mail-order sources throughout the U.S.

Support • primarily through the software dealer; however, a vendor telephone number is also provided with the documentation.

☐ Component Summary

Software elements consist of 14 programs, utilities, and tutorials. PEARL.A00 are the screen masks for main Personal Pearl programs; PRLHELP.TXT is the HELP text file; INSTALL.DAT is the Configuration data file; PEARLDF is the Design forms program; PEARLDR is the Design reports program; PEARLI is the Install forms and reports program; PEARLED is the Enter Data program; PEARLPR is the Produce reports program; PEARLFM is the File maintenance program; and PSORT is the Sort utility.

LCNS: license fee.

The Starter Library includes the forms and reports to immediately use for the following applications: appointment calendar, people file for business and personal associates, mailing list, and a cash disbursement journal. The Welcome Program provides an overview of Personal Pearl. The Easy Tutorial is the program showing how to set up a form and a report. The Advanced Tutorial is a program with more sophisticated features and options.

Personal Pearl:

$295 lcns

☐ Computers & Operating Systems Supported

The package is available to run on the IBM PC or PC/XT and PC compatibles such as Compaq and Eagle with MS-DOS. It is also supported on the Kaypro system, DEC Rainbow, and the Apple III with CP/M option.

☐ Minimum Operating Requirements

Personal Pearl runs on 8-bit machines with a memory requirement of 52K bytes and CP/M Version 2.0 or later, and on 16-bit machines with minimum memory of 128K bytes with CP/M-86, PC-DOS, or MS-DOS. Either a hard disk or multiple floppy drives are required together with a color monitor or monochrome display with bold or reverse highlight. Although a printer is not required, since reports may be output to a diskette or a monitor, the emphasis of the software is on the generation of printed reports.

☐ Features

Record Size Limitations • 250 fields per record.

File Size Limitations • limited only by disk storage.

Field Size Limitations • fields may not exceed one display line (80 characters) in length.

Key Field Limitations • any number of fields may be designated as key fields, but the number of secondary indices created by such a decision would in most cases fill memory; a practical file would probably have no more than 5 keys.

Screen Format Definition • screen forms are generated by typing prompts and data areas into a blank working form, providing full facility to utilize the screen.

Entry Edit Capabilities • limited to existence checks for key fields and basic range checks.

Report Format Definition • form-/menu-oriented entry of report structure, with control breaks and subtotals; multiple files may be accessed for a single report, and multiple reports may be defined per file.

Sort/Merge Capabilities • data may be sorted up to 5 levels with subtotals accumulated for primary sort field.

Query/Selection Capabilities • records may be accessed by browsing via index or by selecting on combinations of field criteria and relationships.

Programming & Batch Processing Capabilities • not generally provided; data entry and reporting are the major uses of the product, and processing features are very limited.

• END

Perfect Software Perfect Calc
Spreadsheet Package

■ PROFILE

Function • spreadsheet and financial forecasting/reporting package.

Computers/Operating Systems Supported • IBM Personal Computer, PC/XT, and compatibles using PC-DOS or MS-DOS; also available for most 8-inch and 5.25-inch CP/M systems.

Configuration • requires 128K bytes of memory, a monochrome or color display device, and at least one floppy disk drive; optional printer and hard disk can be utilized.

Current Version/Version Reviewed • Version 1.15 now being shipped/Version 1.11 on an IBM PC using DOS 2.0 was reviewed.

First Delivery • November 1982.

Number of Installations • over 150,000.

Comparable Products • VisiCorp's VisiCalc; Microsoft's Multiplan; Sorcim's Supercalc.

Optional Associated Software • can be used in conjunction with Perfect Writer.

Price • $295 retail price.

Vendor • Perfect Software; 702 Harrison Street, Berkeley, CA 94710 • 800-222-4222.

Canada • currently no Canadian distributors; however, plans are under way to institute them.

■ ANALYSIS

Perfect Calc provides the ability to build financial models, perform business forecasting functions, and generate "what if" type analyses using an electronic representation of an accountant's spreadsheet. It provides several unique features, including multiple spreadsheet buffers allowing data to be shared by as many as 7 spreadsheets at once.

Perfect Calc is a competent spreadsheet program that is long on functionality and short on user interface. It should be a welcomed addition to users of other Perfect Software products already familiar with its particular command style.

☐ Strengths

The primary feature unique to Perfect Calc is the ability to have as many as 7 different spreadsheets active within memory at once. The user is allowed to switch back and forth among them at will, or make cross-buffer references by including a buffer name in a cell reference. Two windows may be viewed simultaneously, split either horizontally or vertically, and each window may view a separate file.

Permanent file associations can also be specified in Perfect Calc. A one-way link may be created between 2 particular files. A command is placed at the end of the dependent file indicating that the other file should be loaded into one of the alternate buffers whenever the first is to be used. This allows complex applications to be broken into smaller pieces and linked together at the important places where data must be shared.

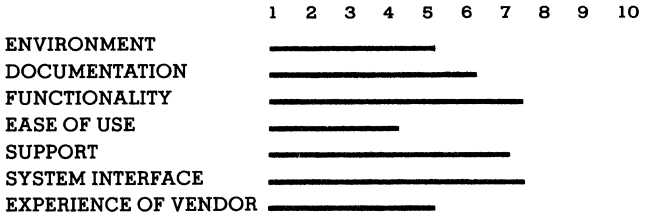
The flexible use of color on a color monitor is a nice capability. The foreground color used for each of the various display purposes may be individually specified. The program is delivered configured for a monochrome monitor, but a color monitor may be quickly configured, and default color values are provided for each of the possible display classes.

☐ Limitations

Perfect Calc does not fall short in the area of technical spreadsheet capability. About the only request one could make is for named cell references. The weakest link in an otherwise fine product is the user interface. Commands consist of 4 distinct forms; a single control character, an ESC followed by a single normal character, a CTRL-x followed by a single normal character, or a CTRL-x followed by another control character. The difficulties are complicated by the seeming lack of orthogonality and mnemonic usage that would give the user some chance of predicting where a particular command would fall. The QUIT command is CTRL-x CTRL-c, for example.

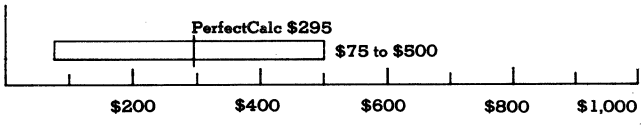
The ability to use the function keys as a replacement for some of the command sequences simplifies some operations. The sophisticated user may also run the configuration program and change the key assignments, but keeping

PRODUCT QUALITY RATINGS*



*For an explanation of rating criteria, please refer to the Spreadsheet Features section in the Software Evaluations (805) report.

PURCHASE PRICE RANGE Software Price Range



PERFECT SOFTWARE PERFECTCALC • open bar shows the typical range of prices for **SPREADSHEET** software used in a corporate environment • the vertical line within the bar graph indicates the price of **PERFECT CALC**, the evaluated product, relative to the price range of similar products.

Perfect Software Perfect Calc
Spreadsheet Package

track of changes becomes a burden, particularly when one is forced to refer to the manual.

Perfect Calc is a program that was designed for other systems and adapted for the IBM PC. It supports a number of other non-memory mapped terminals, resulting in certain behavior patterns that are an annoyance on an IBM PC. Whenever the data in a window is to be scrolled, the entire window is first erased, including the row and column indicators, and then repainted. This operation is more disturbing to the eye than that caused by other programs that do actually scroll the information gently across the screen. In addition, it does not have an IBM PC-specific manual, resulting in many references meant for other systems, such as the use of a control character for moving the cursor.

■ HANDS-ON EVALUATION

Perfect Calc is provided on 2 single-sided floppy disks. One disk is the program disk, and the second is a lessons disk containing 8 successive lessons in the use of Perfect Calc. The program disk also contains a wide variety of sample spreadsheets for commonly needed applications. The disk may be easily backed up or installed on a hard disk using standard procedures. The program is preinstalled for use on the IBM PC with a monochrome display.

The program disk contains a configuration program that allows the user to change the default installation parameters if desired. On execution of the package, the user is told that new users probably want to invoke option 1 (color monitor configuration), and usually options 2, 4, and 5. Option 4 says only that it writes a new version of PC.OVL. Option 1 allows the user with a color monitor to specify the colors desired. A default list is suggested, and will be used if no further input is given. Only after exiting the program does the user discover that nothing is made permanent unless option 4 is invoked before leaving the configuration program. Why this was not stated more directly in the configuration menu is unknown.

The color selection program is, unfortunately, a separate utility. It does not present a view of the different color possibilities, but simply lists their names and selection numbers. This requires much trial and error and program invoking and exiting if any real customization is desired. We decided to use the default values, which proved to be as good as any.

The lessons themselves are simple and useful. Errors were discovered rather quickly, however. The introductory TEACHME lesson describes the use of Control PGUP and Control PGDN to cause page scrolling in the window not containing the cursor. Use of these keys produced a bright red error message. The next lesson defined other key sequences for this capability that worked. Later experimentation with the configuration program allowed us to assign the Control PGUP and Control PGDN keys their proper value. More common than technical errors was the occurrence of spelling and grammatical errors, and constant reference to non-standard usage features on the IBM PC, such as using control keys for cursor movement instead of the arrow keypad.

The biggest problem with the lessons is the same one found in the general usage of the program. The complex control and escape key sequences necessary to operate the program make the user interface very difficult. At one stage early in the lessons the wrong key was hit, and the lesson information vanished from the screen. Many various and sundry key sequences had to be tried and aborted before control was finally regained. Users used to the escape key as an abort function were constantly being reminded with prompts and error messages that ESC followed by another key frequently "does something." Some of the complexity can be eased by reconfiguring the command key assignments, but too much deviance from the product documentation can also cause problems.

One feature mentioned in the manual overview was the user-extendable function library. It stated that the user could add specialized functions and formulas, or even modify the workings of the Perfect Calc built-in function set. This would be an extremely useful feature that would allow the addition of the numerous complex financial and mathematical functions missing from most spreadsheet packages. Examination of the remainder of the manual, including the index, all references, and the files provided on the program disk, gave no indication of the presence of such a capability.

The remaining functionality of the program conformed to the expected behavior. The program carries out standard spreadsheet operations according to specifications. The multiple buffer capability is a well-liked enhancement, particularly the ability to specifically reference cells in another buffer by use of the buffer name.

☐ User Interface

The Perfect Calc user interface consists of single- and multiple-control key sequences and escape key sequences to perform all of the program functions. The function keys are assigned commonly needed operations, and may be used as an alternative to the control key sequence.

Menus: No menus are displayed by the program by default. Short menus listing abbreviated information on particular topic areas can be called onto the lower portion of the screen with the "?" key. Menus do not automatically disappear from the screen, and can be overwritten with data if not explicitly erased.

Control Characters: All of the Perfect Calc commands are executed via control character sequences. The reference card lists over 7 possible control and escape key sequences. Some of the sequences are multiple control characters.

Function/Special Keys: Function keys on the IBM PC can be used to invoke commands instead of using the control key sequences. Each function key is assigned 4 commands through the use of the shift, control, and ALT keys. The cursor control keypad is also functional, including the PGUP and PGDN keys. Unassigned keys may be assigned through the configuration program.

Command Language: No command language is provided

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Spreadsheet Package

by Perfect Calc unless one considers the more complex functions available for the conditional selection of result values for formulas.

Positive Feedback: Positive feedback is provided for most operations, either in the form of obvious results (such as a new cursor position) or an on-screen message. Operator confirmation is requested for destructive commands.

Status Display: The only status information displayed is the name of the worksheet and the row and column designation of the cursor position. These appear in the lower right corner of the screen.

Help Facilities: A 16 category HELP menu appears when the "?" key is pressed. Each category displays an abbreviated summary of the information requested. The HELP screen does not disappear when the user is through; some operation that repaints the screen, such as a page scroll or an explicit Control-L command, is required. The F1 key can also be used to request 4 different HELP menus describing the 4 levels of commands assigned to the function keys.

☐ Environment

Perfect Calc comes already installed for the IBM PC system. Some terminal configuration may be necessary in other environments. It is easily adapted to a hard disk environment, and normal procedures may be used to create backup copies of the master diskette. An easy-to-use color-customization program written in BASIC may be used to modify the default colors used for a color monitor.

Perfect Calc requires 128K bytes of memory in a PC-DOS environment, more than some existing spreadsheet programs. It uses a virtual memory system to provide up to 64K bytes of storage for spreadsheet data. No advantage is taken of any extra real memory in the machine itself.

☐ Documentation

The Perfect Calc documentation consists of a single manual written in tutorial format. It is a soft-cover bound book, instead of the more traditional loose-leaf binder. Though this may have the advantage for the vendor of preventing easy copying of the material, it will probably also discourage updates to the documentation, to the detriment of the user. This is in addition to simply being less convenient to use.

The manual presents the material in an easy-to-follow manner, progressing in difficulty throughout the manual. Part I describes the fundamentals of using an electronic spreadsheet program. Part II covers the advanced features of Perfect Calc that deal with multiple files, multiple buffers, and associated files. Part III is a run-through of a number of home, personal, and small business applications using Perfect Calc. The examples presented in Part III are included on the program disk for usage, modification, or adaptation.

The documentation package also includes a reference card of all of the default command key sequences and built-in functions, a function key template, and an 8 page tutorial on the installation and usage of Perfect Calc on an IBM PC.

☐ Functionality

Perfect Calc provides all of the traditional spreadsheet capabilities and operations. Normal cursor movement from cell to cell is done via the arrow keys on the IBM PC keypad, though the manual and HELP screens consistently refer to the control keys used on non-IBM systems. The IBM PGUP (page up) and PGDN (page down) keys may be used for rapid vertical movement through the worksheet, one screen at time.

Cell referencing is by absolute column and row designation, with the columns being lettered, and the rows numbered. Computer- or mathematically-oriented users may find this going against their previous training of specifying the row first, then the column, but it does conform to traditional spreadsheet usage. Cell reference by name or relative location is not provided. When a formula is moved to another location, the user is prompted to define whether it is a relative or absolute cell reference.

Statistical functions are available for computing sums of columns, averages, minimums, and maximums, in addition to several mathematical functions, including square root, base 10 and natural logarithms, and exponentials. A net-present-value function is provided for financial analysis.

The most useful capability unique to Perfect Calc is the support for multiple buffer areas. Each worksheet is stored in a buffer. The buffer is given a name, usually that of the disk file that it represents. Up to 7 buffers may be in use simultaneously, though the screen only supports 2 separate windows for viewing. If the screen is split into 2 windows, either horizontally or vertically, each window may display a different buffer area. Cross buffer references are allowed in formula specifications by enclosing the cell reference in square brackets and prefixing it with the name of the buffer.

In conjunction with the multiple buffer and cross-buffer referencing capability, the user may specify associated files. A file that depends on values from another file can have a link established to the needed file. Whenever the dependent file is loaded into a buffer, the associated file will be loaded automatically in another buffer area.

☐ Ease of Use

Perfect Calc comes ready to execute on the IBM PC, though a configuration program is provided for customization of printer or color monitor display.

The biggest single issue in the ease-of-use category is the user interface. The documentation explicitly states that many of the commands are the same ones used by Perfect Writer, but this doesn't seem to be much consolation. Commands are transmitted via 4 distinct methods; they may be a single control key, an escape key followed by a normal key, a Control-x followed by a normal key, or a Control-x followed by another control key. Little orthogonality to how the keys are assigned is present. Vertical scrolling is done by a Control-x sequence; horizontal scrolling is an escape key sequence. Nor are the keys assigned in any mnemonic fashion. Control-x Control-c is the QUIT command, Control-a is beginning of line. Fortunately, many of the commands are assigned to the function

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keypad (4 commands per key). The function key template provided is a must for keeping them sorted out.

Users of other Perfect Software products, such as Perfect Writer, will probably have no problems adjusting to this complex user interface. New users of spreadsheet programs will have more problems adjusting than for most other programs on the market, particularly the recent introductions that have made great strides in ease of use. Experienced users of existing spreadsheet programs will probably not bother with Perfect Calc.

☐ Support

Perfect Software maintains a separate end-user support department, with a toll-free number (800-222-4222). At the time of the review, not all of the toll-free phone lines had been installed, and we were referred to several toll numbers for some information. The purchaser must return a registration card, whereupon he will be sent complete information on future release notifications and reduced-fee update availability. No customer classes are offered, but support is available from local dealers and distributors, and Perfect Software participates in dealer training classes for this purpose.

☐ System Interface

Perfect Calc is designed with an external program interface in mind. The spreadsheet is stored in an easy-to-interpret ASCII format representing the keystrokes necessary to re-enter the information onto an empty worksheet. With a little work, other programs can be written to interpret this format. Worksheet data may also be printed to disk, allowing their use in textual reports. Examples are given of how to combine Perfect Calc output into a Perfect Writer report.

While the Perfect Calc file format is easy to interpret, it is yet another file representation to deal with. Perfect Calc does not provide any support for the more popular DIF format.

☐ Vendor Experience

Perfect Calc, other Perfect Software products, and the company itself have been in existence since the fall of 1982. In little over one year, more than 150,000 copies of Perfect Calc have been installed.

■ PRODUCT OVERVIEW

☐ Terms & Support

Terms • Perfect Calc is available for purchase only from Perfect Software, through computer dealers, software dealers, and mail order firms throughout the U.S. and internationally; quantity discounts are available to volume corporate purchasers.

Support • customer support department available via toll-free number 800-222-4222; reduced fee updates and new product announcements available to registered purchasers; no customer classes offered.

☐ Component Summary

Perfect Calc is provided on 2 single-sided floppy disks: one program disk and one lessons disk. The major components of the disks follow. PC.COM is the main command file of Perfect Calc; PC.OVL is a program file which swaps Perfect Calc command routines back and forth between memory and disk storage; PCCONFIG.COM is the configuration program for customizing the printer style parameters or color usage for your particular system; LESSON1.PC thru LESSON8.PC are a series of 8 sequential and interconnected lessons to acquaint the user with Perfect Calc.

Numerous additional sample spreadsheets are also included on the program disk, consisting of small, preconfigured application packages to demonstrate typical usages of Perfect Calc.

Perfect Calc:

$295 lcns

☐ Computers & Operating Systems Supported

Perfect Calc is available for the IBM PC or PC/XT under PC-DOS, other 8086-/8088-based systems using MS-DOS, and most systems capable of using CP/M-80.

☐ Minimum Operating Requirements

Perfect Calc requires 128K bytes of memory, a monochrome or color display device, and at least one floppy disk drive. Optional printer and hard disk can be utilized.

☐ Features

Perfect Calc is an electronic spreadsheet package for the development of financial models, budget systems, reports, and forecasting models. Features supported include:

Spreadsheet Size • up to 255 rows and 52 columns can be used in a single spreadsheet; up to 7 spreadsheet buffers can be used simultaneously through the use of a virtual memory storage system.

Command Type • all operations are performed through a series of control key selections; command operations can also be invoked from the function key pad, with each function key supporting 4 operations via the use of the shift, ALT, and control keys.

Financial & Statistical Functions Supported • NPV (net present value) function support for financial applications; COUNT, AVG, MIN, MAX, and SUM provided for simple statistical operations; mathematical functions LOG (base 10 logarithm), LN (natural logarithm), EXP (exponential), and SQRT (square root) also supported.

Cell Reference • cells may be referenced by pointing using cursor movement functions, or by specific reference to row and column identifiers (D15); no explicit relative cell referencing or cell naming capability is provided; when removing formulas from the saver buffer, the user must specify whether each cell reference is relative or absolute for the purpose of the copy.

Multiple Buffer & Window Capabilities • 2 separate windows are allowed, with optional scroll synchronization; each window may reference a different spreadsheet file; up to 7 different buffer areas may be in use at one time; cross-buffer cell references and associated files are also supported.

Formatting Capabilities • extensive formatting capabilities for text and numeric entries, including left, right, and center justification.

Print Facilities • any region of a worksheet may be printed, either to a printer or disk file; column and row indications may be included or suppressed; the worksheet definition itself is stored in an instructional ASCII format, and may be printed to show the cell formula information.

File Transfer Capabilities • full or partial worksheets may be saved or loaded; loading of multiple worksheets merges data; if overlap occurs, new worksheet information takes priority; internal file format is in easily interpreted ASCII representation.

LCNS: license fee.

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☐ Other Facilities

Perfect Calc information may be further utilized by other Perfect Software products. Perfect Writer may be used to include financial information produced by Perfect Calc in reports.

• END

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■ PROFILE

Function • provides personal computer communication support for attachment to information services, other personal computers, or mini/mainframe systems, and support data exchange.

Computers/Operating Systems Supported • IBM Personal Computer or PC/XT with PC-DOS, or PC-compatible systems with MS-DOS.

Configuration • 128K-byte RAM, one disk drive, serial port, and external modem or integral modem.

Current Version/Version Reviewed • Version 1.0/Version 1.0.

Number of Installations • information not available from vendor.

Comparable Products • Microstuf's CROSSTALK XVI, Headland Press' PC-TALK, Southeastern Software's DataCapture/PC.

Optional Associated Software • none.

Price • $149 retail price.

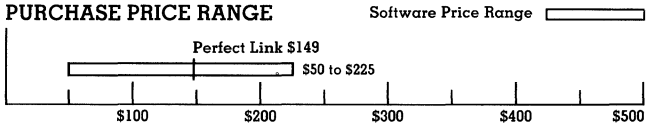
Vendor • Perfect Software, Inc; 1001 Camelia Street, Berkeley, CA 94710 • 415-524-1926.

■ ANALYSIS

Perfect Link is a relatively new communication support program designed to provide terminal emulation and file transfer capabilities via asynchronous communication paths using the ASCII character set, characteristics common to nearly all PC communication software. The product attempts to provide a full-feature communication implementation without becoming so complex as to be useless to non-technical personnel. To a large extent, it succeeds.

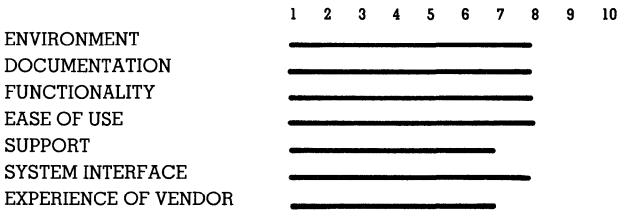
By combining a well-written and educational manual with a menu-driven structure and a complete but not verbose set of options, Perfect Link provides the communication features needed by most businesses and retains a structure which can be learned by the average office worker. While there are capabilities in other communication packages not matched in Perfect Link, the typical user will not be constrained.

Supporting a general philosophy of free transfer of information, Perfect Link offers a unique capability of reading specific foreign disk formats under PC-DOS/MS-DOS, including CP/M-86 formats for the IBM PC and formats for other systems such as Kaypro and NEC. This provides some users with the ability to do, WITHOUT a communication connection, what they may have purchased the communication package to support—file exchange between unlike microcomputers.



PERFECT SOFTWARE PERFECT LINK PRICING • open bar shows the typical range of prices for **DATA COMMUNICATIONS SUPPORT** software used in a corporate environment • the vertical line within the bar graph indicates the price of **PERFECT LINK**, the evaluated product, relative to the price range of similar products.

PRODUCT QUALITY RATINGS*



*For an explanation of rating criteria, please refer to the Communication Features section in the Software Evaluations (805) report.

Users who felt that the features of simple teletype emulators were inadequate for their applications, but found alternative packages supporting CRT emulation too complex, may find Perfect Link an ideal solution. It is certainly a candidate for use by corporations with asynchronous communication requirements.

☐ Strengths

This package strikes an excellent balance between features and ease of use. The user has complete control over the communication parameters of a connection, including the facility to define multiple connection setup files. File transmission and reception from keyboard and disk are supported, and nearly any popular modem can be accommodated.

The documentation is exceptionally helpful. The manual opens with a brief tutorial on data communication, with illustrations, and proceeds to the operation of the program. The material is well written and the use of jargon is minimal.

Function keys are heavily used for command entry, based on a screen menu. This makes the operation of the product easy and relatively foolproof. Nearly every setup action can be predefined on disk and run automatically at program load.

☐ Limitations

Perfect Link's command or setup save option is limited to 10 distinct configurations, and the facility is limited to saving OPTIONS and not commands. Thus, a user cannot define a command file which performs a sequence of tasks before or during connection.

Data is sent and received by Perfect Link using only files and the screen/keyboard. There is no memory area of the

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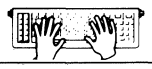
Data Communications Support Program

type known in other products as a "capture buffer" which can be pre-filled and sent or received and manipulated prior to transfer. Some users will find the absence refreshing (it reduces the number of program options) but others may have applications where in-memory manipulation of data would be a benefit.

There is a bias toward the use of Perfect Link to access information services such as Dow Jones or The Source which is clear in both the design of the product and the documentation. While this bias may be helpful to users who actually intend to use such a service, it may confuse others. It certainly adds to the size of the manual.

■ HANDS-ON EVALUATION



Perfect Link comes in an attractive package with a host of coupons which entitle the owner to discounts on access to information services such as NewsNet, Dow Jones, or The Source. There are two diskettes, one the Program Disk and the other a Utility Disk. Both disk's contents will fit on a single double-sided PC diskette, and since the program is NOT copy-protected we elected to do that, making an archive copy of the actual distribution diskette.

There was some confusion in the initial setup of the product because the manual assumes that the user will be running one or more of the information services, which we were not. The PLINSTAL program is not really needed unless you ARE subscribing, but we ran it anyway and selected the option to "subscribe" to Perfect Software's bulletin board service.

Perfect Link allows a user to define up to 10 alternate "systems", each of which represents a dial destination and a set of associated communication parameters and function key definitions. Since we had to connect to our VAX computer and to a remote PC in another office, we asked out data center communication specialist to provide the parameters for the VAX system and bought an extra copy of Perfect Link for the remote office. We accepted the default settings for everything but the data rate on the PC link. Rather than talk to a remote office through the installation, we sent them the configured diskette.

Our applications of file transfer between PC and VAX worked with no hitches, and the setup procedure was not difficult.

We copied a portion of Perfect Link's manual for our clerical users as a reference, since the document was too large and contained some information they did not need. None of our users experienced any problems with the product.

We did not normally use an information service, but the features of the modem to support connection to one were irresistible so we tried the system using the subscription of one of the managers. He bought the package after watching it work.

☐ User Interface

Perfect Link uses a hierarchical menu structure where commands are requested via function keys. The menu structure is logical and permits a user with a standard setup to establish communication with a minimum of command selections. Communication setup may be saved to disk, making it possible for very inexperienced personnel to use the system with little chance of error.

Menus: The menus in Perfect Link are hierarchical, three levels deep, and have on the average seven selections per menu. Intermediate level menus may not be bypassed by expert users. Menus are generally physically smaller as the hierarchy is descended, and overlay the prior menu. This rather strange structure makes it immediately obvious how "deep" in the structure the current menu is located. Where a menu is used for selection of a parameter value such as data rate, the current value is displayed.

Control characters: The control key (Ctrl-xx) is generally used in conjunction with the function keys to provide another set of user-definable functions. Ctrl-Q and Ctrl-S are used in data mode to send an X-on and X-off from the keyboard.

Function/special keys: The function keys are defined in "normal" mode as menu response. The HOME key is used to gain access to the main menu from data mode. Alt-mode function keys are used for special and seldom-needed commands such as sending a BREAK sequence. A set of function key menus defines the use of each function key set by the system. Users may define the function keys in shift- or Ctrl- mode, and that definition is also available on request from a menu.

Command language: A limited form of command language may be employed by users through the definition of function keys. These keys may represent strings of text, and the strings may include special characters to invoke a PAUSE, ISSUE BREAK, WAIT FOR RESPONSE, or COMMENT.

Positive feedback: All command responses will cause a menu change or a prompt for further information. Data keyed in entry mode will be sent to the other system, and response to that data depends on the partner. The current state of any internal indicators set by command is available for inspection at the appropriate menu.

Status display: While the data display is active (representing the connection to the communication link) a status line is displayed at the bottom of the screen. This shows the relative time since connection was made, the state of the CARRIER lead on the modem, the status of printer logging, whether the program has been flow controlled by the other system, whether this system is acting as the HOST, and the name of the file to which data is being sent. On an 80-column monitor, the following elements are present: the current system communication setup file name, the type of terminal being emulated, the data rate of the link, and a reminder that the HOME key will toggle the user to the main menu.

Help facilities: The main menu is referred to as a help menu by the vendor, and is available by pressing the HOME key while in data mode. All other commands are

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invoked via function keys from menus, so help is implicit in the command structure. The documentation provides a tree diagram of the menu structure of the program.

☐ Environment

Like many communication packages, Perfect Link requires 128K-byte RAM to execute. While the program will run on a system with one single-sided disk drive, a dual, double-sided configuration is more practical. Since the program is not copy-protected, you can install it on a hard disk and copy DOS to a floppy version of the program diskette to make it self-loading. Since we had an XT locally and a standard PC in the remote location, we did both.

Most popular modems are supported by Perfect Link, and the PLINSTAL program lets you select a modem type. You can also adapt nearly any type of modem to operate by selecting a "catch-all" option at 300 bps or 1200 bps and using the customization features to set up the proper sequence of characters needed to command the modem to dial a number.

Printer support for Perfect Link is via the LPT port of the PC, so no special printer protocols are supported. Either the IBM Color Graphics Adapter or the Monochrome Display will work with the product, and our attempt to run it on a compatible PC was successful.

☐ Documentation

Perfect Software takes a different tack with the manual on Perfect Link. The document begins with a kind of tutorial/overview on communication in general and the product in particular, then summarizes the basic operation and features. While you might think that it was too soon to do that, it was very helpful in setting the stage and pointing out features which might otherwise have been overlooked.

Perfect Link seems designed primarily as an access tool for the information services, and this orientation shows in the remainder of the manual. The "reach out" section takes you through a tour of features of the package by leading the user from installation through access to an information service. We tried it with Perfect Software's (PSI) bulletin board, and it did provide an excellent grounding on the use of the package.

The next section, actually Chapter 1 of the manual, goes deeper into the operation of Perfect Link. It begins with a view of the product as two systems (menu and display) and leads the reader through the major menu options in a hierarchical way. The display section of the product, the part that interacts with the actual communication link, is covered in a series of subsequent chapters which relate it to the specific information service the user has available. Again PSI's bulletin board will serve for users without a subscription to Dow Jones, etc.

Chapter 8 resumes a discussion of the menu segment of the product, and the following chapters cover material from originating a call through the use of the disk-to-disk facilities of the product. The appendices cover installation and service access in more detail, then provide a trouble-shooting guide and list of error messages.

The only negative aspect of the document was the relative lack of attention paid to data center connections. However, the procedures for accessing an information service are generally compatible with those for accessing a data center system, and there was no lack of examples there. Our technical specialist had little difficulty implementing the setup files to connect to our remote PC and our VAX based on the documentation.

☐ Functionality

According to our technical specialist, the best way to run Perfect Link was to set up a "system" or setup file for each of our target connections and specify the identity of the current partner at program load time. This proved to be the case, since Perfect Link starts up in data mode even if there is no connection. You can enter the main menu by pressing the "HOME" key, which Perfect Software (PSI) thankfully did not rename something in communicatioeeze.

When Perfect Link has a set of predefined systems, any one of them can be selected at program load by simply following the "PL" program name with the name given to the system desired. We called ours "PC" and "VAX," so a typical startup was "PL VAX." The setup includes the specification of a terminal type to be emulated, and the choices are the popular "dumb" teletype terminal, the DEC VT52, IBM's 3101, the Lear ADM-3A, the Televideo 920, and the Teleray.

Once the program loads in this "system startup" mode, it automatically dials the specified phone number and sets the communication parameters as required. It then enters data mode and awaits the connection.

Our VAX has a log-on sequence which is long enough to promote errors, so we took advantage of Perfect Link's capabilities to define function keys to represent strings of characters. Our technical specialist took the task to heart, and we shortly had a set of key definitions which would log onto the VAX, invoke applications, log off, send mail to VAX users, and so forth. The function key definition strings can not only contain data to be sent to the computer, they can wait for a prompt response from the host (single character), pause for a second, send a break sequence, and even display a comment on the PC screen without sending it. This feature can be used, as we used it, to alert the operator to the identity of the system being connected. You can also set one of these key sequences to execute automatically when the program is loaded. By doing this, we made it possible to connect and log onto our VAX with no operator action beyond loading the program with the "VAX" operand.

File transfers from VAX to PC were easily accomplished. The operator on the PC keyed another function key to call up the line edit application and cause the required data to be typed to the PC. The only hitch was that the operator must set the "saving to file" state to ON via the F1 key. We inserted a reminder to do this in the "This is the VAX"

Perfect Software Perfect Link
Data Communications Support Program

prompt. The ability to set and reset this function from a command string would have been very valuable.

Sending a file simply involves selection of the send option and the specification of the "send without name" technique. Again, we would have liked to have been able to define a user function key sequence to do this, but had to settle for having the operator documentation handle it.

PC communication is simpler. Since both sides of the link were running the Perfect Link, we defined the sending station (us) as the controller. Files were sent using the "with name" option, which selected an error-correcting protocol and forced the receiver to give the file the name defined by the sender. You can use DOS "wild card" specifications such as "TODAY.*" in a file name, causing the system to send multiple files.

MCI mail support can be installed on the most recent copies of Perfect Link. We tried this feature since we were subscribers to that service, and it supported connection and transmission of mail in a very simple manner.

Another PC feature is called "wireless transfer" in the document. What it means is that Perfect Link will read disks created on operating systems other than MS-DOS and on computers other than the IBM PC. This is not to say that it will read ALL disks (we wanted to read an Apple II disk and that is not supported), but systems such as the Kaypro are supported. We tested the feature with a CP/M-86 diskette created an a PC-compatible computer, and it let us transfer a data file from that disk to the PC in DOS format.

In all, Perfect Link did everything we had to do, most of what we would haved liked to do, and some things (like the disk-to-disk conversion) we never expected.

☐ Ease of Use

The combination of reasonable documentation, clever design, ability to define alternate connection "systems" and the ability to define character strings to be generated when a function key is pressed make it possible to set Perfect Link to handle most communication functions without excessive demands on the operator.

Function key control and menus for selection make the use of the commands very easy, even where they cannot be eliminated by setup selection. The only negative aspect of the menu is that successive menus appear on top of the main menu. This gives the screen a very modern, "window" appearance, but sometimes the last few lines of the older menu remain visible, creating a double statement and causing some confusion.

A status line at the bottom of the screen keeps the operator posted on the current state of the connection, and the information displayed is all which should be needed, including time relative to loading, the state of the CARRIER DETECT modem indicator, the printer log state, whether the package is performing the character echo function, whether file saving is active, and if the system is being flow-controlled. The display can get a little busy, but critical information IS there.

The major complaint on the use of the package (there were very few complaints) was over the fact that Perfect Link menu commands cannot be invoked by user-defined function keys. This prevented a complete transmission or reception session being set up at a few keystrokes. The issue was more than laziness—little things like remembering to enable saving of data to disk were easily forgotten in a setup almost completely automatic.

The access to information services, which we tried using an individual subscription, was almost uncanny. The PLINSTAL program even selects the correct dial point for entry to the service based on your area code. Each service installed can be similarly set, and the result makes public source access very easy.

☐ Support

Perfect Software REALLY likes this product, and getting information on it was more easily accomplished than halting the flow of comments, features, and plans. The only problem we had was finding the number. We waded through the promotions for various information services and the documentation without success, and finally looked them up in a vendor source. You get the number when you mail in your warranty card, it seems.

The quality of support we received was high, and we made several calls during our setup. Our suggestion that function key definitions include the ability to invoke the Perfect Link commands was listened to sympathetically, but no promises were made.

☐ System Interface

There were pluses and minuses in the terminal selection made by Perfect Software in their emulation choices, and these may affect compatibility. The LSI ADM-3A is a very popular terminal among minicomputer users, and the support for it makes the package compatible out of the box with many of these systems. On the other hand, DEC's popular VT100 is NOT supported, and some users may find that software option changes at the host system are required to communicate properly.

We were able to use Perfect Link with DEC systems, and a test call to an IBM CMS system was also successful. Interfacing to a Perkin-Elmer minicomputer and a Cromemco personal computer required the proper terminal selection option on the target system, but was completed without difficulty.

☐ Vendor Experience

Perfect Software is an experienced supplier of microcomputer products. Their products are distributed with several personal computer systems, and widely available. Perfect Link is the company's first entry into the data communication product area, however. The product has not been in the field an extensive period of time and is still on its first revision level.

■ PRODUCT OVERVIEW

☐ Terms & Support

Terms • Perfect Link is available from Perfect Software, Inc on a purchase license only, through personal computer or software

Perfect Software Perfect Link
Data Communications Support Program

retailers, or through mail-order firms throughout the U.S. • international distribution is not mentioned.

Support • telephone service provided when warranty card is mailed.

☐ Component Summary

Software elements include: PL, the Perfect Link program, which must be disk resident during execution • PL.DAT is a file containing the definitions for alternate "systems" including dialing instructions and communication parameters • PLINSTAL is the installation program for Perfect Link, used to set up the automatic facilities to attach a user to the most popular information services:

$149 lcns

☐ Computers & Operating Systems Supported

The Perfect Link package runs on the IBM Personal Computer or PC/XT with PC-DOS, or PC-compatible systems with MS-DOS.

☐ Minimum Operating Requirements

The minimum memory requirements are 128K bytes of RAM. One disk drive and serial port, and external modem or integral modem are also required.

LCNS: license fee.

☐ Features

Type of Product • terminal emulator providing support for basic teletype-compatible terminal communication and emulation of IBM 3101, DEC VT52, TV-920 LSI ADM-3A, or Teleray CRTs.

Target Host Computers • DEC minicomputers and IBM mainframe systems, but most minicomputer systems and many other mainframes could be supported with proper selection of host communication parameters.

Protocol • asynchronous, ASCII character set.

Data Rates Supported • to 9600 bps.

Format Conversion Features • no direct conversion of communication formats is supported • limited disk-to-disk facilities support the reading of disks from foreign systems such as Kaypro.

Automatic Setup Features • multiple system definitions permit storage of phone numbers and communication options for up to 10 destinations • function keys may be programmed to generate character strings when pressed.

• END

Perfect Software Perfect Writer
Word Processing Package

■ PROFILE

Function • word processing system with optional spelling checker.

Computers/Operating Systems Supported • IBM PC and PC/XT/MS-DOS or PC-DOS; compatibles; 8-bit systems running under CP/M.

Configuration • minimum 64K bytes of RAM (128K RAM recommended); a printer (over 30 are supported); one or more single- or double-sided disk drives or hard disk; compatible monitor.

Current Version/Version Reviewed • Version 1.0 for IBM PC/ reviewed Version 1.0, enhanced in September 1983.

First Delivery • 1982.

Number of Installations • information not available.

Comparable Products • MicroPro WordStar; Microsoft Word; Metasoft The Benchmark; IBM Easy Writer; Lexisoft SpellBinder.

Optional Associated Software • Perfect Speller, Perfect Filer, and Perfect Calc.

Price • $495.

Vendor • Perfect Software; 702 Harrison Street, Berkeley, CA 94710 • 800-222-4222.

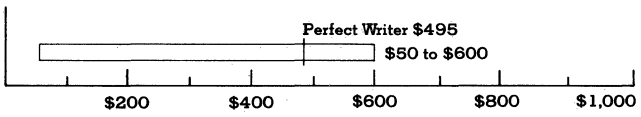
Canada • currently no Canadian distributors; however, plans are underway to institute them.

■ ANALYSIS

Perfect Writer is written in "C," a high-level, streamlined language that allows greater flexibility and a high degree of transportability between microcomputers. While it was first written for the 8-bit Z-80 machines to operate under CP/M, the company optimized the Perfect Writer program for the newer 16-bit machines (including the IBM PC and PC/XT), and even for 32-bit machines, such as Apple's Lisa. This offers an advantage in terms of upgrade capability, since new hardware advances will not preclude the use of text files generated by Perfect Writer for a number of years to come, although it may be necessary for a user to purchase a newer version of the program from time to time to keep up with the improvements in hardware design.

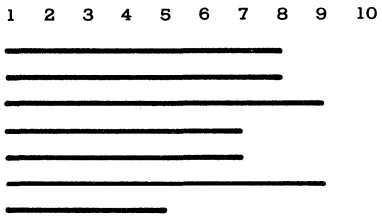
Perfect Writer uses the ASCII format to store text files that are created or modified within the program. This allows these files to be merged into other programs, such as databases and filers. It also permits the program to accept ASCII text from any source. The program is designed to generate, edit, merge, and manipulate text from as many as 7 files at a time. It uses a split-screen, multiple file display to accommodate these file functions. With a 128K byte RAM, a user can store up to 20 pages of text and not worry about overflow since Perfect Writer automatically saves text to disk. The same feature can be accommodated for a user with a 64K RAM through what the company calls a virtual memory swap file. To accomplish this, however, the 64K RAM user must have at least 2 single-sided, double-density disk drives available.

PURCHASE PRICE RANGE Software Price Range



PERFECT SOFTWARE PERFECT WRITER PRICING • open bar shows the typical range of prices for **WORD PROCESSING** software used in a corporate environment • the vertical line within the bar graph indicates the price of **PERFECT WRITER**, the evaluated product, relative to the price range of similar products.

PRODUCT QUALITY RATINGS*



*For an explanation of rating criteria, please refer to the Word Processor Features section in the Software Evaluations (805) report.

☐ Strengths

One of Perfect Writer's greatest strengths is index compilation. Added to the footnoting and table of contents generation capabilities of the program, this truly makes the package one of the most versatile (in terms of functionality) on the market. Another area of great strength is style formats. There are more than 30 printers supported, and over 50 discrete style formats to choose from. It is a good idea to let the software, in this case Perfect Writer, lead the user to the peripherals marketplace, rather than the other, more limited way around.

Perhaps the most important and unique characteristic of the package is the inclusion of up to 7 files in memory concurrently. The power this offers is simply astonishing. The merging of files is one thing, but the wholesale compilation of spreadsheet data, text, addresses, and other information into a single ASCII Text File is certainly worthy of note.

The user can switch back and forth between files on the split-screen, and merge files at will. This is a capability inherently possible on the IBM PC and PC/XT, provided the color graphics adapter is present. Thus far few companies have taken advantage of the feature. It should be pointed out that this cannot be achieved in high-resolution graphics

Perfect Software Perfect Writer
Word Processing Package

mode, but that is not significant for word processors in any event.

☐ Limitations

Perfect Writer has few limitations as word processors go, but one that should be noted is the price. After all, the Perfect Speller is not included in the $495 price tag. When one adds this capability, the price paid moves up to nearly $800: that is $495 for Perfect Writer and another $295 for Perfect Speller. While the Perfect Speller program offers features not usually found on a spelling checker, such as the ability to create an entirely new dictionary from scratch, and includes a prefix/suffix dictionary in addition to the root word dictionary, it would seem advisable to provide either a better price or a toned-down version of the speller that could be included in the $495 Perfect Writer package price to give it more user appeal.

The major products it competes with, such as WordStar, Microsoft Word, EasyWriter II, and SpellBinder, either include a speller at the lower price, or retain a lower price with the addition of the speller and dictionary.

Perfect Software also has attempted to hold down the memory utilization of the package, a point which many users no doubt appreciate. In the process of doing so, however, the use of control characters and escape sequences has risen to a new high for latter-day word processors. A new version may provide a significant improvement in the use of menus, thus hierarchically modifying the function keys to handle a larger number of control character and escape sequence manipulations for the users that have invested in larger main memory boards.

■ HANDS-ON EVALUATION

One of the most disturbing thoughts a user has upon opening a new software package is going through the installation process with the chance of blowing it and erasing the program disk, a utilities disk, or the system installation disk itself. Granted, most dealers will help out in these circumstances, but the wasted time, and the opportunity to blow it again remains.

Perfect Writer comes out of the wrapper ready to use. There is an installation diskette, but it is only needed to configure the system to accept the user's printer (any one of more than 30 are supported). The software tutorial (which is Perfect Writer's read-me-first document) advises the user to first make backup copies of all diskettes. This sage advise can often prevent the problems mentioned above. In addition to configuring the printer, the installation diskette provides the user a method of pre-defining certain default-style parameters, such as margins, distance between paragraphs, indentation, and more.

The detailed procedure for using the configuration programs is presented in Appendix A of the Perfect Writer's User Guide. While this appendix is nearly 30 pages long, it should not put any user off. A good part of it refers to printers that are not on a single system, and as such can be skipped over. If one has yet to decide on a particular printer, however, it contains information concerning the characteristics of a large number of them that is difficult to find elsewhere.

The first step following the installation procedure should be to run through the lessons diskette. This is easily set up on a single-drive system by first loading the edit diskette and then the lessons diskette. The method for doing this is contained in a short number of pages within the supplied tutorial. The lessons are more explanatory than interactive, but do allow the new user to gain an appreciation for the functionality and usage of the package. It is not recommended that one attempt to memorize everything in these lessons, since they go far beyond what one needs to get started. They should be referred to as needed while learning the use of Perfect Writer.

For anyone willing to invest the time to learn all of the features of Perfect Writer, it will provide a very easy-to-use, and powerful tool in document preparation. It is not so easy to learn, however, since the range of capabilities is vast, and since the package relies heavily on the use of control characters to implement its functions.

☐ User Interface

Menus: Perfect Writer provides a main menu and a printer menu. All other functions are invoked via command entries, either of the CTRL or ESC-plus-a-key variety, or via function keys.

Control Characters: Perfect Writer includes over 90 functions, which can be accessed via control characters using the depression of control key plus another, the escape key plus another, plus several dedicated key depressions within a menu. Function keys are not counted in this command summary—they are in addition to these key sequences. Also not counted are the commands available in the Perfect Speller program, nor the commands available for Query options.

Function/Special Keys: The IBM function keys have been given quadruple duty by Perfect Writer, each of them having a single function when depressed alone, and another in combination with either the control key, alternate key, or shift key. The exception to this is the F9 key, which is mysteriously labeled Reserved.

Command Language: No command language is provided, but the wide range of commands essentially covers the extent of most macros a user may wish to include.

Positive Feedback: The feedback one receives is audible beep tones, and the light, which warns the user of an attempted action which cannot be completed. There are also message prompts requesting authorization to proceed with an unexpected request.

Status Display: Perfect Writer uses line 24 to display the current version number of the program, a message indicating the mode, and the filename plus extension being edited. Line 25 displays the copyright year, and leaves room for an instructional message, such as: "Type ESC + ? for HELP."

Help Facilities: Perfect Writer provides a HELP command in the form of [ESC + ?], which brings up the HELP menu. The

Perfect Software Perfect Writer
Word Processing Package

user then selects the part of the directory desired by depressing the associated number, and has the opportunity to view the definition of the command. The menu, and then the specific HELP message, temporarily overwrites the screen display, but when finished with the HELP facility, the user can immediately return to the display text by depressing CTRL G.

☐ Environment

Perfect Writer arrives already installed for the IBM PC or PC/XT. The only reason an installation diskette is provided is to allow the user to configure the package for use with a specific type of printer. The package may require some further configuration for compatible microcomputers. It is easy to install on a hard disk, requiring only that the copy command be invoked to place disk components in the root directory or in a newly made subdirectory.

The package requires 64K bytes of RAM as a minimum operating environment, and at least 2 single-sided floppy drives that use double-density diskettes. It is necessary for the user to place a swap file on the document diskette to be placed in Drive B in order to take advantage of the virtual memory feature of the package. Without this being done, the user cannot take advantage of the program's more exotic features, such as split-screen for up to 7 files.

☐ Documentation

Perfect Writer includes a bound documentation manual, which provides information for both Perfect Writer and Perfect Speller; a quick reference card, which lists all of the commands available alphabetically by function; a function key template, which lists the 4 different commands associated with each of the 10 function keys on the IBM PC or PC/XT keyboard; and a 19-page tutorial booklet, which is to be read first.

The authors of the Perfect Writer documentation have combined a sense of humor with press relations spiel to present a user's guide which in their own words . . ."represents a radical departure from the computer manuals you may be accustomed to. Its style and organization permit quick and easy understanding of every feature of the Perfect Writer system."

Simply scanning through the user's manual will prove what the authors claim to be true. It is radical in its use of cartoons, but has good screen representations of the functions being explained. The User's Guide is comprehensive and complete, and free of technical jargon. There is a comprehensive glossary of word processing terminology, which is needed to reference DOS commands.

The only complaint heard of the manual is that its binding makes it more difficult to copy, and that this also implies a touch of arrogance on the part of the vendor. Specifically, it gives the impression that no new information would be forthcoming on the package, and that updates would not be added to the manual. It is hard to tell if the company plans to send out entirely new manuals each time it does update the package or whether the short pamphlets will be considered sufficient to handle the dissemination of new update information.

☐ Functionality

Perfect Writer contains such a large array of features that it would be difficult not to include it as one of the most complete word processors available on the market today. It includes all of the standard capabilities, such as text insertion and deletion, block moves and copies, split-screen displays, smooth scrolling in 2 windows, forward and reverse search and replace, sophisticated query options for search and replace, transposition and capitalization, more than half a dozen utilities, including go back, cancel, refresh screen, universal repeat, type exact number of repetitions, yankback, quote next character, and much more.

The package also contains set-up utilities; both file and buffer commands; mode changes, including save, normal, fill, view, overwrite, and spell; a host of environment commands for formatting text; typeface commands; sectioning commands; variable manipulation commands; and general commands. The Perfect Writer quick reference card lists all of these and provides style parameter options, as well as listing the Perfect Speller commands. A tear-off from this card contains a questionnaire the company wishes the user to fill in and return regarding the entire package. It allows the user to rate the program, the documentation, the document design program, the Perfect Writer lessons, document design lessons, and other areas. It appears that the company actually reviews these questionnaires and uses the results in formulating plans for enhancements, corrections, and new releases to their current product.

☐ Ease of Use

Perfect Writer is not for those who only require occasional use of a word processor, or for those who only prepare short documents with loose format requirements. The package is far too complex and far more advanced than the needs of such casual users. It will take a good amount of time for anyone serious about word processing to learn all of the features, functions, and benefits of the package.

The package arrives installed for the IBM PC or PC/XT, and this is a welcome surprise from any software vendor. It takes only a few moments to configure the package and then the user is off to the races. Simple usage of Perfect Writer can be achieved in just a few minutes by selecting the Create a Document choice from the main menu. Those familiar with other full-feature packages will have little problem adapting to the workings of Perfect Writer, but there remains a learning curve to be overcome.

While the documentation claims Perfect Writer to be very fast at running spelling checks, this was not evaluated, since the speller is a separate add-on extra cost package that was not made available to the evaluation team. For those interested, the Perfect Speller dictionary includes over 50,000 words, can look up approximately 4,000 words per minute, handles a 20-page document in about 7 seconds, and has an estimated error rate of 2.2 words per thousand scanned and 2.9 if an extra 1,000 words have been added to the dictionary. Perfect Speller also allows a user to add to the current dictionary or to create a new

Perfect Software Perfect Writer
Word Processing Package

dictionary to be accessed by the program. This is a definite plus, but it should be noted that the size of the current, or newly created, dictionary cannot exceed the memory limitations of the RAM because there must be space reserved both from DOS, Perfect Writer, and Perfect Speller, in addition to the dictionaries. Memory swapping features generally cannot be extended to include the dictionaries in addition to the working text files.

☐ Support

Perfect Software maintains a separate end-user support department with a toll-free number 800-222-4222. At the time of this review, not all of the toll-free phone lines had been installed, and we were referred to several toll numbers for some needed information. To use the toll-free numbers, a user must first fill in and return the warranty registration card, at which point a listing is made which includes the user on a mailing list for complete information on future release notifications and reduced-fee update availability. No customer classes are offered, but support is available from local dealers and distributors. Perfect Software representatives provide dealer training classes to promote this method of bringing training to the end user.

☐ System Interface

Perfect Writer interfaces with any file that can be imported in ASCII format. This includes most of the other programs the company offers, such as Perfect Filer, Perfect Speller, and Perfect Calc. While ASCII file format is easily converted (via translation components on other systems), no support is provided for DIF (Data Interchange Format) files; this would seem a definite plus for a new release.

☐ Vendor Experience

Perfect Software has been in existence since the fall of 1982. Perfect Writer, one of the company's earliest products, was issued that year, and later upgraded to meet the opportunities available in the 16-bit IBM PC and PC/XT market. While the vendor did not reveal the number of packages sold, it is estimated to be over 75,000 since introduction.

■ PRODUCT OVERVIEW

☐ Terms & Support

Terms • Perfect Writer is available for purchase only from Perfect Software, through computer dealers, software wholesalers, and mail-order firms both in the U.S. and internationally; the retail price is often discounted by mail-order and software dealers; Perfect Software offers quantity discounts to volume corporate or other organizational users.

Support • technical and customer support is available via a telephone hot-line: 800-222-4222; updates are available to registered users at a reduced fee; new product announcements are made available by free literature sent by the vendor.

☐ Component Summary

Perfect Writer is provided on 4 single-sided, double-density 5.25 inch diskettes. These disks are not copy-protected. The first of the 4 disks is the installations diskette, used to configure for a specific printer. It includes 2 files: pfconfig.com, the configuration program; and test.mss, a test file to be used when installing a new printer.

The edit diskette contains menu.com, the main menu guide: pw.com, the main edit program; pw.hlp, a HELP menu summarizing commands: pf.dat, the data file holding configuration data on the printer specified; and pf.com, the component responsible for formatting or printing in typewriter mode.

The third disk is the printer diskette. It contains 4 files: menu.com (the same as described above); pf.com (same as above); pp.com, a component responsible for guiding a formatted document through the specified printer; and pf.dat (also as described above).

The fourth diskette is the lessons diskette, which guides a new user through the use of the commands, menus, and storage and printing routines available.

Perfect Writer:

$495 lcns

☐ Computers & Operating Systems Supported

Perfect Writer was first designed in 1982 in the "C" programming language for 8-bit, CP/M-based microcomputers, but with the expectation that it would not be long before a new version could take advantage of the newer generation 16-bit micros. As such, this highly transportable language has allowed Perfect Writer to operate under CP/M, MS DOS and PC DOS, as well as a large variety of compatible microcomputers. Since the program can accept ASCII text, it is only a matter of disk formatting that may prevent the transfer of files from a large number of machines. Even then, a telecommunications line and modems can reduce the problem to almost zero.

☐ Minimum Operating Requirements

Perfect Writer requires 64K bytes of RAM to operate, but 128K bytes is recommended. The program allows a virtual memory to be established with memory swapping between RAM and a separate floppy or hard disk subsystem from the one holding the program. It is necessary to have at least 2 single-sided floppy disk drives that use double-density diskettes to enable this feature.

☐ Features

Perfect Writer is a word processing package that provides the tools necessary for the generation, editing, and reformatting of documents of very simple to very complex design, from small size to large size. The 64K memory with the swapping feature enabled can accommodate up to 25 pages of double-spaced text.

Full-Screen Editing • Perfect Writer supports full cursor movement; it supports fast moves to characters, words, sentences, paragraphs, end, home, next, and previous page, as well as beginning or end of document.

Block Mode Operations • full copy and move operations are accommodated between buffers, memory-swapped virtual locations in RAM, to disk or back, and between windows.

Complex Formatting Capabilities • provides a large array of formatting capabilities, including headers, footers, 10 different typeface commands, sectioning commands for titling chapters, sections, subsections, paragraphs, appendix, and appendix sections; when the variable string command is used, titles can be variably manipulated for cross-reference.

Multiple Windows • supports up to 7 discrete files to appear 2 at a time via the split-screen feature; allows scrolling in either window for block moves or copies between them; editing can take place in either of the 2 windows displayed on the screen.

Glossaries • available in Perfect Speller, but not reviewed.

Complete Style Sheets • all formatting instructions for a given type of document can be stored in configuration settings for use in new text files.

☐ Other Facilities

Perfect Writer is able to accept any ASCII text file, but the major use of this feature is to import data (in ASCII file format) from Perfect Calc, and to allow mail merging with the Perfect Filer program. The

LCNS: license fee.

Perfect Software Perfect Writer
Word Processing Package

document design lessons discussed in the Perfect Writer documentation cover all of the necessary fundamentals required to interface these packages. Through the use of the variable manipulation commands, a diverse array of designs is possible. These, however, are most assuredly the most advanced uses of the package, and rely upon a user's knowledge of other, more fundamental, commands as a prerequisite.

• END

Quic-N-Easi Q-Pro 4
Data Management Package

■ PROFILE

Function • database management.

Computers/Operating Systems Supported • IBM Personal Computer, IBM XT, Compaq, Chameleon, Hyperion, and all computers supporting the CP/M, MP/M, and TurboDOS operating systems/PC-DOS, MS-DOS, CP/M, MP/M, MP/M-80, MP/M-86, MmmOST, MUSE, NSTAR, and TurboDOS.

Configuration • 128K bytes of RAM, 2 doubled-sided, double-density floppy disk drives or hard disk; monochrome display or color-graphics board and the appropriate monitor; printer with appropriate interface is recommended.

Current Version/Version Reviewed • Version 2.11/Version 2.11. (evaluation copy.)

First Delivery • September 1981.

Number of Installations • 3,500.

Comparable Products • dBase II, Knowledge Man, Rbase 4000.

Price • $395, 8-bit single-user systems; $595, 8-bit multiuser systems; $595, 16-bit single-user systems; $795, 16-bit multiuser systems.

Vendor • Quic-N-Easi Products, Inc; 136 Granite Hill Court, Langhorne, PA 19047 • 215-968-5966.

Canada • Harso; 607-165 Larose Avenue, Weston, ON M9P 3S9; 416-245-8190 • Cogitech; 147 Laurier Boulevard, St. Basile, PQ J0L 1S0; 514-653-2100.

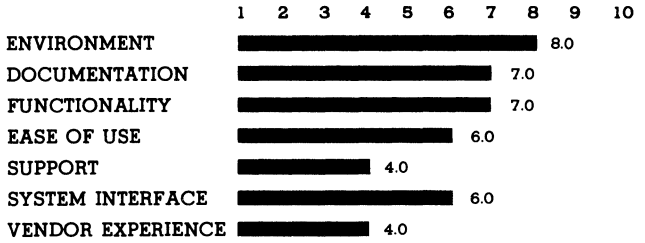
■ ANALYSIS

Q-Pro 4 provides the data processing professional with a fourth generation system to design applications. It is not a particularly user-friendly package, nor does it possess a large number of predefined procedures or formats. Consequently, it is not easy for a nonprogrammer to master. However, it is quite powerful in scope and implementation. It features facilities to design screens for data entry and maintenance, records for information storage, and reports for control and information, and it possesses a procedural language which will allow the programmer to tie all of the pieces together and create complete applications. In addition, Q-Pro 4 provides the capability to perform operating system commands and execute machine language subroutines from within the developed application.

Q-Pro 4 is not restricted to a particular type of database management system (DBMS) since it supports indexed sequential, random, and sequential file organizations. Sequential files may be generated by other products, but the programmer is responsible for the establishment of the database organization (relational, hierarchical, etc). Neither is this product restricted as to the number of records per file or the number of characters per record; however, a file must not exceed 80M bytes in length.

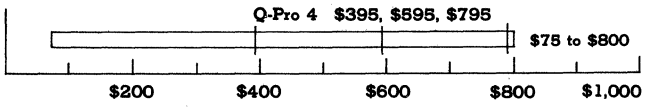
There is still a disagreement among corporate information managers on the benefit of permitting user organizations to use even a high-level programming language. If a corporation elects to support a degree of user programming, Q-Pro 4 is a better alternative than actual programming languages. If it is to be used, however, the growth of its use should be monitored to insure compliance with corporate policies.

PRODUCT QUALITY RATINGS*



*For an explanation of rating criteria, please refer to the Data Management Features section in the Software Evaluations (805) report. The Overall Package Average is 6.0.

PURCHASE PRICE RANGE Software Price Range



QUIC-N-EASI Q-PRO 4 PRICING • open bar shows the typical range of prices for **DATA MANAGEMENT** software used in a corporate environment • the vertical line within the bar graph indicates the price of **Q-PRO 4**, the evaluated product, relative to the price range of similar products.

□ Strengths

One of the features which sets this product apart from the more traditional database management programs is its emphasis on creating a "runtime" module which can be used independently of the rest of the product. This means that it is a reasonable vehicle for the development of corporate-wide utility packages. (An "Author's Package" is available from the vendor, at additional cost, which provides additional utilities.)

A second feature worthy of note is the interface which Q-Pro 4 provides to the world outside of the developed application. It provides a straightforward means of invoking operating system commands from within the developed application without requiring that the programmer know the intimate details of the interface. This reduces the level of expertise and intimate knowledge of the machine operating system generally required to accomplish such a task.

A third feature which adds to its marketability is that the product supports a wide variety of computers and

Quic-N-Easi Q-Pro 4
Data Management Package

operating systems. In the corporate environment, this would mean that the logic for an application could be developed for a wide variety of users on a single system. To be sure, it would be necessary to configure the application for the particular runtime environment and reenter it to conform to the particular operating system. It would not have to be redeveloped.

☐ Limitations

The Self Teaching Guide section of the manual is, at best, a reference to the order in which tasks should be accomplished. It does not provide a clear or coherent means of learning to use the product. It makes the mistake of imbedding commands within the tutorial without explaining which are required to successfully complete the tutorial. It also has some annoying typing errors, particularly ones which instruct the user to select an inappropriate menu item. Fortunately, the remainder of the manual is in much better shape.

The editing facilities, especially when entering commands for the interpreter portion of the product, are less than ideal. While in this mode, the return key is used to signify completion of the phrase and the "new line" key is also used in its place. Unfortunately, a definition of what keys constituted the new line key was not included with the IBM PC version of the product that we tested. The insert key was implemented in a restrictive manner. When depressed, the product inserted a blank space at the current cursor position and shifted the line to the right. The backspace key was not even defined. While there is a utility provided for the customization of this interface, it was difficult to locate the instructions for it.

In general, the level of difficulty in using the product is not inappropriate to the pseudo-programming orientation of Q-Pro 4, but that level probably is inappropriate to the average office user.

■ HANDS-ON EVALUATION

Installation of the product consists of making working copies of the diskettes, then configuring them to the particular machine and operating system on which the product is to run. As a general rule, it is a good practice to read through the Addendum supplied with the package before commencing the installation. We read on the final page of the Addendum that the product is already configured for PC-DOS and that the only additional benefit to be gained from the setup procedure was the tailoring of the keyboard, highlighting, and the like. As a result, no additional installation was necessary.

After installation is complete, the next step is to attempt the tutorial. In Q-Pro 4, this is entitled the "Self Teaching Guide." It is the worst section in an otherwise good manual. It is hard to follow, not explicit enough in providing instructions, and contains typographical errors of a serious nature. For example, the beginning of the third segment, entitled "The Interpreter," instructs the user to choose choice "D" from the main menu of the file building program. In the text, it describes this choice as the "Field Format Definition," which is incorrent. Option "F" is the correct choice for defining the field. It is especially bad that such an error occurs in the tutorial section which is usually the first look that an individual gets at a particular product.

After completing the tutorial, our technical staff designed and implemented a menu selection program to facilitate the interfacing of most of our commonly used software.

☐ User Interface

Q-Pro 4 uses a combination of menus and function keys to provide the user with the tools to build an application in a short period of time. Screens are designed online with the help of menus, files are defined via menus, and reports are prescribed via a combination of screens and menus. The result is a facility wherein most of the tedium of screen, record, and report definition has been reduced to an acceptable level and the power of a stylized programming language added to render the development of an application easier and quicker.

Menus: Menus are used to control the flow of the developer from one subsystem, such as format building, to another. Menus are single level, but link to other menus. Menus are displayed only when necessary for the operation of the product.

Control characters: In the PC-DOS version, control character sequences are not used.

Function/special keys: Generally, the F10 function key, designated as F0 by the product, is used to trigger an operation. It is used to toggle the graphics capability on and off in screen development mode, and to exit to the in-screen test mode. The fact that a function or special key has been depressed can be detected by an application developed with the product.

Command language: The product possesses a comprehensive programming language. Included are commands which include arithmetic, logical, and file handling functions. Also variables, tables, and registers are supported. The structure and syntax of the language is similar to other programming languages such as BASIC. An example of a logical command is: IF CUSTNO GE 10 AND CUSTNO LE 100 THEN END which states that if a field named CUSTNO is between 10 and 100 then no further processing is to take place for this record.

Positive feedback: The user is generally informed if a potentially destructive command is issued and given the chance to change his mind. Applications written with this product will not necessarily be so forgiving.

Status display: None.

Help facilities: Help screens may be built into the application being developed via the Help command. This allows an unlimited number of Help Screens to be displayed by a user in sequence. Assistance to the developer is more subtle: a trace feature is present for use in running procedures whether in screen or report development. In addition, the development screens generally state the range of values allowed for their particular fields.

☐ Environment

Q-Pro 4 runs on a wide variety of Z80 or 8086/8088

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computers. Operating systems currently supported include CP/M, MP/M, MP/M-80, MP/M-86, TurboDOS, MmmOST, MUST, NSTAR, MS-DOS, and PC-DOS. On the IBM family of personal computers using PC-DOS 2.0 and greater, the product requires 128K bytes of random access memory (RAM) and 2 disk drives. The disks may be either single- or double-sided. If the product is to be run on a system with single-sided drives, 4 diskettes and access to a double-sided drive to make the working copies are required; if the system has double-sided drives, only 2 diskettes are needed.

We tested the product using an IBM PC with 192K bytes of RAM, 2 double-sided disk drives, a color monitor, and an Okidata Microline 92 printer. Incidentally, the product supports color for its own displays, but not for the applications that are created using it. We also ran tests using an IBM XT with 512K bytes of RAM, a color monitor, and an Anadex WP6000 printer. We experienced no difficulties with either system configuration.

☐ Documentation

The product comes with a single manual in a slip-case cover and a Quick Reference Card. Unfortunately, the manual is written with an eye toward the CP/M operating system, but it is useable in the PC-DOS world without difficulty. Those paragraphs which explain a particular CP/M quirk can be bypassed without losing continuity. The manual is divided into several sections by index tabs. The sections are titled: Self Teaching Guide, Programmer's Reference Manual, File Item Descriptor (FID) Generator, Report Generator, System Commands, and Appendicies and Supplements.

The Self Teaching Guide is intended to be a tutorial on the basic operation of the system, but we found it to be poorly organized and proofread, which detracted from its effectiveness. On the other hand, we found the remaining sections of the manual to be of more use—even the tutorial portion of the Report Generator section was helpful. The index is quite sparse in its inclusion of terms and references.

The Appendicies and supplements section contains an explanation of error messages and a cross-reference of trappable errors, a list of reserved words, instructions on interfacing with files created by other products, hints for better programming, definitions of the key assignments for screen graphics, and discussions of the several utility programs.

☐ Functionality

Our technical staff had been on the lookout for a product which could be used to develop a menu control program. This product seemed to fit the bill. Accordingly, after the completion of the tutorial, they used the system to generate an application control program which was file-driven and which could, therefore, be tailored to each individual user's system. In addition, it was decided to implement a password access module which would deter (prevention via software alone is not currently possible) unauthorized access into the system.

The product contains all of the features necessary for the development of the above application. It possesses a screen format builder with which our staff was able to easily generate screens for the applications. The procedure is a multistep process. First, the screen is given a name, second, the background format is built, third, the variable portion of the screen is added, and finally, the processing logic of the screen is entered.

Our technical staff used the "N—Name Format File" option to create PSWDPROT.QP4 (password protect) and MENUSLCT.QP4 (menu select) screens. Once named, the development of the layout could proceed. Our staff chose to place a copyright statement and a credit to Q-Pro 4 in addition to the "Please enter password" prompt, for the background of the password screen, and a simple corporate heading with the "Please enter choice" prompt for the menu screen. We experienced no difficulties here, but we did find that graphic characters could be added after we had already entered the screens. It was a simple task to call up the screen and change it.

The variable portion of the password screen was simple, just an 8-position alphanumeric field for entering the password defined as "may enter," "must enter," and "must tab." "May enter" allows the operator to enter data into the field, "must enter" requires that data be entered into the field, and "must tab" requires that the operator use some form of cursor control key to proceed beyond the field.

Once the field was defined, our programmers added the logic to inhibit other means of bypassing the screen such as the control/break key combination and the password validation logic. (This is the area which will be most difficult for non-data processing professionals to implement in a reasonable manner). One feature of note here is that the field can be defined so that it is not displayed to the operator or to the person looking over a shoulder by adding a question mark to the field descriptor.

Similarly, the menu selection data elements were laid out on the background screen and defined. We chose to display a maximum of 8 items on the screen at a time. These items would consist of a letter choice and a description and would be variable, but we would not allow the operator to change them. Q-Pro 4 has the facility to do so by replying "N" to the "May enter" prompt. These fields would be filled, up to 8 at a time, from an external file. The operator would only be able to enter data into the selection field. Again, function keys were inhibited. Each of the choices on the menu was linked to other products using the "Run" command.

Q-Pro 4 is more of a programming language than a database or traditional application package. It possesses more features for complex tasks than any conventional application generator, but is more suited for light-programming environments because it requires some level of programming skill to manipulate it to its full potential.

☐ Ease of Use

Our professional staff provided sample screens drawn up to include the verbiage that they wanted. Their report indicated that the facility for the design of forms via the system was very satisfactory. Via the system, they were

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also able to add character graphics, which added a professional touch to the screens. They were disappointed to learn that color was not supported for the applications which were being developed. Indeed, it is only supported during the development process.

Our programming staff found the editor supplied with the system to be inadequate when compared to the features found on a standalone editor. Functions such as block moves and text are not available. The authors mention a facility which allows the use of a separate text editor for entering procedures and tables called QBUILD. The index lists it on the third page of the Introduction section which defines QBUILD.COM: "Converts a program file written with a text processor to a Q-Pro 4 program file." No mention is made there about how to implement the command. (When invoked by keying: "QBUILD," the system responds with: "IMPROPER PARAMETER LIST." However, buried on the fifth page of the Utilities section under the heading of "TEXT FILE CONVERSION" our staff found a discussion of the QBUILD utility, the use of which makes the entry of procedures bearable but still cumbersome. Unfortunately, there is no utility to extract an existing format to a text file.

Our professional staff became involved in the preparation of reports via the Report Generator. They found it as easy to use as the screen formatter in that using it is as simple as laying out the report on paper. However, they again left the details of implementation to the programming staff.

The report generation process includes facilities for dividing each page of the report into "regions," each of which may have its own rules for displaying fields including field editing and the like. In this manner, headings and footings which may not contain any file-dependent fields are added to the body of the report. In addition, other regions may be defined which are used to control the input files and processing but do not produce any visible output. The result is a flexible, but somewhat complex, method for describing almost every conceivable report layout.

There is also a "Quick Report" facility which our programming staff found invaluable for the generation of file verification lists. This was especially useful during the creation of the menu control files which were later used to fuel the menu selection application.

Those of our organization with a programming background or at least a familiarity with programming concepts had no problems using Q-Pro 4, but our non-DP professionals and clerical staff found the capabilities of the product generally more difficult. It was not so much that the selection of options or building of tasks was difficult, but that the concept of what to do was more difficult to understand. With some assistance from our technical staff, most of our professionals could perform some low-level Q-Pro 4 programming, but without it we doubt we would have had much success.

☐ Support

Quic-N-Easi Products, Inc maintains a technical staff ready to answer any questions on the product. They do not, however, maintain a toll-free number. Our technical staff called them early in the review—in fact right after entering the first procedure. We wanted to know if there was another way to enter and update the procedure. The response was that there was indeed such a procedure and that it was called QBUILD.COM. Our staff was then able to track the program down within the manual.

We found the staff at Quic-N-Easi Products to be courteous and prompt even though they profess to "get somewhat testy if you have not read the documentation and tried before calling."

☐ System Interface

Interfacing with other products is one of the strong points of this product. First, the product will accept sequential input from other products without alteration. Second, sample programs are supplied for the conversion of indexed and random files into a format which can be understood by the product. And, finally, the product can invoke other products directly by using the RUN command.

☐ Vendor Experience

Quic-N-Easi Products, Inc has been in business for approximately three years. Q-Pro 4 is their flagship product.

■ DETAILED PRODUCT DESCRIPTION

☐ Terms & Support

Terms • Q-Pro 4 is available on a license for purchase only basis from Quic-N-Easi Products, Inc, through software dealers, computer dealers, or mail order houses throughout the United States, Canada, Europe, South Africa, and Australia; the suggested retail price of the product is dependent upon the size of the machine and the number of users; the author's package costs $1,000 and allows for the distribution to 10 runtime programs; additional runtime modules are available at $50 each.

Support • hot-line telephone support provided by vendor's technical staff.

☐ Component Summary

Software elements consist of the following files and programs. FB.EXE is a program to generate screen layouts and the associated processing logic. FID.EXE is a program to create and maintain file definitions. QPACK.EXE is a utility to pack source files into minimum storage size. QBUILD.EXE is a utility to convert text files into a format useable by the merge option of the format build program. QNE.EXE is the runtime module; RG.EXE is the report generation program and REPORT.EXE is the report processing module. SETUP.EXE is a program to configure the product to a particular system; IVERIFY.EXE is a utility to verify the integrity of an indexed file; REORG.EXE is a utility to organize an indexed file into its optimal state. RECOVER.EXE is a utility to recover a damaged indexed file.

Other overlays and file definition are provided in support of the above programs.

8-Bit, Single-User Package:	**$395 lcns**
8-Bit, Multiuser Package:	**595**
16-Bit, Single-User Package:	**595**

LCNS: license fee.

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16-Bit, Multiuser Package:

795

☐ Computers & Operating Systems Supported

Q-Pro 4 runs on the IBM PC and PC/XT, the Compaq, Seequa Chameleon, Bytec Hyperion, and systems supporting the following operating systems: CP/M, MP/M, MP/M-80, MP/M-86, MmmOST, MUSE, NSTAR, and TurboDOS.

☐ Minimum Operating Requirements

For operation the package requires 128K bytes of memory, 2 double-sided, double-density diskette drives or hard disk, a monochrome display or color graphics board, and monitor. A printer and interface are recommended.

☐ Features

File & Record Limitations • files may be up to 8M bytes in length; there are no restrictions on the number of records per file.

Field Size Limitations • only 2 positions are provided for the field length for screen input forms, which implies a maximum length of 99; however, a field within a file definition may be from 1 to 255 bytes long.

• END

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■ PROFILE

Function • communications product.

Computers/Operating Systems Supported • IBM Personal Computer, Compaq, Chameleon, Hyperion, Eagle, Columbia/ PC-DOS or MS-DOS.

Configuration • 96K bytes of RAM, one single- or double-sided floppy disk drive, monochrome or color/graphics adapter and monitor, an asynchronous communications adapter port (serial), and a modem; a printer with adapter is also supported.

Current Version/Version Reviewed • Version 1.0/Version 1.0 (serial number less than 1400).

Number of Installations • approximately 200.

Comparable Products • Microstuf CROSSTALK, Hayes Microcomputer Products Smartcom, VM Personal Computing Relay.

Price • $75 retail price.

Vendor • ReadiWare Systems Inc; P.O. Box 680, West Redding, CT 06896 • 203-431-3521.

Canada • currently no Canadian distributors.

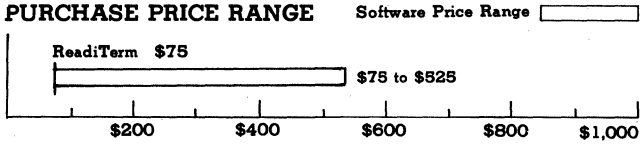
■ ANALYSIS

ReadiTerm is an ASCII (American Standard Code for Information Interchange) terminal emulator program that is versatile in its range of options and settings, enabling the establishment of a TTY-type (teletype) connection to another computer with a minimum of fuss. Once the connection has been established, the product will support nearly any normal communication application.

The product is strictly functional. It offers only communication capabilities and not the support procedures and automatic sequences of commands which, although they do add considerably to the ease of use of a communications product, add considerably to the purchase price. These luxuries must be created by another means external to ReadiTerm.

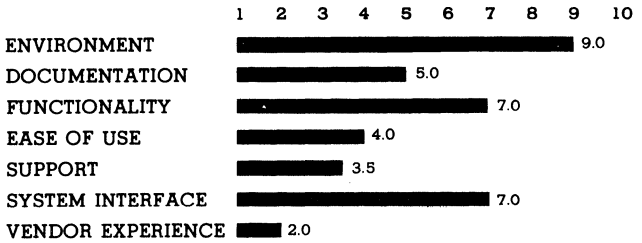
Considering its low cost and high functionality, ReadiTerm is a good communications utility package which is provided with an excellent manual which minimizes the technical skill level necessary to use it. When mastered, it offers complete communications support. Mastering it, however, is not something which businesses can reasonably expect from their office staff. If you want to provide some level of in-house expertise to support this product, it will function well. If not, another choice might be advisable.

PURCHASE PRICE RANGE



READIWARE READITERM PRICING • open bar shows the typical range of prices for **COMMUNICATION** software used in a corporate environment • the vertical line within the bar graph indicates the price of **ReadiTerm**, the evaluated product, relative to the price range of similar products.

PRODUCT QUALITY RATINGS*



*For an explanation of rating criteria, please refer to the Communication Features section in the Software Evaluations (805) report. The Overall Package Average is 5.4.

☐ Strengths

The product comes with a wide range of options allowing for the most diverse of communication links to be established. In addition, file transfer, whether loading to or from disk, is easy and very controllable. Procedure files of commands and text to be transmitted can be created, permitting the product to be used by personnel whose skill level might otherwise make such use impractical.

ReadiTerm protects a user from accidental data loss caused by overlaying an existing file with a newly received one. If a file name chosen for the file to be received already exists on the disk, ReadiTerm prompts the user with an appropriate message.

Help is available anytime on either a command-by-command basis or in its entirety from a menu. Further, the user does not lose his place when using the Help function. When completed, it returns to the place from which it came.

Sensitive data can be transmitted without display, including that data transmitted from procedure files. In this manner, passwords especially can be protected from prying eyes.

☐ Limitations

The procedure files which make the product tolerable in an office environment are extremely difficult to create and to maintain. The skill level required to understand the procedure file generation process is considerable, and there are no internal facilities to expedite the process. Keystrokes cannot be saved to create procedure files, and no internal editor exists to help the user build them or maintain them.

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Error checking in ReadiTerm is primitive. It does not provide online trouble diagnosis or error checking. This can increase the time required to establish an initial communications link, but will rarely interfere after the link is established. It does not provide for the establishment of any automatic means for the examination or editing of the incoming data. The user is given a visual display of the data as it is being received which is generally not very helpful in problem determination.

Data capture to disk is only done from the communications port. The product does not support combining keyboard input with the data from the communications port. It also does not support combining keyboard with disk input to be sent to the communications port. While these features can be provided through the use of an off-line text editor, the combination of a second product with ReadiTerm's technical style results in a package which is very difficult for non-computer personnel to master.

■ HANDS-ON EVALUATION

We paced ReadiTerm through three different communications environments. First, we used the product to connect with the Dow Jones News Service (DJNS) querying the day's quotes on a dozen different stocks. Second, we accessed a corporate mainframe computer to check on some tasks which were submitted earlier and to transfer a memo from the mainframe to our IBM PC where we could use our word processing programs to dress up the format. And third, we took some time to investigate some areas of many local CBBS (computer bulletin board service) networks. In each case there was a particular need to be satisfied by the communication product.

When the cost of access time is a consideration, such as with DJNS, the need is to get in, retrieve the information wanted, and disconnect. Using our Racal-Vadic modem, which is not equipped with auto-dial, we manually dialed the number, connected, then used the "enter" on the PC keyboard to activate the DJNS service program. The standard service, password, and stock queries were performed, the information was saved on our disk, and we disconnected. Once the process was tested, our technical staff established a "procedure" to perform the function for us automatically. This enabled us to complete the service, password, and stock queries; send the information to our microcomputer; save the data on disk; and disconnect in less than one minute at 1200 bps, a connect cost of only 15 cents.

When accessing a corporate computer, the critical issues are rarely connect cost; but two rather unrelated topics do become important. The first is to have functionality equivalent to that which you would have if you were connected to the host with a terminal on site. The second is the ability to make the IBM PC a viable remote workstation without affecting the communications procedures with which the operator may be familiar. ReadiTerm succeeded in the first and failed in the second.

You can do nearly anything you want to with ReadiTerm if you have the expertise to support it. The documentation, while helpful in getting you through communication problems, did not address the issues of trying to make a ReadiTerm environment mimic a mainframe terminal environment. Perhaps it is unreasonable to expect a product so inexpensive to provide both technical flexibility and application-level instructions. We would have preferred the latter.

☐ User Interface

ReadiTerm is a no-frills communications product which allows the user to establish a remote communications link via either the COM1 or the COM2 asynchronous port. It allows the user to define up to 40 function keys which, when filed as a procedure, can automate the establishment of the initial communications link. The spartan quality of the product contributes to its low cost and stability, but its use requires some technical ability or support.

Menus: A menu of available functions is provided as a part of the "Help" feature.

Control Characters: None.

Function/Special Keys: The 40 function key combinations are available for user definition. The HOME key on the numeric keypad is used to enter command mode.

Command Language: Procedures are written in pseudo-command language using a line or text editor. Command language consists of the keystrokes which would be used to invoke the command from the keyboard.

Positive Feedback: None.

Status Display: None.

Help Facilities: Help is available for any command, even in the midst of the transmission or reception of data. The HOME key is used to enter command mode. Keying "Help" while in command mode causes the help menu to be displayed. The help menu contains a list of all available functions. Additional information on the particular command selected will be displayed.

☐ Environment

The product was tested on an IBM PC using 320K bytes of memory, a Racal-Vadic modem without auto-dial, and a Hayes modem with auto-dial. Communication links were established and tested with the Dow Jones network, a corporate mainframe, and with a number of local CBBS networks. The product itself loaded into 96K bytes of memory from one disk drive. Internal memory was set at 160K bytes, 320K bytes, and 450K bytes with no noticeable effect on the performance of the product.

ReadiTerm permits a user to establish communications as an ASCII terminal device, capture data from the host and place it on a file in the IBM PC, and transmit a file residing on disk within the IBM PC to the host computer. The product may easily be configured in many different ways, permitting the use of diverse configurations and types of equipment. ReadiTerm also supports printed output of the data received via the communications line, but a printer is not required for standard operation. Either a color or monochrome monitor with the appropriate interface may be used. Additional disk drives are also supported for transmission of files to and from the PC.

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☐ Documentation

ReadiTerm divides its documentation into three areas: an introductory section with an overview, a section on commands and functions, and a section on operating procedures. The writing is clear, detailed, and organized in such a way that it is easy to locate information when needed.

The overview explains backup procedures for the product. The assumed level of technical knowledge is of a beginner and, consequently, nothing is overlooked.

So often, communications documentation will describe the many rich options of its software without a corresponding explanation of the choices. ReadiTerm, however, takes the time to describe the option and provide an explanation of the choices and their respective differences. The "SET" command for the parity option is an example of the product furnishing information about communication in general and how to trouble shoot a "parity" line error in particular.

The final section is devoted to exploring ReadiTerm's special features. As noted about the first section, little is left to the imagination. Screen displays are used to demonstrate a typical procedure for a modem with auto-dial. And, where appropriate, sufficient technical details are supplied describing cable and pin values for communications via modem and locally attached computers. Also, this section includes an explanation of the file transfer and data-capture-to-disk functions. This section is rich in explanation and insight into the realm of telecommunications.

What was missing from the documentation was any clear picture of how to apply ReadiTerm to a problem. Sure, we could troubleshoot a parity error (not that that's been much of a problem), but to do that we first had to get connected to our systems, and that application-level help was very sparse. ReadiTerm is a product for communication specialists or people who want to become specialists, and the documentation shows that.

☐ Functionality

The HOME key is the heart of ReadiTerm. Pressing the HOME key places a user in command mode, which allows the start up of file transfer, printer functions, or employing of HELP, while still maintaining a communications link. In command mode, a user may either enter a primitive command directly, or invoke a procedure which contains many commands and is saved on disk files.

The first time our professional staff accessed DJNS, we were novice users of ReadiTerm. We tried the DOWJONES.PRC procedure, helpfully supplied with the product. The first attempt failed because the procedure was meant for a modem equipped with auto-dial which, as it turned out, we were not using. An attempt was then made to make the connection manually, but before we could do so, a message, "DATA NOT RECEIVED IN 30 SECONDS. RUN ABORTED.," was displayed on the screen, and our connection was severed. Frustrated, we turned to the manual for help.

Here, the documentation was good in explaining the commands to use to communicate with the modem and the communications port. Some confusion arose because the sample files pre-supposed that a modem equipped with auto-dial would be employed. Once we realized that our modem was not so equipped, our technical staff was able to modify the procedure to take over the chore of service startup, password, query of the stock database for our desired stocks, and disconnect. When using a modem equipped with auto-dial, a few additions to the procedure made it possible for the task of retrieving the data to be accomplished without requiring our intervention except to initiate it.

Our technical staff modified the procedure written for DJNS using the PC-DOS-supplied line editor, EDLIN, and created both auto-dial and manual dial procedures to establish our communications link and entry into our data center system. Experienced now, we established a link on the first try and successfully "logged in" by way of our procedure. Overall, the product was found to be easy to use and functional once connection was made. The transfer of data always under the control of the user was found to be a plus. We found ReadiTerm a useful utility for data transfer and for checking the status of jobs submitted earlier.

Trying some of the local CBBS networks in the area allowed us to test some of the different options and settings. From Radio Shack's TRS computers to Digital's PDP-11s, even though there exist myriad differences, we were always able to accommodate the target computer's communications requirements. There was no question that the communication option flexibility was adequate with ReadiTerm. One target system's default terminal width was 40 characters; ReadiTerm accommodated it automatically. And, on another, we experienced parity errors, but were able to identify them from reading the documentation and correct the appropriate option. Once again, we found the product a reliable, basic, no-frills communications utility.

Once procedure files were established for each application, we found that untrained personnel could easily use ReadiTerm and apply it to file transfer or query applications with confidence. Unfortunately, the task of building such procedures could only be performed by our technical staff.

☐ Ease of Use

It is not recommended that ReadiTerm be loaded and executed by a first-time user without having cracked the manual. And yet, the documentation included with ReadiTerm is sufficient such that, once a user has mastered a few basic functions of ReadiTerm, even the novice is capable of utilizing approximately 70 percent of its offerings. Herein lies the rub, however. Does a novice really need to set parity? Someone does, of course, but the ideal situation for office use would be the generation of procedure files for the operation of the system by the staff. The procedure files are powerful tools, allowing all program functions to be controlled at the push of a button. But procedure files are part of the 30 percent that the novice user cannot utilize.

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The big problem with procedures is that they must be entered in a form of command language via a line editor, such as IBM's EDLIN (which is not particularly easy to use) or via a special full-screen text editor which the user must purchase elsewhere. Most standard word processors will use special data formats and may not be used as a command editor for ReadiTerm. While other products permit a user to SAVE a sequence of commands, the ReadiTerm concept requires that they be entered out of context and even out-of-program. Our programming staff could do this; thus, all our successes with the product are prefaced with "the technical staff. . . ." Alone, we could never have made it work.

Once a procedure is written, the operation of the program improves considerably. The Help function, always available even in the midst of data transfer, provides a needed base from which to more fully understand the product. Help generic, invoked by typing HELP after pressing the HOME key, displays a menu of the available commands to the user. From there, a user may query a specific command or exit and return to the point from which he came. The online facility was found to be very helpful, with clear, specific information about each of the commands.

A user may define up to 40 function keys as commands, data sequences, or whatever. All functions of this type can be made permanent by building a file which defines the keys and by saving that file on disk for future uses. Again, the procedure must be set up external to ReadiTerm.

A plus is the product's ability to direct its communications to either of the standard serial ports, COM1 or COM2, which allows some users the freedom to keep other devices, especially plotters, attached to the COM1 port.

☐ Support

ReadiTerm assistance is available any time during working hours. To date, no major problems have been encountered and, consequently, little support has been needed—a good sign. We called them on some questions on the application of ReadiTerm to IBM VM/CMS environments, and the staff could not provide us with much help—they said that they needed the questions related in more communication terms. We couldn't do that (they were questions on how to apply the product via CMS setup parameters), so there was an impasse.

☐ System Interface

ReadiTerm is an asynchronous communications product supporting TTY features. Its provision for a varied user configuration ensures its ability to link to any ASCII line at virtually any baud rate within the limits of an RS-232 serial port.

Because ReadiTerm does not emulate a CRT terminal, it may be limited in its applications to some systems. While nearly any computer can support a dumb teletype device, most will not currently, and some adjustment of the communication setup in the data center may be in order.

The product also is capable of functioning in remote and local modes. It provides the ability to transfer files dependably using XMODEM protocol, controlled by the specification of a trigger or prompt "go-ahead" character, or without protocol. Transfers may be accomplished manually or automatically.

The product will work on a variety of systems, generally any running the PC-DOS operating system. All IBM PC-compatible computers can use ReadiTerm.

☐ Vendor Experience

ReadiWare has 4 PC products on the market; ReadiTerm represents their third product. The stated objective of the company is to provide dependable software at very reasonable individual prices. The company is young, bringing its first product to market near the end of 1982.

■ PRODUCT OVERVIEW

☐ Terms & Support

Terms • ReadiTerm may be purchased from ReadiWare Systems, Inc, through computer dealers, software dealers, or mail-order firms throughout the U.S.; demonstration diskettes are available from ReadiWare Systems for $15 which may be applied to the purchase price if bought within 60 days; updates and new releases are available to bona-fide users for an additional $20 • volume discounts cut 15% from the purchase price for quantities of 6 to 20 copies and 30% for 21 to 50 copies.

Support • telephone support available during normal business hours.

☐ Component Summary

The product comes on one single-sided diskette containing the following files and procedures: RT.EXE is the main command to start ReadiTerm; RT.HLP is a file invoked when requesting help; RT.PRF are the default values of the SET function—a general set of values for establishing communications; SOURCE.PRC is a procedure for establishing a communications link with the Source; COMPUSEV.PRC is a procedure for establishing a communications link with CompuServe; and DOWJONES.PRC is a procedure for establishing a communications link with the Dow Jones financial network.

ReadiTerm:

$75 lcns

☐ Computers & Operating Systems Supported

ReadiTerm runs on the IBM PC, Compaq PC, Seequa Chameleon, Bytec Hyperion, Eagle PC, and Columbia with PC-DOS or MS-DOS.

☐ Minimum Operating Requirements

The package requires 96K bytes of memory, one single- or one double-sided diskette drive. Also required are a monochomre or color/graphics adapter and monitor, an asynchronous serial communications adapter port, and a modem. A printer with adapter is also supported.

☐ Features

Type of Product • asynchronous teletype terminal emulator, with file transfer support for both sending and receiving files.

Target Host Computers • any system capable of interfacing a teletype/teleprinter terminal, particularly minicomputer systems such as the DEC PDP-11 family; some users may have to adjust data center communication hardware or software for use.

Protocol • asynchronous, ASCII code set.

Data Rates Supported • to 9600 bps, may be limited by modem unless direct system connection is employed.

Format Conversion Features • none.

LCNS: license fee.

ReadiWare Systems ReadiTerm
Communications Package

Automatic Setup Features • communication parameters and command sequences may be set via procedure files created off-line with any text editor program; once such files are set, the operator may invoke one or more to perform routine tasks; function keys may be assigned values to generate text, and the values may be locally defined or set in procedure files and thus more global.

• END

Redding Group, Inc GrafTalk
Business Graphics Package

■ PROFILE

Function • business graphing package for production of line, bar, pie, or symbol charts from directly keyed data or from the output of popular spreadsheet programs.

Computers/Operating Systems Supported • IBM PC and PC/XT under DOS operating system, DEC Rainbow, Zenith Z-100, Epson, most systems running MS-DOS, most systems running CP/M level 2 or MP/M.

Configuration • minimum hardware requirements vary depending on computer, operating system and data used; requires one double-sided diskette drive and one graphics device; support is provided for most plotting and graphics peripherals available; contact dealer for latest information.

Current Version/Version Reviewed • Version 3.23 for 16-bit machines; 2.19 for 8-bit machines/Version 3.23, Release 1, tested on an IBM PC.

First Delivery • April 1982.

Number of Installation • not available from vendor.

Comparable Products • Software Publishing Company pfs:Graph, Graphic Software Chartman, C.R. Toren, Ltd Executive Graphics.

Optional Associated Software • though not a part of GrafTalk, Redding Group also provides GrafLib and GrafLib-GK, two collections of graphics subroutines for use in programs written in other languages.

Price • $450 retail price.

Vendor • Redding Group, Inc, 2730 High Ridge Road, Stamford, CT 06903 • 203-329-8874.

Canada • sold on OEM basis through U.S. distributors.

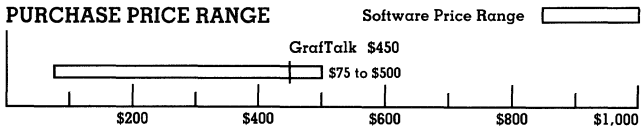
■ ANALYSIS

The primary need of a user of a business graphics package is the ability to display information in the manner that the user feels is most likely to get the point across to the viewer. The more options available for making the graphs vivid, attractive and informative, the better. GrafTalk puts every single option under its control in the hands of the user—from the scale, location, shading, and labeling of the graphs produced, to the size, shape, placement, and even direction of the lettering used. It also allows for the manipulation and modification of the data after it has been entered and before the graph is drawn.

GrafTalk combines ease of use in the production of simple charts with power and flexibility for use in complex applications. It can produce bar and pie charts and line and point graphs from any data source where the information is arranged in rows and columns. This allows it to complement electronic spreadsheets that do not have graphing capability, or be used with existing data gathering programs written in any language.

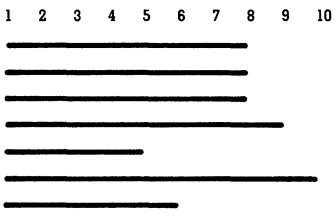
Anyone considering the need to use computer generated graphics in presentations, manuals, reports, or the like would be well advised to take a good look at GrafTalk.

PURCHASE PRICE RANGE



REDDING GROUP GRAFTALK PRICING • open bar shows the typical range of prices for **GRAPHICS** software used in a corporate environment • the vertical line within the bar graph indicates the price of **GrafTalk**, the evaluated product, relative to the price range of similar products.

PRODUCT QUALITY RATINGS*



***For an explanation of rating criteria, please refer to the Graphics Features section in the Software Evaluations (805) report.**

☐ Strengths

GrafTalk's major strength is the combination of the number of options available to the graph designer and the ease of use of the package. Every option has intelligently selected defaults that allow the user to concentrate on those portions of the graph for which customization is desired. As soon as you determine how to enter your first set of data, you may immediately begin creating graphs. In some graphing packages, this is both the beginning and the end. In GrafTalk, you spend the next several sections of the tutorial manual examining how to alter any characteristic of the graph desired. You may change the placement of the automatically created legends, add explanatory text anywhere on the graph, or restrict it to a portion of the page to allow room for typeset text or other graphs.

All commands can be entered from the keyboard, or from a previously created control file. GrafTalk also includes a simplified version of a text editor called SCATE to allow the creation of control and data files without leaving GrafTalk. Command output may even be switched back and forth from a control file and the keyboard, allowing one to construct a pre-packaged graph control file that prompts the user for guidance at particular points. You may create your own custom-made menus, and invoke them from a control file to guide your own user through a commonly needed graph production.

GrafTalk contains commands that allow easy manipulation of the data sets after they are entered into the system.

Redding Group, Inc GrafTalk
Business Graphics Package

This includes such operations as creating new rows and columns of data, with new values calculated from the optional data entered, much like the way electronic spreadsheets operate. In cases where the original data does not come from a spreadsheet package, the package can eliminate the necessity of spreadsheet processing altogether. The user should note that the spreadsheet capabilities available are a small subset of the many complex features available in today's spreadsheet package.

☐ Limitations

The menu system provided by GrafTalk is a good concept. It is an optional alternative to command mode for novices and occasional users, but can also be used to create menus for a user's own applications. However, one is warned in the first few paragraphs describing menu mode in the manual that operations are slowed down considerably over command mode, and that menu mode is not intended to be the general mode of operation for GrafTalk. The most patience-taxing part is the slowness with which the menus are written to the screen, one line at a time, at a very deliberate pace.

The menu system in general and the HELP facility in particular are further degraded once the user begins drawing graphics on the screen. As soon as the first command is given to actually produce an image on the screen, the screen is put into graphics mode, and exactly one line is saved at the bottom of the screen for further command input or HELP file display. Each line of text written or typed into the command line is very slowly erased to make room for the next line. Reading the HELP file one line at a time would be problem enough at a decent rate of speed, but the pace used is so slow that the mind wanders and cannot retain the train of thought, and one eventually reaches for the reference manual instead.

A spokeperson for GrafTalk stated that these indeed were the most commonly mentioned shortcomings of the product, and said that both problems are currently being addressed.

The only other item missing from GrafTalk is the support for a joystick, mouse, or other type of pointing device. Though GrafTalk has a joystick mode that allows the user to explicitly place text or legends exactly where desired, it requires the use of the keyboard cursor control keys to move the cursor pointer. This is definitely a benefit for the majority of systems that do not have other pointing devices, but it is a shame that those that do have them cannot use them to their advantage. There are currently no plans to add support for alternate pointing devices.

■ HANDS-ON EVALUATION

GrafTalk is delivered on two double-sided diskettes. One diskette is the INSTALL diskette, the other the MAIN diskette. Upon execution of the installation program, the user is given the option of changing any of a number of options associated with the program, including the actual device drivers installed, any special terminal handling functions needed, and the default settings of all of the graphing options. This last group includes such items as the sequence of colors and shading techniques to use for graphs, the symbols and line types used in line plots, and the size and shape of the characters used for each of the labeling sections. The user may override each of the default option settings by command in the main package, but if settings different from the defaults are needed the majority of the time, the defaults themselves may be changed by running INSTALL.

The main disk is not copy protected, allowing easy backups and installation on a hard disk system. Once a data file is created, the tutorial manual has the user drawing complete graphs with legends, axis names, titles, and tick mark labels in just seven commands. The simplicity and appropriateness of the commands allow the tutorial to rapidly take the user through most of the common variations and some of the special features of bar charts, pie charts, line, and point plots. The only thing the new user is likely to stumble on, if he tries some tricks on his own, is the fact that all of the option settings are remembered from one graph to the next, unless the INITIALIZE command is issued. The importance of this feature becomes apparent later when trying to fine-tune a graph operation without re-entering every command.

Some of the more sophisticated features that are supported on the IBM PC graphics monitor include printing text horizontally or vertically in several different character sizes. Attempts to print text at an angle were rounded to the nearest 90-degree angle, and even-numbered character sizes were treated the same as the next lowest odd-numbered size. This ability to accept requests for particular attributes and to produce the best result possible instead of complaining is an important feature, allowing the transportation of a graphing model across several devices without modification.

☐ User Interface

The GrafTalk user interface consists primarily of a simple, straightforward command language. Commands may be entered from the keyboard, or read from a control file. A menu facility is also available, but is recommended in the manual for use only by novices and infrequent users.

Menus: The current menu system available in GrafTalk is a simple yet flexible scheme that allows the display of a small file of text listing the various options and some identifying letter or number. A command file drives the menu, accepting the user's selection and invoking the function desired via explicit command. The user cannot bypass the menu system selectively, but can leave it to return to command mode. Instructions are given to allow the user to incorporate the use of the menu system in his own control files.

Control Characters: Control characters are not used as commands in the command mode of the graphing package, but are used by the built-in editor for modifying data and control files.

Function/Special Keys: Function keys are not used by GrafTalk. The system does make use of the cursor control

Redding Group, Inc GrafTalk
Business Graphics Package

keys (left, right, up, and down arrows) in joystick mode for specifying the location at which to draw an item.

Command Language: The command language consists primarily of OPTION-VALUE pairs with some additional modifiers. Examples include TITLE XYZ INDUSTRIES to define a value to be used as the title, or X LABEL NY NJ CT MA PA RI to define the labeling of tick marks on the X axis. Graphs are actually drawn acting upon such commands as BAR C2 C3 C4, meaning produce a bar graph using all currently select options, using columns 2, 3 and 4 of the data set.

Positive Feedback: No particular feedback is provided for individual commands aside from the detection of command errors, and the final graph display.

Status Display: No status display is provided by the graphing package, though a simple one indicating row, column, file name, and edit mode is used by the built-in editor.

Help Facilities: The HELP command will display a summary of the available functions on the screen, though if executed after entering graphics mode on the terminal it is of limited usefulness. No reference card is provided.

☐ Environment

GrafTalk supports an extremely wide variety of plotters, printers, built-in and separate graphics screens, with more device drivers being added on a weekly basis. Users should contact their local dealer or distributor for up-to-the-minute information on the support for a given device. The installation procedure allows the user to have two device drivers installed at the same time.

GrafTalk also provides a very important feature in the way of support for the portability of graph-producing control files. Commands and features used in the production of complex graphs on sophisticated devices can be used in a less sophisticated environment. Each command will implement the desired function on a given peripheral to the best of its ability. This allows the creation of complex control files to be tested on limited screens or printers, or used by a wide variety of users without constant customization.

☐ Documentation

The documentation binder provided consists of a user's manual, a reference manual, a SCATE manual (the text editor used), and an index. The user's manual is a tutorial that easily leads the user through most of the common usages of GrafTalk, one graph type at a time. It contains pictures of the resultant graphs as drawn by GrafTalk on a sophisticated color plotter. The graphs the user will get on the screen will vary slightly from the ones in the manual, but the differences are usually trivial.

The reference manual is organized by general functional area, such as data entry, bar charts, axis labeling, etc. It has its own table of contents, with an entry for each command that falls under a given heading. Each command description contains references to other related commands that should be read. Though there are occasional examples in the text, this portion of the manual contains no diagrams or pictures.

The four-page index is good, though a little short of references. It would be nice if all command options were referenced separately. Referrals to the RANGE commands in the reference manual can only be found under X RANGE and Y RANGE in the index. A reference card would also be handy.

☐ Functionality

GrafTalk provides a complete system for creating all of the common graph types from data entered via the keyboard, from a data file, or some combination of the two. It provides great flexibility in the usage of data once it is entered. Graphs can be produced from selected rows or columns only, or from user-defined subsets of the complete data set. Additional rows and columns can be created, with values derived from the entered data.

In addition to providing all of the capabilities necessary to produce the graphs themselves, GrafTalk provides numerous methods of modifying and affecting the visual presentation of the graph. A graph can be restricted to a particular portion of the screen (or page), either by reserving a percentage of the screen (RESERVE LEFT 25 or RESERVE RIGHT 30), or by defining a specific region in which the graph must be drawn. This can be used to combine separate graphs in a side-by-side manner, or to reserve space for separate hand-placed titles or legends. Explicit placement of information can be accomplished by entering JOYSTICK mode, and positioning the cursor dot at the locations desired.

The user explicitly chooses the device upon which the graph is to be drawn, with the default being the screen. This allows for a relatively quick checkout of the expected results on the screen before the graph is committed to paper.

☐ Ease of Use

GrafTalk is a separate utility that can be used in conjunction with spreadsheet programs or other data collection utilities to produce graphs. Even though this constitutes a separate step, GrafTalk's acceptance of tabular data makes the process quick and easy. This, combined with the customizable default values and the control file facility that can be invoked from the DOS command line, reduce the effort necessary to produce graphs from another package's data to a bare minimum. With GrafTalk's limited built-in spreadsheet facilities, it may not even be necessary to use a separate package to prepare the data.

The flexibility of the complete default system and the ease with which each default may be overridden free the user of the burden of specifying every single detail, while encouraging him to experiment and develop his own style of presentation.

☐ Support

A separate support group and phone number were given by the main vendor office, though the number did not

Redding Group, Inc GrafTalk
Business Graphics Package

appear in any of the documentation reviewed. No 800 number is available.

The license agreement states that bug fixes and corrections are made available to the registered purchaser for a period of one year from purchase date, but no terms are specified. A spokesperson for the company said that the current pricing of updates is $50 if the manual is not affected, and $100 if a new manual is needed.

☐ System Interface

GrafTalk can accept any data file where the data is represented in tabular format—a series of rows and columns. This makes it ideal for use with spreadsheet programs or any other data gathering programs the user may wish to use. GrafTalk contains numerous facilities for the selection and manipulation of data after it is entered, eliminating the need to specifically modify the method of data production to satisfy a particular graphing requirement.

☐ Vendor Experience

Redding Group, Inc. has been in business for close to five years. Its customer base includes many branches of the U.S. Government, in addition to major corporations around the world. The company does not release information on the number of installations made, but did mention single-order volumes of a significant magnitude. GrafTalk has been on the market for about two years.

■ PRODUCT OVERVIEW

☐ Terms & Support

Terms • GrafTalk is available for purchase only, from Redding Group, Inc, through computer dealers, software dealers, and mail-order firms throughout the U.S. and internationally • quantity discounts are available to the volume corporate purchaser.

Support • the user is referred to the local dealer or distributor for support; a customer support phone number is also available • bug fixes and corrections are available to a registered purchaser for a period of one year, though the terms were not defined in the documentation reviewed.

☐ Component Summary

GrafTalk is a completely self-contained package distributed on two double-sided diskettes. One is the INSTALL disk for the configuring of particular device drivers. This disk contains the INSTALL program, and 10 different screens, printer and plot devices. This disk will vary depending on the version purchased. The IBM PC version included screen drivers for the IBM color graphics card, the Plantronics color graphics card, and the Epson and Okidata printer lines, among others.

The second disk is the MAIN disk, and contains the particular version of GrafTalk for the operating system being used, about 30 menu files optionally used during execution of the program, and one small demo control file that draws a simple bar graph from a small collection of data.

GrafTalk:

$450 lcns

LCNS: license fee.

☐ Computers & Operating Systems Supported

GrafTalk is supported under a wide variety of microcomputers; 8- and 16-bit versions are available. It will run on most CP/M level 2 and MP/M systems, and on most MS-DOS and PC-DOS systems. New systems and peripherals supported are added on a regular basis.

☐ Minimum Operating Requirements

Memory requirements vary depending on the computer, operating system and amount of data being used. One double-sided disk drive and at least one graphics device required.

☐ Features

GrafTalk is a business graphing package for production of line, bar, pie, or symbol charts from directly keyed data or from the output of popular spreadsheet programs. It includes the following features:

Chart Types Supported • bar charts, either vertical or horizontal, with side-by-side, stacked, or floating bars, pie charts, line, and point plots; graphs may be drawn using combinations of different types, either superimposed or side-by-side.

Color & Shading Selection • provides default sequencing of color and shading types, line types and point plot characters, with user override or resetting of all defaults.

Axis Labeling • vertical and horizontal axis labels supported, along with individual tick mark and legend labeling.

Scaling & Image Size Control • scales of both axes, the base and maximum values for each, and the overall image size can be calculated by the program or specifically stated by the user; character size and shape for text can also be specified.

Additional Customization of Graphs • contains capability for adding extra text, lines, or figures drawn by the user; allows explicit placement of legend and text information.

Data Manipulation • accepts any data from file or keyboard with data arranged in row versus column format; includes commands for manipulation of data once entered, including simple spreadsheetlike capabilities; subsets of the data entered may be graphed selectively; also includes a simple editor for hand-modification or entry of data.

Command Language • simple command language used for setting all graph options desired; supports a menu-system that can be used in end-user applications; all commands executable from keyboard or control file.

• END

Reston Publishing The Executive's Guide to the IBM PC

Training in VisiCalc & BASIC

■ PROFILE

Function • introduction to programming in BASIC, how to use VisiCalc, and how to understand the IBM PC manuals.

Computers/Operating Systems Supported • IBM PC/PC-DOS; IBM PC compatibles and MS-DOS not mentioned.

Configuration • 64K bytes of memory, 1 drive, and a monitor.

Current Version/Version Reviewed • version number not provided by vendor.

First Delivery • May 1983.

Number of Installations • 5,000.

Comparable Products • The Executive Package.

Optional Associated Software • VisiCorp VisiCalc.

Price • $49.95.

Vendor • Reston Publishing Company; 11480 Sunset Hills Road, Reston, VA 22090 • 703-437-8900.

Canada • Prentice-Hall of Canada; 1870 Birchmount Road, Scarborough, ON M1P 2J7 • 416-293-3621.

■ ANALYSIS

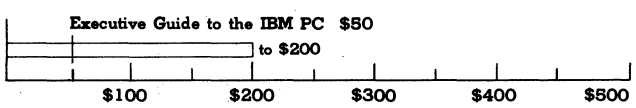
For those interested in learning the basics of BASIC, the product is a very good way to get your feet wet. It can also serve to dramatize some of the reasons to reconsider doing your own programming.

In the corporate world we live in, one is hard-pressed to envision an application where it would be necessary, or even desirable, for a user to be fluent in BASIC. The trend is quite the contrary. Applications programs are becoming more powerful and efficient at the same time that they are becoming easier to use by the uninitiated.

We know of many companies where users are specifically not given access to programming tools. In most cases one of 2 situations will be true. Either a standard package is available to do the job, or the task is so specialized and complex that the beginner would not have the capability to write an appropriate program.

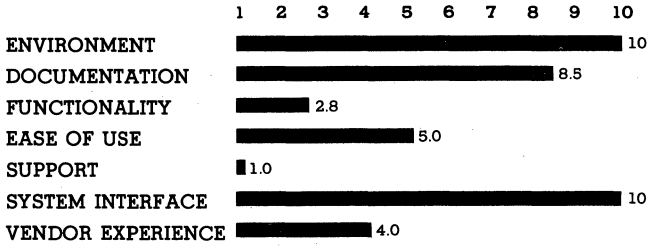
The only possible use for the product in a typical environment would be as an introduction to the concepts of how a computer works and why certain things need to be done the way they are. Is the product useful for learning BASIC programming? Perhaps. Would an executive want to use it? Probably not.

PURCHASE PRICE RANGE Software Price Range



RESTON PUBLISHING EXECUTIVE GUIDE TO THE IBM PC PRICING • open bar shows the typical range of prices for **TRAINING** software used in a corporate environment • the vertical line within the bar graph indicates the price of **Executive Guide to the IBM PC**, the evaluated product, relative to the price range of similar products.

PRODUCT QUALITY RATINGS*



*For an explanation of rating criteria, please refer to the Software Evaluations (805) report. The Overall Package Average is 5.9.

☐ Strengths

The product presents the material in a manner that is easy to understand. The structure is such that one can proceed at whatever pace is comfortable. The use of serial, interrelated examples to teach programming is probably one of the best do-it-yourself techniques.

Everything pertinent to each exercise is covered. Explanations are given as to why something is, or is not, done. In addition, examples are illustrated as to what can happen if a common error is made. This tends to build users' confidence by extending their understanding beyond what is expected, making the unusual less traumatic.

Almost anyone with a PC will, by default, have a system capable of using the product. Almost anyone with any need to program in BASIC will find it at least helpful.

☐ Limitations

The title and packaging can be misconstrued. As a guide to the operation and use of the IBM PC, the product provides little if any more information than IBM's documentation. Furthermore, the suggestion that the material is directed to the executive implies that corporate management should learn to program BASIC, and essentially that is all the product could hope to accomplish.

The section on VisiCalc doesn't match the quality of explanation that was established in the BASIC section of the text. It consists of fewer than 15 pages—less than 10% of the entire text. The section is obviously an afterthought, and the package is one of several which appears to have

Reston Publishing The Executive's Guide to the IBM PC
Training in VisiCalc & BASIC

been reworked from a programming text and applied to general management computer literacy.

■ HANDS-ON EVALUATION

As an "Executive's Guide" we anticipated something that would speed users on their way to understanding how to utilize their new PC. The subtitle regarding BASIC programming may deter some users who have no need or desire to learn programming, but we anticipate that many users may want to get up to speed with spreadsheets.

"Who should use this book/diskette package?" we were asked in bold letters from the other side of the shrinkwrap. The answer given was "executives who want to learn how to program in BASIC for business purposes." In addition, the statement was made that when finished, we should be able to understand the IBM manuals that came with our Personal Computer. Furthermore, we should also understand how to use VisiCalc.

One of our personnel staff members had just purchased a PC. He had no real background or previous exposure with computers, but having heard how helpful computers could be, he was both willing and anxious to learn. Any product that professed to assist in that learning process was worth a try—or so we thought.

Based on the product's presentation, one could be led to believe that understanding BASIC and how to write a sort program is prerequisite in order to begin to use a computer.

The section on VisiCalc consisted of about a dozen pages, a few elementary commands, and an elementary income statement example.

The textbook approach, with hands-on examples that do have functions in real life, was good. For someone intellectually curious about what makes a computer do some of the things it does, our techncial staff found the product to be a reasonable start. In practical terms, we could find no use for it.

☐ User Interface

The product is actually a textbook. The diskettes contain only the correct solutions to the programming problems, which are supplied as a convenience to eliminate the need for re-keying them from a printed list. No operational software is provided. Therefore, the following characteristics do not apply to this product:

Menus: None.

Control characters: None.

Function/special keys: None.

Command language: None.

Positive feedback: None.

Status display: None.

Help facilities: None.

☐ Environment

The packaging does not clearly state what is or is not suitable for the operation of the product. For those with an understanding of the PC, it can be inferred that since only a 64K-byte system with one drive and a monitor is required, it will most likely operate on any PC or compatible. Since everyone who has a PC with disks will have BASIC, that portion of the course is at least applicable to any system. The VisiCalc material, of course, requires that you have VisiCalc or a compatible product in order to try the exercises.

There is nothing to installing or using the product, and in fact, you would not necessarily even have to have a computer to read the material. The diskette supplied provides the correct answers to the exercises; there is not any form of interactive tutorial.

No restrictions or copy protection schemes were encountered.

☐ Documentation

The manual is a slightly over-sized 3-ring binder in a slipcase. While the text for the manual itself is typeset, the screen examples and program listings are reproduced from a dot-matrix printer (probably the IBM 80). Legible, but not very easy to read.

Some introduction to the operation of the computer is given. There is a brief explanation of DOS, and how to adjust the brightness and contrast of the monitor. Diskette care is emphasized, but an explanation of backup procedures and the need thereof is noticeably absent.

A quick overview is given of computers and the type of things they can do, as well as an explanation of the popularity of BASIC. Conspicuously absent is any comment on why a corporation would want an executive or manager learning BASIC programming, or any other form of programming for that matter. Further absent is reference to VisiCalc, whose last-minute addition will be covered later.

One is introduced to BASIC programming on a chapter-by-chapter basis. The objectives are clearly stated at the beginning of each chapter. Flowcharting is explained and used throughout to help clarify what is happening.

Step-by-step instructions are given for everything from turning on the computer to saving files and turning it off again. The proper naming of files is also covered. BASIC commands are introduced as they are needed to solve more complex problems.

Problems begin with elementary calculations and proceed to introduce more complex and realistic elements. In this manner one is not overwhelmed and can continue to maintain some semblance of confidence.

The structure of each chapter is as follows:

The description of an example; a problem summary including input, processing, and output; flowchart and/or listing of what is to be typed on the screen; one or more additional problems as above; and one or more problems without a flowchart or listing, but with the name of the disk file containing the correct solution.

Reston Publishing The Executive's Guide to the IBM PC
Training in VisiCalc & BASIC

At the end of the document is a single chapter on VisiCalc, apparently added at a later date and with some conflict in style. The material in the chapter is useful in an unspectacular way; it is certainly less useful than any number of books available on the subject for a fraction of the product cost.

A summary of BASIC commands and instructions is provided in the appendix.

☐ Functionality

The product is clearly written, and the examples and problems are easy to understand. Any difficulty with a problem can be figured out from the correct solution provided on the diskettes supplied with the product. One might ask whether a written copy of the program would have served as well as the disk examples, and if so, whether the entire purpose of the example diskette was to make a computer product out of a book. We printed the examples out and gave them to some users in that form, with no apparent effect on the learning experience.

Leaving aside the philosophy (marketing or otherwise) of the product, it does teach BASIC reasonably well. Progress from very simple and rudimentary functions to more complicated ones is slow but steady. In this manner one may progress at a comfortable rate without being overwhelmed. Thorough explanations are given as to what is going on and why. Typical mistakes are also shown, leaving the user with the appreciation that not everyone gets it right the first time.

The use of practical business requirements as examples makes it easy for almost anyone involved in business to understand how what is being learned can be applied to their situation. The only problem, which is typical of the learn-by-doing method, is that the initial examples are superficial.

The first section on calculating using BASIC relies on payroll and inventory examples, both of which are easily enough understood by the average office worker or manager. They proceed through the fundamentals of calculation specification, and our technical specialist said that the programming techniques used were acceptable.

In the data entry section, these same payroll and inventory examples are refined to include the requirement that information be entered from the screen rather than be supplied as constant data in the program. Most of our users felt that the transition from calculation to this method was trivial and would have preferred that a single lesson cover both. This would also have saved the user from exposure to the idea that programs with their own imbedded data are in any general way useful. Many in our organization thought that the DP department was inventing their own data on occasion, and found this a confirmation of the theory.

The next 2 sections introduce file concepts in our same inventory and payroll context. The building of files is covered first, then the reporting of data from files. At this point in the material, the concepts defined became somewhat useful to the users in a live environment, and interest picked up. The file orientation continued in the next session with the adding and deleting of records, and finally, with the next section, completed with a discussion of updating existing records on a file. The entire series on files was probably the most interesting from a user perspective, since they could relate to all the processing.

Following file handling is a series of sections on special topics, such as lists and tables, direct access files (as a form of "disk-based table," then into complex problem solving. These sections lost some of our clerical staff in a hurry, probably because we tended to go through the material at a continuous pace rather than stopping for several days to build skills at each level.

At the end of the book is a single chapter on VisiCalc. Not only is the writing style somewhat different here, the examples used through the earlier chapters are abandoned. The result is that the chapter appears disconnected from the rest of the work. We think that, in fact, it is a later addition.

When the staff completed the material, we asked for some views. The consensus was that the material was helpful but that they could not understand what the disk was for. It's a nice course, but it should have been a manual instead of a program.

☐ Ease of Use

As the hoped-for introduction to the use of the PC, the product was quite useless.

For staff members with no previous experience at all, the product tended to give the impression that in order to use a computer for much of anything, one had to learn to be a programmer. Since this is a view most vendors are trying to dispel, we had to set everyone down and explain that fact. A bad start.

The only section with potential corporate use was the VisiCalc chapter. Unfortunately, it consisted only of the procedure to follow to set up a simple income statement. Unlike the BASIC problems, only final print images were shown. The instructions read: Move the cursor to B1 Type /IR then repeat /IR Type INCOME STATEMENT Press ENTER.

It seemed more like an afterthought than a major component of the product.

We could see absolutely no practical application for the product. As far as BASIC is concerned, we have no desire for our staff to be attempting to write programs, especially when today's applications software contains the necessary sort, merge, and other utilities.

☐ Support

Since the product is really nothing more than a textbook with problem solutions on disk, the prospect of any support being required is nil. In the event that help is needed, the vendor indicated that a toll-free customer relations number is available—800-336-0338. Unfortunately, neither that number nor any other phone number is provided in the material.

☐ System Interface

The disk files can be executed by IBM Advanced BASIC or anything compatible.

Reston Publishing The Executive's Guide to the IBM PC
Training in VisiCalc & BASIC

☐ Vendor Experience

Reston Publishing Company has 13 years experience in computer textbooks and has been publishing software for 3 years.

The product has been available for two years and there are currently 200 other products available from the vendor.

■ DETAILED PRODUCT DESCRIPTION

☐ Terms & Support

Terms • the product is available on a purchase license basis from computer and software stores, bookstores, or directly from the vendor; the diskettes are warranted for 90 days; after 90 days, replacement diskettes are available to registered users for $15 for the set of two.

Support • it is not anticipated that users will need support; but the vendor provides a toll-free customer relations number.

☐ Component Summary

Two diskettes containing files representing the programs in the text are provided:

	$50 lcns

LCNS: license fee.

☐ Computers/Operating Systems Supported

The package runs on the IBM PC with PC-DOS operating system. We did not test the package on a PC compatible.

☐ Minimum Operating Requirements

The package requires a machine with 64K bytes of memory, one diskette drive, and a monitor.

☐ Features

Training Objective • to develop BASIC programming skills, and to a lesser degree, to introduce VisiCalc concepts and use.

Instruction Method • successive restatements of the same basic problems in increasingly complex terms provide a background for the development of the material, which forces the user into employing more sophisticated programming techniques to seek solutions to the problems.

Target Audience • according to the material, the course is aimed at management/executive personnel, but the material itself is more suited to persons who have an actual need to learn to program.

Use of Online Concepts • none; the diskettes provided with the manual serve only as examples of the correct solutions to the problems; no form of interactive tutorial is provided.

Effectiveness of Training • the course material teaches BASIC effectively but is not useful for VisiCalc; the diskettes are of no value whatsoever.

• END

Rocky Mountain Software Systems New Word
Word Processing Package

■ PROFILE

Function • word processing, report generation and production, formatting and modification of text.

Computers/Operating Systems Supported • IBM PC, PC/XT, PCjr, and IBM compatibles, including: Columbia PC, Corona, Osborne, Kaypro, TeleVideo, Morrow, Epson, Apple IIe, Molecular, CompuPro, and Dynabyte; MS-DOS or PC-DOS 1.1 or 2.0, CP/M, and CP/M-86.

Configuration • minimum memory requirement is 96K bytes for DOS 1.1 and 2.0; an IBM PC, PC/XT, or a compatible; at least one double-sided floppy or a hard disk drive; a monochrome or color monitor, and a printer.

Current Version/Version Reviewed • Version 1.29 is the current version and is the version reviewed; the earliest version is 1.18 which runs for all computers except the IBM and IBM compatibles.

Date of First Installation • November 1983 for Version 1.18 and March 1984 for Version 1.29.

Number of Installations • information not available.

Comparable Products • MicroPro WordStar, Lexisoft Spellbinder, Microsoft Word, Office Solutions Office Writer, and Perfect Software Perfect Writer.

Optional Associated Software • none; however, most WordStar-compatible spelling checkers will work with New Word.

Price • $249 retail price.

Vendor • Rocky Mountain Software Systems; 2150 John Glenn Drive, Concord, CA 94520 • 800-832-2244.

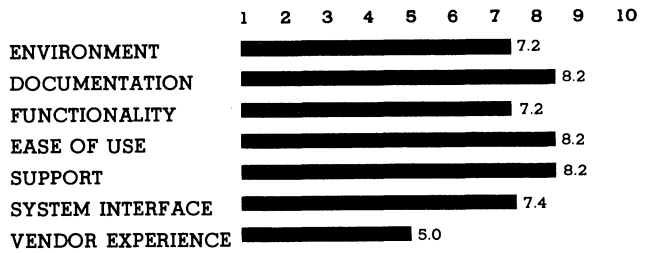
Canada • currently no distributors in Canada.

■ ANALYSIS

New Word is a full-featured word processing package well-designed for heavy word processing users. As described in this evaluation, it contains the strengths of WordStar as well as the flexibility required for today's newer users. The program immediately stands out from all other packages in that it will not run without a toll-free call being placed to Rocky Mountain Software Systems to register the package, and to gain the information necessary to "unlock" the program disk.

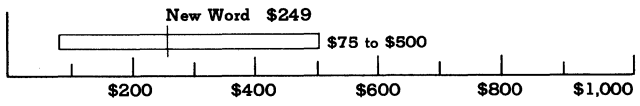
Our professional staff received its copy of New Word on March 22, 1984, just three days after Rocky Mountain Software Systems began distribution of the program in the current Version 1.29 for use under PC- and MS-DOS. It is rare when a package can be issued to a reviewer so close to the beginning of its life cycle. In this case, we are pleased to have the opportunity to relate something of this package's worth. At $249, New Word is quite a bargain, given the full complement of features combined with its ease of use and the ease with which it can both be learned and modified.

PRODUCT QUALITY RATINGS*



*For an explanation of rating criteria, please refer to the Word Processor Features section in the Software Evaluations (805) report. The Overall Package Average is 7.3.

PURCHASE PRICE RANGE Software Price Range



ROCKY MOUNTAIN SOFTWARE SYSTEMS NEW WORD PRICING • open bar shows the typical range of prices for **WORD PROCESSING** software used in a corporate environment • the vertical line within the bar graph indicates the price of **New Word**, the evaluated product, relative to the price range of similar products.

☐ Strengths

New Word provides a novice word processing user a well-designed array of Help screens and menus which preclude the need for memorization of commands. For the intermediate word processing user, these help screens can be partially suppressed to single message lines. And for the expert, especially one familiar with WordStar and its other clones, Help screens can be bypassed entirely, thus leaving more screen display open for text entering, and with less distraction when reviewing text already entered.

As a writer, I am partial to the presence of color in a word processor since it helps hold my interest in the work I am doing at a given time. Many more stolid word processing types prefer white on black or black on white screens. All of these options are user-selectable with New Word. The color options include the full spectrum of colors allowed with the IBM monitor with the color graphics adapter or one of the available color boards from other manufacturers. The user can select foreground colors, and background colors, and can select from the other color options to display a variety of format and print enhancements in place of the control codes, which many of us continually find so distracting when trying to review the text we have entered.

The inclusion of control codes in this package for special enhancements for format and print are formidable, matching those of WordStar and others. The major

Rocky Mountain Software Systems New Word
Word Processing Package

strength of this package feature, however, is the capability for the user to select which particular functions are most important to him or her and to program them as function keys. The programming reference is perhaps a misnomer; all one need do is do a print screen command of the menus, check off which are important, and load them into function keys via the menu-driven NWKEY.EXE file, included on the program diskette. These selections can number up to 40 command sequences, and can be changed or eliminated at any time by the user.

☐ Limitations

As far as it goes, New Word is quite a powerful package, but it lacks several features of the most recent versions of its main competition (for example, WordStar and Perfect Writer). There is no multiple window support, a feature which provides a user with great flexibility when preparing large documents or preparing 2 documents for merging. While multiple documents can be merged with the package, it is first necessary to edit and format them separately; it is later possible to perform a final edit and formatting pass if required. The package also does not include a speller or glossary. Rocky Mountain Software Systems has indicated that several good spellers exist which will work with the package quite well, but none are proprietary, and it is left for the user to decide which to use.

In several packages recently evaluated by our professional staff, new features such as repetitive typing, quote next character, auto-indexing, ability to undo previous edits, and a variety of fill commands are provided, but are not available in New Word.

One of the features we liked best about the package (the user programmability of the function keys) is only an advantage to the point of utilizing the first 10 keys. The use of Shift and Function or Control key, Alternate, and Function key gains you little over the use of the Control key plus "coded key," unless of course you are programming a function available only otherwise accessed through a separate menu.

■ HANDS-ON EVALUATION

We have mentioned before in other reviews that it is very disturbing to consider the opportunity one has of mismanaging the installation procedure and having to sit and wait for a new disk to arrive in the mail. We stress the word mail because despite what is supposed to be the case, most dealers can only presently act as a go-between for a user in acquiring a replacement disk.

The need to contact Rocky Mountain Software Systems prior to using the New Word is a blessing in disguise for those of us that have gone through the process of awaiting that new replacement disk. It pushes one to follow the directions in the "Read Me First" document. These directions make it clear that one should always make a backup copy of the program disk(s) before proceeding with usage. This back-up creation provides the security that is always welcome at installation time.

From the vendor's perspective, this unlocking process both saves users time and effort (not to mention frustration), and provides the vendor with the opportunity to get the users to register their new program. This in turn allows the user to receive information regarding new products, enhancements to the purchased product, and information concerning fixes to bugs which may have gone previously unnoticed by the developers.

The unlocking process takes about 5 minutes, and the telephone call is free, via a toll-free number. This also affords the opportunity to ask any questions you may have generated by reviewing the "Read Me First" document or the documentation manual.

For those of you who are familiar with other word processing packages at an intermediate to an advanced level, it will take very little time to get up and running with New Word. It is probably only necessary to scan the documentation to find out what New Word cannot do rather than what it can. Our professional staff did this, but still found it difficult to find the "On-screen format" utility. To our chagrin, we found that it was not a pictorial image, but rather a mundane, although quite complete, menu of command choices.

Having had access to other word processing packages has allowed us to save a number of documents both large and small for use in testing the way a package treats them when loaded. New Word accepted every file we attempted to load, and had no difficulty with any of them which contained escape sequences for special enhancements to print.

While, at first, the amount of the screen taken up by the menus was distracting and tedious, we soon found out how to suppress them or to make them smaller. In the documentation, it is advised to begin experimenting with the features of New Word with the menus and help screens fully visible. Once you become confident of your ability to remember the command descriptions you are free to partially suppress or to fully suppress them.

☐ User Interface

Menus: New Word contains a number of menus, summarized as follows: Main menu is used for installation and changing of the default specifications; Opening menu is used to select command modes, for example, to create a document, revise a document, print, merge-print, protect a document, change disk drive, rename, copy, or delete a document, run a program or directory. The Edit menu is used to control cursor, scrolling, erasure, extensions, and others, i.e., help, tab, alignment, and insert. The Quick menu is similar to edit menu, but accommodates larger moves; the Format menu is used for control of margins, typing, display, and tabs; the Block and Save menu is used to control exits with save, block controls, and document copy, deletion, and insert; and the Print Controls menu provides start/stop enhancements, changes to pitch, color changes, overprint options, and custom options.

Control characters: New Word contains over 80 standard control code sequenced commands, any of which can be programmed easily into the IBM functions keys. Forty-five one-dot commands are also available to control formatting for on-screen or printout review.

Function/special keys: The IBM function keys can be

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easily user-programmed to handle "quadruple" duty, each having a single function when depressed alone, and another in combination with either the control key, the alternate key, or the shift key.

Command language: No command language is present per-se, but with the vast array of commands that are preprogrammed, the user is given considerable power and versatility.

Positive feeback: Audible beep tones and the message lines provide a user with positive feedback. In addition, error messages are present which alert the user to either use the undo command or to back up one step.

Status displays: New Word utilizes the top half of the screen to display the command choices, unless these are suppressed by the user. The top line of the screen indicates the name of the document you are working on, the drive letter (default drive if not user specified), and the mode of processing, for example, insert mode, as well as the page, line, and column number. The ruler line appears at the bottom of the command menu and above the text entry area.

Help facilities: Help is available in 2 ways: full screens which explain the last keystroke, partially suppressed screens which indicate a message line only; a third option lets the user choose to have no help. The choice of Help level is for you to decide. It can be changed at any time.

☐ Environment

New Word is supported on more than 14 vendors' microcomputers, and 8 operating systems, ranging from 8-bit, single-user systems to 16-bit, multiuser systems. With a main memory requirement of 96K bytes for DOS 1.1, it will fit the configurations of most users today. The requirement for 128K bytes for use of DOS 2.0 and 2.1 may cause a bit of displeasure for those who have not upgraded main memory, but it appears from our conversations with dealers that most serious users have or soon will upgrade to take advantage of the wealth of software which calls for such minimums.

The package is quite capable of editing large files. In fact, the maximum file size is limited only by available disk capacity. The New Word will operate more efficiently with larger RAM. The package is also easy to install on a hard disk either in the root directory or in a subdirectory.

☐ Documentation

New Word provides a "Read Me First" text both in a disk file and on paper in addition to the perfect-bound documentation manual. The "Read Me First" text leads you through the process of formatting blank disks for use as both program and work disks; provides a toll-free 800 number for you to call to get the instructions to unlock the program, a task which must be completed to assure that the program functions correctly; provides detail on the variety and types of printers supported by the package; and discusses information on the license agreement, piracy, support policies, the video display, keyboard and function keys, reset provisions, and other miscellaneous information.

The documentation manual is perfect bound, and contains 3 separate sections; the Do It Yourself, which is a tutorial and functional explanantion of most-often-used features, with its own cross-index; the Nuts & Bolts, which is the customization guide for New Word; and the New Word Encyclopedia, which presents a detailed description of all terms, functions, features, menus, and commands in alphabetical order. This last section also contains its own separate cross-index. All 3 sections include their own table of contents.

The use of screen images in the documentation is rather sparse, and generally does not picture the entire screen, but rather only the area under question in the text of the manual. New Word menus are shown completely in a variety of places throughout the manual as the need is seen by the authors of the text.

The New Word Encyclopedia is an extension of the concept of glossaries within documentation manuals, and it is extremely well done. The level of detail in the descriptions is appropriate for an intermediate user, and the cross-referencing makes it ideal for the novice as well. The experienced word processor may find it unnecessary to use at all, but rather opt to use the partially suppressed Help menus when required.

☐ Functionality

With more than 80 control-code-sequenced functions, and in excess of 45 "dot" commands for document formatting, and printer control, Rocky Mountain Software Systems has indeed come up with a package that should challenge WordStar domination of the marketplace. This package includes all of the standard capabilities, such as text insertion and deletion (by character, word, sentence, paragraph, block, and file); block moves and copies; forward and reverse search and replace; transposition; capitalization; universal repeat; paragraph auto-indenting, and alignment.

By marketing the beginning and end of a portion of text, you can store text as a boilerplate. It is also possible to store only the format, tabs, and indents as a boilerplate or to also include headers, footers, and/or titles in boilerplate. Adding to this utility, you can enter comments which will display on screen, but will not print. This is often useful to remind yourself or someone else of when the document was created, who processed it, what page format commands were used, and even which printer and/or print wheel should be used for the printout. New Word can also be used to create and edit "nondocuments," that is, computer programs or data files. Its use in creating data files is important for those users interested in sending a form letter or report to a large number of different people.

☐ Ease of Use

One of the major complaints of full-feature word processing packages, such as WordStar, Perfect Word, and Microsoft Word, centers around the need to memorize a large number of control codes, and the lack of function key usage. New Word not only gives a screen presentation of the control sequences required for special functions, it also allows the full usage of the IBM function keys. In addition, the package allows the user to program the use of the function keys for whatever functions may be most

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used by him or her. In so doing, the function keys toggle special control sequences on or off whenever needed.

The depth of the help screens is also user selectable, from a simple one-line message up to 2 screens deep in paragraph form. There are also a rather large number of user-selectable defaults which can be set to accommodate special filing requirements, print formats, screen formats, system requirements, and privacy and protection of documents.

With the color option enabled, the user can also select foreground and background colors, as well as those colors to be used to indicate specific enhancements made to text. This allows an easy-to-remember sequence of colors on-screen, to show the user what enhancements have been made to a particular document.

The edit mode, as with all command modes, is completely menu-driven and thus eliminates the need for memorization. When function keys are user programmed, the new label appears on the screen in place of the control code sequence. Help is available from any keystroke; upon completion of the Help function, the user is returned to the invocation point.

☐ Support

Direct end-user support is offered for disk replacement, as outlined below under Terms & Support. Mail support and telephone support are also available. Mail support is included for one year free of charge. Problems should be reported via the Common-Tater for problems related to the documentation manuals, and via the Software Problem Report when related to the software itself. User questions are typically answered in writing the same day received.

Telephone support is provided free of charge for the first 90 days. The support group can be reached during normal business hours (8:00 AM to 5:00 PM, PST) at 415-680-8378. Prior to answering any questions, the support group will ask your name, address, and phone number; the type of computer system you are using; and the serial number of your software, which is printed on the red and blue label on the program disk. After obtaining the above information, a complete description of the problem will be requested.

After the initial 90-day free telephone support period expires, the user has a choice of obtaining support for a cost of $45 per hour, or by a contract which costs $50 per month. Payments may be made via Mastercharge or Visa.

☐ System Interface

New Word was designed with WordStar compatibility in mind, and as such is capable of accepting virtually any ASCII text file you may wish to load into the program. The package is also capable of performing editing on DOS files for clarity of format. The package outputs files in ASCII format, which allows them to be easily input into a variety of spelling checkers now on the market. No specific information is given (nor required) on the internal file format for New Word.

☐ Vendor Experience

Rocky Mountain Software Systems was founded in early 1981 and sells software primarily as a distributor today. New Word was developed by Newstar Software, Inc. Rocky Mountain Software Systems also sells accounting packages, which were developed by the company.

The initial releases of Rocky Mountain Software Systems accounting software have been met with good user acceptance. Version 1.29 of New Word was pre-released in November 1983, and the first commercial release was in the first quarter of 1984.

■ DETAILED PRODUCT DESCRIPTION

☐ Terms & Support

Terms • New Word is available for purchase through computer dealers, software dealers, mail order, and at selected trade shows.

Support • Rocky Mountain Software Systems offers direct end-user support by calling 415-680-8378 Monday through Friday between the hours of 8:00 AM and 5:00 PM, PST; defective disks are replaced free of charge for the first 30 days; a user must first call the company to obtain a Return Material Authorization Number (RMA #), and then package the defective disk and the RMA # for return; disks that are accidentally destroyed do not qualify, but can be replaced for $15 plus a $5 shipping charge; mail support and telephone support are also available • potential users can call Newstar Software at 415-932-2526 to determine dealers close to their place of business.

☐ Component Summary

The PC-DOS built-in directory program will display the file names on the New Word program disk inserted into drive A or copied onto a hard disk, and includes information on each file's size in bytes, and the date and time it was originally written to disk:

$249 lcns

☐ Computer & Operating Systems Supported

New Word supports MS- or PC-DOS 1.1 and 2.0, as well as DOS 2.1 for the IBM PCjr. While a number of IBM clones may be supported, the determining factor is the level of their compatibility with the IBM PC and its operating sytem. Version 1.18 (which is not reviewed here) also supports CP/M, CP/M-86, and the computers mentioned above. The package also supports a variety of printers including most models from Diablo, Qume, Silver Reed, NEC, Epson, Mannesmann Tally, Okidata, and C. Itoh.

☐ Minimum Operating Requirements

New Word requires 96K bytes to operate under DOS 1.0 or DOS 1.1, and 128K bytes to operate under DOS 2.0, an IBM PC, PCjr, and IBM PC/XT or a compatible computer, at least one floppy disk drive (double-sided), a black and white or color monitor, and a printer. The package takes advantage of higher main memory. Maximum performance is attained at 256K bytes where all messages and menus are stored in memory rather than on disk.

☐ Features

New Word provides all necessary commands to support document design, generation, editing, printing, and storage. It can handle file sizes from the smallest memos to the largest documents that can be stored in main memory rapidly and effectively. If the full version of the package is opted for at the opening menu, virtual memory swapping is enabled, thus extending both the processing power of the package and its functionality as well.

Full Screen Editing • New Word supports all of the IBM cursor movement keys; has accommodation for next and previous page, top of file and bottom of file; and accommodates deletion and insertion of text by character, word, sentence, and paragraph.

Block Mode Operations • full move and copy operations are supported within New Word, except if the NW-Novice version is selected at the start of the program.

LCNS: license fee.

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Complex Formatting Capabilities • New Word provides a vast array of formatting capabilities including: headers and footers, custom print commands, sectioning commands for titles, variable margins and indents within a document file, and enhancements that are automatically adjusted with the usage of format commands.

Multiple Windows • windowing is not a supported feature of New Word.

Glossaries • none presently available from Rocky Mountain Software Systems, but the company is examining the capabilities of spellers and the needs of its users as a preliminary to such an offering.

Complete Style Sheets • formatting instructions for any allowable document type can be stored for future use with other documents to be created or edited.

• END