

RESEARCH IN WORD PROCESSING NEWSLETTER

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Word Processing on a Budget

Vance L. Eckstrom

It isn't necessary to have the latest and the best equipment and programs to enjoy the benefits of word processing by microcomputer. Yes, we would all *like* to have the newest whiz-bang machine and hot-shot program to appear in the marketplace. Nevertheless, the truism is well worth repeating: any *moderately* adequate computer running any *minimally* competent word-processing program is so vastly superior to even the finest of typewriters that, once you have become accustomed to the computer, you will never go back. The thesis of this article, then, is that word processing, even with less-than-state-of-the-art equipment and with somewhat limited programs, can still be great word processing—or, at least, very good.

This is not to knock the higher-quality equipment and programs that are now available, nor the even better ones coming in the future. If one is ready to pay the price, there are many benefits to be gained from using one of today's fine 16-bit computers. For example, these more advanced machines can handle more RAM; they are more adequate than the 8-bit machines for heavy-duty number crunching, database sorting, and some other non-word-processing applications; and most of the best new word-processing programs are being written exclusively for these newer 16-bit machines. So, when my school recently purchased a word-processing computer for use by teachers in my division, I strongly recommended the IBM-PC with 256k RAM, and I have found it to be quite satisfactory. Not perfect, to be sure, but very good. If I were starting from scratch today, and *if I could afford it*, that is probably the machine I would buy for my own home use.

Nevertheless—and this is a very big nevertheless—there is widespread agreement that *for word processing applications* 8-bit machines running the better programs available for them are a near match for their 16-bit siblings. For significantly less money, a user can have in an 8-bit machine all the word processing power that most of us will ever need. For under \$2000 total—including, in many cases, a wide selection of bundled software—one can acquire any one of a number of microcomputer-program-printer combinations that will be more than adequate for 99% of all word processing tasks. Yes, the printer, if it is a daisy-wheel, letter-quality unit—as it should be for many word processing applications—will be comparatively slow. But that just means that you will get to drink your *whole* cup of coffee, rather than only a few sips, while your latest masterpiece prints. Only heavy-duty users who regularly require such elaborations as automatic renumbering of a hundred footnotes scattered throughout a thirty- or forty-page document will find the 8-bit machines lacking. And with auxiliary programs many such refinements are, in fact, also available in the 8-bit world, though perhaps in less convenient forms than those available on the latest MS-DOS marvels.

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Examples abound of serious work being done on modest machines. One of my colleagues is currently writing her doctoral dissertation on her Commodore 64. It's what she could afford, she explains. My school's psychologists are Apple devotees. An English teacher is doing his magnum opus on a Kaypro, using the *Perfect Writer* program which came bundled with his machine. He has found *Perfect Writer's* windowing function to be very useful as he labors his way through three-hundred pages on the relationship between Jung and the transcendentalists. Other teachers at my school are using a variety of equipment in their homes, for both word processing and many other applications, but only two have thus far sprung for the 16-bit machines (and they had specific need for business programs which would run only on such equipment).

I myself am older than many of my colleagues, and my eyes need a larger screen than those built into such units as the Kaypro. In my home I use a Morrow MD-3 with a 12-inch monitor and two double-sided, double-density disk drives. I got started using *WordStar* simply because it came with the Morrow. There are also many other good word-processing programs available for 8-bit machines. Some, like my friend's *Perfect Writer*, do windows. None, so far as I know, uses a mouse, but that may not be a major disadvantage.

Lack of windows and mice notwithstanding, then, so long as *WordStar 3.0* is available for my 8-bit machine, I will never feel much deprived—as far as word-processing power is concerned. I admit what everyone knows: *WordStar*, at least in version 3.0, is a bear to learn. Independently-produced manuals, such as those by Ettlín and Naiman, are almost essential for the beginner working alone. Yet the more powerful of the 16-bit programs, despite their on-screen tutorials and other aids, are also difficult to learn. *Microsoft Word*, which I am now working on, is surely as difficult to pick up as *WordStar*. Admittedly, *Word* is somewhat more versatile than *WordStar*—but *Word* runs only on 16-bit machines.

In any case, my 8-bit *WordStar* can do almost anything I want to do in word processing. I particularly value certain features which are not common in other programs, even 16-bit programs, such as the ability in *WordStar* to spread lines vertically in increasing increments of 1/48th of an inch. Thus, a 9/48th line height (as over against the usual 8/48ths, or six lines per inch), invoked with the simple dot command “.lh 9” at the beginning of a file, makes the printout more readable. If there is plenty of room on the page, or quite a bit of space left on the last page of a three- or four-page item, the command can be changed to “.lh 10” for an even more open and readable appearance. For a number of reasons, I also value *WordStar's* power to control the amount of subscript/superscript roll. For example, a recent book by M. David Stone tells how to use this feature to print fully justified columns two or more across on a page without removing and re-inserting the paper, a capacity of great value to certain users, such as those called upon to produce newsletters in two-column format.

This last point illustrates another advantage of *WordStar*: it has been around so long, and is so widely used, that a vast body of auxiliary material has grown up around it. Stone's book, especially if combined with the techniques revealed in a book on the topic available from Writing Consultants, enables one to produce proportionally spaced output from *WordStar*, either with or without microspace right-margin justification. Also available for use with *WordStar* is Oasis Systems' *The Word Plus*, a fine spelling checker and hyphenation program. Its companion program *Punctuation + Style* is, in my opinion, very nearly useless for the even moderately competent writer; but it does include a very useful sub-program called *Cleanup*, which will remind you about missing punctuation marks and print-control codes (so that, for example, you do not have your printer struggle through ten pages of underlining every word in your text while you sip your coffee in another room, simply because you forgot to turn off the underlining after emphasizing a word on page three.

In addition to the programs mentioned above, dozens of other programs have been developed over the years for use with *WordStar*. Two I have acquired recently deserve mention here. *Eureka!* is a disk-catalog program which will locate any program indexed into it very quickly, using Boolean and/or/not operators. It requires the user to insert at the beginning of every file to be included in the indexing system a string of key words, of up to 97 characters total, plus a date. This practice soon becomes second nature to the user. Once these identifying headings are in place,

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you can, in only a few seconds, find that letter to Aunt Emmy which you wrote last fall, and now need to look at again, or any other file about which you can remember at least one key word.

Though I chose a commercial program for my indexing system, similar programs are available free in that immense body of public domain software which has come into existence for use on 8-bit CP/M machines. (Available free, that is, except for the cost of duplication and mailing, for those who do not find it convenient to copy the programs from a friend or to download them from a remote bulletin board system.) From the public domain I have acquired a program called simply *Find*. It does not even require indexing each file. Instead, this program will go into every file on a disk and search through the text of each file for any "string" you specify. It prints to the screen (and on your printer, too, if you choose) the name of each file as it goes through it, and gives each line number, and prints the line, whenever it finds the desired string. Typically it will search 40 files filling 220k, and print out ten lines on which the desired string appears, in about three minutes. Thus, the program becomes a free-form database system of sorts, invaluable for searching through all those disks I filled before I began to use *Eureka!*, and with the power to locate quickly that elusive fragment of information in one's on-disk research notes which is needed for that upcoming article or lecture.

A fine discussion of public-domain programs for 8-bit machines is available in *THE FREE SOFTWARE HANDBOOK: 1984-1985 CP/M EDITION*; and at least one company offers, at what I consider a moderate price, a set of six disks containing all 70 programs discussed and explained in the book, for those who do not have other access to them.

The point of the last several paragraphs is not to select for special praise any one word-processing program and its available add-ons from the commercial and public-domain realms. All the features mentioned above, and more, are available for use with other 8- and 16-bit programs, or are even built into them. But the point, for present purposes, is that this wealth of program versatility is available for the modest 8-bit, VW-bug-type computers, and not just for the 16-bit Cadillacs.

To be sure, if 16-bit equipment is in use at one's place of employment, then undeniably it is handy to have similar equipment at home, for the sake of easy compatibility. When our college president asked for a suggestion for his home-computer purchase, I recommended that he give serious consideration to getting the same computer and word-processing program as his secretary now uses, so that he could easily do such things as editing at home the draft of a letter or speech, and then have his secretary print it out at work the next day, and other such maneuvers.

However, exchange of data does not always require matching equipment. I can prepare material at home with my 8-bit equipment, and then edit and print it at school using the 16-bit computer available to me there, by first converting the file to the IBM PC format with the *Xeno-Copy Plus* program, and then converting the text from *WordStar* to *Volkswriter Deluxe*, the word processing program currently in use by my division, via a utility included in the *Volkswriter* program. Such refinements as fine-tuned line height adjustments are lost in this process, but the text itself comes through intact.

Though this discussion has wandered somewhat from the article's starting point, the digression has been for a purpose: namely, to emphasize that word processing can be very nearly as satisfying, efficient, and feature-laden on comparatively inexpensive 8-bit machines as on the more expensive 16-bit machines with their gee-whiz features and super-agile programs. Especially is this true if one can reach just far enough, in the purchase of an 8-bit system, to include the cost of two double-sided, double-density disk drives. In spite of my praise for modest equipment, I must say that working with one single-sided drive is carrying things just too far! Equipment that limited begins to take away the real benefits of working with modern word-processing technology.

To sum up, then: if money were no object, then of course I would go with the high-priced spread. But when constrained by a budget, as most of us are, we can still get a lot of word-processing bang for our 8-bit buck.

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Further Information on Titles Mentioned

Walter A. Ettlín. *WordStar Made Easy, Second Edition*. (Berkeley: Osborne/McGraw-Hill, 1982).

Arthur Naiman. *Introduction to WordStar*. (Berkeley: Sybex, 1982).

M. David Stone. *Getting the Most From WordStar and Mailmerge: Things Micro-Pro Never Told You*. (New York: Prentice-Hall, 1984).

Proportional Spacing on WordStar. (Writing Consultants, 11 Creek Bend Drive, Fairport, NY 14450).

T. Gregory Platt, Patricia Law Hatcher, and Blake H. Van Meter, *Software Handbook: 1984-1985 CP/M Edition*. (People Talk Associates, P.O. Box 863652, Plano, TX 75086). [For information about these public domain programs on disk, contact Central Computer Products, 330 Central Ave., Fillmore, CA 93015.]

EUREKA!. Mendocino Software Co., P.O. Box 1564, Willits, CA 95490

Xeno-Copy Plus. Vertex Systems, 6022 W. Pico Blvd., #4, Los Angeles, CA 90035

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Call for Papers: Small-College Computing Symposium

The 19th Annual Small-College Computing Symposium will be held April 11-12, 1985, in Rapid City, South Dakota. Papers are being invited which deal with various aspects of computers and the world of text in the small-to-medium college setting: word processing and the writing process, text analysis, database management systems, computers as a humanistic theme, writing across the curriculum, research opportunities, and the administration of grants and programs. December 1, 1985, is the deadline for abstracts. Contact Dr. Dale Rognlie, Mathematics and Computer Science Department, South Dakota School of Mines and Technology, 501 E. St. Joseph Street, Rapid City, SD 57701-3995.

NCTE Assembly on Computers in English

The National Council of Teachers of English has set up an Assembly on Computers in English to serve the needs of teachers and supervisors involved with computers in teaching programs and to promote communication and cooperation among individuals interested in computer-assisted instruction in English and the language arts. ACE's newsletter will be edited by Tom Decker, Westview Centennial Secondary School, 755 Oakdale Rd., North York, Ontario, Canada, M3N 1W7. Communications regarding ACE business should be sent to the President of ACE, Audrey Roth, 8620 S.W. 118th St., Miami, FL 33156. Those wishing to become members should send \$5.00 to Jack Jobst, Humanities Dept., Michigan Technological University, Houghton, MI 49931.

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Call for Papers: Computational Linguistics

The University of Bonn, West Germany, will be the site of the XIth International Conference on Computational Linguistics to be held August 25-29, 1985. December 1, 1985, is the deadline for submitting 5 copies of paper drafts (double-spaced, maximum of 8,000 words) in the following areas:

computational linguistics in general, syntax, parsing, language generation, semantics, phonological and morphosyntactical analysis, speech analysis and synthesis, discourse analysis, machine translation, machine-aided translation, representation of knowledge, computational models of understanding, linguistic theories and computational models, software tools and programming languages for computational linguistics, hardware for natural language processing, dictionaries, and lexical databases.

Contact Prof. Makoto Nagao (Kyoto), Dept. of Electrical Engineering, Kyoto University, Sakyo-ku, Kyoto, 606, Japan.

Conference: American Society for Information Science

The Special Interest Group for the Arts and Humanities of the American Society for Information Science will focus on scholarly applications of databases and database-management software in the arts and humanities at the ASIS annual convention to be held October 20-25, 1985, at the MGM Grand in Las Vegas, Nevada. Contact Ralph Du-main, Editor, *SIG/AH Newsletter*, American Society for Information Science, 302 E. University Parkway #1, Baltimore, MD 21218, or call (301) 889-6017.

Call for Papers: Computer Conferencing

The March 1986 issue of the *IEEE Transactions on Professional Communication* will be a special issue on computer conferencing, a form of communication that combines techniques of speaking and writing. Various approaches to the subject are welcomed, especially those which explore the relationship between computer conferencing and the communication it facilitates. October 1, 1985, is the deadline for article submissions, and revised manuscripts from authors will be expected by December 15, 1985. Contact Dr. Valarie M. Arms, Dept. of Humanities and Communication, Drexel University, Philadelphia, PA 19104.

Conference: IEEE Professional Communication Society

"Bridging the Present and the Future" is the theme of the 1985 IEEE Professional Communication Society conference to be held October 16-18, 1985, in Williamsburg, VA. The IEEE-PCS addresses the needs of professionals in technical communications, and conference papers will focus on computer applications such as communicating on-line and the integration of graphics and text. Contact the Institute of Electrical and Electronic Engineers, 345 East 47th Street, New York, NY 10017.

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The Scholar's Software Library

Bryan Pfaffenberger

Program:	<i>ProofWriter Graphics</i>
Available From:	Image Processing Systems 6409 Appalachian Way P.O. Box 5016 Madison, Wisconsin 53705 (608) 233-5033
Price:	\$425 (includes Scientific or Foreign Language character sets; for both, add \$25)
Requires:	IBM Personal Computer, IBM PC XT, 100% IBM PC-compatible, or Texas Instruments PC (256K, 2 disk drives, color graphics adapter required; character generator requires one of the following printers: Anadex 9620A, C, Itoh Prowriter, Epson LQ-1500, Epson MX-80, Epson RX-80, Epson FX-80, IBM Graphics Printer, IDS Prism, Manesmann Tally Spirit-80, NEC 8023A, Okidata 84/92/93, Toshiba P1350, Toshiba P1340, Toshiba P1351)

Of all computing mysteries, none is more arcane than the difficult business of displaying and printing foreign language characters. That's true even in the IBM-PC environment, which was designed to surmount the notorious Anglocentrism of the ASCII character set.

The PC complicates an already confusing situation by offering two routes to foreign language character heaven. The first, the ROM route, involves taking advantage of the PC's built-in set of 126 foreign language, technical, and graphics characters (the extended-character set) in the PC's read-only memory. But two major obstacles lie in your path. You can display and print those extra characters only if (1) your word processing program recognizes the additional characters, and (2) your printer contains them in its higher-order character set. If the first obstacle doesn't get you, the second one probably will. Only a few printers--despite the frequent claim of "IBM-PC compatibility"--respond correctly to the PC's extended character set. And even if you can get everything working, you may find that the IBM extended-character set doesn't have all the characters you want.

The second route lies through the PC's optional color graphics card. Instead of saddling you with a fixed set of characters like the ROM route does, the color graphics card permits a program to switch every dot on the screen on or off at will. That means you can display just about any foreign language character ever devised. And if you have a dot-matrix printer, what's displayed on the screen can, in principle, get printed. It can, that is, if you've got software expressly designed to help you do just that.

ProofWriter Graphics, a word-processing program from Image Processing Systems of Madison, Wisconsin, makes full use of the PC's graphics display and dot-matrix printers for foreign-language word processing. The program comes with a character database containing almost two-thousand foreign language, technical, and scientific characters, including characters for word processing in science, mathematics, engineering, statistics, and modern languages (including Russian, Slavic, classical Greek, Romanized Arabic, Hebrew, Ugaritic, Egyptian, and all European languages).

You can use any 126 of these characters at a time while you're writing. It's easy to enter them; you can configure your keyboard so that 38 are available simply by holding down the ALT key and pressing an alphanumeric key. The color graphics video display shows the characters on the screen. If you've forgotten how the keys are mapped to the keyboard, holding down the ALT key and pressing function key F8 brings up a screen display of the key assignments. Best of all, your dot-matrix printer prints the special characters, cranking out accents, diacritics, and umlauts with ease.

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If you can't find the character you want in the character database, a special character-design program lets you create your own characters right on the screen and save them to disk for regular use. It shows you an enlarged, eight by eight matrix of dots, and by placing asterisks in the matrix you can tell the program which dots to light up (and which ones to cast into darkness). There's nothing to stop you, in short, from creating a font in a non-Romanized language such as Tamil.

ProofWriter Graphics' prowess with foreign-language characters inspires enthusiasm, but its provisions for word processing are another matter. Leaving aside the onscreen display of foreign-language characters, the program isn't a "what you see is what you get" word processor. It falls, rather, under the text editor/batch formatter rubric; you enter and revise text with the text editor and, as you do, you embed formatting commands in the text. But you don't see the effect of these commands while you're writing, and they make the text difficult to proofread onscreen.

A separate pass over the document with a formatting program arranges the text for printing. You can preview the results on the display screen. Even so, fixing formatting errors--and you'll surely find some--takes time. Like *Perfect Writer/Perfect Formatter*, *EDIX/WORDIX*, and other text editor/batch formatters, *ProofWriter Graphics* is surpassed by interactive programs (such as *Microsoft Word* or *WordStar 2000*) that show the effect of all or most formatting commands on the screen as you're writing. Other quibbles: you write in one mode and edit in another, and the manual is occasionally unclear or inadequately indexed. Fair warning: the program is complex, and beginners will find it challenging (you'll want someone at hand who is experienced with *DOS*).

That said, *ProofWriter Graphics* offers ample compensation for the writer willing to put up with the text editor/batch formatter approach, the modes, the manuals, and the program's complexity. Besides the program's prowess with foreign-language characters, it offers an excellent footnoting utility that automatically numbers footnotes, formats them just as you please, lets you choose between footnotes or endnotes, and "floats" excess footnote text to the next page; a special equation mode for entering multiline mathematical expressions; automatic numbering of equations; a spelling checker; and print merging for form letters.

When used with an excellent, high-density dot matrix printer such as the Toshiba P1351 or Epson LQ-1500, *ProofWriter* can produce handsomely formatted and footnoted documents containing any character imaginable. And if that not-so-small achievement matters to you, the program's limitations will surely pale in significance.

Contributing Editor **Bryan Pfaffenberger** is a writer and anthropologist who teaches in the Division of Humanities, School of Engineering & Applied Science, University of Virginia. He's the author of *The College Student's Personal Computer Handbook* and *Macintosh for College Students* (both published by Sybex Computer Books). His more recent *The Scholar's Personal Computing Handbook: A Practical Guide*, was published this fall by Little, Brown and Company; he is currently working on *Mastering Microsoft Word* for Dow Jones/Irwin. Comments and dialogue are welcome; contact Bryan at 218 Sunset Ave., Charlottesville, VA 22903.

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SOFTWARE REVIEW - MacWrite 4.5

William Kemp

PROGRAM	MacWrite 4.5
PUBLISHER	Apple Computer, Inc.
ADDRESS	20525 Mariani Avenue Cupertino, CA 95014 (408) 996-1010
LIST PRICE	\$195 (with <i>MacPaint</i>), but currently free with purchase of any Macintosh computer
WILL RUN ON	Macintosh, Macintosh 512, Macintosh XL
MEMORY (RAM) NEEDED	128K
DISK DRIVES NEEDED	one (two recommended)
SPELLING DICTIONARY	third-party vendor option
ON-DISK TUTORIAL	yes
QUALITY OF MANUAL	excellent
EASE OF LEARNING	excellent
EASE OF USE	very easy
COPY-PROTECTION	none
UPDATES	available at no charge from dealers

COMPOSITION

Features	Yes-No	Comment
Help screens	no	all essential commands are constantly available on menus across top of screen
Automatic headers/footers	yes	up to six lines each; invariable within a document except for page number, date, and time; very easy to add, remove, or change
Full-screen cursor control (ability to move to any spot on the screen to edit)	yes	the cursor is controlled by the Mouse input device rather than cursor-control keys. Extreme movements are very easy; removing hands from the keyboard to move the cursor a few spaces is slightly irritating. The optional numeric keypad has conventional cursor-control keys
Automatic word-wrap (no "return" or "enter" required at the end of each typed line)	yes	no automatic hyphenation
Adjustable left and right margins	yes	minimum left margin is 1"; settings are controlled by format rulers, which can be inserted at any point in the text

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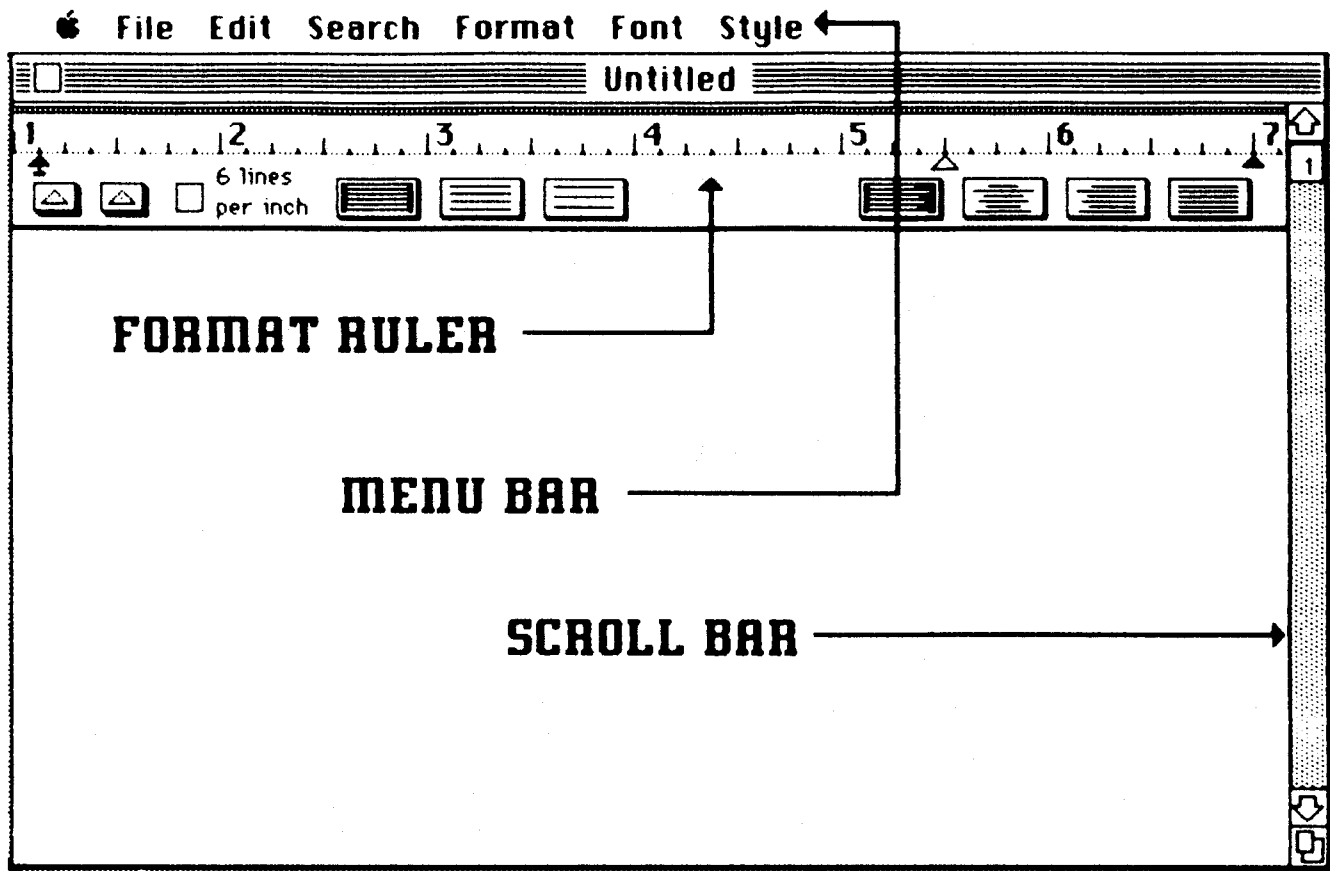


Figure 1: Functional areas of the MacWrite screen

Single and double spacing	yes	also one-and-a-half line spacing for use with small type sizes; the settings are controlled by the format rulers
Automatic text adjusting	yes	no type-over; unwanted text must be deleted, but the process is simple and rapid. Text-insertion at the cursor location automatically pushes existing text along. Backspace automatically deletes. <i>MacWrite</i> maintains text in the format selected throughout editing; reformatting is never required
View text on the screen as it will appear on the page	yes	<i>MacWrite</i> offers the closest available correspondence between screen and page; all formatting and typographic choices appear on screen exactly as they will appear in print
Search and/or replace	yes	find, replace, find next, find and replace all; the global find/replace is not reversible
Move text from one location to another in a document	yes	mark passage using Mouse, then cut or copy; move cursor (with Mouse) to new location, then paste. The movable passage is temporarily stored in the Clipboard utility file until the next cut or copy command and can be

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CREATIVE WRITING

Ability to space lines in less than full increments	no	
Proportional spacing	no	Justification only by spaces inserted between words.
Right-justified text	yes	Format rulers also allow ragged left and centered text.

TECHNICAL WRITING

Subscripting (H ₂ O)	yes	to one level only
Graphics	yes	<i>MacWrite</i> marries smoothly with graphics software which produces free-hand drawings (<i>MacPaint</i>), scaled drawings (<i>MacDraw</i>), or standard charts (<i>Microsoft Chart</i>). The inserted images can be resized within <i>MacWrite</i> for effective display. New text cannot be entered in <i>MacWrite</i> on a line which contains an image. Several hardware accessories to digitize images (producing a <i>MacPaint</i> image which can then be included in a <i>MacWrite</i> document) are available; short of professional electronic page layout equipment, <i>MacWrite/MacPaint</i> offer the most sophisticated wedding of text and image commonly available.

PROFESSIONAL

Create your own "Help" screens	no	
Text merging ('boilerplate')	no	with the Clipboard and Scrapbook utility files, <i>MacWrite</i> can do primitive boilerplate operations; but it lacks an automatic merge-on-printing facility
Background printing	no	

OTHER FEATURES

MacWrite is inseparable from the Macintosh user interface, which depends on icons, top-of-screen menus, and the Mouse to make the computer's powers readily accessible; becoming comfortable with the Mouse takes about an hour. While working in *MacWrite*, the user can quickly access and use an electronic notepad, a simple calculator, a clock (with an alarm), and a simple number puzzle. Other "desk accessory" utilities are available from third-party vendors.

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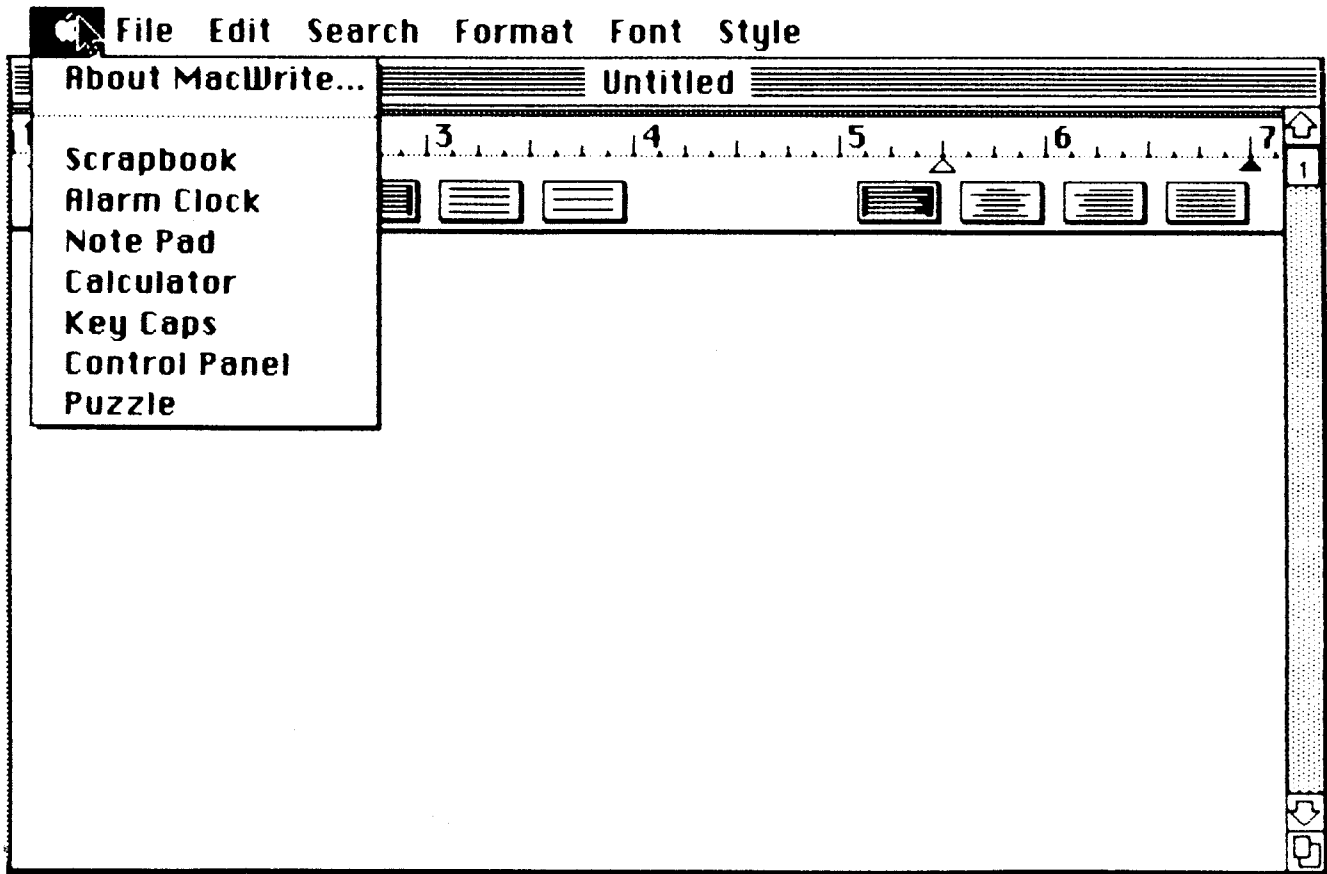


Figure 3: *MacWrite* screen with the Apple menu pulled down, showing the "desk accessories" available while using *MacWrite*.

PRINTER SUPPORT

The Macintosh comes with a printer driver which supports the Apple Imagewriter dot-matrix printer in three print modes; the highest mode is superior to most dot-matrix output. Interfaces for other popular dot-matrix and letter-quality printers are available commercially, but using a conventional letter-quality printer prohibits mixing text and graphic images in one document. *MacWrite* will also support Apple's LaserWriter, which produces newspaper-quality copy.

OVERALL EVALUATION

MacWrite is a medium-duty word processor which is remarkably easy to learn and use. It also offers a seductive range of typographic control and great flexibility in mixing images with text. Technical features of the Macintosh design limit a *MacWrite* document to about fifteen pages on a 128K machine; where 512K is available the maximum document length is what can be stored on a disk—about 250 pages. The previous official release (version

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2.2) works more smoothly on 128K machines than does version 4.5. Various unofficial versions, numbered between 2.2 and 4.5 and widely available through user groups, are reported to contain dangerous bugs. *MacWrite* does not provide the resources of a full-function word processor (spelling checking, boilerplate merging, automatic footnoting), but it will perform most kinds of academic work more than adequately. Its strongest points are ease of use and visual variety. Through its variable type fonts it offers word processing with quite legible printed output in non-English symbol sets. For new and occasional users, it is quite possibly the easiest word processor available.

William Kemp teaches English and linguistics while also directing the Master of Arts in Liberal Studies program at Mary Washington College in Fredericksburg, VA (where, he says, "I'm stuck with WordStar on the HP 150"). He participates in numerous computer-related activities on campus, and also teaches a course titled "Introduction to Computer Themes and Applications."

Manuscript Submissions Welcome

The *Newsletter* welcomes article submissions which pertain to word-processing, text-analysis, and research applications in professional writing situations. Also, hardware and software reviews are accepted, but please contact Dr. Jim Schwartz, Hardware/Software Review Editor, before submitting them (call Jim at 605-394-1246). Manuscripts may be submitted either as hard copy or on 5¼" diskettes using *WordStar* (3.xx), *Leading Edge Word Processor*, or standard ASCII code. If submitting disks, please make sure they are formatted either in MS-DOS, PC-DOS, or a popular CP/M format (Kaypro, Zenith, etc.). The Editors reserve the right to edit manuscripts, if necessary. If you want your manuscript or diskette returned, please send enough postage to cover the return along with a self-addressed envelope. Address all correspondence to the Editors, *Research in Word Processing Newsletter*, South Dakota School of Mines and Technology, 501 E. St. Joseph, Rapid City, SD 57701-3995. The Editors may also be reached on *CompuServe* (70177,1154) and the *Source* (AAH500).

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