

color of a Mac II under Multifinder (where it took 800K of RAM). Most of the testing was performed on an SE running system software, Release 6.0.

Mac Draw II is a worthy extension of the original Mac Draw, with improvements in features and operating speed. You can use it as a general workhorse for drawings and illustrations, but it is missing support for the latest Macintosh color model. This holds the performance score to very good.

DOCUMENTATION:

Mac Draw II comes with a thick user manual, a foldout quick-reference card, and two interactive animated tutorial disks.

The user manual is quite complete, with descriptions of basic and advanced features, a section on learning the program through experimentation, and a structured set of beginner's exercises in conjunction with the tutorial disks.

The manual has a table of contents, an index, and a glossary of terms. A discussion of the differences between this and earlier versions of Mac Draw is also included. The user guide includes numerous illustrations of drawings in progress and of the dialog boxes you can expect to see.

Separate appendixes cover setup (including configuration of the plotter driver), command-key equivalents, using Mac Draw for color work, and the default preset options. There are also very short discussions of installing the program on AppleShare networks and PICT formats.

Our only significant criticisms of the documentation are the absence of on-line help and the failure to discuss error conditions and messages. Still, this comprehensive documentation is very good.

EASE OF LEARNING:

Almost every Macintosh user has played with a paint or draw program. Mac Draw II is as easy to learn as any of them.

Because the basic tools are standard, an experienced user of earlier versions needs to read only a few pages of the manual or the quick-reference card to understand the differences between Mac Draw II and earlier releases.

The novice user would be well-served to take the hour required to run both tutorial disks and should be able to begin creating usable drawings within a few hours.

It is difficult to make a product like this equally accessible to a wide range of potential customers, but Claris has gone the extra mile to do just this. We therefore rate ease of learning very good.

EASE OF USE:

The tools in the top half of the left margin are standard and straightforward. Tools in the bottom half of the screen are not self-evident, however, and you'll probably have to refer to the manual. Almost all the menu functions can be accomplished by using the command key or shift-command shortcuts. You can have extra control over functions such as motion and selection by using the shift and sometimes the option key.

Unlike most Macintosh programs, Mac Draw II does not use a Command-P for print. However, the normal Macintosh conventions for selecting objects (drawing a marquee box around them, shift-clicking, "select all") all work exactly as you would expect.

The combination of mouse and command keys makes drawing swift and easy. The menus and dialog boxes are straightforward and prompt you for your choices among a likely selection; you can also customize some of the options in the dialog box. Although you will have to read the manual to understand "views" and "library parts," anyone with Macintosh experience will be able to figure out how to customize Mac Draw II.

You can open older Mac Draw files and save them in the new program, and you can bring illustrations in via the clipboard. You can't, however, open the files of other drawing programs unless they support the Mac Draw format. You cannot save your drawing in either TIFF or Encapsulated Postscript format.

The program could be better at enlarging small regions for detail work. There's no magnifying glass or selection box to choose which part of the drawing the software will use as the center of your enlargement — it centers on whatever is at the center of your screen. When you "fit to window," it moves everything against the left-hand margin of the work area instead of the center of the window. On the other hand, enlargement/reduction works quite well; the 2,000-dpi resolution is more than adequate for most uses, and the single mouse action to return to normal size is a godsend.

Claris has put a great deal of effort into making this package easy to use, and we rate it very good.

ERROR HANDLING:

Mac Draw II does not automatically save files, so you need to save your work regularly. There is one level of undo function in the edit menu, and it covers all the operations used to make changes to the document you are working on. (It does not affect changes in your window size, selecting an object, or similar level

operations.) There is also a Revert command in the file menu that discards your current drawing and reloads the last version you saved. Be warned, however, that the Undo command does not counteract the Revert command.

Mac Draw II's error handling gets a satisfactory rating.

SUPPORT:

Claris offers a 90-day media warranty on the disks and a 30-day money-back guarantee on the program. Mac Draw II users who send in their registration cards receive free technical support and customer service as well as information on updates, enhancements, and new products. Calls to technical support are not toll free, but technicians are available from 6 a.m. to 8 p.m. Monday through Thursday. Technicians are available the same hours on Friday, except for a break from 4 p.m. to 5:30 p.m. Support policies are very good.

Our calls to Claris were answered promptly and routed to the company's technical support department. We never held for more than a couple of minutes. The technicians were friendly and courteous and gave us ready answers. One technician seemed confused, however, when we asked about Color Quick Draw vs. Quick Draw in the program's use of color. Another worked extensively with us on a difficult problem, suggesting many possible causes until we finally discovered the drawing file itself had been corrupted. Overall, Claris' technical support is good.

VALUE:

Mac Draw II sells for \$395. Registered users who purchased Mac Draw before July 1 can upgrade for \$100 prior to September 30. Anyone who bought the Mac Draw after July 1 can upgrade for \$200.

Mac Draw II is a natural extension of earlier versions of the popular program. It features improved performance and added features that will appeal to more high-end users than Mac Draw (which Claris is still selling as an entry-level package). Still, it's not an illustration program of the class of Freehand or Illustrator '88. So it seems odd that Claris has priced this program only 20 percent below these high-end illustration programs.

Mac Draw II is easier to use and will take very little time for someone familiar with its predecessor to get up to speed. Further, the pen-plotter driver program alone is worth a good portion of the list price.

Considering these trade-offs, we rate Mac Draw II a good value.

Michael Ward is a consultant with Expert Management Services (EMS), a management services company located in San Jose, California. He has been using and evaluating graphics packages since 1983.

RELATED REVIEWS

MACINTOSH DESIGN PACKAGES

Illustrator '88, August 22
Freehand, May 16
Product Comparison: Macintosh
Graphics Software, Macintosh Target
Edition, June 13:
MacPaint 2.0
FullPaint 1.0se
PixelPaint 1.0
MacDraw 1.9.6
Cricket Draw 1.1
MacDraft 1.2b
SuperPaint 1.1
Canvas 1.02m
Graphicworks 1.1

Samna Word IV 2.0

Strong High-End Word Processing Package Improves

By John Lombardi, Review Board

Samna Word IV is a high-end word processor derived from a dedicated word processing model, competing with MultiMate, Office Writer, and Displaywrite. Its robust features match high-end leaders like Word Perfect, Microsoft Word, and Wordstar 2000. Highly structured and menu driven, Samna offers good support for such common office tasks as correspondence and forms processing, and the Plus version adds a competent integrated spreadsheet.

Version 2.0 adds a thesaurus, document preview, proportional spacing for fonts, improved graphics printing, table of authorities, and a variety of other enhancements.

This review is based on scoring and testing criteria established in our Office/Professional Word Processing product comparison (March 28). (It does not include an evaluation of the spreadsheet module in the Plus edition.)

FEATURES:

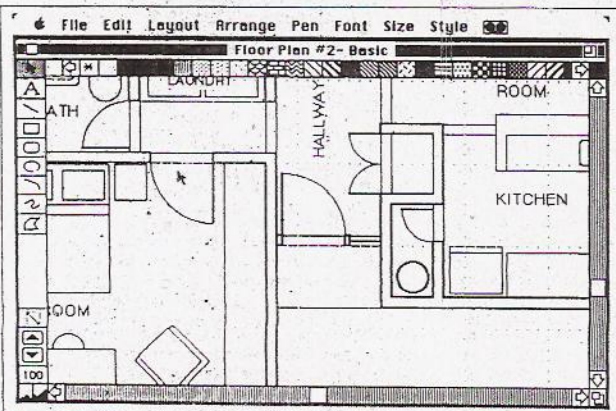
Samna IV offers all the basic facilities we have come to expect in high-end word processing. It edits with the normal complement of cursor control commands (customized to its own keyboard command design), delete functions, and move and copy commands. Most formatting takes place on-screen with the usual bold, center, underline, justify, and super/subscript capabilities.

Samna can change fonts or print wheels in mid-document. It supports headers and footers, does footnotes capably, and adjusts all margins. While creating binding widths (alternating by even/odd pages) is difficult, Samna can change page numbers easily. It supports two windows in the word processing and two windows in the spreadsheet mode in the Plus edition; the windows can show different documents or two views of the same document.

Samna's comprehensive dictionary support includes hyphenation with an extensive thesaurus. File- and directory management includes a sorted display, full document comments, and a complete document history screen. Tabs include decimal, regular, and right-adjusted jumps, combined with the capability to center text between top and bottom margins. You can also number lines, change letter cases (upper/lower), and perform search and replace forward or backward.

Samna IV has a special feature for processing formulas, good math capabilities, and useful sort facilities, although the sort routine sorts uppercase separately from lower case — a disadvantage. Form letters and forms management represent a special strength with significant attention on filling out preprinted forms.

Samna joins the desktop publishing rage with increased font management for laser printers, including both a graphics preview capability and a host of font-related functions. Available in three magnifications, the preview presents a graphic representation of the printed text and displays character spacing as well as text and graphic element positions. While effective, the full page mode is not



Mac Draw II is faster and packed with more features than Mac Draw, which Claris will continue to sell as an entry-level package.

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edition) will take much longer, perhaps as much as a day or two, depending on whether issues of proportionally spaced fonts must be addressed.

We rate Samna's ease of learning satisfactory.

EASE OF USE:

A number of features, such as zoom, preview, and the dual windows, improve ease of use. Once familiar with the program's characteristics, an experienced user will find Samna IV as easy to use as most other high-end word processors.

Some peculiarities of the Samna IV system deserve mention. While the program will print multiple copies of a document on the HP Laserjet, among

others, it won't output the pages a document at a time. For example, you get six copies of Page 1 and then six copies of Page 2, and so on, leaving you with the task of collating.

Further, when printing columns and some other special printing tasks (such as graphics beside text), Samna IV makes two passes on the printer, requiring it to rewind the page for the second pass. Not only must the printer be capable of doing this, but if you use non-pin-feed or non-tractor-feed sheets the re-rolled page may not end up in exactly the same position because of printer slippage. Most competitors can print double or more columns side by side in one pass. On a laser printer, this becomes a nonissue.

Overall, while Samna Word IV has significant ease-of-use features (especially for forms processing, math capabilities, and formula processing), its slow speed and some clumsy solutions reduce a user's efficiency. However, if you require close integration of spreadsheets and text preparation, the streamlined integration of these applications in the Plus edition improves ease of use. In balance, we rate Samna satisfactory in ease of use.

ERROR HANDLING:

Samna has several provisions to protect the user against inadvertent data loss. Backup files, automatic timed backup, and prompts before quitting all contribute to data integrity. There are two Undo commands: One lets you undo your last deletion; the other lets you undo your last text enhancement. (For example, you could un-format text, or if you had just boldfaced a section, it could be undone.) Given the multiple backup capability, we rate error handling very good.

vided good advice on how to work around the difficulty. Samna's team made an admirable support effort, and we rate technical support very good.

VALUE:

In the frantically competitive word processing market, the pace of improvement is so fast that while Samna has improved, its competitors have improved even more, causing Samna's relative position to slip a little. At \$595, Samna's generally good performance and average to above average ratings in other categories make it a reasonable value, although a little pricey. (For those who need a spreadsheet integrated into a word processor, the Plus edition adds the spreadsheet for an additional \$100.) Overall, we rate Samna IV, Version 2.0 a good value.

John Lombardi is provost of a major university and author of five books. He has been working with computers since 1967.

WORD PROCESSING
INFOWORLD BENCHMARKS

	Samna Word IV 2.0	Microsoft Word 4.0	Word Perfect 4.2
File			
Load	2.6	1.4	1.5
Save & continue	Varies	4.1	5.6
Import ASCII	79.1	1.1	18.3
Export ASCII	29.5	55.3	22.5
Import DCA	49.2	58.7	20.9
Cursor movement			
Top to bottom	0.9	0.5	2.9
Manual scroll	51.4	94.1	97.7
Reformat	86.0 ¹	10.8	25.9 ¹
Search			
Last word	76.0	2.2	2.7
Replace	81.6	14.4	5.5
Append document	15.7	0.7	0.8

All times in seconds.

All tests conducted on 8-MHz IBM AT (640K of RAM, EGA).

¹ Could not globally alter all rulers. Chart indicates the total time to alter each ruler manually.

SUPPORT:

Samna provides registered users with 30 days of free, but not toll-free, phone support. Thereafter users may purchase support contracts, as well as training programs, at varying prices. Companies buying large quantities of Samna receive unlimited free support. Support on the Source BBS will be available soon. The short policy period is not sufficiently offset by the availability of extended corporate support. We rate support policies poor.

We called Samna's technical support line with a variety of questions related to font management and graphics printing. The answers from two technicians at different times were correct and helpful. In one case the problem was quite complex, and after considerable discussion, the technical support person pro-

RELATED REVIEWS

SAMNA WORD IV, VERSION 2.0

Office Writer 6.0, August 8
Sprint, Version 1.0, August 1
Lotus Manuscript, Version 2.0, July 11
Total Word, Version 1.0, May 23
Word Perfect, Version 5.0, June 20
Product Comparison:
Office/Professional Word Processing,
March 28:
Lanier Deskworks
Displaywrite 4
Lotus Manuscript 1.0
Mass-11
Microsoft Word 4.0
Multimate Advantage II
Office Writer 5.0
Samna Word IV
Word Perfect 4.2
Wordstar Professional 4.0
Wordstar 2000, Release 3
Xywrite III Plus

as clear or WYSIWYG as some competitive preview features. The full-page preview provides more WYSIWYG than the partial-page preview does. You can also view the final text with the zoom feature, which presents a greened picture of the current page. Because zoom is fast and shows newspaper column layouts when the regular editing screen does not, it is particularly helpful in editing and formatting snaking columns.

The extended version, Samna Plus IV, has a competent spreadsheet module fully integrated into word processing operations. Although limited to 64 columns with 6,400 cells, the spreadsheet can link with other spreadsheets. Any range or the whole worksheet can be put into the host text as a table, and whenever the spreadsheet is updated, so is the text version. This operates in a

seamless and effective way. While we did not test the spreadsheet in depth, it works well with the word processing system and represents a nice added value.

The Samna Plus IV also includes Wordbase, a text file indexing utility that lets you search files for particular words. Once a file or group of files has been indexed, you can request a display of the files one at a time or a list of the file names where any particular keyword appears.

PERFORMANCE:

As a correspondence engine, Samna IV 2.0 is nicely tuned. Redefinable tabs improve flexibility, the search and replace maintains capitalization, and the program can insert either the text or a code for the system date. The insert mode is awkward: It uses a drop-down method that opens up a line for inserting. When in this mode, all you can do is insert text; all other editing features are disengaged. Features like columnar cut and paste and vertical centering on a page contribute to the good rating we give Samna in correspondence.

The spelling and thesaurus features are designed nicely. The spell checker offers a wide range of choices when a misspelling is detected and also permits global corrections. However, it does not permit the user to edit any other word in the text when editing the misspelled word. This makes it difficult to correct compounds, such as changing *pre view* to *preview*. The thesaurus integrates remarkably well and permits access to synonyms, antonyms, and related words. Overall, the spelling checker and thesaurus are well-implemented, sound performers, and we rate them very good.

For offices where mail merging is a necessary evil, Samna offers a robust set of templates and forms capabilities that allows for prompted input. Samna does not, however, support conditional selection criteria for mail-merge records, although it will select an alphabetical or numerical range from a records list. Given its overall strength, we rate mail merge very good.

Outlining in Samna IV is limited to numbering outline sections automatically at print time, although you can include user-defined numbering. We rate outlining good.

The table of contents feature supports three levels, and the index uses a keyword file that can be reused for other documents. However, it is not possible to mark specific words in the text for indexing; they must be in the keyword file. Overall, we rate Samna's table of contents and indexing features good.

Thanks to a convenient and effective window system, entering and editing footnotes is a snap. Notes can be at the bottom of the page or gathered at the end, but there is no provision for both footnotes and endnotes. We rate footnotes very good.

Revision tracking is displayed on-screen and permits printing with the revisions marked. Samna also supports complete document histories. The wordbase utility offers another useful way of tracking documents, permitting the recall of files with particular keywords. These capabilities meet our criteria for a revision tracking score of good.

Font support is extensive, although it uses a clumsy numbering system for selecting fonts. User-defined keys can be set up to store font and format information.

But overall, Samna's font management leaves something to be desired, especially with proportionally spaced soft fonts for Laserjet-type printers. The

extensive support for a wide range of fonts and printers requires considerable user intervention for best results. The program does not automatically download fonts, nor does it automatically adjust proportionally spaced lines. Instead, for example, a special function must be used for alignment so that proportionally spaced text can be right-justified. Moreover, the system does not provide a font or printer-driver editor to accommodate adjustments for new fonts or printers. Many competitors, such as Office Writer and Word Perfect, provide this capability.

While the program recognizes many fonts, the algorithm for handling proportional spacing and right justification is less sophisticated than the best in the market. Samna IV 2.0 just uses a word spacing scheme to justify lines, leaving wide white spaces in the text.

Font handling is nice but somewhat lacking in its implementation. There is no style sheet feature. We rate font handling satisfactory.

Samna can include TIFF, PIC, PCX, CGM, PDL, and Samna Decision Graphics file types. While it automatically protects sufficient space on the page for the graphic element, it will not flow text around the graphic, although image scaling and density can be controlled. The graphic image can be displayed in preview mode. Within the realm of high-powered products, these features represent satisfactory performance.

Samna offers many functions by scrolling the text across the screen while formatting. Consequently, its speed is significantly slower than other contenders. Among high-end word processing programs, Samna IV 2.0 earns a poor rating for speed.

Supporting the spreadsheet Data Interchange Format (DIF), ASCII, Navy DIF, and both DCA/RFT and DCA/FFT, Samna is amply compatible. It can import some standard data files (if they match rather narrow specifications) into its mail-merge system as well. We rate compatibility very good.

DOCUMENTATION:

Samna IV 2.0 comes with two large manuals and a getting-started booklet. In the Plus edition, another manual addresses the spreadsheet and wordbase utility. The word processing manual is organized alphabetically by function and has an excellent index. The explanations are clear and comprehensive, and in most cases, a set of notes and examples illustrates capabilities and limitations.

On-line documentation, while better than previous versions, is still skimpy by current market standards. One- or two-line explanations indicate the purpose of commands but provide very little information about what or how they should be used.

Error messages are reasonably helpful, but they stay on-screen after the error has been corrected or the function canceled, requiring a separate keystroke to remove them. Samna's tutorial, however, is quite helpful.

On balance, documentation is good.

EASE OF LEARNING:

Samna takes about one hour to install and set up. Less experienced users will need more time to handle the steps required for laser printer setup and font selection. Within another hour-and-a-half, the average user can produce simple correspondence. The manual's index and tutorial will help, but the weak on-line information inhibits learning.

Mastering the core features of Samna IV (excluding the spreadsheet in the Plus

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REPORT CARD

WORD PROCESSING SAMNA WORD IV VERSION 2.0

Criterion	(Weighting)	Score
Performance		
Correspondence	(40)	Good
Speller/Thesaurus	(40)	Very Good
Mail merge	(30)	Very Good
Outlining	(25)	Good
Table of contents and indexing	(20)	Good
Footnotes	(25)	Very Good
Document tracking	(15)	Good
Fonts and style sheets	(25)	Satisfactory
Graphics integration	(25)	Satisfactory
Speed	(125)	Poor
Compatibility	(30)	Very Good
Documentation	(100)	Good
Ease of learning	(125)	Satisfactory
Ease of use	(150)	Satisfactory
Error handling	(75)	Very Good
Support		
Support policies	(25)	Poor
Technical support	(25)	Very Good
Value	(100)	Good
Final score		5.5
Average score this category:		6.1

PRODUCT SUMMARY

Company: Samna Corp., 5600 Glenridge Dr., Atlanta, GA 30342; (800) 831-9679, (404) 851-0007 in GA.
List Price: \$695; \$595 for non-Plus version (word processing only).

Requires: IBM PC or compatible; PC/MS-DOS 2.0 or later; 512K of RAM; more memory required for preview or thesaurus; two floppy drives, hard disk recommended; graphics card required for preview.

Pros: Strong complement of features, especially forms, mail merge, math, and thesaurus; effective preview function.
Cons: Slow speed; less effective on-line help; clumsy font management; limited telephone support.

Summary: Somewhat more expensive than its competitors, Samna Plus is a good choice if you have a user base familiar with the product, you want an integrated spreadsheet/word processor, or do lots of forms processing and printing. Not recommended for long documents because of its slow speed or for complex formatting tasks using fonts.