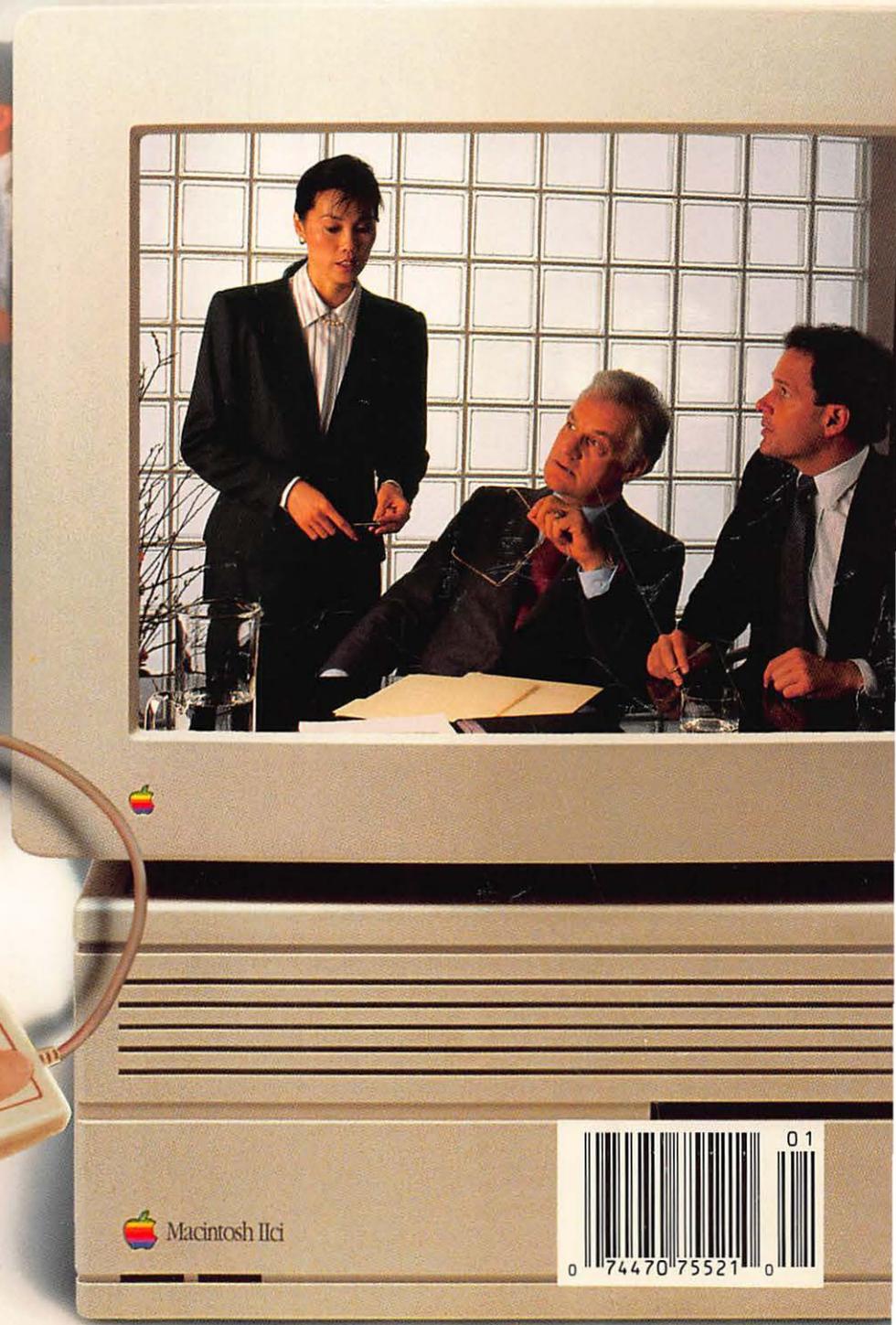
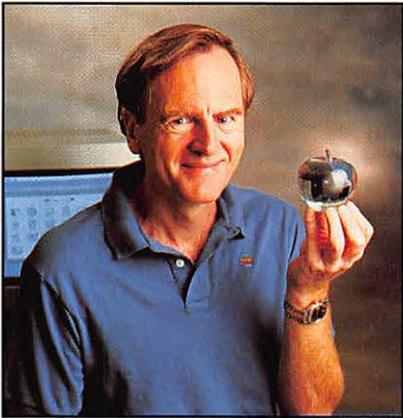


US \$5.95  
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# The Macintosh® Product Guide

# The AnswerSource.





W

e live in a multivendor world. But it is a world in which real productivity gains will come only by getting people to work in new ways. This is what Apple's vision is all about. The events that are happening right now are tilting the balance of power to you, the information "system" user. We want you to know that Apple intends to invest in and support both standards and innovation.

Apple is best known as the company that launched the personal computer revolution 13 years ago. Now we are bringing you a new revolution—"interpersonal computing." Interpersonal computing will become a tremendously important idea as peer-to-peer communications evolve into enterprise networks.

Ultimately, it will become obvious that the strategic issue is not just how we connect computers to computers, but the question is, how do we connect people to people? How do we accelerate the sharing of ideas and information between people, not just computers? How do we make the technology invisible enough—and the tools appealing enough—that people will actually want to use them? Or, to put it all in a single phrase, how do we inspire people to work and communicate in new, more productive ways?

We very much appreciate this chance to share with you how we intend to serve you better, not just as a desktop publishing/personal computer company, but as the end user's dashboard to distributed processing in a multivendor world. We know that we can offer end users the same ease of use in a local area system that they have grown to expect from Macintosh as a stand alone system.

John Sculley  
Chairman and CEO  
Apple Computer, Inc.



# The AnswerSource.

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*The AnswerSource* is a joint effort by JointSolutions Marketing and the independent third party development community. The plan for a comprehensive sourcebook was originally conceived by JointSolutions Marketing in response to developers seeking an efficient method for communicating product information to new Macintosh owners. Macintosh owners were seeking more efficient ways of understanding, selecting, and buying Macintosh products. The needs of the developers and customers manifested as *The AnswerSource*—a book which has now evolved to support Macintosh users of all skill levels.

We would like to thank Apple Computer, Inc. for helping us launch the first *Apple Answers*. This issue of *The AnswerSource* is the fourth issue of the Macintosh® Product Guide and is now an independent publication.

## KEY CONTRIBUTORS

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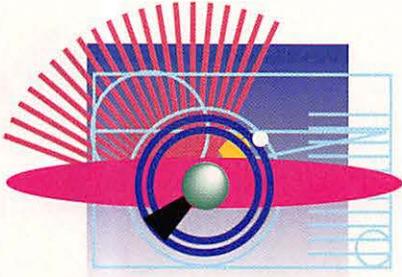
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**L**ike any quality publication, we continually take the pulse of our readers. Little makes us happier than to hear that a subscriber's copy is dog-eared from overuse. Better yet are the stories that *The AnswerSource* is one of the hottest commodities in a corporate mailroom, destined to be stolen before it reaches its intended owner.

This edition reflects the next step in the evolution of our product guide, as we stay one step ahead of our readers. It's not enough to have the latest information on existing products, or even the newest releases in the market; we're constantly evaluating what *kind* of information to include about each product, and what other background material might be useful to our readers. To that end, there's more information on each product in this issue, and expanded editorial coverage of the technologies and concepts that underlie new Macintosh software and hardware.

*The AnswerSource* has established itself as a unique, informed resource by providing awareness and objective information about products in a manner unlike any other publication. It is a bridge for joining two separate communities—Macintosh users and product developers—in two different ways—through information and communication.

*The AnswerSource* has the information you need to make informed purchasing decisions. Much more than an advertisement, it provides the detailed descriptions and sound technical advice missing from other sources. *The AnswerSource* belongs within easy reach, not on the shelf, but on your desk. It's as essential as the local phonebook.

*The AnswerSource* is also a bridge to the developers, putting our readers in touch with the people and products that can facilitate their work. It opens the line of communication between you. This book, in conjunction with a telephone, gives you the tools you need to make your decision-making time as productive as possible.

As you strive to do more and more with this wonderful computer, pushing the technology to its limits, Apple Computer and the entire Macintosh development community are geared to support your efforts. And, *The AnswerSource* is here to serve as *the* information resource.

Remember—we're in the midst of a great technological adventure.

*The AnswerSource Staff*





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**T**he AnswerSource is a unique collection of software and hardware product descriptions of solutions developed for the Macintosh. Products are grouped and color-coded according to the solution category which they support. In addition to specific descriptions, each

product group has a section introduction offering an overview of the applicability and functionality of its particular solutions. You will also find a review of the Apple product family, interviews with Macintosh experts, glossaries and some educational technical shorts.

## PRODUCT HEADING

A color-coded section description appears at the top of each product page and accompanies the product name, the manufacturer's address and phone number.

## PRODUCT OVERVIEW

Describes a product's general characteristics and purpose. Learn how the product can be used to solve problems in given environments and determine if it will meet your particular needs.

## PRODUCT PHOTOGRAPH

Portrays the product to help you recognize the software or hardware at your dealer. Most include disks, manuals, or tapes that come with the product.

## FEATURES

Highlights some of the major features and benefits of each product. Use this section to compare similar products. Features listed are not comprehensive and should not substitute for a demonstration by your dealer.

## TECHNICAL SUPPORT

Technical support phone lines and hours are given, as well as warranty details and, occasionally, additional technical information sources.

## REVIEWS AND AWARDS

Tells you where to find current product reviews and indicates any industry quality awards that the product has received.

## ORDERING

Learn how and where you can purchase the product, and get suggested retail pricing. You will also find pricing, system requirements and phone information in bold type.

## SCREEN SHOT

Shows what a program will actually look like when it's running on your Macintosh. In the case of hardware products, included software is usually reflected here.

## TIPS & TECHNIQUES

Shares tricks and short-cuts for using the product. Some are general, good sense rules and others are terrific suggestions exclusive to *The AnswerSource*.

Products are presented uniformly and include elements pictured in this example. Every description includes an overview, features, a photograph or screen shot, ordering information and system requirements. Note that each product's system requirements, cost, and phone number appear in

bold for easy reference. We encourage you to contact these companies, to order their products or to arrange for demonstrations. We have also included a reader service card at the end of the book for requesting additional information.

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5201 Pat & Henry  
Suite One, CA 95052  
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## MacDraw II 1.1



**Product Overview**  
MacDraw® II, the best-selling Macintosh graphics software, is a powerful, flexible tool for illustration, design, presentation, and publishing.

Illustrate using custom line widths and easy-to-modify curves. Rotate graphics or text in 0.1° increments. Zoom in to 500% for precise editing or out to 3%. Design to scale with ease, using custom scales. Plot drawings to popular Hewlett-Packard and Eclairon printers. Export drawings directly to Class CAD or to other CAD systems using the Class Graphics Translator.

Present slides or overheads created with built-in slide manager and printing controller. Create audience handouts (2, 3, or 6 slides per page). Output to black and white printers, color printers, or even 35mm slide acetates. Publish documents with powerful text-handling capabilities. Easily create block-justified text blocks. Edit text on-screen with your graphics.



**Features**

- Zoom out to 3% or in to 500%
- Specify line weights in 0.01 point increments
- Customizable arrowheads and dashed lines
- Multiple fonts, sizes, and styles in the same text block
- Left-right center and right-justified text
- Slide manager for easy presentation and audience handouts
- Create or buy licenses with frequently-used objects
- Filter drawings included for 21 popular HP and HP-compatible printers
- Wetware and disk-based tutorials included



**Reviews and Awards**

Government Computer News  
*Draw Award* (1/90)  
MICrowze (1/89)

**Technical Support**  
Tel: (408) 727-9054  
MTH: 8:00 am-5:00 pm (PST)  
E: 8:00 am-2:00 pm (PST)

Technical Solutions How & Where  
covering tips, techniques, and product update information.

**Ordering**  
MacDraw II is available through authorized resellers, or contact Class at (408) 727-8227.

**Required: Macintosh Plus or greater; 800K drive; System 6.0 or higher.**

**Recommended: Hard disk.**

**Suggested Retail Price: \$399**

**Version: 1.1**

**Contact: (408) 987-7000**

**Tips & Techniques**

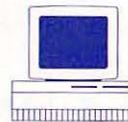
1. To select all objects created with a toolie, click on the tool, then choose Select All from the Edit menu.
2. To set all program defaults, create a new document, set all your custom settings, then Save As a stationary file called "MacDraw II Options" (save this in the System Folder).

# *Macintosh Family of Products*

---



*“The Macintosh is the solution to all of my problems . . .  
Well, at least some of them!”*





# T

## *ailoring the Macintosh to Fit a Business' Needs*

How does Apple suggest that you go about buying a Macintosh?

"START WITH THE SOFTWARE!" admonished Tom Virden, Manager of Small Business Marketing at Apple Computer, when asked how Apple recommends that potential owners evaluate the type of Macintosh system that would work best for them. Once you've decided on software (selected to accomplish the work that you've got to do), you'll automatically know what kind of hardware you'll need for maximum efficiency and effectiveness.

"Do some basic research. Look at books such as *The AnswerSource*, or any of the magazines on the market. Go to the library. Talk to friends. Talk to people in your own industry. Ask them for the name of a dealer that they've bought from and liked. After all that, then go to a dealer. And when you're talking to the dealer, find out how much additional support they'll offer you. In addition to the hardware and software purchase, ask about the availability of on-site service, or training, or trouble-shooting, or even the on-going acquisition of information about issues such as upgrades."

### ***The Business Market***

"The overall business market is the area in which Apple has grown the most for the last 5 years. And it's still where there is the greatest growth potential," said Virden, who's worked at Apple for the last seven years.

*"We have tremendous equity/momentum, built into our innovative computer solutions. We develop new uses as well as offering a complete array of standard solutions. Nobody has the depth and breadth of products that Apple has!"*

To be more specific, the service sector of the small business market is viewed as the next growth area for the company. Only 40% of small businesses are computerized. "Small businesses are 'value' rather than 'price' sensitive, and will pay to get just the right machine. They can't afford to make a wrong decision when it comes to a computer."

**Interview with  
Tom Virden  
Manager of Small Business  
Marketing, Apple Computer  
Cupertino, CA**

Many large businesses understand the applicability of the Macintosh to their systems/business needs. Unfortunately, a number of small- and medium-sized businesses still maintain the perception of the Macintosh strictly as a stand-alone, desktop publishing machine.

The Macintosh has options for all the business "basics." Businesses need financial analysis/spreadsheet capability. They all do some type of word processing, although the work may vary, such as a law firm's need for footnoting or a sales organization's need for mail merge capabilities. They need databases to track information, such as customer lists or inventory, and most companies do some sort of presentations. The Macintosh also has software for specific needs, such as CAD/CAM applications for engineering design/manufacturing.

To dispel the myth that the Macintosh is at a non-competitive price level for small businesses, Virden pointed out, "It's possible to get a Macintosh system for \$2,000 (a Macintosh Plus and an ImageWriter). If you need color and additional room for expansion it will only cost \$5,000. Generally a Plus or an SE is adequate to create a viable work system. That's *definitely* competitive."

# Solving the Problems of Business

Apple's large business market is hardly monolithic. There are at least four basic groups of users involved with Macintosh product purchase decisions: senior management; information systems managers; department heads; and end users.

Peter Watkins, of the Large Business Marketing Group at Apple Computer, says that big corporations that formerly regarded the Macintosh as a specialized, stand-alone machine now look at the broad spectrum of their data needs and consider the Macintosh from a more global perspective. The question isn't "how to use the Macintosh in the organization, but rather, how to best solve business problems with them."

For example, one large financial services company used HyperCard to give each employee easy, instant access to more information. This Macintosh application cut their customer service phone call length 90%, from 20 minutes to just 2 minutes.

Another company has taken advantage of the ease of learning the Macintosh to cut human resource costs. Training costs were excessive because of the large amount of information to be conveyed. The Macintosh put information at new employees' fingertips as needed, cutting the training time significantly.

**Interview with  
Peter Watkins  
Senior Manager of Market  
Information, Apple Computer, Inc.  
Cupertino, CA**

Typically, information systems departments have huge numbers of applications on non-Macintosh platforms. Required maintenance and enhancement of these systems has meant a chronic backlog of user requests, but adaptation to accommodate the Macintosh seemed impractical.

There are now dozens of products on the market which facilitate the interface of the Macintosh with mainframes. The friendly features of the



Macintosh can be blended into the existing environments. The complexity of this connection is dependent only upon the effort the company wants to put into creating such an interface.

A simple solution is to add some cut and paste benefits and move the data to the Macintosh desktop for manipulation and output in programs like Microsoft Excel and Word. Known as terminal emulation, this process typically requires a hardware card and software combination, such as DCA's MacIRMA or the MacMainFrame series from Avatar.

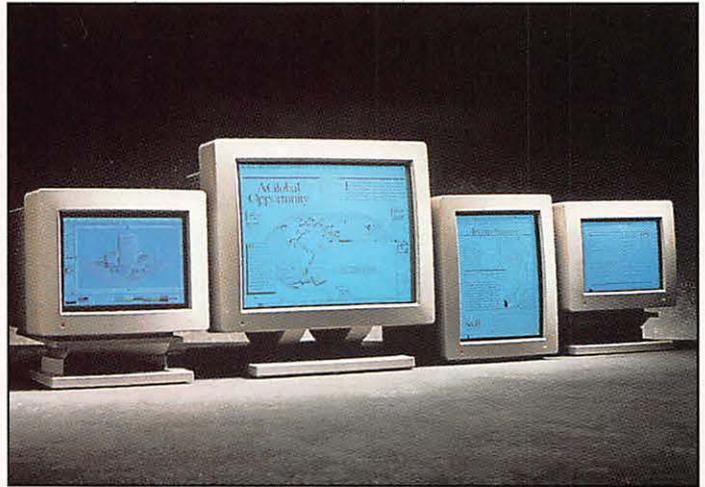
Another option is to make the mainframe connection and data transfer transparent to the user by hiding the arcane and recondite aspects of mainframe applications behind their familiar Macintosh counterparts. Apple's CL/1 connectivity language and MacWorkStation application development tool allow a company to create just such transparency. A system can be developed that places mainframe data directly into a Macintosh spreadsheet document. The mainframe's database application processes information queries and retrieves the necessary data, while the Macintosh spreadsheet puts the data into a form that the user can manipulate him/herself.

The key to the process is the understanding that users don't fundamentally care how the data is accessed from a mainframe, as long as it's easy and responsive. New reports can be generated without relying on the information systems department. Users can work with their desktop computers, becoming more self-sufficient in generating what they need. Information Systems can then focus on protecting the corporate information assets and maintaining the integrity of the entire system. The qualities of the Macintosh can now easily be maximized for the benefit of the entire organization.

# I ntroducing the Members of the Family

The Macintosh was an instant sensation when it was introduced back in 1984, in part because of its distinctive styling. The shape—a spare, clean rectangle with a built-in screen and floppy disk drive—was a hallmark of the new computer's revolutionary design. And yet, within a few short years, Apple Computer introduced a color version, the Macintosh II, with a much different look. And recently the world saw its first Apple laptop, the Macintosh Portable.

The Macintosh family of computers is now comprised of three basic product groups: the compact, the modular, and the portable lines. The equipment's look, shape, and even color have changed; what has remained constant are the mouse, the compact floppy (either 800K or FDHD) disk, and the intuitive, graphic interface. Completely compatible with each other.



## ***Let Me Show You Something In A Compact Model . . .***

The compact line consists of models that most resemble the original Macintosh box, stressing a small footprint and black & white graphics. It includes the three most widely-distributed computers: the Macintosh Plus, SE, and SE/30. The Macintosh Plus is considered an entry-level model that can function as a stand-alone office productivity system or as a cost-effective node in a local area network. The Macintosh Plus has one 3.5-inch internal 800K disk drive as well as a SCSI port (Small Computer Serial Interface, pronounced scuzzy) for connecting peripherals such as hard disk drives, scanners, or the Apple LaserWriter IISC.



Courtesy of Apple Computer, Inc.

If speed is important to you, consider the Macintosh SE, which is designed to access files and run applications 15-20% faster than the Macintosh Plus. Unlike the Plus, it can have two floppy disk drives, or one hard disk drive, built-in; its floppy disk drive is different, too—Apple FDHD SuperDrive, a 3.5-inch floppy disk drive that can read from, and write to, MS-DOS, OS/2 and ProDOS disks. The Macintosh SE also has an internal slot for communications, video, or system-accelerator options.

The top model in the compacts is the Macintosh SE/30. It combines the original Macintosh design with the latest microprocessor technology, the 68030. (The 68000 series of microprocessors from Motorola constitute the heart of every Macintosh. With each succeeding version—68000, 68020, and 68030—the chip is faster and more powerful.) The Macintosh SE/30 runs most applications up to 4 times faster than the SE. Like the Macintosh SE, it includes the Apple FDHD SuperDrive and an optional internal hard disk drive. But there are two important differences—an internal 030 Direct Slot for video, memory and communications applications; and the SE/30 has the capacity to work in color, on a separate external monitor.

## Hit the Trail With This Macintosh

Apple's long-awaited laptop, the new Macintosh Portable, is an all-in-one, battery-powered computer. Its advanced design features deliver twice the power of a Macintosh SE in a package that's even easier to take on the road. It has an advanced Active Matrix LCD screen, standard Macintosh input and output capabilities, such as the mouse, and, like all Macintosh computers from the Macintosh Plus up, built-in networking. Its unique intelligent power management facility allows the Portable to operate for 6-12 hours on a single battery charge.

### These Machines Are Very Modular

The modular line also consists of three models: the Macintosh IICx, Macintosh IIfx, and Macintosh IIfx. All feature the 68030 microprocessor, the 68882 coprocessor and can support color or monochrome monitors. These are the computers of choice for color applications; but the line derives its name from its ease of expandability. Each features varying numbers of expansion slots on the NuBus (the internal data pathway that connects external devices, such as video and mainframe communication boards, to the main processor), one of which is needed for a video card. None of the modular line comes with a monitor, but the combination of expandability, processor power, and color capability make it the unbeatable choice for many graphic- and data-intensive applications.

The Macintosh IICx is distinguished by its power and its compact size. The Macintosh IICx can even be used in either a vertical or horizontal position. This computer comes with 1 megabyte of RAM; 3 NuBus slots; and a 1.4 megabyte Apple FDHD SuperDrive, which offers nearly twice the storage capacity of 800-kilobyte disk drives. It has MS-DOS, OS/2 and ProDOS integration capability and can come with either a 40 or 80 Mb half-height 3.5-inch internal hard disk drive.

The Macintosh IIfx has the features of the Macintosh IICx coupled with increased expandability and disk storage capacity. Instead of the three slots of the Macintosh IICx, it has six NuBus expansion slots and can accommodate either a 3.5 inch or a higher-capacity 5.25-inch hard disk drive in 80 or 120 Mb configurations.

The most sophisticated modular computer, the Macintosh IIfx should be considered when speed, especially in graphics applications, is critical. The Macintosh IIfx runs applications up to 45% faster than the Macintosh IICx, and *twice* as fast with the addition of an optional cache card. It comes with built-in video circuitry (eliminating the need for a video card) for several monitor types and supports gray scale and 256 colors simultaneously that boasts tremendously its performance in graphics-rich tasks, such as 3-D modeling or CAD/CAM. Like its sibling the Macintosh IICx, it comes with 3 internal NuBus expansion slots.



Courtesy of Apple Computer, Inc.

### Coming Up Next: System 7.0

In 1990, Apple Computer will be releasing a major overhaul of the System software that incorporates several exciting new features, including:

- outline fonts (see p. 29).
- an improved Finder that will allow you to install fonts and desk accessories simply by dragging them onto the System file; tear-off windows; new icons; and custom views for the contents of folders. In addition, the Finder will be truly that, able to search a hard disk or multiple floppy disks for a particular file.
- interapplication communication, (also called live cut/paste), which will allow the user to build live links between information in different files. Change the information in one file, and it's automatically updated in the other.

## COMPACT LINE

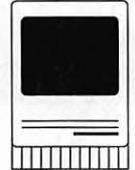
### Macintosh Plus



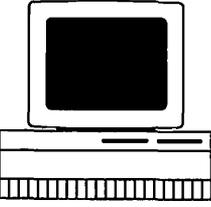
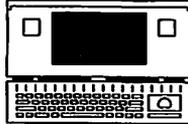
### Macintosh SE



### Macintosh SE 30



	Macintosh Plus	Macintosh SE	Macintosh SE 30
<b>Processor</b>	68000	68000	68030
<b>Clock Speed</b>	8 Mhz	8 Mhz	16 Mhz
<b>Math Coprocessor</b>	none	none	68882
<b>RAM</b>	1-4 Mb	1-4 Mb	1-8 Mb
<b>Internal Floppy Drive</b>	1 800K	1 or 2 FDHD SuperDrive	1 FDHD SuperDrive
<b>External Floppy Drive</b>	1 800K	1 FDHD SuperDrive or 800K	1 FDHD SuperDrive or 800K
<b>Hard Disk Support</b>	external	internal or external	internal or external
<b>Capacity</b>	any external hard disk drive	internal 20, 40 or 80 Mb; any external drive	internal 20, 40, or 80 Mb; any external drive
<b>Internal Expansion Slots</b>	none	1 SE Expansion Slot	1 030 Direct Slot
<b>Internal Modem Slot</b>	no	no	no
<b>Video Display Black &amp; White</b>	built-in 9 inch	built-in 9 inch	built-in 9 inch
<b>Gray Scale/Color</b>	no	no	yes
<b>Sound</b>	mono	mono	stereo
<b>Dimensions (inches)</b>	13.6 x 9.6 x 10.9	13.6 x 9.6 x 10.9	13.6 x 9.6 x 10.9
<b>Weight</b>	16.5 lbs.	17-21 lbs.	19 lbs

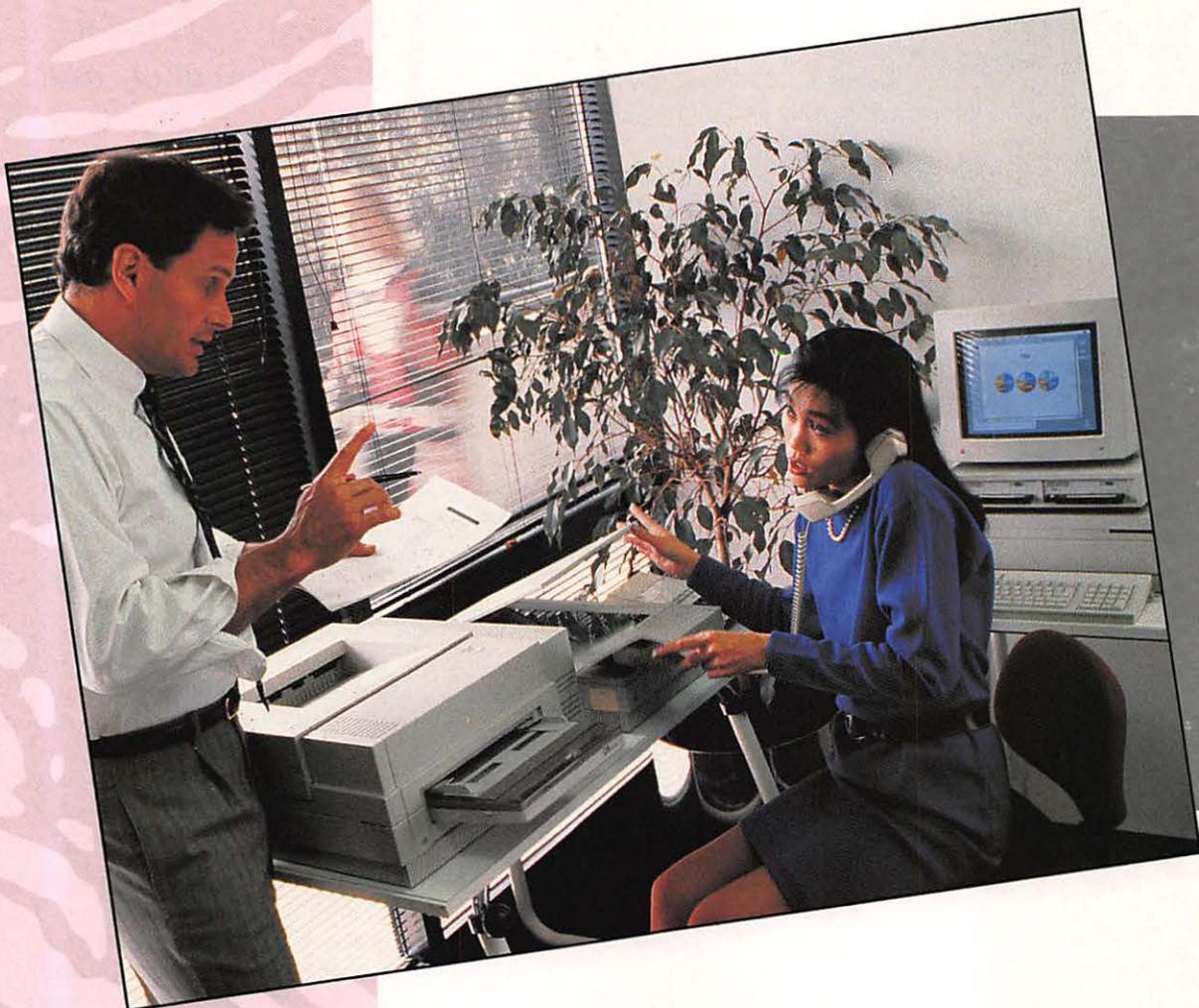
<b>No Longer Manufactured</b>  <b>Macintosh II</b>  	<b>MODULAR LINE</b>  <b>Macintosh IIx</b> <b>Macintosh IIcx</b> <b>Macintosh IIci</b>			<b>PORTABLE LINE</b>  <b>Macintosh Portable</b>  
<p>68020</p> <p>16 Mhz</p> <p>68881</p> <p>1-8 Mb</p> <p>1 or 2 800K</p> <p>none</p> <p>internal or external</p> <p>internal 20, 40, 80, 160; any external drive</p> <p>6 NuBus</p> <p>no</p> <p>not included</p> <p>yes; not included</p> <p>stereo</p> <p>5.5 x 18.7 x 14.4</p> <p>24-26 lbs.</p>	<p>68030</p> <p>16 Mhz</p> <p>68882</p> <p>1-8 Mb</p> <p>1 or 2 FDHD SuperDrive</p> <p>none</p> <p>internal or external</p> <p>internal 20, 40, 80, 160; any external drive</p> <p>6 NuBus</p> <p>no</p> <p>not included</p> <p>yes; not included</p> <p>stereo</p> <p>5.5 x 18.7 x 14.4</p> <p>24-26 pounds</p>	<p>68030</p> <p>16 Mhz</p> <p>68882</p> <p>1-8 Mb</p> <p>1 FDHD SuperDrive</p> <p>1 FDHD SuperDrive or 800K</p> <p>internal or external</p> <p>internal 40, 80; any external drive</p> <p>3 NuBus</p> <p>no</p> <p>not included</p> <p>yes; not included</p> <p>stereo</p> <p>5.5 x 11.9 x 14.4</p> <p>14 pounds</p>	<p>68030</p> <p>25 Mhz</p> <p>68882</p> <p>1-8 Mb</p> <p>1 FDHD SuperDrive</p> <p>1 FDHD SuperDrive or 800K</p> <p>internal or external</p> <p>internal 40, 80; any external drive</p> <p>3 NuBus</p> <p>no</p> <p>not included</p> <p>yes; not included</p> <p>stereo</p> <p>5.5 x 11.9 x 14.4</p> <p>14 pounds</p>	<p>68000</p> <p>16 Mhz</p> <p>none</p> <p>1-2 Mb</p> <p>1 FDHD SuperDrive</p> <p>1 FDHD SuperDrive or 800K</p> <p>internal or external</p> <p>internal 40 Mb; any external drive</p> <p>1 Processor Direct Slot</p> <p>yes</p> <p>built in 8.5 x 5.25 inches</p> <p>no</p> <p>stereo</p> <p>15 x 15 x 4</p> <p>15.9 lbs.</p>

# Word Processing & Desktop Publishing

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**P**aul Brainerd of Aldus Corporation is credited with popularizing the term desktop publishing (DTP), the practice of producing documents at one's desk using a variety of hardware and software tools that accommodate every element of a finished page. Desktop publishing integrates the several tasks necessary to the design, format, text, presentation, and output of a document. According to Brainerd, the three things that distinguish a DTP application are "the *quality* of the output, the *versatility* in terms of the range of documents that (it) can create, and the *integration* in terms of what you can bring into a document." (italics ours) Desktop publishing is the intersection of word processing, graphic art, and graphic design; it provides the user with a flexible and creative system for page design that maximizes utility and effect.





**T**he technological and psychological developments that led to the “invention,” or perhaps more accurately “synthesis,” of desktop publishing are critical to understanding both the present state of DTP and its future course. The technological aspects of the DTP revolution are the clearest to see; its foundation lies on the Macintosh and the low-cost laser printer. The Macintosh was the first mass-produced computer specifically designed for the manipulation and display of images and text. In fact, the most important innovation was probably the power of its multi-font display; no other widely-available computer had ever placed true font control in the hands of the computer user, enabling the mixing of fonts, styles, sizes, and spacing. The low-cost laser printer leveraged this font control by providing an inexpensive means for the average computer user to produce camera-ready artwork for printing, in the process completely eliminating the need for such services as traditional typesetting and prepress production.

*Desktop publishing is the intersection of word processing, graphic art, and graphic design; it provides the user with a flexible and creative system for page design that maximizes utility and effect.*

### ***Mind Over Writing Matter***

But in many ways it was the psychological breakthrough that is more significant, the roots of which lie in the development of word processing. Word processing applied the computer's management of data to the human process of writing. It promised to ease the work of writing by reducing some of the tedium, and resulting error, that was the inevitable product of working with typewriters and paper. Create a document in word processing software, check its readability on the screen, save it to disk, and then print final copy.

However, the true power of word processing coalesces in the notion of revision. Word processing software opened vast new opportunities for rewriting text over and over again by eliminating much of the hard work inherent in change. No longer was it necessary to retype a document to modify its content; simply make changes to the electronic version, and print out a new version, quickly and easily. It also probably shifted the burden of work, in some ways, from the administrative personnel traditionally associated with typing and retyping documents to the writers who had created the text.

The notion that a computer could assist and speed the production of work stimulated powerful developments in computer software, developments that in turn changed the way people work. The computer removed tedium, freeing more energy for creativity; but it also forced the most compelling of all questions: what if?





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Of course, the psychological changes wrought by word processing are not unique to the Macintosh, though the machine certainly reinforced the lessons learned in word processing on previous computers. The Macintosh provided an even easier entrance into word processing, and certainly introduced new refinements, such as the improved type flexibility alluded to previously. But the confluence of the three elements—the graphic Macintosh, the low-cost laser printer, and the power of revision—were transformed into desktop publishing.

The key to desktop publishing lies in the interaction of three separate tasks—text, graphics, and layout or design. In building a publication using a desktop publishing application, the user frequently begins by importing a document already written in a word processing program. The DTP program governs the appearance of that text on the page—its flow, font management, spacing manipulation such as kerning (the process of adjusting space between letters) and leading (the process of adjusting space between lines). Copy editing can be accommodated within the DTP program, as well, but is often better done in the word processing application.

Desktop publishing also allows a user to endow a publication with visual impact. Graphics, whether clip art or original images created in a graphics program, can be added and adjusted for the page, simply and quickly. Desktop publishing provides the meeting ground for a unique partnership, bringing words and images together on the page to communicate powerfully, and aesthetically. In addition, a comparatively new advance—the use of color on screen and in output—further refines and enhances a graphic, and thus the document it illustrates. Color processing is currently one of the hottest topics in desktop publishing.

These page layout abilities typically distinguish desktop publishing programs from word processors, and symbolize a huge step towards automating the traditional process of paste-up that accompanies the pre-printing phase of assembling any mass-produced document. Page layout allows the text and the graphics to fit together seamlessly. Automatic column flow, full WYSIWYG (What You See Is What You Get) display, and text-wrapping around inserted graphics are just a few of the functions provided by the page layout mechanisms of desktop publishing programs.

---

The Macintosh community has eagerly embraced page layout abilities, to such an extent that it's touched off a small features-battle between word processing and DTP software. An odd cross-pollination has occurred, as word processing programs began to incorporate DTP features, and DTP programs answered in return with strong word processing capabilities. It's unclear, at this point, just what will become standard features for a DTP program or word processing application; but it is clear that users can choose from a range of applications that include basic word processing tools, full-featured word processing programs with DTP tendencies, basic page layout applications, and DTP software with word processing power.

And at the end of the process, translating the computer-generated document to paper was revolutionized by the laser printer. For years, the tedium and expense expended in the traditional process of creating finished artwork for printing discouraged production of documents that the average Macintosh user can now output effortlessly in the office. Again, color is the crucial technological issue: despite present difficulties, Fred Ebrahimi, president of Quark, Inc., believes that color printers will be household items in the next three to five years. If so, these laser printers will increase powerfully the value of documents produced with DTP: the advent of color could usher in a completely new era in desktop publishing.

---

Without a doubt, the desktop publishing industry has greatly affected our means of communication. In less than one decade, its technology has modernized and enormously streamlined the production of verbal and visual information. Desktop publishing's future holds the promise of even more fantastic methods for enabling humans to share ideas with each other.



# Styles and Substance



**Find the  
word  
processing  
features that  
fit your  
tasks.**



Since its introduction, the Macintosh has been associated with word processing as one of its chief functions. The earliest Macintoshes were sold bundled with MacWrite, by today's standards a comparatively rudimentary word processing package. MacWrite originally revolutionized word processing by providing personal computer users the ability to easily create and manipulate document formats through menus and mouse clicks. But users hungered for more sophisticated and powerful features.

MacWrite II (a thorough revision of MacWrite) and WriteNow provide the basic functions of simple word processing, with plenty of power for most business writing tasks. Their intent is to make it as easy as possible for a user to create and output a range of basic business writing—memos, letters, reports. The virtue of these programs lies in a clean and simple user interface that takes the work out of word processing, letting the user focus on the work of writing.

The evolution from a market of basic word processing applications to one of “simple” versus “complex” programs occurred as enhancements were added, spurred by advances in desktop publishing. Today, a high-end word processor can often perform extensive desktop publishing functions beyond the range of traditional word processing—format stylizing, writing tools, editorial, and file exchange abilities.

Some word processors, like Microsoft Word 4.0 or FullWrite Professional, distinguish themselves as more powerful by providing true, multiple-column, editable WYSIWYG (What You See Is What You Get) capabilities, allowing you a preview of what the finished document will look like when printed. They automatically generate tables of contents and related “outlining” sections of a document, and provide powerful, flexible mail-merge programmability. They open multiple documents at a time, and come packaged with thesauruses and detailed, flexible spelling checkers. They accommodate intricate style sheets, import complex graphics, and let the user design their own keyboard macros (miniature “programs” that automate repetitive tasks).

Simple word processing programs have some of these same features; both WriteNow and MacWrite II have built-in spell checkers and can import graphics. But these complex word processors have the greater range of features, especially in terms of the tools and techniques for complex formatting borrowed from page layout software.

Simple word processing applications continue to sell well in the market, while a the trend towards more fully-featured programs continues, fostering fierce competition among developers to include sophisticated features and desktop publishing capabilities, while retaining as simple a user interface as possible. ■



Ashton-Tate Corporation  
20101 Hamilton Avenue  
Torrance, CA 90509-9972  
(213) 329-9989

# FullWrite Professional

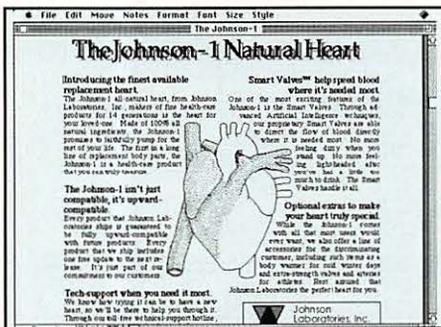
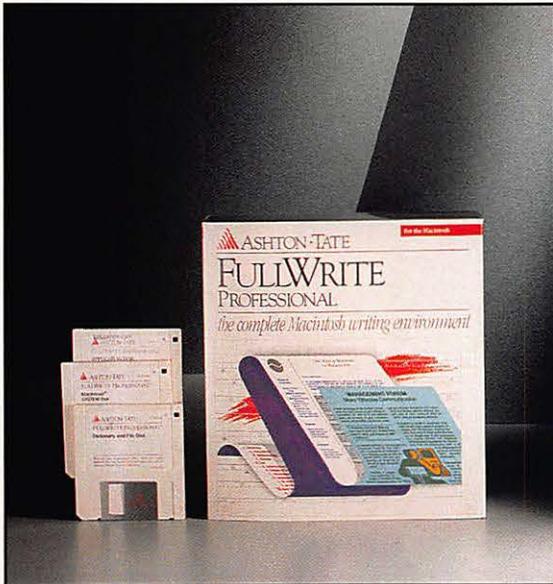
## Product Overview

FullWrite Professional® is the word processor of choice for those who need high-quality output but require ease-of-input. As *InfoWorld* said, "If you can pull down a menu, you can easily learn to use FullWrite." (8/21/89)

FullWrite's annotation capabilities give the user the flexibility to footnote and index documents. Classification and citation of objects as well as bibliography and table of contents creation take a few simple steps. Once its done, all changes are automatically tracked. The fully-integrated outliner outperforms its competitors.

FullWrite offers page-layout features with precise graphic placement, automatic text flow around irregularly shaped objects, editing of those objects, and kerning and leading.

Finally, its true, full-time WYSIWYG display is a hallmark of the elegance for which FullWrite is known.



**Required: Macintosh Plus or greater; 800K drive; hard disk.**

**Recommended: 2 Mb RAM.**

**Suggested Retail Price: \$395**

**Version: 1.1**

**Contact: (800) 437-4329  
ext. 2104**

## Features

- All text visible at all times
- Extensive annotation
- Automatic updating of all references and re-references (footnotes, index entries, endnotes, table of contents, citations)
- Custom style sheets
- Integrated draw environment
- Integrated, flexible outliner
- Automatic text flow around irregularly-shaped graphics
- Automatic pagination
- Automatic hyphenation
- Integrated thesaurus
- Integrated spell checker
- Redlining, strike-out, and "posted-note" feature for group editing
- Mail merge
- MultiMate, MacWrite, and Microsoft Word compatible

## Reviews and Awards

*PC Week* (5/10/88)

*InfoWorld* (6/27/88, 8/21/89)

## Technical Support

Tel: (213) 768-1703

M-W, F, 6:00 am-4:30 pm (PST)

Th, 6:00 am-4:00 pm (PST)

Toll-free BBS access via CompuServe, MacNet, AppleLink, and GENIE BBS service too.

## Ordering

Available at authorized resellers, or contact Ashton-Tate's Product Line at: (800) 437-4329 ext. 2104

All customers eligible for future upgrades.

## Tips & Techniques

1. Use FullWrite's "Walk-Down" menus for easy keyboard access to commands (command 1, command 9 gets the print dialog).
2. To select a word, double click on it. To select a paragraph, triple click on it.

# MacWrite II

Clarix Corporation  
5201 Patrick Henry Drive,  
Box 58168  
Santa Clara, CA 95052-8168  
(408) 727-8227

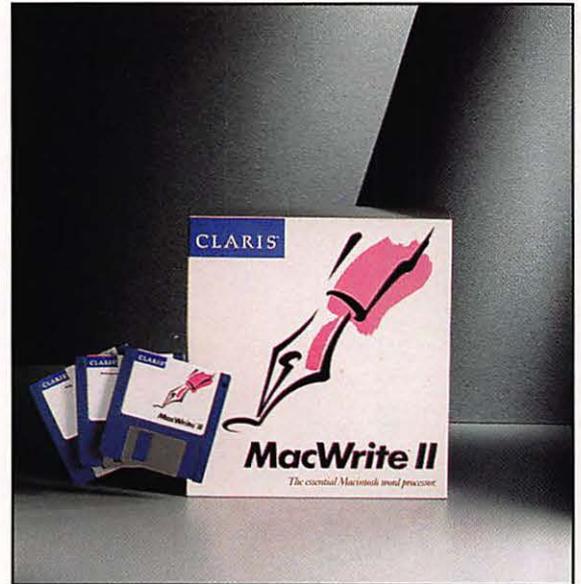
CLARIS™

## Product Overview

MacWrite II is the essential Macintosh word processor. It combines all of the tools needed for professional-quality word processing with the accessibility and ease-of-use of the original MacWrite.

With MacWrite II you can create a broad range of documents from daily correspondence and short reports to sophisticated proposals, multi-column newsletters or 1000-page manuscripts. Whether you need precision formatting tools, custom styles, or special editing capabilities, MacWrite II offers it all. Revise and edit effortlessly using the built-in dictionary and thesaurus, automatic or discretionary hyphenation, and powerful find/change features.

And, the familiar Macintosh interface means you can focus your efforts where they belong—on writing and creating great-looking documents.



## Features

- Revise and edit effortlessly by using the dictionary and thesaurus, automatic or discretionary hyphenation, and powerful find/change features
- Design and layout your page for maximum effect with multiple columns and scalable or cropped graphics from almost any application
- Customize MacWrite II to fit your style with custom font sizes and style—set your own defaults or customize a stationary template for frequently-used document formats
- Streamline your work using mail merge to combine a database with basic form letters, with customized conditional commands printing only the data you want
- Share files with your co-workers easily by directly importing and exporting to WriteNow or Microsoft Word, Works, or Write
- Direct import/export of Microsoft Word and Works, WriteNow, WordPerfect, PICT, MacPaint and many other popular Macintosh, PC and mainframe applications

## Reviews and Awards

*InfoWorld* Best in its Class  
*MacWeek* (1/19/90, 4/18/89)  
*MacUser* (8/89)  
*Macworld* (10/89)

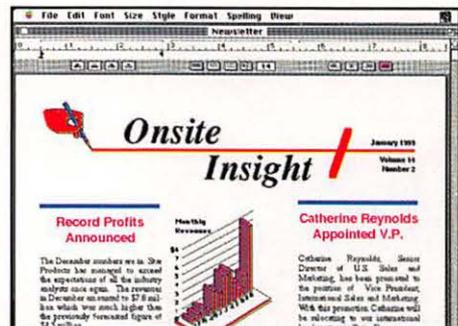
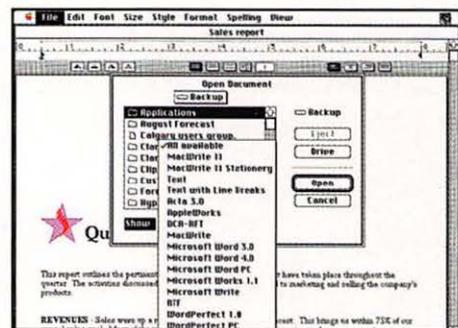
## Technical Support

Tel: (408) 727-9054  
M-Th, 8:00 am-5:00 pm (PST)  
F, 8:00 am-2:00 pm (PST)  
Technical Solutions Newsletter covering tips, techniques, and product update information.

## Ordering

MacWrite II is available through authorized resellers, or contact Clarix at: (408) 727-8227.

Upgrade from MacWrite 5.0 is \$65; from Apple-labeled versions \$75.



**Required: Macintosh Plus or greater; 1 Mb RAM.**

**Compatible: MultiFinder; Apple networks.**

**Suggested Retail Price: \$249**

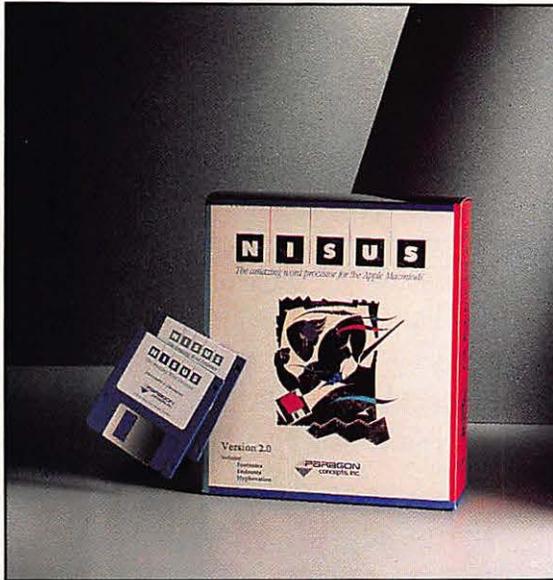
**Version: 1.1**

**Contact: (408) 727-8227**



Paragon Concepts, Inc.  
990 Highland Drive, Suite 312  
Solana Beach, CA 92075  
(619) 481-1477

# Nisus 2.1

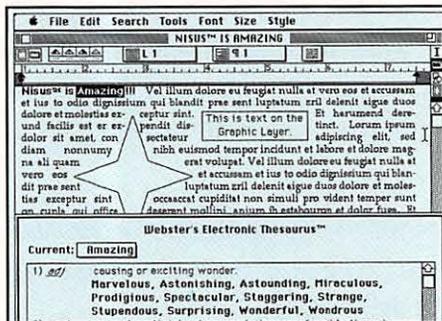
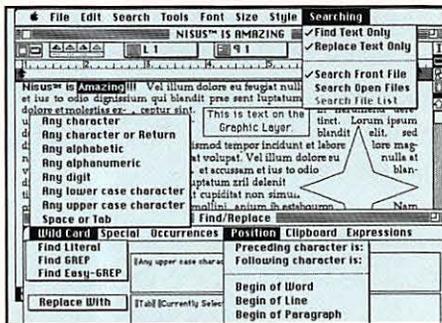


## Product Overview

A powerful information processing package for both novices and professionals, Nisus™ combines total control and flexibility with true Macintosh ease of use.

Especially suited to projects requiring large amounts of text processing, Nisus is fast. With the ability to search for and replace text in any document, open or closed, it can locate a key word or phrase in unopened files much faster than other word processors can search through a single open document. Search and Replace includes a unique pattern-matching facility which allows a literal or more general search. It can be style-sensitive (including color) and font-sensitive even in parts of words; and text or graphics copied to the Clipboard can be pasted into the Find/Replace dialog.

With Nisus, there is no need to go outside the program to create graphics; integrated drawing tools provide what is necessary to produce newsletters, charts and illustrations.



**Required: Macintosh Plus or greater; 2 800K disk drives.**

**Recommended: Hard drive; 2 Mb RAM with MultiFinder.**

**Suggested Retail Price: \$395**

**Version: 2.1**

**Contact: (800) 922-2993**

## Features

- Powerful, fast Search & Replace (plain and text pattern matching) through all files, opened or closed
- Extraordinary macro programming and editing
- Graphics can be created within the program or imported, and can be mixed with text
- Reads MacWrite 5.0 and older; Microsoft Word 3.0 and 4.0; imports to PageMaker; writes Word 3.0
- Cross-referencing, instant index and table of contents
- Ten Clipboards—edit, append and save
- Practically unlimited Undo tracks up to 32,767 items

## Tips & Techniques

1. Use Nisus graphics to create forms and then write a macro to fill in information automatically.
2. Use single-keystroke search & replace to conform to different specifications when writing for several publications.
3. Use search function to create a word list and index every word in your document automatically.

## Reviews and Awards

*MacUser U.K.* Best Word Processor of 1989

*MacUser* 1990 Eddy Nominee

*MacUser* (2/90)

*Byte* (2/90)

*Macworld* (9/89)

## Technical Support

Tel: (619) 481-1477

M-F, 9:00 am-5:00 pm (PST)

Unlimited, free customer support

## Ordering

Nisus is available from authorized dealers and mail-order companies, or contact Paragon Concepts at: (800) 922-2993 or (619) 481-1477

Contact Paragon for upgrade information.

# A World Of Options



**Sort out the things that you need in a word processing package.**



**Interview with  
Audrey Handelman,  
Media Map  
Bedford, MA**

**T**he popularity of desktop publishing has caused users to clamor for its page layout features to be included in other software, such as word processing. Conversely, word processing applications have begun incorporating more DTP-like features, blurring the difference between the two. "On the whole it's advantageous because it offers more choice. But there are still differences," says Audrey Handelman, journalist and Director of Research for Media Map, Inc. "And the overall trend is toward more and more features and customization options for the user." There are also now many good desktop accessory packages (DAs), such as QuickLetter or MAILDEX, which can customize and supplement a very basic word processing set-up.

Handelman, who has experience on a range of word processing equipment, believes that the Macintosh's graphical user interface makes it an ideal computer for general office word processing, a skill which most office workers possess. It's easier to use than the PC, more flexible, and in some ways, more informative. "I look up and I can 'see' evidence of the disk and 'know' what documents are on it. In fact, the Macintosh is so user-friendly, it took me a long time to recognize that the Macintosh is a true computer, an intricate piece of hardware, and that as a responsible user, I needed to understand a little about its complexity."

One of the most important word processing software innovations is the ability to save text in a number of formats. The principal file format for the exchange of data between different applications is ASCII, often referred to as "text only." It can only encode the actual characters themselves, hard carriage returns, and occasionally tabs. Other formats, such as MacWrite (the original version, not the current version) and RTF (for Rich Text Format), encode more of the formatting information—fonts, type styles (bold, italic, etc), type alignment (centered, flush left, etc.), and more.

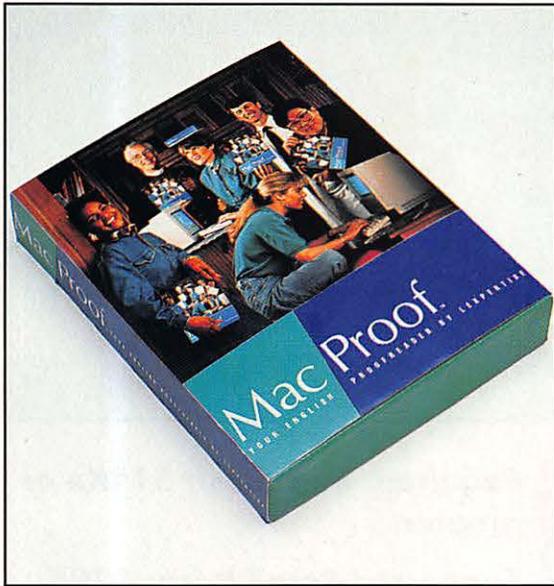
Handelman's advice on software selection applies to any purchase: "Understand what you're trying to accomplish before you start to evaluate packages. There are lots of programs to choose between." Consider the following:

- Does ease of use matter to you?
- What kinds of documents will you need to produce?
- What size (how many pages) are the documents that you'll produce?
- Will you need to import or export text from any another program?
- Will multiple users be sharing documents?
- Will you need footnote, referencing and bibliography options?
- Do you need special features such as outlining?
- Do you need mail merge capabilities? If so, for how much mail?
- Do you do a lot of text editing, which will require extensive cutting and pasting as well as use of a dictionary, thesaurus or proofing software?

**LEXPERTISE**  
LINGUISTIC SOFTWARE

Lexpertise  
9 Exchange Place #900  
Salt Lake City, UT 84111  
(801) 350-9100

# MacProof 3.2.1

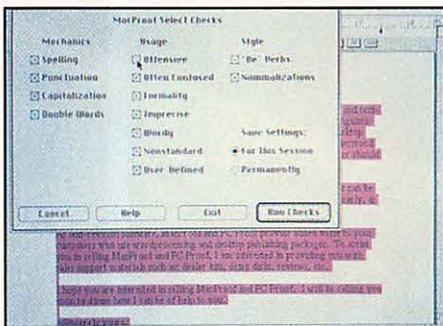
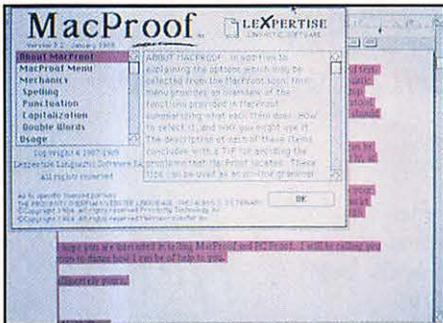


## Product Overview

MacProof is text-revision software that proofreads documents for potential errors in writing style and word usage. A desk accessory, MacProof can be accessed at any time, and proofreads text from within the word processing software. MacProof also checks for potential errors in mechanics such as double words, punctuation, capitalization, and spelling.

MacProof's structural analysis features show text in several different ways, allowing the writer to scan for run-on sentences, sentence fragments, and agreement problems. It is helpful in determining whether sentences and paragraphs are well-developed. Redundant sentence beginnings and repetitive phrases are easily spotted.

Usage and spelling dictionaries can be easily modified to create customized checks to catch regionalisms, or to enforce corporate terminology standards.



**Required: Macintosh SE or greater; 1 Mb RAM (2 Mb RAM required when used with Aldus PageMaker).**

**Suggested Retail Price: \$195**

**Version: 3.2.1**

**Contact: (800) 354-5656**

## Features

- Style Checks help you avoid empty subject and weak passive construction
- Mechanics Checks that look for potential mistakes in punctuation, capitalization, double words and spelling
- Structural Analysis views text in several different formats, and analyzes features such as paragraph structure, document structure, and repetitions
- Usage Checks flag potential problems in many categories, including formality and imprecise wording, wordiness, and offensive words such as racist and sexist terms
- Easily customized usage dictionaries
- Compatible with MacWrite 4.6 and 5.0; MacWrite II; Microsoft Word 4.0; Mind-Write 1.0 and 2.0; and Page-Maker 3.0, 3.01 and 3.02

## Reviews and Awards

*Macworld* (2/90)

*MacUser* (2/90)

*MacDigest* (11/89)

## Technical Support

Tel: (800) 354-5656 or  
(801) 350-9100

M-F 8:00 am-5:00 pm (MST)

Free to all individual registered owners.

## Ordering

MacProof is distributed to dealers through Ingram Micro-D, Softsel and Macamerica, or contact Lexpertise at: (800) 354-5656

# Microsoft Word 4.0

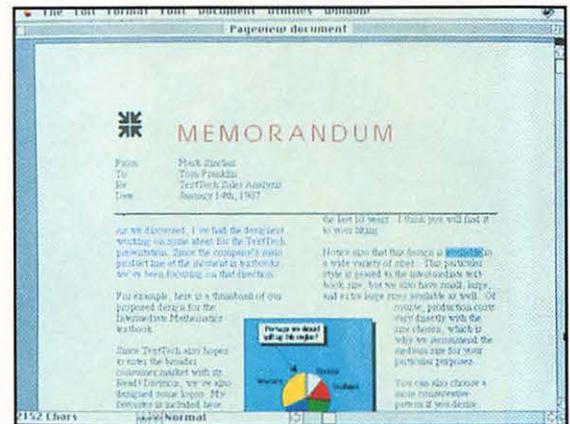
Microsoft Corporation  
One Microsoft Way  
Redmond, WA 98052-6399  
(206) 882-8080

**Microsoft®**

## Product Overview

Microsoft® Word is the best-selling application for Macintosh systems. Word offers impressive output and ease of use for managers, plus all the speed and editing conveniences an administrative assistant could want. Word supports a broad range of documents, including memos, long documents, technical documents, legal documents, novels, and term papers.

Microsoft Word offers unparalleled integration with Microsoft's other products for the Macintosh. You can automatically update graphs or tables copied from Microsoft Excel 2.2, and you can access Microsoft Mail directly from within Word. And Microsoft File automatically creates a template for mail merge with Word.



## Features

- Easy to learn with short menus, context-sensitive help, and a tutorial
- On-screen columns, headers, footers, and footnotes
- Automatic text flow around graphics or paragraphs
- Fully integrated outlining

## Technical Support

Tel: (206) 454-2030

## Ordering

For orders, contact Microsoft Information Center:  
(800) 426-9400

**Required: Macintosh 512Ke or greater.**

**Suggested Retail Price: \$395**

**Version: 4.0**

**Contact: (800) 426-9400**

# WriteNow 2.2

T/Maker Company  
1390 Villa Street  
Mountain View, CA 94041  
(415) 962-0195

*T/Maker.*

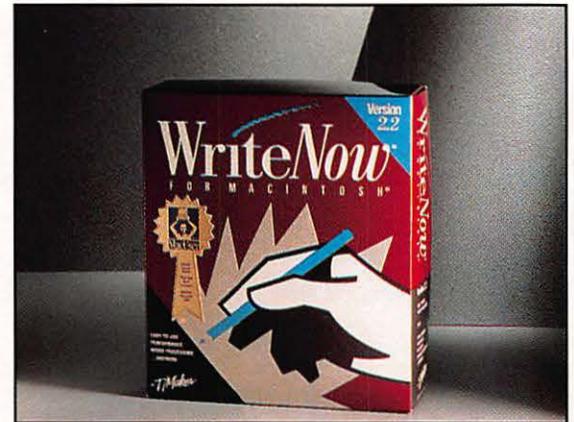
## Product Overview

Here's what the experts say about WriteNow:

"WriteNow is the definitive Macintosh word processor. It's easy to use, powerful and comfortable...Highly recommended."—John Dvorak, Industry Columnist

"Even if WriteNow is your first Macintosh application, you'll be up and running in no time. We rate ease of learning excellent."—Barbara Assadi, *InfoWorld*

"The Best Program I'd Ever Use (TBPIEU). On any computer—it's the fastest Macintosh word processor I've ever seen."—Jim Seymour, *MacUser*.



## Features

- 1.4 million-word thesaurus that includes definitions and inflected suggestions
- 135,000-word spelling dictionary
- Mail merge, with label templates included
- Embedded graphics

## Technical Support

Tel: (415) 962-0195  
M-F, 9:00 am-5:00 pm (PST)

## Reviews and Awards

*InfoWorld*, Highest Rated Word Processor 1988, 1989  
*MacUser* Editors' Choice Award 1987, 1989

**Recommended: 512KE Macintosh or greater; System 4.2 or higher.**

**Suggested Retail Price: \$195**

**Version: 2.2**

**Contact: (415) 962-0195**

# The War of the Fonts



**Apple & Microsoft and Adobe develop competing font standards.**



**A**rtistry in typeface has an impact beyond its raw psychological effect—the serifs, metric, hints, and boldness which add personality to a printed character are licensed and patented by independent businesses, like every other component of a computer. The battle between software companies for ownership of font formats has come to present a potential dilemma for those consumers in search of standardization.

PostScript typefaces (often called outline fonts) are formatted exclusively for device-independent imaging (laser printing, linotype, etc.), and are used by a printing device in place of bit-mapped screen fonts (which are only used by QuickDraw [ImageWriter] printers). Some PostScript fonts—Times, Helvetica, Palatino, and others—are built into many PostScript printers. Other fonts, such as Garamond, Optima, and many others, are downloaded—electronically sent to the printing device—by the Macintosh at the time of printing. Adobe Systems, Inc. owns the original PostScript interpreter that resides in printing devices such as Apple's LaserWriter and LaserWriter II families; it's the interpreter that translates the PostScript description of a font's letters into dots on the page. In addition, it owns its own PostScript fonts, many of which are based on printing typefaces licensed from traditional typeface companies.

Until recently, only typefaces that adhered to Adobe's font technology were considered the de facto "standard" for PostScript typesetting. Adobe has published its PostScript language standards, so that other companies could create compatible products, and will also license its technology for use, so a company could pay a fee for a PostScript interpreter to put in its laser printer, as Apple did—or it could create a PostScript clone to use as its own interpreter.

In October 1989, Apple Computer, Inc. and Microsoft Corporation joined forces, and traded software technology in a revolutionary deal allowing Apple rights to a PostScript clone owned by Microsoft in exchange for outline-font technology, called Royal, which Microsoft's new OS/2 products need to control screen fonts. Apple will no longer have to pay licensing fees to Adobe to build laser printers, and Microsoft will have Apple's support for a standard font technology that will be the same for Macintosh and IBM products. In addition, Royal fonts will be the technology that System 7.0, Apple's next major system upgrade, will use to draw screen characters, replacing the cumbersome bitmapped images used today.

This format competition presents a challenge to novice desktop publishers. Apple and Adobe seem to have set themselves on a collision course, as their rival technologies seem to promise the same great PostScript effects. The real mystery at this point is their compatibility—will Adobe fonts work with the Microsoft clone interpreter? Will Royal fonts print on Adobe PostScript printer? At this point, only time will tell.

# Adobe Type Manager

Adobe Systems Incorporated  
1585 Charleston Road  
Mountain View, CA 94039  
(415) 961-4400

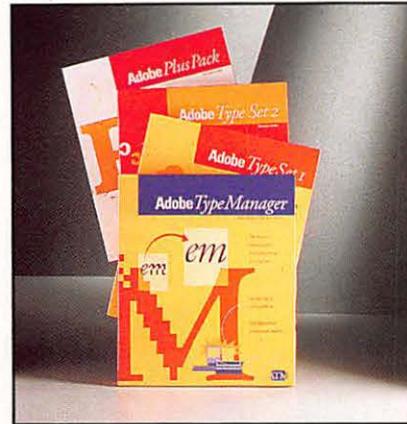
**ADOBE**  
Adobe Systems Incorporated

## Product Overview

Adobe Type Manager™ allows Macintosh applications to display and print sharp, legible text at any size, automatically. ATM brings the quality of scalable PostScript® outline fonts to your Macintosh screen and ImageWriter or HP DeskWriter printer for the first time.

ATM™ is easy to use—just drag it into your System Folder and reboot. Existing applications work as before, but the text they display and print looks better than ever, with no more jaggies!

ATM uses the same PostScript Type 1 outline fonts as PostScript printers and Display PostScript workstations. Or you can choose from hundreds of Type 1 fonts for your future typeface needs.



## Features

- Sharp, legible text at all sizes, both on screen and when printing
- Includes high-quality PostScript outline versions of 13 fonts in the Times®, Helvetica®, Courier and Symbol families

## Technical Support

Tel: (415) 961-0911  
M-F, 8:00 am-4:00 pm (PST)

## Ordering

Contact Adobe at:  
(800) 83-FONTS

**Required: Macintosh Plus or greater; 1 Mb RAM; System 6.0.2 or higher.**

**Suggested Retail Price: \$99**

**Version: 1.2**

**Contact: (800) 83-FONTS**

# Adobe Plus Pack Adobe Type Sets 1&2

Adobe Systems Incorporated  
1585 Charleston Road  
Mountain View, CA 94039  
(415) 961-4400

**ADOBE**  
Adobe Systems Incorporated

## Product Overview

### Adobe Plus Pack

Now that you own Adobe Type Manager, you'll want the Adobe Plus Pack. Twenty-two additional fonts that, together with Adobe Type Manager software, supply the full set of fonts found in the Apple LaserWriter Plus, LaserWriter II family, and most other Adobe PostScript printers. The Adobe Plus Pack's standard set of fonts gives you both versatility and classic style.

### Adobe Type Sets

You're probably tired of seeing Geneva, Venice and New York every day, or even Helvetica and Times. Or maybe you've just been waiting for a great deal on some of your favorite display faces in the Adobe Type Library. Whatever the reason, you can't go wrong by adding the Adobe Type Sets to your font collection. For only \$99, each Adobe Type Set gives you seven carefully-selected Adobe Type 1 faces worth far more if sold separately.

### ADOBE PLUS PACK

ITC Avant Garde Gothic®

ITC Bookman®

Helvetica® Narrow

New Century Schoolbook

Palatino\*

ITC Zapf Chancery

ITC Zapf Dingbats®

→ ⊕ ⊗ ⊛ ⊜ ⊝

### ADOBE TYPE SET 1

**Bodoni Poster**

**COTTONWOOD™**

*Freestyle Script*

### Hobo

Linotext\*

TRAJAN™

**VAG Rounded Bold**

### ADOBE TYPE SET 2

**Cooper Black**

COPPERPLATE

GOTHIC 31 AB

**Franklin Gothic**

**No. 2 Roman**

JUNIPER™

**LITHOS™ BOLD**

Peignor\* Demi

Present\* Script

## Technical Support

Tel: (415) 961-0911  
M,W,F, 8:00 am-4:00 pm;  
T,TH, 8:00 am-5:00 pm (PST)

## Ordering

Suggested Retail Prices:  
Adobe Plus Pack—\$198  
Adobe Type Sets (ea)—\$99

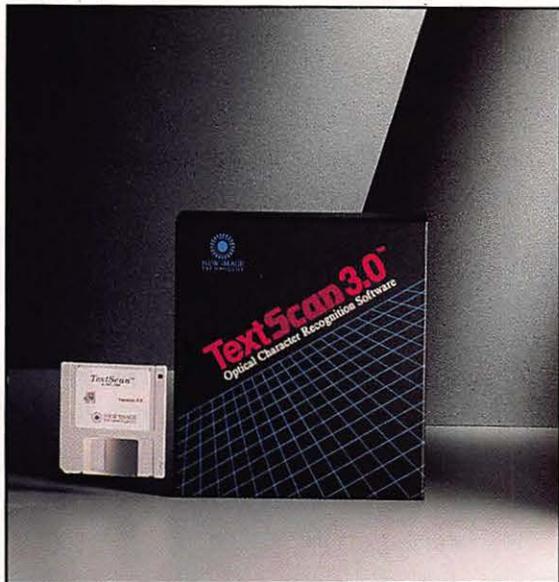
**Required: System 6.0.2 or higher.**

**Contact: (800) 344-8335**

PRISM

Prism Enterprises, Inc.  
14703-E Baltimore Avenue, Suite 248  
Laurel, MD 20707  
(301) 604-6611

# TextScan 3.04

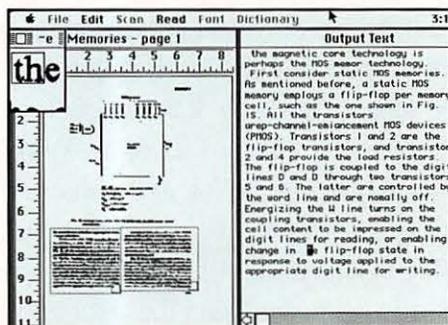


## Product Overview

TextScan™ 3.04 is an Optical Character Recognition (OCR) program which translates scanned documents into ASCII text files, eliminating the need to retype documents to input them into your Macintosh! In addition, your data entry is faster, easier, and more accurate. Once TextScan 3.04 has processed your document, you can easily drop the file into your favorite word processing, desktop publishing, database, or spreadsheet application.

TextScan 3.04 is fully automatic, eliminating the time consuming task of training it on each new document. However, it provides the versatility of a trainable mode for ornate and unusual fonts or sizes.

The "Feature-Based" algorithm allows TextScan 3.04 to analyze the shape and connectivity of characters to be able to read a vast number of fonts and sizes. The "Matrix-Matching" algorithm allows TextScan 3.04 to quickly match characters to increase speed and accuracy.



## Features

- Reads proportionally spaced, typeset and kerned characters
- Built-in 40,000+ word dictionary provides automatic corrections
- Reads multiple font types and sizes in a single document
- Compatible with all Macintosh word processing programs
- Competitively priced for the average Macintosh user
- Optional saving and loading of font tables for increased speed
- Selection rectangle allows you to read multiple columns and avoid graphics or photos

## Tips & Techniques

1. Increase speed by saving and loading font tables.
2. Use Teach mode to create your own font tables.
3. Scan and save multiple pages to read later.

## Reviews and Awards

*Seybold Report on Desktop Publishing* (1/90)

*MacUser* (11/89)

*MacWeek* (10/89)

## Technical Support

Tel: (301) 604-6611

M-F, 9:00 am-5:00 pm (EST)

Technical Support is free of charge to all registered Prism customers.

TextScan 3.04 comes with a 90 day warranty.

## Ordering

Tel: (301) 604-6611

Fax: (301) 604-6613

M-F, 9:00 am-5:00 pm (EST)

Suggested retail price: \$395.00

**Required: Macintosh Plus or greater; 1Mb RAM; Macintosh page scanner.**

**Recommended: 2 Mb RAM.**

**Suggested Retail Price: \$395**

**Version: 3.04**

**Contact: (301) 604-6613**

## Back To DTP's Future

Competition among desktop publishing companies has given rise to features and capabilities that revolutionized in-house media production, but what about the future? What advancements and challenges can we expect in the next few years?



**Color and  
standard file  
formats  
point  
toward the  
future of  
DTP.**

Color production certainly ranks high on the list of immediate R&D efforts. A state-of-the-art Macintosh color monitor can display up to 16.4 million colors. But color output has hardly kept pace with color display. At this point, the best output solution is to print four color separations onto film with a PostScript-compatible imagesetter, which can be more expensive, difficult and time-consuming than traditional color processing. Though more and more desktop publishing and graphics applications are providing color separation features, the technological aspects are complex, and to some users forbidding.

Because of this complexity, users are more apt to default to traditional processing for purposes of convenience and quality. An interesting event in publishing has been the recent development of systems that connect the Macintosh with other high-end, dedicated color prepress systems, such as those by Scitex, Hell and Crosfield. These systems link the ease of use and intuitive feel of desktop publishing on the Macintosh with the scanning technology, color, and speed of these sophisticated color imagesetters. Work is being done that would allow a designer to create a publication on the Macintosh, print color proofs on a PostScript 300 dpi laser printer, and then provide a file specifying the color and geometry of the elements on the page to the prepress technician, who would be able to quickly and easily remodel the pages for output on the color prepress system.



Unifying the formats of different desktop publishing programs presents perhaps the most formidable challenge to this industry. While desktop publishing facilitates simple information presentation and distribution, conflicting program formats stunt the ability to exchange that information across different platforms for editing, reproduction, and manipulation. Graphics applications for the Macintosh derive a lot of their power from the easy exchange of graphics accomplished with the Scrapbook and standard formats like Paint, PICT, and EPS, and word processing software isn't far behind with ASCII (or Text Only) and MacWrite (the original version, which is emerging as a de facto standard). But desktop publishing lags far behind. Executives at Aldus, Adobe, Ventura Software, and Quark are all enthusiastic about exchanging technology to develop an intermediate document-interchange format that would allow a page created in Aldus PageMaker, for example, to be opened and edited in QuarkXPress. The flexibility this breakthrough would create is exciting, and would accomplish what desktop publishing originally set out to accommodate: volume visual and written communication produced from a desktop computer.

Quark

Quark, Inc.  
300 South Jackson, Suite 100  
Denver, CO 80209  
(303) 934-2211

# QuarkXPress 3.0

## Product Overview

QuarkXPress 3.0 delivers a complete publishing environment with the precision, reliability and ease-of-use to serve a full range of needs. QuarkXPress facilitates all levels of design and production, from brochures and reports to books and newspapers.

Document control features and enhanced user interfaces allow continual interaction with the design process. A moveable on-screen measurements palette permits the changing of fonts, type size, kerning, tracking, leading, and a variety of other attributes without ever having to consult a menu or dialog box. A librarian provides frequently used pictures, formats, or text stored for placement in any document at any time.

Productivity is also central to the core of QuarkXPress 3.0 with its features that cut production time and cost. Complete color support and the ability to import and manipulate all popular picture formats saves time and expense. And its fully functional word processing capabilities serve the needs of an entire organization.



**Required: Macintosh Plus or greater; 1 Mb RAM.**

**Recommended: Macintosh II family; 2 Mb RAM.**

**Version 3.0**

**Suggested Retail Price: \$795**

**Contact: (800) 356-9363**

## Features

- Font sizes from 2-720 points in .25-point increments, and kerning and tracking to 1/2000 em space
- Leading in .001-point increments
- Style sheets for quick text formatting
- Text runaround inside or outside boxes or irregular shapes
- 360° rotation of text and graphics in .001° increments
- Move, insert, or delete pages visually
- Pasteboard feature for placing objects aside while redesigning a page
- Retroactive default page editing
- Page view zoom from 1% to 400%
- 80,000-word dictionary and spelling checker
- Precise hyphenation and justification controls
- Import text in most popular word processing formats
- Supports TIFF, RIFF, EPS, PICT, PICT2, and bitmap graphics formats

## Reviews and Awards

Personal Publishing Product of the Year 1989

*MacUser* Best Page Design Program 1989

*InfoWorld* Best in Its Class 1990

## Technical Support

Tel: (303) 934-0784

M-F, 7:00 am-6:00 pm (MST)

90 day free technical support.

Extended support available separately.

## Ordering

Available at authorized dealers, or contact Quark at:  
(800) 356-9363 (US)  
or Uppercase Technology at:  
(800) DTP-4244 (CAN)

# QuarkStyle

Quark, Inc.  
300 South Jackson, Suite 100  
Denver, CO 80209  
(303) 934-2211

Quark

## Product Overview

QuarkStyle is affordable, entry-level desktop publishing developed for Macintosh users who want professional-looking documents, but lack the in-house expertise to create designs with page-layout and graphics programs. QuarkStyle combines full-featured word processing and page-composition features with more than 70 predesigned page-layout templates.

Eight of the nation's leading graphic designers put together the QuarkStyle template package, which includes business forms, as well as designs for newsletters, books, and magazines.

With QuarkStyle you can prepare text using powerful, built-in word processing features, then place it into the desired template. Easy-to-use page composition tools make modifying templates a snap, so finished documents have that custom look. Templates can be created and modified in QuarkStyle, or imported from QuarkXPress, Quark, Inc.'s high-end page-design and production program.



## Features

- 70 predesigned page-layout templates, including business forms and publications
- Template preview
- Fonts from 2 to 500 points in one-point increments
- Line leading to 1/100 point
- Style sheets
- Automatic text flow and hyphenation
- Text pipelining
- 1" x 1" to 48" x 48" page sizes
- Automatic text runaround
- Line rule widths from hairline to 127 points
- Three graphic drawing tools
- Ability to cut, copy, and paste text and objects between documents
- Find/change text commands
- 80,000-word dictionary and spelling checker
- Custom dictionaries
- Importing of text in most popular word processing formats
- Support for gray-scale and color TIFF, RIFF, EPS, PICT, PICT2, and bit-mapped pictures
- Excellent technical support

## Reviews and Awards

*InfoWorld* (1/16/89)

*MacGuide* (Spring 1989)

## Technical Support

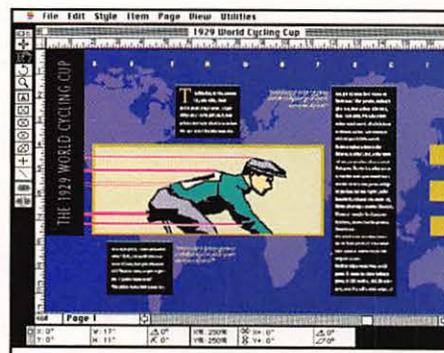
Tel: (303) 934-0784

M-F, 7:00 am-5:00 pm (MST)

Purchase includes 90 days of free support. Additional support and upgrades sold separately.

## Ordering

QuarkXPress is available from authorized dealers, or contact Quark, Inc. at: (800) 356-9363  
Or, in Canada, contact Uppercase Technology at: (800) DTP-4244



**Required: Macintosh Plus or greater; 1 Mb RAM; hard disk.**

**Suggested Retail Price: \$295**

**Version: 1.0**

**Contact: (800) 356-9363**

# The Money of Color



**The latest in  
how to get  
bright colors  
from the  
desktop  
to the  
document.**

## W

ith the increasing recognition by businesses that color adds significant effect and value to professional publications, companies using Macintoshes are investing more and more in software, printers, scanners and monitors that allow color production. Displaying the color on a monitor is easy, and quite impressive; but getting that color out of the computer and on to paper or film can be difficult. Preparing color for output from the Macintosh is most effectively achieved through a process called *color separation*.

The complexity of color separation involves building desired colors from four basic inks—cyan, magenta, yellow, and black (CMYK)—and specifying in the illustration software the size and angles of the color “dots” or pixels (called screening) as they will cluster and overlay each other on the final printed document. This pattern of clusters of ink blends to produce any conceivable color. The printer (human or mechanical) translates this information into a corresponding ink.

Color monitors are unnecessary for this procedure, since the designer can obtain CMYK percentages from color wheels, tint-chart books, and Pantone Matching Systems (PMS) books, which describe the formula for each color swatch. In fact, many desktop publishing and graphics applications have color separation tools built-in. The user can specify colors in PMS, CMYK, or RGB (Red Green Blue), applying colors to elements on the page, which can be shown in color or simulated with grey patterns on a black and white Macintosh. The color information is encoded in the PostScript file, and can be printed as separations on either paper or film.

Some graphic artist professionals have noted the occasional misrepresentation of colors on Macintosh color monitors, in comparison to their actual printed outcome. But one recent development centers on electronic color matching systems that verify that the screen colors correctly match traditional ink colors.

The current lack of quality, affordable color desktop printers, combined with the cost of having a print shop run separate press runs for each color on a document, may make color production impractical for small businesses. In addition, the inability of today's color separation programs to effectively *trap*, or overlap each other without leaving a gap between two colored regions, represents an Achilles heel in processing that must be overcome. Nevertheless, the continued refinement and sophistication of color separations on the Macintosh is a major personal computer milestone, one that promises exciting technological developments in monitors, printers, and software. ■



# *Graphics and Multimedia*



**T**here is no denying the power of pictures and images to communicate information; and the Macintosh computer impressively underlines this point. The cliché, that a picture is worth a thousand words, provides important insights into the logic behind the Macintosh design works: that pictorial information is as important to communication as textual information. Much of the allure of the Macintosh continues to be its graphics capability. The present bears witness to the power and beauty of its graphics; and the future points towards a new way of organizing, accessing and displaying information—multimedia.





**T**he graphics capability of the Macintosh was first introduced to the world with MacPaint, which was included with every Macintosh shipped in its first few years of existence. MacPaint introduced a number of crucial Macintosh graphics concepts: simple-to-use, intuitive painting tools, such as a brush, a paint bucket, and a pencil; a WYSIWYG (What You See Is What You Get) display; bitmapped graphics; and a magnified view for pixel-by-pixel editing.

This first graphic application was soon followed by MacDraw, which shared some of the features of its cousin MacPaint, such as intuitive drawing tools, but introduced another important innovation—object-oriented graphics. Bitmap graphics are collections of pixels; object-oriented (or vector) graphics describe mathematical objects that are then converted to pixels for display.

These two different graphic types handle two important tasks, scaling and editing, in different ways. Vector images scale (size up or down) better than bitmapped graphics, because the mathematical formulas are manipulated, then converted to pixels; bitmapped graphics, on the other hand, are less precisely scaled from a fixed collection of pixels. But bitmapped graphics can be edited pixel by pixel, which is not possible with the images drawn by vector formulas.

*Multimedia combines text, graphics, sound and video in an interactive environment that holds great promise as a new technology for education, training and business presentations.*



## ***From Then To Now***

To jump forward from the misty past of Macintosh application development: most programs employ one or both graphics, now called Paint and PICT. But much has changed. The dividing line between the two has blurred. Another type of graphics application, based on PostScript, has been introduced and has flourished. And color has been added to the Macintosh artist's palette.

Though the basic dichotomy between Paint and Draw remains an essential distinction, the graphics standard set by MacPaint and MacDraw has evolved considerably since then. Now, many of the most important Macintosh graphics packages blend the two different types of applications into one program, providing the best features of both: the ability to select and stack different objects; pixel-level editing; smoother scaling; and object-oriented editing. Nearly all current graphics applications employ the basic tools—pencil, brush, bucket, rectangle, circle—but each package adds its own unique modifiers to these tools, which add special effects. Many have introduced totally new tools and features, such as free rotation, masks (to cover parts of objects), editable patterns (to fill objects), and multiple magnification views. The range and breadth of applications is exciting, and daunting.

Another important development for Macintosh graphics was the introduction of PostScript drawing programs. These programs employ the object metaphor of draw programs, but utilize the amazing

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flexibility of PostScript, the graphics language that most laser printers use, to open new vistas to the artist. In particular, PostScript programs offer better-rounded shapes through the inclusion of a tool called a Bezier curve (though some Draw and Paint programs now offer this tool, too), which provides control points all along an object for precise editing. And PostScript applications provide more versatile text-manipulation features that can skew, invert, stretch, and otherwise distort text, yet print it at high-resolution with no jaggedness.

Perhaps the most exciting aspect of Macintosh graphics is the proliferation of color. Nearly all Paint, Draw, and PostScript programs support some type of color scheme; and a few Paint programs were designed from scratch to take advantage of the new world of color. Some applications provide the artist with a palette of 16 million colors to choose from, and offering full compatibility with such standards as the Pantone Matching System.

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## ***Presenting Presentations—and Multimedia***

Presentation software automates the process of creating presentations by integrating text and graphics, much as a page layout program does. But the emphasis here is on the graphics needed to produce 35-mm slides and overhead transparencies. At the least, presentation software will allow you to import text, artwork and graphs, arrange them on the slide, apply colors, and output to a printer or slide recorder. The more powerful packages feature built-in outliners for creating text, built-in charting capabilities, master templates for controlling elements over all slides, and the ability to present the presentation live, with the elements on a slide fading in and out at the click of a mouse.

Another powerful and exciting presentation technique is animation. A natural outgrowth of the graphic richness of the Macintosh, animation has graduated from a hobbyist's toy to a businessperson's tool. Graphics programs can automate the process of animation—place the object at the beginning and at the end, and the application fills in the frames in between—and allow you to add sound effects.

But any discussion of the state of the Macintosh art would be incomplete without a look at multimedia, the latest Macintosh buzz word. If text is the rough material that desktop publishing polishes into a final document, then graphics are the clay that multimedia shapes into impressive monuments to interactive knowledge. A unique confluence of hardware—more powerful, color Macintoshes, video disc players, high-capacity hard disk and optical disk drives—combined with innovative software heralds this new computer technology.

Multimedia combines text, graphics, sound and video in an interactive environment. Optical disk drives, in particular, put enormous amounts of information—up to 600 megabytes—onto a single, searchable media. Software has been developed that allows a Macintosh to drive a videodisc player, providing access to any of thousands of minutes' worth of video in an instant. Multimedia attempts to create a software framework that provides access to this rich variety of information in an open way, so the user can direct his/her own way through the information. The potential for business presentations and self-paced education and training marks multimedia as a technology with an exciting future.



# ColorStudio

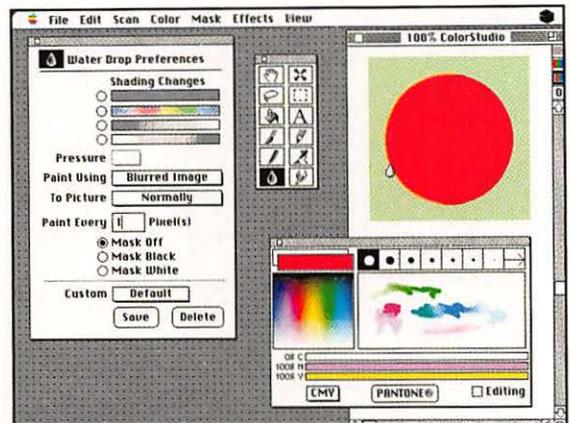
Letraset USA  
40 Eisenhower Drive  
Paramus, NJ 07653  
(201) 845-6100

Letraset®

## Product Overview

ColorStudio is the first true-color image retouching, assembly and illustration program to combine creative painting and retouching tools with a superior color model for professional color control on the Macintosh.

It is the only application that matches input color to the display and then to the selected printer to yield an image that is true to the creator's vision. Because of its superior color model, ColorStudio provides a predictable, repeatable response with accurate color as an image goes through the capture, design and reproduction process.



## Features

- Calibrated color control system
- Sophisticated masking capabilities
- Real-time color correction
- Paintbucket tool creates vignettes, overlays entire images with graduated tints

## Technical Support

Standard is 60 days; Letraset InTouch™ extended support available.  
M-F, 9:00 am-6:00 pm (EST)

## Ordering

Available through authorized Letraset dealers.

**Required: Macintosh II family; 5 Mb RAM; 8-bit color video board; QuickDraw; 80 Mb hard disk.**

**Suggested Retail Price: \$1995**

**Contact: (201) 845-6100**

# DesignStudio

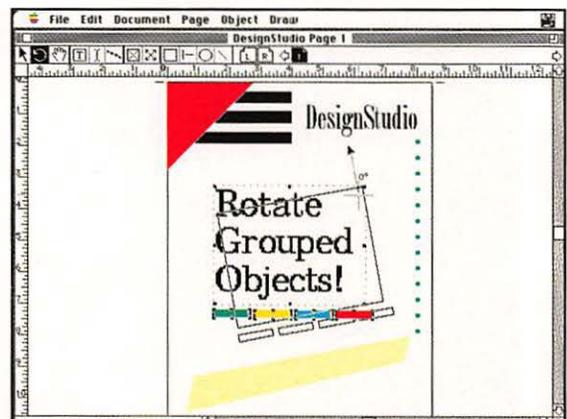
Letraset USA  
40 Eisenhower Drive  
Paramus, NJ 07653  
(201) 845-6100

Letraset®

## Product Overview

For design professionals, DesignStudio™ provides a familiar working environment in which their creativity can explore newer, faster and more powerful paths of expression.

There is a pasteboard area to give designers "more elbow room" to create their documents, with objects on the pasteboard being visually dragged onto the active page. The typographic controls in DesignStudio rival many of those found in high-cost typesetting machines. Text and graphics can be put into a number of shapes. DesignStudio can import text and graphics from all major programs, and print to QuickDraw, PostScript, or high-end prepress equipment like Linotronic and Crosfield.



## Features

- Text, objects and graphics can all be rotated up to a tenth of a degree
- High-end typographic controls
- Status bar and editable thumbnails
- Annexes for added features

## Technical Support

Standard is 60 days; Letraset InTouch™ extended support available.  
M-F, 9:00 am-6:00 pm (EST)

## Ordering

Available through authorized Letraset dealers.

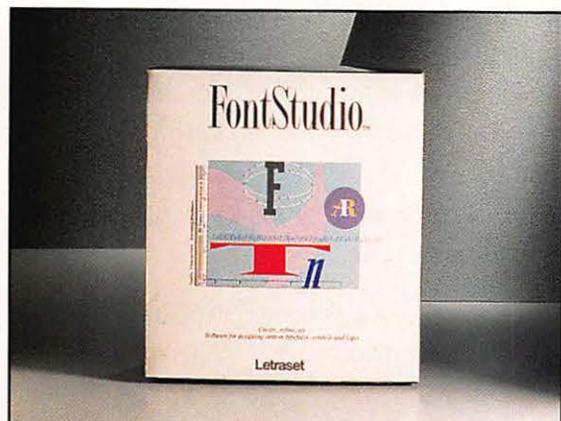
**Required: Macintosh Plus or greater; 1 Mb RAM; 20 Mb hard disk.**

**Suggested Retail Price: \$795**

**Contact: (201) 845-6100**

**Letraset®**

Letraset USA  
40 Eisenhower Drive  
Paramus, NJ 07653  
(201) 845-6100



## FontStudio

### Product Overview

FontStudio® is the most potent tool available for the creation and editing of PostScript Type 1 and Type 3 fonts, logos and simple line art. Its ease-of-use and powerful features help designers take what is in their mind's eye and transform it into high-quality, professional graphic art.

Scanned artwork can be read into FontStudio and "auto-traced" for rapid creation and production of logos and typefaces for your company's or client's needs. It simplifies the addition of dingbats, logos or symbols to an existing font. Its drawing window has a comfortable feel with a wide range of precise drawing and editing tools.

**Required: Macintosh Plus or greater; 1 Mb RAM; 20 Mb hard disk; current System.**

**Suggested Retail Price: \$595**

**Contact: (201) 845-6100**

### Features

- Integrated character parts library
- Auto Trace of scanned artwork
- Imports most major font formats
- Integrated Bitmap Editor
- Powerful Kerning Editor

### Technical Support

Standard is 60 days; Letraset InTouch™ extended support available.  
M-F, 9:00 am-6:00 pm (EST)

### Ordering

Available through authorized Letraset dealers.

**Letraset®**

Letraset USA  
40 Eisenhower Drive  
Paramus, NJ 07653  
(201) 845-6100



## LetraStudio

### Product Overview

With the ability to condense, stretch, slant, scale, rotate, flip-flop or distort a design in real time, LetraStudio® empowers the designer with a new level of creative control that is ideally suited to a variety of print and video titling applications.

Created with the designer in mind, LetraStudio works with PostScript Type 3 fonts and Letraset's extensive LetraFont type library. Built-in "envelopes" work like a distortion lens on a camera. But unlike traditional methods, LetraStudio lets you create multiple effects—with immediate feedback on how they will look. Anti-aliasing reduces "the jaggies" usually associated with display type.

**Required: Macintosh Plus or greater; 1 Mb RAM; 20 Mb hard disk; current System.**

**Suggested Retail Price: \$495**

**Contact: (201) 845-6100**

### Features

- Manipulates the shape, size and texture of type to create attractive and unique graphic designs
- Bezier control points on every distortion
- Import Paint, PICT and EPSF files as templates

### Technical Support

Standard is 60 days; Letraset InTouch™ extended support available.  
M-F, 9:00 am-6:00 pm (EST)

### Ordering

Available through authorized Letraset dealers.

# The Edge of Technology



**New  
technologies  
and new  
skills  
demand  
new ways  
of thinking.**



**Interview with  
Mike Beato,  
Beato Enterprises, Inc.  
Buffalo, NY**

Sometimes, when you're working on the edge of technology, you invent techniques, procedures, or systems as you go along; then later someone will come up with a name for it. One of the latest Macintosh buzzwords is Desktop Media—the combined technologies of desktop publishing, desktop presentations, and multimedia. Whatever the name, it's something Mike Beato of Beato Enterprises has been doing for awhile.

"The Macintosh is a tremendous tool for working with clients," explained Beato, a Macintosh graphics and desktop publishing consultant to advertising agencies. "The color Macintosh allows us to show clients artwork, and then work with them live on screen, making changes and trying out different possibilities. It really gets the client excited about the work we can do."

It all began for Beato in 1984, when he saw his first Macintosh. He tried it out, and within ten minutes he knew he had to have one. He moved from Rochester to Buffalo, New York, and began to work as a systems consultant to an advertising agency using an IBM 36 system. He and a VP at the agency got together a proposal for the head of the agency—create a small, completely computerized subsidiary agency on Macintoshes exclusively.

"We wanted to take eight people, and put each in front of a Macintosh. At the time, three years ago, no one had done that around here before," he said. "But the Macintosh had really caught up—desktop publishing and graphics had matured, and the Macintosh II, with its color capabilities, had been released."

The subsidiary agency was a success; within a year it was profitable. And that agency, and others that are Beato's clients, are staying profitable by embracing new technology. It's nearly a fulltime job just to keep abreast of the new products and technologies being developed for the Macintosh; technologies and products that are more complex than their predecessors.

"The Macintosh used to be self-limiting—one person could learn to do it all. But now, with the explosion of the new technology, specialization becomes necessary. Now people begin to specialize in certain areas: an artist who works only with FreeHand and Illustrator; a technician who only retouches digitized photography; a designer who only works with type. This technology and specialization are changing the relationships between the client, the agency, and the printer," he said. "The smart ones will adapt."

But whatever the future holds, Mike Beato sees the Macintosh in it.

"I can't image an ad agency without a Macintosh," observed Beato. "Life—and advertising—are full of change. The Macintosh gives people the ability to make changes on the fly at a reasonable cost. For alternatives and revisions, it's the way to go."

CLARIS

Claris Corporation  
5201 Patrick Henry  
Santa Clara, CA 95052  
(408) 987-7000

# MacDraw II 1.1

## Product Overview

MacDraw® II, the best-selling Macintosh graphics software, is a powerful, flexible tool for illustration, design, presentation, and publishing.

Illustrate using custom line widths and easy-to-modify curves. Rotate graphics or text in 0.1° increments. Zoom in to 3200% for precise editing or out to 3%. Design to scale with ease, using custom scales. Plot drawings to popular Hewlett Packard and Houston Instruments plotters. Export drawings directly to Claris CAD or to other CAD systems using the Claris Graphics Translator.

Present slides or overheads created with built-in slide manager and spelling checker. Create audience handouts (2, 3, or 6 slides per page). Output to black and white printers, color printers, or even 35mm slide recorders. Publish documents with powerful text-handling capabilities. Easily create block-justified text blocks. Edit text on-screen with your graphics.

## Features

- Zoom out to 3% or in to 3200%
- Specify line weights in .001 point increments
- Customizable arrowheads and dashed lines
- Multiple fonts, sizes, and styles in the same text block
- Left, right, center, and fully-justified text
- Slide manager for easy presentations and audience handouts
- Create or buy libraries with frequently re-used objects
- Plotter drivers included for 21 popular HP and HI plotters
- Written and disk-based tutorials included

## Reviews and Awards

*Government Computer News*  
Users Award (1/90)

*MACazine* (1/89)

## Technical Support

Tel: (408) 727-9054

M-Th, 8:00 am-5:00 pm (PST)

F, 8:00 am-2:00 pm (PST)

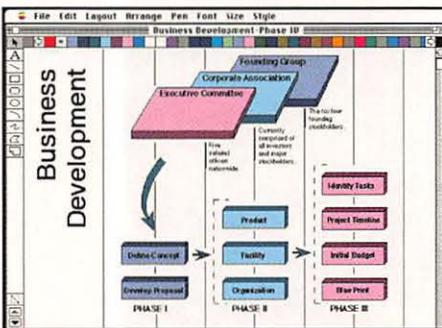
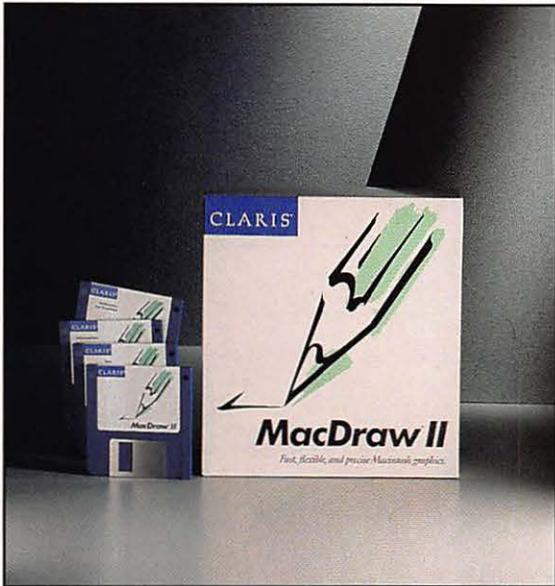
Technical Solutions Newsletter covering tips, techniques, and product update information.

## Ordering

MacDraw II is available through authorized resellers, or contact Claris at (408) 727-8227.

## Tips & Techniques

1. To select all objects created with a tool (i.e., all rectangles), choose the tool, then choose Select All from the Edit menu.
2. To set all program defaults, create a new document, set all your custom settings, then Save As a stationery file called "MacDraw II Options" (place this in the System Folder).



**Required: Macintosh Plus or greater; 800K drive; System 6.0 or higher.**

**Recommended: Hard disk.**

**Suggested Retail Price: \$399**

**Version: 1.1**

**Contact: (408) 987-7000**

PARACOMP

# ModelShop 1.1

Paracomp, Inc.  
123 Townsend Street, Suite 310  
San Francisco, CA 94107  
(415) 543 3848

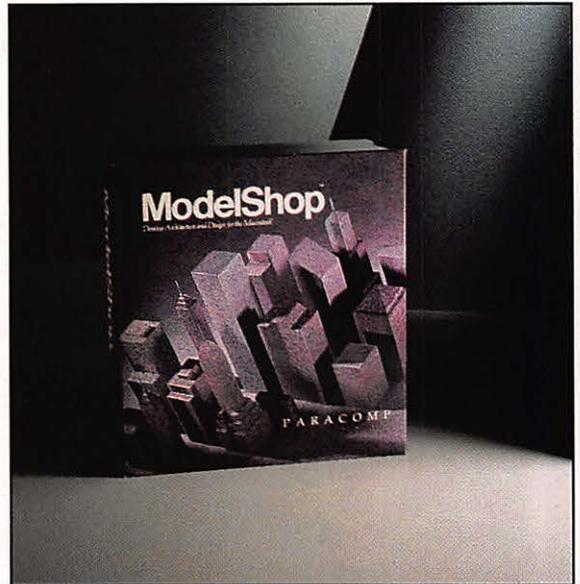
## Product Overview

ModelShop is a sophisticated 3-dimensional sketching and design tool ideal for architecture and technical illustration, computer aided design, and professional presentations.

Start with a two dimensional plan view, save it as a PICT document, then import it into ModelShop. Within moments you can extrude the model into three dimensions, and proof it in Axonometric or any other Perspective view. When satisfied with your 3D design, export any of the 3D views back to your draw, CAD, presentation, publishing or paint programs.

Or start sketching in three dimensions directly in ModelShop. Its intuitive Draw and Pull technique, based on familiar 2D draw and paint programs, will have you drawing in 3D in no time.

ModelShop is unique among 3D modelers because it is compact, can punch holes on existing objects, and can work on several files and views at a time. ModelShop's compactness allows it to run fast on a Macintosh Plus with one megabyte of RAM.



## Features

- Import 2D WYSIWYG or scaled drawings
- Create draw-type models that render in high resolution, not bitmaps
- Hole Tool creates any shape hole (unique among 3D Macintosh modeling programs)
- Multiple windows of the same or different models
- Perspective Views with precise positioning of the viewer
- Compact program, with a 5,000 face model in a one Mb partition; limited only by memory
- Export 3D Views as PICT graphics
- Precise creation and editing of objects
- Soon: Animation link to Swivel 3D; DXF, ClarisCAD, MacDraw, EPS and Swivel 3D import and export

## Reviews and Awards

*Macintosh Aided Design* (2/90)

*MacWeek* (12/5/89)

*Architecture* (2/90)

## Technical Support

Tel: (415) 543-3848

M-F, 9:00 am-5:00 pm (PST)

Technical Notes sent regularly to registered customers.

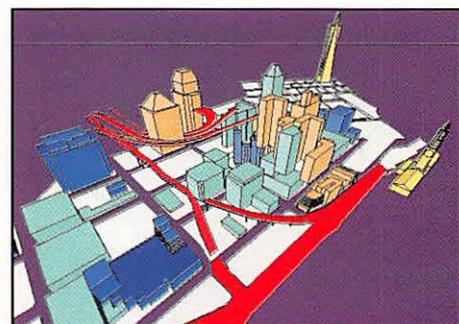
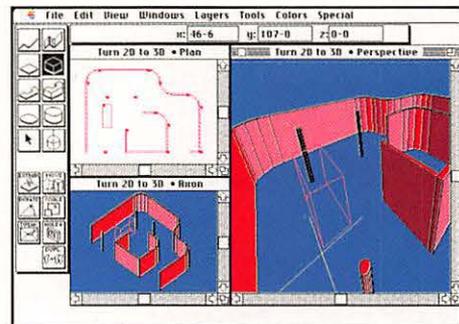
30 day money-back guarantee.

## Ordering

ModelShop is available through authorized dealers, or contact Paracomp at: (415) 543-3848

Demonstration Kit for \$19.95 includes 2 disks and tutorials. Cost of demonstration kit is refunded upon purchase of full product. Call Technical Support with questions regarding the demonstration kit.

Upgrades at minimal charge.



**Required: Macintosh Plus or greater.**

**Recommended: Macintosh II family; 2 Mb RAM.**

**Suggested Retail Price: \$595**

**Version: 1.1**

**Contact: (415) 543-3848**

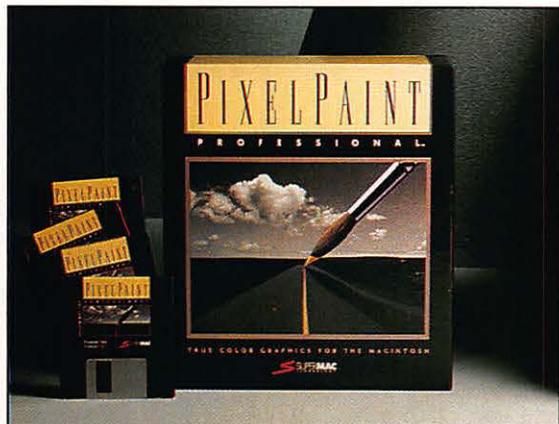
## Tips & Techniques

1. Edit Holes like any other object.
2. Tweak allows you to create any shape.
3. 235 layers can be used to organize large files.



SuperMac Technology  
485 Potrero Avenue  
Sunnyvale, CA 94086  
(408) 773-4456

# PixelPaint Professional



## Product Overview

PixelPaint Professional® is the first true color paint program for the Macintosh, allowing you to easily import, create, manipulate and export color images. And it's designed to grow with you—from 8-bit to 32-bit systems, from general painting to advanced design.

PixelPaint Professional gives you the tools to do your work quickly and easily. Use powerful features like advanced masking, image merging, fill effects, dithering and perspective to dramatically improve how you work with your color system. PixelPaint Professional opens up new creative and professional design options at a fraction of the cost of dedicated systems.

**Required: Macintosh SE/30 or II family; 2 Mb RAM; System 6.0.3; 8-bit video; hard disk.**

**Suggested Retail Price: \$699**

**Contact: (408) 245-2202**

## Features

- Supports 8, 16, 24, or 32-bit color depth
- Full range of paint tools including a powerful airbrush
- Powerful masking using any tool or color
- 4-color separations

## Technical Support

Tel: (408) 245-0646  
M-F, 6:00 am-6:00 pm (PST)

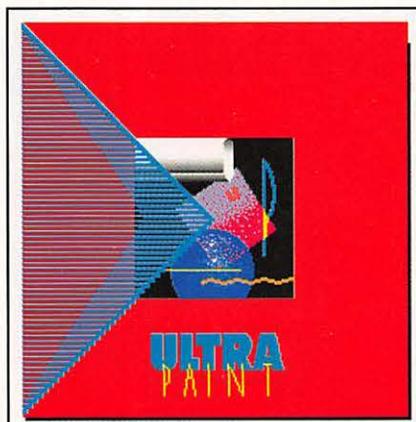
## Ordering

Contact SuperMac at:  
(408) 245-2202



Deneba Software  
3305 N.W. 74th  
Miami, FL 33122  
(305) 594-6965

# UltraPaint



## Product Overview

Now, for the first time, black and white painting, color painting, grey scale editing and object drawing in ONE program! Introducing UltraPaint, the next generation, entry-level graphics program that doesn't limit its users to entry-level performance. On a Macintosh Plus experience high resolution painting, using every tool imaginable. On a Macintosh II watch it come alive with millions of colors and enough grey scale editing power to retouch, combine, or totally recreate images captured by any scanner. UltraPaint is compatible with MacPaint, PICT and PICT2, TIFF, and even MacDraw I formats. And thanks to its breakthrough Open Architecture design, you'll never be waiting for an upgrade again! UltraPaint: it's easy, flexible, powerful and infinitely expandable.

## Features

- All the standard painting and drawing tools
- Special effects—rotate, slant, distort, stretch and perspective
- Gradient color fills
- Sophisticated color manager
- Bezier Curves

## Technical Support

Tel: (800) 6-Canvas  
M-F, 9:00 am-5:00 pm (EST)

## Ordering

Contact Deneba at:  
(305) 594-6965

**Required: Macintosh Plus or greater; 1 Mb RAM.**

**Suggested Retail Price: \$199**

**Version: 1.0**

**Contact: (305) 594-6965**

# Adobe Illustrator 88

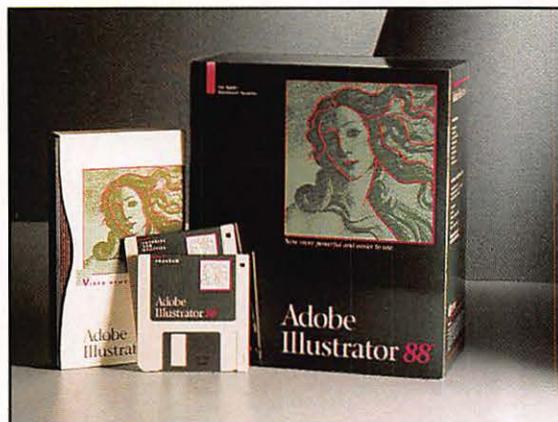
Adobe Systems Incorporated  
1585 Charleston Road  
Mountain View, CA 94039  
(415) 961-4400

**ADOBE**  
Adobe Systems Incorporated

## Product Overview

Adobe Illustrator 88™ is robust illustration software for the creation and control of text and graphics. It's a program with so much capability and power, so many features, that the design and production of high-quality artwork becomes virtually automatic.

Features include PostScript drawing tools, such as a freehand sketching tool and automatic tracing of bitmap images, for rapidly turning scanned images into refined art. There's also a unique blending tool for airbrush and animation effects. And even the ability to create PostScript patterns, and of course, full PANTONE® matching system capability. And it's brought to you by the company that created the industry-standard PostScript language.



## Features

- Draw precise lines and curves with amazing pen tool
- Rotate, scale, reflect, or shear any object, including text, with powerful transformation tools
- Create automatic color separations

## Technical Support

Tel: (415) 961-0911  
M-F, 8:00 am-4:00 pm (PST)

## Ordering

Contact Adobe at:  
(800) 344-8335

**Recommended: Macintosh Plus or greater; 2 Mb of RAM; hard disk.**

**Suggested Retail Price: \$495**

**Version: 1.9.3**

**Contact: (800) 344-8335**

# Adobe Streamline

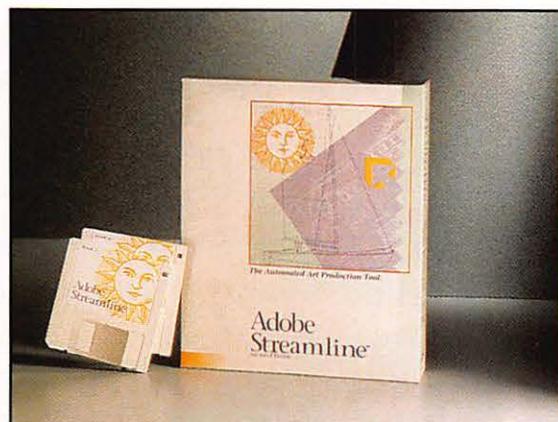
Adobe Systems Incorporated  
1585 Charleston Road  
Mountain View, CA 94039  
(415) 961-4400

**ADOBE**  
Adobe Systems Incorporated

## Product Overview

Adobe Streamline™ is a revolutionary program that streamlines the art production process. Now you can automatically and fully convert a high-resolution bitmapped file into an Adobe Illustrator file or an Encapsulated PostScript file. Convert an image and use "as-is" with your favorite word processing or page layout program, or refine it using Adobe Illustrator 88.

Converted files are stored as vectors, not as bitmaps, and therefore take up much less disk space—up to 90% less. You'll be able to transport, manipulate and print artwork more easily than ever before.



## Features

- Converts rough, static bitmaps into smooth, flexible PostScript files
- Input formats include TIFF (any resolution), Paint and PICT
- Complete control over the file conversion process

## Technical Support

Tel: (415) 961-0911  
M-F, 8:00 am-4:00 pm (PST)

## Ordering

Contact Adobe at:  
(800) 344-8335

**Recommended: Macintosh Plus or greater; 2 MB of RAM; hard disk; bitmaps or Macintosh compatible scanner.**

**Suggested Retail Price: \$495**

**Contact: (800) 344-8335**

# Multimedia vs. Desktop Media



**It's a brave  
new world  
of text,  
graphics,  
animation,  
video and  
sound.**

As is the case with many buzz words, the term “multimedia” has recently generated a considerable amount of excitement, and as a result, its meaning has become somewhat obscure. In an attempt to try to understand what multimedia is, a free-wheeling debate has sprung up that shows no sign of abating; nonetheless, certain generalizations have definitely emerged.

Multimedia draws part of its meaning from its original use in the fine arts and dance—the mingling of information (or materials, in the case of art), from different sources, into a larger whole. In the case of the Macintosh, the information can be of many different types—text, graphics, sound, and video are currently the most popular. The reason that people are excited about multimedia is because of the other component of the concept—the key to multimedia is the framework in which the information is combined and accessed.

Often, this framework is described as a sort of database; but database is too limiting a concept for this sense. For example, imagine viewing a multimedia project about Mozart's life. On screen is a picture of Mozart, and some text from a biography of his life. But built into the system are other ways of “experiencing” Mozart—you can hear digitized recordings of his music; view paintings of other figures in his life; perhaps even access a video recording of one of his operas. The key to multimedia—the key to whether it will succeed—lies in the quality of the design of its framework and interface. Most experts agree with, and are excited by, the notion of a system that is as free-form as possible, in which the user has the utmost control over how the information is accessed.

But what has this to do with the phrase Desktop Media? Desktop Media is an Apple coinage that's intended to encompass three different technological means for communicating information—desktop publishing; its progeny, desktop presentations; and its in-law, multimedia. Apple argues, persuasively, that these are really just three different paths to the same goal: communicating information, or, as Apple prefers, communicating an idea. The simplicity and power of the Macintosh puts all these impressive and dynamic means of communication in the hands of the person that actually has the idea, thereby making the communication better.

What's interesting about Apple's thesis is that they tend to stress desktop publishing and desktop presentation, and the ability of the Macintosh to create better forms of communication for business. Many of the current converts of multimedia, however, see greater potential for multimedia in education and training. But whichever side of the media fence you fall on, Desktop or Multi, the ground is the same—the Macintosh is playing its part in unleashing the creativity inherent in all of us.



# The Art Of File Formats

**W**hen you create images in a graphics program and save them, the information used to display the images (on the screen or on paper) is called a file format. Graphics software typically have their own proprietary formats, but can also save in a variety of standard formats that makes images accessible to other graphic applications.

These standard formats, an important aspect of the power and flexibility of Macintosh graphics, fall into two general categories: bitmapped and vector. Bitmapped formats are designed for the computer screen, which is made up of several hundred rows of dots known as pixels. Images are represented on the screen by applying different colors to the pixels, either black and white or color. A bitmapped image is a file that stores the location of pixels and their colors.

Vector formats, on the other hand, define the curves, edges, and patterns of images as mathematical descriptions. Instead of storing patterns of colored pixels, a vector file stores mathematical formulas; the computer uses the formulas to determine which pixels to color, and where to draw them on the screen. Bitmapped graphics lose sharpness (and appear jagged) as they are enlarged, because the computer must approximate the size change based on a specific pixel image. Vector images, on the other hand, are more precisely rendered, because they are based on formulas that can be easily and accurately manipulated. However, bitmap graphics can be edited at a pixel-by-pixel level in a way that's not possible with a vector image.

Graphics file formats are largely identified by acronyms. The standard Macintosh vector format is called PICT (PICT refers to a format that can encode color, too). Encapsulated PostScript (EPS or EPSF) is a specialized, powerful vector graphics language that displays an image at the best possible resolution for the device, whether screen, laser printer or imagesetter. EPS is the graphics format of choice for quality output because of the flexibility and precision of its mathematical characterization of an image (whether on screen or paper).

Bitmapped formats for the Macintosh include the standard and venerable MacPaint, now called Paint, which limits images to black-and-white 8.5" x 11" layout; and TIFF (Tagged Image File Format), which records color and gray-scale information for digitized (scanned) artwork and photography, used by scanners and page-layout programs.

In general, most Macintosh graphics programs can manipulate images stored in at least two file formats—Paint and PICT—and some can work with those plus EPS and TIFF. In addition, Macintosh System software comes with a valuable desktop accessory called the Scrapbook, which allows you to move images between files—even in different programs—simply by using the Cut and Paste commands.



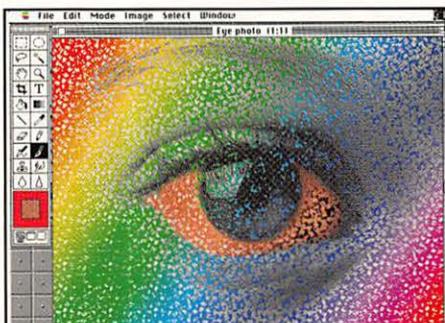
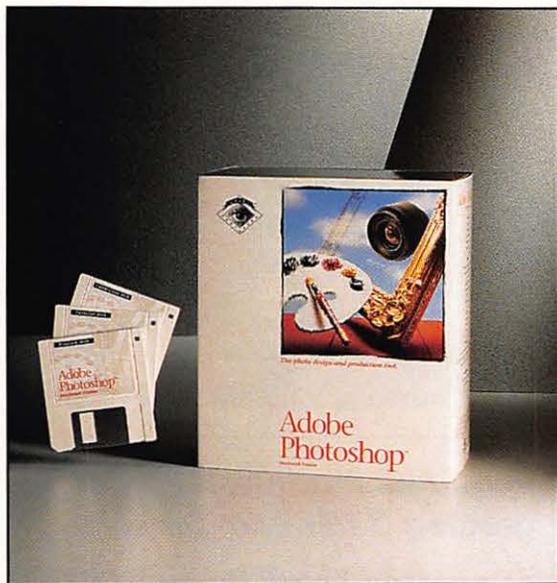
**Paint, PICT,  
EPS and TIFF  
are just  
part of the  
Macintosh  
graphics  
picture.**



Adobe Systems Incorporated  
 1585 Charleston Road  
 Mountain View, CA 94039  
 (415) 961-4400

**ADOBE**  
 Adobe Systems Incorporated

# Adobe Photoshop



## Product Overview

Adobe Photoshop allows users to create original images using advanced painting functions, to retouch and edit photographs and other scanned-in, digitized images, to make color corrections, and to produce four-color separations. It features a wide array of painting and editing tools, including custom tools and brushes for creating original images, special effects, and textures and patterns. For precise image selection and editing, users can create 8-bit alpha channels that can be used for masks. Collages and photo montages can be created easily.

More than two dozen filters can be used to achieve such effects as blurring or sharpening an image, or creating special effects. Users can adjust the brightness, contrast, middle grays, hue, saturation, and specific color values of pixels in any part of an image. Sophisticated color separation capabilities allow users to produce professional-quality, four-color separations. Documents can be printed directly from Photoshop, or saved as EPS files and placed in application such as PageMaker and Adobe Illustrator.

## Features

- Paint with soft-edged paintbrush or airbrush in any of 16 million colors
- Smudge, blur, sharpen, or "clone" any area of an image
- Adjust brightness, contrast, gamma, color balance, hue and saturation for the entire image, the selected area, or any individual channel
- 22 built-in filters including a wide variety of sharpening, softening, and effects filters
- Rotate stretch, skew, distort, flip, or alter perspective of any part of an image
- Create high-quality CMYK separations from continuous-tone images, and use the "automatic-trap" feature to reduce registration problems in areas with transitioning colors
- Supports files in Paint, PICT, TIFF, EPS, TGA (Targa), ScitexCT, GIF

## Reviews and Awards

*MacWeek* (11/21/89)

*Publish* preview (12/90)

## Technical Support

Tel: (415) 961-0911

M-F, 8:00 am-4:00 pm (PST)

Free technical support; on-line electronic support for subscribers to CompuServe.

## Ordering

Adobe Photoshop is available from Macintosh software retailers, or contact Adobe at: (800) 344-8335

Free product updates for 90 days.

**Required: Macintosh SE or II families; 2 Mb of RAM; System 6.02 or higher; hard disk.**

**Suggested Retail Price: \$895**

**Contact: (800) 344-8335**

# Swivel 3D

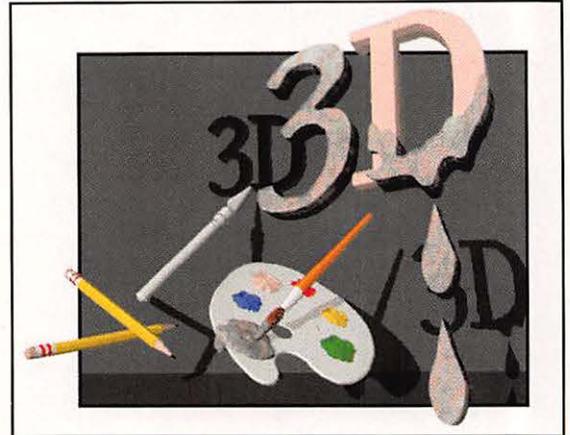
Paracomp, Inc.  
123 Townsend Street, Suite 310  
San Francisco, CA 94107  
(415) 543-3848

P A R A C O M P

## Product Overview

Swivel 3D was developed for professionals who want quality graphics for illustration, product design, desktop publishing, visualization, multimedia presentations, and animation. It gives you the power of a high-performance graphics system at a fraction of the cost, without compromising ease of use.

Swivel 3D goes beyond traditional graphics packages by letting you visualize ideas, develop and present designs, and simulate mechanical models in three dimensions. And it's the only Macintosh program to feature Linking, permitting a component to pivot, but not to separate. Objects can also be constrained in their range of motion and rotation for hinges, wheels or sliding panels.



## Features

- Multiple rendering modes
- Output EPS, PICT, PICT2, PICS
- Shadow casting
- Anti-aliasing
- Tween panel for animation
- Imports 2D graphics

## Reviews and Awards

*MacUser* Eddy Award 1989  
*MacUser* 5 mouse rating

## Technical Support

Tel: (415) 543-3848  
M-F, 9:00 am-5:00 pm (PST)

**Required: Macintosh Plus or greater; 2 Mb RAM for color.**

**Suggested Retail Price: \$495**

**Version: 1.1**

**Contact: (415) 543-3848**

## Technical Short



**The latest in  
output  
techniques  
add pizzazz  
to your  
presentations.**

Desktop publishing has brought the ability to inexpensively produce high-quality documents in-house, facilitating the widespread communication of written material. However, business communication is not just of a written nature; oral and visual communication are also important means to getting the point across. Group presentations are an arena in which information must be distributed clearly and effectively in order to have an impact.

Effective presentations require good organization, flawless execution, creativity, and proper use of materials and output devices to best display your graphics. Presentations are always more powerful and effective when you employ visuals. Overhead transparencies and 35-mm slides are the standard means to display visual information in a presentation, but their expense precludes the ability to update, revise and polish. The Macintosh can now produce transparencies and slides quickly and easily.

You can create charts, lists of bullet points, and graphs on a Macintosh, and then print these onto plastic transparency sheets with a laser printer, and take them to your meeting for the overhead projector. A new product for presentations, the projection pad, directly connects the Macintosh screen to the overhead projector, casting the image on the computer screen onto the large screen, without having to resort to printed transparencies.

A new innovation in slide projection for boardroom presentations is the film recorder. Film recorders allow the user to create 35-mm slides of Macintosh graphics by simply "printing" to it; the recorder processes the image onto standard 35-mm slide film that can then be developed in the typical way. Although film recorders are expensive and can be finicky, they are a step towards the investment in in-house multimedia techniques, a fashionable trend in marketing these days.

**SYMANTEC.**<sup>™</sup>

Symantec Corporation  
10201 Torre Avenue  
Cupertino, CA 95014  
(408) 253-9600

# MORE

## Product Overview

MORE is designed for managers who need to organize information, write reports, and present ideas. MORE's powerful outliner lets you organize complex information and turn it into project plans, status reports, and effective presentations. Create all types of documents, and with MORE's powerful style sheets you can completely customize the look of your outlines.

MORE is the fastest way to create a presentation on the Macintosh! Turn your outlines into bullet chart slides or tree charts instantly, with one click of the mouse. Create black and white overheads from your printer, or create color slides for more elaborate presentations including financial charts and tables.

## Features

- Instant presentations—convert your outline into a set of bullet chart slides automatically in one step
- Powerful outlining for organizing ideas and lists, writing reports, and creating presentations

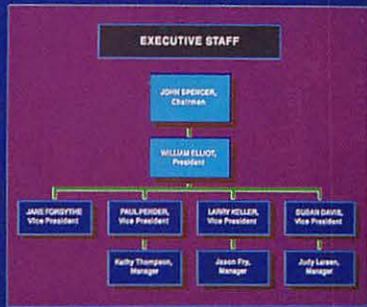
## Technical Support

(415) 964-6200  
M-F, 9:00 am-4:00 pm (PST)

## Tips & Techniques

1. Create templates from your favorite styles and layouts and store them in a library.

## Design Tree Charts Instantly with MORE



**Required: Macintosh Plus or greater; 1Mb RAM; hard disk.**

**Version: 3.0**

**Suggested Retail Price: \$395**

**Contact: (800) 441-7234**

**In California, (800) 626-8847**

**MACROMIND**  
the multimedia company

MacroMind, Inc.  
410 Townsend, Suite 408  
San Francisco, CA 94107  
(415) 442-0200

# MacroMind Director 2.0

## Product Overview

MacroMind Director version 2.0 is a multimedia presentation and animation tool that lets you present your ideas with a force beyond any combination of words or pictures. With MacroMind Director you can easily create and combine animations, graphics and text, synchronizing these with sound and video to produce stunningly effective multimedia communications: from exciting animated slide shows and video productions to highly-interactive presentations, self-guided training programs, information kiosks, technical simulations—and more. MacroMind Director features two integrated modules—Overview and Studio—that give you complete control over every element in your animation.

## Features

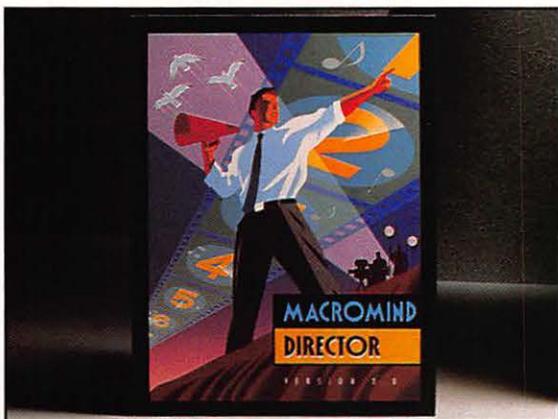
- Overview lets you easily import and organize documents
- Studio modules—Score, Paint, and Lingo—let you layout, storyboard and add motion to your message

## Technical Support

Tel: (415) 442-0200  
M-F, 9:00 am-5:00 pm (PST)

## Tips & Techniques

1. Play MacroMind Director movies from within HyperCard with the MacroMind Player.



**Required: Macintosh Plus or greater; 1 Mb RAM (B&W), 2 Mb RAM (color); System 6.0.2 or higher; hard disk.**

**Suggested Retail Price: \$695**

**Contact: (415) 442-0200**

# HyperCard

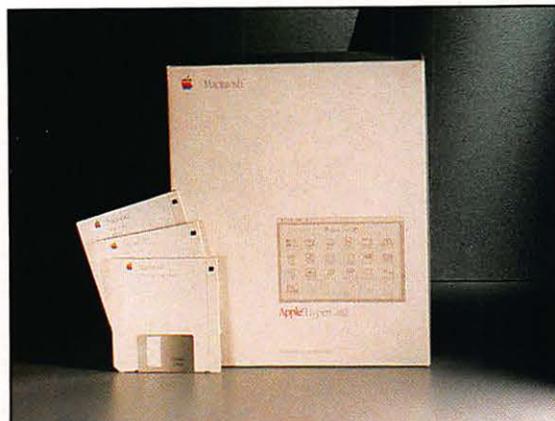
Apple Computer, Inc.  
20525 Mariani Avenue  
Cupertino, CA 95014  
Tel: (408) 562-3910



## Product Overview

HyperCard® is a personal software construction kit that is sophisticated, yet very accessible, allowing novices and experts alike to create powerful applications. With HyperTalk™, the programming environment behind HyperCard, you can create and manipulate applications and organize robust collections of information with text, graphics, audio, and animation components.

HyperTalk is a powerful programming environment with easy to learn and use English-based commands and syntax. It is an extendable environment, which means you can extend the language with external commands, customizing to fit your unique requirements while maintaining its ease of use.



## Features

- Easy to learn and use
- Fast, flexible searching
- Powerful graphics
- Audio/sound capabilities
- Speed- and cost-effectiveness
- Animation
- Bundled with all current Macintosh models

## Ordering

HyperCard is available from authorized Apple resellers, or contact Apple at:  
(800) 282-2732 (U.S.)  
(800) 637-0039 (Can)

**Required: Macintosh Plus or greater; 1 Mb RAM.**

**Suggested Retail Price: \$49**

**Version: 1.2.2/1.2.5**

**Contact: (800) 282-2732**

## Technical Short



## A few of the key terms to understanding HyperCard.

**Authoring:** the act of designing and/or programming a HyperCard stack.

**Background:** a layer of information shared by many cards in the same stack. In an address stack, for example, each card has a unique name and address; the background provides the layout of fields used by every card. The background stays the same; the information changes with each card.

**Button:** an object, usually identified by a graphic or text, that performs the action (or actions) specified by the attached script. Examples of actions include search for a particular item, sort a stack, or go to a specific card or stack.

**Card:** the basic unit of HyperCard, roughly equivalent to a record in a traditional database.

**Field:** the basic container for textual information.

**HyperTalk:** the programming language that underlies HyperCard. An intuitive language with an English-like syntax, a HyperTalk script

can be attached to any HyperCard object, and can access programs and procedures written in other more traditional languages, such as Pascal or C, through XCMDs and XFNCs.

**Object:** a functional unit in HyperCard; a button, field, card, background or stack can be called an object.

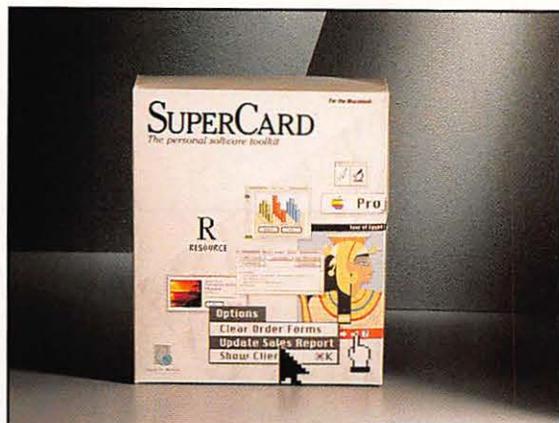
**Script:** a collection of HyperTalk commands, attached to an object, that specifies an action for that object. A script is the series of instructions HyperCard carries out as the result of some action.

**Stack:** a collection of cards arranged in some order, similar to a file in a standard database scheme. A stack can have one or more backgrounds.

**XCMD/XFNC:** (pronounced "X-command" and "X-function") a procedure, written in a programming language such as C or Pascal, that can be accessed from within HyperCard as a HyperTalk command. An XCMD performs an action; a XFNC returns some information to the script that called it.



Silicon Beach Software  
9770 Carroll Center Road, Suite J  
San Diego, CA 92126  
(619) 695-6956



# SuperCard

## Product Overview

SuperCard is a HyperCard-compatible "software toolkit" that gives users the power to create custom Macintosh software—anything from simple personal productivity stacks to full-color presentations and stand-alone commercial applications. SuperCard combines a powerful scripting environment with rich graphic creation capabilities, providing an ideal multimedia platform for combining video, sound, animation, and graphics. SuperCard's graphics environment provides 256-color painting and drawing, color text, and four types of animation, including industry-standard PICS. SuperCard's intuitive scripting environment includes extensive on-line scripting references, and a built-in debugging system.

**Recommended: Macintosh SE;  
2 Mb RAM; hard disk.**

**Suggested Retail Price: \$299**

**Version: 1.5**

**Contact: (619) 695-6956**

## Features

- Imports and converts HyperCard stacks
- Custom pull-down, pop-up, and hierarchical menus
- Cards and standard Macintosh windows of any size
- Multiple projects and scripts can be open simultaneously

## Technical Support

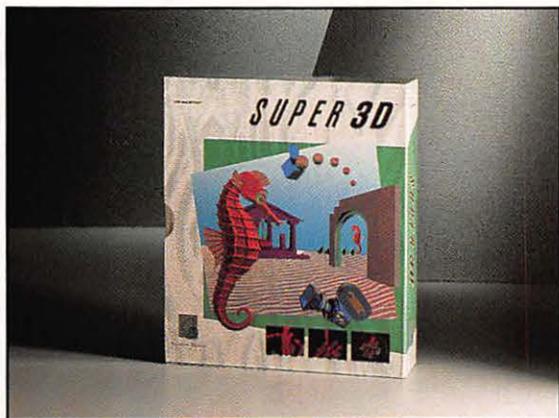
Tel: (619) 695-6956  
M-F, 8:00 am-5:00 pm (PST)

## Ordering

Available from domestic and international software resellers.



Silicon Beach Software  
9770 Carroll Center Road, Suite J  
San Diego, CA 92126  
(619) 695-6956



# Super 3D

## Product Overview

Super 3D™ is a powerful, yet easy-to-use 3D graphics and animation program ideal for modeling, visualization and design. Use familiar tools to create two-dimensional Draw graphics, or import them from popular drafting programs. Next, transform these 2D "templates" into 3D models using automatic commands. Shade models with multiple light sources and thousands of colors. View and manipulate wireframe or solid models from any angle using intuitive "spin wheels" and camera controls in three dimensions. Create high-speed (up to 60 frames per second) or industry-standard PICS animations easily using the automatic animation recorder and powerful "tweening function, which fills in the blanks" by creating frames in between user-defined key frames.

## Features

- Highly intuitive user interface
- Imports 2D PICT files; supports VersaCAD export files; converts ASCII numeric data into 3D images; exports PICT, EPS, and text files

## Technical Support

Tel: (619) 695-6956  
M-F, 8:00 am-5:00 pm (PST)

## Ordering

Available from domestic and international software resellers.

**Recommended: Macintosh II family; color monitor.**

**Suggested Retail Price: \$495**

**Version: 2.1**

**Contact: (619) 695-6956**

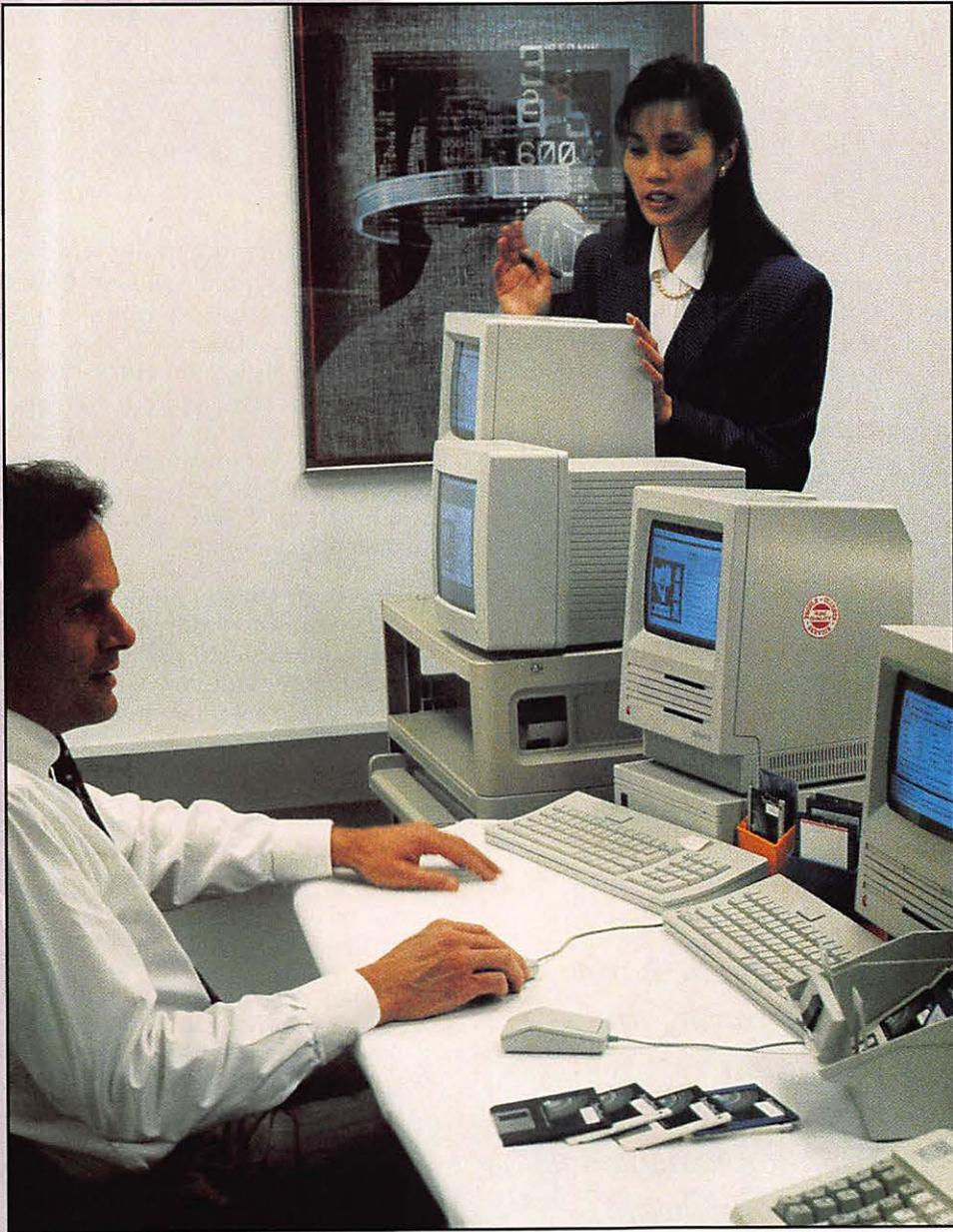
# *Information Management*

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**T**he computer represents a milestone in the human quest for more powerful and versatile tools. A computer manipulates an abstraction called information, in quantities and at speeds far beyond the capabilities of human beings. And its ability to process these huge amounts of data, especially numerical data, into organized structures has made it an invaluable tool to businesses throughout the world.

And the Macintosh is a further refinement still of the computer tool. Its staggering graphic capabilities has the potential to communicate information in new and exciting ways. But other tools—database, spreadsheet, project management—are necessary to take full advantage of the power and versatility of the Macintosh. It's these tools that can directly influence the quality (if not the quantity) of the information that the Macintosh processes.





# **F**ile It Away—But Electronically

The traditional tool for managing data on a computer is the database application. A database allows you to create complex files filled with related information that can be accessed, changed, and viewed quickly and easily. The remarkable speed and storage capacity of a computer provides for the creation of data structures that are large, yet organized and accessible.

The Macintosh has sparked an amazing range of database management software, everything from simple flat-file applications for text purposes, accessible from any application; to a more complex application for managing graphic, sound, and even video information; to fully-functional, elaborate relational databases that can access multiple files with literally millions of bits of information (see article, "Flat-file vs. Relational Databases"). With such a plethora of possibilities to choose from, making the right choice for your needs becomes of critical importance.

Choosing the right database software depends on two factors: what kind of information you want to organize; and what your expectations (or pocketbook) can bear. At this point in software development, no one database product is best for all types of information. Some are better for managing simple, self-contained textual information, such as a mail list, while others are better for more complex tasks, such as an invoicing system in which credit, inventory, and shipping information needs to be accessed. And still others are better for managing graphics or sound.

*Good database management demands careful planning and organization. Understanding how your information is related will help determine what database software is right for your needs.*



In addition, it's important to examine your own expectations, and how they might affect the complexity of the software you choose. If you want to create a complex inventory tracking system (with cost control), and have no database experience, you may have to hire an outside programmer to program it for you. On the other hand, if it's a relatively simple mail list, you may want to do it on your own.

In any case, certain tenets hold true for all. Foremost among them is planning. Take some time to decide what your information is, and how it is interrelated. Diagram your information flow, drawing shapes to represent data and files, and lines to show their connection. More complex databases require this type of planning, because of inherent difficulties (even impossibility) in adding new features later. Don't anticipate every detail of your database, but try to grasp its outlines and plan its growth.

This planning should include the input of any people who will also be using the database. What may seem like a sensible way to you to do a task may not seem as sensible to someone else. If you're designing a database to perform work that you don't actually do, make sure that it works for the people that will have to do the work.

Commit the necessary resources, in terms of time or patience or even money, to make the database right. Whether you're going to design a database from scratch with a flat-file application, or buy a multi-user relational database and hire a



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programmer to develop a custom application, time, patience and money will be needed to see the project through. Setting up a database application is more complex than setting up a word processing or desktop publishing program—it will probably require some testing and refinement before it really works the way you want it to.

Finally, understand the limitations of your database software, in terms of the larger context of the many tools on the Macintosh workbench, so you can fit the right tool to the task. For example, it may be the ideal tool for tracking your company's account receivables and account payables; but it might not be the best tool to use to analyze your company's cash flow. In this case, a spreadsheet program might be a better choice for communicating the cash flow data.

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## ***Spread Around The Numbers***

Spreadsheet software has done for numbers what word processing software has done for words—provide for the easy creation and editing of large quantities of data. A spreadsheet combines the organization of an accountant's column sheet with the arithmetic capability of a calculator, allowing you to develop structured documents with defined relationships between quantities. Change a number, and the others related to it are instantly recalculated.

But a spreadsheet goes beyond word processing by including a host of analytic capabilities. At heart, a spreadsheet is really an analytic tool, providing you with the techniques and features necessary to convert a mass of data into meaningful communication—information. The Macintosh's strength in graphics allows you to turn columns of numbers into dazzling graphs and charts. And most spreadsheets can dynamically link the chart or graphic to the numbers themselves; as the numbers change, the chart changes automatically.

The Macintosh's point-and-click simplicity, graphic charm and typographic dexterity increasingly are being incorporated into spreadsheets. As spreadsheets become more complex, however, they can become more complicated and varied. For example, some now offer a database capability that seems to provide some benefits by integrating two different functions (database and spreadsheet), though without the extent of features found in strictly database software.

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## ***Managing the Whole Show***

Another tool for managing information, more and more often found on the Macintosh workbench, is project management software. It employs the Macintosh graphic interface in a different way, utilizing drawing tools, database power and report-generation capability to provide an automated way to plan, and track, resources.

Project management software allows you to draw a schematic of the steps needed to complete a given task or tasks. These steps are connected to each other in a chain, dates are assigned, and resources (time, people, money) are allocated. A variety of reports can be created that illustrate progress in various ways, tracking time, people involved, and money spent.

A recent offshoot of project management software, at least for the Macintosh market, is flow charting software. Think of this software as a “smart” drawing tool, used in operational planning, structured programming, and scientific applications. Create flow charts from a library of standard symbols (or use your own). The beauty of computerized flow charting is that changes are simple; move one element, and the lines connecting to other elements automatically adjust and redraw themselves. Textual information can be attached to various places of the flow chart for explanation and analysis.



# The Inside Information



**The  
Macintosh  
is maturing  
as an  
information  
management  
tool.**



**Interview with  
Sean Cavanaugh,  
Ancier Technologies  
Carlsbad, CA**

**W**hen it comes to Information Management, it is rare to find a company that relies solely on the Macintosh. Macintosh/mainframe communication is still developing, which contributes to a continued reliance on other platforms. Despite the limitations, though, the majority of MIS managers are becoming competent in both database technology and the Macintosh and, if they're honest, according to Sean Cavanaugh of Ancier Technologies, they'll tell you that they prefer the Macintosh.

Cavanaugh, who is Manager of Product Development for Ancier, a producer of PC printer enhancement products, originally introduced the Macintosh at Ancier to help design PC fonts. He then expanded its use into product development, budgeting and reporting.

He sees three advantages for using the Macintosh for information management. First, as reported, the Macintosh requires very little time to learn. "I had people writing FoxBase programs within a few weeks, even if they had never programmed before. And, you can transfer a solid PC programming background to Macintosh extremely fast, though the converse isn't true," says Cavanaugh.

Next, Cavanaugh finds that the Macintosh is good for information management productivity. He believes that its use is addictive and to his programmers it becomes "more than just a tool." "The Macintosh is a companion. My people give a little extra when they use the Macintosh because they have more fun; the PC doesn't have that type of magnetism. These machines become as much a part of the organization as the people—and the company benefits from that attitude."

Finally, the software is economical and generally available for less than \$300. This figure compares to double the cost for a PC program such as dBase 4.

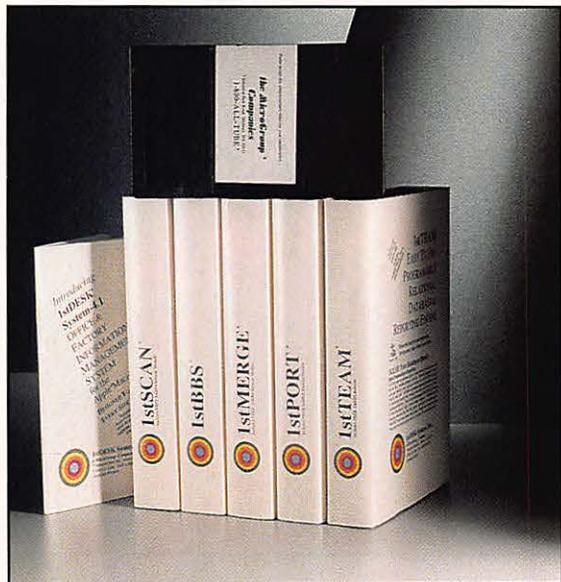
Cavanaugh sees the next step in information management development to be an evolution of available products similar to the PC world. "The dBase after-market is very competitive, offering several overlapping support products. There is a similar need for more case and support tools for the Macintosh."

Cavanaugh has some recommendations for introducing Macintoshes into your business. First, spend the necessary time to investigate your solution options before you buy anything. There are plenty of horror stories about companies buying expensive, unnecessary items because of lack of knowledge.

And if you've contemplated incorporating the Macintosh into your organization, but haven't managed to justify it, Cavanaugh suggests sneaking one in. Don't let a 'We don't do desktop publishing here' attitude inhibit you. Then, once you've got the machine in, quietly develop a critical application and watch the use grow from there.

1stDESK Systems, Inc.  
7 Industrial Park Road  
Medway MA 02053  
(800) 522-2286

# 1stDESK System 4.1

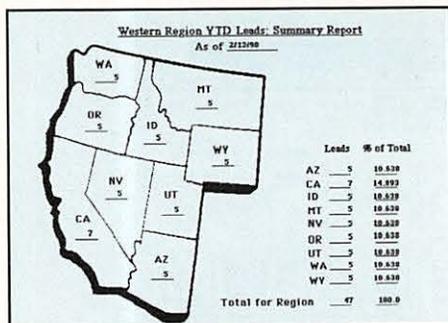
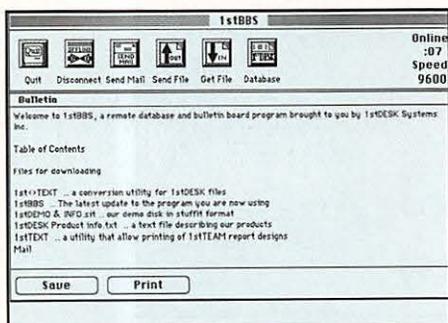


## Product Overview

1stDESK System 4.1 is a team of five compact, stand-alone business application programs: 1stTEAM, 1stSCAN, 1stMERGE, 1stPORT and 1stBBS. They work together to form a comprehensive business data management system.

1stTEAM is a powerful relational database that can utilize HyperCard as a custom user interface. 1stSCAN is a forms generator with database access. The data entered into the form can automatically create a 1stDESK data file or add to an existing file. 1stMERGE is a mail-merge product that outputs to any MacWrite-formatted document.

1stPORT is a data conversion product that supports conversions to or from DIF, SYLK, flat file, tab-delimited, comma-delimited, Clipboard and custom format files. 1stBBS is a remote database access and bulletin board system. The database allows on-line data entry and searches from the remote location. It has electronic messaging and file transfer capabilities.



## Features

- Custom HyperCard interfaces
- Natural language programming for powerful analysis and reports
- Forms generation from TIFF, PICT or Paint files
- 25 standard business forms
- Automatic data file creation based on the fields in the form
- Personalized form letters and labels in any font, size or style
- File conversion for data import/export from any data source, including main-frames
- Remote data access and file transfers

## Reviews and Awards

*Macworld* (1/88)

## Technical Support

Toll free support

Tel: (800) 522-2286

M-F, 8:00 am-5:00 pm (EST)

Toll free bulletin board 24 hours a day, 7 days a week, with free software.

## Ordering

Available through authorized dealers, or contact 1stDESK Systems at: (800) 522-2286

Programs also available separately.

## Tips & Techniques

1. Automate repetitive tasks with 1stTEAM macros.
2. Use 1stMERGE for database publishing.
3. Use 1stBBS for global networking and remote job entry.

**Required: Macintosh Plus or greater; 1 Mb RAM; System 6.0.3 or higher.**

**Recommended: Hard disk; scanner.**

**Suggested Retail Price: \$795**

**Version: 4.1**

**Contact: (800) 522-2286**

# 4th DIMENSION 2.0

ACIUS, Inc.  
10351 Bubb Road  
Cupertino, CA 95014  
(408) 252-4444  
(408) 253-DEMO



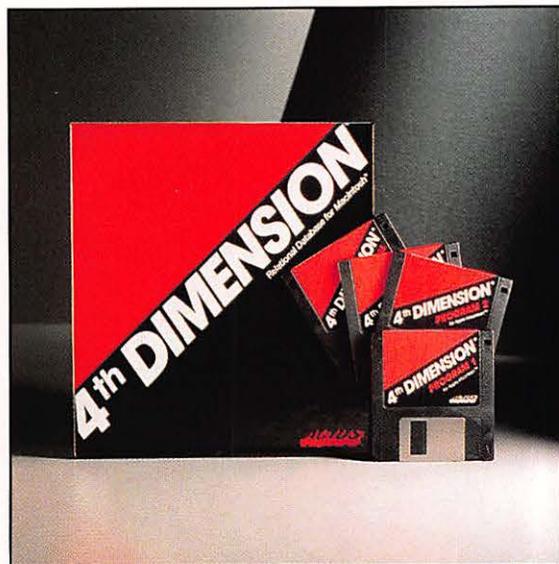
## Product Overview

4th DIMENSION® is a relational, multi-user database for the Macintosh. Its straightforward approach to database design makes it ideal for the database novice, while the flexible capabilities and sophisticated editors make it the database of choice for intermediate and advanced users.

Database professionals will appreciate the extensive configurability and programming language that enables them to create custom applications that are virtually indistinguishable from standalone applications.

4th DIMENSION was designed to expand as your needs expand. It's as simple to use as any flat file manager but won't leave you stranded.

Any 4th DIMENSION database can be used in a single or multi-user environment. 4D Runtime™ allows users to utilize all aspects of a custom 4th DIMENSION database.



## Features

- 100 files open simultaneously
- 511 fields per file
- 16 million records per file
- Unlimited relations between files
- 4 Gigabyte maximum database size
- Full-featured object-oriented graphics editor to design forms and reports
- Ability to create line, pie, scatter, area, column, proportional column, stacked column, or picture graphs
- "Quick" relational report generator requiring no programming for totals, subtotals, min, max, count, and average
- Automatic mail merge for custom letters and invoices

## Tips & Techniques

1. Multi-user access to any database with no programming.
2. Compatible with AppleShare, TOPS, and 3Com 3 Plus Mac.
3. Automatic repair of data caused by hard disk damage.

## Reviews and Awards

- InfoWorld* Best In Class 1989
- MacUser* Editors' Choice Award 1988, 1989
- Macworld* World Class Award 1988, 1989

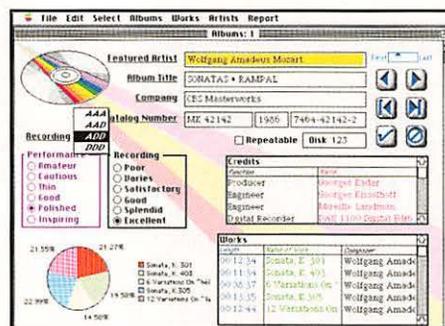
## Technical Support

Tel: (408) 252-4444  
M-F, 8:30 am-5:00 pm (PST)  
ACIUS also provides developer support programs.

## Ordering

Suggested retail price:  
4D Runtime® 1 Pack-\$125  
4D Runtime 2 Pack-\$225  
4D Runtime 4 Pack-\$395  
4D Demo-\$20; contact ACIUS for details.

Free upgrades available.



**Required: Macintosh Plus or greater; hard disk.**

**Compatible: MultiFinder; Apple networks.**

**Suggested Retail Price: \$795**

**Version: 2.0.10**

**Contact: (408) 252-4444**

# The Database Difference



**Exploring  
information  
in two and  
three  
dimensions.**

**I**n today's Information Age, companies are relying heavily on electronic information managed by database applications, to not only store and retrieve, but to also update, exchange and analyze data. However, the manner—and extent—to which data can be manipulated depends on the type of database application used, either flat-file or relational.

Flat-file databases are those which use the ASCII character set to represent and translate each number, letter, character, or control code (such as tabs or returns). ASCII, for American Standard Code for Information Interchange, is a code developed to represent letters and numbers—the basis of information—in a manner that would make it available to any computer system. The ASCII information is stored essentially as large text files that can be thought of as “flat” or two-dimensional, from which the name “flat-file” springs. (All Macintosh database applications can open files containing ASCII code, which provides a somewhat painless method of moving information from one database application to another.) Flat-file databases lend themselves well to many business uses, such as address lists or simple invoicing schemes. However, in terms of structuring large amounts of complicated, interrelated information, flat file databases can fall short of users' data retrieval needs, because searching speed slows down as these large, flat files increase in size.

On the other hand, a relational database management system (RDBMS) stores data in tabular format, then links it by relationships according to characteristics the user designates, providing more flexible accessibility. The basic metaphor of an RDBMS is a table of information, divided into rows and columns, any element of which might be linked to another complete table of information, or an element in a table of information. The links that retrieve this information lend an RDBMS its three dimensional quality, as any two pieces of information can be directly connected to each other. Unlike a flat-file database, an RDBMS provides advanced querying capabilities via a fourth generation language, such as SQL. The user issues commands to “select” data or “join” tables in order to summon the information that fulfills specific qualifications. The data, kept in discrete, compact tables, is marshalled together each time a user creates a new query. These powerful capabilities are often at the expense of complexity (some RDBMS applications require some programming expertise) and price (RDBMS applications are often more expensive than flat-file databases).

While RDBMSs cannot always exchange data with the cooperation that flat files with their “standard” format can, the ability to cross-reference, query, recover, and organize data with an RDBMS provides more powerful data management techniques. It comes down to what kind of information you want to organize, and whether you have the time—and expertise to do it yourself. ■



# FileMaker II

Claris Corporation  
5201 Patrick Henry Drive  
Santa Clara, CA 95052  
(408) 987-7000

CLARIS

## Product Overview

FileMaker II is for everyone with information. FileMaker II's advanced database capabilities, combined with the intuitive Macintosh interface, provide the versatility and power necessary to manage information efficiently to produce sophisticated results.

For business needs such as customer lists, invoices, summary reports, and mailing labels, FileMaker II's graphical report generator lets you use familiar graphic tools to generate sophisticated business reports, directories, and catalogs. FileMaker II can take the drudgery out of working with information by automating repetitive routines like search, sort, and print with a single keystroke using the powerful "Scripts" feature.

Vital information can be shared with other users on the same network: FileMaker II has its own built-in server technology, removing the need for dedicated hardware or special server software to share important data. Yet multiple levels of password protection prevent changes to files, reports, and layouts.



## Features

- Holds up to 32,787 characters of formatted text with automatic word wrap in text fields
- View data in many different layouts, including single records, or lists of entries
- Define calculations using more than 48 financial, date, text, logical, and statistical functions and operators
- Select and retrieve data based on any criteria you define
- MacDraw-like tools for creating graphics to enhance reports and data entry screens
- Automatically open and retrieve data with the easy-to-use "Lookup" feature
- Import text (with tabs), BASIC (commas), and SYLK files into new or existing records; export data for use with other products such as MacWrite II for mail merge

## Reviews and Awards

*InfoWorld* Product of the Year 1988

*Macworld* World Class Award Best Database 1988, 1989

*MacUser* Eddy Award Best Database 1988

## Technical Support

Tel: (408) 727-9054

AppleLink: Claris.Tech

M-Th, 8:00 am-5:00 pm (PST)

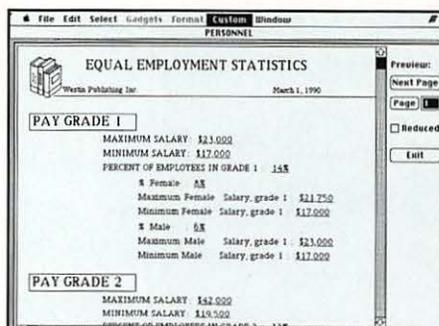
F, 8:00 am-2:00 pm (PST)

Technical Solutions Newsletter covering tips, techniques, and product update information.

## Ordering

Filemaker II is available through authorized resellers, or contact Claris at: (408) 727-8277.

Upgrade from any previous version for \$50.



**Required: Macintosh Plus or greater; 2 800K disk drives.**

**Recommended: Hard disk; 2 Mb RAM.**

**Suggested Retail Price: \$299**

**Version: 1.1**

**Contact: (408) 987-7000**



Ashton-Tate Corporation  
20101 Hamilton Avenue  
Torrance, CA 90509-9972  
(213) 329-9989

## dBASE Mac 1.01

### Product Overview

dBASE Mac is a powerful, flexible, yet easy-to-use relational database management system for the Macintosh computer. It takes advantage of the ease of use for which the Macintosh is known, while providing the power to handle a wide range of business tasks.

dBASE Mac is rich in features that let you design custom databases without programming. Reports, data-entry screens, and forms can be designed by using MacDraw-like drawing tools. Menus and on-screen "palettes" can be designed and customized simply by pointing and clicking. dBASE Mac provides direct access to PC dBASE (.dbf) files, as well as import and export of ASCII files.

### Features

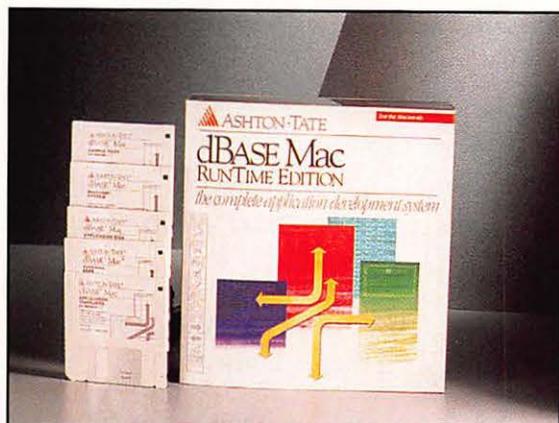
- Intuitive, easy-to-use system
- Seven data types, including test, numeric, date, time, logical, choices, and graphic
- Easy creation of file relationships by simply pointing and clicking the mouse

### Technical Support

Tel: (213) 768-1703  
M-F, 6:00 am-4:30 pm (PST)  
Free technical support

### Tips & Techniques

1. Perform a function with menu, keyboard shortcut, or palette icon.



**Required: Macintosh Plus or greater; hard disk.**

**Suggested Retail Price: \$495**

**Version: 1.01**

**Contact: (800) 437-4329**

Odesta Corporation  
4084 Commercial Avenue  
Northbrook, IL 60062  
(800) 323-5423

## Double Helix 3.0

### Product Overview

With Double Helix you can quickly create powerful business solutions: client tracking, inventory, project planning, association management—just about anything. With easy-to-use visual building blocks instead of a traditional programming language, your applications are rapidly developed and quickly changed.

Fast, powerful, and reliable, Double Helix uses the Macintosh interface to its fullest. Double Helix gives professional consultants and developers a flexible and easy-to-use platform upon which to build powerful custom solutions. Without modification, Double Helix applications can be shared with the Double Helix MultiUser Kit (no file server required) or on the DEC VAX with Helix/VMX.

### Features

- Fully relational applications
- Multiwindow environment with custom menus and buttons
- On-screen help and why? messages
- Nonprocedural, graphic environment

### Technical Support

90 day free technical support for registered users; additional support is available on GENie.

### Ordering

Contact Odesta at:  
(800) 323-5423  
(312) 498-5615 (IL)



**Required: Macintosh Plus or greater; hard disk.**

**Compatible: MultiFinder.**

**Suggested Retail Price: \$595**

**Version: 3.0**

**Contact: (800) 323-5423**

# A Database Lexicon

**T**his list explains some of the basic terms that are used when discussing database applications. Database software existed long before the introduction of the Macintosh, so much of the language of database applications is the same, regardless of the actual hardware platform you're discussing.



**Some  
helpful  
definitions to  
file for  
future use.**

**Field:** the basic data items of a database that usually contain textual information, such as, in an address record, "name," "address," "phone number."

**File:** a collection of records and their related layout information.

**Flat-file database:** a database application that stores information as text files for simplicity and ease-of-use.

**Indexed field:** a field that's been specially noted by the database program, thereby increasing the speed of sorts or searches involving that field.

**Layout:** formatting information that specifies the display of a database file's information, either on the screen or in a printout.

**Link:** a connection that associates the contents of two fields in two different files, tying the information together, in a relational database scheme.

**Lookup field:** a limited sort of link in a flat-file database. This lookup field will connect to another database file, and access its contents. But the other file must be open, and its contents cannot be modified, only consulted.

**Multi-user database:** a database application that allows more than one user to view the same information at the same time, though usually, because of record-locking, only one user at a time can actually change the data.

**Record:** a collection of related fields; each record signifies new information in one or more of the fields.

**Record-locking:** a feature of multi-user databases which prevents more than one user from accessing a given record at the same time, in order to avoid corrupting the data in the record.

**Relational database (RDBMS):** a database application that stores information as tables, then links those tables together in meaningful ways.

**Report:** any sort of printout that displays information that's in the database.

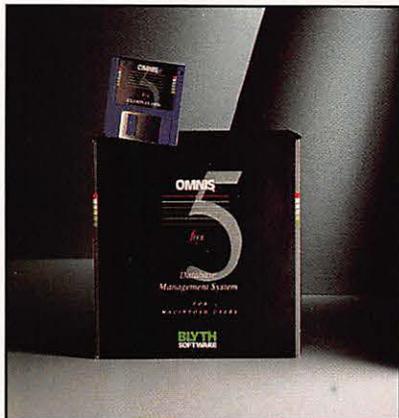
**Search:** an operation in which a database application looks for and displays records or fields that match the criteria specified by the user.

**Sort:** an operation in which a database application organizes the records in a file in an order specified by the user.



**BLYTH**  
SOFTWARE

Blyth Software  
1065 E. Hillsdale Blvd., Suite 300  
Foster City, CA 94404  
(415) 571-0222



# Omnis 5

## Product Overview

Omnis 5 is the development platform of the 90's for developing business data management applications. It is a multi-user, multi-platform database management system for the Macintosh, IBM PC's and compatible personal computers. Omnis 5 applications can be shared on a mixed network comprised of Macintosh and IBM PC computers. SQL connectivity which allows Omnis 5 to connect to micros, minis and mainframes is also available.

"Event manager" allows the user complete point and click control over multiple open windows in an application containing multiple fonts, colors, and graphics. Data files can be up to 2,560 Mb with no limit on the number of records (up to maximum data file size).

**Required: Macintosh Plus or greater; hard disk; Apple-compatible printer.**

**Recommended: 1 Mb RAM.**

**Suggested Retail Price: \$795**

**Contact: (415) 571-0222**

## Features

- A screen graphic can include hot areas for HyperCard-like buttons
- User-defined menus can be substituted for standard menus
- Full support for graphic data
- WYSIWYG reports

## Ordering

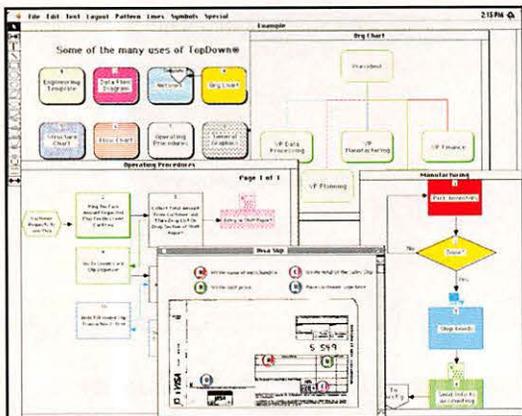
Available at Apple or IBM dealers, or contact Blyth Software at:  
(800) 223-8050 (CA)  
(800) 843-8615 (U.S.)

Suggested retail price:  
Single user-\$795  
Each additional user-\$99



Kaetron Software Company  
12777 Jones Rd., Suite 445  
Houston, TX 77070  
(713) 890-3434

# TopDown 2.0



## Product Overview

TopDown is the ultimate productivity/management tool. This hierarchical design program is perfect for project plans, flow charts, organizational charts, training materials, graphical outlines, data flow diagrams, and documentation. Unlimited levels of drawings enable you to tailor your diagrams by showing or hiding the details.

It's easy to learn, simple to use, and a genuine time-saver. Instantly write, draw, and change your diagrams as your project evolves. Take advantage of productivity enhancing features such as auto line rerouting, custom symbols, on-line help, text search, easy navigation through the hierarchy, and anchors which return you to a specific drawpoint automatically.

**Recommended: Macintosh Plus or greater; System 5.0 or higher; hard disk.**

**Suggested Retail Price: \$345**

**Version: 2.0**

**Contact: (713) 890-3434**

## Features

- 84 custom symbol palette with color
- Ability to bind styled caption text to connecting lines
- Auto line rerouting with collision detection
- 32,000 character notecard for additional documentation
- Exports text as an outline

## Reviews and Awards

*MacUser* 4.5 mice (1/90)  
*MacUser* 1990 Eddy Nominee  
*MacWeek* (4/25/89)

## Technical Support

Tel: (713) 890-6171  
2.0 upgrade to registered owners for \$30 plus shipping and handling.

# Aperture Visual Information Manager

Aperture Technologies, Inc.  
84 West Park Place  
Stamford, CT 06901  
(203) 975-7587

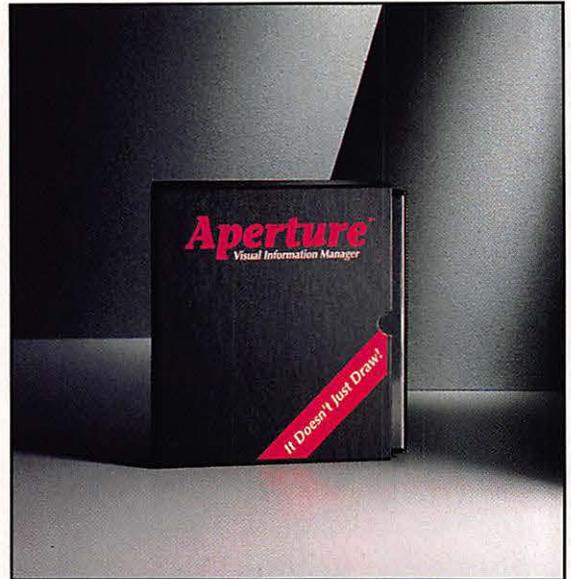
**Aperture**<sup>™</sup>  
Visual Information Manager

## Product Overview

Aperture Visual Information Manager™ integrates two essential elements—diagrams and data. At the same time you create accurate, real-dimensioned, fully-scaled visual representations of your projects, you can also add your facts, figures, and thinking. Your applications and presentations will take on a whole new dimension.

Aperture is the first product to combine a high-precision drawing system with an integrated database manager so you can build complete visual information systems. With Aperture, you can maintain and expand your applications as your needs grow.

Aperture allows you to create large-scale, detailed drawings, attach data to the objects in your drawings, produce reports showing that data, link your drawings together, and display data on your drawings to form complete applications. By keeping drawings and data consistent, your ideas and projects are completely documented, accessible, and maintainable.



## Features

- Attach data to objects in your drawing—click on an object and see the data attached
- Highlight objects in your drawings by searching the database
- Produce reports in any layout showing detailed or summary information
- Any object can be a link to any other drawing and any view in that drawing
- Extensive symbol facilities—bring in a symbol and its data is automatically entered into your database
- Variable Zooming with a range of more than 30,000,000 times
- Automatic object snap to end points, midpoints, center points, intersections
- Work in real-world dimensions
- Output your drawings at any scale over any reasonable number of pages
- “Mouse-up” drawing so you can zoom while drawing an object
- Modify objects without ungrouping

## Technical Support

Tel: (203) 975-7587

M-F, 9:00 am-6:00 pm (EST)

30 day unconditional guarantee

## Ordering

Available through authorized dealers and mail order houses, or contact Aperture at:  
(800) 342-9022

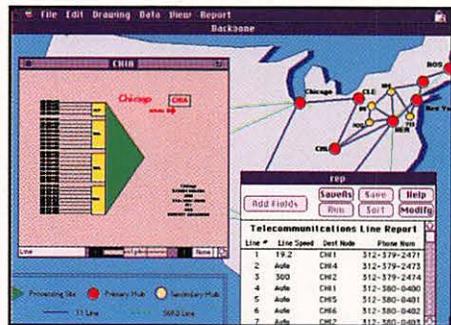
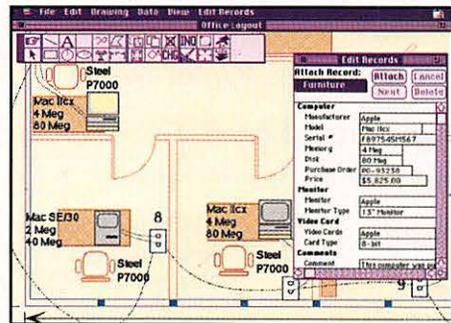
Optional DXF translator—\$100

In-depth, self-running demo available for \$5.

Comes with complete self-running and written tutorial.

## Tips & Techniques

1. Combine precision drawing with scanned images to produce effective presentations.
2. Copy and paste between Aperture drawings also copies data attached to the drawing.
3. Bring in drawings done with other packages (including AutoCad), add data and link drawings together.



**Required: Macintosh Plus or greater; hard disk.**

**Recommended: Macintosh II; 2 Mb RAM; color monitor.**

**Suggested Retail Price: \$795**

**Version: 1.06**

**Contact: (800) 342-9022**

CLARIS™

Claris Corporation  
5201 Patrick Henry Drive  
Santa Clara, CA 95052-8168  
(408) 727-8227

# MacProject II

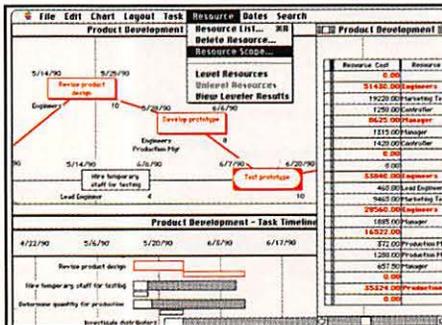
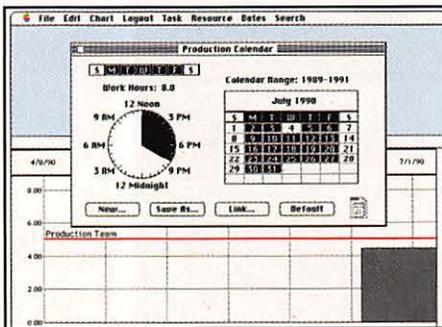


## Product Overview

MacProject® II is the best-selling Macintosh project management software for planning, managing, and presenting projects. Sketch out projects quickly and easily using the graphic schedule chart, with unlimited tasks and resources per project. Gather details of a massive project into unlimited subprojects, whose cost, resource and schedule information is reflected in the master project.

Control your project using nine different tables and charts. The changes you make in one chart will be reflected automatically in all the other charts. Identify work overloads with the resource histogram and pinpoint and resolve bottlenecks using the interactive and automatic resource leveler.

Communicate your plans effectively with presentation-quality charts and reports. Create highly customized charts using annotated text and imported graphics, displaying only the dates you require through use of search formulas. Print documents up to 94" x 48" and with 25% reduction to 400% enlargement.



## Features

- Learn quickly with an easy-to-use graphical interface and online help including shortcuts and tips
- Smooth resource overloads by reassigning dates, resources, or task durations utilizing automatic or interactive resource leveling
- Combine information from multiple projects to review overall workloads with cross-project resource analysis
- Easily import and export data in comma-separated, tab-delimited, merge, SYLK, and DIF formats
- Use planned and actual date and cost calculations for accurate time and cost management
- Create an unlimited number of tasks, resources, and custom calendars
- View up to nine different on-screen charts simultaneously
- Printouts up to 94 by 48 inches, with 25% reduction to 400% enlargement

## Reviews and Awards

- *Macworld* World Class Software Awards 1987-1989
- *PC Week* (7/17/89)
- *InfoWorld* (7/17/89)

## Technical Support

Tel: (408) 727-9054  
M-Th, 8:00 am-5:00 pm (PST)  
F, 8:00 am-2:00 pm (PST)

Technical Solutions Newsletter covering tips, techniques, and product update information.

## Ordering

MacProject II is available through authorized resellers, or contact Claris at: (408) 727-8227

Upgrade from version 1.0 is \$65; from Apple-labeled versions \$199.

**Required: Macintosh Plus or greater; 2 800K disk drives; System 6.0 or higher.**

**Recommended: Hard disk.**

**Suggested Retail Price: \$495**

**Version: 2.1**

**Contact: (408) 727-8227**

# Informed Designer

Shana Corporation  
 # 105, 9650 - 20 Avenue  
 Edmonton, Alberta, T6N 1G1 CANADA  
 (403) 463-3330



## Product Overview

Informed Designer™ allows the creation of crisp professional forms. Produce the exact look you want with variable line widths and precise text manipulation. Text can vary in size from 1 to 999 points with leading control and multiple styles. Round individual corners on rectangles, tables, or fields, and fill with graduated screens to give your form a quality look. Specialized tools enable complex tables and fields to be drawn in one mouse stroke.

Manipulate objects by duplicating, distributing, rotating and aligning to grids or guidelines. Move objects with an accuracy of 1/1152" for perfectly typeset forms every time. You can print spot color overlays with registration and crop marks.

Forms can be intelligent: data formatting, error checking, help messages, choices lists, lookups and more can be added and tested in Informed Designer. These checks and calculations are used when you fill out forms using the Informed Manager database.



## Features

- Tools include box, circle, arc, polygon, line, field and table
- Text can be any font in multiple styles
- Line from .25 to 999 points
- Independent horizontal and vertical grids
- Gridlines, guidelines and object guides
- Group, rotate, distribute and duplicate objects
- Accurate to 1/1152"
- Pen/Fill shades from 0 to 100%
- Graduated screens
- Form size from 0.5" x 0.5" to 17" x 17"
- Import TIFF, EPSF, PICT, Text files
- Spot color overlays, crop marks, and registration marks
- Over 160 functions to calculate and verify data

## Reviews and Awards

- MacUser* (1/90)
- Infoworld* (1/90)
- Macworld* (2/90)

## Technical Support

Tel: (403) 463-3330  
 M-F, 9:00 am-5:00 pm (MST)

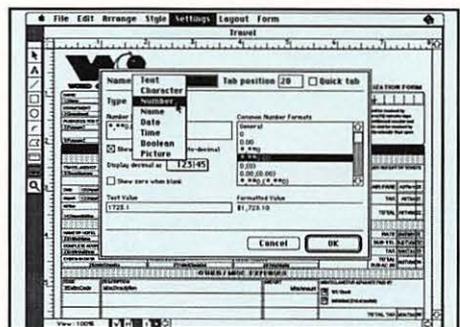
Free support for registered users.

## Ordering

Informed Designer is available from authorized dealers, or contact Shana at:  
 (403) 463-3330

## Tips & Techniques

1. Hold down the option key to select the arrow.
2. Double-click on the field and table tools for defaults.
3. Hold the mouse down when selecting an object to view the object while dragging.



**Required: Macintosh Plus or greater; System 6.0.3 or higher.**

**Recommended: Hard drive.**

**Suggested Retail Price: \$295**

**Version: 1.0**

**Contact: (403) 463-3330**

# Analyzing Spreadsheet Data



**New  
features  
challenge  
our notion  
of what a  
spreadsheet  
is—or isn't.**



The last few years have brought a fundamental change to the Macintosh spreadsheet market. Some notable new products—Ashton-Tate's Full Impact and Wingz from Informix, in particular—have attempted to displace top-selling Microsoft Excel. A good way to understand the change that has been occurring is to look at spreadsheets in the light of five broad areas of functionality—numeric capacity, graphics capability, programmability, connectivity, and interface.

*Numeric capacity* fits with our traditional understanding of a spreadsheet as a tool for computing and analyzing numbers. The typical spreadsheet contains formulas for simple arithmetic and basic financial computation. But new products are expanding this capacity, extending it to include complex financial or real number analytical calculation, even statistical functions. And numeric capacity is now being expanded in another way, too, as products add a simple database management capability, akin to that provided by a flat-file database.

Perhaps the most astounding visible changes have been wrought in a spreadsheet's *graphics capability*. Some products now allow you to turn your numbers into a polished, desktop publishing-quality presentation with color charts, annotation, and textual information displayed in a variety of typefaces. Other spreadsheets are incorporating more complex charting options, such as statistical-based plots and 3-D graphs, for scientific analysis.

It used to be that a user was satisfied simply with automating tedious tasks, such as importing data from a file, with a keyboard macro (a sequence of commands recorded and performed by the spreadsheet). But the *programmability* of spreadsheets has evolved enormously, providing users with the power to create integral, automated "applications" within a particular spreadsheet's framework, complete with icons or buttons. This power, however, can be costly (requiring sophisticated hardware) and complex (requiring some programming expertise).

More and more products are pioneering new ways to exchange and update information, building links between the data in different files, and even between different applications. This *connectivity* can facilitate the exchange of information between applications, or can manifest itself as a "hot link" between files—as one file is changed, the linked file is changed, too.

Finally, standing above, below and beyond the features of these different spreadsheet programs is the *interface*. Each product, of course, conforms to the common Macintosh interface; but each implements the features discussed above in its own way. We advise you to find out more about a product before you buy it by contacting the developer for more information or a demonstration disk, or by seeking out a dealer and asking for a demonstration of the program. ■

# Full Impact 2.0

Ashton-Tate  
20101 Hamilton Avenue  
Torrance, CA 90502-1319  
(213) 329-9989

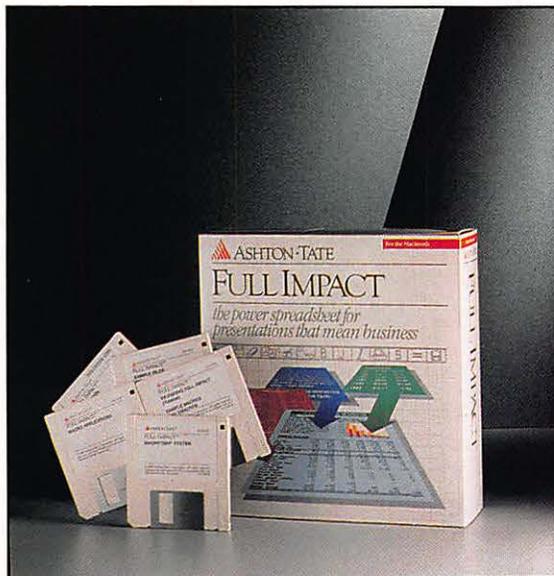


## Product Overview

With the introduction of Full Impact in 1988, Ashton-Tate advanced the state of the art in Macintosh spreadsheets. Full Impact combined comprehensive spreadsheet capabilities with the impact of color graphics in a single package. Now, Full Impact 2.0 advances the state of the art even further with enhanced capabilities that increase your productivity and deliver a greater return on your investment in data.

Quickly identify trends and patterns that are not readily apparent from merely looking at the numbers. Simply select the data you want to view, and click on the icon representing the type of graph you want. The spreadsheet and graphics are all on the same page.

Use the mouse to size and position graphs anywhere on the page. Add legends and borders. Annotate with text in a variety of fonts, styles, sizes and colors. Add 3-dimensional perspective to pie charts and bar charts. Use the MacDraw-like environment for layout, object alignment, grouping and constrained movement.



## Features

- Imports and exports Excel spreadsheets in native format
- Integrates data, charts, text, borders, drawings, and pictures on the same page
- Chart types include pie, bar, 3D bar, line, scatter, area, 3D surface, hi-low-close, and single and dual axis overlay
- Minimal (smart) recalculation evaluates only cells when values change
- Virtual memory permits use of up to 4 million cells in 1 Mb systems
- Link data from one spreadsheet to another to automatically reconcile related figures and calculations across multiple spreadsheets
- Custom formats with built-in formulas.
- FullTalk application development language supports procedural commands and HyperCard-like buttons.

## Reviews and Awards

*MACzine* (1/89)

*MacUser* Editors' Choice Award  
1988

## Technical Support

Tel: (213) 768-1703

M-F, 6:00 am-4:30 pm (PST)

Free technical support and dedicated Macintosh products line.

## Ordering

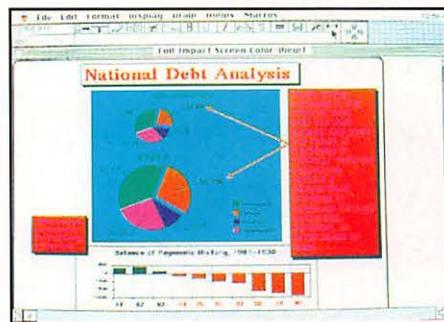
Available at authorized resellers, or contact Ashton-Tate's Product Line at:  
(800) 437-4329 ext. 2104

Suggested Retail Price: \$295

Version 2.0 available in April, 1990.

## Tips & Techniques

1. Full Impact saves time by providing direct access to its power. Click on any of the default icons to copy and paste formulas or create standard charts. In a chart, simply select the title area with the mouse and type the title.



**Required: Macintosh Plus or greater; hard disk; System 6.0 or higher.**

**Recommended: 2Mb RAM.**

**Suggested Retail Price: \$295**

**Version: 2.0**

**Contact: (800) 437-4329  
ext. 2104**

Informix Software, Inc.  
16011 College Boulevard  
Lenexa, KS 66219  
(913) 599-7100

# Wingz

## Product Overview

Wingz™ for the Macintosh is a graphic spreadsheet featuring advanced charting and desktop presentation capabilities, and HyperScript,® an easy-to-use custom applications generator. Placing over one billion cells at your command, Wingz is the largest spreadsheet available for the Macintosh. Despite its enormous size, its optimized performance makes it the fastest spreadsheet for the Macintosh.

With Wingz, you can combine numbers, words, charts, and graphic images on a single worksheet and then print your work to a single page. Whether you need a dynamic-looking report or a motivating sales proposal, Wingz makes all your ideas more presentable. Wingz features an unmatched array of business, engineering, and scientific graphs and charts, including three-dimensional graphs.

Fully exploiting the intuitive quality of the Macintosh interface, Wingz is extremely easy to learn and use.

## Features

- 32,768 rows by 32,768 columns
- 20 graph types, including 3-D, scientific, and engineering graphs
- Rotation, elevation, and variable perspectives of 3-D graphs
- Full-color support on a Macintosh II, IIx, IIcx, and IIci; select from a palette of 16 million colors
- Freehand drawing tools
- Ability to import any bitmapped graphic, scanned image, or clip art through the system clipboard
- Ability to add text fields up to 22" by 22", with multiple fonts, styles, sizes, and colors
- HyperScript, a compiled, event-driven programming language with English-like syntax
- Over 140 built-in functions
- Network ready
- Access to remote databases through Wingz-DataLink™

## Reviews and Awards

*MacUser* Eddy Best Spreadsheet 1989

*Byte* Award of Excellence 1989

*Macworld* World Class Award Winner 1989

## Technical Support

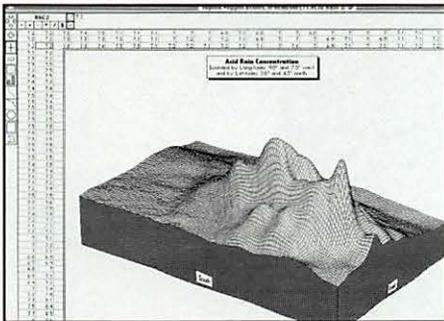
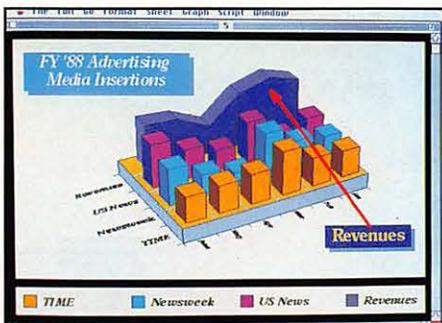
Tel: (913) 599-7100

M-F, 8:30 am-5:00 pm (CST)

## Ordering

Wingz is available through authorized Wingz resellers, or contact Informix at: (913) 599-7100

Upgrade from version 1.0 to version 1.1 free to registered users.



**Required: Macintosh Plus or greater; 1 Mb RAM.**

**Recommended: Hard disk.**

**Compatible: MultiFinder.**

**Version: 1.1**

**Suggested Retail Price: \$399**

**Contact: (913) 599-7100**

# Microsoft Excel 2.2

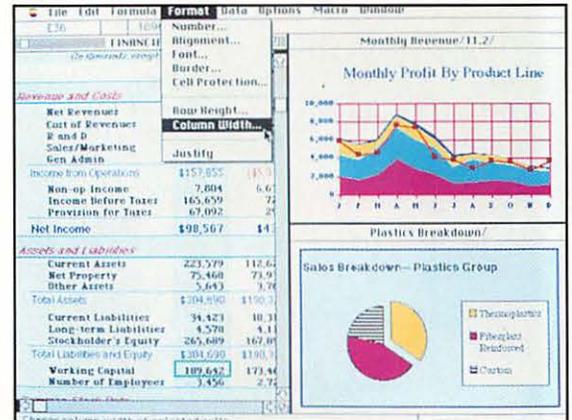
Microsoft Corporation  
One Microsoft Way  
Redmond, WA 98052-6399  
(206) 882-8080



## Product Overview

Since its introduction in 1985, Microsoft® Excel has been an undisputed standard in the Macintosh business market, and for good reason: it combines the capabilities of a large, fast spreadsheet with outstanding presentation capabilities and powerful database tools. Link multiple spreadsheets and charts and just point and click. Its macros are incredibly easy to build and use—just point, click, and record. For reports, Microsoft Excel offers high-quality graphics and 44 different styles of charts.

You'll also find an abundance of products from other software developers to support specific applications in such areas as real estate, accounting, tax preparation, and bookkeeping.



## Features

- Access to all 8 Mb of RAM
- Outstanding presentation tools such as multiple fonts, variable row heights, shading, custom number formats, and more
- Point and click to link multiple spreadsheets

## Technical Support

Tel: (206) 454-2030

## Reviews and Awards

*Software Digest* Best Macintosh Spreadsheet 1989

**Required: Macintosh Plus or greater; 1 Mb RAM.**

**Suggested Retail Price: \$395**

**Version: 2.2**

**Contact: (800) 426-9400**

# SYSTAT/FASTAT

SYSTAT, Inc.  
1800 Sherman Avenue  
Evanston, IL 60201  
(708) 864-5670

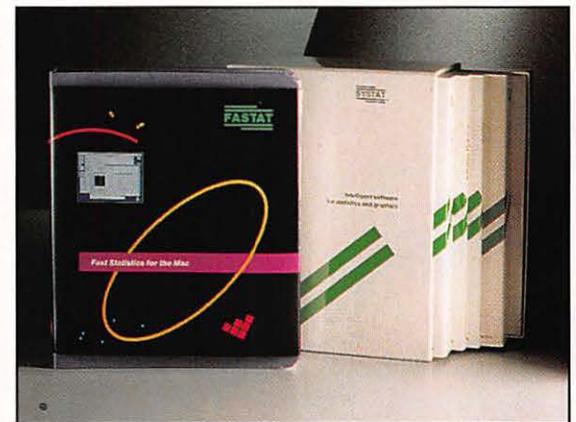


## Product Overview

SYSTAT, Inc. offers an array of statistical and graphics software tools for business, education, and scientific applications.

SYSTAT 5.0 is the most powerful statistical and graphics program available for the Macintosh. SYSTAT draws on the very latest user interface and human factors research, and features tear-off, hierarchical, and graphic menus, enabling users to accurately perform sophisticated statistical techniques easily and quickly.

FASTAT, an alternative to SYSTAT, provides statistics and graphics for the business user. Scatterplot brushing tools encourage interactive, exploratory analysis, and FASTAT's 2- and 3-D drawing tools make it easy to create full-color presentation graphics.



## Features

- Choose from universal symbols instead of technical words
- HELP is icon-driven and text-linked
- Edit reports with graphic and text annotation

## Technical Support

Tel: (708) 864-5670  
M-F, 8:00 am-6:00 pm (CST)

## Reviews and Awards

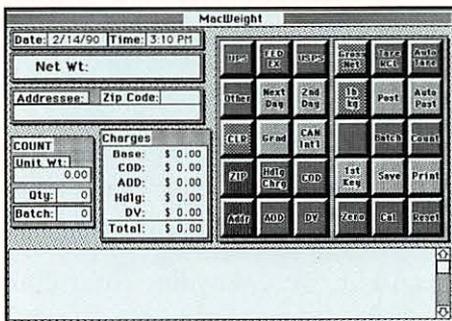
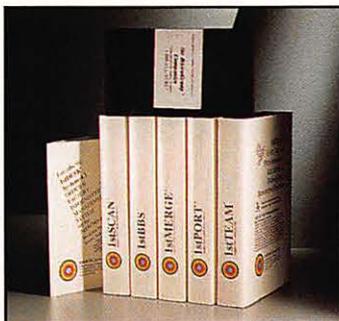
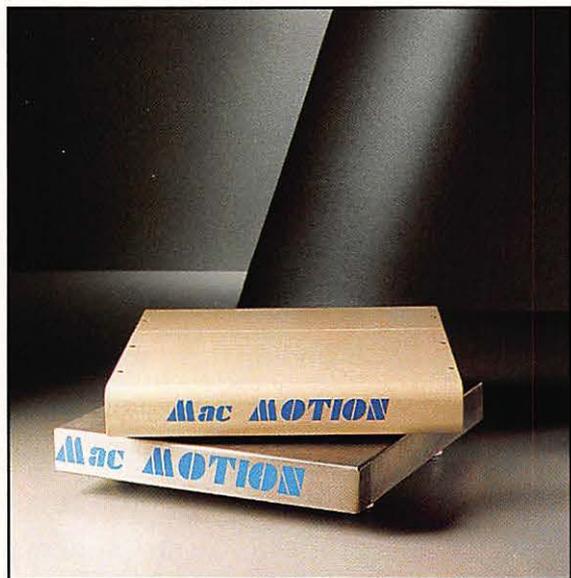
*MacUser* (11/89)  
*PC Magazine* Editor's Choice (3/89)

**SYSTAT Required: Macintosh Plus or greater; 4Mb RAM (FASTAT: 1 Mb RAM); hard disk.**

**Suggested Retail Price:  
SYSTAT: \$795  
FASTAT: \$195**

**1stDESK Systems, Inc.**  
**MacMotion Division**  
 7 Industrial Park Road  
 Medway, MA 02053  
 (800) 522-2286

# MacWEIGHT



## Product Overview

MacWEIGHT is a complete weighing and data management system that features "plug and weigh" simplicity, and includes the 1stDESK System 4.1 for data management.

Installation is as easy as hooking up a tape drive, because everything you need is included (except the Macintosh!). The PST platform scale transducer incorporates the well-known gauged plate concept, and further reduces costs through an improvement which simplifies the load introduction technique. The PST is a complete scale with a stainless steel top and bottom cover that form a "labyrinth" seal suitable for many washdown applications.

1stDESK System 4.1 is a team of five compact, stand-alone business application programs: 1stTEAM, 1stSCAN, 1stMERGE, 1stPORT and 1stBBS. They work together to form a comprehensive business data management system.

## Features

- Excellent linearity, hysteresis, and creep
- Integral overload stops
- Very low profile
- Low eccentric load sensitivity
- New H-44 code performance capability
- Cost-effective design
- Stainless steel covers
- Integral bubble level
- Includes 1stDESK System 4.1 data management software packages
- Two models: MacWEIGHT-100 (100 lbs capacity) and MacWEIGHT-300 (300 lbs capacity)

## Technical Support

Toll free support  
 Tel: (800) 522-2286  
 M-F, 8:00 am-5:00 pm (EST)  
 Toll free bulletin board 24 hours a day, 7 days a week, with free software.

## Ordering

Available through authorized dealers, or contact 1stDESK Systems at: (800) 522-2286

Suggested Retail Prices:  
 MacWEIGHT-100—\$4295  
 MacWEIGHT-300—\$5195

Includes all hardware and software. Individual programs also available separately.

## Tips & Techniques

1. Export data to any other program or platform via 1stPORT 4.1.

**Required: Macintosh Plus or greater; 1Mb RAM; System 6.0.3 or later.**

**Recommended: Hard drive.**

**Suggested Retail Price: \$4295**

**Model: 100**

**Contact: (800) 522-2286**

# *Accounting*

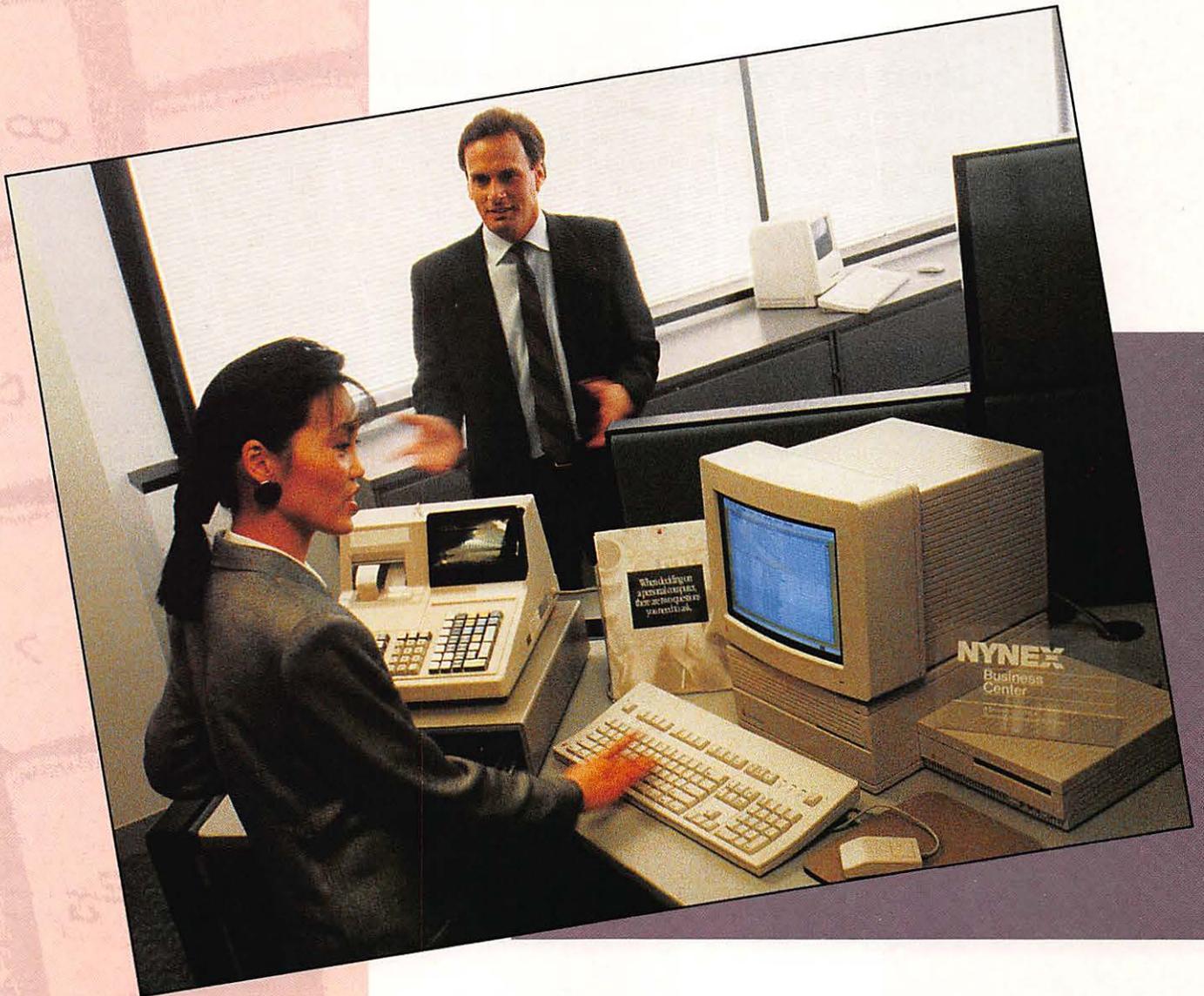
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**I**n a never-ending drive to do and know more, human beings have consistently added complexity and introduced greater possibilities for error to the systems of thought that govern action. Perhaps this complexity is a necessary corollary to powerful or wider-ranging systems; but it has, nonetheless, necessitated greater and greater efforts to be expended in monitoring and managing these systems.

This observation seems to hold particularly true for the way humans manage their financial interactions. In a few thousand years, human beings have progressed from simple barter to complex, speculative financial transactions. In order to manage and understand these complex financial interactions, the growth and complexity of accounting was inevitable.





**B**ecause it consists mostly of mathematics, accounting is a natural task to program computers to perform. Initially the domain solely of giant mainframe computers, accounting has been moving inexorably to the desktop. As personal desktop computers have become more powerful, the related accounting software has become more flexible, versatile and powerful.

The ease of use and graphical interface of the Macintosh now make accounting easier than ever. Today's Macintosh computer, combined with the appropriate accounting software, mitigates, in some ways, the complexity of accounting by bringing new, automated methods to bookkeeping and information management.

### ***Short On Promises, Long On Performance***

Before we can discuss what accounting software can do for you and your business, we should begin by explaining what it can't do. Accounting software will not solve all of your financial problems, though it will solve some of them. An automated accounting package is really only as good as the data that's put into it. It can't make that data better. And it's in many ways dependent on the existing (no-computer) accounting systems already in place; if these systems are inconsistent, or incomplete, the accounting package cannot automatically create them for you.

But an automated accounting system can cut down on simple mechanical errors, especially in arithmetic. Since computer programs organize data by imposing a structure on it, accounting software can focus a company's attention on the flaws in its accounting practices, procedures and systems; the structure of the accounting program itself might provide organizational solutions.

In the short term, investing in an automated accounting systems can be somewhat expensive, because of the requisite installation and training. But the long-term benefits—better and more accurate information—are enormous. You can now know where every product, every invoice, every check, every order, and every dollar is, every day, in a manner that will allow you to make better decisions about your business. The benefit of an automated accounting system—storing and retrieving information—can help you be a more informed, and therefore better, businessperson.

### ***3 Times 3 Times 3 Equals One Accounting System***

To understand better how an automated accounting system would help your business, analyze your organization in terms of three levels—clerical, middle management, and top management. Each level has different responsibilities and different needs to be met by an automated accounting system. And these levels apply even in small businesses—one person in the organization might function at both the clerical and the middle management levels, for example.

At the clerical level, the overriding consideration is for easy and accurate data entry. For middle management, system management issues become more important. It's important to be able to safeguard, through backups and security, the valuable financial data that's being accrued in the computer. In addition, middle management wants to track day-to-day transactions, and cash flow. Finally, top management relies on the accounting system for timely information for short and long-term decision-making; it's the accounting system's output that's most important.

In selecting accounting software, then, all three levels of organization must be considered. You also need to consider the three "complexities" of accounting software—one-write, integrated, and modular. One-write systems, designed for personal or small business finance, are generally simple General Ledgers, providing the user with easy one-write data entry. Write a check, and the cost is immediately deducted from the appropriate account.

An integrated accounting software package is more sophisticated, combining full-fledged Accounts Receivable (AR) and Accounts Payable (AP) functions (and sometimes Inventory Control) with the General Ledger (GL). Generally, these packages are more powerful than one-write systems, and will automatically post information between the different functions. A



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modular system, on the other hand, is one in which each module is a separate accounting function—GL, AR, AP, Payroll. These systems' strength lies in their ability to work together, and the modules can be bought separately as needed.

In addition, there are the three types of business accounting situations—manufacturing, consulting/service, and retail—each of which demands different features from accounting functions.

The manufacturing situation places a premium on Inventory Control, Sales Orders, and Accounts Receivable. Closely conforming to the “classic” notion of an accounting system, manufacturing needs to track “things”—inventory, finished goods, work in process—as the basic unit of the system, from order to receipt of payment from the customer. These kinds of businesses need the power of a database built into the accounting software, so that the status of every item in inventory—in process, shipped, backordered—can be accessed instantly.

The consulting/service industry model organizes accounting information in a different way, stressing the job as the basic unit of measurement. The accounting system will be built around the desire to measure the financial flow—expenses, overhead, labor, income—against the individual job. This sort of software typically provides input on a job basis, analyzes the data of all jobs, and provides output for the business as a whole.

Retail businesses have still different accounting concerns. In this case, the system's unit of measure is the retail transaction. When a transaction occurs, the software should instantaneously take the item out of inventory, adjust the cash drawer, and credit the appropriate commission. Retail shares some similarities to manufacturing, but in this case the emphasis is on the cost of the goods sold, measured in terms of inventory, payable and receivables, and overhead.

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*Accounting software will not solve all of your financial problems, though it will solve some of them. An automated accounting package is really only as good as the data that's put into it.*

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## ***From Numbers To Trends***

The future of Macintosh accounting software is bright, for two reasons. First, the Macintosh has increasingly become the computer of choice for many businesses across the country (indeed, around the world). It may be that many businesses initially buy a Macintosh for its desktop publishing or graphics capability, but its power and ease of use soon demonstrates its usefulness for other applications, too.

Of equal importance has been the gradual improvement of the accounting software available for the Macintosh. Many of the early Macintosh accounting programs were in fact DOS/PC programs adapted for use on the Macintosh. As with many adaptations (from books to movies also comes to mind), the full potential of the new system (or medium) hadn't been realized. Now accounting software is appearing on the market that has been designed from the ground up on, and for, the Macintosh. These programs more effectively harness the user-friendly Macintosh interface, facilitating data entry, manipulation and analysis. And combined with improvements in networking the Macintosh to other computer systems, on-line help, and recent trends towards automated, interactive tutorials, accounting software for the Macintosh is becoming a smart investment—for any business.



# Checks And Balances



**A separation  
of accounting  
powers  
organizes  
business  
data.**



**N**early all accounting software for the Macintosh market (or, for that matter, the entire personal computing market) conforms to universal accounting methods and terminology known as Generally Accepted Accounting Principles. Whether the software is an all-in-one package or employs a modular approach, it will consist of at least these functions: General Ledger, Accounts Payable, and Accounts Receivable. Some also include functions such as Sales Orders, Purchase Orders, Inventory, and Payroll.

*The General Ledger* (GL) is where the books are balanced; the information from other functions or areas are received, compared, and reconciled. This “command center” outputs such reports as the balance sheet and the income statement.

*Accounts Payable* (AP) tracks the bills that your company has to pay, and can provide check-writing capabilities. Good AP software will allow you to create and maintain payment schedules for your vendors, and will provide customizable forms for printing checks (rather than requiring you to print them on someone else’s preprinted forms).

*Accounts Receivable* (AR) manages your customer invoices and their payment schedules or histories. The resulting data can be manipulated by a formula to produce an analysis of the credit risk of the customer. The software should allow you to apply money received to open invoices, and some will automatically generate bank deposit slips.

*Sales Orders* (SO) tracks sales information, especially in situations in which there is a lot of time (and work) between the receipt of an order and its shipment. This software should allow multiple shipping addresses for a single billing address, and track the all-important backorder.

*Purchase Orders* (PO) can provide some control over expenditures. This software cuts down on AP data entry (by tying into Purchasing [ordering] functions), provides cost control, tracks inventory costs, and generates reports for Purchasing and Receiving (for better coordination and control).

*Inventory* (or Inventory Control) tracks resources, in order to provide more sophisticated reordering procedures and reduction of inventory carried (and therefore costs). Most good software will allow you to select one of three ways to cost inventory—LIFO (Last item In, First item Out), FIFO (First In, First Out), and average cost.

*Payroll* manages employee hours, state and Federal tax withholdings, and allows you to print checks. It can calculate tax liabilities, and print important payroll documentation, such as the W2.



CheckMark Software, Inc.  
1520 E. Mulberry #200/Box 860  
Ft. Collins, CO 80522  
(303) 484-3541

# CheckMark Accounting Series



## Product Overview

CheckMark Software presents three easy-to-learn, easy-to-use accounting programs created especially for the Macintosh.

MultiLedger™ is a full-featured accounting program which combines General Ledger, Accounts Payable, Accounts Receivable, and Inventory tracking into a single, integrated package. It produces invoices, statements, checks, and a wide variety of financial and management reports.

Payroll is a complete payroll system for companies with 1 to 1000 employees. It can be integrated with either MultiLedger or Cash Ledger for automatic posting of payroll expenses and liabilities.

Cash Ledger is an entry-level accounting program for businesses and organizations which need only a General Ledger program. It's particularly good for "cash-basis" businesses and those which don't need to track receivables, payables, or inventory. Suitable for accountants for "write-up" work.

Customer Invoices

Invoice # 10992    Statement Description    Phone order/Jane

Customer Peabody & Rudolph  
P. O. Box 4589  
N. Hwy 125  
Las Vegas, NV 89000  
Net 30

Date 2/ 8/90    Ship Date 2/ 8/90

Terms Net 30    Purchase Order # TF4572

Shipping Charges 6.50    Salesperson Kathy

Sales Tax Rate 5.375    Shipped Via UPS

Item	Quantity	Unit Price	Amount
Product #2	3.00	25.0000	75.00
Labor	2.00	45.0000	90.00
			4.03 Tax
			\$175.53

Modify Save

Calculate - 2/90

Hours	Rate	Amount
Regular	30.00	14.00
Over Time	8.00	21.00
Ob Time	2.00	28.00
Sick	0.00	14.00
Vacation	0.00	14.00
Rate2	8.00	15.00
Rate3	4.00	0.00

Hourly Wages 724.00

Salary 7.73

Commissions Savings Plan 30.00

Bonus 125.00    Retire Fund 75.00

FICA W/H 65.71    United Way 5.00

Fed W/H 119.01    Credit Union 36.00

State W/H 24.21    Miscellany

Local W/H

Net 490.34

Calculate All Save Create Check Un-calculate

**Required: Macintosh Plus or greater; 1 Mb RAM.**

**Recommended: Hard disk.**

**Compatible: Apple printers; MultiFinder; Apple networks.**

**Contact: (800) 444-9922**

## Features

### MultiLedger ver. 1.3

- Supports multiple companies with multiple profit centers
- Bank reconciliation included
- Allows recurring entries, prior-period adjustments and entries into a future month
- Prints checks, invoices, and statements
- Can handle thousands of items, accounts, customers, and vendors
- Many reports are exportable as SYLK or text files

### Payroll ver. 4.1

- All tax tables are included and all can be changed by the user
- Prints paychecks and W-2s
- Quarterly tax summary gives all information for federal 941 form

### Cash Ledger ver. 1.3

- Includes financial reports, bank reconciliation, and check-writing

## Reviews and Awards

*Macworld* (11/89, 9/88)

*Macintosh Buyer's Guide* (Spring 89)

*MacUser* (4/89)

*MACazine* (3/89)

## Technical Support

Tel: (303) 484-3541

M-F, 8:00 am-5:00 pm (MST)

## Ordering

Available from authorized dealers, or contact CheckMark Software at: (800) 444-9922

Suggested Retail Prices:

MultiLedger-\$395

Payroll-\$295

Cash Ledger-\$195

Free demo disk available.

# Flexware Accounting

Flexware  
15404 East Valley Boulevard  
Industry, CA 91746  
(800) 527-6587



## Product Overview

Flexware is a multi-user, integrated accounting and financial information system targeted for the medium to very large businesses. Accounts Receivable, Accounts Payable, General Ledger, Payroll, Inventory, Order Processing, Purchasing, Job Cost, and Point of Sale, plus a wide variety of third party developed applications, are available. The elegant simplicity of the Macintosh user interface is combined with the power of Flexware to provide a powerful, but easy to use business solution.

Managers and others need quick access to information on receivables, cash requirements, employees, and more. Flexware's multi-user capability allows such access without interrupting the work of other employees. Flexware's field-by-field security prevents unauthorized personnel from seeing and/or changing protected data. Performance is key in networked accounting systems, and FlexShare™, our exclusive database server, ensures productivity by providing quick processing of inquiries, accounting entries, and reports.

## Features

- Multi-user capability with file and record locking
- Network performance up to 50 times faster than any other Macintosh system
- Easy access to accounting data with User Report Writer
- Advanced two-way interface to Microsoft Excel or Wingz for spreadsheet analysis, reports, and graphics
- Complete Macintosh interface for ease of training and use
- Easy customization
- Complete audit trails
- Multiple companies, departments, and profit centers
- Field-by-field security
- Availability of Manufacturing, Time & Billing, and other modules

## Tips & Techniques

1. Use our visual report writer to click on the data you want to create quickly and easily custom reports.
2. Create financials in your favorite spreadsheet, formatted as you like, Flexware will insert the numbers automatically.

## Reviews and Awards

*MacUser* (4/90)

*InfoWorld* (11/89)

*Macworld* (11/89, 9/88)

*MacGuide* (Spring 1988)

## Technical Support

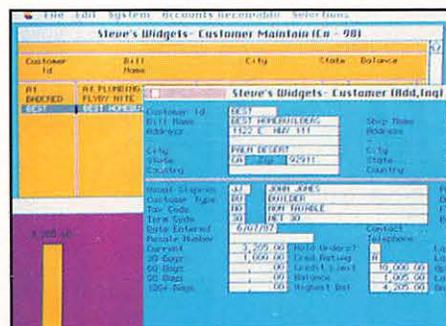
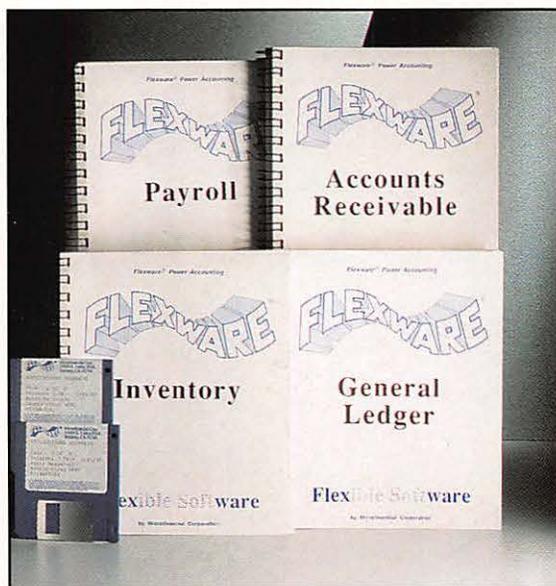
Tel: (818) 961-0237

M-F, 8:00 am-5:00 pm (PST)

Telephone and FlexNet™ electronic mail support.

## Ordering

Flexware is available from dealers, consultants, and VARS, or contact Flexware at:  
(800) 527-6587  
(818) 961-0237 (CA)



**Required: Macintosh Plus or greater; hard disks.**

**Suggested Retail Prices:  
\$695—\$995**

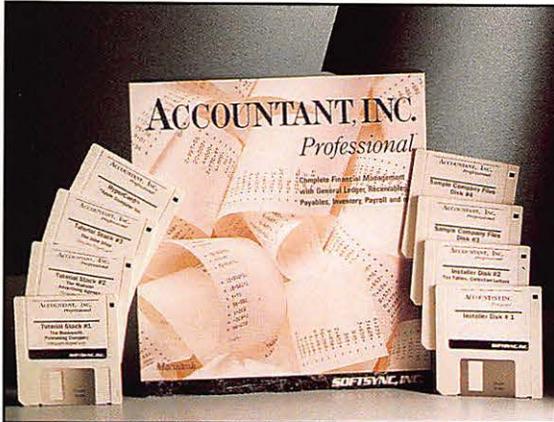
**Version: 6.02C**

**Contact: (800) 527-6587**

SOFTSYNC, INC.™

Softsync, Inc.  
162 Madison Avenue  
New York, NY 10016  
(212) 685-2080

# Accountant, Inc. Professional



**Required: Macintosh Plus or greater; hard disk; System 6.0.1 or greater.**

**Suggested Retail Price: \$595**

**Contact: (212) 685-2080**

## Product Overview

Accountant, Inc. Professional is an integrated small business accounting system with General Ledger, Accounts Receivable and Payable Ledgers, Payroll, Inventory and Project Management, appropriate for service businesses, professionals, manufacturers and retailers.

A streamlined entry system takes the information generated with invoices, purchase orders, receipts and payments and posts to journals and ledgers automatically, saving hours of bookkeeping time. In addition, there are over 100 up-to-date financial reports and analyses which can be displayed, printed or exported to a spreadsheet for further analysis.

## Features

- Integrated accounting and financial management system
- Reversing entries makes it easy to correct mistakes
- Over 100 reports on customers, vendors, inventory, payroll, and more

## Technical Support

Tel: (212) 685-2080  
Fax: (212) 685-6322  
M-F, 9:00 am-5:00 pm (EST)

## Tips & Techniques

1. HyperCard tutorials provide friendly, user-specific training.

## Expert Insights

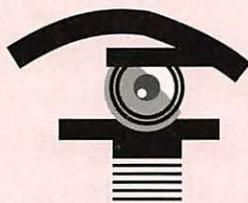
# A

utomating an accounting system doesn't bring order to chaos," Craig Cordova pointed out. "But if you take a good manual system and transfer it onto a computer with the appropriate accounting software, you'll improve data storage and generate automatic reports, giving you the timely and accurate information you need to make effective decisions."

Cordova, an accounting systems consultant based in Palo Alto, California, has been bringing his vision of the effective use of accounting software to small and medium-sized businesses in the San Francisco Bay Area for the past four years. During that time, he's seen the rise of the Macintosh and its accounting software as viable alternatives to more traditional computer systems.

"The first job I ever took-on was converting a company's accounting system from an old CP/M machine to a DOS system," he reminisced. "And for some businesses, the PC is still the way to go. But the Macintosh has some real advantages. The mouse, the windows and icons, and the pull down and popup menus make data entry and manipulation a lot easier. And some of the Macintosh accounting packages are beginning to provide comprehensive on-line help and HyperCard tutorials that really make the software easier to learn."

Accounting systems aren't cheap, or simple to put in place, which is why consultants like Cordova are in such high demand. Typically, the process involves four steps. First, the company's needs—both current and near-future—have to be understood. Then it's time to shop for the necessary software and hardware. The next step is installing the software, and collecting and entering data. Finally, the system must be used effectively, which requires detailed training and support. For many companies, the best answer is to turn to consultants with specific accounting software expertise. But their expertise can only go so far—ultimately, it's how a company's management uses the new system that determines its ultimate success or failure.



**Automated  
accounting  
systems:**

**Interview with  
Craig Cordova,  
Cordova Systems**

# Desktop Communications

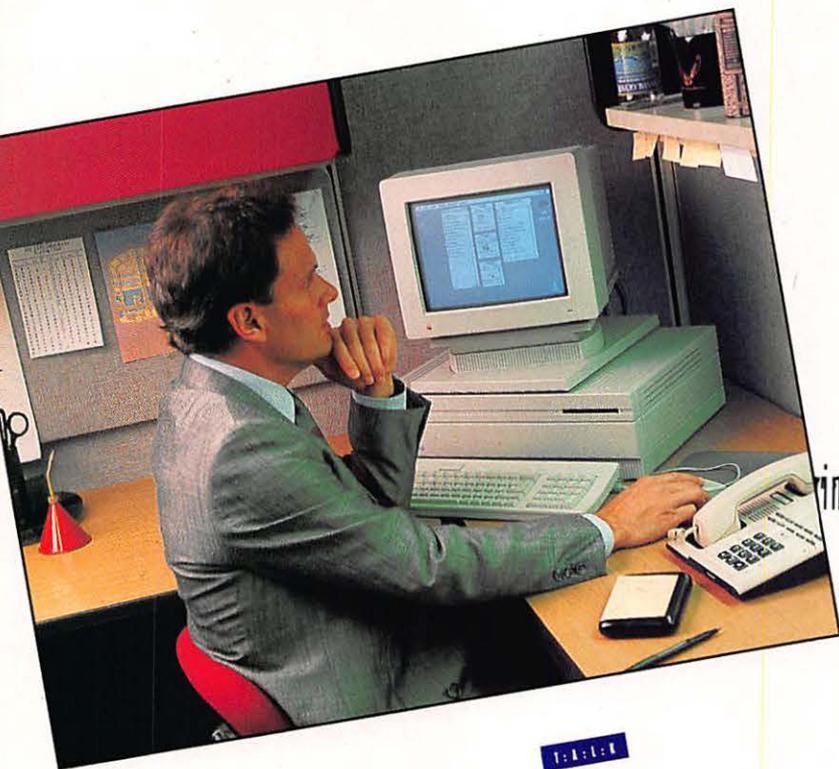
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ike a successful athletic team, business requires good teamwork. The skills of each team member must fit the demands of each position. A business succeeds because of the synergy created by the team members working together; the business becomes a whole greater than its parts.

Good communication is the backbone of a successful team; coordinating and informing that team, therefore, becomes a vital concern. Your Macintosh computer can assist in this communication. Tying your company's desktop computers together can save time and money by increasing communication and creativity.

ring packets of information via AppleTalk handshaking prot

*Design a system that responds to your needs today, and can change to meet your needs tomorrow.*





active efforts among multi-users, and network packets of information

Packets of information

information

T-1-1-1

T-1-1-1

**D**esktop communications begins with the network. Connect some Macintoshes and other devices (printers or modems) together with some cable, install some software on each Macintosh, and your players are ready to start sharing information and resources in new and efficient ways. Of course, if you already have one or more Macintoshes connected to a laser printer, you already have the beginnings of a simple network. But what clearly differentiates a network from that type of connection is the “smart” software that allows each Macintosh (or node, in networking parlance) to share information with others. Networking, like teamwork, comes from exchanging and sharing information.

As with any computer technology, networking requires some planning to be truly successful. Consider which computers need to be connected, what resources need to be accessible, what information needs to be shared. Design a system that responds to your needs today, and can change to meet your needs tomorrow.

### ***Assembling A Team***

The make-up of your particular networking scheme will vary according to your needs; but certain elements are common to any scheme.

You'll need cabling to connect up the nodes of the network. There are several types of wiring that can be used to connect computers. It can be as simple as unshielded twisted pair wire (otherwise known as phone wire or cable) or as complicated as fiber optic cabling (which is expensive). The



two chief considerations are speed and distance. More expensive cable will carry more information, which will increase network speed, and will sometimes carry that information longer distances. But a less expensive alternative, though perhaps slower, may be adequate for your needs.

The second element of a network is to decide on a topology, which can be thought of as the geometric logic of the network. Different topologies grant different features. Some can't be laid out over long distances, but provide for quick and easy expansion of the network. Others span longer distances, but are more difficult to add to. And depending on your cabling scheme, you will need either connection boxes (unshielded and shielded twisted pair) or interface cards (coaxial and fiber optic).

The third element to consider is what type of network software to run, either dedicated or distributed. In any networking scheme, some sort of software will need to be installed on every Macintosh; and in the case of a dedicated network, one Macintosh must be installed with a specialized application in order to become the network file server. Any network services, shared printers or modems, for example, are also added to the network scheme. At this point, your network is ready to increase your efficiency and productivity.





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## ***The Rules Of Other Games***

The foregoing description, though somewhat general, essentially characterizes the steps to setting up a Macintosh-only local area network (LAN). But one of the most exciting developments occurring in the Macintosh industry is the development of technologies to connect Macintoshes or (Macintosh networks) with other computers: PCs, Unix machines, minicomputers, and IBM and DEC mainframes.

For businesses that have already invested in PC equipment, the solutions that allow their Macintoshes and PCs to share information and devices are most welcome. The range of solutions is impressive. There are cards that slip into a PC and allow it to become a node on an AppleTalk network; and there are PC network software vendors that now provide Macintosh support. There is even hardware and software that turns a PC into a dedicated file server for a Macintosh network.

Another popular networking system for Macintoshes, and other computers, is Ethernet, a worldwide standard for business and educational institutions that's much faster than an AppleTalk network. Apple and many other vendors provide a variety of cards, gateways, and software products that allow Macintoshes and Macintosh LANs to become fully-functioning nodes of an Ethernet network.

As the Macintosh becomes more integrated in corporations around the world, the need for connecting to IBM and other mainframes has increased dramatically. Apple met some of that demand last fall, with the announcement of a hardware and software connection for token-ring networks, the standard method for connecting PC to IBM mainframes. Other vendors, too, provide hardware and terminal emulation software for IBM mainframe connection. And VMS connections, currently supported by Apple and a few other vendors, is scheduled for an upgrade in the near future.

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*As the Macintosh becomes more integrated in corporations around the world, the demand to connect to existing corporate computer systems has increased dramatically.*

## ***Telecommunications Connection***

The uses of telecommunications are many, from connecting to and extracting data from on-line services, to connecting to networks from remote locations. A modem (whose speed is measured in bits per second [bps]—1200, 2400, 9600) connects your Macintosh to on-line information services, other Macintosh users, networks, or mainframe computers over a telephone line. A netmodem allows a user to call in from another location and connect directly to an AppleTalk network; or a netmodem can be installed on an AppleTalk network, and serve as a shared device, like a laser printer, for connected users.

A lot of excitement has been generated about fax modems that you connect to your Macintosh to send and receive faxes with other computers, or stand-alone fax machines. Files created on your Macintosh can be sent directly to a fax machine, and faxes are received as files that you can open, look at, print, and store on hard or floppy disks.



# A Network Lexicon



**Making connections between networking hardware and software.**

**A** **ppleShare:** Apple's networking software. A dedicated file server system, with a small software installation in each Macintosh's System folder.

**AppleTalk:** the protocols, devised by Apple, used in most Macintosh networks. These protocols are separate from the networking software; both AppleShare and TOPS are based on AppleTalk protocols.

**Bridge:** a device that joins two smaller networks into a larger one. A bridge can help manage traffic, and, combined with modems, provide a telecommunications link between networks in different geographical locations.

**Dedicated:** a type of networking software in which one Macintosh serves as the network manager for the rest of the network.

**Distributed:** a type of networking software in which every Macintosh on the network shares responsibility for managing the network.

**Ethernet:** a high-speed industry-standard protocol that usually runs on coaxial cabling. Macintoshes need special equipment (network cards or gateways) to connect to Ethernet networks.

**Gateway:** a "smart" network device that connects two different kinds of networks, providing translation service between the two different protocols. A gateway might be used to connect an AppleTalk LAN with an Ethernet system.

**Local area network (LAN):** a small network setup, typically for a workgroup (2-20 computers) in size.

**LocalTalk:** Apple's wiring solution; shielded twisted-pair cabling for wiring networks.

**Media:** the cabling—unshielded twisted pair, shielded twisted pair, coaxial, fiber optic—that connects the machines on a network.

**Node:** a device—computer, server, printer, modem, bridge, gateway, repeater—on a network.

**Protocol:** the rules and language that a computer uses to communicate with another computer on a network. Both computers must be using the same protocols to understand each other.

**Repeater:** an amplifier that boosts the signals on a network cable, increasing the operational distance between nodes. Apple has adopted the term "router."

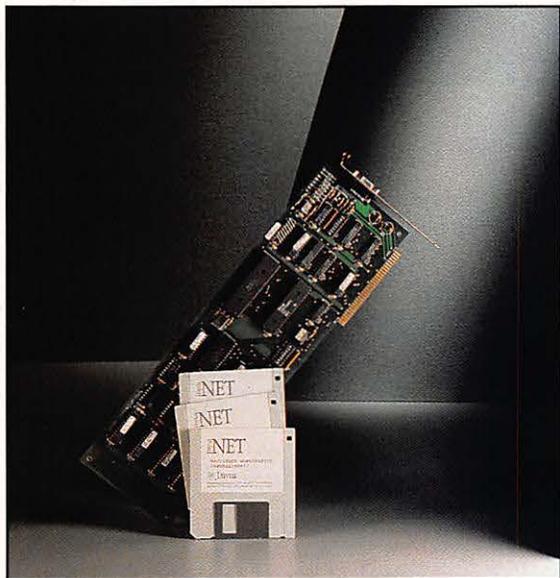
**Topology:** the geometric configuration of a network that describes its wiring scheme.





Dayna Communications  
50 South Main Street, Fifth Floor  
Salt Lake City, UT 84144  
(801) 531-0203

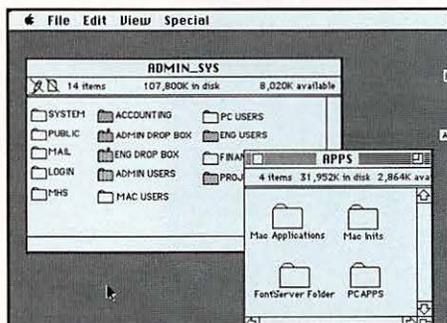
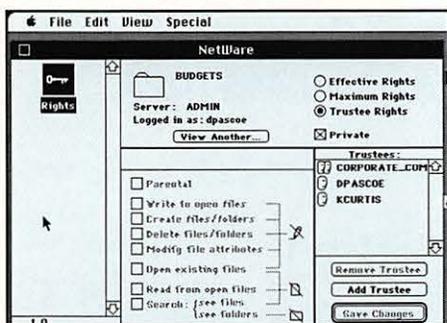
# DaynaNET



## Product Overview

DaynaNET™ is a full-featured Local Area Network operating system for Macintosh and PC users. It uses a dedicated computer as the network file server, providing centralized storage and management of information and a platform for running multi-user applications such as databases. Although designed for the Macintosh networking market, DaynaNET uses a cost-effective IBM-compatible 286 or 386 computer as the file server, instead of a Macintosh.

A unique version of the top-selling NetWare, DaynaNET is specially tailored for the needs of Macintosh users. In addition, its exceptional PC support makes DaynaNET the ideal network for mixed Macintosh and PC workgroups. No knowledge of NetWare is needed to install or run the network and all administrative tasks can be performed from any Macintosh on the network with familiar "point and click" techniques.



**Required: an IBM-compatible 286 or 386 PC with a 40 Mb hard disk and 2 Mb RAM; Macintosh 512K or greater.**

**Suggested Retail Price: \$795-\$3995**

**Version: 1.0**

**Contact: (801) 531-0203**

## Features

- High performance local area network (LAN) with Macintosh simplicity
- Uses an IBM-compatible 286 or 386 computer as the file server
- DaynaNET models support up to 4, 8 or 100 Macintosh and PC users per server
- All models allow inter-networking and connectivity to NetWare file servers
- All models support LocalTalk cable systems; some models also support Ethernet
- All models feature built-in print queuing and a thorough, yet flexible, security system

## Technical Support

Tel: (801) 972-2000

M-F, 9:00 am-4:00 pm (MST)

90 day warranty

## Ordering

Available from authorized dealers, or contact Dayna directly at: (801) 531-0203

Suggested Retail Prices:  
DaynaNET 4L-\$795  
DaynaNET 8L-\$1795  
DaynaNET 8LE-\$2195  
DaynaNET XL-\$3595  
DaynaNET XLE-\$3995

Generous upgrade rebates.

## Tips & Techniques

1. DaynaNET file servers support LocalTalk and Ethernet cable systems without external bridges.
2. Built-in print queues stop printer "bottlenecks."
3. Full-featured but flexible security system offers complete data protection.

# Network Bundle For Macintosh

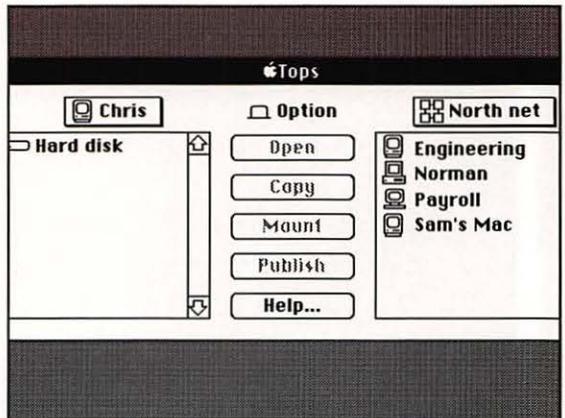
TOPS  
950 Marina Village Parkway  
Alameda, CA 94501  
(800) 445-TOPS

T O P S®

## Product Overview

TOPS Network Bundle is the complete network solution in a single package. It combines all the essential services for the workgroup: file sharing, InBox 20-user electronic mail system and network printing capabilities. You can install the network yourself and start communicating in minutes. Easy, menu-driven installation, on-line help and desk-accessory access to all functions simplify networking. Link Macintoshes, PCs and Sun Workstations; all users of TOPS Network Bundle can share files and printing resources and exchange mail, regardless of the computer they're using.

For translating between popular Macintosh and DOS application file formats, DataViz MaLink Plus is included free!



## Features

- Share files while working with any application
- Determine file availability and access; set passwords and access options
- Compatible with single-user, multi-user and AFP-based applications

## Technical Support

Tel: (415) 769-8711  
M-F, 7:00 am-5:00 pm (PST)

## Ordering

For information or to order, contact TOPS at:  
(800) 445-TOPS

**Required: Macintosh Plus or greater; System 4.2 or higher.**

**Suggested Retail Price: \$299**

**Version: 3.0**

**Contact: (800) 445-TOPS**

# InBox Plus

TOPS  
950 Marina Village Parkway  
Alameda, CA 94501  
(800) 445-TOPS

T O P S®

## Product Overview

InBox Plus provides consistent and full-featured electronic mail services to users on both Macintosh and DOS personal computers. It is a flexible and comprehensive electronic mail solution for networks of any size supporting multiple servers (Message Centers), with up to 100 users on each.

InBox Plus gives you a choice of networks and cabling. It operates over any file sharing network, like NetWare or AppleShare, using Ethernet, Token Ring or other cabling. You can also run it with just an AppleTalk-compatible connection; as long as your computers are connected, InBox will fit into your system. InBox Plus supports gateways for world-wide connectivity to other mail systems.



## Features

- Save time with standardized memo and phone message forms
- Attach multiple files to messages
- Respond to incoming mail by replying to the sender, to all recipients, or forwarding it to others

## Technical Support

Telephone: (415) 769-8711  
M-F, 7:00 am-5:00 pm (PST)

## Ordering

For information or to order, contact TOPS at:  
(800) 445-TOPS

**Required: Macintosh Plus or greater; System 4.2 or higher.**

**Suggested Retail Price: \$995**

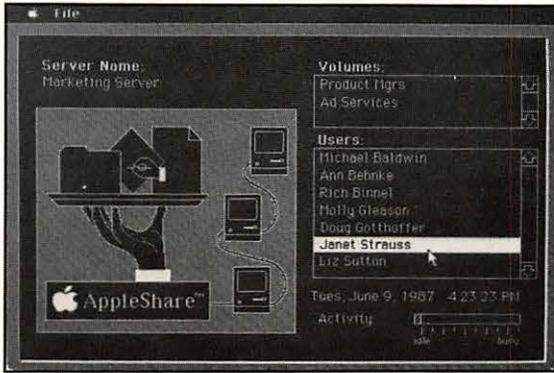
**Version: 3.0**

**Contact: (800) 445-TOPS**



Apple Computer, Inc.  
20525 Mariani Avenue  
Cupertino, CA 95014  
(408) 996-1010

# AppleShare



## Product Overview

The AppleShare™ file server lets members of your workgroup use the AppleTalk® network to share information quickly and easily. AppleShare turns a dedicated Macintosh with one or more hard disks into a central electronic filing cabinet in which everyone can store documents in various types of folders. By giving everyone in your workgroup access to the same documents and applications, AppleShare simplifies and speeds up the work of the group—whether it involves creating budgets, updating data files, producing publications, or assembling reports. AppleShare has a powerful set of privacy features that let you control who has access to folders. AppleShare will greatly increase the productivity of any office with Macintosh computers.

**Required: Macintosh Plus or greater with hard disk; AppleTalk connections.**

**Suggested Retail Price: \$799**

**Version: 2.0**

## Features

- Up to 25 users can log on simultaneously
- Access information as if it was on a local hard disk
- Owner assigns access privileges to folders

## Ordering

For more information, contact Apple Computer at: (408) 996-1010

## Technical Short



### The basics of local area networks.

The simplest sort of Macintosh network consists of connecting a Macintosh to a laser printer. Join the computer and the printer with one cable, place the driver software for the laser printer in the System folder, and the Macintosh will print to the laser printer.

But in order for different Macintoshes to communicate with each other and share information, more complex wiring and more sophisticated software is necessary. The geometric layout of a network is called its topology; the basic Macintosh network topologies include daisy chain, trunk, passive star and active star. However, the actual materials used to create the network connections, called the media, are different from the topology. A daisy chain topology can be wired with LocalTalk cables (Apple's standard) or PhoneNET wiring (Farallon Computer), for instance. Once the cabling is in place, each Macintosh on the network can access a laser printer or other network service, but won't yet be able to communicate with each other. That task falls to the networking software.

Network software can be divided into two different types: dedicated or distributed. In a dedicated system, one computer (with at least one hard disk) is converted into a dedicated file server by installing the network software on it; this computer can be either a Macintosh or an IBM PC. This computer can no longer be used for other tasks; it's dedicated (limited) to network management. Users access common information saved onto the dedicated file server's hard disk (called a network volume). To each user on the network, the volume appears as an icon on the desktop that can be manipulated as a hard disk.

In a distributed scheme, each Macintosh on the network operates as a mini-file server. After the network software is installed on every Macintosh in the system, information on one machine is made available to other users by publishing a folder or hard disk to the network. Network users can access the published information from their computers by mounting the folder or hard disk.

# DOS Mounter

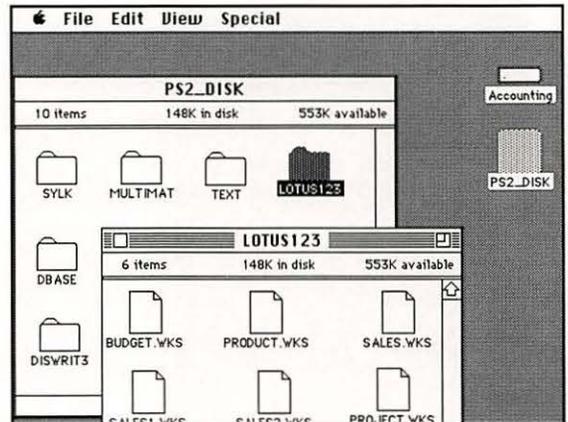
Dayna Communications  
50 South Main Street, Fifth Floor  
Salt Lake City, UT 84144  
Tel: (801) 531-0203



## Product Overview

Apple's FDHD drive, the standard drive in all new Macintosh models such as the Macintosh SE/30 and IIcx, can read and write 3.5" MS-DOS disks, as well as Macintosh disks. But the drive will only accept MS-DOS disks when Apple File Exchange is running.

Now you can get desktop support for MS-DOS disks and read and write files directly to the disk, without Apple File Exchange. With the DOS Mounter™ utility in your system folder, any MS-DOS disk you put in the FDHD drive appears automatically on the desktop and looks and behaves like a Macintosh disk. You can select and drag it with the mouse. You can copy files, documents and applications to and from the disk and drag items to the trash.



## Features

- Desktop support for 3.5" MS-DOS disks, which look and behave like Macintosh disks
- Extension Mapping™ links MS-DOS file extensions with Macintosh applications, so files open with mouse click

## Technical Support

Tel: (801) 972-2000  
M-F, 9:00 am-4:00 pm (MST)

## Tips & Techniques

1. Use DOS Mounter with file conversion software to read incompatible MS-DOS files.

**Required: Any Macintosh with an FDHD drive.**

**Suggested Retail Price: \$89.95**

**Version: 1.1**

**Contact: (801) 531-0203**

# LapLink Mac III Connectivity Pac

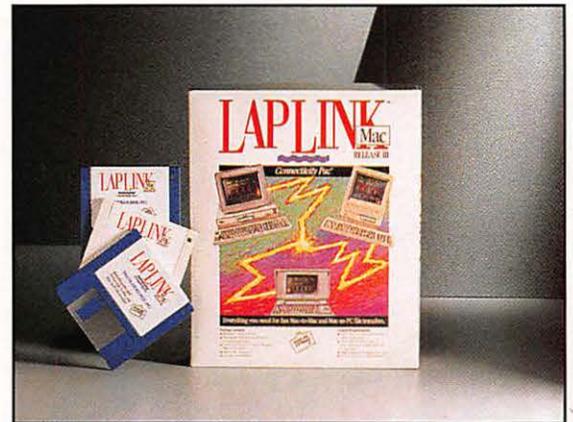
Traveling Software, Inc.  
18702 North Creek Parkway  
Bothell, WA 98011  
(206) 483-8088

Traveling Software

## Product Overview

LapLink® Mac III Connectivity Pac permits quick and easy Macintosh-to-Macintosh and Macintosh-to-PC file transfers for two users. Data can be transferred via the cable provided, modem, AppleTalk, or with a SCSI cable.

The program includes file translators for conversion of word processing documents from PC to Macintosh formats and vice versa, and an accelerator which boosts Macintosh-to-Macintosh transfers up to 750,000 baud. And, file transfers can be controlled from either the Macintosh or the PC.



## Features

- Permits file transfer between a Macintosh and a PC, or between two Macintoshes, at 115,000 baud
- Background operation
- Translates word processing files between PC and Macintosh formats

## Technical Support

Tel: (206) 483-8088  
M-F, 8:00 am-5:00 pm (PST)

## Ordering

Contact Traveling Software for dealer information at:  
(800) 662-2652 (U.S. only)

**Required: Macintosh Plus or greater; 330K RAM in PC.**

**Suggested Retail Price: \$189.95**

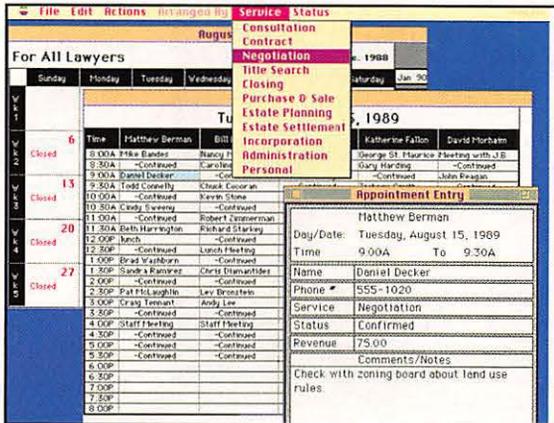
**Version 3.0**

**Contact: (800) 662-2652**



LAYERED, Inc.  
529 Main Street  
Boston, MA 02129  
(617) 242-7700

# Front Desk MultiUser



## Product Overview

LAYERED Front Desk MultiUser is a fully-featured office scheduling program that allows you to schedule multiple resources over a 12-month period. Its flexible setups make it suitable for all businesses and professions that need to track people, rooms, equipment—any resource—by time. Currently used by thousands of managers, doctors, lawyers, and other professionals whose staffs can now access a common appointment book. Set up your workday with time increments as small as 10 minutes over your normal business hours. Front Desk also calculates and reports expected revenues for one or all of your resources.

**Required: System 4.2 or higher.**

**Suggested Retail Price: \$99**

**Version: 6.10**

**Contact: (800) 622-4436**

## Features

- Network over 25 workstations simultaneously to enter appointments and view the calendar
- Track 30 user-defined resources—people, rooms, trucks, or anything that has to be scheduled

## Technical Support

Tel: (800) 346-5317  
M-F, 9:00 am-6:00 pm (EST)

## Tips & Techniques

Set up multiple calendars to manage people or equipment in the office.

## Technical Short



**Coordinate and organize the actions of a group with groupware.**

The chief benefit of networking is the enhanced productivity that results from the sharing of information. In much the same way that a well-designed phone system helps to coordinate actions among colleagues, a network of computers, outfitted with the proper software, can assist in focusing the work of a group. The software—called groupware—is just beginning to make its presence felt on networks and in offices.

Groupware goes beyond the telephone metaphor by harnessing the information access and storage capacity of the Macintosh to support and organize the actions of a group of users. Unlike a multi-user database, which is simply an application that can be used by more than one person at a time, a groupware product serves as an electronic moderator of some kind, moderating communication, scheduling, or other group tasks.

The most common type of groupware is electronic mail, or e-mail. Once installed on a network, e-mail provides fast and accurate communication between users. Messages can be sent to an address, even if that user is not currently logged onto the network; the network software will store the message in the user's mailbox until the next time he/she connects.

Another type of groupware product that has entered the office is an integrated scheduler. A user who wishes to call a meeting queries the scheduler, indicating the attendees. The scheduler checks each attendee's calendar, and/or sends a message to each attendee about the meeting, collates the responses, and informs the user who called the meeting who can or can't attend.

Another groupware product that's being used on networks around the country is the group document editor, which tracks the changes to a document made by a group. The original "published" document remains untouched, as other, transparent layers record corrections by each editor, identified by date and creator. The "principal author" can then decide which corrections to incorporate in the document.

# MarkUp

**Mainstay**  
5311-B Derry Avenue  
Agoura Hills, CA 91301  
(818) 991-6540

**Mainstay**

## Product Overview

MarkUp ends the paper shuffle of editing and reviewing documents by enabling co-workers to simultaneously comment on a document electronically—even if they don't have the application that created it.

Print an image of any document to disk and reopen it with MarkUp. Publish it to any individual or group for review. Each reviewer has all the tools necessary to rewrite, annotate, and approve the document. If reviewers are distant or do not have access to the network, just send the MarkUp document via floppy disk or modem. When editing is complete, their comments can be merged with all others.



## Features

- Keeps journal of editing sessions
- Instant access to menu of proofreaders' marks
- Selectable merging of overlays
- Multiple layers of editing viewed simultaneously

## Technical Support

Tel: (818) 991-6540  
M-F, 8:30 am-5:30 pm (PST)

## Ordering

Suggested Retail Prices:  
Single—\$245  
2 pack—\$495  
5 pack—\$995

**Required: Macintosh Plus or greater.**

**Suggested Retail Price: \$245**

**Version: 1.02**

**Contact: (818) 991-6540**

# MarcoPolo

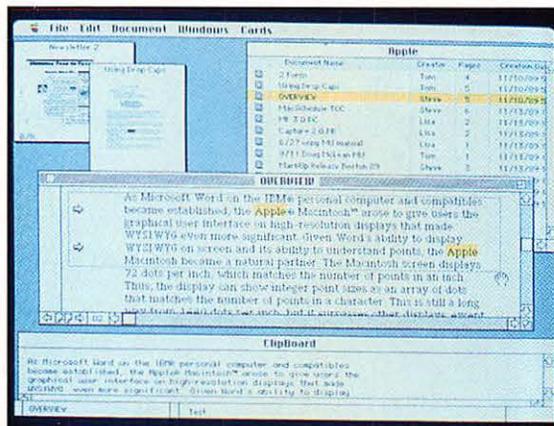
**Mainstay**  
5311-B Derry Avenue  
Agoura Hills, CA 91301  
(818) 991-6540

**Mainstay**

## Product Overview

MarcoPolo archives, organizes, finds and distributes your documents, assembling them in a Document Center where they are compressed and indexed to facilitate rapid search and retrieval.

Organize, find and distribute them based on content, author, title, commentary and archival date—automatically. Search and group documents based on title, author, archival date or even the document content, describing your search criteria in plain English. Documents that originally filled an 80 Mb hard drive are searched in just a few seconds. MarcoPolo will search all documents regardless of format, highlighting the search subject on screen.



## Features

- Automatically organizes documents
- Point and click to build search queries
- Extremely fast search and retrieval
- Individual and work group use

## Technical Support

Tel: (818) 991-6540  
M-F, 8:30 am-5:30 pm (PST)

## Ordering

Suggested Retail Prices:  
Single—\$295  
2 pack—\$495  
5 pack—\$995

**Required: Macintosh Plus or greater.**

**Suggested Retail Price: \$295**

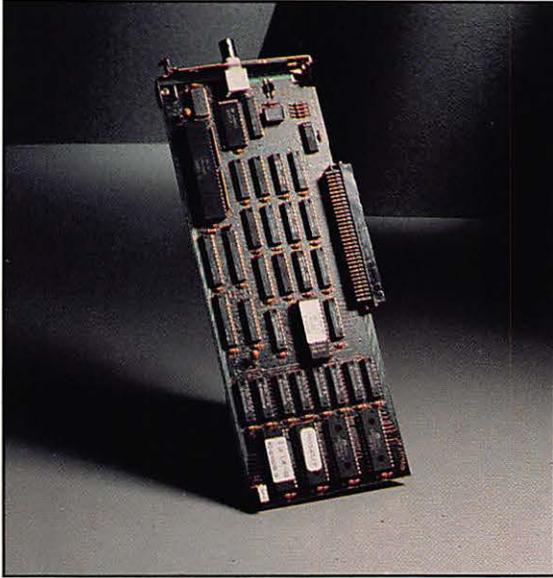
**Version 1.0**

**Contact: (818) 991-6540**

**Avatar**

Avatar Corporation  
65 South Street  
Hopkinton, MA 01748  
(508) 435-3000

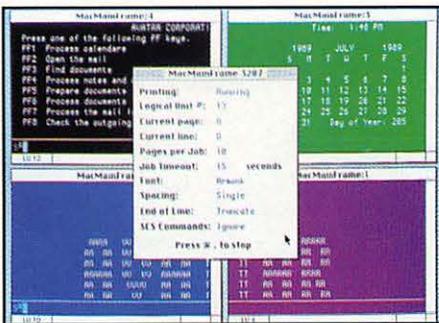
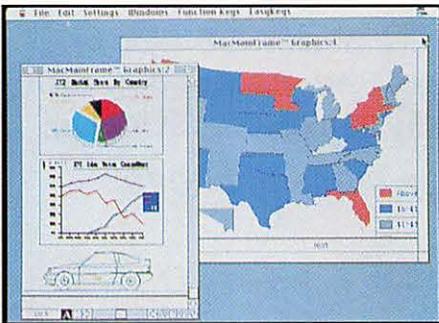
# MacMainFrame Series



## Product Overview

MacMainFrame Macintosh-to-mainframe connectivity options provide easy access to IBM 3270-based mainframe information through terminal emulation, file transfer, printer emulation and mainframe graphics distribution across a range of network types.

Mainframe services can be provided to users of all types of Macintosh computers across SDLC, Token Ring or traditional coaxial cable networks, in direct workstation or gateway configurations, for local or remote sites. Using one of the variety of MacMainFrame physical connection options, Macintosh users in Ethernet, Token Ring, LocalTalk or coax environments can tap centralized resources—statistical or financial information, customer records, even mainframe-based mail systems—to make their desktops all the more powerful. And all MacMainFrame products employ the same feature-rich user interface across all hardware and network platforms, eliminating the need for retraining if network configurations change.



**Required: System 6.0.3 or higher; AppleTalk 1.0 for Gateway configurations.**

**Compatible: IBM 3270.**

**Suggested Retail Price: call**

**Contact: (800) 289-2526**

## Features

- Mac-to-mainframe connectivity for all Macintosh computers in any network environment
- Common user interface across the entire MacMainFrame series
- Fully IBM 3270-compatible, so Macintosh connection has no effect on normal mainframe operations
- Workstation and gateway versions for Token Ring, SDLC and coaxial cable connections
- Fully AppleTalk-compatible
- Multiple session support
- Terminal emulation, file transfer, APA Graphics and printer emulation support
- Programmers' Toolkit provides full range of tools including HyperCard API for customization

## Reviews and Awards

*MACazine* (1/89)

*Macworld* (2/89)

*PC Week* (4/89)

*MacUser* (1/90 and 4/90)

## Technical Support

Tel: (800) 282-8276

M-F, 8:00 am-7:00 pm (EST)

1 year warranty

## Ordering

MacMainFrame is available through authorized resellers, or contact Avatar at: (800) 289-2526.

Suggested Retail Price: From \$995-\$6495, depending on network requirements.

## Tips & Techniques

1. The system administrator can assign terminal, graphics and printer sessions, and other tasks to any client on the network.
2. Each client Macintosh has access to all mainframe services.

# MacIRMA

## Family of Products

DCA, Inc.  
1000 Alderman Drive  
Alpharetta, GA 30201  
(404) 442-4000

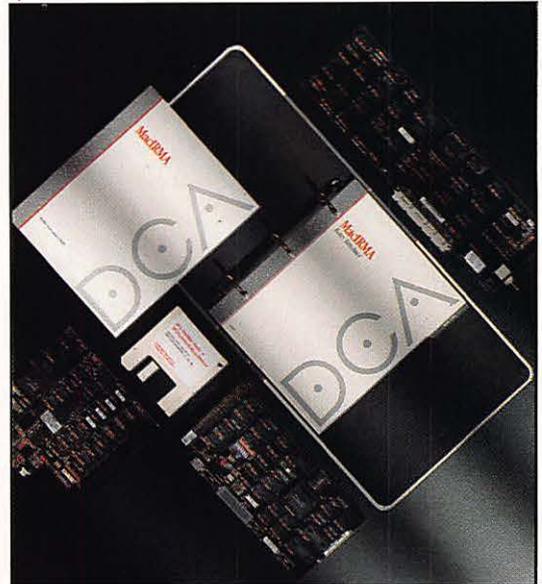


### Product Overview

The DCA MacIRMA™ Family of Products includes MacIRMA hardware and a variety of software that allows your Macintosh to communicate with an IBM mainframe as an IBM 3270 terminal.

The RAM-based MacIRMA hardware allows for software-only upgrades and is available for the SE, SE/30, and NuBus platforms. It comes bundled with MacIRMA Entry Emulator (EE) software, which provides CUT (single-session) emulation and file transfer. MacIRMA Graphics provides access to GDDM-PCLK graphics as an APA workstation and supports PICT and PIF file formats.

MacIRMA WorkStation offers DFT (multiple-session) emulation, providing five concurrent host sessions and 3287 host printer emulation, in addition to file transfer. MacIRMA API is a Macintosh-based programming tool used to develop custom applications that drive the MacIRMA hardware/software in CUT and non-CUT environments. Applications may be written in C or HyperTalk to automate log-ons, file transfers, and other tasks.



### Features

- Built-in file transfer via DCA's IRMAlink or ForteNet in TSO and CMS and IBM's IND\$FILE in TSO, CMS, CICS
- International file transfer and keyboard support for 18 different languages
- Tear-off QuickPad™ allows the execution of 3270 functions with a point and click of the mouse
- Copy and paste mainframe data into Macintosh applications
- Support for full-screen Models 2-5
- Complete color and configuration control
- Light pen support
- Hardware diagnostics
- Consistent MacIRMA user interface
- Base terminal attributes, extended attributes, and status line

### Tips & Techniques

1. As an alternative to cumbersome keystroke combinations, access the tear-off QuickPad™ from the menu bar. Just point and click to execute 3270 functions.

### Reviews and Awards

*Macworld* World Class Award  
1988, 1989

*InfoWorld* Product of the Year  
1987

STC Award for Technical  
Communication 1987, 1989

### Technical Support

Tel: (404) 740-0300

M-F, 8:00 am-5:00 pm

For MacIRMA API users, DCA  
Developer Services:  
(404) 740-0001

1 year warranty

### Ordering

Available from DCA dealers  
and distributors, including  
Authorized Apple dealers.

Suggested Retail Prices:  
MacIRMA EE-\$1195

MacIRMA Graphics-\$1295  
software only-\$195

MacIRMAWorkStation-\$1395  
software only-\$295

MacIRMA API-\$195

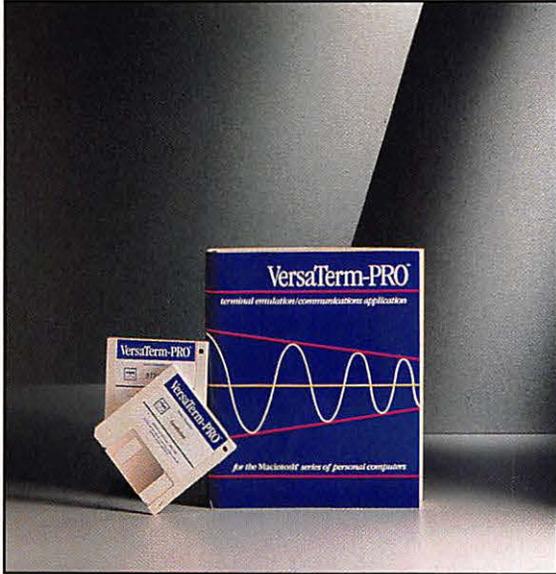
**Required: Macintosh Plus or greater; 1 Mb RAM; 800K disk drive; System 6.0.2 or higher.**

**Contact: (404) 442-4000**



Synergy Software  
2457 Perkiomen Avenue  
Reading, PA 19606  
(215) 779-0522

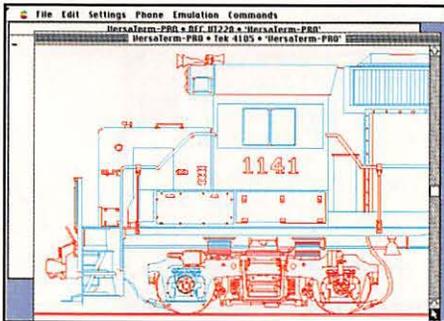
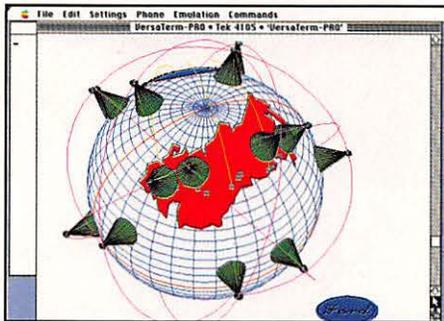
# VersaTerm-PRO



## Product Overview

VersaTerm-PRO™ turns your Macintosh II system into a professional color workstation by connecting it to the world of mini-computers and mainframes. Connect your Macintosh to DEC VAX, Cray, Prime, IBM, and Data General mainframes. VersaTerm-PRO emulations include DEC VT220, VT102, VT100, VT52; Data General D200; Tektronix 4010, 4012, 4014; a complete Tektronix 4105 for color graphics emulation; ANSI Color/Graphics support.

VersaTerm-PRO maintains the full high-resolution vector image of the graphic in memory, and allows zoom and pan with either the Tek4105 or the Tek4014 emulation. Create MacDraw, MacPaint or TekPrint graphic documents and create launchable text documents for your word processor. Apple's CommToolbox is supported, allowing you to utilize Connection Tools and File Transfer Tools. Internal support for file-transfer protocols include: MacTerminal's XModem; Kermit (including Kermit Server); XModem; and YModem.



## Features

- Apple CommToolbox support
- Multi-tasking background
- Full support of all text and color graphics features of a Tek4105 terminal
- Very complete VT220 emulation, including selective erase, downloadable character sets, 8-bit operation and DEC's multinational character set
- Pop-up soft keyboard support for simulating the Apple Extended keyboard
- Ability to respond to host menu selections with a simple double-click of the mouse
- Ability to search the text buffer for a text string
- Allows up to 32 cleared graphic screens in memory so the user can go back and view them
- Baud rates up to 57,600 bps

## Reviews and Awards

*Macworld* World Class Software Award (9/89)

*Macworld* World Class Software Award (9/88)

*MacUser* 4.5 mice ranking

## Technical Support

Tel: (215) 779-0522

Fax: (215) 370-0548

M-F, 9:00 am-5:30 pm (EST)

Periodic newsletters

## Ordering

VersaTerm-PRO is available at authorized dealers or contact Synergy Software at: (800) 876-8376

Updates are available to registered users for \$20; contact Synergy Software at: (215) 779-0522

(Out of country updates must pay extra for shipping.)

**Required: Macintosh Plus or greater.**

**Recommended: 2 Mb RAM; hard disk.**

**Suggested Retail Price: \$295**

**Version: 3.1**

**Contact: (800) 876-8376**

# White Knight

The FreeSoft Company  
150 Hickory Drive  
Beaver Falls, PA 15010  
(412) 846-2700

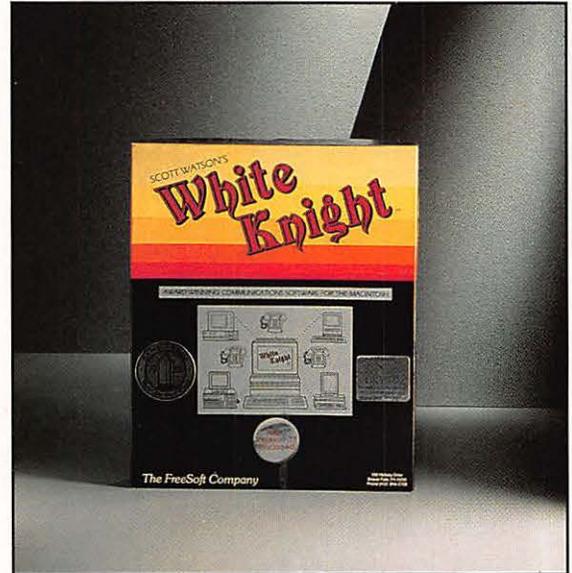


## Product Overview

White Knight is the successor to Scott Watson's legendary Red Ryder telecommunications program, with a new feature list that spans over 20 pages!

The user manual is geared to all levels of experience. There are plenty of tutorials and step-by-steps for beginners, and plenty of "meat" for experienced users. The user interface is customizable to an extraordinary degree. There's no more searching for the "perfect" program, because you set it up the way you want it.

The FreeSoft Company is constantly adding features and improving White Knight. Intra-version (minor) updates are free of charge and upgrades are always provided at a low cost. White Knight has been designed to get the job done with a minimum of fiddling with settings. It offers the kind of power associated with products costing hundreds of dollars more, but is easier to learn and more flexible. It's the perfect low-cost solution to almost any Macintosh telecommunicator's needs.



## Features

- Support for many protocols for guaranteed error-free file transfers, including XMODEM, XMODEM/CRC, XMODEM-1K, YMODEM, YMODEM-1K, YMODEM-G, ZMODEM, Kermit, Long Packet Kermit, Sliding Windows Kermit, and FLASH protocols
- Support for color and large screen monitors
- Over 200-command Procedure language with "point and click" editor lets you completely automate any session from beginning to end
- Flexible filtering of received text
- Customizable user interface including user defined menus, dialog boxes, icons, pictures, and pushbuttons
- Fast throughput of transmission speeds from 300 to 57,600 baud
- Terminal emulation includes TTY, VT52, VT100 and VT102 (with ANSI graphics support)

## Reviews and Awards

Three *MacUser* World Class awards

Two Macintosh 100 awards

One *MacUser* Eddy award

## Technical Support

Tel: (412) 846-2700

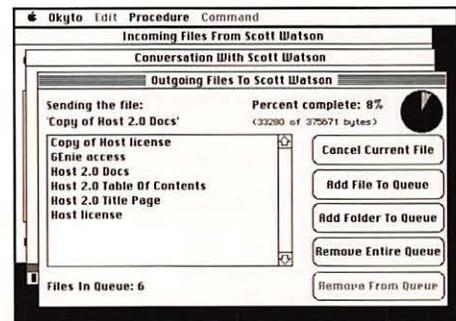
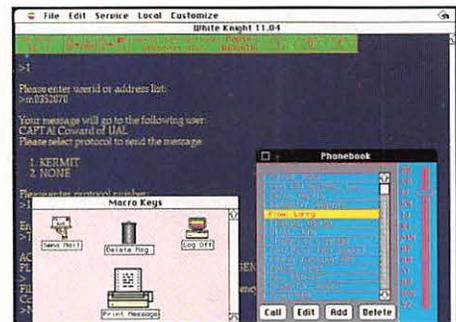
M-F, 2:00-5:00 pm (EST)

Available at no extra charge.

## Ordering

White Knight is available from most Macintosh software dealers and mail order firms, or contact The FreeSoft Company at: (412) 846-2700

Includes free copy of Okyto (a file transfer program) and free or discounted subscriptions to GENie, Dow Jones, and Delphi.



**Required: Macintosh Plus or greater; System 6.0 or higher.**

**Recommended: Hard disk.**

**Suggested Retail Price: \$139**

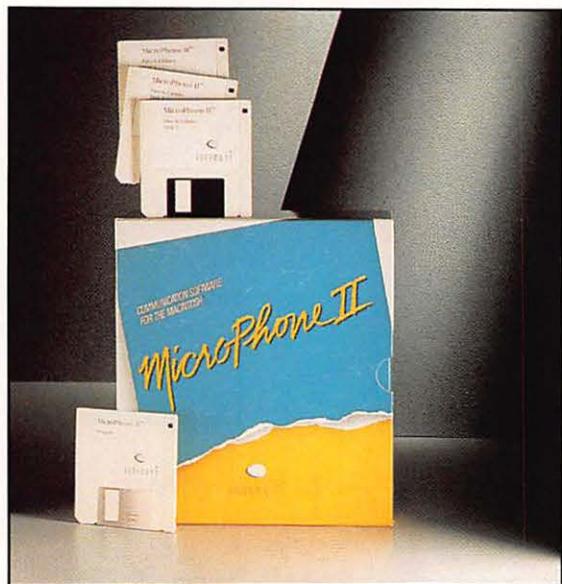
**Version: 11**

**Contact: (412) 846-2700**



Software Ventures Corporation  
2907 Claremont Avenue  
Berkeley, CA 94705  
(415) 644-3232 ext. 123

## MicroPhone II Version 3.0

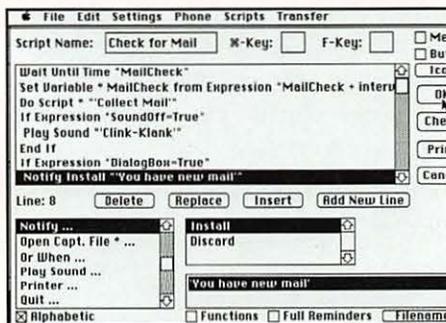


### Product Overview

MicroPhone™ II is the top-selling telecommunications software for the Macintosh. Its unique ability is to shield you from the complexities of computer communications.

Using MicroPhone II's tools—color icons, a dialog creator, and a superior text editor—you can build your own custom front-end to a remote computer. The resulting interface allows even first-time users to communicate within a matter of minutes, freeing them from having to memorize confusing communications jargon. Users interact with intuitive on-screen elements that translate their mouse clicks into the proper commands for the remote computer.

Using MicroPhone II's powerful automation features, you can turn the program into your communications agent. Working in the foreground or in the background under MultiFinder, MicroPhone II can manage the flow of electronic mail or other timely information, freeing you to tend to other business.



**Required: Macintosh 512Ke; modem.**

**Compatible: MNP modems.**

**Suggested Retail Price: \$295**

**Version: 3.0**

**Contact: (800) 336-6477 ext. 123**

### Features

- Watch Me: create scripts by automatically recording your actions—automate log-on and navigation through databases without learning a single script command
- Script Editor: create scripts by clicking at script commands presented in a special window
- Dialoger for creating your own dialog boxes; use them to build custom front ends to any remote computer
- Extend MicroPhone II's power via HyperCard's XCMDs and XFCNs
- International character sets include French, French Canadian, German, Italian, Spanish and Swedish
- Transfer protocols: XMODEM, 1K XMODEM, YMODEM, YMODEM-G, ZMODEM, Kermit, MacTerminal 1.1; MacBinary II and batch files
- MultiFinder: run scripts and file transfers in the background
- Other features: Excellent VT52/VT102 emulation; password protection; color icons; large screens; color and sound; mini BBS

### Reviews and Awards

*InfoWorld* Top 100 Products of 1989

*MacWeek* (2/90)

*LA Times* (1/90)

*The New York Times* (2/90)

### Technical Support

Tel: (415) 644-1325

M-F, 9:00 am-5:00 pm (PST)

Unconditional 30-day money-back guarantee.

### Ordering

MicroPhone II is available at all major Apple dealers, or contact Software Ventures at:

(800) 336-6477 ext. 123 (US)  
(800) 336-3178 ext. 123 (CA)

### Tips & Techniques

1. Use the same icon for similar functions on different services. Use Watch Me to write scripts the first time you log-off; then assign the "log-off" icon to that script.

# ViVa24

## ViVa24m (MNP5)

Computer Peripherals, Inc.™  
667 Rancho Conejo Blvd.  
Newbury Park, CA 91320  
(800) 854-7600

COMPUTER PERIPHERALS, INC.

### Product Overview

The ViVa24 and ViVa24m (with MNP5 data compression), communicate with you and your world! The ViVa's ergonomic "tower" design allows for easy viewing of the status icons, from any angle. At a glance, these easily-recognized symbols keep you informed while your data is transmitted or received. All ViVa modems occupy 65% less space than conventional modems and have a unique look you'll be proud to display.

Each modem includes the new Quicklink communication software and a free CompuServe offer! The new ViVa modem represents innovation—the internal integrity, size and shape add up to the most reliable, contemporary and stylish modem available today!



### Features

- 100% Hayes compatible
- 2400, 1200, 300 bps
- MNP 5 data compression
- CCITT V.22 bis, V.22, V.21, Bell 212A and 103
- Asynchronous transmission
- Adaptive equalization
- Self-diagnostic testing

### Technical Support

Tel: (800) 854-7600  
M-F, 8:00 am-5:00 pm (PST)

### Ordering

Suggested Retail Prices:  
ViVa24—\$299  
ViVa24m (MNP5)—\$399

**Required: Any Macintosh computer.**

**Suggested Retail Price: \$299**

**Model: ViVa 24**

**Contact: (800) 854-7600**

## Technical Short



**Ever wondered what mode is the right mode for your modem?**

**Bandwidth:** a measure of the useable area of a (telephone) line for sending signals.

**Baud:** a measure of how many times per second a signal modulates (or changes). Each change encodes data, from 1 to 4 bits.

**Bits Per Second (BPS):** a measure of the amount of information that is being sent, indicating the speed of a data transfer.

**Error Detection/Error Reduction:** software procedures that attempt to minimize or correct errors in data transmission that occur because of other "noise" on the telephone lines.

**Fax Modem:** a special type of modem for a computer that imitates the action of a fax machine, allowing the computer to send and receive files between other computers and Group 3 fax machines.

**Full Duplex/Half Duplex:** full duplex modems send and receive information simultaneously; in a half-duplex setup, one modem sends, and the other one waits before sending in return.

**Kermit:** a communications protocol with good error-checking procedures often used to link personal computers to mainframes.

**Modem:** a computer peripheral that modulates computer digital signals into analog signals transmittable over phone lines, then demodulates signals into digital signals understandable to a computer. This device (and process) allows computers to send information to each other over phone lines.

**Parity:** a procedure for detecting errors in data transmissions between modems.

**Protocol:** the rules that modems follow in sending information to each other.

**Terminal Emulation:** software or hardware that allows a computer to imitate the actions of a particular type of computer terminal.

**TTY:** a basic terminal type, also known as Teletype, that handles text-only, line by line.

**VT52, VT100:** more sophisticated terminals, designed and built by Digital Equipment Corporation (DEC).

# The Keys To Connectivity

**T**he key to productivity is connectivity," says Romel Solis, Network Manager for *MacUser* magazine. "A Macintosh alone is great. But Macintoshes working together is far greater, even if it means you start with a couple of wires dangling from the ceiling or under the rug. Connectivity is the key to the growth of the Macintosh."

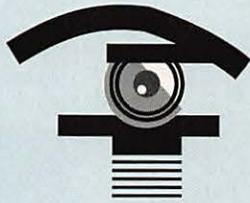
When you examine networking needs for a company, Solis suggests that you ask, "How committed are you to electronic technology? How close to the cutting edge do you like to be?" Networking technology is changing rapidly and sometimes can be very expensive to implement.

"There is an evolutionary quality to the Macintosh. There are continually new technologies, and networking technology won't, and musn't, stop. As it evolves to its infinite limit, you have a choice; to wait in line, be prudent, see what happens with it and choose to implement it in a conservative way, never taking full advantage of what is possible with the Macintosh. Or, you can participate in the change; go to 'the edge.' Spend money with the awareness that change is imminent."

An example of a small company that employed a simple network to do a massive amount of work is the ComputerWare retail computer chain in California. Their initial network consisted of a Macintosh Plus, operating as a file server, connecting the operations at three stores. This cleverly-configured system tracked all their invoicing. ComputerWare's current network has grown to accommodate several more stores and now operates from a DEC VAX mainframe computer, handling everything from sales to inventory to billing.

All networks, regardless of their size or complexity, require some management. They need routine file backup, clean-up of hard disks, virus prevention and regular hardware maintenance. As work demands increase, response times may begin to decrease. If you don't monitor the activity and prepare to modify the system, network participants will become disillusioned and may no longer be as productive with the system. Hard disk capacity must then be increased. In addition, you may need to isolate high traffic areas with devices called routers, so that low traffic areas aren't overrun with unnecessary work. Wiring becomes tricky as you increase the hardware to be connected, and will probably require consultation with experts. In addition, if your intent is to integrate a Macintosh network with other computer systems, additional hardware, gateways that act as translators between different kinds of networks, will need to be acquired.

Solis concludes, "Every time you make a move, give it some thought. Don't let a 'runaway' network evolve. Consider what you're going to need to do with your investment dollars. I want people to create viable networks and increase their Macintosh productivity to the limit."



**It takes  
commitment  
to keep your  
network  
running in  
the fast  
lane.**



**Interview with  
Romel Solis  
MacUser  
Foster City, CA**

# GatorBox

Cayman Systems, Inc.  
26 Landsdowne Street  
Cambridge, MA 02139  
(617) 494-1999

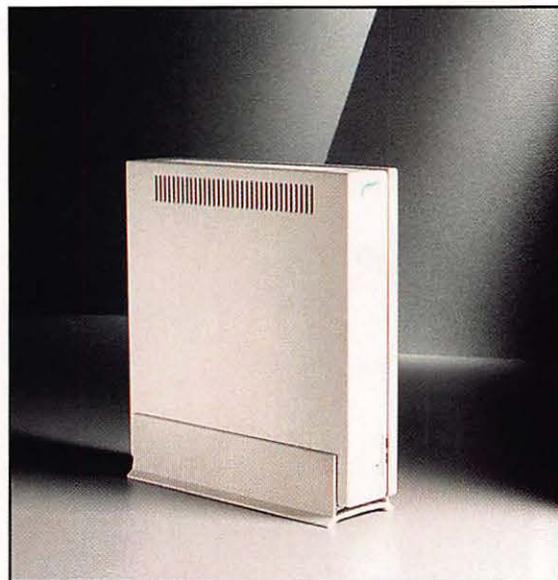


## Product Overview

The GatorBox,<sup>®</sup> Cayman Systems' AppleTalk-Ethernet gateway, connects an entire Macintosh network to Ethernet. It lets Macintosh computers on AppleTalk communicate with DEC, Unix, and PC computers on Ethernet.

The unique feature of the GatorBox is its ability to be upgraded to a file-sharing and printing gateway using GatorShare and GatorPrint software. GatorShare and GatorPrint run on the GatorBox, eliminating the need for additional communication software on any computers in the network.

The GatorBox itself lets Macintosh computers on AppleTalk and Ethernet communicate and share printers. It also supports TCP/IP so Macintosh users can log into Unix hosts. Communications software that uses AppleTalk or TCP/IP protocols can also be used for file transfer, printing, and other services.



## Features

- AppleTalk-Ethernet gateway
- AppleTalk routing for printer and e-mail sharing between Macintosh computers
- Support for popular networking software from TOPS, Pacer, Alisa, and others
- Full support for AppleTalk and TCP/IP protocols
- Easy file service using GatorShare (AppleShare-NFS gateway software)
- Printing from Berkeley Unix hosts to PostScript printers using GatorPrint
- Support for SNMP-based networking applications
- Wide area connection of AppleTalk networks via TCP/IP backbone with filtering to manage network growth
- NCSA Telnet software included

## Reviews and Awards

Digital Review Target Award nominee, 1989

*DEC Professional* (6/89)

## Technical Support

Tel: (617) 494-1999

M-F, 8:00 am-5:00 pm (EST)

Free for first year.  
One year hardware warranty.  
Overnight replacement in case of defect.

## Ordering

For more information, contact Cayman Systems at: (617) 494-1999

## Tips & Techniques

1. Store Macintosh files on Unix workstations using GatorBox with GatorShare.
2. Transfer files between Macintoshes on LocalTalk and PCs on Ethernet using AppleShare PC and GatorBox.
3. Connect Macintosh networks with VAX/VMS networks using GatorBox and AlisaShare.

**Compatible: LocalTalk, thick or thin Ethernet; AppleTalk or TCP/IP networking software for Macintosh, PC, DEC, Unix computers.**

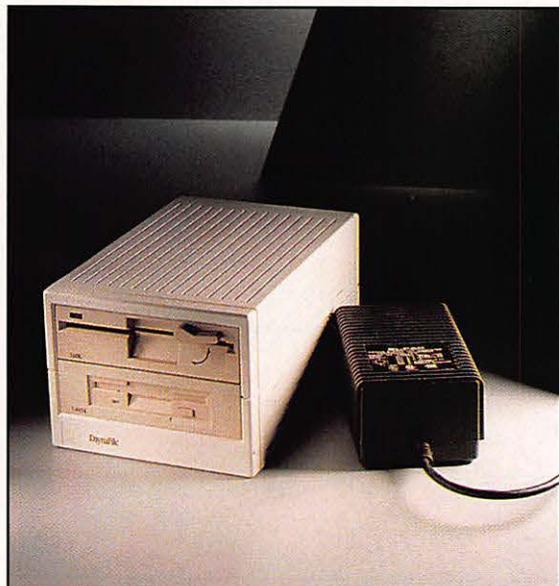
**Suggested Retail Price: \$2795**

**Contact: (617) 494-1999**



Dayna Communications  
50 South Main Street, Fifth Floor  
Salt Lake City, UT 84144  
(801) 531-0203

# DaynaFILE

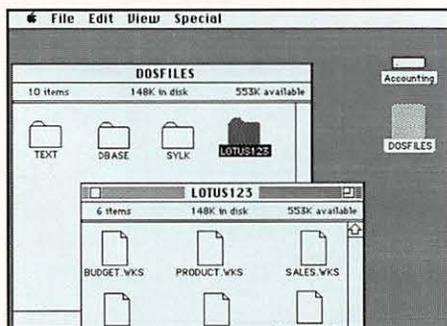
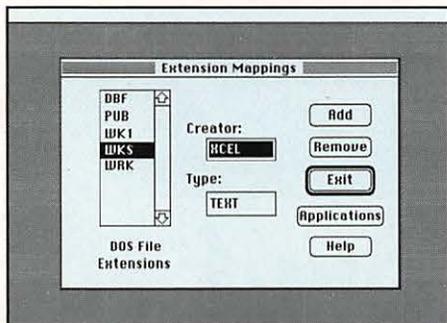


## Product Overview

DaynaFILE™ is an MS-DOS compatible floppy disk drive that allows any Macintosh computer with a SCSI port to read from and write to MS-DOS and Macintosh FDHD disks. As a single or dual-drive unit, DaynaFILE can be configured with any of the following MS-DOS disk drives: 5.25" 360K and 1.2 Mb, 3.5" 720K and 1.44 Mb.

DaynaFILE supports the Macintosh file system, so MS-DOS disks and files appear on the desktop as disk icons, folders and documents. All the familiar Macintosh "point and click" techniques then apply to manipulating the disks and the data they contain.

Macintosh applications, such as Microsoft Excel, that recognize MS-DOS formats can open and edit MS-DOS files directly off the disk. DaynaFILE's Extension Mapping™ feature links MS-DOS file extensions to Macintosh applications, so a file can be opened by simply double-clicking on its icon.



**Required: Macintosh 512Ke or greater.**

**Compatible: MultiFinder; Macintosh FDHD disk format.**

**Suggested Retail Price: \$650**

**Contact: (801) 531-0203**

## Features

- DaynaFILE fully supports the Macintosh Finder—a disk in DaynaFILE appears on the desktop and is instantly accessible; no file transfer application is needed
- Only DaynaFILE makes MS-DOS data look and behave like Macintosh folders and documents; Macintosh users can access MS-DOS files without any knowledge of MS-DOS applications and techniques
- Compatible with the Macintosh FDHD disk format, DaynaFILE lets any Macintosh with a SCSI port read and write to Macintosh high-density (1.44 Mb) disks

## Tips & Techniques

1. The 1.44 Mb DaynaFILE drive also reads 720K MS-DOS disks.
2. DaynaFILE can store Macintosh files and applications on MS-DOS disks.
3. Use Dayna Translation Software to convert incompatible MS-DOS file formats.

## Reviews and Awards

*MacUser* Eddy Award 1987

*MacUser* 5 mice (10/89)

*Macintosh Buyer's Guide* (Summer 88)

## Technical Support

Tel: (801) 972-2000

M-F, 9:00 am-4:00 pm (MST)

Standard 90 day warranty; optional 1 year warranty available.

## Ordering

For more information, contact Dayna Communications at: (801) 531-0203

# Netway Family

Tri-Data Systems, Inc.  
3270 Scott Boulevard  
Santa Clara, CA 95054  
(408) 727-3270

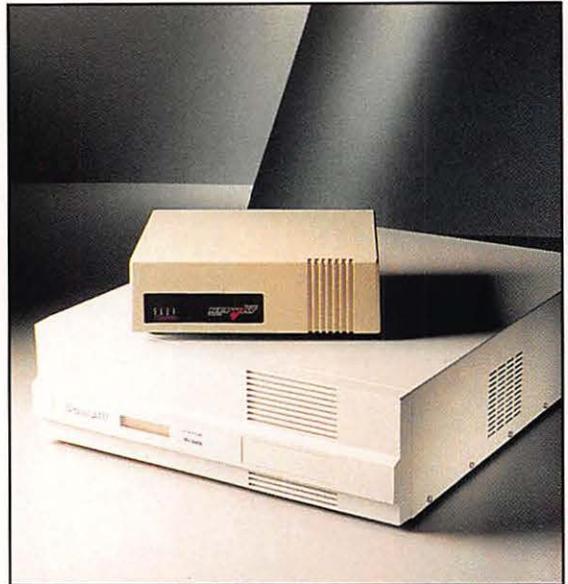
**TRI-DATA**  
Systems, Inc.

## Product Overview

The Netway® Family of 3270 SNA gateway products is the ideal solution for providing LocalTalk, Ethernet or Token Ring networks with direct access to an IBM mainframe, without the need for costly emulator boards and cabling for each node. Emulating an IBM 3174 controller, the Netway Family provides full 3278/9 terminal emulation, remote 3287 printing, and Extended Color and Attribute Byte (EAB) support. The Apple-compatible 3270 API and HyperCard API support host front-end applications.

The Netway 1000 series, via LocalTalk and EtherTalk, supports up to 16 sessions (up to 8 sessions on the Macintosh), accessing the main-frame at speeds of up to 19.2 Kbps.

Using the 10 MIPS SPARC CPU, the Netway 2000 series supports up to 64 sessions, four serial ports, and LocalTalk, Ethernet and Token Ring interface adapters. The ports allow the user to choose any of three interfaces, including LocalTalk, RS-232, and an optional 56 Kbps V.35.



## Features

- Access to multiple IBM mainframes or multiple lines to a single mainframe
- Support for up to 64 simultaneous sessions, at \$160 to \$250 per session
- IND\$FILE and proprietary file transfer for universal file exchange
- Apple-compatible, and HyperCard API support host front-end applications
- "Virtual" light pen support
- 3287 printer emulation to any Macintosh printer
- Support for IBM terminal models 2 through 5
- No special interface cards or emulator boards needed
- Both Macintoshes and PCs can gain access to mainframes through the same gateway

## Tips & Techniques

1. Use Netway 2000 as your network router.

## Reviews and Awards

*MacUser* Best Business Connectivity Product (2/88)

*Macintosh Buyer's Guide* (Winter 1990)

*Apple Networking & Communications Guide* (Summer 1989)

## Technical Support

Tel: (408) 727-3270

M-F, 7:30 am-4:30 pm (PST)

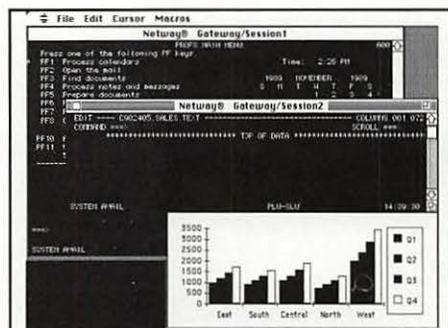
120 day standard warranty

Extended Support, including free updates, discounted upgrades, 1 year warranty, and toll-free support:  
Netway 1000—\$595  
Netway 2000—\$1,695

## Ordering

For more information contact Tri-Data Sales Group at (408) 727-3270 (US) or McKenzie Brown, Ltd. at (416) 821-9222 (CAN)

Suggested Retail Price:  
Netway 1000—\$3,995  
Netway 2000—\$9,995



**Required: Macintosh 512Ke and greater with System 5.0 or higher; or PC/AT and compatibles with DOS 3.1 or higher.**

**Suggested Retail Price: \$3995**

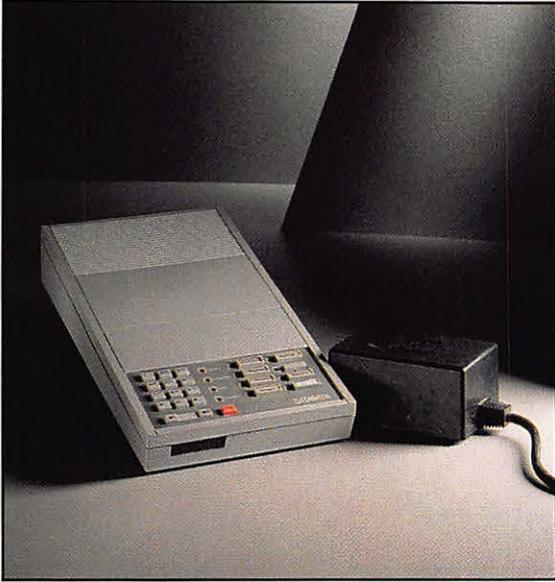
**Version: 1000**

**Contact: (408) 727-3270**



Northern Telecom, Inc.  
P.O. Box 13010, Dept. 3207  
Research Triangle Park, NC 27709  
(919) 992-5000

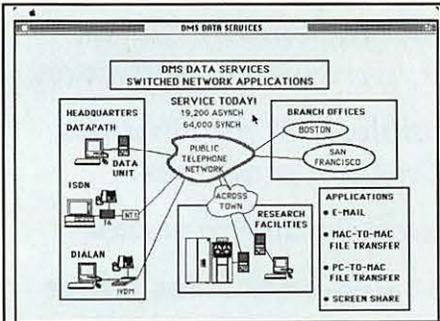
# DMS Data Services



## Product Overview

Northern Telecom's DMS Data Services is a family of fully digital products that provides Macintosh users with enhanced data communications capabilities. Whether you want to connect Macintosh systems with a corporate mainframe, a minicomputer, or with each other, DMS Data Services provides you with fast, manageable, cost-effective access. These services are offered by your local telephone company, in conjunction with a Northern Telecom DMS-100, which provides telephone services to business and residential customers. The services may be offered as part of a Meridian Digital Centrex or CO-LAN service, or they may be offered separately. Request DMS Data Services, to take advantage of the alliance between Northern Telecom and Apple Computer.

Whether you need AppleTalk LAN bridging, Macintosh-to-host, Macintosh-to-Macintosh or Macintosh-to-PC links on a local, regional, or nationwide basis, NT's Datapath, DIALAN, and ISDN products provide fully tested, proven solutions to your data communications requirements.



**Compatible: All Macintoshes;  
PCs; AppleTalk.**

**Suggested Retail Price: Call**

**Contact: Your local telephone  
company**

## Features

- Up to 19,200-bps switched asynchronous access (Solana, SmartCom, MacTerminal, Macintosh 3270, and others); and up to 19,200-bps switched or dedicated synchronous support (Netway 1000, WallData, and others)
- Hayes dialing compatibility or simple Hayes-to-NT dialing translations
- "Secure" access via authorization and account codes, and other Centrex features
- "Hunt group" support for cost-effective use of incoming lines
- Speed Calling, Auto Line, and Ring Again features to promote improved user productivity
- Switched MacIRMA connections
- Tested connectivity between Macintosh systems, between Macintosh LocalTalk networks, and between Macintosh Systems and PCs, mainframes, and minicomputers for nationwide networking capability

## Technical Support

Available through local telephone companies and Northern Telecom Customer Services.

## Ordering

Please contact your local telephone company for availability and pricing in your area.

Copies of the *Macintosh to Meridian Data Services Connectivity Guide* are available by contacting Northern Telecom at: (919) 992-5412

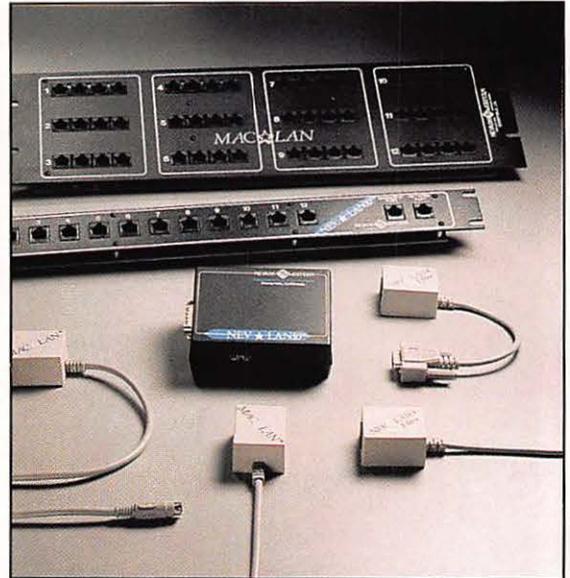
# Nevada Western LAN Connectivity Products

Nevada Western  
615 N. Tasman Drive  
Sunnyvale, CA 94089-1950  
(408) 734-2400

## Product Overview

Nevada Western's LAN (local area network) connectivity products provide the ability to create various types of computer networks using unshielded twisted pair (UTP) wiring, a less-expensive option to other, more traditional wiring systems.

Create AppleTalk LANs with MAC\*LAN.<sup>™</sup> The combination of a star topology and UTP wiring results in a low-cost and highly reliable network that's flexible enough to provide for easy changes or moves. MAC\*LAN can run AppleTalk and the faster FlashTalk, and provides an efficient means for small workgroups to connect to larger corporate computer environments. Build industry-standard IEEE 802.3 Ethernet networks with NEV\*LAN<sup>™</sup> 10—its star topology, UTP wiring, and on-board physical layer network management are an inexpensive and reliable wiring alternative. There's also a solution for industry-standard IEEE 802.5 Token Ring networks—NEV\*LAN 4, which supports UTP and IBM Type 1 and 2 shielded wiring.



## Features

### MAC\*LAN:

- Balun and panel compatible with all Macintosh and AppleTalk systems
- Connects to Macintoshes and PCs with DIN or DB9 interfaces
- MAC\*LAN panel supports up to 48 connections
- Works with Farallon Computing's PhoneNet StarController switching circuit

### NEV\*LAN 10:

- 10 Mbps on UTP wiring
- Full IEEE 802.3 10BASE-T features and multiport retiming repeater
- 12 port hub, expandable to 144 stations per backbone connection
- Built-in, microprocessor-based network management
- Distances of up to 100 meters (328') from transceiver to hub

### NEV\*LAN 4:

- Compatible with IEEE 802.5 Token Ring standard and IBM's Token Ring Multi-station Access Unit 8228 and Type 3 media filter products
- 4 Mbps on UTP and 16 Mbps on Shielded Twisted Pair
- Connects to Macintoshes and PCs

## Technical Support

Tel: (408) 734-2700, ext. 331

1 year warranty.

## Ordering

For more information, contact the regional sales offices of Nevada Western:

Western: (800) 828-9287

Midwest: (800) 247-5370

Eastern: (800) 542-6895

**Required: Macintosh Plus or greater; networking software.**

**Compatible: IBM mainframes and PCs; Unix machines.**

**Suggested Retail Price: Call  
Contact: Regional Sales Office**



KMW Systems  
6034 W. Courtyard Drive, #100  
Austin, TX 78730  
(512) 338-3000

# NetAccess

## Product Overview

NetAccess™ is the gateway that connects AS/400 and System/3Xs to AppleTalk Macintoshes. Just plug the NetAccess NuBus card into any Macintosh II, install the NetAccess software, and you're ready to integrate IBM data on any Macintosh on your network.

NetAccess installs in minutes, and because it runs in the background, your Macintosh is free for other uses. The NetAccess hardware is a half-size NuBus card which works in any Macintosh II NuBus slot and installs in just minutes.

With the NetAccess card installed, the Macintosh appears like a terminal to your IBM midrange and allows other Macintoshes, such as the Macintosh Plus or SE, to talk to the IBM midrange as if it were directly connected to the twinax line, thus utilizing existing AppleTalk network cabling instead of installing custom wiring to all Macintoshes. NetAccess also includes a complete terminal emulation program.



**Required: Macintosh II family; System 6.0.3 or higher; AppleTalk network; IBM AS/400 or System 36/38; a file transfer utility (on host) for transfer of disk files.**

**Suggested Retail Price: \$3995**

**Contact: (800) 531-5167**

## Features

- AppleTalk connection to your IBM AS/400 or System/3X
- Use of your existing LocalTalk, EtherTalk or TokenTalk cabling
- HyperCard interface allows transparent database access
- Simple file transfer access to your host's mass storage capabilities
- Use your Macintosh as an IBM terminal
- Use a LaserWriter or ImageWriter as an IBM System 3X printer
- Works with MultiFinder, AppleShare, electronic mail packages, and many other Macintosh networking products

## Technical Support

Tel: (800) 531-5167

M-F, 8:00 am-6:00 pm (CST)

1 year warranty

## Ordering

NetAccess is available from KMW Systems at (800) 531-5167

## Tips & Techniques

1. Use NetAccess to store Macintosh files and applications on your IBM midrange.
2. Use NetAccess for IBM midrange database access.

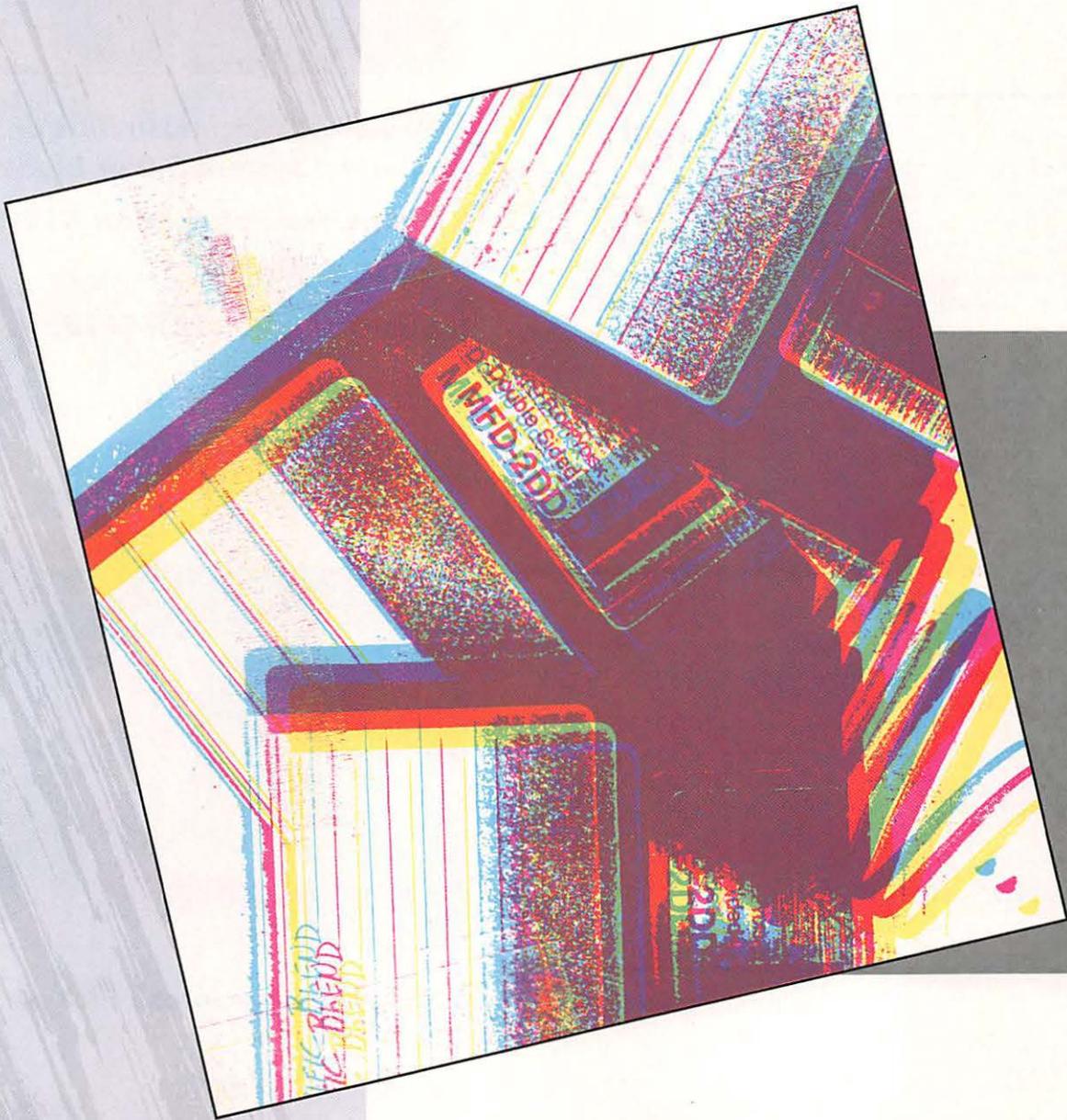
# Utilities



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**T**his book is a testament to the exciting, powerful, versatile software that has the whole Macintosh community buzzing. But this section is devoted to software that you might not have heard of before, software that can increase your productivity as much as some of the better known products. The Macintosh community has spawned a multitude of utilities—print utilities, file recovery applications, virus protection software, automated backup software. They come in all shapes and sizes, but share one thing in common—they make working on the Macintosh easier, better and more satisfying.

*In the rush to try out the latest desktop publishing or database applications, we forget about utilities, software with just one purpose—to improve the quality of our Macintosh working life.*



# MacEnvelope

Insight Development Corporation  
2200 Powell Street, Suite 500  
Emeryville, CA 94608  
(415) 652-4115

## Product Overview

MacEnvelope is the premier envelope-printing utility for the Macintosh, providing for the easy addressing of envelopes and labels using any Apple or HP printer (connecting with MacPrint). Graphics, message files, Bar and OCR coding give this software package a unique capability to customize mailings with the power and flexibility of a database.



## Features

- Address envelopes and labels quickly and easily on a wide variety of printers
- Full Macintosh application/Desk Accessory with graphic capability
- Import and export mailing lists

## Technical Support

Tel: (415) 626-9558

## Tips & Techniques

1. Take advantage of the import/export database capability for mass mailings.

**Required: Macintosh Plus or greater; System 5.0 or higher.**

**Suggested Retail Price: \$129**

**Version: 5.0**

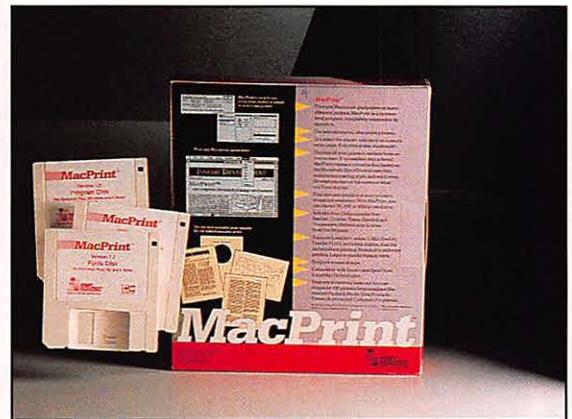
**Contact: (800) 825-4115**

# MacPrint

Insight Development Corporation  
2200 Powell Street, Suite 500  
Emeryville, CA 94608  
(415) 652-4115

## Product Overview

MacPrint® is a utility program that lets users print on a wide variety of HP (PCL) printers, including the new HPLaserJet III printer, from their Macintosh printer. MacPrint will also increase print quality without investing in additional hardware. MacPrint is designed to be compatible with all Macintosh programs, and can print to such printers as the HP LaserJet series II, IID, IIP, and III; DeskJet, DeskJet and compatibles; Diconix 150+; and the Epson EPL 6000 printers.



## Features

- Translates QuickDraw to PCL
- Compatible with most HP printers
- Transparent, Chooser-level driver
- Display printer and cartridge fonts on screen
- Compatible with ATM

## Technical Support

Tel: (415) 626-9558

## Tips & Techniques

1. Use font cartridges from HP, PDP, Everex, Anacom, IQ Engineering and Computer Peripherals.

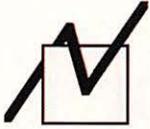
**Required: Macintosh Plus or greater.**

**Compatible: ATM.**

**Suggested Retail Price: \$149**

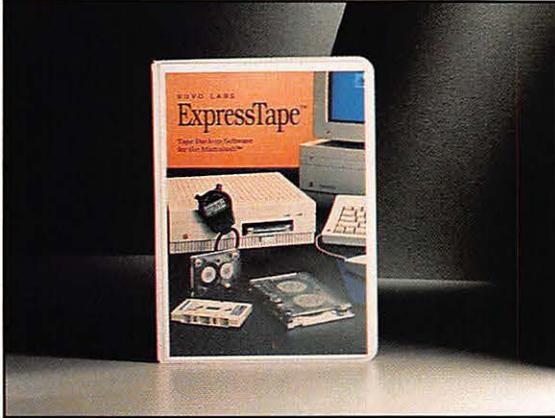
**Version: 1.3**

**Contact: (800) 825-4115**



Nuvo Labs  
245A Tank Farm Road  
San Luis Obispo, CA 93401  
(805) 544-5766

# ExpressTape



**Required: Macintosh Plus or greater; 1 Mb RAM; System 4.2 or higher.**

**Suggested Retail Price: \$149**

**Contact: (805) 544-5766**

## Product Overview

ExpressTape is a practical software upgrade for your tape backup system, providing the fastest, most reliable and convenient backups available. ExpressTape is sold with more tape drives than any other backup software. ExpressTape works with all popular tape backup systems, including those made by TEAC, Tandberg, 3M, Braemar, Tallgrass and others. ExpressTape effectively quadruples the speed and performance of the Apple 40SC tape drive. And it reads Apple-created tapes for true compatibility. Automatic error-correction, plus a verify command, insure data integrity. Avoid time-consuming and cumbersome backups with ExpressTape's single-click, full or incremental operations. Advanced features include: enhanced SuperScript™ files for automated file selection; delayed backups for network fileserver support; SCSI partition backups for A/UX; password protection for sensitive data; and on-line help.

## Features

- Fastest file-by-file, mirror image, and incremental backups available
- One-button, full, or incremental backups
- Unattended backups of multiple volumes; selectable volume backups
- Multiple backups on each tape; unlimited size backups using multiple tapes
- Reviews  
*Macworld* (12/89)  
*MacUser* (12/89)

## Technical Support

Technical support is available to registered owners:  
(805) 544-5766

## Tips & Techniques

Plan your backups for the end of the day by using the Shut-down After Backup feature. Select "Back up all files," and click the "shutdown" option. ExpressTape will automatically back up your volume and shut down your Macintosh.

## Technical Short



**Is it a backup or a back up?**

**Backup:** a copy of a disk or of a file on a disk. It's a good idea to make backups of all your important disks and to use the copies for everyday work, keeping the original in a safe place.

**Back up:** to make a spare copy of a disk or of a file on a disk. Backing up your files and disks ensures that you won't lose information if the original is lost or damaged.

**File-by-file backup:** a type of backup that allows you to select files individually or by association with their folders.

**Full backup:** a backup of all the files and folders on a hard disk.

**Incremental backup:** a backup of only those

files on a hard disk that were created, modified, or copied on the disk since the last backup.

**Mirror image backup:** a type of backup that makes an exact copy of a volume, block by block, regardless of whether the block contains information.

**Restore:** the process of translating files from tape, or other media, and duplicating them back on the hard disk in their original form.

**Script:** the automatic recording of choices made while backing up or restoring.

**Session:** A set of files backed up to tape.

**SuperScript:** A list of files and instructions, launched from the desktop, specifying the files you want to back up or restore.

## An Information Investment

**A**s you begin to accumulate and analyze more data—especially if you're storing it on a hard disk—the need to back up and secure that data becomes more and more important. Hard disks and other magnetic storage media—floppy drives and tape drives—are fragile, and can break down, which means disaster if you don't have a backup of your data. And the ease of use of the Macintosh makes it susceptible to data theft.



**It's  
important to  
protect your  
valuable  
information  
from theft or  
damage.**

Backing up your data is one of the most important management tasks you face as a user. More and more Macintosh users are relying on hard disks to store their applications and files, and some never consider what might happen if the hard disk were to break down. There are a number of ways in which a hard disk can be damaged, and some or all of its data lost—a disk head crash caused by dust; interference from a strong magnetic field; overheating from too much use; and simple wear and tear on the disk from use. Floppy disks can also be damaged, and though the amount of data on a floppy disk is much smaller than on a hard disk, it may be equally valuable, and should be backed up too.

The solution is simple—make copies of all important files and applications. But deciding on which means to employ is difficult. The easiest method is to back up a hard disk's data onto another hard disk, or similarly large-capacity media, such as a tape drive or Bernoulli box. In some situations, such as the data on hard disk used as a volume on a network, another means such as a tape drive is necessary, and the cost can be justified. But many users with just one hard disk cannot afford these other media, and floppy disks are the only solution.

Whatever the means, a number of vendors provide back up software that, to various degrees, automates the process of creating, and updating, a back up set of data, either on floppies or other media. These programs, when used with floppies, work best the more often you back up—every day is quicker than every week. And if you are particularly concerned about your data, it's advisable to have two back up sets, and alternate between them every few days (or weeks).

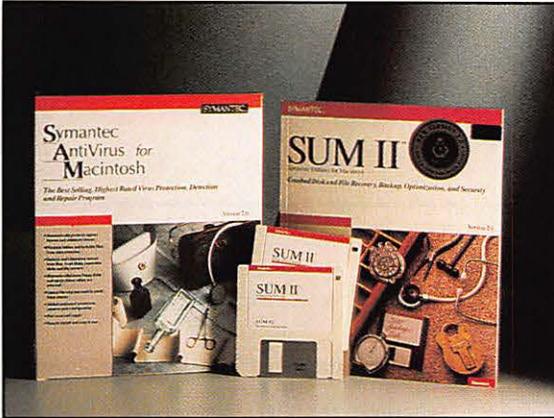
Data security refers to methods, both hardware and software, that allow you to control access to your Macintosh and its data. Hardware solutions actually lock parts of the Macintosh, preventing access to starting or inserting a floppy disk by locking a cover over the drive slot or the power switch, keeping intruders from using the Macintosh in your absence. Software methods are generally of two types—password protection and encryption. Password protection locks a file, folder or hard disk, preventing access to users unless they can type the correct password. However, the files can still be examined with a file- or resource-editing tool, such as Fedit or ResEdit. Encryption, however, actually transposes or scrambles the information, making it unreadable and unusable until the correct password is given, and the data is unencrypted.





Symantec Corporation  
10201 Torre Avenue  
Cupertino, CA 95014  
(408) 253-9600

# SAM SUM II



**SAM: Macintosh 512Ke or greater; System 6.0 or higher.**  
**SUM II: Macintosh Plus or greater; System 4.2 or higher.**

**Contact: (800) 441-7234,  
(800) 626-8847 (CA)**

## Product Overview

Symantec AntiVirus for Macintosh (SAM) is the highest-rated virus protection, detection and repair program for the Macintosh. SAM will prevent both known and unknown viruses from infecting your system. SAM can also repair infected files and applications. SAM gives you the peace of mind that your system is protected by the most advanced antivirus software available.

Symantec Utilities for Macintosh (SUM II) is award-winning data recovery and disk management software for the Macintosh. A comprehensive set of utilities, SUM II will recover valuable data from a crashed hard disk, floppy disk, partition, file server, or even the trash can after it's been emptied.

## Reviews and Awards

SAM *MacUser* Editor's Choice Award 1989  
SAM *MacUser* 5-mice rating (10/89)  
SUM II *MacUser* Editor's Choice Award 1989  
SUM II *MacUser* 5-mice rating (12/89)

## Technical Support

Tel: (408) 253-2167  
M-F, 8:00 am-12:00 pm, and  
1:00-5:00 pm (PST)

## Ordering

Suggested Retail Prices:  
SAM 2.0—\$99.95  
SUM II—\$149.95

## Technical Short



**Proper  
procedures  
can prevent  
viruses from  
infecting  
your files.**

For the past few years, the Macintosh community has lived in a shadow of fear caused by the spread of computer viruses, to such an extent that virtually any problem a user has with his/her Macintosh system is blamed on a virus. In fact, Macintosh users are lucky, in that the viruses that have been discovered have been relatively benign, causing more annoyance and frustration than damage or destruction to information or applications.

Nonetheless, understanding how viruses work, and how to prevent them from infecting your computer and its files, can grant you an important peace of mind.

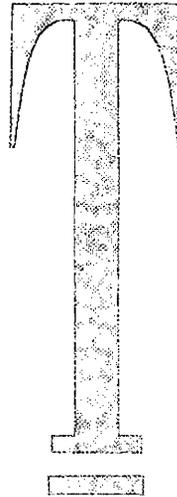
All known viruses in the Macintosh community infect applications and system files only (though a recent strain, known as WDEF, infects the Desktop file of floppy and hard disks). Typically, an infected application is introduced into a system; when the user launches it, it attacks the System and Finder files. From there, it can spread to any application that is started.

Most viruses simply interfere with the normal flow of action on the Macintosh, causing frequent system bombs, especially when starting applications, and disrupt printing. One familiar virus, nVIR, causes the Macintosh to beep every time an application is opened.

Preventing the introduction of viruses into your system is comparatively simple, but requires constant vigilance. Previously, users had to test new software themselves by running it on their system, observing its action and noting any unusual behavior. Now, however, a number of utilities have appeared that assist the user in preventing the introduction of all known viruses. The best of these are made up of two separate programs—an INIT that searches a floppy disk for viruses when it is inserted, before it can infect the system; and software for eliminating viruses from applications and system files. But the best defense is to back up your applications and data, so that if a virus is found, you can replace infected files. The surest way to clean your system is to discard infected files and replace them with new ones.

# Hardware

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he power, versatility and ease of use of the Macintosh has engendered high expectations on the part of Macintosh users. They expect inexpensive and fast mass storage; resourceful data and graphic entry systems; and impressive printed output.

They expect and demand the very best from Macintosh hardware.

And the hardware meets these demands. More so than perhaps other computers, the Macintosh has made its mark with innovative hardware products—the original Macintosh, the mouse, the low-price LaserWriter laser printer. Hardware options on the Macintosh continue to evolve and innovate, both meeting and setting expectations.



he evolution of Macintosh software has tended towards more power, versatility and complexity, which translates into larger applications and files. The bad news about this trend is that, coupled with the latest System software, few applications can actually run on a single floppy disk drive system. More will work with floppy drives, but for true ease of use and performance, a hard disk drive is required.

The good news is that mass storage devices are becoming less expensive. The most popular choice is the hard disk drive, which is fast, reliable, and relatively cheap. A hard disk drive can be an external unit that plugs into the SCSI (Small Computer Serial Interface) port in the back of the Macintosh, or an internal unit that's installed inside the computer itself, and is available in sizes from 20 Mb to 1 Gigabyte (1,000 Mb).

In choosing a hard disk, three factors should be weighed: access time (the speed with which it can actually retrieve information); price per megabyte; and reliability. Buyers often focus exclusively on the first two, in spite of the fact that the last, reliability, is in many ways the most important quality in a hard disk. Users tend to put all of their data and applications on a hard disk, leaving themselves vulnerable to any breakdown of the hardware. A hard disk is, in some ways, a fragile magnetic media susceptible to damage at any time;

evaluating the reliability of the drive, which does vary from manufacturer to manufacturer, is an important step to protecting your data and applications.

The best bet is to back up the data onto another media, such as floppy disks, another hard disk, or a tape system. A tape system, which stores files and applications on tape, either cassette, video, or Digital Audio Tape, is slower than a hard disk; it's not appropriate for constant access, like a hard disk, but is perfect for archiving (backing up) important data and applications. Large amounts of information can be stored on one tape, which are a stable media with a long shelf-life. And a tape system is removable; pull out the full tape, and replace it with a new blank one.

## ***From Mind To Machine***

As useful and as fun as the Macintosh can be, the real work lies in getting the information into the computer. The standard input devices for the Macintosh, the keyboard and the mouse, are now being augmented by the trackball and the graphics tablet. These devices use the Apple Desktop Bus to connect to the computer. Other devices, such as scanners and digitizers, connect via the modem or SCSI port to transmit pages of graphics or text.



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*The ability to render an image at the best possible resolution provides the Macintosh with a distinct advantage in output technology. Transparent connection to a wide variety of imagesetters adds versatility to the Macintosh's output.*



Scanners and digitizers convert a photograph or drawing into a digitized format that can be manipulated by the Macintosh. Operating on the same principle as a plain paper copier, a scanner can create an electronic image of a drawing or photograph, which you can then manipulate with image-processing software, place in a desktop publishing program, crop or enlarge, and then print out. The original scanning technology was limited to black and white images only; but the latest generation of scanners are able to detect and transmit gray-scale or color information for higher-quality resolution of images.

Some scanners can be used in conjunction with Optical Character Recognition (OCR) software to convert printed documents into an unformatted text file, rather than a graphic image. Instead of retyping a letter, you can create a scanned image that can be edited by word processing software. OCRs, however, may be limited in their recognition of specific fonts; the technology is still a new and developing one.

An interesting branch of scanning technology is devices that can tap into and capture video images. This device, connected to a live video camera or VCR, will convert a single frame into a graphic image and send it to the computer for manipulation in a graphics application.

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### ***It's Black And Read All Over***

The advantage of Macintosh printing technology is that it is based on PostScript, a device-independent page description language. PostScript stores graphic images as mathematical descriptions that can be sized large or small without losing any of the detail of the image. In addition, PostScript automatically outputs an image at the highest possible resolution for each printing device.

This ability to render an image at the best possible resolution provides the Macintosh with a distinct output advantage. A Macintosh can be connected directly to an imagesetter, a sophisticated printing device that images output on either photo-sensitive paper or film at resolutions as high as 2540 dots per inch (compared to the LaserWriter's 300 dpi). No special modification or translation of the output is necessary on the part of the user; standard desktop publishing and graphics packages will print directly to the imagesetter, provided the application has the necessary printer drivers.

The color Macintosh II has touched off another advance in printing technology, in the field of color output. Imagesetters can print color separations directly to film, ready for the printer; many of the popular software packages now support color separations (even on a black and white Macintosh). Color thermal printers and color film recorders (which produce 35-mm slides) have also introduced bright, vibrant output to the Macintosh community; and even more exciting developments are predicted.



**WIZ**

CalComp, Inc.  
 2411 W. La Palma Avenue  
 Anaheim, CA 92801  
 (714) 821-2000

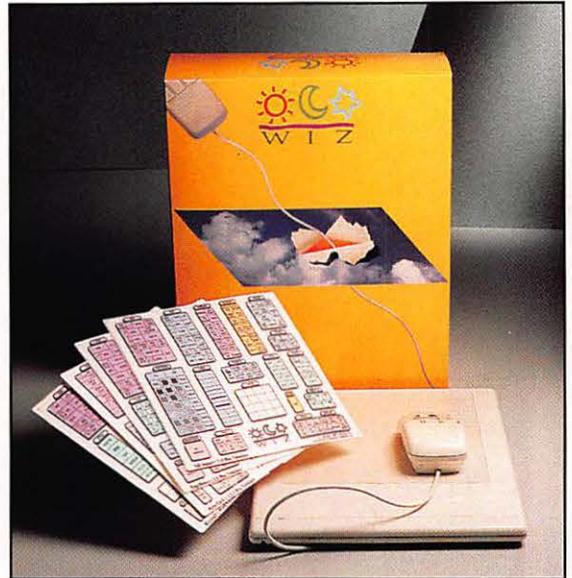


## Product Overview

WIZ™ from CalComp—one of the world's leading providers of alternate input devices—is the first mouse system to combine the easy-to-use features of a traditional computer mouse with the power of an intelligent graphics pad. The versatile, low-priced WIZ is a precise pointing and drawing tool for electronic publishing, graphic design, office automation and CAD applications.

Unlike a traditional one-button mouse, WIZ has three rocker buttons that let you program four different functions. It also has no mechanical parts, so it's more reliable.

Available for the Macintosh version of WIZ are 18 application templates for the leading software packages from WordPerfect, Aldus, Microsoft, Claris, Quark, Ashton-Tate, and Computer Associates. These optional color-coded templates call out menu commands on the intelligent pad, eliminating the need to scroll through endless menus or remember obscure keyboard commands.



## Features

- Smooth and easy operation
- Pinpoint accuracy, with precise tracking, 1000-dpi resolution, a cross-hair window on the mouse, and absolute mode selection for tracing and drawing
- High proximity traces through thick documents
- Three programmable click-touch rocker buttons
- Optional application templates for WordPerfect, PageMaker, FreeHand, Word, Excel, PowerPoint, MacDraw II, MacWrite II, QuarkXPress, Full Impact, FullWrite Professional, Cricket Presents
- Optional template builder for creating custom templates
- Adjustable pad scaling for adjusting pad to screen aspect ratio
- Intelligent pad interface to Apple Desktop Bus (ADB)
- Optional 2-button pen
- Intelligent pad's small footprint—just 9.5" x 11.8"

## Reviews and Awards

- PC Publishing* (3/90)  
*InfoWorld* (2/5/90)  
*InfoWorld* (2/26/90)  
*Modern Electronics* (3/90)

## Technical Support

- Tel: (800) 458-5888  
 M-F, 7:30 am-4:30 pm (MST)  
 5 year warranty

## Ordering

WIZ is available through dealers, or contact the CalComp WIZ hotline at: (800) 458-5888

Suggested Retail Prices:  
 Application template—\$49  
 2-button pen—\$75

**Required: Macintosh SE or greater.**

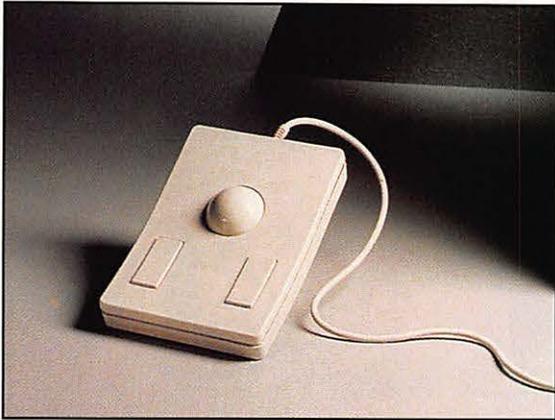
**Compatible: MultiFinder.**

**Suggested Retail Price: \$249**

**Contact: (800) 458-5888**



Lynx Computer Products  
120 Linden Avenue  
Long Beach, CA 90802  
(213) 590-9990



## Lynx Turbo Trackball

### Product Overview

It has twice the speed—twice the accuracy—half the space.

Lynx Turbo Trackball provides fast and concise control of your cursor and requires less of your valuable time to accomplish your goals.

Lynx Turbo Trackball is a perfect match for all Apple and Macintosh computer systems. From engineering to aesthetics, you won't find a better design.

We are so confident that you will fall in love with our products that we offer a 30 day money-back guarantee and a lifetime warranty! It's perfect for CAD/CAM, desktop publishing and playing games.

**Required: Any Macintosh computer.**

**Suggested Retail Price: \$99.95**

**Contact: (800) 321-LYNX**

### Features

- Two-button control system
- Automatic acceleration
- Significant aesthetic value
- Convenient
- Effective
- Affordable
- Teflon seal to protect the ball from dirt and oils

### Technical Support

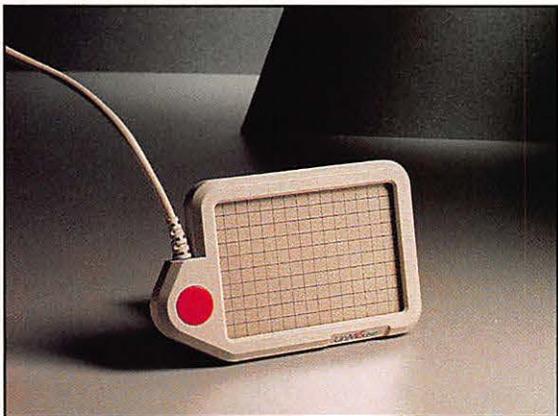
Tel: (800) 321-LYNX  
M-F, 9:00 am-5:00 pm (PST)

### Ordering

For more information, contact Lynx at: (800) 321-LYNX

**MicroTouch®**

MicroTouch Systems  
55 Jonspin Road  
Wilmington, MA 01887  
(800) UNMOUSE



## The UnMouse

### Product Overview

The UnMouse™ is a touch-sensitive glass tablet that does everything a mouse can—only faster and in less space. To move the cursor, simply slide your finger over the glass surface. To make a selection, merely press.

The UnMouse also serves as an extended keyboard. Slide one of the templates (included) under the glass and The UnMouse instantaneously becomes a Power KeyPad™. To execute macros, simply select one of the 16 keys available (60 keys in advanced mode). And with its one million touch points, The UnMouse also serves as a small graphics tablet. Using the UnMouse's stylus, you can draw free-hand drawings, trace, or even sign your name.

**Required: Macintosh SE or greater; ADB port.**

**Suggested Retail Price: \$235**

**Contact: (800) UNMOUSE  
or (508) 694-9900**

### Features

- Absolute mode provides fastest cursor control
- Reliability - no moving parts
- Stationary save space
- No cleaning necessary
- Control panel allows user to select preferred cursor control mode

### Technical Support

Tel: (508) 694-9900  
M-F, 8:00 am-6:00 pm (EST)

### Tips & Techniques

1. Program the Power KeyPad for increased productivity.
2. Trace images under glass.

# MacVision Video Digitizer

Koala Technologies Corp.  
70 North Second Street  
San Jose, CA 95113  
(408) 287-6278

 **Koala**  
Technologies Corporation

## Product Overview

MacVision® is a low-cost and easy-to-use video digitizer system for both hardware and software. It allows images of 3-D objects, such as people, buildings, or equipment, to be captured and then edited, merged with text, printed, and saved as files in a variety of formats. Images can be digitized into your Macintosh directly from a video camera, VCR or laser disc player. Product versions are available for use with NTSC and PAL video output.

MacVision produces images with 256 shades of gray in a format compatible with most graphics programs, making it ideal for graphics, desktop publishing, presentations, inventory databases, personnel files, recordkeeping, and hundreds of other applications.



## Features

- 256 gray shades with 640 x 480 pixel resolution
- File format compatibility includes RIFF, TIFF, EPS, PICT, PICT2 and Paint
- Brightness and contrast manipulation controlled by either hardware or software

## Technical Support

Tel: (408) 287-6311  
M-F, 9:00 am-5:00 pm (PST)

## Tips & Techniques

1. Use Posterizing for high-contrast images.
2. Print to any PostScript or QuickDraw printer.

**Recommended: Macintosh Plus or greater; System 6.0 or higher; 2 Mb RAM; hard drive.**

**Suggested Retail Price:  
\$499.95**

**Contact: (408) 287-6311**

## Technical Short



**Import  
images into  
your  
Macintosh  
with a  
scanner.**

As desktop publications become more visual, and information graphics software allows copy to be supplemented with graphics, some Macintosh users are investing in scanners as a means of importing text and images into the computer.

Scanners operate by measuring the light intensity of a photographic image at various points along the image, then converting the intensity into digital values. An interface board translates these values for the Macintosh system and displays them on the monitor. Gray-scale and color scanners work similarly, except for the number of shades they can detect and the number of passes the scanning machinery makes over the image in order to record each shade. To draw an analogy, a scanner is similar to a copying machine: it looks at and reproduces an image, placing that information in a computer file, rather than directly on paper.

Gray-scale scanners produce varying levels of output quality according to the number of halftones (shades that constitute a range of grays) and the screen ruling, or number of rows of halftones per inch on the image. A process called dithering allows the artist to adjust the percentage of printer dots per halftone on the screen to produce certain patterns and effects.

Color scanning, on the other hand, involves capturing an image according to the primary colors in the Macintosh's color separation system (whether RGB or CMYK) for each part of the image. With CMYK processing, for example, the image lies flat on the scanning table while the scanner fires cyan, magenta, yellow, and black fluorescent light onto a band of the image. Light reflects onto a photosensitive strip, which digitizes it into as many as 256 levels per color, determining the color and sending that information to the computer until each color and each band have been scanned.

Scanning technology continues to improve resolution and output so that scanners are evolving into a more attractive and affordable option for small-scale publishing endeavors.



Howtek, Inc.  
21 Park Avenue  
Hudson, NH 03051  
(603) 882-5200

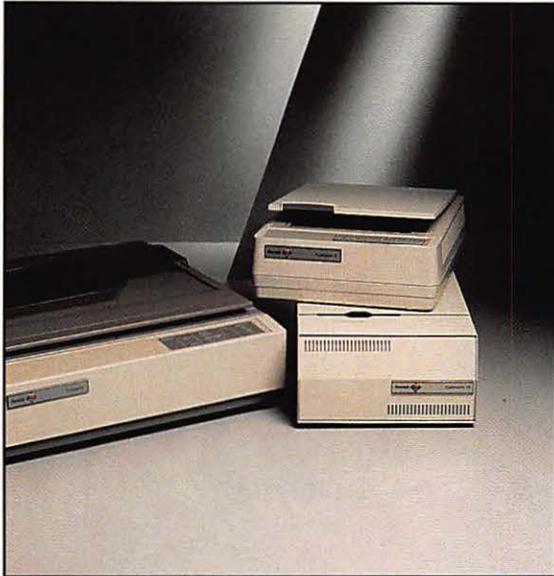
## Howtek Scanmaster Series

### Product Overview

Howtek's Scanmaster™ series of digital color scanners makes high-quality, affordable desktop color scanning a reality. The Scanmaster family includes flatbed and 35mm scanners capable of scanning color and black & white photographs, line art, graphics, or 35mm positives or negatives.

The Scanmaster flatbed series can accommodate reflective or transmissive art of up to 11" x 17" at resolutions up to 300 dpi. The 35mm scanners are capable of scanning slides, mounted, unmounted and strip film. The Howtek Scanmaster family is fully supported on the Macintosh II platform by Howtek's robust MacScan-It applications program. MacScan-It provides you with immediate access to all functions of the scanner.

The Howtek Scanmaster series of professional-quality scanners offer high-resolution, brilliant color images to a busy production environment. Howtek scanners offer the best price/performance solution for the desktop.



**Required: Macintosh II family;  
1 Mb RAM; 40 Mb hard disk.**

**Recommended: 4 Mb RAM.**

**Compatible: 8-bit (or greater)  
color display.**

**Suggested Retail Price: \$6995**

**Model: Scanmaster**

**Contact: (603) 882-5200**

### Features

- Compatible with 32-bit QuickDraw
- 30 to 300 dpi adjustable and selectable resolutions for flatbed scanners
- Up to 2000 x 3000 pixels for 35mm scanning
- Support for 256 levels of gray per color for producing camera-ready images
- Standard 8-bit GPIB interface
- Supported file formats include TIFF, RIFF, PICT2, SIM, VGA, Targa, and Artisan
- Scan-It features include zooming, cropping, color enhancement and global color correction

### Technical Support

Tel: (603) 882-5200

M-F, 8:00 am-6:00 pm (EST)

### Ordering

Available from authorized dealers, or contact Howtek at: (603) 882-5200

Suggested Retail Prices:  
Scanmaster—\$6995  
With Scan-It and GPIB—\$8195

Scanmaster II—\$4995  
With Scan-It and GPIB—\$6195

Scanmaster/35—\$6995  
With Scan-It and GPIB—\$8195

### Tips & Techniques

1. The MacScan-It tutor includes a C print for scanning and easy-to-follow instructions. Once you understand the functions of the software, it's easy to apply the commands to other images.

# Smart Label Printer™

Seiko Instruments USA, Inc.  
PC Products Division  
1144 Ringwood Court  
San Jose, CA 95131  
(800) 888-0817 Ext. 105

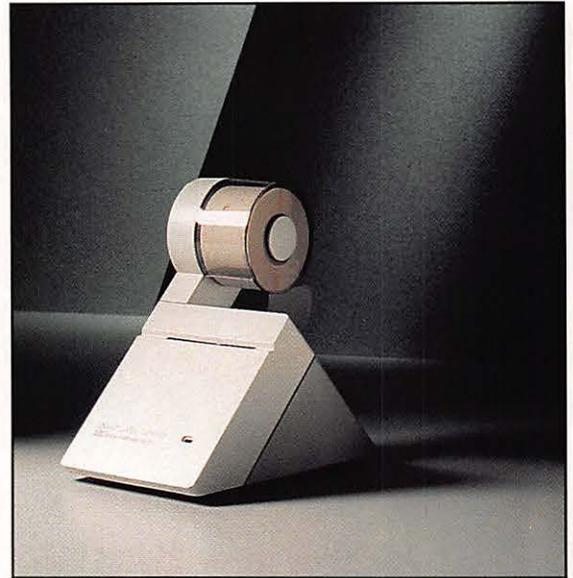


## Product Overview

Until now, you really had only three options for printing labels or envelopes: write them by hand (not very professional looking); do them on a typewriter (slow, inefficient); interrupt your main printer (a real hassle).

The Smart Label Printer offers you a better way. Its software, which works as a Desk Accessory, copies text right off your computer screen, from popular Macintosh word processing, spreadsheet, and database software, and sends it to the small, sophisticated Smart Label Printer. Instantly, you're printing one or more high-quality, self-adhesive labels for envelopes, Rolodex® cards, file folder labels, diskette labels, bar code labels, and more—all without affecting the operation of your main printer.

The Smart Label Printer comes complete with printer, software (with its own database, text editor, bar code generator and more), serial cable, and a roll of 130 ready-to-use labels. The Smart Label Printer uses the finest thermal print technology available, so there are no ribbons, toner or cartridges to replace. The unique software gives you access to labels as you work, without tying up your computer and main printer.



## Features

- Easy-to-use, versatile software captures text from most popular programs
- Prints one or more labels at a time without having to exit your program or interrupt your main printer
- Prints text and bar code labels
- High-quality, non-impact printing for silent operation
- Small footprint: 3.6" W x 6.3" D x 3" H; weighs only 1 lb. 1 oz.
- Label Size—1 1/8" x 3 1/2"

## Reviews and Awards

BYTE Award of Distinction (1989)

Int'l Design Magazine ID Design Award (1989)

Reviewed in *InfoWorld*, *U.S. News & World Report*, *MacWeek*, *Los Angeles Times*, *Washington Post*, *Chicago Tribune* and others.

## Technical Support

Tel: (800) 888-0817

M-F, 9:00 am-5:00 pm (PST)

1 year warranty on hardware

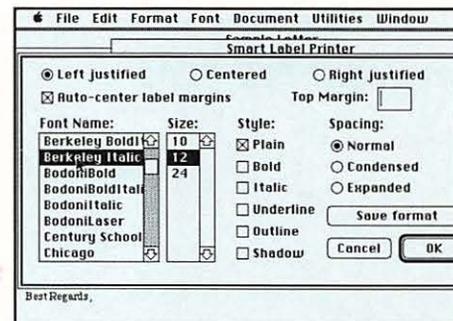
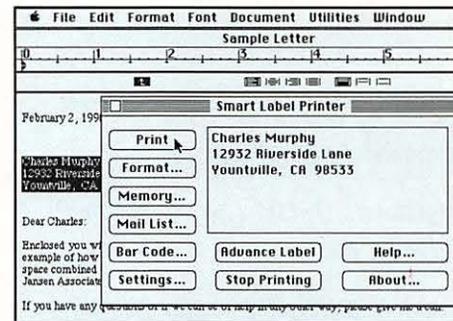
## Ordering

For Seiko Instruments Dealer information call:  
(800) 888-0817, ext. 105

2 rolls replacement labels  
(130 ea)—\$12.95

## Tips & Techniques

1. Store and recall often-used addresses by using the memory function.
2. Store mailing lists as text files that can be recalled by using the list function.
3. Change fonts, size, margins, style and spacing to suit your labeling needs.



**Required: Macintosh Plus or greater; System 4.2 or higher.**

**Suggested Retail Price:  
\$249.95**

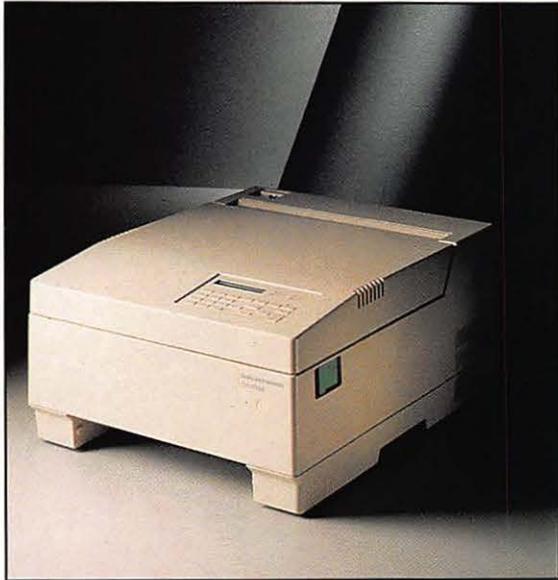
**Model: SLP-1000**

**Contact: (800) 888-0817  
ext. 105**



Seiko Instruments USA, Inc.  
Graphic Devices & Systems Division  
1130 Ringwood Court  
San Jose, CA 95131  
(408) 922-5800

## QD5500 Series Color Printers



**Required: Color QuickDraw Macintosh; 2 Mb RAM; 40 Mb hard disk; either QD56-N (Network Interface Kit) or QD56-S (Single User Interface Kit).**

**Contact: (800) 873-4561**

### Product Overview

Seiko Instruments QD5500 Series Color Printers offer high-resolution color output with LaserWriter quality and optional networking capabilities. The QD5500's QuickDraw-based driver features PostScript-like outline font technology, providing users with exceptionally high-quality color text in any size or orientation.

A super size printing option accommodates oversized media, allowing users to print a full 8.53" x 11.95" image (or bleed) on letter-size printers, and 11.75" x 17.13" images on tabloid devices.

The single user QD5500s are available for all Color QuickDraw-compatible Macintosh computers (including the SE/30, II, IIfx, and IIfx). Network print server QD5500s can be accessed by any workstation node that is a Macintosh Plus or higher computer. A dedicated Color QuickDraw-compatible Macintosh is required to act as the Server platform.

### Features

- Models support A-size (letter) and B-size (tabloid) output
- 300 dpi output provides LaserWriter-quality color images
- Single-user and network print server versions available
- Both plain paper and transparency (overhead) film supported
- Supports all AppleTalk protocol network implementations
- Super size option allows color images larger than standard A- or B-size output for bleeds.
- QuickDraw-based print driver uses outline font technology to provide color text in any point size; includes 35 LaserWriter-equivalent fonts
- 16 million colors supported

### Tips & Techniques

1. Small and lightweight, the QD5500 fits on the desktop.
2. The QD5500 prints proofs, comps and layouts, freeing you to create several versions of color, typeface, and layout.

### Reviews and Awards

*Macworld* (1/90)

*Desktop Presentations Report* (1/90)

### Technical Support

Tel: (800) 825-9711

Supplies & Service:  
(800) 553-5312;  
(800) 553-5315 (CA)

Installation, maintenance and training available.

90 day warranty (including parts and labor).

### Ordering

For more information, or to receive samples, contact Seiko Sales and Information at:  
(800) 873-4561

Suggested Retail Price:  
from \$7,000-\$14,000

QD56-N—Network Interface Kit

QD56-S—Single User Interface Kit

# Tektronix Color Image Printer

Tektronix, Inc.  
Mail Station 63/583  
P.O. Box 1000  
Wilsonville, OR 97070  
(800) 835-6100

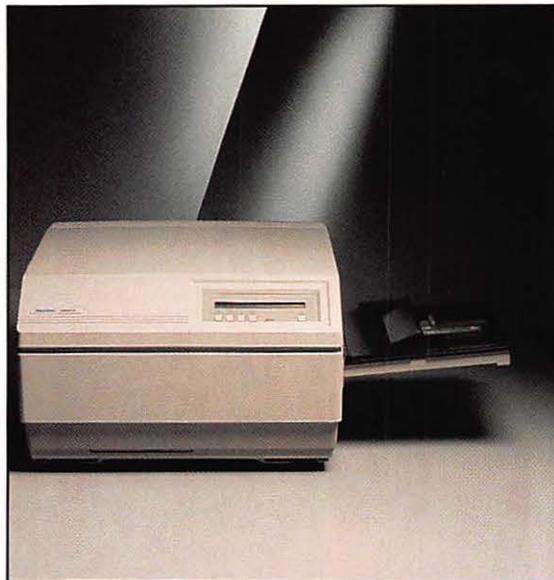
**Tektronix**  
The best and the brightest.

## Product Overview

The Tektronix® Color Image Printer (Model 4693DX) uses advanced thermal wax transfer technology to provide laser-quality color output on paper and overhead transparency film, making it ideal for presentation graphics and color layout proofs.

The Tektronix Color Image Printer is compatible with leading presentation graphics packages, such as Aldus Persuasion, Microsoft PowerPoint, and many others. Its brilliant, saturated colors add tremendous impact to presentations and reports.

The Tektronix printer driver software gives you unsurpassed control over color and produces prints which closely match display colors whenever possible. In addition, Tektronix offers you a migration path to true PostScript compatibility, as your printing needs change.



## Features

- 300 dpi color thermal wax transfer print engine
- 16 million colors through on-board dithering
- Standard 4 Mb RAM, expandable to 12 Mb RAM
- TekColor™ software for screen-to-printer color matching
- Migration to PostScript compatibility available from Tektronix
- Fast QuickDraw-based driver software
- 11 font families corresponding to the standard LaserWriter typefaces
- Motorola 68020-based image processing controller
- Compatible with Adobe Type Manager

## Technical Support

Tel: (800) 835-6100  
M-F, 8:00 am-5:00 pm (PST)

## Ordering

For the location of a dealer nearest you, contact Tektronix, Inc. at: (800) 835-6100

## Tips & Techniques

1. Use the Tektronix publication "Picture Perfect" for hints on the effective use of color and color applications.
2. Use TekColor, included with the driver software, to select colors that can be printed and match the screen.

**Required: Macintosh II family; 2 Mb RAM; hard disk; 1 NuBus slot**

**Recommended: More RAM.**

**Suggested Retail Price: \$9490**

**Model: 4693DX**

**Contact: (800) 835-6100**

**Tektronix**  
The best and the brightest.

Tektronix, Inc.  
Mail Station 63/583  
P.O. Box 1000  
Wilsonville, OR 97070  
(800) 835-6100

# Tektronix Phaser CPS

## Product Overview

Designed for AppleTalk network sharing, the Tektronix Phaser™ Color PrintStation (CPS) is a fully-integrated PostScript-compatible color printing system with local print spooling. Its 300-dpi thermal wax transfer print technology produces laser-quality printing in vibrant colors on paper or transparency film in less than a minute.

The Phaser CPS includes a 40-megabyte hard disk with full print-spooling and print-management software. Down loadable fonts and prep files are stored as well. LaserWriter driver compatibility makes printing to the Phaser CPS familiar and easy. Powerful and easy-to-use Administrator software provides job tracking and system management capability. Monitor software for the individual user allows quick checking of print status.

Modular construction provides for upgrade flexibility as system needs change. The PrintStation controller is available as an upgrade for users of Tektronix Color Image printers who want to add PostScript compatibility.

## Features

- AppleTalk network and LaserWriter driver compatibility
- PostScript language compatibility
- 300-dpi color thermal transfer printer
- 68020-based print controller with 8 megabytes of RAM, expandable to 11 megabytes
- 40 megabyte hard disk for local print spooling and font storage
- 35 built-in typefaces
- Support for downloadable fonts
- Paper and transparency film printing on letter, legal, A4, and A4 special-sized media

## Tips & Techniques

1. Use the multiple queue feature of the Phaser CPS to set up one queue for paper and one for transparency. Multiple users on a network can share one printer, and have their output print on the right kind of media.

## Reviews and Awards

*Macworld* (2/90)

## Technical Support

Tel: (800) 835-6100

M-F, 8:00 am-5:00 pm (PST)

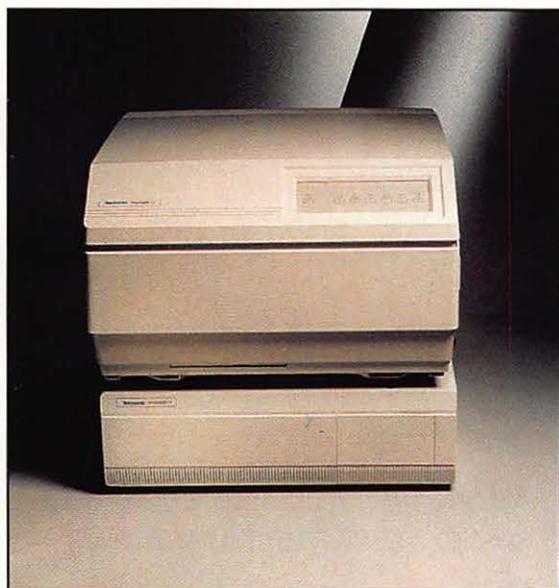
Free to registered users.

90 day on-site service;  
Warranty Plus available for 1, 2, and 3 years.

## Ordering

For the location of an authorized dealer near you, contact Tektronix, Inc. at: (800) 835-6100

Suggested Retail Prices:  
U.S. \$12,995  
CAN \$18,200 (including tax)



**Required: Macintosh Plus or greater; System 6.02 or higher; LaserWriter 6.0 or higher; application that supports color PostScript.**

**Suggested Retail Price:  
\$12,995**

**Contact: (800) 835-6100**

# Tektronix ColorQuick Ink-jet Printer

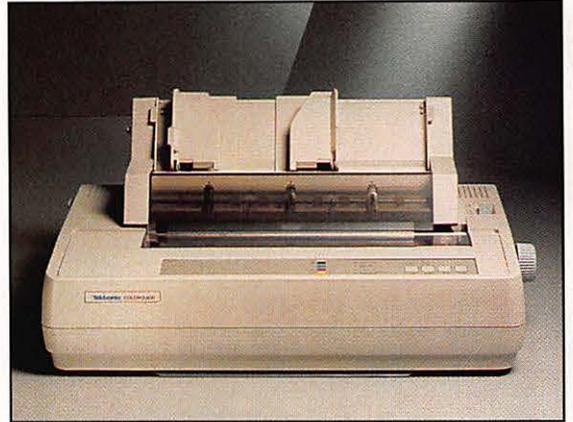
Tektronix, Inc.  
Mail Station 63/583  
P.O. Box 1000  
Wilsonville, OR 97070  
(800) 835-6100

**Tektronix**  
The best and the brightest.

## Product Overview

The Tektronix® ColorQuick™ Ink-jet printer is a 216 dpi color printer designed for the Macintosh environment. It features a high-speed SCSI interface, Chooser-level driver, and 11 font families. Using dithering, the ColorQuick can print up to 16.7 million colors.

The ColorQuick prints on plain and coated paper and on overhead transparency film. It is capable of printing on both letter and tabloid (11" x 17") paper sizes, making it ideal for proofing large-format graphic art layouts or dual-page layouts for publishing applications. Paper may be fed from standard automatic cut-sheet or roll feeders, or from an optional tractor feeder. The ColorQuick printer is compatible with the Macintosh II family and the SE/30.



## Features

- 216 dpi ink-jet engine
- High-speed SCSI interface
- Chooser-level QuickDraw driver
- 16.7 million colors
- 11 typeface families included
- Adobe Type Manager compatible

## Technical Support

Tel: (800) 835-6100  
M-F, 8:00 am-5:00 pm (PST)

## Tips & Techniques

1. Use TekColor™ to select colors which can be printed and match the screen.

**Required: Macintosh II family or SE/30; 2 Mb RAM; hard disk.**

**Suggested Retail Price: \$2495**

**Contact: (800) 835-6100**

## Technical Short



**The concepts  
behind  
Macintosh  
output—in  
plain print.**

**Chooser:** a desk accessory, supplied with the System software, that enables a user to select different printers, depending on what's connected and what printer drive software has been installed.

**Dot-matrix printer:** a type of printer that forms characters by pressing ink from a ribbon onto paper; the Macintosh ImageWriter has the same resolution as the screen, 72 dpi.

**Downloadable font:** a font that must be sent by the computer to a laser printer for printing.

**DPI:** an abbreviation for dots per inch, the measure of the resolution, or print quality, of a printer. Higher dpi means more precise rendering of text and graphics.

**Imagesetter:** a printing device that employs a photographic technique to produce output on either paper or film. Imagesetter dpi can range from 600 to 2540, and beyond.

**Interpreter:** the software resident in a laser printer that translates the graphics description sent from the computer into dots on paper.

**Laser printer:** a printing device that employs laser technology to output text and images at 300 dpi.

**QuickDraw:** a graphics description language developed by Apple Computer and used by the Macintosh. QuickDraw is employed to draw all text and graphics images on screen, and to print to the ImageWriter and LaserWriter IISC.

**PostScript:** a page description language developed by Adobe Systems and used by the Macintosh and other computer systems. PostScript is the page description language used by the LaserWriter printers; most desktop publishing and some graphics applications; all downloadable and resident fonts; and many other printers and imagesetters.

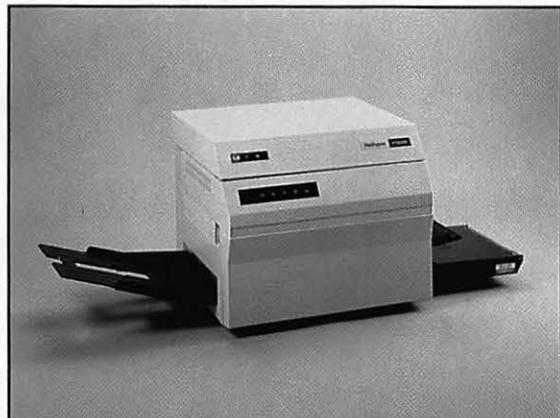
**Resident font:** a font already built into a printer and always accessible for printing. The LaserWriter family has 35 resident fonts.

**Spooler:** a software utility that can organize and send files from a computer to a printer, freeing the computer for other tasks.

**Varityper**

a Tegra Company

Varityper, Inc.  
 11 Mt. Pleasant Avenue  
 East Hanover, NJ 07936  
 (201) 887-8000



# Varityper VT600P & W

## Product Overview

The VT600P and VT600W are plain-paper imagesetters with an output resolution of 600 dpi—four times the image density of 300 dpi printers. Both incorporate Adobe's PostScript interpreter, employ proven laser diode technology, and come standard with a 20 Mb Winchester hard disk. To accommodate large type libraries, a 42 Mb Winchester disk is offered as an option for both models.

The VT600P and VT600W are easy to operate and accept input from all Macintosh products. They are compatible with many of the popular application packages presently on the market, including Aldus PageMaker, Microsoft Word, MacDraw II, Quark XPress, and many others. The VT600W's 11" x 17" format is ideal for newspapers, technical drawings, certain legal and financial documents, and forms, as well as for two-up imaging of letter-size pages. The VT600P and VT600W are cost-effective alternatives for many publishing environments desiring high resolution, plain paper imaging and control over the publishing process.

**Compatible: Any Macintosh configuration.**

**Suggested Retail Price:  
\$16,995**

**Model: VT600P**

**Contact: (800) 631-8134**

## Features

- 600 dpi resolution
- Print speed of up to 10 images/minute at letter size (VT600P and VT600W) and up to 7 pages/minute at ledger size (VT600W)
- 32-bit Motorola 68020 processor
- 8 Mb (VT600P)
- 12 Mb (VT600W)
- Adobe PostScript-compatible
- Winchester 20 Mb SCSI with up to 200 fonts or 42 Mb SCSI with up to 500 fonts
- Supports LocalTalk, RS-422, RS-232C and Centronics Parallel interfaces
- Automatic toner replenisher
- Up to 12,000 prints per month

## Reviews and Awards

*PC Magazine* Editor's Choice 1989

*PC Magazine* Technical Excellence Finalist 1989

*EPEP Magazine* Product of the Year 1989

## Technical Support

Tel: (800) 346-8808

M-F, 8:00 am-8:00 pm (EST)

Full service contract and telephone "Hotline" support available.

90 day warranty.

## Ordering

For more information about the VT600P or VT600W contact Varityper at: (800) 631-8134, (201) 887-8000 Ext. 999 (New Jersey).

Suggested retail price:  
VT600P—\$16,995

VT600W—\$ 22,995

# SAYETT DATASHOW® Projection Pads

SAYETT Technology, Inc.  
100 Kings Highway, Suite 1800  
Rochester, NY 14617  
(800) 836-7730



## Product Overview

SAYETT Technology, Inc. offers a family of liquid crystal display (LCD) systems which, when placed on an overhead projector and connected to a computer, act as a second monitor to provide big screen viewing for meetings and training presentations.

The SAYETT DATASHOW 480 Projection Pad, compatible with both Macintosh and IBM computers, provides projection of the computer image. It projects sharp black & white images, and can render color graphics in eight shades of gray. The IntelliPrompt™ Circuitry synchronizes with the video to provide the best image.

The SAYETT DATASHOW HR/MP Projection Pad provides high-resolution projection for the Macintosh Plus, SE, SE/30 and Portable. The display resolution of 640 x 400 pixels projects the full screen of the Portable; the smaller Plus, SE, and SE/30 screen is a centered 512 x 342 pixel image surrounded by a white border. All projected images are displayed at a 20:1 contrast ratio for a bright, clean look.



## Features

### SAYETT DATASHOW 480 Projection Pad

- Contrast ratio of 15:1
- Display resolution of 640 x 480 pixels
- Eight true shades of gray
- Dual cooling fans
- 14 x 14 x 2.75 inches and 7.1 pounds
- Interface cable required (not included)
- DATASHOW Video Adapter needed for Macintosh Plus and SE family (not included)

### SAYETT DATASHOW HR/MP Projection Pad

- Contrast ration of 20:1
- Display resolution of 640 x 400 pixels (Portable) or 512 x 342 pixels (Plus and SE family, with white border around image)
- Integral cooling fan
- 13 x 12.6 x 2.4 inches and 5.7 pounds
- Includes interface cables for Portable, and Plus and SE families
- DATASHOW Video Adapter needed for Macintosh Plus and SE family (not included)

## Technical Support

Tel: (800) 533-6803

M-F, 8:00 am-5:00 pm (EST)

One year warranty.

## Ordering

For the name of the nearest dealer that can arrange a demonstration, contact SAYETT Technology at: (800) 836-7730

Suggested Retail Prices:  
DATASHOW 480—\$1895  
Interface Cable—\$129  
Video Adapter—\$99  
DATASHOW HR/MP—\$1695

Accessories include:

- interface cables for different computers
- a mouse extender
- soft carrying case
- SAYETT Smart Remote, an infrared, programmable, wireless remote control device

**Model: SAYETT DATASHOW  
480 Projection Pad.**

**Required: Macintosh Plus or  
greater; IBM PC compatibles.**

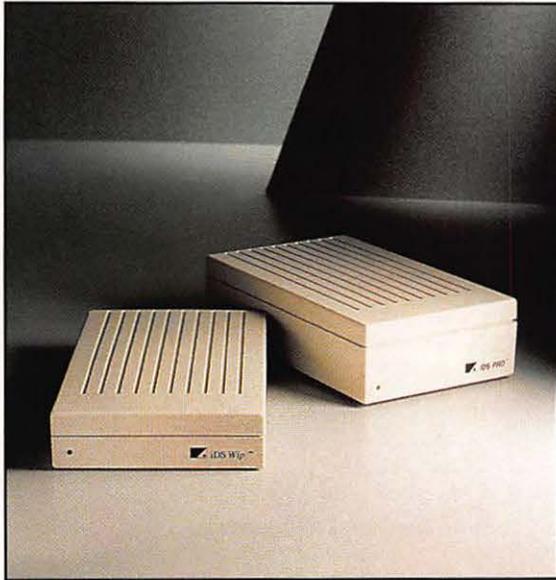
**Suggested Retail Price: \$1895**

**Contact: (800) 836-7730**



iDS Systems, Inc.  
2107 N. First Street, Suite 280  
San Jose, CA 95131  
(408) 441-0500

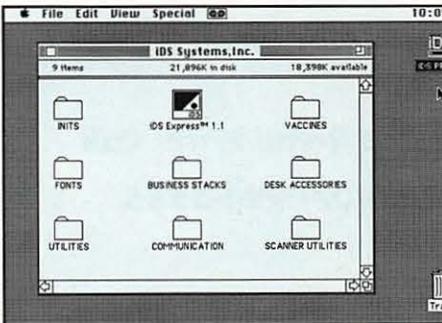
## iDSPRO Series Portable Hard Drives



### Product Overview

The iDSPRO Series portable hard drives usher in a new generation in mass storage. Available with capacities ranging from 20 to 200 megabytes, the iDSPRO does not require its own power supply or cooling fan, drawing its power instead from the external floppy port on the back of the Macintosh. As a result, iDSPRO drives are small, lightweight, compact units—just 2 x 5 x 8 inches in size. For applications requiring an even smaller drive, iDS Systems offers the iDSWip, a 1 x 5 x 8 inch subsystem of 20, 40, and 80 megabytes (50 and 100 Mb available soon).

In addition to providing the speed and capacity of larger external drives, the iDSPRO Series drives offer other unique features as well. Because there is no fan or power supply, an iDSPRO is less expensive to produce, and therefore less expensive to purchase. No fan also means that the iDSPRO is "airtight," and no dust can enter the mechanism and corrupt data. Auto-park heads and G-shock mounting insure drive integrity during transportation.



### Features

- Ultra-compact size, and weighs just 3 pounds
- 20-200 megabyte capacities
- 12-35 ms access times
- 2, 3 and 5 year warranties
- 60 G shock rated
- Dual standard SCSI ports
- Terminator access door
- Rotary SCSI ID select switch
- 6 megabytes of software

### Tips & Techniques

1. Use terminator access door to remove resistors when drive is not first or last SCSI device.
2. Upon installing drive, immediately copy all bundled software onto back-up media.

### Reviews and Awards

*MacUser* (2/90)

### Technical Support

Tel: (800) 733-0078

M-F, 8:00 am-6:00 pm (PST)

Two, three and five year warranties available.

### Ordering

iDSPRO Series hard drives are available from authorized dealers and distributors, or contact iDS at: (800) 733-0078

**Required: Macintosh Plus or greater (II or IIx require iDS power adapter).**

**Suggested Retail Price: Call**

**Contact: (800) 733-0078**

# Rodime Systems

## Cobra™ Hard Drives

Rodime Systems  
901 Broken Sound Parkway, N.W.  
Boca Raton, FL 33487  
(407) 994-5585

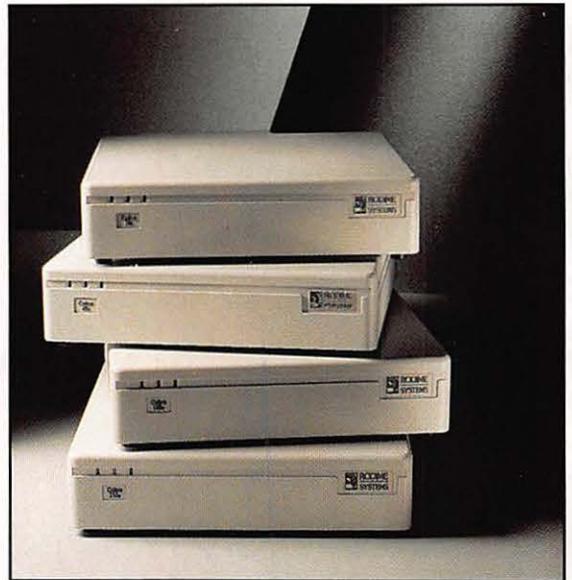
**RODIME**

### Product Overview

The Rodime Systems Cobra external drives for Macintosh computers come ready to use with an embedded SCSI interface. The Cobra external drives include 45 MB, 70 MB, 100 MB and 210 MB capacities and are available in 3.5 inch form factors.

A manufacturer of disk drives for 10 years, Rodime introduced the first 3.5 inch hard disk drive that is now the industry standard. Rodime, the largest independent manufacturer of hard disk drives for the Macintosh market, offers A/UX compatible drives with fast access times and look-ahead caching for even faster access to your data. Three LED status lights indicate power on, fault status and drive activity, alerting you to the status of the drive at all times.

These drives come ready to use with documentation, SCSI and power cabling. Software supplied includes Rodime utility software which allows partitioning, password protection, media verification, formatting and driver installation; and Fastback II backup software Free—a \$189.00 value.



### Features

- 45, 70, 100 and 210 MB capacities
- Average seek time of 18 ms
- Latest 3.5" technology
- Embedded SCSI controller
- Automatic head park and lock
- Dual SCSI ports allow daisy-chaining of up to seven SCSI peripherals
- 2 auxillary surge-protected A/C outlets
- 100% Apple-compatible
- Three LEDs for full diagnostic capabilities
- Full format and installation software included
- Free backup software
- A/UX compatible
- Ultra-quiet operation for low-noise environments
- UL listed and CSA certified
- Cobra internal hard disk also available, in capacities of 45, 70, 100, and 120 MB

### Reviews and Awards

- BYTE* (1/90)  
*MacUser* (2/90)  
*Home Office Computing* (2/90)

### Technical Support

- Tel: (407) 997-0774  
M-F, 8:00 am-5:00 pm (EST)  
1 year warranty

### Ordering

- Rodime drives are available from dealers and distributors, or contact Rodime at:  
(407) 994-5585  
(US and Canada) or  
33-1-34659798 (Europe)

**Required: Macintosh Plus or greater.**

**Suggested Retail Price: Call**

**Contact: (407) 994-5585**

# Finding Room For It All



**There's a range of choices for storing your applications and files.**

A Macintosh computer without an adequate data storage system is like a fast sportscar with only a gallon of gas—it's great to look at, but it's not going to get you very far. To take full advantage of today's desktop publishing, graphics, spreadsheet, and database applications, a Macintosh computer must be paired with adequate data storage space—at least 20 Mb, or as much as you can afford to purchase. For Macintosh users, there are essentially three kinds of storage devices—hard disk drives, tape drives, and optical drives. Each can deliver the storage space your Macintosh needs.

Hard disk drives are the most popular and common storage systems on the market. A hard disk provides fast and efficient data storage and retrieval in a comparatively small package, as either an internal or external unit; they are the workhorses of data storage for personal computer systems. Hard disks are manufactured by many different manufacturers, and come in a variety of sizes, with different speeds and reliability. The speed of a hard disk should be balanced against its vulnerability. The read/write head is perched exceedingly close to the spinning platter, and can be susceptible to crashing into the platter, damaging itself and the data. This vulnerability is one of the reasons why other, safer, though slower storage devices have been developed.

Another storage option is a tape drive system. Tape drives for the Macintosh come in two main types: cartridge and cassette. Cartridges can hold from 40 to 250 Mb per cartridge; cassettes store between 60 and 150 Mb of data. The primary advantages of tape drives are that they're relatively inexpensive and infinitely expandable, with new cassettes or cartridges readily available. They are a great choice for making daily backups of networks, database systems, or large, frequently modified files. But tape systems are only for archiving purposes; they cannot be used to start your Macintosh, like a hard disk, and you can't run applications from them.

Optical drives are of two kinds: CD-ROM and erasable. CD-ROM drives, the first optical drives to be available, are based on the same technology as home CD and videodisc players. A small, thin, 5.25-inch disc is impregnated with pits in its underside at a fixed distance. A laser is aimed at the the pits, and interprets the change from the surface of the disk to a pit as information. The information is not magnetically coded, as in hard disks, and therefore not susceptible to magnetic fields, and the disk head, because of its distance from the disk, will not crash and damage information. CD-ROM discs can hold enormous amounts of information—600 Mb—but are read-only; information can be accessed, but not saved. Erasable optical drives are now available, providing the storage capacity of CD-ROM drives to users to save their own data.

# Fujitsu 3.5" 800K Drive

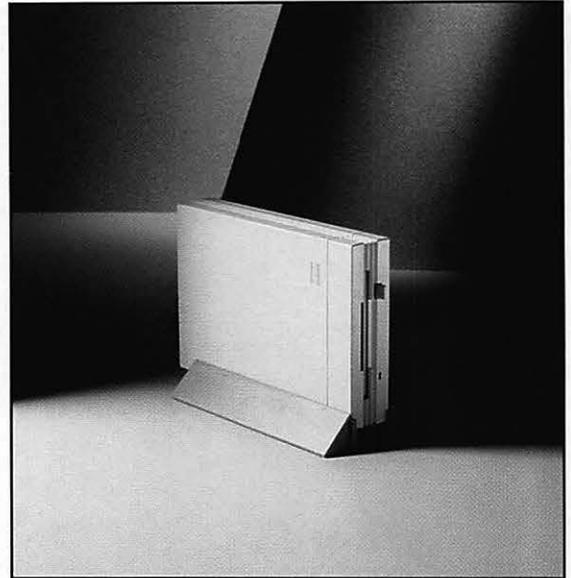
Fujitsu America  
Computer Products Group  
3055 Orchard Drive  
San Jose, CA 95134  
(800) 626-4686

FUJITSU

## Product Overview

As any serious computer user will testify, the convenience of a second disk drive, even in tandem with a hard disk, is clear. Another drive makes it easier to perform disk-to-disk copies, archive data, or run applications independent of the hard disk.

Handsomely designed, this flexible disk drive from Fujitsu could well turn out to be the disk drive of choice for Macintosh Plus and SE owners. It directly addresses the demand for two-drive convenience at a very reasonable price with no sacrifices in quality. In fact, it offers features not available in competitive models costing almost twice as much: three mounting options, two color choices, and an easy-to-see LED. And it's just about the quietest disk drive you will find. The quality of engineering and construction is exceptional, the result of Fujitsu's decades of experience as the leading supplier of drives for the mainframe marketplace. They back up their work with a 12 month guarantee, and claim service is handled directly by Fujitsu itself!



## Features

- Space-saving vertical mount; inclined and flat options also provided
- About half the cost of a comparable Apple drive
- FCC Class B approved
- Manual eject button for emergency disk ejection
- LED activity light to show when disk is being accessed
- Extremely quiet operation
- Available in both beige and platinum

## Technical Support

Tel: (800) 826-6112  
M-F, 24 hour service  
Sat-Sun, 5:00 am-5:00 pm (PST)  
Have serial number, date of purchase and description of problem available.  
12 month "no questions asked" warranty.

## Ordering

The Fujitsu 3.5" 800K drive is available at authorized dealers, or contact Fujitsu at: (800) 626-4686

**Required: Macintosh with external floppy port; HFS.**

**Suggested Retail Price: \$265**

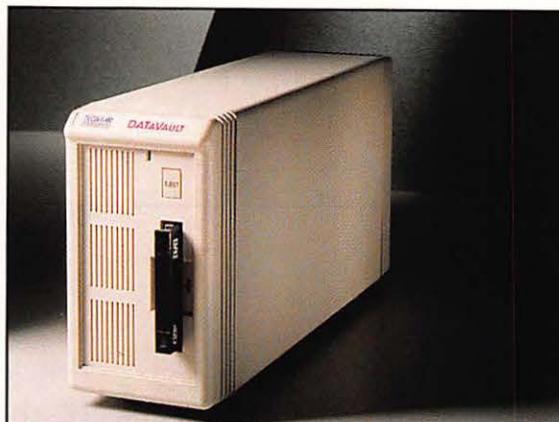
**Contact: (800) 626-4686**

## Tips & Techniques

1. Save extra copying steps (and time) with two floppy drives, copying directly from disk to disk.
2. Save hard disk space. Run applications not commonly resident on your hard disk without tying up hard disk space.
3. Use of the vertical mounting stand can save space on the desktop.

**TECMAR**

Tecmar  
6225 Cochran Road  
Solon, OH 44139  
(216) 349-0600



## DATAVault

### Product Overview

Tecmar DATAVault™ is a high-performance 1.3 gigabyte tape subsystem designed around the new 4mm digital audio tape (DAT) technology. With backup speeds of up to 10 Mb per minute, DATAVault is capable of server or high-capacity workstation backup in minutes. Data search time for restore is less than 2 minutes, resulting in rapid recovery from data loss and timely updating of hard disk contents.

DATAVault is compatible with all SCSI Macintosh computers, with media costs that are less than 3 cents per Mb. In addition, the drive can be connected to ISA, EISA and MCA computers, resulting in the most cost-effective, flexible archiving system available.

**Recommended: Macintosh SE;  
2 Mb RAM; Hard disk.**

**Suggested Retail Price: \$4995**

**Macintosh Host Kit: \$195**

**Contact: (800) 624-8560**

### Features

- Compatibility with Macintosh, ISA, EISA, and MCA computers
- Data backup/restore speed of up to 10 Mb per minute
- Full backup and restore of AppleShare and Novell file servers

### Technical Support

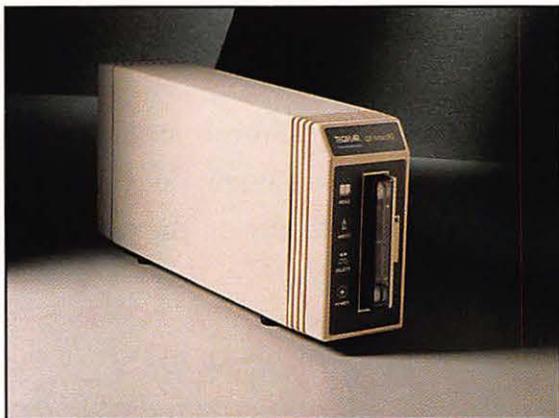
Tel: (800) 344-4463  
M-F, 8:00 am-6:00 pm (EST)  
Electronic BBS: (216) 349-0853

### Tips & Techniques

1. Use tape to distribute database files, CAD portfolios, multi-media presentations.

**TECMAR**

Tecmar  
6225 Cochran Road  
Solon, OH 44139  
(216) 349-0600



## QT-Mac80

### Product Overview

Tecmar QT-Mac80™ is an 80/128 megabyte portable tape subsystem designed for use with all SCSI Macintosh computer systems. Combining high-speed flexibility and powerful QT-Backup™ software, the QT-Mac80 makes protecting valuable data fast, easy and reliable.

At speeds up to 6 Mb per minute, the QT-Mac80 is the highest-performance 3.5-inch SCSI backup system available for the Macintosh. Up to 84 Mb of formatted data may be stored using DC2110-compatible high-density mini cartridges, and 128 Mb can be stored using the new long-length DC2165 cartridges.

**Recommended—Macintosh SE;  
2 Mb RAM; hard disk.**

**Suggested Retail Price: \$1795**

**Contact: (800) 624-8560**

### Features

- Reads cartridges produced by Apple Tape Backup 40SC and Tecmar QT-Mac40
- Fully-automated QTBackup software
- Most compact drive made
- External SCSI address selection and termination

### Technical Support

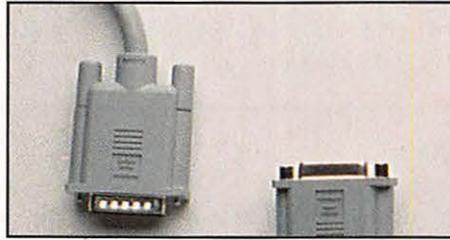
Tel: (800) 344-4463  
M-F, 8:00 am-6:00 pm (EST)  
Electronic BBS: (216) 349-0853

### Reviews and Awards

*MacUser* 5 mice rating (12/89)  
*Macworld* (12/89)

# Accessories & Publications

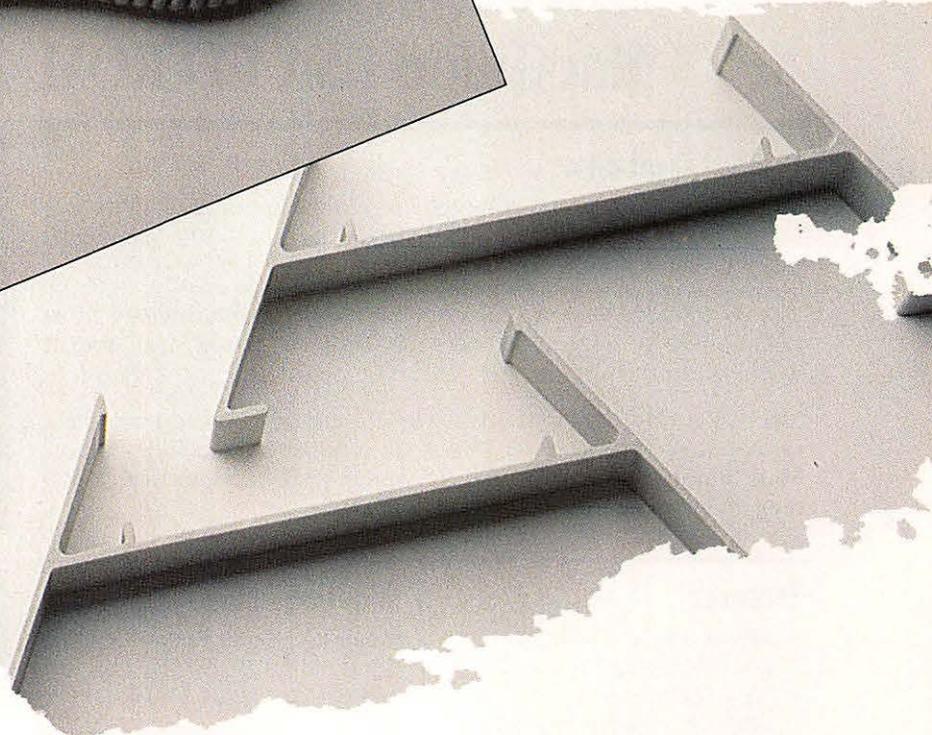
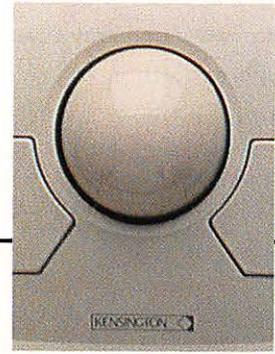
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**L**ike a smart pair of cuff links or an attractive scarf, the right accessories can be the perfect finishing touch to your Macintosh ensemble. Perhaps you need an eye-catching dust cover for your machine; a sturdy, handsome carrying case to take your Macintosh SE on the road; a stand to get your Macintosh IIx off your desk and onto the floor; or a guide to PageMaker page design. These accessories and publications are designed with the same combination of function and style that distinguishes the Macintosh itself. In fact, your new accessories might be so popular, you'll find yourself buying them for your friends!

*Improve the appearance of your desk, acquire some new power, or just indulge in some self-expression with these useful accessories and publications.*





# Microsoft Press

Microsoft Press  
One Microsoft Way  
Redmond, WA 98052  
(800) MSPRESS



## Product Overview

**Excel in Business**, 2nd ed, by The Cobb Group. Information-packed volume filled with explanations, examples, and tips. The most comprehensive tutorial and reference book available for version 2.2 of Microsoft Excel. \$24.95

**Working with Word**, 2nd ed, by Chris Kinata and Gordon McComb. The definitive guide to Microsoft Word version 4.0 for the Macintosh, with inventive, time saving tips and blueprints for newsletters, brochures, and reports. \$22.95

**The Apple Macintosh Book**, 3rd ed, by Cary Lu. The classic introduction to the Macintosh and its breakthrough technology. Includes information on HyperCard, mass storage options, desktop publishing, and new Macintosh software. \$21.95

**Microsoft Works for the Apple Macintosh**, 2nd ed, by Charles Rubin. The one book for anyone using Microsoft's popular integrated software, and a great guide to its exciting features. \$19.95

**Desktop Publishing by Design—Aldus PageMaker Edition**, by Ronnie Shushan and Don Wright. Blueprints for page layout using Aldus PageMaker version 3.0 for the Macintosh and IBM PC. Includes hands-on projects and a portfolio of successful printed pieces. \$24.95



**Microsoft Press books are available at book sellers and retail computer stores, or contact Microsoft Press at: (800) MSPRESS**

## MacGuide<sup>®</sup> Report and MacGuide USA CD-ROM

MacGuide Magazine, Inc.  
444 17th Street, Suite 200  
Denver, CO 80202  
(303) 893-1454

## Product Overview

The *MacGuide Report* will be released in the summer of 1990, as a semi-annual publication/book, listing nearly 4,500 Macintosh products, with reviews of many products.

The *MacGuide Report* will concentrate on providing the most comprehensive information on each hardware or software product available for the Macintosh.

MacGuide USA CD-ROM v.1.2, with its talking icons and complete descriptions of most every Macintosh product, also includes almost 500 demonstrations of many popular products, and over 300 megabytes of public domain software.



## Features

- Most complete listing of Macintosh products available
- New features available to product manufacturers to highlight their product
- More reader reviews than ever before, with credits for reader reviewers

## Ordering

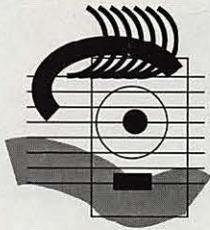
Suggested Retail Prices:  
CD-ROM v.1.2—\$99.98  
*MacGuide Report*—\$9.95

## Tips & Techniques

1. Information also available on-line and via 900-FAX.

**MacGuide USA CD-ROM v.1.2**  
**Recommended: Macintosh Plus or greater; 2 Mb of RAM.**  
**Suggested Retail Price: \$99.98**  
**Contact: (800) 873-1454**

# Inside Scoop On User Groups



**Swap  
stories,  
software,  
and  
solidarity  
with fellow  
Mac fans.**

If you've ever pursued a serious interest or hobby, you know that the discoveries you make and the trials you experience are often more rewarding if you can share them. The people who work or play on a computer often think of themselves as a special few, part of an elite. If you'd like to share your experiences in the world of Apple computing, meet other Macintosh fans, and even learn a new shortcut or two, then you may want to explore an Apple User Group.

A user group is an organization of Apple users whose main purpose is to enhance the use of Apple systems by sharing insights and information on the latest applications, services, and products. It brings together people from many different professions, with many different interests, united in their love of the Macintosh.

Apple User Groups can be found in professional organizations, universities, government agencies, and corporations; just about anywhere. Anyone can join—and the groups are made up of users of all levels.

Are you interested in learning about new applications, or the latest products to enhance your Apple systems? Could you use a little help getting started? Would you simply like to get more out of your computer? Well, there is probably an Apple User Group nearby, ready to help.

User groups generally provide a variety of services on a regular basis. The more common services include monthly meetings, newsletters, technical support, electronic bulletin boards, resource centers, product reviews, telephone hotline support, public domain software, vendor recommendation, dealer tie-ins, and training and orientation.

Many user groups also have subgroups of people with a particular interest, called Special Interest Groups (SIGs). SIGs provide specific information and support on topics such as desktop publishing, HyperCard, data bases, and more.

Apple Computer actively encourages and supports user groups, mainly through a program called the User Group Connection. This program provides Apple User Groups with a wide range of services, such as a newsletter to the user group community, the use of AppleLink® (Apple's in-house communications network), developer contacts, third party product information, and even access to Apple speakers for meetings and special functions.

There's sure to be a user group near you. If you want more information on existing user groups or want to start one, write to: User Group Connection, Apple Computer, Inc., 20525 Mariani Avenue, Cupertino, CA 95014.



Kensington Microware Limited  
 251 Park Avenue South  
 New York, NY 10010  
 (800) 535-4242  
 (212) 475-5200

KENSINGTON 

## Turbo Mouse

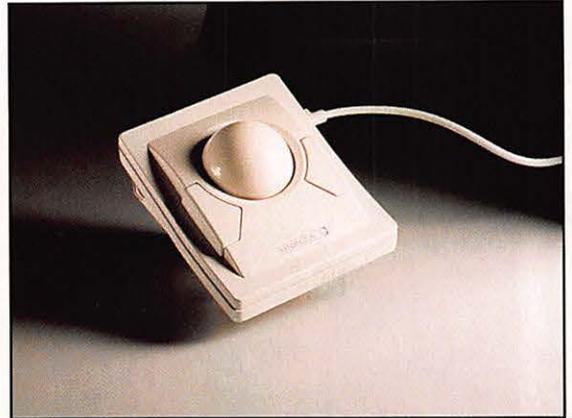
### Product Overview

Three-time winner of the *Macworld* World Class Award for Best Input Device, Turbo Mouse® is quicker, more precise and easier to use than an ordinary mouse.

It puts the mouse on top, so you move only the ball, not the whole mouse. And its automatic acceleration senses the speed at which you're working

to move the cursor further when you move faster. Up to 200 CPI (counts per inch) resolution for pin-point precision. Two mouse buttons offer regular clicking and click-lock; you define which is which.

**Macintosh Plus or greater.**  
**Suggested Retail Price:**  
**\$169.95**  
**Contact: (800) 535-4242**



## Mac II Stand and Extension Cables

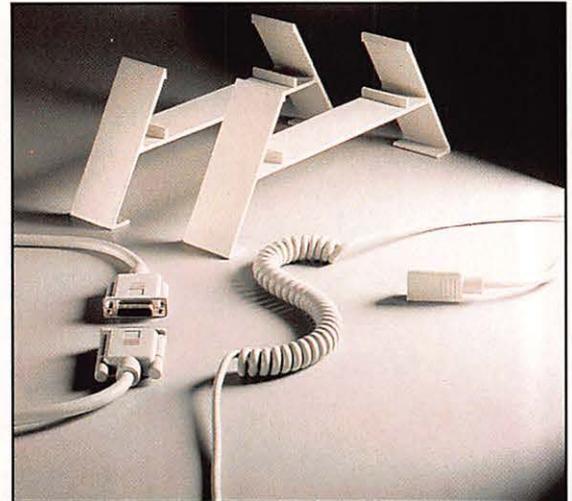
### Product Overview

Lets you stand your Macintosh II, IIfx or IIfx beside your desk, so that only your monitor and keyboard remain on the desk-top. Made of sturdy aluminum, the Mac II Stand leaves two inches of airspace between the computer and the floor for proper ventilation.

Includes 6-foot power and video signal extension cables

and an 8-foot replacement cable to position your monitor and keyboard up to 8 feet from your CPU. Built to Apple specifications, this equipment is compatible with any monitor that uses standard Macintosh II monitor cables.

**Macintosh II family.**  
**Suggested Retail Price:**  
**\$99.95**  
**Contact: (800) 535-4242**



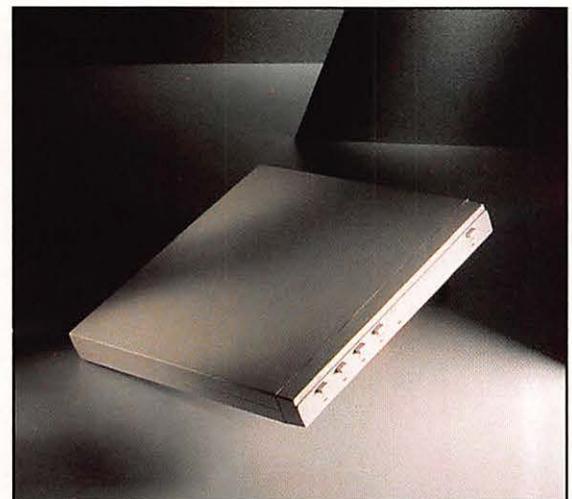
## MasterPiece Mac II

### Product Overview

MasterPiece® Mac II organizes and protects your Macintosh II system with surge suppression, EMI/RFI noise filtering, and modem surge suppression. A special computer outlet (continuously powered to allow for Macintosh II keyboard startup) and four individually-switched peripheral outlets are controlled by a handy master

switch. Front-mounted switches also give you convenient control. Designed to blend in perfectly with any of the Macintosh II family of computers. Handy built-in monitor swivel.

**Macintosh II family.**  
**Suggested Retail Price:**  
**\$159.95**  
**Contact: (800) 535-4242**



Designer Products, Inc.  
6585 South Yale Avenue, Suite 1050  
Tulsa, OK 74137  
(918) 299-1808

## Designer SoftWear



### Product Overview

Designer SoftWear® fabric dustcovers are unique. They are attractive, durable, washable, antistatic, and water-repellent. Unlike vinyl and plastic covers, Designer SoftWear "breathes," allowing heat and moisture to escape. Strict standards of construction ensure quality covers that fit your equipment properly. The

covers are available in a variety of colors in Ultrasuede,® VersaTech,™ and denim for the entire family of Macintosh computers, keyboards, printers, and external disk drives.

**All Macintosh computers.**  
**Contact: (800) 223-2687**  
**Suggested Retail Price:**  
**\$10.75—\$129.30**

MacCable Division  
Monster Cable Products, Inc.  
274 Wattis Way  
So. San Francisco, CA 94080  
(415) 871-6000

## MacCable Accessories & Cables



### Product Overview

MacCable™ offers an intelligent selection of printer, modem, fax, SCSI, keyboard, monitor, LocalTalk, and Phone-NET cables, connectors, and switchboxes for the Macintosh computer. Accessories include the revolutionary vibration-absorbing MacFeet™ and Tranquility Base.™ Color- and icon-coded packaging with

well-defined hood labels ensure error-free selection of specific cable and connector types. All products have a lifetime guarantee.

**All Macintosh computers.**  
**Suggested retail price:**  
**\$9.95—\$79.95**  
**Contact: (800) 437-2853**

West Ridge Designs  
1236 N.W. Flanders  
Portland, OR 97209  
(800) 548-0053

## Macintosh Plus/SE Carry Case



### Product Overview

Each Mac Plus/SE case is engineered to make your load feel lighter. Non-slip pad keeps the adjustable shoulder strap comfortably and securely in place. Full-length handles with a smooth leather grip make lifting and carrying easy. Each case is constructed with a high tenacity Cordura nylon exterior that resists abrasion and moisture. Closed cell foam

cushions sensitive equipment from bumps and jars. Special padded interior compartments hold your keyboard, mouse, and exterior drive securely. Available in Black, Platinum, Charcoal, Burgundy, Navy, and Royal Blue.

**Suggested Retail Price:**  
**\$79.95**  
**Extended Keyboard**  
**Version: \$89.95**  
**Contact: (800) 548-0053**

# G L O S S A R Y

## A

**A/UX:** Apple's enhanced implementation of the standard AT&T UNIX operating system for the Macintosh.

**administrator:** The person who sets up and manages a LaserShare print server or AppleShare file server.

**analog:** Varying smoothly and continuously over a range, rather than changing in discrete jumps. For example, a conventional 12-hour clock face is an analog device showing the time of day by the continuously changing position of the hands.

**Apple Desktop Bus (ADB):** A low-speed, input-only serial bus with connectors on the back panel of the computer that you use to attach the keyboard, mouse, and other Apple Desktop Bus devices, such as graphics tablets, hand controls, and specialized keyboards.

**Apple menu:** The menu farthest to the left in the menu bar, indicated by an Apple symbol, from which you choose **desk accessories**.

**AppleShare:** Apple's networking software. A dedicated file server system, with a small software installation in each Macintosh's System folder.

## B

**background:** A program operates "in the background" if it continues to function automatically while you use another program.

**background printing:** Printing from one application while another application is running.

**bit:** A contraction of *binary digit*. The smallest unit of information that a computer can hold.

**bitmap:** A set of bits that represent the positions and states of a corresponding set of items, such as pixels. Used by the Macintosh to construct graphic images and fonts.

**bits per second (bps):** A measure of the amount of information that is being sent, indicating the speed of the data transfer.

**boot:** Another way to say *start up*. Starting up is often accomplished by first loading a small program from a disk, which then reads a larger program into memory. The program is said to "pull itself up by its own bootstraps"—hence the term *booting*.

**buffer:** A "holding area" of the computer's memory where information can be stored by one program or device and then read by another. In editing functions, an area in memory where cut or copied data is held; the **Clipboard** in Macintosh lingo.

**built-in fonts:** Fonts built into LaserWriter printers. A LaserWriter printer substitutes built-in fonts for the Macintosh screen versions when you print. Also called *internal fonts*.

**byte:** A unit of information consisting of a fixed number of **bits**.

## C

**CD-ROM:** Acronym for *compact disc read-only memory*; a compact disc 4.72 inches in diameter that can store 550 Mb of information. The information is designated as **read-only memory** because a CD drive can access (read) the information, but cannot record new information.

**Clipboard:** The holding place for what you last cut or copied; a buffer area in memory. Information on the Clipboard can be inserted (pasted) into documents.

**close:** (1) To turn a window back into the icon that represents it by choosing the Close command or by clicking the close box on the left side of the window's title bar. (2) To terminate access to an open file. When a file is closed, its updated version is written to disk and all resources it needed when open (such as its I/O buffer) are released. The file must be opened before it can be accessed again.

**Control Panel:** A desk accessory that lets you change the speaker volume, the keyboard repeat speed, mouse tracking, and other features.

**copy-protect:** To make a disk uncopyable. Software publishers frequently try to copy-protect their disks to prevent them from being illegally duplicated by software pirates.

## D

**data compression:** A procedure in which data is encoded in such a way that its overall size is reduced, thereby speeding data transmissions.

**default:** A value, action, or setting that a computer system automatically assumes, unless the user gives an explicit instruction to the contrary.

**desk accessory:** A "mini-application" that is available from the **Apple menu** regardless of which application you're using—for example, the Calculator, Note Pad, and Chooser. Desk accessories are installed by using the **Font/DA Mover**.

**digital:** Represented in a discrete (noncontinuous) form, such as numerical digits or integers. For example, a digital clock shows time as a digital display (such as 2:57).

**directory:** (1) A pictorial, alphabetical, or chronological list of the contents of a folder or a disk. (2) A file that contains a list of all the names and locations of other files stored on a disk. These other files may themselves be directories (called *subdirectories*); sometimes called a *catalog*.

**dithering:** A technique for alternating the values of adjacent dots or pixels to create the effect of intermediate values. In printing color or displaying color on a computer screen, the technique of making adjacent dots or pixels different colors to give the illusion of a third color. For example, a printed field of alternating cyan and yellow dots appears to be green. Dithering can give the effect of shades of gray on a black-and-white display, or more colors on a color display.

**driver:** A program, usually in a System Folder, that lets a peripheral device and a computer send and receive files. Printer drivers control printers; a hard-disk driver controls exchanges between a hard disk and a computer.

## E F G

**Finder:** The application that maintains the Macintosh desktop and starts up other programs at the request of the user. You use it to manage documents and applications, and to get information to and from disks.

**floppy disk:** A disk made of flexible plastic, as opposed to a hard disk, which is made of metal. The term *floppy* was formerly applied to disks with thin, flexible disk jackets, such as 5.25-inch disks. With 3.5-inch disks, the disk itself is flexible, but the jacket is made of hard plastic; thus, 3.5-inch disks aren't really "floppy."

**folder:** A holder of documents and applications on the desktop. Folders act as subdirectories, allowing you to organize information in any way you want.

**Font/DA Mover:** An application that allows you to add or remove fonts and desk accessories from a disk's System file or from a font or desk accessory file.

**font:** A complete set of characters in one design, size, and style. In traditional typography usage, *font* may be restricted to a particular size and style or may comprise multiple sizes and styles of a typeface design.

**Group 3:** An international standard for fax transmission. Group 3 is a digital protocol that includes automatic data compression for faster transmission speeds.

## H I J K

**hertz:** The unit of frequency of vibration or oscillation, defined as *cycles per second*. The 68000 microprocessor used in the Macintosh operates at 7.8336 megahertz.

**hierarchical file system (HFS):** A method of organization in which disk files are grouped together

within directories and subdirectories (folders within folders). HFS is used on hard disks and on 800K-formatted disks. In a hierarchical file system, a file is specified by its pathname, the hierarchy of folders it is within, rather than by a single filename.

**initialize:** To prepare a blank disk to receive information by organizing its surface into tracks and sectors; also called *format*.

**input/output (I/O):** The process by which information is transferred from a computer's keyboard to its memory and out to its peripheral devices.

## L M N O

**local area network (LAN):** A group of computers connected for the purpose of sharing resources. The computers on a local area network are typically joined by a single transmission cable, and are located within a small area such as a single building or section of a building.

**main logic board:** A large circuit board that holds RAM, ROM, the microprocessor, custom-integrated circuits, and other components that make a computer a computer.

**megabyte (Mb):** A unit of measurement equal to 1024 kilobytes, or 1,048,576 bytes.

**megahertz (MHz):** One million hertz; a measure of a computer processor's speed.

**menu:** A list of choices presented by a program, from which you can select an action. In the desktop interface, menus appear when you point to and press menu titles in the menu bar. Dragging through the menu and releasing the mouse button while a command is highlighted chooses that command.

**multi-user:** Characterizes a mode or ability of an operating system to support several people using the same computer simultaneously.

**multitasking:** A process that allows a computer to perform two or more tasks during a given period of time; it is accomplished by alternating the actions of the computer between tasks.

**network:** A collection of interconnected, individually controlled computers, together with the hardware and software used to connect them. A network allows users to share information, applications, and peripheral devices such as printers and storage media, and to exchange electronic mail.

**on-line:** Currently connected to and under the control of the computer. Used to refer to equipment such as printers and disk drives, information storage media such as disks, and the information they contain.

**on-line help:** Assistance you can get from an application program while it's running; for example, HyperCard's disk-based Help system.

# G L O S S A R Y

P

Q

R

**peripheral device:** A piece of hardware—such as a video monitor, disk drive, printer, or modem—used in conjunction with a computer and under the computer's control. Peripheral devices are often (but not necessarily) physically separate from the computer and connected to it by wires, cables, or some other form of interface.

**pixel:** Short for *picture element*; the smallest dot you can draw on the screen. Also a location in video memory that corresponds to a point on the graphics screen when the viewing window includes that location.

**processor:** The hardware component of a computer that performs the actual computation by directly executing instructions represented in machine language and stored in main memory.

**protocol:** The rules and language that a computer uses to communicate with another computer on a network. Both computers must be using the same protocols to understand each other.

**random-access memory (RAM):** The part of the computer's memory that stores information temporarily while you're working on it. A computer with 512K RAM has 512 kilobytes of memory available to the user. Information in RAM is temporary, and must be saved before powering down.

**read-only memory (ROM):** Memory whose contents can be read, but not changed; used for storing fixed instructions. Information is placed into read-only memory once, during manufacture; it then remains there permanently, even when the computer's power is turned off.

**RGB monitor:** A type of color monitor that receives separate signals for each color (red, green, and blue).

**RS-232:** A common standard for serial data communication interfaces.

S

T

**scanner:** A scanner converts printed information into a digitized format a computer can manipulate, either graphic or textual.

**Scrapbook:** A desk accessory in which you can save frequently-used pictures or passages of text.

**SCSI:** An acronym for Small Computer Serial Interface (pronounced "scuzzy"), it designates an industry-standard interface that provides high-speed access to peripheral devices, such as hard disks.

**SCSI partition:** A special type of volume that is actually part of a larger volume. The SCSI device manufacturer, or customer with the help of SCSI device software, creates this volume.

**serial interface:** An interface in which information is transmitted sequentially, one bit at a time, over a single wire or channel.

**SIMM:** Stands for *Standard in-line memory module*.

**Standard Apple Numeric Environment (SANE):** The set of methods that provides the basis for floating-point calculations in Apple computers. SANE ensures that all floating-point operations are performed consistently and return the most accurate results possible.

**startup disk:** A disk with all the necessary program files—such as the Finder and System files contained in the System Folder for the Macintosh—to set the computer into operation. Sometimes called a *boot disk* or a *system disk*.

**system file:** Any file the computer uses to start itself up or to provide system-wide information. Although system files are represented by icons just as documents and applications are, they can't be opened in the usual way. You can, however, alter the contents of system files.

**template:** A predefined set of contents (numbers, text, and formulas) for an application, designed for some specific purpose or task.

**terminal emulation:** Software or hardware that allows a computer to imitate the actions of another type of dedicated terminal.

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**volume:** A general term referring to a storage device or to part of a storage medium formatted to contain files; a source of or a destination for information. A volume can be an entire disk or only part of a disk. A volume has a name and a volume directory with the same name. Its information is organized into files.

**window:** (1) The area that displays information on a desktop. You can open or close a window, move it around on the desktop, and sometimes change its size, scroll through it, and edit its contents. (2) The portion of a collection of information (such as a document, picture, or worksheet) that is visible on the display screen.

**workstation:** (1) A personal computer that you can use to do your work and to send or receive information over a network. (2) An individual work area that includes one or more devices on a network. (3) A node through which a user can access a server or other nodes.

**zone:** A network in a series of interconnected networks, joined through bridges.

**zoom box:** A small box with a smaller box enclosed in it, found on the right side of the title bar of some windows. Clicking the zoom box expands the window to its maximum size; clicking it again returns the window to its original size.

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**Below is specific information on materials that are available by calling the listed companies or filling out a reader response card.**

**1st Desk Systems** - 1stDesk Systems 4.1 and MacWEIGHT: Free demo disk includes 1stBBS Remote, 1st Merge demo with catalog. Call (800) 522-2286.

**Aperture Technologies, Inc.** - Aperture Visual Information Manager: Receive our colorful information package that includes; a full color brochure, "concepts & facilities," sample drawings and reports. Call (800) 342-9022 to receive our self-running demo.

**Blyth Software, Inc.** - Omnis 5: Call (800) 843-8615 or (800) 223-8050 (CA) for a free demo disk and literature.

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**Cayman Systems, Inc.** - GatorBox: Check reader service "GatorBox" to receive literature describing Cayman Systems' Macintosh - Ethernet connectivity solutions. Or call immediately at (617) 494-1999.

**IDS Systems, Inc.** - iDSPRO Series Portable Hard Drives: For a free product catalog call (800) 733-0078.

**Kaetron Software Corporation** - TopDown 2.0: Information kit is available. Call or write today.

**KMW Systems** - NetAccess: All inquiries receive Andrew's complete line of product brochures. For more information call Andrew at (800) 531-5167.

**Kensington Microware Limited** - Turbo Mouse, Mac II Stand and Extension Cables, MasterPiece Mac II: Kensington is a leading manufacturer of a complete range of Macintosh accessories and input devices. For a free brochure or Hypercard stack on our products, call (800) 535-4242.

**Koala Technologies** - MacVision Video Digitizer: You will receive a brochure on MacVision features, benefits and specifications. Current reviews may also be included.

**Mainstay** - MarkUp, MarcoPolo: You will receive a free demo disk and brochure of either product.

**Microsoft Press**: You will receive a free product catalog. Call (800) MSPRESS.

**MicroTouch Systems** - The UnMouse: For a detailed brochure call (800) UNMOUSE.

**Odesta Corporation** - Double Helix: Call (800) 323-5423 for the \$10 Double Helix test flight and quick start instruction guide of your choice (List Management, Time & Billing, Order Entry or Lead Tracking).

**Paracomp, Inc.** - Swivel 3D: Demo disk, tutorial and reference guide are available. Self-running demonstration is also available. Call (415) 543-3848.

**Paragon Concepts, Inc.** - Nisus 2.1: Call (800) 922-2993 (outside CA) or (619) 481-1477 (CA) for product and review information and our complete brochure "How Nisus compares with Microsoft®Word."

**Prism Enterprises, Inc.** - TextScan 3.04: Additional product information will be rushed to you including our full color spec sheet or demonstration diskette.

**Shana Corporation** - Informed Designer: We would be pleased to send you more information, including a two page brochure, spec sheet and sample form. Demonstration disks are available for a nominal charge.

**Silicon Beach** - SuperCard and Super 3D: Interested parties will receive brochures on the full line of Silicon Beach Software products, which includes SuperPaint, Digital Darkroom, SuperCard, Super 3D and Personal Press.

**Softsync, Inc.** - Accountant, Inc. Professional: Call, write or fax for a brochure and Hypercard stack that demonstrates the program. (Specify type of business: manufacturing, retail or service professional.)

**Symantec Corporation** - MORE: For free product information on MORE 3.0, call (800) 228-4122, extension 7640 to request a demo disk and literature.

**Synergy Software** - VersaTerm-PRO: Replies to reader service receive our six-sided brochure which includes screen shots, features/benefits and product specifications.

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**T/Maker** - WriteNow: T/Maker is happy to supply readers with our product brochure and a sample WriteNow diskette for evaluation.

**Tecmar** - DATAVault, QT-Mac80: Tecmar offers free demonstration disks of QTBackup™ software to qualified users. Call (800) 624-8560 for details.

**West Ridge Designs** - Macintosh Plus/SE Carry Case: Responding readers will receive a color brochure featuring our Macintosh Plus/SE Carry Case and Accessories. For a dealer near you, call West Ridge Designs at (800) 548-0053.

### Desktop Communication

- DaynaNET
- Network Bundle
- InBox Plus
- AppleShare
- DOS Mounter
- LapLink MAC III
- Front Desk
- MarkUp
- MarcoPolo
- MacMainFrame
- MacIRMA
- VersaTerm PRO
- White Knight
- MicroPhone II
- ViVa24
- GatorBox
- DaynaFILE
- Netway Family
- DMS Data Service
- Nevada Western LAN Products
- NetAccess

### Accessories and Publications

- Microsoft Press
- MacGuide
- Turbo Mouse
- Mac II Stand
- Masterpiece Mac II
- Designer SoftWear
- MacCable
- Carry Case

### Hardware

- WIZ
- Lynx Turbo Trackball
- The UnMouse
- MacVision
- Scanmaster
- Smart Label
- QD5500 Series
- Tektronix Color Image Printer
- Tektronix Phaser
- Tektronix ColorQuick
- Varityper VT600P/W
- Sayett DataShow Projection Pads
- iDSPRO Series
- Rodime Cobra
- Fujitsu 3.5 800K
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- Q T-Mac80

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- Express Tape
- SAM
- SUM II

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- CheckMark Series
- Flexware
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### Graphics and Multi-Media

- ColorStudio
- DesignStudio
- FontStudio
- LetraStudio
- MacDraw II 1.1
- Model Shop 1.1
- PixelPaint Professional
- UltraPaint
- Illustrator 88
- Streamline
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- Swivel 3D
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- SuperCard
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- FullWrite Professional
- MacWrite II
- NISUS 2.1
- MacProof 3.2.1
- Microsoft Word
- WriteNow 2.2
- Adobe Type Mgr
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- Adobe Type Sets
- TextScan 3.04
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- 4th Dimension
- FileMaker II
- dBASE Mac
- Double Helix
- Omnis 5
- TopDown 2.0
- Aperture Visual Information Manager
- MacProject II
- Informed Designer
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### Desktop Communication

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- Mac II Stand
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- Designer SoftWear
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- WIZ
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- Smart Label
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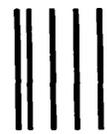
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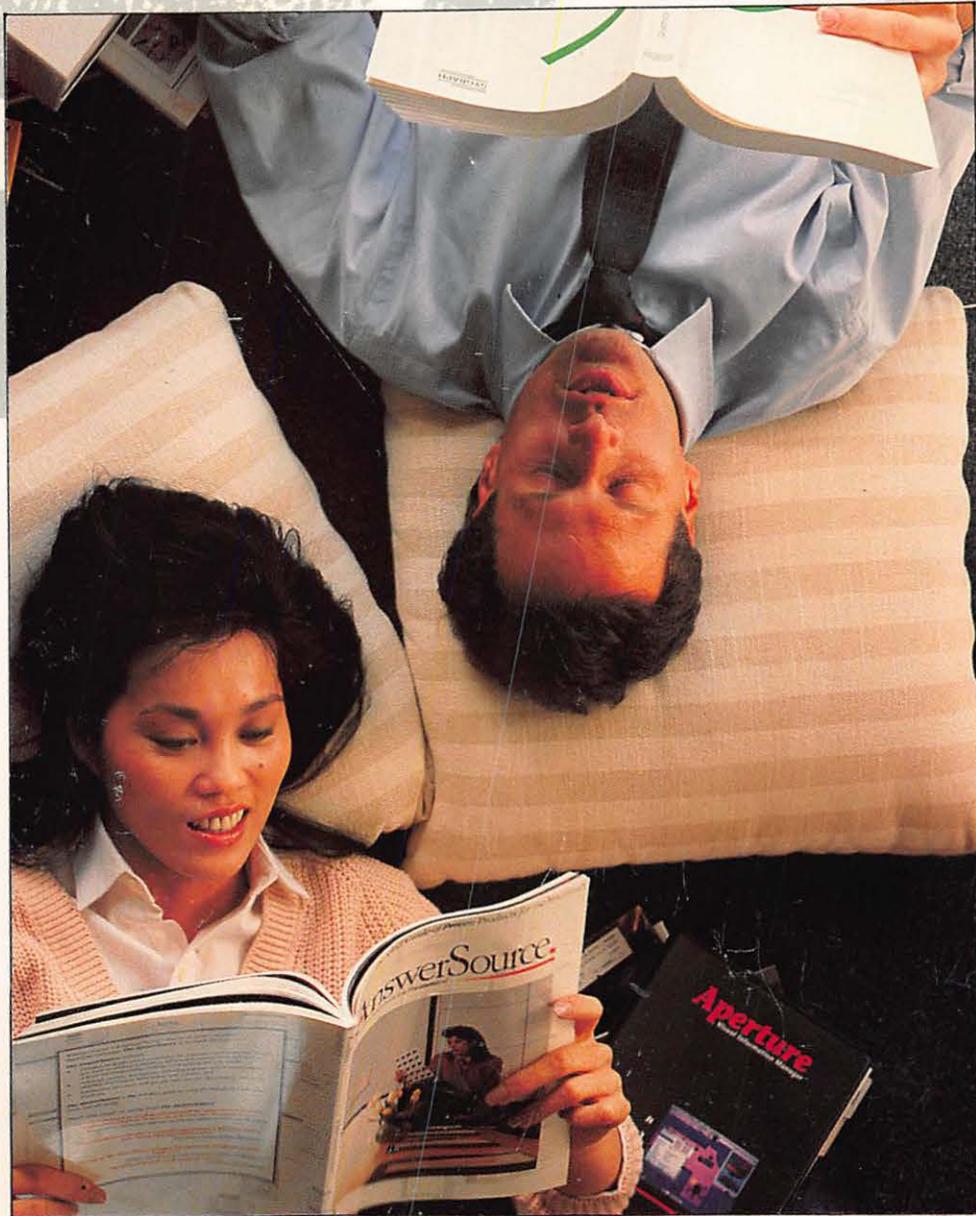
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