specific brands of modems.

Sprinkled throughout the manual in italics are nontechnical explanations of telecommunications jargon. Though this material is not essential to learning to use Microphone, it will greatly aid new users in understanding the communications process. More than once, in the course of looking up a technical point, we caught ourselves flipping pages to read more of these interesting passages.

The documentation's clarity and comprehensiveness earn Microphone a very good in this category.

EASE OF LEARNING: We found Microphone easy to learn. Novices will find Microphone a relatively simple program to use because its careful organization minimizes the need to change settings or hack through mind-numbing jargon. We were able to log on to a remote service on our first try without reading the manual.

We also found that the program's organization encouraged us to experiment with more advanced features, with the result that our learning period was more swift and less painless than we had expected. This self-revealing quality of the software makes Microphone particularly suitable for novices who wish to become proficient telecommunicators, earning it a very good in ease of learning.

EASE OF USE: Using Xmodem for downloading files is very simple. You simply select "receive Macbinary Xmodem" from the file transfer menu and type the name of the desired file. Microphone takes over automatically from there, managing the downloading and keeping you informed on the transfer's status.

We had no difficulty making a backup copy of the disk or installing the program on a hard disk. It is not copy-protected.

Microphone's organization contributes greatly to its ease of use. The product does a very good job of managing, though not entirely eliminating, communications complexity. The capability to include multiple services in a single file also made Microphone less trouble to use than other packages we have used in the past. The inclusion of Switcher and Microeditor added greatly to Microphone's ease of use and effectiveness as a terminal emulator.

The program is well-organized, is easy to follow, and does a very good job of managing telecommunications, earning it a very good in ease of use.

ERROR HANDLING: Microphone's organization makes it difficult to get lost or confused during the communication process, and we experienced no errors in the transmission of data. In all but one instance, we were able to get out of difficult situations by referring to the Microphone manual. For these reasons, we give the

program a satisfactory score in this category.

SUPPORT: Software Ventures offers telephone support but has no toll-free number. We talked with technical support representatives several times and found them to be extremely knowledgeable and eager to help even with problems not caused by the Microphone software. Although support is officially available from 9 a.m. to 5 p.m. on weekdays, we found that the line is often answered in the evening and on weekends.

In a departure from virtually all other software packages, Microphone is sold, not just licensed to users. This is a plus because it allows you to legally resell your Microphone package (in its entirety) to someone else if you no longer need it. The licensing language of most other packages theoretically obliges you to get permission from the vendor before reselling. The bundled Switcher and Microeditor programs may be used only in combination with Microphone. The software is not copy-protected and may be copied for backup purposes or installation on a hard disk.

Software Ventures offers a 30-day return policy, under which dissatisfied users may return the product for a refund. Microphone is sold subject to a standard limited warranty. The firm has said that its expected upgrade will be sent to existing owners for a nominal fee.

The superior telephone support, the money-back policy, and the beneficent departure from standard licensing procedures earn Microphone an excellent score in support.

VALUE: Dennis Brothers, the author of Microphone, is best known as the author of Mactep, one of the earliest communications programs for the Macintosh. Although Microphone doesn't match the shareware price of Mactep, at $74.95 Microphone offers more features and better performance than many more expensive communications packages, including packages offered by several modem manufacturers, making it a very good value.

Though the product contains no radically new features, it does a better job of integrating existing capabilities than just about any general-purpose communications package we have tried. Microphone is particularly suited to communications with remote services but also does a solid job of communicating with other Macintoshes.

Wang-Style PC Program For Office Improved

By John Lombardi
Review Board

Before the proliferation of the personal computer, the Wang word processor was one of the most successful dedicated systems in American business. It was only natural for several programs to appear on microcomputers that mimicked the functions and power of the Wang machines. Office Writer, Version 4.0 from Office Solutions attempts to improve on some of the characteristics of the Wang system while maintaining the same Wang-style operating environment. Since its initial review ("Office Writer: Adequate Text Editing with Nice Secondary Touches," December 31, 1984), two updates have brought a number of new features that make it even easier to use.

As a page-oriented word processing program, Office Writer organizes words in the same way an office worker types material — a page at a time. For environments where the final preparation of text for printing is the most important function, page-oriented systems such as Office Writer are well-regarded.

FEATURES: Like most high-powered word processing systems for the IBM PC and its imitators, this program is loaded with capabilities. The document management features include a comprehensive document history screen, which allows operators to keep information about the contents and a revision history of a document.

Office Writer contains an array of editing features. Although using the alt key and function keys to perform editing functions may be less efficient than the

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control key combinations made popular by Wordstar, many users find the function keys used in Office Writer easier to learn and remember. The block move, copy, and delete functions include operations for making lines and columns.

Office Writer also supports the range of formatting capabilities available in competing products. Superscript, subscript, underlining, double underlining, boldface, and compressed or expanded text are all available with this program, assuming the printer used can produce the effects. The program centers text, justifies it, and supports multiple formats in the same document.

Beyond the features for editing and printing text, Office Writer now offers footnotes, which can be placed at the bottom of the page or at the end of a document. Headers and footers can have six lines or 512 characters and include a page number. Single, double, or triple columns can be printed, and the program has a print spooling feature that permits several documents to be stored on disk for controlled printing while the main Office Writer program continues to allow editing of another document.

In addition, a complex series of commands permits document assembly in which fragments of text from different documents are assembled into a final text.

Other auxiliary features include a document conversion system that takes Office Writer documents and translates them into a form useful for the Wang word processor. It can also move documents from Multimate to Office Writer, Office Writer to ASCII (standard characters without any special word processing codes), and ASCII to Office Writer. The program now supports Revisable Format Text/Document Content Architecture, an IBM document format standard.

The conversion utilities will take a database file in either fixed field form (such as Dbase II files) or comma-delimited form (such as Basic data files) and convert them into an Office Writer style usable with the form letter and list processing functions. This version also has a column and row arithmetic feature.

An 80,000-word spelling checker is included (it was formerly an option), and 12,000-word legal and 26,000-word medical dictionaries are available as options.

PERFORMANCE: Office Writer performs well; we found only minor irritations. Compared to other page-oriented systems, it is reasonably fast, primarily because it keeps all text in memory. As a result, movement from page to page is quick.

Editing is easy, although the insert function is less effective than it might be. When you insert text, the program moves all the text ahead of the cursor to the next line, leaving a blank line for the new text. However, not every editing command is available in insert mode, and it takes some training to remember which ones do not work.
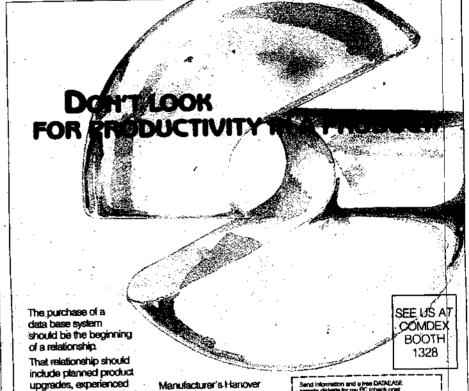
We were happy to learn a destructive backspace key has been added in this version. In the earlier versions, all deletions, even of a single character, required several keystrokes to define the area being deleted. Unfortunately, the backspace deletion is very slow. Another shortcoming is that all other forms of deletion work only forward of the cursor position.

The undelete function permits restoring mistakenly deleted material. However, you must perform the undelete immediately — if you press any other key after deleting, you can't undelete. In this sense, it is more like an undo function, undoing the preceding command.

For users unaccustomed to the page orientation of Office Writer and similar systems, the requirement of repagination often seems an unnecessary burden. Although Office Writer automatically arranges line lengths to conform to margins, it does not automatically end the page when you reach the last line defined in the document format. Instead, when you reach the end of a page you hear a beep, and you are supposed to type a page command that marks the end of the page and starts a new one. After editing is done, the pages are likely to be of varying length. The solution is to go through a repagination routine so the program can determine the correct page endings, as well as line endings, placement of headers, footers, and footnotes, and numbering of pages. This repagination function is done quickly, but it must be done whenever you do any significant editing. Otherwise, the document does not print correctly.

Version 4.0 has a wide range of printing capabilities, supporting about 100 printers, though it still may not cover your exact model of printer. For example, our Diablo 630, a common printer, is on Office Writer's list of supported printers, but our particular version doesn't work with the program. However, Office Writer can be set up to handle any printer, provided you

know enough about printer codes to construct a table that informs the program how your printer does boldfacing or underlining, for example.

Likewise, Office Writer can customize the keyboard and screen to produce any characters in the IBM character set on the screen, associate them with keys on the keyboard, and produce another character on the printer. Achieving success in setting up custom keyboard, screen, and printer tables is not a task for the faint of heart or the impatient, but it can be done.

Office Writer includes many printing facilities. It can do footnotes at the bottom of the page or at the end of the document and double or triple columns, but not both at once. It can print justified text by adding whole spaces between words but does not do the more attractive microspace justification, by which incremental spaces are distributed between words to make the right margin even. It does not do proportional spacing.

When printing an Office Writer document, the user selects from a full set of options that affect the appearance of the document on the printed page. This flexibility is an advantage, but it has its drawbacks. We found it easy to get mixed up, confusing the options we needed to repaginate with the options available when starting to print. We also had considerable difficulty getting long footnotes to print correctly at the bottom of the page.

Compared to its most direct competitors, Office Writer is not as full-featured, but we credit it for being noticeably faster and therefore rate it very good.

DOCUMENTATION: The manual for Version 4.0 is well-written and reasonably complete. A few design changes since the last version make it a little easier to use, and the new *Getting Started* booklet is helpful.

We did find some flaws that show it still needs expanding. For example, the index misses a number of important entries, it fails to keep related subjects together, and it is thin on examples and illustrations. The on-line help, while excellent for editing functions, is nonexistent for menus or non-editing functions. Thus, when attempting to understand the printing menus, you get no help except from the manual, and the information needed to decipher the printing possibilities is scattered. We would recommend an expanded manual with comprehensive explanations and examples and illustrations of results.

Despite these shortcomings, the documentation is complete enough to be usable to a satisfactory degree.

EASE OF LEARNING: Office Writer is very easy to learn. It installs easily, and the menus and on-screen help system quickly get a user into the process of writing and printing. The tutorials are minimal, but at the same time it is so easy to start using this program that most people will skip the tutorial and begin writing. It is not always so easy to learn the complex functions because of the minor problems in the documentation, however.

Ease of learning can be rated as very good, especially at the beginning level.

EASE OF USE: Given the function key orientation, the elaborate help system, and the comprehensive menus, Office Writer can be judged relatively easy to use, though it requires attention, practice, and training. Although it has clear help screens, the program provides help only from the editing screen. If you get lost elsewhere, there is no on-line help, and you must make do with the manual.

The elaborate document history screens provide information about the history and contents of the document along with the excellent document management facilities; these prove especially helpful when using high-capacity hard disk drives. On floppy disk systems, these screens have less utility; indeed, Office Writer works most effectively on a fixed disk system since a

floppy system limits the size of the document and inhibits easy use.

Since Office Writer keeps all of its document in memory, the amount of memory determines the outside limit for document size. With 344K of free memory (our 640K system was loaded with RAM-disk and memory-resident programs), our system ran out of space with a document of 156,000 characters. This is about 60 pages of single-spaced text, a sizeable document. Larger memories permit larger documents.

As a safety measure, the program automatically saves the document at intervals while you work. This is nice for security; if it proves an annoyance, you can lengthen the time between saves or turn it off.

Unfortunately, the program does not adequately recognize monochrome screens running on a color graphics card. Our green screen is attached to an IBM Color Graphics Adapter, and Office Writer treats it like a color monitor. As a result, we have some difficulty setting the screen to display

boldface, underlining, and other print enhancements.

Worse yet, Office Writer and Sidekick don't agree on how to leave the screen. When we called Sidekick, it worked fine, but when we returned to Office Writer the screen colors had been reset in some way that made many entries unreadable. If you use Sidekick, be sure to test it with your monitor, display card, and version of Office Writer.

Despite these glitches, the program rates a satisfactory in ease of use.

ERROR HANDLING: Office Writer recovers very nicely from errors such as wrong directories, open drive doors, wrong disks, and similar miscues. We see no significant improvements in this version over Version 3.0. We are disappointed that the minimally useful undelete function has not been improved. But overall, the error handling of this program is very good because its error messages are as good as the best in its class.

SUPPORT: Copy protection has been

removed from Office Writer, so its three disks can be copied for backup purposes or installation on a hard disk.

The company has a telephone line for support (not toll-free), which is available only to those who send in their registration cards. This could prove inconvenient, since the time you need support the most is during the first three days of use, before the registration form has a chance to arrive in the company offices. We rate support for Office Writer to be satisfactory.

VALUE: Among corporate word processing packages, Office Writer, Version 4.0 represents a good, solid product. It is not quite as powerful as Wordstar 2000 or Multimate Advantage, but it has most of the functionality of those two very powerful programs and should be sufficient for all but the most demanding of word processing environments. Unfortunately, it is priced in the same range as its more powerful competitors. We rate the product a marginally satisfactory value because its greater speed helps to balance this high price.

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