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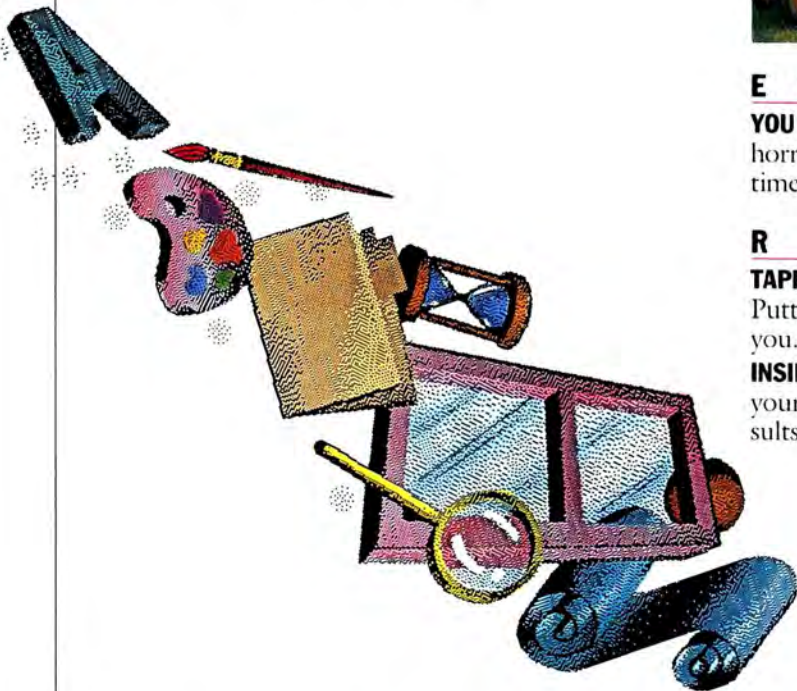
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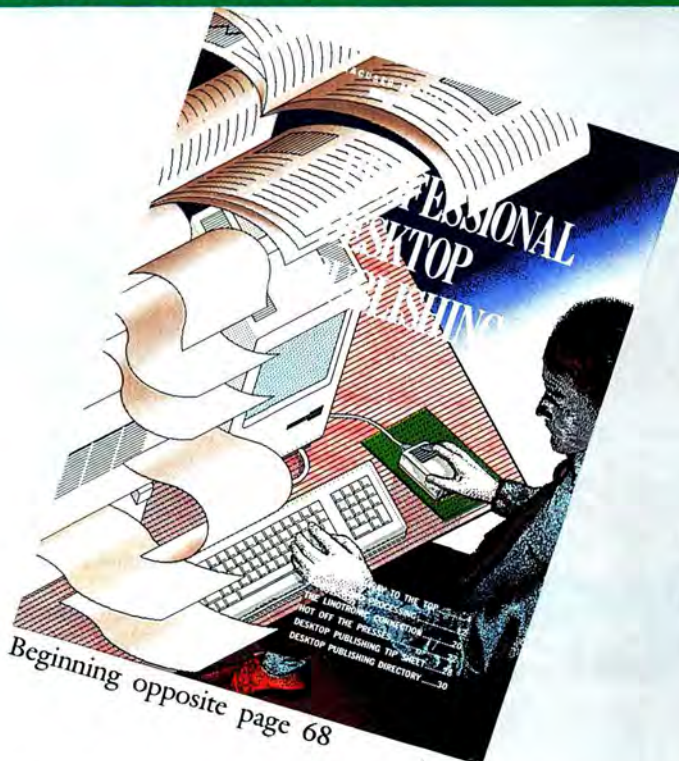
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Due to space considerations, our Pascal article will not appear this month. The series will resume in October.



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## INTRODUCING HYPERDRIVE 2000.

Last year, the first internal hard disk for the Macintosh appeared. It was called HyperDrive, and The MACazine's reviewer was "totally destroyed."

Personal Computing judged it "an unabashed winner," and A+ proclaimed it "a giant leap for Mackind."

Now the next generation of HyperDrive systems has arrived—and ushered in its own language crisis. Because a whole new set of superlatives are in order.

## THE MAC AS NUMBER-CRUNCHER.

Stated simply, HyperDrive 2000 transforms the Macintosh from an eminently efficient personal computer into an incredibly powerful one—a tool capable of manipulating unprecedented amounts of data at unprecedented speeds.

If that strains credibility, consider the following:

A Mac with HyperDrive 2000 can perform computations from 10 to an astonishing 250 times faster than a conventional Mac.\* (Which, by way of rough analogy, is approximately the speed differential between a station wagon and a space ship.)

It can run up to 8 different applications at the same time using Apple's Switcher. And it can run applications for which the Mac just a short time ago would not even have been seriously considered—applications like those used by engineers, software developers, scientists, statisticians, and others for whom a powerful computer makes jobs not just easier but possible.

No one who works with large quantities of information will have any difficulty understanding why we've thus modified the Mac. The remaining mystery is how.

## THE MAKING OF THE WORLD'S FASTEST MAC.

HyperDrive 2000 is a delightful paradox: a system that radically enhances the Mac's performance while changing neither its appearance nor the manner in which it works.

We accomplished this by adding another microprocessor that doubles the processing speed. And we connected a huge (20-megabyte) hard disk system directly to the microprocessor.

We also equipped it with a floating point processor—this to handle the high-speed computations that knowledge workers require.

We increased the Mac's main (or RAM) memory to two megabytes (2.5 megabytes on the Macintosh Plus). And thus equipped it to run vastly more sophisticated software.

Finally, we designed the sophisticated software that melds it all together. Software that not only supports virtually all Macintosh programs but delivers all the ingenious capabilities of HyperDrive. Including file drawers that automatically shrink or swell according to what's put in or taken out. A security program that protects files from unauthorized entry. And a print spooler

that lets you go on to other jobs while your printer is churning out the one you just completed.

## A NEW DIMENSION OF USER-FRIENDLINESS.

The arrival of HyperDrive 2000 enlarges to three the first family of high-quality, high-performance products installed inside the Macintosh.

It means you can choose between 10- and 20-megabyte versions of HyperDrive if you need the speed and capacity that only a hard disk can provide—and that only HyperDrive provides this well. Or you can choose HyperDrive 2000 if you also need the kind of computational prowess we've already described.

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by Neil L. Shapiro

# WORLD BEATERS UNITE!

What does it take these days to change the world? Back in the good old days it would all begin with a unique, new idea. Then would come the development of the skill to program that idea into reality. Then you needed only the ability to market that reality. A few lucky breaks and you were on your way not only to fame and fortune, but to remodeling the world.

It was never easy to break into computer programming with a revolutionary idea, but it was always feasible. Is it still as feasible? I think so, but first, some background.

By revolutionary software ideas, I mean things as awesome to software as the Mac is to hardware. I can't say *exactly* what I mean because, after all, that would mean I would have to invent the idea and I'm only an editor. But I know I'll recognize a revolutionary idea when I see it — I have in the past.

At the first New York City computer show in 1978 I hardly even knew what a computer was. I was a journalism major with a minor in printing and had talked my way into a berth on an electronics magazine as its technical editor on the basis of an advanced-class ham radio license.

At that show I learned something that would stand me in good stead in future years — to find not the most ballyhooed product, but the most useful. My first find was something called *Dr. Memory* being demonstrated on an Apple II by Ed Zaron, its author. It was the first obtainable word processor for the Apple. People were just being blown away every time Ed deleted a word or typed over an old one. And when he did a copy and paste the crowd went nuts.

This was something most people had never seen done on a computer before. Suddenly many, many people had a reason to want to buy one of these machines.

The next time I saw a miracle program was a year later at the same New York show. This time a crowd of businessmen, dressed in conservative suits and ties, were clustered screaming around two long-haired types dressed, at best, in casual chic. But what those guys — Dan Bricklin and Bob Frankston — were showing went beyond the split between *Esquire* and *Rolling Stone*. It was *VisiCalc* and the world suddenly became much more hospitable to the personal computer revolution.

## HERE'S THE HARDWARE

Then came the Mac. Suddenly we had hardware that was unimaginably better and more advanced than anything we could possibly have hoped for just a few years earlier.

We had hardware that was made out of dreams. And the software, I was sure, would be a trip to another dimension.

I have not been disappointed, particularly in the area of graphics. Programs such as *MacPaint* and *MacDraw* in design and *PageMaker* in desktop publishing have, indeed, proclaimed the Macintosh as being the new hardware standard-bearer of the future in a whole new field. But in other areas, I sort of wonder what is happening to that heady atmosphere of invention and enterprise.

There are hundreds of programs for the Mac that do what programs on other computers do. Sure, they do it better! I'd much rather have a go-around with *Excel* any day than with *1-2-3*. The Macintosh Interface takes silver and turns it into gold. But a spreadsheet is a spreadsheet is a spreadsheet. And a word processor by any other name would spell as sweet.

## HERE COMES THE VC

The present state of the art in such programs as word processing and spreadsheets reminds me of physics in the late 1920's. At that point many famous scientists were saying that we had already discovered everything there was to know about the universe and its laws, that only the details were left to be found.

Then Einstein came along and physics became a new field. That's all that it takes — one dreamer to open a new way of thinking to discover some surprising and universal truth.

Unfortunately, there is now a feeling in software circles that only major companies, funded with lots of capital, can instigate and market real world-beating ideas. The big money syndrome began with Lotus when they dropped a few million on *1-2-3*. From that point on

marketing software came out of the garage and into the realm of The Venture Capitalists.

Most software entrepreneurs have a little pet name for venture capitalists. They call them "the VC." It's a real kick to sit around a bar with a fellow who's staring off into space, holding a glass of Jack Daniels, and mumbling curses about "the VC" and it's not even the 1960's anymore.

The VC don't want to know about new-fangled, innovative, revolutionary ideas. They'll make a good pin-striped case for how open they are to such ideas at software shows and panel discussions and magazines like *Time* tend to believe them. But most venture capitalists want the type of 5-year business plan that makes any real visionary start reaching for the Visine.

The situation is hardly any different at most large companies that do not need VC funding. After all, they have stockholders and boards of directors to report to.

Picture someone at Microsoft suddenly waking up and saying, "Well, *Word* is nice as far as it goes. But I think we should scrap everything we ever thought about word processing programs and start over from scratch." Picture them on the unemployment line.

## THE DREAMSMITHS

The Macintosh market is still new enough, wild enough, that I have no doubt that a revolutionary idea could still find a home if given half a chance.





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## THE EDITOR'S DESKTOP

But I think a lot of people who have such ideas are discouraged at going up against the big companies, the companies backed by the VC, the companies with the bucks for massive ad campaigns. And many of the best ideas would probably not appeal to most venture capitalists.

The purpose of this editorial is to say to anyone out there who has an idea — but who feels that they must be doomed before they begin because of the competition and the costs — that in the Mac marketplace you can still do it. You can raise yourself, by your own bootstraps and your own product's worth, to the level of a major player.

If you have the next step (or even better, five steps removed from now) in word processing, spreadsheets or something no one has thought of yet — you don't need megabucks to make it on the Mac. You will have to go to shows and generate some grass roots excitement. You'll have to go after the media with press releases and demonstrations (here's one editor looking forward to hearing from you) and you'll have to budget the money you do spend on ads, small at first. And don't forget user groups and smaller newsletters; they're some of the most trusted ways to hear about what's new. Apple itself, with its software evangelists and development team, will give you a hand.

Keep in mind that the Mac marketplace is still a community effort. It's not like breaking into the IBM PC market where you have to reach faceless corporate buyers who can only see something if it's Blue. The Mac market is still composed of people who are willing to take a chance on technology, people who you can reach as people.

If you have a dream, there was never any better machine than the Macintosh on which to hammer it into reality. And there's no better time than now. ☐

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◀ (If you own a Mac 512, you can get DataFrame performance too, with our \$99 SCSI adapter.)



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Internal drives save desktop space, but there are serious trade-offs. First, you lose your system while the drive is installed. Worse, you lose your system if the drive needs repair. (Internal drives have earned a not undeserved reputation for frequent breakdowns.)

Then there's heat—the enemy of reliability. Internal drives add heat to the system. You either use a fan—which means you listen to an annoying whine while you are working—or you use no fan, which means your system gets too hot.

DataFrame is external, so it adds no heat to the system. Because the drive is preformatted, you can take it right out of the box, plug it in, and be *working* in minutes. And if your hard disk should ever need service, you just unplug the DataFrame (you can *still*

use your Mac) and get a replacement *immediately* from your dealer.

## **Decision: Under-system or beside-system?**

A drive under your Mac has the same heat problems as a drive inside your Mac. The drive must either have a fan (*noisy*) or it sits under your Mac like a little hotplate (*unacceptable*).

DataFrame sits *beside* the Mac, uses a vertical 'chimney' design to vent heat, needs no fan, and therefore stays cool *silently*.

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DataFrame has been chosen by more professionals, more Macintosh software developers (including many in Apple Computer, Inc.), more dealers, and in fact, *more people* than any other SCSI Macintosh drive, *by far*.

So before you commit to *any* hard disk for your Macintosh, you owe it to yourself to see DataFrame in action. You'll find it at any of the hundreds of qualified SuperMac™ dealers. They're listed next to this ad.

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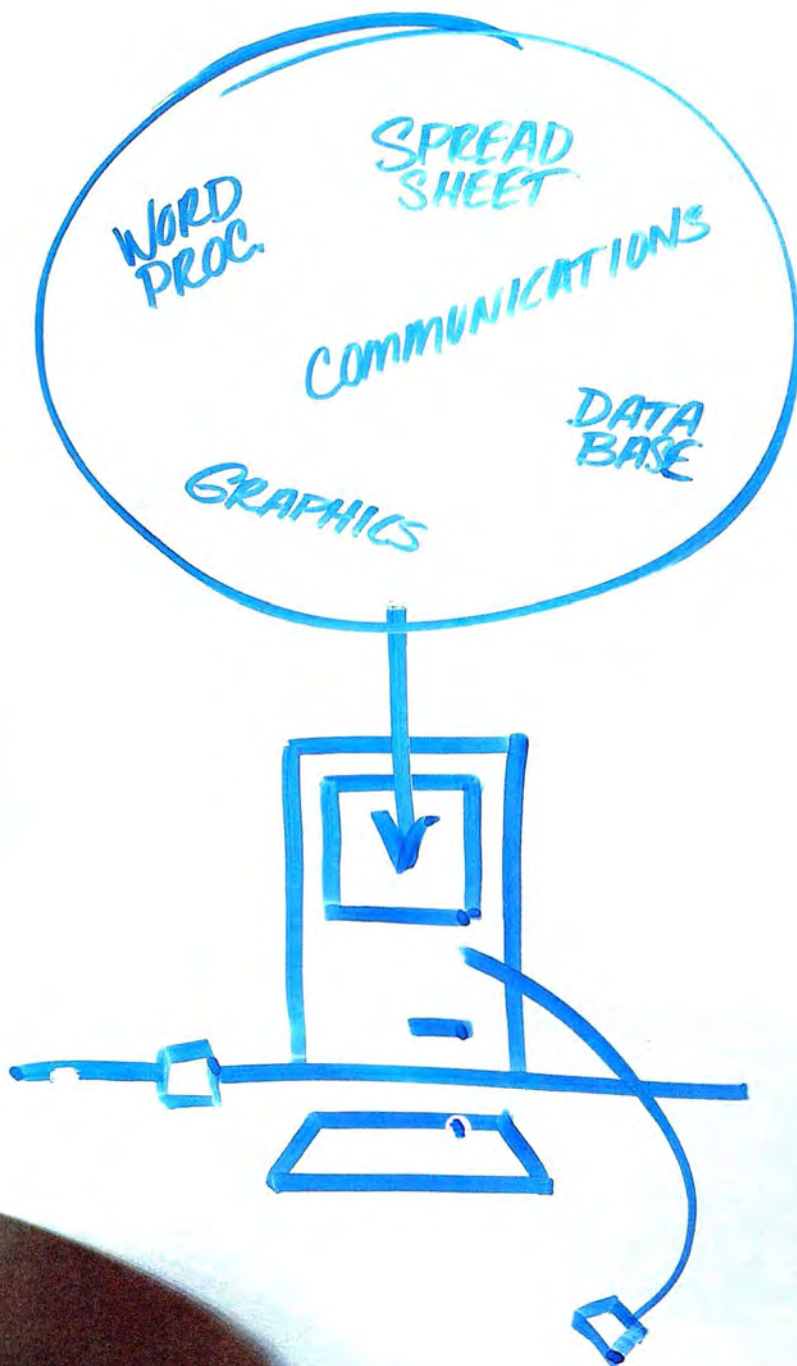
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## INSIDER INFORMATION

I'm a *MacUser* chooser!

Congratulations for producing such a great publication. In my job, it is very important to keep abreast of the industry's newest, latest and greatest hardware and software. *MacUser* is one of my most valued Macintosh references. It's colorful, inquisitive and thorough. Very often I learn of new products and techniques from *MacUser* that enhance my knowledge of Macintosh. I anxiously await its arrival on my desk every month.

Keep up the great work!

JOE HUTSKO

TECHNICAL ASSISTANT

OFFICE OF THE CHAIRMAN AND C.E.O.,  
APPLE COMPUTER

## BALANCE OF (BRAIN)POWER

I wish to add my congratulations on the quality of your magazine to those expressed by other readers. I speak not as a seasoned Macintosh user, but rather as a novice. Thanks for remembering those of us who aren't "Macexperts."

BRAD EASTMAN

EDMONTON, ALBERTA, CANADA

*We try to maintain an editorial balance between high-end, ultrasophisticated users and people who are just starting out on the Mac. Thanks for the kudos and keep letting us know what you want to see.—TFH*

## A CHANGED TEMPO

Thanks for the entertaining and informative review of *Tempo* in the July *MacUser*. There are a few corrections I'd like to make in your article. First, although you indicated the *Tempo* version reviewed was 1.1, it was actually 1.0, as seen in the screen shot on page 40. *Tempo* 1.1 was released in late March and has been sent, without charge, to every registered owner of 1.0.

More importantly, as most users will attest, *Tempo* does not affect the speed of the program it is running with in 90 percent of the cases. There are graphics programs which slow down on replay, but these are by far more the exception than the norm. With word processors, spreadsheets, database programs, etc., *Tempo* flies.

Additionally, there are three cases which could look as though we've responded to the author's requests with clairvoyance: our Branch routine does default to "Branch Always"; the beep to let us know we have just "survived the launch" has been removed; and for those who, like myself, have trouble remem-

bering esoteric key codes, our "List..." button allows the user to print out a text file of *Tempo* macros and their key codes.

To attest to your magazine's influence, the day I received an express-delivered copy of your July issue, I started getting phone calls asking about the slowed operating system. Happily, it is not a problem for most users, and I hope this letter clears up the confusion for those who still have questions about *Tempo*.

RICHARD H. BARRON

AFFINITY MICROSYSTEMS, LTD.  
BOULDER, CO



## A QUESTION OF SUPPORT

There was one inaccuracy in Mr. Sanders' letter (Letters, June 1986) that I would like to clarify. Mr. Sanders states that for a large fee Omnis technical support will answer ten questions per year and that the complexity of the question to be answered is related to the fee paid. This is a serious misrepresentation of the facts. While in the past our technical support options were somewhat more expensive, fee was never related to complexity.

Based on the responses of our users, we have substantially lowered the price for technical support. Our current policy provides for three levels of support, the most expensive of which is \$95 annually. This provides the subscriber with a quarterly newsletter, all new technical notes, continued access to telephone support, and all upgrades to the product.

I cannot help but feel that your magazine could have made a brief phone call to verify the details of our policies before

printing such potentially inflammatory comments. I would deeply appreciate some effort to rectify the damage unfairly done to Blyth Software and *Omnis* 3.

STEPHEN D. CRONIN

TECHNICAL SUPPORT MANAGER  
BLYTH SOFTWARE

*Right you are, Stephen, not calling to check that fact was a major oversight on MacUser's part. Thanks for helping us set the record straight.—TFH*

## MORE WORD WISH LISTS

I agree with your recent article, "The Secrets of Word," that it's a fine product but suffers from a Bad Problem and leaves several things to be desired. The Bad Problem is that the use of subscripts and certain changes of font cause the line spacing to change. This results in ugly output, even on a LaserWriter. Also, superscripts are too low and can't be adjusted.

Something I would wish for is to be able to embed tabs in the text, rather than in the format. It could be used to set a tab, enter the numerator of a fraction in superscript, return (backwards!) to the tab and enter the denominator as a subscript.

FRANK QUINN

BLACKSBURG, VA

In discussing leading, Doug Clapp overlooked something I consider a bug. I prefer a line spacing other than single or double. I normally begin a document by selecting the Paragraph Formats dialog and select my favorite 10-point font. However, if I decide at some point to use a type size larger than 14-point, I have to remember to alter the "line spacing" specification temporarily from 14-point to "auto" or else the tops of the larger letters will be cut off. It does not matter whether the line above my oversized title is filled with type or blank; the specification of 14-point leading limits the size of every line in the document, including blank ones.

WILLIAM PORTER

KATY, TX

## CALCULATING THE PLUS' MINUSES

I am a proud owner of a new Mac Plus. I think that many new features of the Plus are testimony to Apple having thought out every aspect of its new product. However, I am surprised that they missed the mismatch of the numeric key pad to the keys on the DA calculator. I hope someone comes up with a Calcu-



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We leave a lot more *out*, too. We leave out fluff, puff, arty white space and "lifestyle" articles. We leave out product evaluations taken word for word from press releases. And we leave out "gosh, gee-wizz, the-Mac-is-the-greatest-thing-since-sliced-whole-wheat" editorial comment.

Here at **MacUser**, we call the shots as we see them, fairly and squarely. We are Macintosh enthusiasts, but not blind to the Mac's problems and idiosyncracies. We see **MacUser** as a monthly tool and a resource for its readers. And we utterly reject the philosophy that editorial content is the stuff with which to fill up the spaces between advertisements.

If this sounds like your sort of Macintosh magazine, fill in the coupon opposite to save yourself a bundle off the newsstand price. Subscribe to **MacUser** and get more out of your Macintosh. Because we put more in it.

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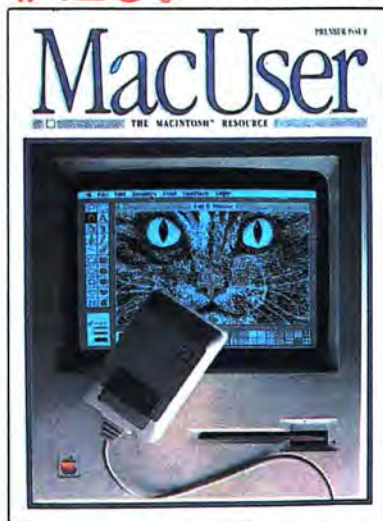
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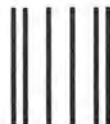
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lator Plus so when I press ENTER it won't be a plus, nor plus a minus, nor even minus a divide. How did that ever get past them?

DR. TODD M. A. PETERSON  
RIVERSIDE, CA

*That was fixed in the latest System software. Get Finder 5.3 and System 3.2 —SB*

## FUN IS A MATTER OF OPINION

Thanks for your column, "Sexism and Silicon Sinners," in the June *MacUser*. I appreciate your exposé of *Real Life*... and I share John Dvorak's opinion of Bible thumpers.

I'd like to suggest, however, that commercial software, especially games, can be a perfectly appropriate place to editorialize. What is *Balance of Power* but an exciting editorial in game form? Another game is called *The Ancient Art of War*. The very title suggests that there's something noble and artistic about the moral slime from which we're still trying to crawl (I have my opinions, too).

Every game that pits the good guys against the bad editorializes as to who's good and who's bad—*MacVegas* is an editorial in favor of gambling.

Editorials add an interesting dimension to software. Let's encourage it and see what new areas of creativity and idea exchange this can open up for us—even if we don't like some of the ideas expressed.

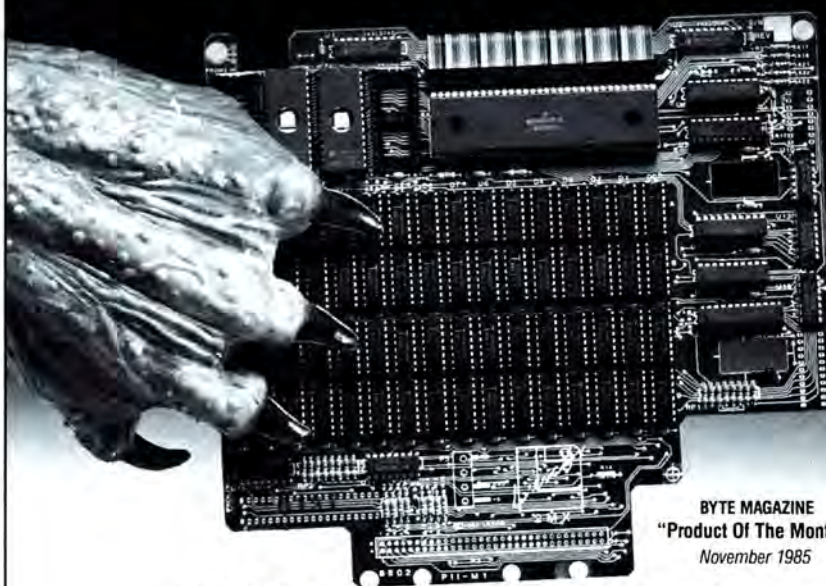
GREGG SANDERSON  
SAN DIEGO, CA

People marketing such programs as *Real Life*... should be decent enough to voluntarily mark their product, and their ads, with a statement notifying buyers of the "true" content of the program. In this case it appears that buyers innocently purchased a product believing it to be a recreational adventure game. Respectable religious orders would not seek to deceive the public regarding the content or nature of their literature and materials.

Mr. Dvorak claims to dislike bigotry and stereotyping. But the statement that, "This is done by introducing you to some religious fundamentalist concepts (a.k.a. religious bigotry)," is an outrageous assertion. I have never attended a single fundamentalist church that has ever espoused nor promoted "bigotry" or "hatred." The only exposure I have had in my life to really flamboyant, vitriolic bigotry and stereotyping has been that as promoted by John Dvorak!

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Installation Date: \_\_\_\_\_

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# NEW ON THE MENU

## SIGNATURE STAMPER

For really impressive Mac-generated stationery you need a good logo. If you have ever tried creating one in *MacDraw* or *Fontographer* (for those lucky enough to have LaserWriters), you know how hard it is to get good-looking results — and how long it takes to create them.

Image Club Graphics has their professional staff convert your logo, signature or graphic image into either a *MacDraw* image or an automatically downloading laser font. The results are excellent and the laser font installs and works just like an



ordinary font. The \$98 price tag may seem high, but only if you haven't tried to do this sort of work yourself. More information

is available from Image Club Graphics at 2828 19th St. NE, Calgary, Alberta T2E 6Y9 Canada, (403) 250-1969. — SB

## SPECIAL SYSTEM UPDATE REPORT

In early June Apple released yet another version of the *System* (3.2), *Finder* (5.3) and related files. Problems with earlier versions had led to two previous releases, but neither fixed all of the original problems.

The story started in January 1986 when Apple released *System* version 3.0 to go with the Mac Plus. This was the first system software to fully support HFS — and it had serious file-eating bugs. **System version 3.0 should not be used by anyone! It will (still) destroy**

**files.** It was almost immediately replaced by version 3.1 and then, as that failed to solve some serious problems, by version 3.1.1. The latest version (3.2) fixes over 50 known bugs.

Apple has chosen to distribute these latest files in a new and innovative manner. They are available to dealers on the AppleLink network, and are also available on the major electronic services such as CompuServe's MAUG, Delphi's Icontact and Genie. These commercial services had to purchase the right

to distribute the System software, and users must first read and agree to a special license before transferring (downloading) the material to their Macs. Users must also pay for the not inconsiderable time charges imposed by these services.

Why should anyone pay to get these files? Possibly you can't get to a dealer. Or your dealer can't or won't supply them (there are some *strange* dealers out there). Or your dealer hasn't acquired the the new materials yet (Apple mailings will reach

dealers by mid-July). Or you want to be first on your block with the latest and best.

If you chose to wait for your dealer, you'll have two options: you can bring in two disks (and your masters to prove ownership) and simply copy the new files. Or you can buy a kit containing a short manual and the new materials on two disks. The pricing and availability date for the kit are unconfirmed at press time, but are believed to be \$15 and mid-July, respectively. — SB

## LATEST SYSTEM VERSION NUMBERS

Here are the System software version numbers as of late June. The June, 1986 Macintosh system update can be placed on two 400K MFS-format disks, arranged as follows:

- System Installation disk:
- System Folder, containing:
  - System (V3.2)
  - Finder (V5.3)
  - Hard Disk 20 (V1.1)
  - Scrapbook File
  - Clipboard File
  - Font/DA Mover (V3.2)
- Utilities Folder, containing:
  - Installer (V2.2)
  - Installer Scripts folder, containing:
    - External Drive (V1.0)
    - Mac Plus Update (V1.1)

Printer Installation disk:

- Installer (V2.2)
- The Namer (V2.2)
- System Folder, containing:
  - System (V3.2)
  - Finder (V5.3)
  - ImageWriter (V2.3)
  - Laser Prep (V3.1)
  - LaserWriter (V3.1)
  - AppleTalk ImageWriter (V2.3)

You can also put everything on a single 800K disk arranged as follows:

- System Installation disk:
- System Folder, containing:
  - System (V3.2)
  - Finder (V5.3)
  - Hard Disk 20 (V1.1)
  - Scrapbook File
  - Clipboard File

- Font/DA Mover (V3.2)
- ImageWriter (V2.3)
- Laser Prep (V3.1)
- LaserWriter (V3.1)
- AppleTalk ImageWriter (V2.3)

Utilities Folder, containing:

- Installer (V2.2)
- The Namer (V2.2)

Installer Scripts folder, containing:

- External Drive (V1.0)
- Mac Plus Update (V1.1)

Be careful about file names. In some cases they must be exact (including spaces) or the scripts, and thus the updating, won't work. Folder names need not be exact. The *Installer* also checks creation dates, so be sure to get your materials from an authorized source. — SB

## ELECTRONIC ARTS STRIKES GOLD

*Seven Cities of Gold*, an adventure/ educational/ political /strategy game that casts players as sixteenth-century Spanish explorers, is all set for its Macintosh release. Electronic Arts' prize-winning questfest should appeal to Mac gamers of all stripes.

For educational purposes, *Seven Cities* offers players the chance to explore the New World as Columbus found it, but it's more fun to have the computer generate a new, never-before-seen land mass, complete with native tribes. Choose to amaze the natives or beat them into submission to get them to trade, but either way, they'll remember your behavior in the future. It will make a great educational program for the kids — if they can ever get it away from you. — TFH



## THE ULTIMATE COLOR-CODED DISKS

Many of us use the colored bar on disk labels to indicate what sort of material is on the disk. For example, green could indicate data disks, while red denotes a start-up disk.

C. Itoh, manufacturers of the ImageWriter, have added a new wrinkle to color-coding — sets of disks in ten bright colors. These single and double-sided disks will certainly make your disk collection a brighter place.

They're called Rainbow Color Diskettes and are available from C. Itoh at 4 Westchester Plaza, Elmsford, NY 10523, (800) 423-6870 or (914) 347-6868 in New York. They list for \$44.95 for ten single-sided disks and \$54.95 for ten double-sided disks. Both styles come packed in a neat plastic disk box. — SB



## MOUSE GENETICS

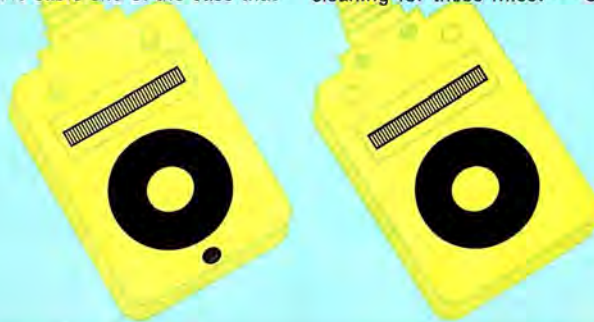
A new generation of Mac mice has arrived. They are now being shipped with all Macs, and are indistinguishable in operation from the original mice. They even appear the same from every external viewpoint (except the bottom view). The strain relief, the funny looking rubbery thing on the cable where it leaves the mouse, is a bit longer and narrower than the originals'.

The bottom is different, with a single screw at the end away from the cable replacing two at the cable end. The riser feet are

also slightly different. They have sharper edges and are a tiny bit higher.

There are some internal changes, the most significant to users being a clip arrangement at the cable end of the case that

effectively prevents removal of the case top. If you force these clips you'll break them. Thus, cleaning must now be done by removing the ball and working in the ball cavity. No more easy cleaning for these mice. — SB



## A PET FOR YOUR MOUSE

Is your Mac lonely? How about getting it a good, friendly, loyal pet — a talking moose? One with an unusual vocabulary, to boot.

*Talking Moose* is a public domain desk accessory written by Steve Halls of Edmonton, Alberta, Canada. It is available on all of the major electronic services and BBSs and, by this time, should be in every users group's library.

The moose speaks what's in the *Moose Phrases* file, so if you want to customize your pet, you'll have to modify this file. Given this pet's growing popularity, it's only a matter of time before a *Moose Editor* appears. — SB

## RUMOR MANAGER

The next Mac, and its peripherals, will be a nice institutional gray. No more mellow beige, no ice white (a la LaserWriter and Apple II), but businesslike gray. The choice wasn't taken lightly, nor were there not other strong contenders. Pale blue almost took the prize, and a darker tan also had a lot of support. . . . alternate keyboards are on the way — one company has found a way of mapping in up to ten distinct function keys, while both entries will have adjustable legs. A built-in trackball will be included on both top-of-the-line models. . . . reports of counterfeit disks have been surfacing at an alarming rate. They come in all colors and are apparently not

just rejects from regular runs, but cheaply made knock-offs. . . . a small scandal will erupt before the end of the year at one of the major Mac magazines. . . . look for yet another high level shakeup at Apple soon. . . . Apple's *Recognition* multitasking project has been put to rest, with the help of some insiders who were totally against it. Instead, look for two versions of Hertzfeld's *Servant* — one released by Andy and one by Apple. They'll be different, and Andy's will be better. The French *Erato* project is still on schedule, with very clean and impressive alpha versions seen recently on the East Coast. . . . Doug Clapp's *Word Tools* is only the first of many name-

endorsed products that are in the planning stages. . . . the soon-to-be-released *Microsoft Works* will be the last major integrated program developed for the Mac. . . . a major LaserWriter price drop is just around the corner. . . . converging new developments will cause the amount of Mac software available to double within 12 months. . . . cheap 4-meg upgrades will not be available until well into 1987. . . . due by Christmas: three new desktop publishing programs, four new *MacPaint*-type products and two, and only two, new word processors. . . . although we haven't seen it, we've heard of a spelling checker with virtually no misspelled words in its dic-

tionary. . . . an electroluminescent screen, laptop Mac was being secretly shown to some developers recently. It weighed under 5 pounds and had a built-in disk drive, trackball and 2400-baud modem. Runs up 12 hours on each charge of its built-in, high-energy batteries. . . . Guy Kawasaki's stag party (which will be history by now) will be the stuff of legend. . . . vertical application software will continue the strong upward trend of recent months, even as the rest of the market flattens out (again!) . . . visual interactive programming will be the program category with the greatest impact in the first half of 1987, as many, many users become programmers.



# WHERE DID THOSE SOFTSTRIPS GO?

Back in our July issue, you probably noticed that we promised to run at least a page of Cauzin Softstrips in every issue. And then you couldn't find them in the July issue or even in the August issue!

We haven't changed our views on Softstrips. We still think that they are both great and revolutionary. What happened was that late-breaking developments forced us to rearrange things in the back of the magazine, and we had to cut those pages. We apologize to those of you (many of whom we heard from) who looked in vain for the strips. Starting this month, *The Strip Show* will appear every month. — SB



## UPDATES

Do you have the latest versions of your programs? Most programs indicate what version they are when you look in the About . . . choice at the top of the Apple menu. If your version isn't the latest, contact the publisher about possible upgrades. Look for addresses in our Mini-Finder section. Here's our list (as of press time). — SB

Aztec C	1.06h
BatteryPak	1.23
Balance of Power	1.03
Click/On Worksheet	1.3
ColorChart	1.3
ColorPrint	2.01
ConcertWare+	3.0
Copy II Hard Disk	5.4
Copy II Mac	5.4
Crunch	2.0
DiskInfo	1.43
Dollars & Sense	1.4
Edit	2.0d1
Excel	1.00
ExperLISP	1.5
ExperLogo	1.1
Factfinder	1.1
Fedit	3.5

Fedit Plus	1.0.4	MS Chart	1.00
FONTastic	2.7	MS File	1.02
Fontographer	1.1	MS Fortran	2.1
Hard Disk Utility	1.21	MS Word	1.05
Helix	2.0 r7	Multiplan	1.1
InTouch	2.1	MusicWorks	1.1
Jazz	1A	myDiskLabeler	2.11
Just Text	1.0i	Omnis 3	3.10.MAC
MacDraw	1.9	OverVUE	2.0d
Mach 1	1.1	PageMaker	1.2
MacBackup	3.5	PictureBase	1.1
MacBase	1.0	QUED	1.4
Mac Disk Catalog II	2.1B	Quickset	2.0
MacDraft	1.3	Rags to Riches	2.6
MacGolf	2.0	ReadySetGo	2.1
MacLabeler	2.0	Red Ryder	9.3
MacPaint	1.5	Resource Editor (Resedit)	1.0d12
MacServe	2.0	Resource Editor (Redit)	1.2
MacSpell+	1.1	Sidekick	1.1
MacTerminal	2.0	Slide Show Magician	1.3
Mac Tools	5.4	Smartcom II	2.2B
MacWrite	4.5	StatWorks	1.2
Mac Zap Copier	4.1	Switcher	5.0
Mac Zap Tools	3.5	Tempo	1.1
Mac Zap Patcher	3.1	ThinkTank 512	1.3
MeasureTest	1.7	Thunderscan	3.2
Megamax C	1.42	Top Desk	1.4
Microphone	1.0	TurboCharger	2.0
Micro Planner	1.1	VersaTerm	2.00
MS BASIC	2.1	Word Handler	1.1

# Until dMac III, knocking out your customized business applications was a real fight.



When you used to put your Macintosh up against tough, custom business applications, it was nearly always an unfair bout. Now with dMac III, your Macintosh possesses the swiftness and power of a top-ranked champion.

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  - \*Up to 100 different indices per index file
  - \*Up to 10 database files in use simultaneously
  - \*Up to 2,000 fields per record
  - \*Up to 253 characters per field
- dMac III features a powerful programming language that offers Macintosh users the ability to create professional business applications
- dMac III shares data with other major Macintosh software packages... in both directions
- dMac III is fully compatible with dBase III
- To run dMac III you need:
  - \*Apple Macintosh or Macintosh plus with 512 KB RAM
  - \*Two disc drives or one disc drive and a hard disc
- All for the suggested retail price of \$495


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We believe in the Macintosh™: it is in our opinion, the hardest working micro computer system in the world. No other computer gives its users as much for the money. That is why we are bringing you the Generic™ Drive Line.

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# TONS OF INFORMATION

Monthly magazines like *MacUser* provide a wealth of information, but publishing realities limit the amount of space that can be devoted to any particular subject. Distributing realities (lead times) make it hard to cover very recent events. Where can you turn for more information, faster? User group newsletters are a super source, with the best of them approaching professional quality. There's also a small, but growing, group of commercial Mac newsletters.

These professional newsletters average between 32 and 48

pages a month and either carry no advertising or just a tiny amount. They tend to be solid information. Some emphasize technical aspects, some are business oriented. One trait that they all share is that they are written and produced by true enthusiasts—and they're good.

The best two, in my opinion, are *The Macintosh Journal*, edited by Michael Bayles and Steven Phillips, and *MacInTouch*, edited by Ric Ford and Rick LePage. A recent issue of *The Macintosh Journal* spent 32 pages evaluating the current

crop of spelling checkers—with great methodology and all the data you could want. *MacInTouch*'s most recent issue has an eclectic mix including reviews of *Acta*, *Lightspeed C* and *HFS Backup*, and the usual hard-hitting, tell-it-like-it-is bug report and fixes section.

*MacInTouch* costs \$48 per

year (12 issues) and is available from Ford-LePage, Inc., PO Box 786, Framingham, MA 01701 (617) 527-5808. *The Macintosh Journal* costs \$30 per year (10 issues—monthly except January and August) and is available from B and P Publishing, PO Box 1341, Provo, UT 84603-1341 (801) 375-4947.—SB

## BUG OF THE MONTH

This month's winner is Roger Bull from Tucson, AZ. Roger uncovered a particularly nasty bug in Excel.

The critter cropped up when Roger wanted to save some changes to a previously created spreadsheet that he had modified. After opening the Save dialog, and pressing Save, he decided that he didn't want to continue the operation, so he pressed Command-period (which cancels whatever function is being executed in most Microsoft software, and elsewhere on the Plus). The save was aborted, and a message indicated that the document

was not saved. When quitting Excel, he responded "No" to the "Save changes?" dialog. That was the last he saw of that spreadsheet. Cancelling the Save command not only wipes out the modified spreadsheet, it also sends the original to byte heaven. There is no way to recover the file.

Get your bug reports in and you may be the next lucky winner. Send your reports to Bugsy, c/o *MacUser*, 25 W. 39th St., NYC, NY 10018. Remember to include all the details, such as what *Finder*, and exactly how you stumbled on your bug.



You can create presentations like a professional. Even talkies!

Forget boring flip charts or slide carousels. **The Slide Show Magician** lets you make and run applause-getting presentations right on the Mac. Even talkies! Just click the mouse to: select/arrange/delete pictures and text—set timings—choose fascinating movie-type special effects. Add up to 10 multiple choice selections per frame for training, testing, demo'ing, user participation. Run on the Mac or with big-screen projection systems. \$59.95

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—MacUser magazine

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**Natural Sound™ Cable & Editor disk.** \$129.95

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Another best seller: **Mouse Mover**. Named "**BEST ACCESSORY**" by Editors of *MacUser* magazine. Just snap it onto the bottom of your mouse and 99 ball bearings turn a sticking, hesitating mouse into a Super mouse. \$19.95

See your dealer first. If unavailable, order direct. VISA/Mastercard. Add \$3 ship/hndl for Cable/Editor. \$2 for SFX sets of Mouse Mover. (Cal. residents add 6 1/2% tax.)

**Magnum** SOFTWARE

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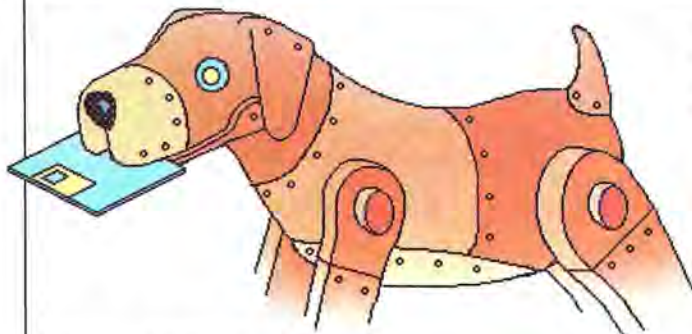
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## MAN, BYTES, DOG

by James Gorman

Many people have asked me about the Cairn Terrier. How about memory, they want to know. Is it I.B.M.-compatible? Why didn't I get the I.B.M. itself, or a Kaypro, Compaq, or Macintosh? I think the best way to answer these questions is to look at the Macintosh and the Cairn head on. I almost did buy the Macintosh. It has terrific graphics, good word-processing capabilities, and the mouse. But in the end I decided on the Cairn, and I think I made the right decision.

Let's start out with the basics:

### MACINTOSH:

Weight (without printer): 20 lbs.  
Memory (RAM): 128K  
Price (without printer): \$3,090

### CAIRN TERRIER:

Weight (without printer): 14 lbs.  
Memory (RAM): Some  
Price (without printer): \$250

Just on the basis of price and weight, the choice is obvious. Another plus is that the Cairn Terrier comes in one unit. No printer is necessary, or useful. And—this was a big attraction to me—there is no user's manual.

Here are some of the other qualities I found put the Cairn out ahead of the Macintosh.

**PORTABILITY:** To give you a better idea of size, Toto in "The Wizard of Oz" was a Cairn Terrier.

er. So you can see that if the young Judy Garland was able to carry Toto around in that little picnic basket, you will have no trouble at all moving your Cairn from place to place. For short trips it will move under its own power. The Macintosh will not.

**RELIABILITY:** In five to ten years, I am sure, the Macintosh will be superseded by a new model, like the Delicious or the Granny Smith. The Cairn Terrier, on the other hand, has held its share of the market with only minor modifications for hundreds of years. In the short term, Cairns seldom need servicing, apart from shots and the odd worming, and most function without interruption during electrical storms.

**COMPATIBILITY:** Cairn Terriers get along with everyone. And for communications with any other dog, of any breed, within a radius of three miles, no additional hardware is necessary. All dogs share a common operating system.

**SOFTWARE:** The Cairn will run three standard programs, SIT, COME and NO, and whatever else you create. It is true that, being microcanine, the Cairn is limited here, but it does load the programs instantaneously. No disk drives. No tapes.

Admittedly, these are peripheral advantages. The real comparison has to be on the basis of capabilities. What can the Macintosh and the Cairn do? Let's

start on the Macintosh's turf—income tax preparation, recipe storage, graphics, and astrophysics problems:

	Taxes	Recipes	Graphics	Astrophysics
Macintosh	yes	yes	yes	yes
Cairn	no	no	no	no

At first glance it looks bad for the Cairn. But it's important to look beneath the surface with this kind of chart. If you yourself are leaning toward the Macintosh, ask yourself these questions: Do you want to type all your recipes into a computer? In your graph, what would you put on the x axis? The y axis? Do you have any astrophysics problems you want solved?

Then consider the Cairn's specialties: playing fetch and tug-of-war, licking your face, and chasing foxes out of rock cairns (eponymously). Note that no software is necessary. All these functions are part of the operating system:

	Fetch	Tug-of-War	Face	Foxes
Cairn	yes	yes	yes	yes
Macintosh	no	no	no	no

Another point to keep in mind is that computers, even the Macintosh, only do what you tell them to do. Cairns perform their functions all on their own. Here are some of the additional capabilities that I discovered once I got the Cairn home and housebroken.

**WORD PROCESSING:** Remarkably, the Cairn seems to understand every word I say. He has a nice way of pricking up his ears at words like "out" or "ball." He also has highly tuned voice-recognition.

**EDUCATION:** The Cairn provides children with hands-on experience at an early age, contributing to social interaction, crawling ability, and language skills. At age one, my daughter could say "Sit," "Come," and "No."

**CLEANING:** This function was a pleasant surprise. But of course cleaning up around the cave is one of the reasons dogs

were developed in the first place. Users with young (below age two) children will still find this function useful. The Cairn Terrier cleans the floor, spoons, bib, and baby, and has an unerring ability to distinguish strained peas from ears, nose, and fingers.

**PSYCHOTHERAPY:** Here the Cairn really shines. And remember, therapy is something that computers have tried. There is a program that makes the computer ask you questions when you tell it your problems. You say, "I'm afraid of foxes." The computer says, "You're afraid of foxes?"

The Cairn won't give you that

kind of echo. Like Freudian analysts, Cairns are mercifully silent; unlike Freudians, they are infinitely sympathetic. I've found that the Cairn will share, in a nonjudgmental fashion, disappointments, joys, and frustrations. And you don't have to know BASIC.

This last capability is related to the Cairn's strongest point, which was the final deciding factor in my decision against the Macintosh—user-friendliness. On this criterion, there is simply no comparison. The Cairn Terrier is the essence of user-friendliness. It has fur, it doesn't flicker when you look at it, and it wags its tail.

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## DIALOG BOX OF THE MONTH

Errors are what programmers make of them. This dialog occurs in CE Software's *MassCopier* when you try to copy to a write-protected disk. Thanks to Craig Schmidt of Midland, MI for sending it to us. — SB



Drat! An error occurred while reading or writing!

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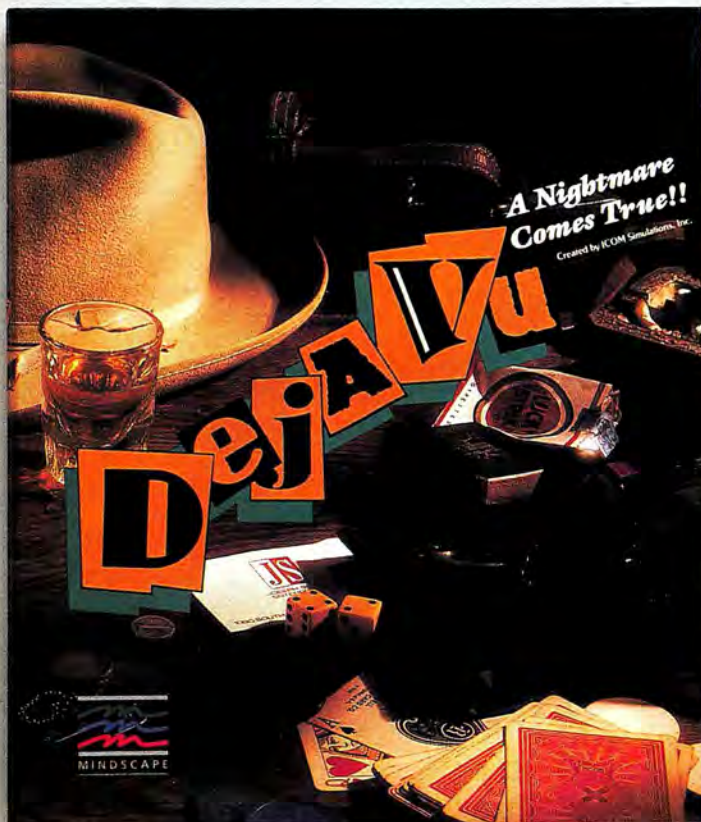
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by Michael D. Wesley

## NEWS FROM THE FRONTIER

I have always liked *LisaDraw* better than *MacDraw*. As I tried to pin down why in a recent discussion, it became apparent that there was basically one reason—the Lisa had a bigger screen. Now that most of my wishes for the Macintosh—external drives, fast hard disks, more memory—have been fulfilled, the wish now at the top of the list is a larger screen.

The “Open Mac,” expected to debut this fall, will have a larger screen, but there should be an option available to those of us who don’t care about slots. (Be warned—sentences like that are inevitably followed by exclamations such as “Well, now there is!”) Okay, I won’t say it, but I have to tell you that I was pleasantly stunned by something I saw at a recent meeting of the MacValley user’s group in Burbank.

Micrographic Images, a company that does Mac memory upgrades, video outputs, and other interesting hardware modifications, has developed a product called MegaScreen that has to be seen to be believed.

MegaScreen sends a video signal out of the Mac so that the desktop can be displayed on a video monitor. “So? Big deal, that’s hardly new, right?” Right, except that the signal it sends alters the display of the desktop slightly. Instead of showing an image of 512 x 342 pixels, the size of the normal Mac screen, the MegaScreen desktop is 1024 x 1024 pixels, or two full screens across and about three down. The resulting display is six times as large as the Mac screen with no distortion or degradation, and with no effect on speed.

The best news is that almost all software that uses a grow box (and conforms to Apple’s standards) will expand to the full size of the MegaScreen with no modification. Of course *MacPaint* can’t utilize the extra space, and *MacWrite* has built-in limitations to the size of a window, but most other programs will have no problems. For example, the MegaScreen enables you to display 14 columns and 45 rows of an *Excel* spreadsheet at one time, or an entire page of text, OR both sides of a spread (facing pages) in full size in *PageMaker*.

MegaScreen is an internal peripheral card with 128K of on-board video memory and a graphics chip. Because it installs internally, it conveniently leaves all existing ports available for other uses. The MegaScreen signal conforms to PAL, TTL, NTSC, and even GEN-LOCK standards so you can connect it to a VCR. This is perfect if you want to record your spreadsheet for later viewing (or to share with friends at your next party).

The MegaScreen system comes complete with a high-resolution, 20-inch video monitor for \$2995, or without the



monitor for \$1495. It’s available now from Micrographic Images, 20954 Osborne St., Canoga Park, CA 91304, (818) 407-0571.

MGI is also doing something kind of weird—sending out Macs with *amber* screens. Apparently, amber screens are required on computer equipment purchased by many government agencies. To be able to sell into those markets, Micrographic Images has been replacing the standard Mac screen with an amber monitor.

### NEW FROM BRODERBUND

Broderbund showed three new products at the recent Consumer Electronics Show in Chicago. The most exciting of the three products is called *The Toy Shop*, and it’s a program that is a little hard to explain. Basically, it is a kit that lets you build working mechanical toys from special card stock. Intricate designs, stored in graphics files, are printed out and the printouts pasted to the special card stock included with the program. Then the designs are cut out and assembled according to detailed instructions (the program’s manual runs to 210 pages) and the finished product is a sturdy, working balloon-powered steam engine, or a Mercer runabout with steerable wheels, or a carousel that revolves with the turn of a hand crank.

The dimensions and structural design of the toys can’t be altered, but they can be fully customized with graphics and text, printed out in color or on colored paper or foil. The kit comes with the software and all the materials needed to assemble the toys for \$64.95, and is intended for persons 12 and over.

The second Broderbund product is *Geometry*, a full first-year course in plane geometry. As a former schoolteacher who believes that the vast majority of published educational materials (in any medium) are essentially without redeeming value, I look at educational courseware with a jaded eye. Even so, I am very pleased with *Geometry*. It is extremely well designed and thought out, combining reference sections, animated explanatory material and a large body of problems, all cross referenced for easy study.

The program incorporates material consistent with the five top selling geometry textbooks, so it should work well as an adjunct to a school course. (As one of the program’s designers mentioned, they have the advantage that Euclidean geometry hasn’t changed much since Euclid.) Broderbund’s *Geometry* also has a few clever, fun and undocumented features for students to discover as they work. *Geometry* will sell for \$99.95.

The final newcomer from Broderbund is *Print Shop Mac*, a Mac version of one of the company’s more popular programs for other machines. It simplifies the process of designing and printing out greeting cards, banners and signs. *Print Shop Mac* will sell for \$79.95. All three products are available from Broderbund, located at 17 Paul Dr., San Rafael, CA 94093, (415) 479-1700.

### DESKTOP TENNIS

Tom Maremaa, who has written for *MacUser*, presented a new game to the press at a recent party with chips and dip and Gatorade punch. The game, called *Grand Slam*, is a 3-D tennis simulation. More than a standard computer tennis game, *Grand Slam* puts you into the four tournaments of the Grand Slam—Wimbledon and the U.S., French and Australian Opens. You are pitted against one of four “robot” players, each with distinct styles and characteristics.

The graphics in *Grand Slam* are extraordinary. Although it takes a while to get used to maneuvering your player with the mouse, it is not too difficult to become fairly skilled. The game follows all the rules of tournament tennis, even to the point of allowing a protest to the umpire. The surface of the court, weather and several other factors are taken into



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## WEST COAST REPORT

account. All in all, what I saw of the game was fairly impressive and it should be worth a look. Plans are to debut a version that will permit two-person play via modem shortly after the release of the basic game. *Grand Slam* is available from Infinity Software, located in Emeryville, California. The phone number is (415) 420-1551.

### WHERE'S THAT GRAPHIC???

*PictureBase*, the application and desk accessory that let you catalog graphic images, may set a new standard for clip art and other graphics on disk. *MacMatBook*, a new collection of clip art from a company called Electronic Publisher, has all its images stored in *PictureBase* libraries instead of bunched together in *MacPaint* documents.

The *MacMatBook* images themselves are interesting and diverse. Some look digitized and others are clearly hand drawn, almost cartoonlike, representations of everyday objects. More interesting than the images themselves, however, is the formatting. With the images in *PictureBase* libraries, they are much easier to access than through *MacPaint*.

*MacMatBook* is available from Electronic Publisher, 210 S. Marietta St., Excelsior Springs, MO 64024. *PictureBase* is a product of Symmetry Corporation, 761 E. University, Mesa, AZ 85203, and is worth more than its \$69.95 price tag for anyone who keeps a large database of graphic images.

### SINS OF OMISSION


Unfortunately, I managed to leave out the addresses of two companies mentioned in recent articles. The Dunn Color Graphics System (May 86) is available from Dunn Instruments at 544 Second Street in San Francisco, 94104. Their phone number is (415) 957-1600.

*Set and Send*, software that codes Mac text for direct input to Compugraphics typesetting equipment (The West Coast Report, May 86), is available from Set and Send Technologies at 1661 W. 8th Ave, Suite 201, Vancouver, BC V6J 1T8, Canada. They have a toll-free number, (800) 663-8973.

### INTERESTING BITS

The Grateful Dead are registered Macintosh developers.

The Finance Minister of Nicaragua uses a Macintosh.

According to rumor, some *high*-ranking members of the White House Staff use Macs with *MacPrompter* as their teleprompters for speeches. There is a beautiful bit of irony in that, because one of the authors of *MacPrompter* is Captain Crunch himself, John Draper. 

## Spellswell<sup>™</sup>

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by Robert R. Wiggins

## BUSINESS ROUNDUP

Who says software companies don't listen to their users (and reviewers)? A few months back *MacUser* ran my review of *Micro Planner*, a project management software package. While I didn't pan it, I didn't hesitate to point out its shortcomings. After the issue came out, I got a call from Bobby Anderson, the president of Micro Planning Software USA, to tell me they thought it was a fair review and that they had plans to correct some of the deficiencies I had pointed out. A month or so later, I got another call, this time from Nigel Humphreys, the author of *Micro Planner* for the Macintosh, who wanted my ideas on the Macintosh interface (a category I had felt *Micro Planner* came up short in). We had a fairly lengthy conversation, and I got the impression that Nigel really wanted to make *Micro Planner* the best he possibly could.

More time passed, and I got another call, this time from Tim Breen, Executive VP, to tell me that *Micro Planner Plus* was on its way. When it arrived one thing was obvious: Nigel Humphreys really did want to make *Micro Planner* the best he could.

*Micro Planner Plus* is a major enhancement over *Micro Planner*, which is still available (although anyone with a 512K Mac with external drive or a Mac Plus shouldn't even consider it). *Micro Planner Plus* is memory based, making it much faster (addressing a major complaint I had). It uses standard print drivers for all printing and no longer needs a separate print utility, so now it's really what you see is what you get (another complaint I had made). It has a font menu, letting you customize your reports (especially helpful for LaserWriter owners). It will even save reports in *MacDraw* format so that you can customize them further. It's fully Mac Plus- and HFS-compatible. About the only thing that Micro Planning didn't improve was the copy protection.

Well, this is turning into a review, which it isn't. The point is that here's a company that pays attention to the people who use its software. Even though they have no real competition in the Mac

arena, they are spending the time and money to improve their product. While all companies should do likewise, too many don't. Here is an example to follow. Of course, be sure to listen to the right reviewer.

### WHITHER SHAREWARE

If your Mac is your business, and you're developing software, a decision you'll be faced with is how to distribute it. Should you go the traditional route, selling it to a publisher who gives you a royalty, tacks on expenses and sells it to a distributor, who tacks on a markup and sells it to a retailer, who tacks on another markup and sells it to the consumer, so that the consumer is paying \$300 and you're only getting \$40 or \$50? Or should you go the innovative route and market it yourself as shareware, where you still get the \$40 or \$50, but the consumer only pays \$40 or \$50?

Consider the FreeSoft Company. It started life with an MS-BASIC program called *Red Ryder* written by the late Wat Buchanan. *Red* was later turned into a regular application program by Scott



Watson. Enough people sent in their \$40 that Scott was able to resign from his other job and devote his full time to *Red Ryder*, constantly enhancing it (which generates more licenses in addition to keeping the previously paid customers happy).

But also consider MacMaster Systems. John Mitchell wrote a program called *Fedit* back in the early days of the Macintosh. It was the first real disk utility for the Mac, and is probably the most indispensable application program for the Macintosh after the *Finder*. But while everyone seemed to use it, and John constantly improved it, very few people bothered to send in their money (less than 250!). Perhaps it was because people only used it occasionally. Or maybe they just forgot. But if everyone who ever used *Fedit* to recover a file or fix a disk had sent in the money, *Fedit* should have made as much money as *Red Ryder*. Since they didn't, and the return

was so poor, the new version of *Fedit*, *Fedit Plus* (which supports the Hierarchical File System) is no longer shareware and is now only available through normal distribution channels.

In between these extremes is CE Software, which brought out the first *Desk Accessory Mover* (long before Apple got around to it), the *Mock* series of desk accessories (*MockTerminal*, *MockWrite*, *MockPrint*, *MockChart*), and its latest entry, *MacBillboard*, a *MacPaint*-type program that remedies most of the shortcomings of *MacPaint*. Donald Brown reports that while initial returns were fair, as time has progressed they've gotten good. Certainly good enough for them to bring out *MacBillboard* out as shareware, for much less than *FullPaint* (and not copy protected, to boot.)

The decision of whether or not to take the shareware route is not an easy one. For every success, there is a failure. Of course, that's often the case with more normally distributed software, too. So think it over carefully.

### MORE ABOUT MORE

Everyone is raving about *MORE*, so I'll be brief. If you use your Mac in business, buy it. If you ever do bullet charts, or need to draw organization charts, or just plain need to organize your thoughts, this one's for you. *MORE* is one of the best pieces of business software I've ever seen. Tell your boss it's a productivity tool. That usually gets them to spring for something. And in this case it's the absolute truth.

### SOMETHING TO STRIVE FOR

In its May 5th issue, *BusinessWeek* magazine rated John Sculley, President and CEO of Apple Computer, as one of the ten most overpaid executives in America, based on the return to shareholders versus his salary (now there's a list I'd like to be on). John was in good company, rubbing shoulders with Lee Iacocca (Chrysler), An Wang (Wang Laboratories), Edson De Castro (Data General), and T. Boone Pickens (Mesa Petroleum).

But wait, there's more. Six weeks later, in its June 23rd issue, *BusinessWeek* ran a piece crediting Sculley with the dramatic turnaround in Apple's stock price. Apple had achieved a higher P/E ratio than IBM. So maybe he's not all that overpaid after all. The stock analysts and the press all seem to really like Apple's new openness. Here's hoping John Sculley makes the move to the list of the ten most underpaid executives. And not by taking a salary cut. ☐



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## "Best Peripheral Device"

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The editors of *MacUser* named ThunderScan the Best Peripheral Device of 1985. Here's what they said: "ThunderScan from Thunderware is an astonishing device that transfers images to the Mac by scanning them using a snap-in device that replaces the ImageWriter ribbon... Easy to hook up and use, relatively inexpensive, this device should be owned by anyone who uses graphic images on the Mac."

## "Best Graphics"

### **MACazine**

Based upon their personal use, the readers of *MACazine* voted ThunderScan the Best Graphics System of 1985.

## "Best Hardware Product"

### **MACazine**

We didn't finish first here, but in this case we don't object to second best. Of all the hardware products on the market, ThunderScan finished second only to the Mac 512 as the Year's Best Hardware Product.

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by Doug Clapp

# LITTLE COMPANIES, BIG COMPILERS

Tom Leonard is a personable young man who, these days, is shipping thousands and thousands of copies of *TML Pascal*. It's boffo. It's a hit. It's a home run. Tom Leonard will soon go from being merely a bright, personable young man to being a rich, bright, personable young man.

The why's of all this are interesting. Pascal is the Lingua Franca of Macintosh. More than that, Pascal has been, up to now, Apple's Language of Choice.

In the early days of Apple, there was AppleSoft Basic — a good language for its time, but not much of a "development language." One of Apple's first employees believed Apple should offer a language better suited to program development. Over the initial objections of Steve Jobs, the employee convinced Apple management to make *USCD Pascal* an Apple product, after renaming it *Apple Pascal*, not surprisingly. That employee was Bill Atkinson.

And today we have Macintosh, a machine built upon QuickDraw. And QuickDraw was designed, thought-through, and specified in Pascal. So was *MacPaint*, a fact that neatly skewers snobs who insist that Pascal is antiquated, clunky, slow and not suitable for developing fast graphic applications.

More explicitly, here's what Atkinson did: he wrote *MacPaint* in Pascal, found the very best algorithms for each portion of the program, then rewrote some of the speed-critical routines in assembly language.

As a result, *MacPaint* was never bug-ridden, even in prerelease days when ROMs thawed and were frozen again, when *MacWrite* was unusable, when the *Finder* wasn't much more than a "good idea," and nobody had ever heard of Andy Hertzfeld.

Even the Macintosh ROMs, although created using assembly language, conform to Pascal conventions — low-level stuff, for the most part, like "the placement of variables upon the stack" and the "string type." (For example, Pascal is the reason that many dialog boxes can only accept 255 characters of text: the language has a construct called "Str255," which specifies that a "string" of text consists of a maximum of 255 characters — or bytes — preceded by a single byte which contains the length of the entire string. Add that byte to the maximum string length of 255 and you get 256.)

So Macintosh is a Pascal machine. So Pascal is the natural choice for Macintosh programming. So where was it?

Nowhere, unless you count *Macintosh Pascal*, an overpriced Pascal interpreter.



*Macintosh Pascal* is fine for learning Pascal, but can't create standalone applications — no program development with this one!

Why didn't third-party developers release Pascal compilers capable of creating applications? Because of Apple, which would release its own Pascal development system. Soon. Trust us.

That expectation was enough to make most developers cower and weep. And develop C compilers instead. Today, we've got between five and ten C compilers for Macintosh. All Apple's doing, indirectly.

Time passes. No Apple Pascal Development System. No file server, either, but that's a different story. Finally, a few brave souls decide to develop and market Pascal compilers after all. Tom Leonard was first to the market with *TML Pascal*.

*TML Pascal* is good for lots of reasons. First, it works, always a plus when software helps you earn a living. Second,

it conforms closely to *Lisa Pascal*, which, up to now, was the only alternative for developers who favored Pascal. Converting from *Lisa Pascal* to *TML* is trivial. Really. And, like *Lisa Pascal*, *TML* lets you access the entire toolbox; you can be as tricky or as traditional as you want. What *Inside Macintosh* says you can do, you can!

Third, it's acceptably fast. Fast is good. Fourth, it's fun. Fun means lots of options, and lots of source code to play with. *TML* has both. And it's priced right: a hundred bucks, less a nickel.

Leonard, it seems, is stealing a page from *The Book of Kahn*: make it good, price it low, and offer lots of fun, useful, nifty add-ons to increase the value of the product. So far, the *TML* stable includes a *Linker* and *Librarian* combo, a "Database Toolkit," the source code for the *MiniEdit* program featured in *Macintosh Revealed*, and *MacExpress*, a powerful package that allows easy access to tricky interface features like split windows, background printing, enlarging and reducing graphic images and more. Each add-on package is well designed, useful, and, ahem, fun.

And there's more to come: more products, more speed, more source code. Even custom "definition procedures," for adventurous souls who want to redesign windows, menu bars and controls.

So great, huh? Tom's a nice guy with a good product who's knocking 'em dead.

But while Tom Leonard is reaping just rewards, clouds are gathering. Borland International has announced *Turbo Pascal* for the Mac. As I write this column in early June, Borland hasn't yet shipped a product, but they might. If they do ship, and if *Turbo* is good, and if it's priced at \$60 or less, Tom Leonard will be in big trouble.

Borland can't make money selling a language for less than \$60 — as I see it — but they can afford to lose money for a few months while wiping out the competition. Then there's Apple. And MPW, which stands for "Macintosh Programmer's Workshop." And part of it is a real, live Pascal compiler.

For Tom Leonard, there's good news and bad news in this. The good news is that Apple's effort sounds baroque and pricey and poor for novices. The bad news is that it may be a powerful, object-oriented, hot-damn affair; the kind of thing that makes programmers swoon.

We'll see. The future is always filled with promise and bogeymen. For now, *TML* is here and it's fine. It's just what I wanted. It makes me happy.

Now, about that file server....



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# QUICK CLICKS

## LASERWORKS ttttt

List Price: \$299. Published by EDO Communications, 63 Arnold Way, W. Hartford, CT 06119. (203) 233-5850. Requires 512K+ and external drive or hard disk. Copy protected. Version reviewed 1.0.

The LaserWriter, with its 300 dot-per-inch resolution, has imposed new standards on font and graphics editors. The Mac's screen, as fine as it is, no longer has the ability to show detail in sufficient fineness. One of the better products that meets user's current needs is *LaserWorks*, a high-resolution font and graphics editor.

The program is very easy to use and quite sophisticated. Creating and editing high-resolution materials is not simple, but *LaserWorks* removes as much of the pain as possible.

A thorough reading of the well-prepared manual is a must, as is the long tutorial. These steps are required because the interface is unusual. It seems to fully conform to interface guidelines, yet some controls and features are presented in novel ways. Everything works, and there is nothing misleading about the interface; it's just different (and good).

The program can be used at several levels, allowing it to be a simple tool for beginners and providing very advanced features for pros. The masking (and easy unmasking) of the advanced features make the program an excellent choice for users of all levels.

Among *LaserWorks*' exceptional features are the ability to use any external font or

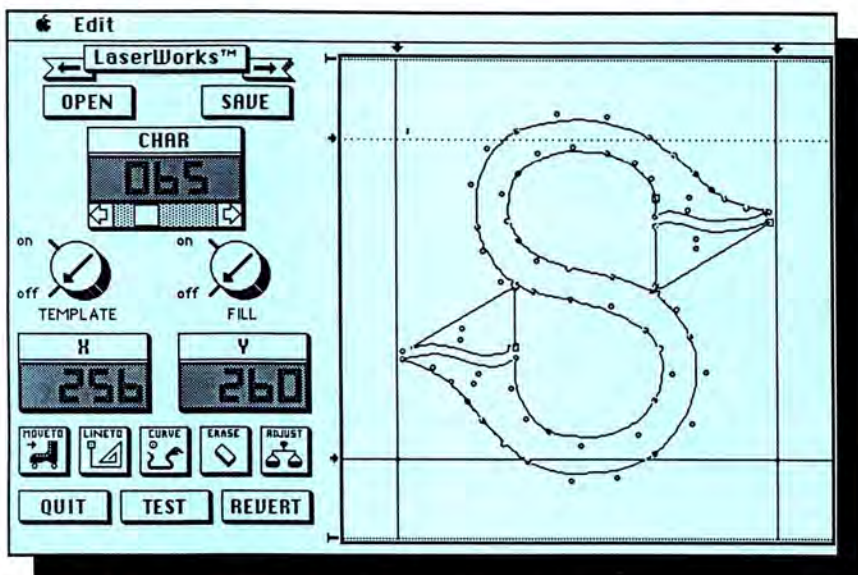


image as a template (a real time saver!), a MOVE TO command that automatically closes an open path, and a FILL command to preview the often rough-looking letters of laser fonts.

The full range of features is enormous, and virtually every possible manipulation is covered. Good on-screen help is always just a click away. The program is a delight to play with.

Users can build up a store of curves or other parts (and whole pieces or letters, for that matter) in a Parts Pad. Letters can be automatically slanted or made bolder or

lighter. And results can be easily output to a LaserWriter.

Normal end results are a downloadable laser font, correctly translated into PostScript. The necessary screen font can be created by selecting the AUTO SCREENFONT command, a really nice touch. This screen font can be installed either by *LaserWorks* or the *Font/DA Mover*. The final results are very high quality, although both the results and process do not seem as "slick" as those obtainable with Altsys' *Fontographer*. However, *LaserWorks* is easier to master, easier to use and cheaper. — SB

File Edit Print Briefcase Advisor Project		
<b>ASSETS</b>		
<b>Fixed Assets :</b>		
Cash in Banks	\$	14700
Securities	\$	8500
Cash Value	\$	36050
Other	\$	9000
		<b>\$ 68250</b>
<b>Variable Assets:</b>		
Securities	\$	38800
Business Int.	\$	0
Real Estate	\$	50000
Retirement	\$	23000
Other	\$	0
		<b>\$ 111800</b>
<b>Non-Working Assets:</b>		
Residence	\$	150000
Autos	\$	24200
Personal Prop.	\$	30000
Other	\$	0
		<b>\$ 204200</b>
<b>TOTAL ASSETS:</b>		<b>\$ 384250</b>
<b>LIABILITIES</b>		
Residence	\$	103000
Other Real Estate	\$	10000
Bank Notes	\$	15000
Notes To Others	\$	0
Taxes/Assessments	\$	0
Margin Accounts	\$	0
Credit Cards	\$	4200
Est. Future Inc. Tax	\$	3000
Other	\$	5000
<b>TOTAL LIABILITIES:</b>		<b>\$ 140200</b>
<b>NET WORTH</b>		<b>\$ 244050</b>
=====		
OK REFRESH		

## PUZZLE 512 ttt

List Price: Consumer version, \$95 including Puzzle Print module. Professional version \$235 plus \$75 for Puzzle Print. Published by JLC Software, 2950 S. Ceylon Way, Aurora, CO 80013. (303) 690-5443. Version 2.0 reviewed.

According to Robin Heiney, the author of *Puzzle 512*, people will lie to their human financial planners, but they won't lie to a computer. Robin, a professional financial planner, has created a program to help people use this natural human to machine honesty to manage their finances. The program, *Puzzle 512*, is equally well suited for individuals doing their own planning, or as a tool to be used by professional planners.

*Puzzle 512* is built around a set of simple questionnaires. To create a plan, users organize their financial data (this may be the most difficult aspect of the program) and fill in the questionnaires with the appropriate information. *Puzzle* asks for per-







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# QUICK CLICKS

## HOMEPAK ††

List Price: \$49.95. Published by Batteries Included, 30 Mural St., Richmond Hill, Ontario L4B 1B5, Canada. (416) 881-9941.

*HomePak* is a disk containing three separate applications of widely varying quality. One, *HomeTerm*, is an excellent telecommunications program. It's a great first communications program for anyone. Aided and abetted by the clear instructions in the manual, new users will soon be modeming with the pros. *HomeTerm* has all the expected features and an exceedingly well-designed and simple macro-creating language. This portion of the program would not shame any existing telecommunications program.

*HomeTerm* is far friendlier than say, *Red Ryder* or *Microphone*, and as such, is an excellent choice for users intimidated by the more powerful programs. If it only had the screen archiving (peruse buffering) of those programs (and of *Smartcom II*), it would easily be in their class. *HomeTerm* by itself is a five-mouse program.

As good as *HomeTerm* is, that's how bad *HomeFind* is. This very unusually structured data manager (or electronic filing system, as the manual calls it) simply doesn't work in the Mac environment. While its structure

might have been advanced for the simpler machines it was originally designed for (Commodore 64 and IBM PC/PCjr), it is nearly hopeless on a Mac. *HomeFind* makes a big point of its unstructured data entry, but then requires entry in a very specific English syntax. Miss that syntax and the program can't handle the entry.

A crude record format can be created, but it really doesn't work either. For example, if

possible from directly within *HomeFind*. Instead, crude text files can be created on disk and transferred to a word processor or editor. Remember those blank spaces in the empty fields in the records? If you're not careful, they can easily become blank lines in the text files.

While *HomeFind* works exactly as its manual claims (and so doesn't earn a bomb), it is the worst data manager available.

Due to the reporting limitations of *HomeFind*, a copy of Apple's *Edit* program has been included on the disk. This simple editor (it's by no means a word processor) can manipulate the files produced by *HomeTerm* and *HomeFind*, but it really can't do much with them. There are better simple editors around, and most users will prefer to work with a real word processor anyway. The version of *Edit* included on the review disk was version 1.0. It's not HFS compatible and will blow up frequently on a Mac Plus. There is an HFS-compatible version of *Edit* (version 2.0) available, and it should appear on the *HomePak* disks shortly.

This mixed bag was really disappointing. The earlier *BatteryPak* from the same company was of uniformly high quality. Here we see the dangers of porting old techniques, designed for simpler computers, to the Mac. *HomeTerm* deserves a better home. — SB



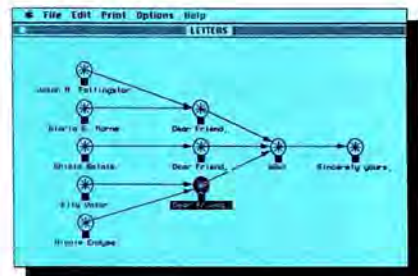
a particular field of a record is empty, you still must remember to enter a blank space there to "fool" the program into thinking there's something there.

Reporting capability is the most limited of any any data manager yet marketed. Simple questions (both qualified and unqualified) can be asked and the answers appear on-screen. Printed reports are not

## CALLIOPE †††

List Price: \$59.95. Published by Innvision, PO Box 1317, Los Altos, CA 94023. (415) 964-2885.

*Ping!* When you have an idea, a really great idea, it's almost as if a light bulb goes off over your head. In the rush to jot it all down, you may lose track of yourself, making organizing that great idea a real chore.



*Calliope* can help you organize those thoughts even as you write them, and it even has the light bulbs to match.

*Calliope* is an outlining program that bears little resemblance the other programs of this type (*ThinkTank*, *Acta*). At first there doesn't seem to be much to the program: Chunks of information are manipulated as small "bulbs" containing text. Double-click in the main work window, and a bulb appears. Double-click it, and a text editing window appears, complete with scroll bars, so that you can type in as much of your idea as you wish. A grid constrains bulb placement on screen, but the grid increments are too big, resulting in jerky repositioning. *Calliope* allows up to 64 idea bulbs in each file (the main idea window doesn't scroll).

The usefulness of the program really begins to show when you want to link related ideas together. The bulbs can be graphically connected to form clusters of related information, and their text informa-

tion then viewed in hierarchical order. The main idea is at the top of the text window, and the text for all related ideas appears in order beneath it. Each linked idea appears in the order of position in the cluster, with the idea title as a bold heading.

Text files can be created for editing in a word processor. All of the text in a particular cluster is printed together. Each idea can also be printed on a separate page. Unfortunately, there are no other print formats. The best thing to do is to move the text to *MacWrite* or *Word* for printing.

The program does have some annoying flaws. Graphics cannot be pasted into bulb windows, and the program does not support variable fonts in either the main idea window (Monaco 9) or in the individual bulb windows (Geneva 12).

*Calliope* is the kind of program that some people will want to keep on their screens all day long, simply because it's very open-ended, and not limited by its design. Sometimes less is more. — DB

## FEDIT PLUS ††††

List Price: \$40. Published by MacMaster Systems, 939 E. El Camino Real, #122, Sunnyvale, CA 94087. Not copy protected. HFS-compatible, although some features do not function. Version 1.0.4 reviewed.

*Fedit Plus* modestly claims to be "a file and disk editor." That's wrong; it's "the file

and disk editor." *Fedit Plus* is the first application every Mac owner should buy, and no Mac owner should be without it. It has advanced features for the most technically minded and easy to use (and valuable) features for the newest user.

By definition a file and disk editor allows you to get down to the basic code in the Mac, and change it if you so desire. That, of course, means you have the power to not

only fix or improve things, but to hopelessly trash them. Follow all the warnings the manual and program present to you, and carefully consider everything you do. That said, start using *Fedit Plus*.

*Fedit Plus* can do far more than just alter code. It can show you where and what everything on a volume is, work with (and often save) otherwise unreadable (unmountable) disks, and recover deleted files (on



# PROVE IT!

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# QUICK CLICKS

MFS volumes only in this version). Hard disk users can quickly determine the fragmentation index of drives (that's a guide as to when reinitialization will speed things up). Boot blocks can be written to both HFS and MFS volumes, and edited if necessary. No other readily available tool can do that. Another valuable feature is the Reverse Forks. While this ability would seem useless, it can be very useful in accessing text type material that winds up in the resource fork.

Displays can be viewed and modified in either ASCII or hexadecimal format. Any string (either ASCII or hex) can be efficiently searched for. Screens can be printed at will, and users have a very wide choice of cursor shapes.

A particularly important feature for all levels of users is the ability to examine and modify all of a file's Finder attributes. This is the only program that can actually modify all of them. The file recovery features (mostly in the Special menu) primarily work on MFS volumes, although by the time you read this, John Mitchell, *Fedit Plus*' creator, may have solved the HFS puzzle.

The documentation is very special. It begins with the most detailed explanation of MFS and HFS available. It's a feast for the techies, and the rest of you can just read the back of the manual and plunge right into this most valuable application.

The original *Fedit* was a shareware product, but the very poor response (under 0.5% of all users registered, and that's an



optimistic figure) resulted in this being released as a regular, commercial product. All upgrades will be available for \$10, and currently registered *Fedit* owners can also upgrade for \$10. —SB

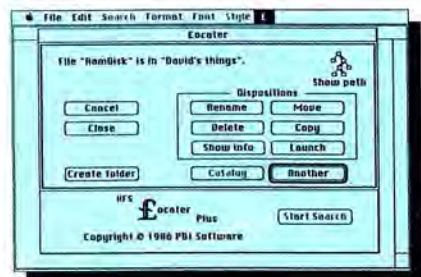
## HFS LOCATOR PLUS

List Price: \$34.95. Published by PBI Software, 1111 Triton Dr., Foster City, CA 94494. (415) 349-8765.

Though SCSI hard disks are bringing a new dimension of performance to the Macintosh, no one enjoys waiting for the desktop to laboriously rebuild itself after quitting a program. But for many, it's still necessary to make the ritual voyage to the Finder to do something as trivial as copying a MacPaint file (or getting rid of one when the dreaded "disk is full" message rears its ugly head).

*HFS Locator Plus* is a serious desk accessory for people who have grown comfortable with the Hierarchical File System. Folders can be created from within *Locator*, and any programs or document files can be moved into the newly created folders. Files can be renamed, deleted and copied between disks, volumes or folders. A program, or

even a document, can be designated to run when quitting the current application. If you're in *MacPaint* and you want to quit to *MacWrite* and print a document, the docu-



ment can be selected from *Locator*, and the user can specify that the document is to be printed once within *Write*. After quitting *Paint*, *MacWrite* will automatically load, the file will be opened, and the Print dialog box will appear on the screen. You take it from

there. A pending launch can also be cancelled before quitting.

Lost a file somewhere in that pile of folders? *Locator* allows you to search for files by name or date of creation. Wildcard searching is also available. Combinations of these may be used to find, for example, all *Multiplan* files that include the phrase "Sales" created after October 22, 1985. All documents for a specific program can also be found; for example, all drawings created with *MacDraw*. When searching for a file, an on-screen progress meter shows how much of the disk has been searched so far.

There are some important omissions that would round out this desk accessory nicely. The space left on a disk or volume cannot be determined and folders themselves cannot be searched for, renamed or moved. But even without these capabilities, *Locator* is invaluable.

If you own a MacPlus, SCSI hard disk, or are using HFS, you owe it to yourself to have this desk accessory. —DB

## POSTERMAKER

List price: \$39.95. Published by Strider Software, Beecher Lake Road, Pembine, WI 54156. (715) 324-5487.

Want to cover an entire wall with a favorite *MacPaint* drawing, or enlarge a digitized image to real poster size? Now there's a simple way to do it. *PosterMaker* is a slick little program whose sole purpose is to enlarge or reduce *MacPaint* files (or any graphic image pasted into the program through the Clipboard, including *MacDraw* graphics). While a number of other programs, *MacDraw* included, can be used to enlarge *MacPaint* graphics to a certain extent, *PosterMaker*'s special features make it much more suited to the task.

*MacPaint* files are opened directly within the program, appearing in a scaled-down view. Any portion of the image can be selected with the selection marquee, then individually expanded. Selecting a large portion of the page and pasting in an image from the Clipboard stretches the image to fit the selection area.

At its highest amplification mode (3200 percent), *PosterMaker* will enlarge an 8 x 10 inch *MacPaint* file to larger than 21 x 26 feet.

While very large sizes require printing out multiple sheets, the program handles the mechanics of the problem automatically.



Whenever an image is enlarged to a size too big to print in a single page, it is automatically printed in strips. Each strip has a border along the right side of the page, which can be used as a base for gluing the edges of two pages together.

Scaling graphics is very easy. The screen

displays two separate versions of the same picture. The one on the left is shown in its entirety, while the one on the right displays a section of that picture in the size it is currently being scaled to. (The area shown in the "actual size box" depends on where the dotted marquee box is positioned on the full image at the left.) To enlarge or reduce a graphic, just scroll the scaling control bar at the bottom right side of the screen. A variety of borders can automatically be placed around the final poster printout, just by choosing the options from the Borders menu.

The disk comes with files that will create several different antique-style posters, and Strider has already released two poster template disks that cost \$20 each. The graphics are uniformly high-quality, and their layout leaves plenty of room to add your own text or additional graphics in *MacPaint*.

*PosterMaker* is admittedly a package aimed at a specific audience. But if you need to enlarge or reduce graphics (and print the results) often, you'll find plenty of uses for this program. —TFH



# SILICON BEACH

## THE WAVE OF THE FUTURE!

### World Builder™

World Builder was used to create Enchanted Scepters, our highly acclaimed adventure game. Now you can create your own games, or use it to create interactive training, story boards, etc. There's a World of possibilities awaiting you!

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Can you defeat the Black Knight, evil ruler of the Dark Castle? The action is hot and heavy as you fight your way through scenes full of enemies. The stunning graphics and smooth animation will take your breath away.

### Enchanted Scepters™

"Clearly a true Mac pioneer (program) . . . one of the first examples of . . . a whole new standard in quality for adventure games." — Show Page, Dec 1985

"The sound effects alone prompt everyone to look over your shoulder." — Int'l Apple Core Express, Jan 1986

### Airborne!™

Voted 1985 Game of the Year in Readers' Polls by A + magazine and the MACazine.

"Destined for the software hall of fame." — A +, Nov 1985

"The first time I heard the jet I was petrified." —

MACWORLD, Sep 1985

### Silicon Press™

"Silicon Press takes Desktop Publishing one step further. The program is pure genius." — Gold Coast Mac, Apr 1986

"... invaluable for easy label-type creation." —

MacInTouch, Apr 1986

### Accessory Pak 1™

"I found Paint Cutter an invaluable tool." — MACWORLD, Nov 1985

"Paint Cutter is the kind of tool I wish I'd had at least 50 times since I've owned my Mac." — MACazine, Sep 1985

To get any of these products, see your local dealer or send the total amount (Calif. residents add 6% sales tax) plus \$3.00 shipping to:  
**Silicon Beach Software, Inc.**  
 P.O. Box 261430  
 San Diego, CA 92126  
 Or call (619) 695-6956  
 (Visa or Mastercard accepted)



"New"

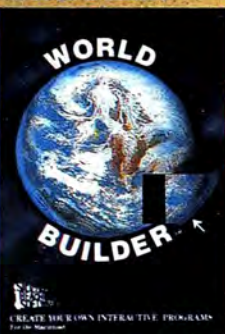
Dark Castle



Fast-paced, arcade-style action as you control the hero who battles his way through the chambers of the castle. Features RealSound™. Two disks.  
 Macintosh 512K, Plus  
 Price: \$49.95

"New"

World Builder™



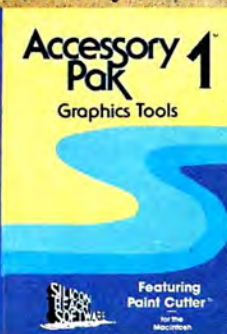
An authoring system to create stand-alone, interactive programs that have graphic scenes accompanied by text and digitized sounds.  
 Macintosh 512K, Plus  
 Price: \$79.95

Silicon Press™



A printing utility for labels of any size and layout. Mix graphics and text, merge-print and print in color with an ImageWriter II. LaserWriter compatible.  
 Macintosh 512K, Plus, XL  
 Price: \$79.95

Accessory Pak 1™



A collection of utilities featuring Paint Cutter™, the program that allows you to cut and paste up to an entire MacPaint document. Includes several desk accessories.  
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Enchanted Scepters™



A graphics-text adventure game with RealSound™. Explore over 200 scenes, fight battles, escape traps and solve dilemmas.  
 Macintosh 128K, 512K, Plus  
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Airborne!™



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by Michael D. Wesley

# MORE THAN ENOUGH

***This new outliner, word processor, presentation graphics program is packed full of nifty features.***

IT'S AN UGLY TRUTH, BUT IT HAS to be faced—Macintosh people are greedy. Sure we were excited to see the first Macintosh, but we wanted *MORE*—*MORE* RAM memory, *MORE* storage, *MORE* speed, *MORE* software, *MORE*... *MORE*... *MORE*! Thanks to a benevolent group of people at Apple and third-party companies, we've basically gotten everything we ever wanted. Face it, we're pretty spoiled. Now whenever we want *MORE*, we expect to get it. Well, we still want *MORE*, so here it is—*MORE*, from the makers of *ThinkTank*.

What's *MORE*? *MORE* is an outline and idea processor that organizes information into headlines and subheads, like *ThinkTank* and *ThinkTank 512*, but with—well, *MORE*. To be specific, *MORE* is *MORE* Maclike than *ThinkTank*, has *MORE* features and does *MORE*—lots *MORE*. It has applications for outlining, of course, but can also be used for desktop publishing and presentation graphics, and it may well be at the forefront of a whole new industry, "Meeting Technology."

## MORE MACLIKE

Even though users of *ThinkTank* tend to be very fanatical about the product, most would admit that it took a while to learn how to use it because *ThinkTank* doesn't quite follow the Mac interface. *MORE* incorporates standard Mac windows, including normal scroll bars, a grow box and a zoom box to shrink or expand windows. In addition, *MORE* makes wonderful use of menus, offers command key options for most actions and provides access to different fonts and styles, even incorporating some *MacPaint*-style tools and shortcuts.

Still *MORE*—if you are used to the way *ThinkTank* works and don't want to convert, you can switch *MORE*'s display to "hot borders" and *ThinkTank*-style scrolling at any time by setting your own Preferences. Chances are this will be a temporary change, though—the Mac interface is truly better.

## MORE FEATURES

*MORE* makes outlining very simple, and it also contains an incredible

richness of features. These include the ability to pick up headlines and move them anywhere in the outline; input graphics, paragraphs, memos or entire letters under a topic; automatically and instantly generate tree charts or bullet charts and incorporate them into an outline or slide show presentation; make a clone of a headline, a duplicate that reflects any changes made to the original; isolate a small section of a large or complicated outline; save templates for common outlines; see up to six outline windows on the screen at one time; sort or search an outline with a powerful pattern matcher and *MORE*—you can even do calculations on data within headlines.

Kind of takes your breath away, doesn't it?

## MORE WINDOWS

Getting back to the matter of greed, Mac people have become very greedy about the number of windows a program can show at one time, perhaps because multiple windowing is as close as we can get to multitasking for now. *MORE* can have up to six outline windows open at once, with full cut and paste capabilities between windows, and it has a few other tricks as well. The windows will normally stack on top of each other, each one offset just a little so they can all be seen. Alternatively, they can be "tiled."

Tiling is a fabulous feature. If you want to see what's happening in more than one window at a time, the windows can be shrunk to fit in neat tiles across the screen, with the size depending on the number of windows open. If you have six windows open, for example, selecting *TILE* from the Format menu automatically creates two rows of smaller windows, three to a row. Any of the tiled windows can be zoomed to full-screen size using the zoom box, and returned to its place by zooming back out. You can also play with the tiles, fitting all the open windows into skinny vertical or horizontal strips across the screen or making a neat diagonal stack by selecting *OVERLAY*.

Any headline or subhead at any level can also have a document or





graphics window attached to it. Double-clicking on the leader character of a line—(a + if the selected item has subheads below it, a - if it does not)—opens a window for text. You can either type directly in the window, using a very capable built-in text editor, or paste text from other applications. There is virtually no limit to the amount of text that a

window can hold, nor to the number of windows in an outline.

You can also paste graphics into an outline simply by selecting the headline or subhead and choosing PASTE. The graphic is automatically placed in a window attached to the selected headline. As is true with document windows, a graphics window moves with its headline. This

ability to incorporate graphics is extremely valuable, especially when working with tree charts and bullet charts.

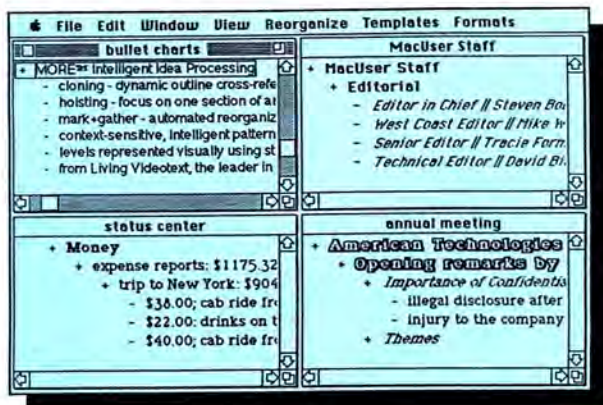
#### **FONTS, FONTS AND MORE FONTS**

One of the problems with *Think-Tank* is that you can't work with different fonts, font sizes or styles. With *MORE*, the entire outline must



# MORE THAN ENOUGH!

Four outline windows open at once and "tiled" for easy viewing. Note the variations in fonts, font sizes and styles.



be in one font and size, but you can do global changes of the font and font size. You can also set a different style (bold, underlined, italicized) for each level of headline, and text within a document window can be in a different font than the outline that contains it.

## SEND IN THE CLONES

Let's say that you're using *MORE* to make a list of all the Mac software in your library. You want to keep track of the software by name, but also by category—word processors, databases, and so on. It would also be nice if the program would let you make changes to a listing in one location and automatically update all other occurrences of the same listing.

With *MORE*, this is done simply by selecting a topic and cloning it. An exact duplicate of the topic is made, including all subtopics and any windows, documents or graphics that may be attached. Pick up the duplicate and move it to its new location. The two twin topics are linked so that when it's time to update the version number of a program, new information only has to be entered once, but will appear everywhere there is a clone. Watching clones operate on screen is very nearly magical.

## MORE MAGIC — INSTANT CHARTS

Perhaps the most amazing feature of *MORE* is its ability to generate tree charts and bullet charts right before your eyes. Tree charts, the structures seen in family trees, are often used to clarify organizational structure within a company or group. They show hierarchies from

top to bottom, side to side or bottom to top, depending on your perspective.

It used to take many hours to create tree charts, although the advent of *MacDraw* certainly cut production time dramatically. But even in *MacDraw*, each box has to be placed and text entered by hand. With *MORE* the chart is created as an outline, with executives as headlines, for example, regional managers as subheads, followed by local managers and department heads. When everyone is in the proper place, simply select TREE CHART from the Reorganize menu. A new window with a grid background replaces the outline view and the chart has already been generated. Each piece of information is in a separate box and the boxes are connected to their appropriate "parent" or "children" boxes.

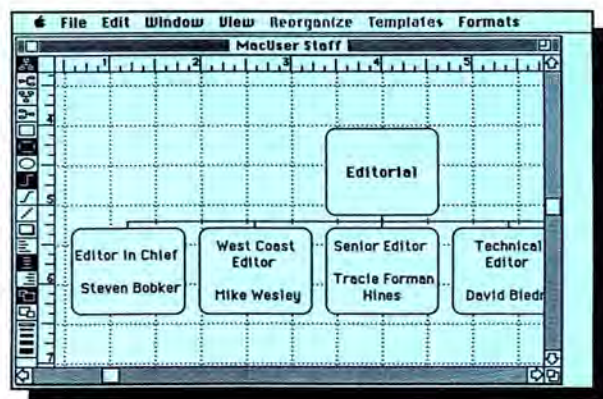
A palette along the left edge of the window lets you customize the shape and style of the boxes and connecting lines. You can also bring up a special window that lets you

customize the size of the boxes. The finished chart can be moved onto the Clipboard and from there into the outline as a graphic. Finally, it can be "exported" to a disk file in *MacDraw* format and opened directly as a *MacDraw* document for further tweaking.

Bullet charts are just as easy to create and perhaps even more dramatic to use. How often have you seen information presented to a group as a series of slides or charts, each slide showing a main topic and a list of related subtopics? For many people, the answer is "Every time I attend a meeting." Almost everyone who makes business presentations uses bullet charts as they get a message across quickly and succinctly.

*MORE* makes creating bullet charts ridiculously easy. Type a main topic, such as "Third Quarter Goals" as a headline. Below it list the general goals as subheads: "Increase sales 10%; Reduce overall production costs 2%; Reduce quality control problems by 50%; Improve working conditions." Then select the main topic and choose BULLET CHART from the Reorganize menu. The outline window is replaced by a new window in which the chart appears as a large box, with the headline as title and each subtopic below it marked by a bullet.

Again, a palette appears, this time along the bottom of the window. With the palette you can adjust the appearance of text, the style of display (you can opt for other standard outline conventions besides bullets), and the shape and style of the box. The palette can be toggled on and



A portion of a tree chart. *MORE* uses the Mac's built-in QuickDraw routines to generate the boxes and lines instantly. A finished chart can be copied and pasted into an outline or other applications.



off so you can print or display the chart cleanly.

While it may not save that much time to do this for a single item, suppose each goal in our list was supported by a set of subgoals, and those by suggested actions. Each section can have its own chart, and the display of the charts can be animated to present a "slide show." As with tree charts, bullet charts can be brought into an outline or exported to another program.

### MARK MY WORDS

MARK and GATHER is a feature of *MORE* that lets you mark some topics as you're working, then go back and collect them later. After generating a large organizational chart, you might want a separate outline that just contains the names of managers, perhaps for a telephone and address list.

As you create the full outline you can mark the manager's names by selecting MARK from the Reorganize menu. The + or - leader is replaced by a >. When you're finished, go back and gather all the marked topics. They can be picked up and moved to another location as a group, duplicated for placement in a different outline or cloned, so the list appears in more than one place in the same outline. Another possible use for MARK and GATHER is the easy creation of an index to your outline.

### CAN THERE REALLY BE MORE?

Yes, indeed there can—templates, for instance. Templates let you create a design for an outline, save the design and use it over and over. A business consultant may set out the information that a client needs to build into a business plan for a new venture. The consultant can save the design as a template and reuse it with other clients, tweaking as necessary, without starting from scratch.

If you are working in a large or very complex outline that spreads across many levels, it is easy to become confused about where you are and where the next entry needs to go. *MORE* handles this problem with a feature called HOISTING. Pick a section that you want to work on



A bullet chart, also created instantly by the program. A sequence of charts can be animated and displayed on a large monitor, in effect creating a slide show just from an outline.

and select HOIST from the Reorganize menu. The complete outline temporarily disappears and is replaced by a new outline sheet with the selected topic as the "home" headline in the upper left corner.

You can now work on an outline within an outline. In fact, you can repeat the process if the hoisted section itself becomes too complicated. You can "nest" up to ten hoisted sections within a single (but, by this time, gargantuan) outline. Returning to the previous level of the outline is as easy as selecting DE-HOIST.

### MORE DESKTOP PUBLISHING

Outlines, tree charts and bar charts can be exported to disk files in several formats, including *MacWrite*, *Word*, *MacDraw*, *Jazz*, plain text and text with tabs. This article was begun as an outline with *MORE*, fleshed out with document windows then moved into *MacWrite* for final editing and formatting. For page layout applications, *MORE* files can be read directly by *PageMaker* and *Ready-SetGo*.

*MORE* prints outlines in any of several standard outline formats, including Legal and Harvard. It can also print in color on the ImageWriter II with different colors for each level, if you wish.

### HOW MUCH MORE?

The easiest way to find out what this program offers is to perform a calculation right in the outline. *MORE* has math abilities, too, so an outline can almost be a simple spreadsheet.

*MORE* contains a calendar generator that builds an appointment schedule for a given period with intervals you define. There is also a feature that dials a phone number if one is listed in a selected headline.

The documentation for *MORE* is clear, easy to follow, and very thorough. Some of the processes, such as cloning and exporting sections of an outline are difficult to comprehend at first, but become clearer as you work with the product. Peter Winer and the people at Living Videotext have made every effort to satisfy the wish list items they have collected over the years from users of *Think-Tank*. As a result, almost anything you could want to do with an outlining program is there.

### WHAT'S MISSING?

We have one major complaint with the operation and design of *MORE*—there is no UNDO command. This is naughty. Say you execute a sort on a list of names and addresses, to put them in alphabetical order. Select (accidentally, of course) the wrong level headline before doing the sort. Instead of sorting by last name, you end up with an alphabetical listing of your fields, so Address becomes the first line and Zip the last. This is easy to do. I know, because I did it. If there were an UNDO command, the data could simply be unsorted, but without it all the fields have to be moved back into place one by one.

For a program as fully featured as *MORE* is, the omission of UNDO is a crying shame.

(continued on page 169)



# It's crazy to buy

## SOFTWARE

### Affinity Microsystems

Tempo (power user's macro utility) . . . . . \$79.

### Altsys

Fontastic (create your own fonts) . . . . . 27.

### Ann Arbor

FullPaint (open four documents at once) . . . . . 55.

### Assimilation

MIDI Composer (music record/playback) . . . . . 22.

Right•Word (spell checker & thesaurus) . . . . . 69.

### ATI

Teach Yourself Multiplan . . . . . 39.

Jazz Training . . . . . 39.

Excel Training . . . . . 39.

### Batteries Included

The Mac BatteryPak (desk accessories) . . . . . 27.

### Borland International

Sidekick w/Phonelink . . . . . 59.

### BPI Systems

General Accounting . . . . . 239.

### BrainPower

Think Fast (improves recall) . . . . . 23.

Chipwits (robot simulation) . . . . . 26.

StatView (statistics package) . . . . . 52.

Designscope (electronic circuit design) . . . . . 129.

StatView 512+ (req. external drive, 512k) . . . . . 179.

### CAMDE

Nutricalc (diet & nutrition analysis) . . . . . 49.

### Casady Company

Fluent Fonts (two-disk set) . . . . . 29.

### Central Point Software

Copy II Mac (includes MacTools) . . . . . 20.

### Challenger Software

Mac3D (3D graphics, CAD features) . . . . . 115.

### Chang Labs

Rags to Riches Ledger . . . . . call

Rags to Riches Receivables (reqs. 512k) . . . . . call

Rags to Riches Payables (reqs. 512k) . . . . . call

Inventory Control . . . . . call

Rags to Riches Three Pak . . . . . call

### Cortland

Top Desk . . . . . 35.

### Creighton Development

MacSpell+ (requires 512k) . . . . . 55.

### Cricket Software

Statworks . . . . . 79.

Cricket Graph . . . . . 129.

### DataViz

MacLink (transfer Mac/IBM files) . . . . . 89.

### Desktop Graphics

DrawArt (MacDraw artwork; 512k) . . . . . 27.

DrawForms (requires MacDraw) . . . . . 30.

### Digital, etc.

Turbo Macccountant . . . . . 299.

### Dow Jones

Straight Talk . . . . . 59.

Spreadsheet Link . . . . . 62.

Market Manager PLUS . . . . . 125.

### Dreams of the Phoenix

Day Keeper Calendar . . . . . 27.

Phoenix 3D . . . . . 27.

Quick & Dirty Utilities Vol. 1 . . . . . 27.

Quick & Dirty Utilities Vol. 2 . . . . . 27.

Twelve-C Financial Desk Accessory . . . . . 27.

### Electronic Arts

Financial Cookbook . . . . . 32.

Deluxe Music Construction Set . . . . . 32.

### Enabling Technologies

Easy 3D (create solid 3D objects) . . . . . call

### Entersert

Quickpaint (find MacPaint files fast) . . . . . \$27.

Quickset (icon-driven accessory) . . . . . 27.

Quickword (word processing tool) . . . . . 32.

MacGAS (requires 512k, external drive) . . . . . 55.

### 1st Byte

Speller Bee (spelling-learning tool) . . . . . 39.

KidTalk (writing-learning tool) . . . . . 39.

Smoothtalker (version 2.0) . . . . . 49.

### Forethought

Factfinder (free-form entry) . . . . . 79.

FileMaker (custom forms & reports) . . . . . 99.

### Fortnum/Southern

MacInooga Choo-Choo (reqs. 512k) . . . . . 21.

### FWB Software

Hard Disk Util . . . . . 57.

### Great Wave Software

KidsTime . . . . . 27.

ConcertWare+ (music composition) . . . . . 39.

The Art of Fugue (Bach) . . . . . 12.

### Haba/Arrays

Home Accountant (reqs. external drive) . . . . . 52.

### Hayden Software

I Know It's Here Somewhere . . . . . 20.

Hayden:Speller . . . . . 27.

MusicWorks . . . . . 46.

Building Blocks . . . . . 46.

Home Design . . . . . 57.

Score Improvement System for the SAT . . . . . 58.

VideoWorks & MusicWorks Bundle . . . . . 58.

Commercial Interiors . . . . . 114.

### Ideaform

MacLabeler (print disk labels) . . . . . 29.

### Innovative Data Design

Paste-Ease (requires MacPaint) . . . . . 35.

MacDraft (requires 512k) . . . . . 139.

### Kensington

Graphic Accents . . . . . 29.

Type Fonts for Text . . . . . 29.

Type Fonts for Headlines (reqs. 512k) . . . . . 42.

### Layered

Notes...For Excel . . . . . 42.

Notes...For Jazz . . . . . 42.

Front Desk (scheduling & organizer) . . . . . 69.

### Legisoft/Nolo Press

WillWriter (prepare your own will) . . . . . 27.

### Linguist's Software

Tech (1000 different symbols) . . . . . 59.

### FOREIGN LANGUAGE FONTS

MacCyrillic . . . . . 39.

SuperFrench/German/Spanish . . . . . 39.

MacArabic . . . . . 59.

MacKana/Basic Kanji . . . . . 59.

MacSemitic/Coptic/Devanagari . . . . . 59.

MacKorean . . . . . 59.

MacGreek . . . . . 59.

MacHebrew . . . . . 59.

MacHieroglyphics . . . . . 59.

LaserGreek . . . . . 79.

MacGreek/Hebrew/Phonetics . . . . . 89.

### Living Videotext

ThinkTank 512k (outline processor) . . . . . 99.

### Magnum

McPic - Volume 1 . . . . . 28.

McPic - Volume 2 . . . . . 28.

The Slide Show Magician . . . . . 34.

### Manhattan Graphics

Ready Set Go (requires 512k) . . . . . 99.

### Microsoft

Flight Simulator . . . . . 32.

Learning Multiplan and Chart . . . . . \$39.

Chart 1.0 . . . . . 72.

Logo 1.0 . . . . . 75.

Basic 2.1 . . . . . 89.

Multiplan 1.1 . . . . . 105.

File 1.02 . . . . . 111.

Word 1.05 . . . . . 111.

Fortran 2.1 . . . . . 169.

Excel 1.0 . . . . . 225.

### Miles Computing

Mac the Ripper - Volume III . . . . . 27.

### Mindscape

The Luscher Profile . . . . . 24.

The Perfect Score: SAT . . . . . 47.

### Monogram

Forecast (tax planning) . . . . . 41.

Dollars & Sense . . . . . 81.

### Nevins Microsystems

Turbocharger (requires 512k) . . . . . 39.

### New Canaan MicroCode

Mac Disk Catalog II (requires 512k) . . . . . 32.

### Odesta

Helix (requires 512k, external drive) . . . . . 125.

Double Helix . . . . . special

### Palantir

MacType (supports Dvorak keyboard) . . . . . 26.

MathFlash (math flash card drills) . . . . . 26.

WordPlay (crossword puzzles) . . . . . 26.

Inventory Control . . . . . 69.

inTouch (communication to emulation) . . . . . 79.

### PBI Software

Icon Switcher . . . . . 14.

Icon Fun & Games Library . . . . . 14.

Icon Business Library . . . . . 14.

HFS Locator . . . . . 27.

Hard Disk Backup . . . . . 29.

### Peachtree

Back to Basics General Ledger . . . . . 89.

Back to Basics Accounts Payable . . . . . 89.

Back to Basics Accounts Receivable . . . . . 89.

Back to Basics Three Pack . . . . . 239.

### Polarware

Graphics Magician . . . . . 49.

### ProVUE Development

OverVUE 2.0 (power-packed database) . . . . . 149.

### QED Information Sciences

Typing Made Easy . . . . . 36.

### Rubicon Publishing

Silver Palate Collection (NY's finest!) . . . . . 29.

Dinner At Eight (recipes to wines) . . . . . 32.

Dinner At Eight-Silver Palate Bundle . . . . . 54.

### Satori

BulkMailer (mailing lists) . . . . . 75.

### Sierra On-Line

MacOneWrite (cash disbursements) . . . . . 137.

MacOneWrite (accounts receivable) . . . . . 137.

MacOneWrite (general ledger) . . . . . 137.

### Silicon Beach Software

Accessory Pak 1 . . . . . 21.

Silicon Press (printer utility, 512k) . . . . . 42.

### Simon & Schuster

The Mac Art Department . . . . . 24.

Paper Airplane Construction Kit . . . . . 24.

Typing Tutor III . . . . . 35.

### SMB Development

MacMate (requires 512k) . . . . . 35.

### SoftStyle

Colormate Art (color graphic images) . . . . . 25.

Colormate (color printing utility) . . . . . 49.

Epstart . . . . . 27.



# We'd like to think you're even stranger.

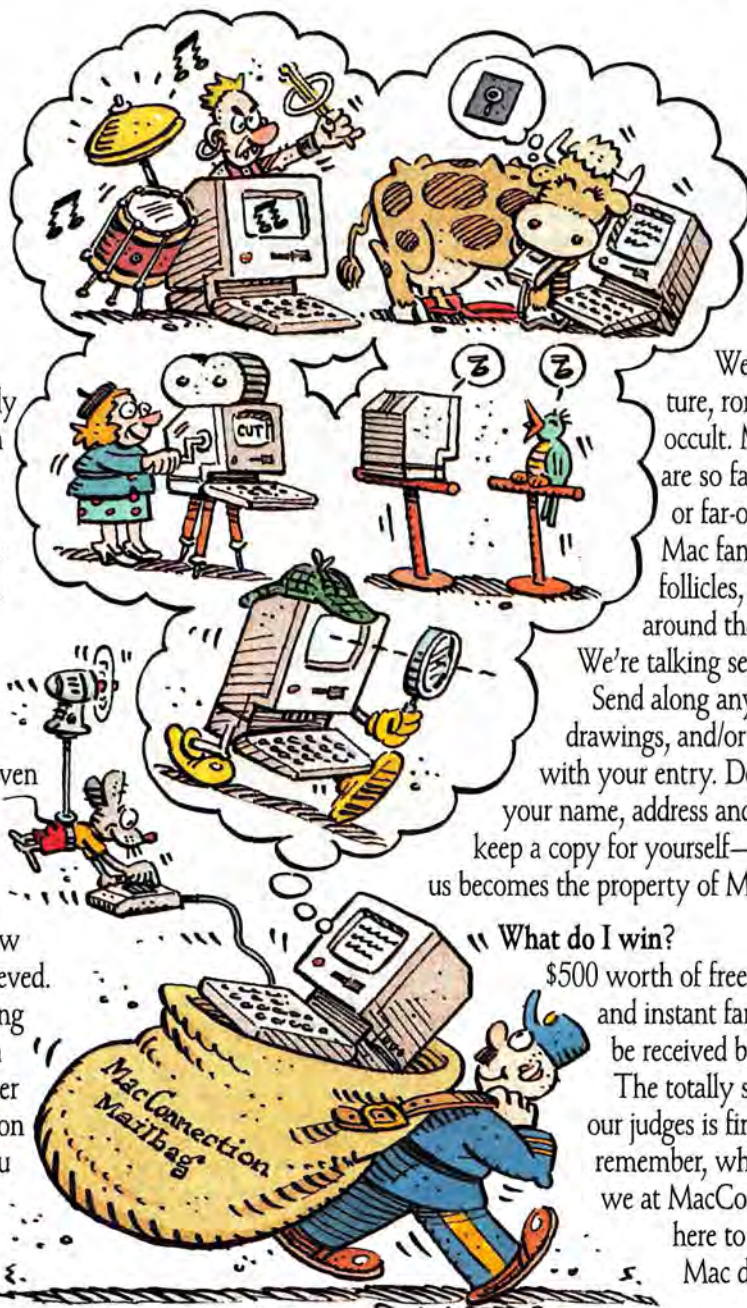
## A walk on the weird side.

Back in prehistoric Mac times (early 1985) we held a contest to unearth strange-but-true Mac stories. Winners received \$500 worth of Mac add-ons and software, and became stars of a series of MacConnection advertisements.

The response was overwhelming. Our customers were using their Macs to run detective agencies, back up heavy metal bands, even to help explore the frozen tundra for remains of old expeditions.

## The odd get even.

Well, it's time to find out what new heights of eccentricity you've achieved. Has your Mac saved your life during a terrorist attack? Have you used a Mac to predict how many times per episode of Miami Vice Don Johnson will say the word "pal"? Have you used a Mac to create a mutant life form that will save the planet from radioactive fallout?



We're looking for adventure, romance, mystery, the occult. Mac applications that are so fascinating, far-fetched, or far-out that your fellow Mac fanatics will froth at the follicles, and feel all fuzzy around their foreheads. Oh yes.

We're talking serious strangeness here.

Send along any relevant snapshots, drawings, and/or newspaper clippings with your entry. Don't forget to enclose your name, address and phone number. And keep a copy for yourself—everything you send us becomes the property of MacConnection.

## What do I win?

\$500 worth of free add-ons and software and instant fame! All entries must be received by December 31, 1986.

The totally subjective decision of our judges is final. Good luck! And remember, whether you win or not, we at MacConnection are always here to fulfill your wildest Mac dreams.

# MacConnection<sup>TM</sup>

14 MILL STREET, MARLOW, NH 03456 1-800/Mac&Lisa or 603/446-7711

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# Mac products and

Jetstart	\$27.
Laserstart	59.
Decision Map	75.
<b>Software Discoveries</b>	
Record Holder	35.
<b>Springboard</b>	
Art a la Mac Vol. 1-People and Places	23.
Art a la Mac Vol. 2-Variety Pack	23.
Easy as ABC	29.
Early Games	29.
<b>State of the Art</b>	
Electric Checkbook	39.
<b>Symmetry</b>	
Acta (outline/writing desk accessory)	39.
PictureBase (clip art manager, 512k)	45.
<b>T/Maker</b>	
Click Art Personal Graphics	29.
Click Art Publications	29.
Click Art Letters	29.
Click Art Effects	29.
ClickOn Worksheet	46.
<b>Target Software</b>	
MacLightning (reqs. 512k, external drive)	53.
<b>Telos Software</b>	
Business Filevision (512k, external drive)	199.
<b>Think Educational</b>	
MacEdge II (math & reading)	28.
<b>TML Systems</b>	
TML Source Code Library	59.
TML Pascal	69.
<b>TrueBasic</b>	
True BASIC	89.
Algebra Utility	36.
Calculus Utility	36.
3D Graphics Utility	36.
<b>Videx</b>	
MacCalendar (incl. reminder system)	52.

## GAMES

<b>Activision</b>	
Championship Star League Baseball	22.
Hacker (you're on your own!)	27.
Mind Shadow (Who am I?)	27.
Borrowed Time (murder mystery)	27.
Alter Ego (become someone else)	36.
<b>Ann Arbor Softworks</b>	
Grid Wars (3D graphic arcade)	22.
<b>Artworx</b>	
Bridge 4.0	21.
<b>Bantam Electronics</b>	
Sherlock Holmes: Another Bow	27.
<b>Blue Chip</b>	
Millionaire (stock market)	35.
Tycoon (commodities)	35.
Baron (real estate)	35.
Squire (personal finance, reqs. 512k)	35.

## MacConnection Special of the Month

through September 30, 1986

### ODESTA

#### Double Helix

Powerful relational database for your 512k Mac or Mac Plus. Supports HFS and includes the following features:

- Password protection
- Free-form text & forms design
- Custom menus
- Unlimited number of records, fields and files

External drive required. \$249.

### Broderbund Software

Lode Runner (you'll never sleep!)	24.
Ancient Art of War (military strategy)	27.

### CBS

Murder by the Dozen (twelve mysteries)	25.
--	-----

### Electronic Arts

Golden Oldies Vol. 1 (software classics)	24.
Skyfox (3D graphics)	27.
One on One/Dr J vs Larry Bird (reqs. 512k)	27.
Pinball Construction Set	27.

### Epyx

Rogue (the mainframe classic!)	24.
Temple of Apshai Trilogy (4 levels)	24.
Winter Games (Olympic events)	24.

### Hayden Software

Perplexx (scrabble-like game)	24.
Sargon III (9 levels of chess)	29.

### Infinity Software

Grand Slam (tennis, reqs. 512k)	28.
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### Infocom

Seastalker	
Junior level of difficulty	each 23.

Ballyhoo	Wishbringer	Planetfall
Enchanter	Zork I	Cutthroat
The Witness	Hitchhiker's Guide	
Standard level of difficulty	each 23.	

Zork II	Sorcerer	Infidel
Zork III	Suspect	
A Mind Forever Voyaging		
Advanced level of difficulty	each 26.	

Deadline	Spellbreaker	Suspended
Starcross		
Expert level of difficulty	each 29.	
Invisiclues (hint booklets)	each 6.	

### Miles Computing

Fusillade (arcade-maze)	\$21.
MacAttack (3D tank simulation)	27.
Harrier Strike Mission (3D flight simulation)	27.
MacWars (3D space simulation)	27.

### Mindscape

Rambo: First Blood Part II	24.
James Bond 007: "A View to a Kill"	24.
Stephen King's "The Mist"	24.
Racter (converse with your Mac!)	27.
Balance of Power (world politics)	30.
Bratavus (requires 512k)	30.
Uninvited (mystery adventure)	30.
Déjà Vu (murder mystery)	33.

### Origin Systems

Exodus: Ultima III (fantasy adventure)	38.
--	-----

### PBI Software

Strategic Conquest (war strategy)	29.
Fokker TriPlane Flight Simulator	35.

### Polarware

Transylvania (rescue Princess Sabrina)	15.
Crimson Crown (sequel to above)	15.
Sword of Kadash (fantasy adventure)	15.
The Quest (beware of the dragon!)	15.
Xyphus (role playing adventure)	15.

### Practical Computer Applications

MacGolf (requires 512k)	36.
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### Psion

Psion Chess (3D and multi-lingual)	31.
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### Sierra On-Line

Frogger (classic video game)	24.
Championship Boxing (knock 'em out!)	24.
Ultima II (role playing adventure)	35.

### Silicon Beach Software

Airborne! (digitized-sound war game)	20.
Enchanted Scepters (text & graphics)	21.

### Simon & Schuster

Star Trek—The Kobayashi Adventure	24.
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### Sir-Tech

Mac Wizardry (fantasy)	36.
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### Spectrum Holobyte

GATO (submarine simulation)	26.
Orbiter (requires 512k)	27.
Tellstar North Level I (reqs. 512k)	27.

### Unicorn

Futura (sci-fi adventure)	24.
Animal Kingdom (ages 6-12)	27.
Decimal Dungeon (math, ages 9 and up)	27.
Fraction Action (arcade style math game)	27.
Mac Robots (pre-school program)	27.
Read-A-Rama (reading, ages 5-8)	32.

### Videx

FunPak (Solitaire and more)	23.
MacCheckers/Reversi	28.
MacGammon/Cribbage	28.
MacVegas (7 casino games)	34.

1-800/Mac&Lisa

620U

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# anywhere else.

## HARDWARE

### Assimilation

Mac•Epson•Connection . . . . .	\$40.
Mac•Port•Adaptor . . . . .	85.
Numeric•Turbo . . . . .	145.

### Compucable

Mac to Hayes Smartmodem cable . . . . .	16.
Mac Plus to Hayes Smartmodem cable . . . . .	19.
Mac Plus to Imagewriter II cable . . . . .	21.

### Cuesta Systems

Datasaver AC Power Backup (90 watts) . . . . .	call
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### Curtis Manufacturing

Diamond (6 outlets) . . . . .	29.
Emerald (6 outlets; 6 ft cord) . . . . .	36.
Sapphire (3 outlets; EMI/RFI filtered) . . . . .	47.
Ruby (6 outlets; EMI/RFI filtered; 6 ft cord) . . . . .	55.

### Epson

AP-80 printer (Imagewriter compatible) . . . . .	call
FX-85 printer . . . . .	call
FX-286 printer . . . . .	call
LQ-1000 printer (letter quality) . . . . .	call

### Ergotron

MacTilt (includes external drive bracket) . . . . .	75.
MacBuffer 256k . . . . .	219.
MacBuffer 512k . . . . .	319.
MacBuffer 1 Megabyte . . . . .	489.

### Hayes

Smartcom II (communications software) . . . . .	89.
Smartmodem 1200 . . . . .	call
Smartmodem 2400 . . . . .	call
Transet 1000 . . . . .	call

### IOMEGA

Bernoulli Box (dual 10-MB w/SCSI) . . . . .	2195.
Bernoulli Box (dual 10-MB storage) . . . . .	2475.
10 Meg cartridge . . . . .	48.

### Kensington

External Disk Drive Cover . . . . .	8.
Mouseway . . . . .	8.
Mouse Pocket . . . . .	8.
Mac (Plus) Dust Cover . . . . .	9.
Imagewriter (II) Dust Cover . . . . .	9.
Mouse Cleaning Kit w/Mouse Pocket . . . . .	16.
Universal Printer Stand . . . . .	17.
Disk Case (holds 36 Mac disks) . . . . .	19.
Disk Drive Cleaning Kit . . . . .	19.
Tilt/Swivel . . . . .	22.
Polarizing Filter . . . . .	31.
Surge Suppressor . . . . .	35.
Starter Pack (includes Tilt/Swivel) . . . . .	53.
A-B Box (specify Mac or Mac Plus) . . . . .	62.
Control Center . . . . .	62.
System Saver Mac . . . . .	65.

### Koala Technologies

KAT Graphics Tablet . . . . .	139.
MacVision (digitizer) . . . . .	175.

### Kraft

QuickStick (Mac joystick) . . . . .	45.
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### Micah

MicahDrive AT (20 Meg internal drive) . . . . .	1195.
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### Mirror Technologies

FastPort ("SCSI" for your 512k Mac) . . . . .	139.
MagNet 20x External Drive w/cable . . . . .	939.

### Mouse Systems

A+ Optical Mouse . . . . .	59.
----------------------------	-----

### N² Products

Mac-Modem cable (6 feet) . . . . .	19.
Mac-Transet 1000 cable (9 feet) . . . . .	19.
Mac (Plus)-Printer cable (6 feet) . . . . .	19.
Mac Plus Adapter cable . . . . .	19.
Mac Plus-SCSI cable . . . . .	24.

### Paradise Systems

Mac 10 (10 megabyte hard disk) . . . . .	call
Mac 20 (20 megabyte hard disk) . . . . .	call

### PBI Software

Switch Box . . . . .	36.
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### Personal Computer Peripherals

MacBottom 20 Hard Disk Drive . . . . .	949.
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### PKI

McD 800k External Drive . . . . .	249.
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### Summagraphics

MacTablet 6" x 9" . . . . .	269.
MacTablet 12" x 12" . . . . .	369.

### Systems Control

MacGard (surge protection) . . . . .	55.
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### Thunderware

Thunderscan (high-resolution digitizer) . . . . .	175.
Mac Plus Power Accessory . . . . .	29.

### Western Automation

DASCH RAMdisk 500k . . . . .	299.
DASCH RAMdisk 1000k . . . . .	359.
DASCH RAMdisk 2000k . . . . .	435.

## DISKS

### Single-sided Diskettes

BASF 3 1/2" Disks (box of 5) . . . . .	10.
Memorex 3 1/2" Disks (box of 10) . . . . .	17.
Sony 3 1/2" Disks (box of 10) . . . . .	17.
Verbatim 3 1/2" Disks (box of 10) . . . . .	17.
MAXELL 3 1/2" Disks (box of 10) . . . . .	18.
Fuji 3 1/2" Disks (box of 10) . . . . .	18.
3M 3 1/2" Disks (box of 10) . . . . .	21.

### Double-sided Diskettes

Fuji 3 1/2" Double-sided Disks (10) . . . . .	26.
Sony 3 1/2" Double-sided Disks (10) . . . . .	26.
Verbatim 3 1/2" Double-sided Disks (10) . . . . .	26.
MAXELL 3 1/2" Double-sided Disks (10) . . . . .	28.
3M 3 1/2" Double-sided Disks (10) . . . . .	29.

## INFORMATION SERVICES

### Compuserve

Compuserve Information Service . . . . .	27.
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### Dow Jones

Dow Jones News/Retrieval Membership Kit . . . . .	19.
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### Source Telecomputing

The Source (subscription & manual) . . . . .	30.
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## ACCESSORIES

### Automation Facilities

Floppyclene Drive Care Kit . . . . .	15.
MacPak Complete Care System . . . . .	29.

### Clean Image Ribbon Co.

Clean Image Ribbon Kit . . . . .	12.
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### Computer Coverup

External Disk Drive Cover . . . . .	4.
Imagewriter (II) Cover . . . . .	8.
Mac (Plus) & Keyboard (two covers) . . . . .	10.

### Diversions

Underware Ribbon . . . . .	9.
Colorpens . . . . .	10.
Jumbo Colorpens . . . . .	13.
ColorPack (includes Colorpens) . . . . .	19.

### Environmental Software Company

The Clutch (holds 8 disks) . . . . .	9.
MACATTIRE (Rip-stop nylon covers) . . . . .	
External Drive Cover (400k or 800k) . . . . .	7.
Numeric Keypad Cover . . . . .	7.

Numeric Turbo Cover . . . . .	\$8.
Imagewriter (II) Cover . . . . .	11.
Wide Imagewriter Cover . . . . .	13.
Mac (Plus) & Keyboard Cover . . . . .	15.
Laserwriter Cover . . . . .	17.
Mac (Plus) & HD20 & Keyboard Cover . . . . .	18.

### I/O Design

Imageware (Imagewriter case) . . . . .	39.
Imageware II (Imagewriter II case) . . . . .	49.
Imageware wide . . . . .	49.
Macinware Plus (Mac Plus carrying case) . . . . .	59.

### Innovative Concepts

Flip & File Micro (holds 25 disks) . . . . .	9.
Flip & File (holds 40 disks) . . . . .	18.

### Innovative Technologies

The Pocket Pak (holds 6 disks) . . . . .	9.
The Easel (holds 20 disks) . . . . .	12.
The Disk Directory (holds 32 disks) . . . . .	18.

### Kalmar Designs

Teakwood Roll-top Case (holds 45 disks) . . . . .	14.
Teakwood Roll-top Case (holds 90 disks) . . . . .	21.
Teakwood Printer Stand 24" . . . . .	29.

### Magnum

Mouse Mover (let your mouse ride!) . . . . .	14.
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### Moustrak

Moustrak Pad (standard 7" x 9") . . . . .	8.
Moustrak Pad (large 9" x 11") . . . . .	9.
Imagewriter Pad . . . . .	12.

### Ribbons Unlimited

Imagewriter Color Ribbons . . . . .	5.
Imagewriter Ribbons Six Pack . . . . .	25.
Imagewriter Rainbow Six Pack . . . . .	25.

### Smith & Bellows

Mahogany Disk Case (holds 90 disks) . . . . .	28.
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**Continental US:** For printers and drives add 2% for UPS ground shipping (call for UPS Blue or UPS Next-Day-Air). For all other items, add \$2 per order to cover UPS shipping. We will automatically use UPS 2nd-Day-Air at no extra charge if you are more than 2 days from us by UPS ground. **Hawaii:** For printers and drives, actual UPS Blue charge will be added. For all other items, add \$2 per order. **Alaska and Outside Continental US:** Call 603/446-7711 for information.





# HARDER AND FASTER

*There's finally a choice of hard disks as SCSI drives hit the marketplace. Here's a look at six manufacturers' offerings.*





PC OWNER TO SELLER OF SCSI hard drives: "What is the seek time of the heads in microseconds? How many microseconds faster is that than your competitor? And how much does it cost?"

Mac owner to same seller: "I hear it's fast. Does it work? Is it reliable? And how much does it cost?"

According to one manufacturer of SCSI drives, the above characterizations are basically accurate. While PC owners are deeply concerned about fractional differences in speed, Mac people seem to care more that a drive works fast and reliably.

SCSI (pronounced "scuzzy" or, in the Mac community, "sexy") stands for Small Computer Systems Interface. A SCSI connector port is built into the Mac Plus and can be added to a 512K Mac with the installation of a peripheral card or Mac Plus upgrade. The required control software (the SCSI Manager) is contained in the 128K ROMs. The SCSI port conforms to a set of industry standards. Though mechanically similar to other hard disks, SCSI drives connect to the Mac Plus through this special high-speed port.

The advantages of SCSI over a standard serial disk drive are speed and the ability to connect up to seven disk drives or other high-speed peripherals, such as a streaming tape backup drive, in a "daisy chain."

Creating a daisy chain involves more than just connecting cables. Inside each drive is a set of switches that must be altered, depending on the drive's position in the chain. In some drives the switches are easier to get at than others (see the box, "Chaining Daisies").

What about speed? SCSI drives are faster than non-SCSI drives. A lot faster.

Although much has been made about benchmark tests of hard drives, the truth is that it is extremely difficult to perform reliable benchmarks on Mac drives. The speed of operation is dependent on many factors, including the amount of software loaded onto a disk, the size of the *System* file, where files are stored on the disk and how fragmented the files are (since bits and pieces of files end up scattered all over the drive).

About the only way to do accurate benchmarks would be to load *exactly* the same files on every machine, in *exactly* the same order, then test them for speed. Unfortunately, the results may have absolutely no bearing on the way a drive works for you. Besides, those differences in speed might literally be fractions of a second in the drive itself and perhaps a second or two in the loading and closing of documents.

#### BEGGING THE QUESTION

What it all boils down to is this: if benchmarks aren't all that meaningful, how do you rate one SCSI drive against another in order to make a responsible buying decision? The answer is that there are several key issues in evaluating SCSI drives:

- Reliability
- The ability to daisy chain with other drives and the ease of making the connection
- The flexibility and functionality of the *System* software (and, indeed, whether a specially modified *System* is required)
- Quality of construction
- Noise and heat considerations
- Backup provisions (if there is no tape backup unit available, there should be software that backs up to floppies)

**by Michael D. Wesley**



# HARDER AND FASTER



SCSI drives from Peripheral Land. From left to right, MacFast 20 (\$1,599), MacBack tape backup (\$995), PL 30 (\$1,495), and MacStore (\$2,295).



The DataFrame 20 (\$1,299).

- Flexibility of the product line
- Support from the manufacturer
- Price

Unfortunately, many of the drives fall down on their documentation and often fail to provide good, useful utility software. Also, if you are planning to buy a SCSI drive, make sure you get the manufacturer's latest version of System software, since it's constantly being updated and improved.

## CHECKING OUT THE SCSI

I have had a total of just over 200 megabytes sitting next to my Mac

for several weeks now. The drives fall into three basic types: internal SCSI (the MicahDrive AT), affordable external (SuperMac, Peripheral Land, Peak Systems and LoDOWN), and *mongo* external. The *mongo* drive is the AST-4000, a 74-megabyte drive with 60-meg streaming tape backup. At just under \$7000 it's in a category by itself and will be considered separately (see box).

## OUTSIDE MACINTOSH

Most of the SCSI drives for the Mac Plus are external units in the 20-

to 30-megabyte range and have prices well under \$2000. The four units tested all worked consistently and fairly reliably. The reviews that follow rank the drives in order of our preference.

## PERIPHERAL LAND

Peripheral Land is a small company in Santa Clara, California that debuted with a wide range of SCSI products for the Mac. Current products include a 30-megabyte standalone unit called the PL 30; a 20-megabyte hard disk called MacFast that can be used alone, or with a 20-meg tape backup unit called MacBack, and a 10-meg drive with a removable hard disk called MacStore.

The "flagship" product for Peripheral Land is the MacFast 20-meg drive with the tape backup. Both units are slimline drives that sit neatly stacked next to the Mac Plus. The MacFast is very quick and efficient, and the accompanying software permits the drive to be partitioned into up to five separate volumes, which can be either MFS or HFS volumes, as desired. That's particularly handy if you run software that is not yet HFS-compatible.

MacBack stores up to 20 megabytes on a streaming tape cartridge and works exclusively with the MacFast drive, connecting directly to the hard disk unit and never interfacing directly with the Mac. What this means for the user is that MacBack is very fast — it can back up information stored on the hard disk at a rate of 4 megabytes per minute, or 5 minutes total for a fully loaded drive, all off-line.

For anyone who has lost information from a hard drive, the ability to back up data quickly and easily becomes a must. Equally important is the "restore" software that reloads backed-up data to the hard drive after a crash or reformatting operation. The software included with the Peripheral Land system is very quick and in our tests restored 5 megabytes of files with no errors or problems in about 5 minutes.

The 10-megabyte removable disk system from Peripheral Land is also very interesting. The hard disk is

MANUFACTURER DRIVE	CONFIGURATION	PRICE	ACCESS TIME (average)	WARRANTY	TAPE BACKUP	PRICE
SuperMac DataFrame	20 megabytes	\$1,299	63 millise.	1 year full replacement	NO*	N/A
LoDOWN	10 megabytes	\$775	65 millise.	90 days	22 megabytes	\$895
LoDOWN	20 megabytes	\$995	"	(longer warranty may be purchased)	60 megabytes	\$1,795
	40 megabytes	\$1,995	"			
	80 megabytes	\$3,995	"			
Peak Systems Plus-20	20 megabytes	\$1,195	50 millise.	1 year parts & labor	NO*	
Plus-30	30 megabytes	\$1,295	"			
Peripheral Land MacFast	20 megabytes	\$1,599	85 millise.	180 days parts and labor	20 megabytes	\$1,995
	30 megabytes	\$1,895	"	(longer warranty may be purchased)		
	80 megabytes	\$2,995	"			
MacStore	10 meg removable	\$2,295	"	"	NO*	
PL series	20 megabytes	\$1,195	"	"	"	
	30 megabytes	\$1,495	"	"	"	
	80 megabytes	\$2,495	"	"	"	
Micah 20AT	20 meg internal	\$1,595	70 millise.	1 year	NO*	
AST 4000	74 megabytes	\$6,995 (tape incl.)	30 millise.	6 months parts & labor (longer warranty may be purchased)	60 megabytes	Included

\* Unit not available at time of writing, but may be by the time the article appears in print.

NOTE: Data transfer not included. The rates quoted by drive manufacturers are sometimes the rate between the drive and the Mac, and sometimes the rate between the controller card and the drive (which is essentially meaningless). The actual rate of transfer from the drives to the Mac is usually about 5 megabits per second.



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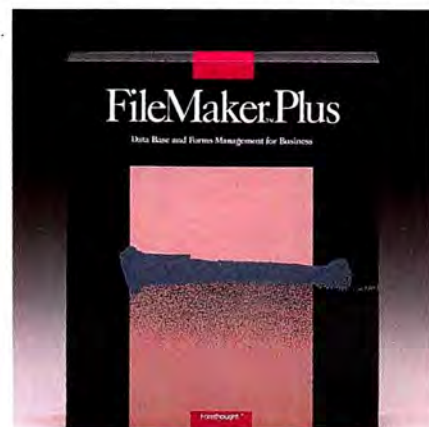
You can exchange information with other programs, like MacWrite™, MacPaint™, MacDraw™, Microsoft® Word and Microsoft Excel. You can share applications or formats you've created with other members of your team, or consolidate group efforts into one database. And FileMaker takes full advantage of the Macintosh™ family, including the Mac Plus, Mac 512, Imagewriter and LaserWriter.

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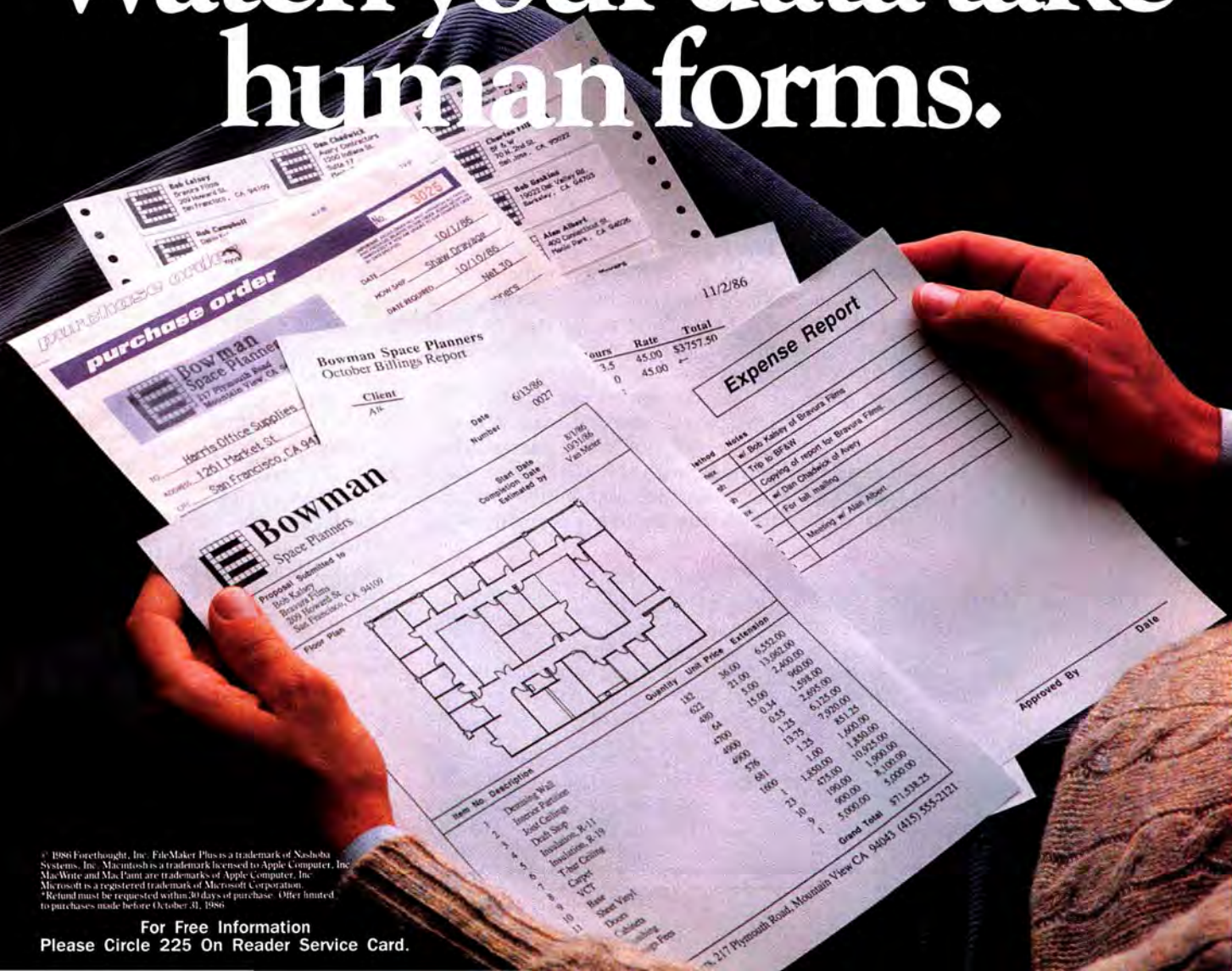
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## HARDER AND FASTER



Peak Systems 20-mega-byte SCSI drive (\$1295).



LoDOWN 20 (\$995) and 22-meg tape backup (\$895).

encased in a cartridge that can be removed from the unit and stored away. Systems like this are very valuable in environments where data security is essential, or where many people use a single system for their own work at different times. A locking mechanism prevents the cartridge from being removed until the drive has spun down completely.

All the Peripheral Land products seem to be well made and have surpassed FCC standards for radio interference. Internal fans are included to prevent overheating, but the noise level is comfortable. The drives daisy chain easily with each other and with other systems, and the jumper blocks (where the switches are located) are easily accessible inside the case. Peripheral Land also manufactures a SCSI port on a peripheral card for the 512K Mac at a price of \$99.

### DATAFRAME 20

The DataFrame 20 is an excellent 20-megabyte drive from SuperMac Technology. Wrapped in a slim,

Macintosh-beige package that sits on its side, the DataFrame is fast, quiet and efficient. Because the people at SuperMac have worked very closely with Apple engineers on this product, the DataFrame is easy to daisy chain with other DataFrames or with drives from different manufacturers. The jumper blocks are easily accessible.

Although there is no fan in the DataFrame, heat does not appear to be a problem as long as air can circulate freely around the vents at the top of the case. As yet, there is no tape backup system for the DataFrame, nor is software included that backs up to floppy. At the time of this writing, the biggest weakness of the DataFrame is the lack of good utilities, although backup software is in the works.

The documents are sparse. The few pages provided will get you going, but not much more. When working with the DataFrame, heed the manual's admonition to not touch the System document SCSI

## THE VERY LARGE AST-4000

One of the drives under review is in a completely different category from the rest. The AST-4000 is a 74-megabyte disk subsystem with a 60-meg streaming tape backup built-in. A system like this one, which retails for \$6,995, is likely to find its way into business with requirements for lots of storage and possibly for file serving.

The AST-4000 is *built* — it comes in an enormous, very heavy and very well con-

structed case. A built-in fan (absolutely necessary) and the drive unit combine to make the 4000 sound like a fleet of World War I triplanes. The noise is definitely annoying if the box sits right next to the Mac Plus, but it's not too bad if there is room to move it down to the floor.

The hard drive and tape backup unit in the AST-4000 are fast, powerful and efficient. The tape drive will backup 60 megabytes in about 15 minutes.

*Items.* It must be present for the drive to operate properly.

### PEAK SYSTEMS

Peak Systems is a Texas company offering 20- and 30-megabyte drives. A tape backup unit is planned that will also work with the Peak Systems drive is enclosed in a flat, wide beige case. It is very noisy, making a loud whirring noise on startup and real mouse-like chirping noises when the drive is accessed. The company is planning to switch from a Miniscribe-made hard disk to one manufactured by Seagate; this should result in a considerable reduction in noise.

The sheet metal frame is bolted to the case in approximately a dozen places, giving the impression of poor initial design. There are just too many connectors. Nevertheless, the Peak Systems drives have passed FCC tests and the internal electronic assemblies seem to be high quality.

Under heavy usage the Peak Systems drive performed very well, and the attendant software includes backup to floppies and restore capabilities. The Peak drive offers fairly easy access to the jumper block, and will daisy chain with other drives.

### LODOWN

LoDOWN, one of the first SCSI drives available for the Mac Plus and the least expensive, comes in 10-, 20-, 40- or 80-megabyte configurations. The name implies that the drive should be kept under the Mac Plus. It looks like an ugly, squarish box with an overhanging hood that makes the top look like a convenient resting place for the Mac.

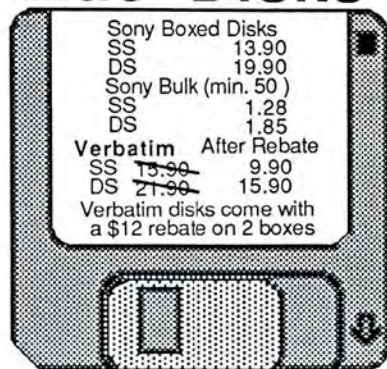
Two things are very quickly noticeable, though — the unit is very quiet because it does not have a built-in fan, and the top of the case has large air holes cut into it to dissipate heat. The LoDOWN heats up intensely and very quickly unless these air vents remain uncovered, so it's best to keep the LoDOWN to the side of the Mac with nothing sitting on top of it.

Except for heat concerns, the LoDOWN is a quick and reliable hard

*(continued on page 173)*



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# THE GRAPHICS GALLERY

***Manage your images as easily as you do words  
with PictureBase, a graphics database.***

MAC PIONEERS REMEMBER WELL those hungry days of early 1984. There wasn't a whole lot of software available. The Mac was proving to be a beast, and a time-consuming beast at that, to program. Thus, some of the first useful Mac software products to be marketed didn't require any programming at all. They were simply collections of graphic images — clip-art — that could be easily incorporated into any Macintosh document.

By now, clip-art is rampant. Dozens of different products are available, and many of us have amassed quite a large collection of these disks. But even a moderately sized collection poses major organizational problems. With more than a few disks, each filled with lots of Macintosh images, searching for a particular picture can become a major chore. Which disk was it in again? Where is the version you modified?

## **A DATABASE FOR CLIP-ART**

One solution would be to use a run-of-the-mill database. Some of

them even allow you to paste in graphic images. But that's time-consuming, and it also uses huge amounts of disk space. For a while, the situation seemed hopeless.

But like a knight on a white charger, to the rescue comes *PictureBase*, billed by its creators as "The Art Management System." *PictureBase* is essentially a database for clip-art. It provides the framework to organize all the *MacPaint* or *MacDraw* images you have collected, created or modified. Within *PictureBase*, clip-art can be categorized into "libraries" of related images.

That by itself is nice, but so what? You can copy such graphics into your own disk libraries (folders) by category. But, while this does impose some degree of organization into a clip-art collection, most people still need a method for locating individual images efficiently.

The real power of *PictureBase* is in its sophisticated search routines. An image within a *PictureBase* library can be located by its title or by keywords, which the program allows

by

**Carlos**

**Domingo**

**Martinez**



users to store with each picture. Such searches bring the desired image, or all answering the call of the chosen keyword, to the active window. *PictureBase* also gives users the capability of browsing through their selections, or through an entire library, picture by picture. Once your art is organized in this database, locating the right image becomes a simple matter.

### THE DIGITAL GALLERY DIRECTOR

The *PictureBase* Art Management System has several interrelated elements: the Catalog window, the Pic-

ture window and the Info window. Users start at the Catalog window. When the Catalog window opens, every library file present on the disk is represented by a miniwindow on the screen. These miniwindows are used to view the contents of each library without leaving the Catalog window. Clicking on the scroll buttons beneath each miniwindow moves viewers, image by image, through the contents of the current library. Naturally, since individual images are compressed to fit inside these small windows, picture resolution is diminished. The more com-

plex the image, the more difficult it is to view it properly. But, although these miniwindows don't afford a great deal of detail, they are useful nonetheless.

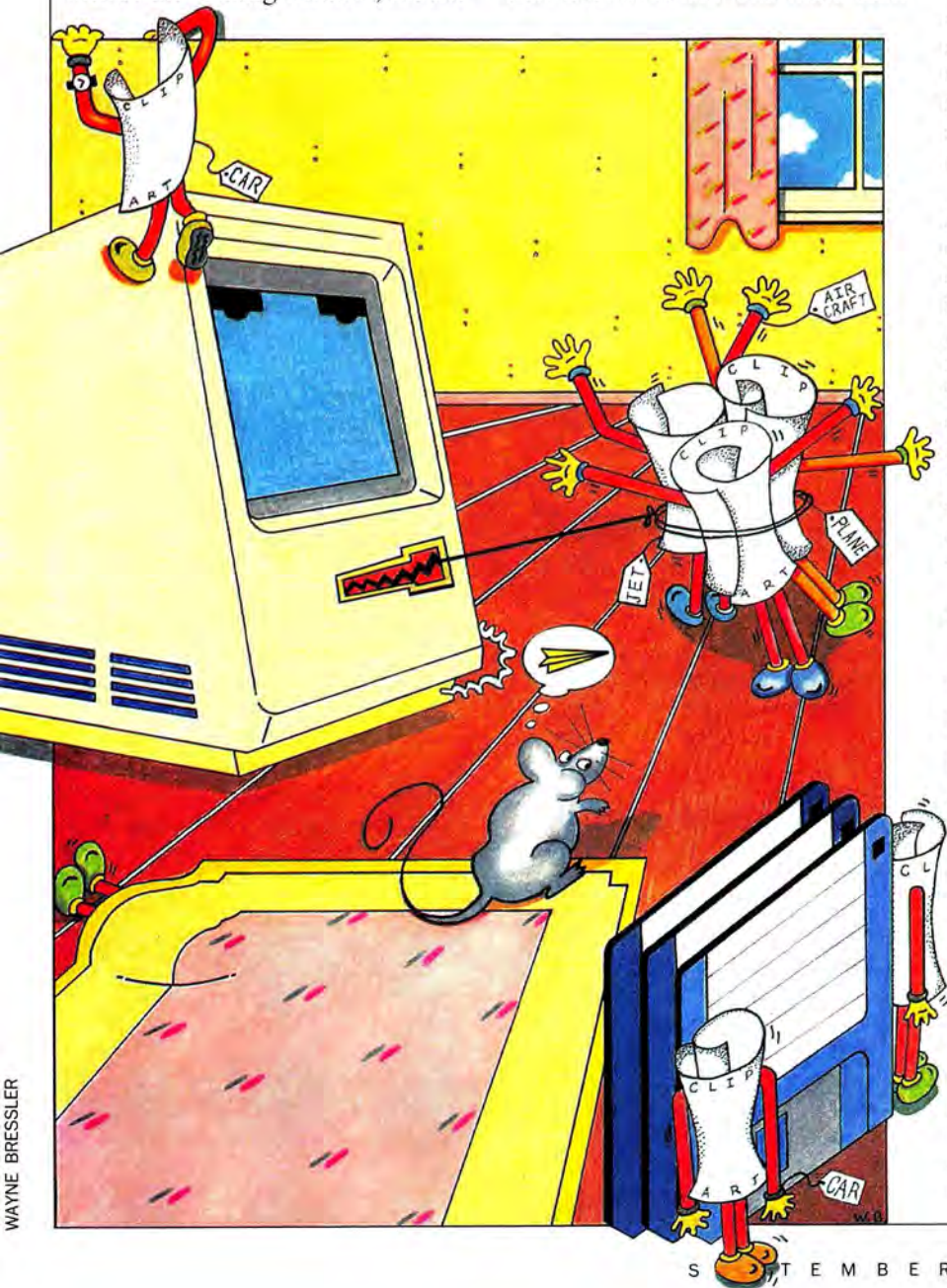
The Catalog window is the centerpiece of the program. From this window, you can create libraries, open or close library files, print the contents of a catalog, library or info page, and initiate searches. From the Catalog window, you may also view the contents of any *MacPaint* or *MacDraw* document, even those not organized into library files. To do this, tell the program the file "type" of the document you wish to view by making the proper selection from the Catalog menu. As you choose, the documents of that type that are available on that disk are displayed in the Catalog window.

Catalog windows are standard Mac windows and can be manipulated in the usual manner, with one exception. That major difference is in the action of the close box. With a *PictureBase* Catalog window, clicking on the close box causes the window to close and the disk to eject. *PictureBase* treats each disk as a separate collection of library files; thus, when you close the Catalog window that looks into those files, the program assumes you want to work with another disk.

### PICTURE, PICTURE, ON THE SCREEN

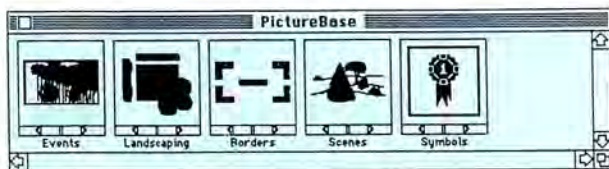
Although you can browse through the contents of a library by using the miniwindows of the Catalog window, to really examine individual images you have to move to the program's Picture window. Click on the miniwindow itself to open that library to a Picture window. From the Picture window you can easily browse through the library or employ any of the editing functions of the program.

A double-click on the title bar of a Picture window will enlarge it to fill the entire screen, and it may also be resized with the grow box at the lower right corner. Up to four separate Picture windows may be open simultaneously. When the Picture window is active, the View menu

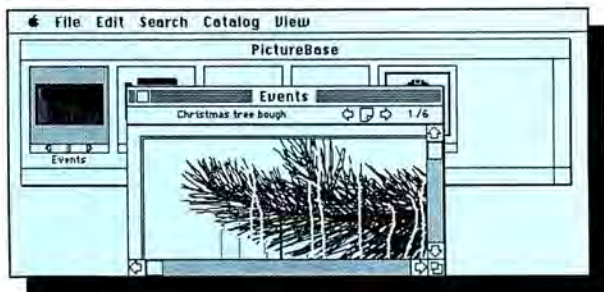




# THE GRAPHICS GALLERY



The **PictureBase** Catalog window, showing five sample libraries.



The "Events" file in the sample library on the **PictureBase** disk opened to a **Picture** window. Note the scroll bars and grow box, which let users see the entire image.

also becomes active, permitting you to change the size of the image within the window. Actual size as well as 50%, 25% and 12.5% of actual size are the available options.

To page through the images in the chosen library, click on the arrows at the top of the window below the title bar. Clicking on these arrows in conjunction with the **OPTION** key will move you directly to the end or the beginning of the library.

The normal **CUT**, **PASTE**, **CLEAR**, and **COPY** options are always available from the **Edit** menu. When library files are being displayed, these functions can be used on selected areas or entire pages. When working on *MacPaint* or *MacDraw* files, only the selection rectangle is operative. If the special **Auto-Copy** feature is selected, the result of an editing operation to the Clipboard (**COPY** or **CUT**) can also be automatically performed in a specified library file.

## ORDER OUT OF CHAOS

Databases are something of a double-edged sword. They impart organization and, at the same time, require it. Building a database necessitates understanding how the material to be compiled will be used, and also a sense of how it should be gathered together for maximum efficiency. Such organization is hard work; ask any file clerk.

Even with a computer as much fun to use as a Macintosh and with

software as competently written as *PictureBase*, organizing your clip-art will require some effort. As with any database, the worst part is collecting the data and entering it into the program. With *PictureBase* this process is not difficult, but the repetitive copying and pasting operations will take some time when hundreds of graphics are involved. Thus, some forethought about your needs will save you time and make your personal clip-art database that much more useful.

However, *PictureBase* does not require that your database be logically built before you begin. One of its best features is its adaptability. If your needs change, re-arranging the contents of your libraries into more particularized categories won't be difficult. And if you need to add or change keywords to make your image searches more fruitful, the program accepts those alterations effortlessly.

The documentation included with the *PictureBase* program is divided into three parts. It takes you through a short tutorial, explains the elements of the program, and includes a reference section. Everything you need to know in order to use the program is in the manual, although some important points (like the unorthodox action of the Catalog window close box) are buried inside or at the end of paragraphs.

Soon you'll be organizing at full speed. Importing images to the li-

braries also proceeds quite smoothly. One of the first libraries I created was a portrait gallery of pictures of presidents, politicians, and celebrities from various commercial clip-art disks.

The entire process can be completed within *PictureBase* by choosing *MacPaint* from the Catalog menu to view the contents of the clip-art disks. Opening the *MacPaint* documents to a *Picture* window allows you to see the image and perform the necessary copying operations. From the Clipboard, the image is then transferred to the library file by re-inserting the *PictureBase* data disk and pasting the image in.

Each step must be repeated for each image. In most cases, *MacPaint* documents from clip-art collections contain more than one image per page. Even when these images are related, each should be on a separate *PictureBase* library page, so it can be filed and catalogued individually.

## ONE WORD IS WORTH A THOUSAND IMAGES

Confucius notwithstanding, the organization of your clip-art wouldn't get very far without words. After a picture is transferred to a library file, the next step is to open the Info window. Available only from a *Picture* window, Info windows are essentially "database screens" where the title and keywords necessary for the *PictureBase* search routines to do their job, as well as, any other information you may wish to append to the stored image, may be entered or viewed. Info windows also display the number of the page from the library to which this information belongs, and a miniature of the corresponding image at the upper right corner — a nice touch.

Titles are the primary form of identification for each image, and so should be chosen carefully. This is especially true when commercial clip-art is being categorized. For example, chances are that almost every disk you purchase will have at least one image of an airplane. By the time you enter each and every one into your Aircraft library, you could have 20 or 30 pictures titled



# New

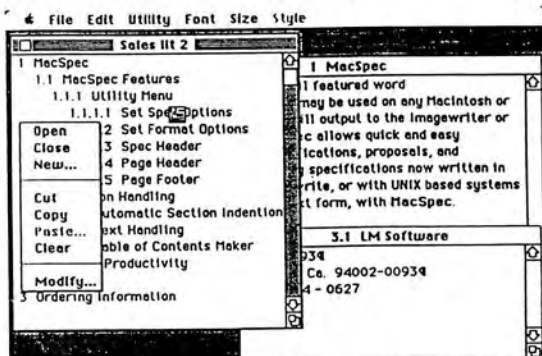
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# THE GRAPHICS GALLERY

"Plane." Use more particular names to avoid confusion.

For images of Presidents Kennedy and Reagan, which I transferred into the Portrait library from the *Click Art Personal Graphics* disk, I entered their respective names as Titles. For a second picture of the 35th President, a first initial was used instead of the given name to arrive at a second distinct Title.

Don't stint on keywords, which really aid in search and retrieval. Take the time to choose and enter them. While keywords can be used to differentiate between similar images, a more useful technique is to employ them as cross references. In this manner, your clip-art database can lead you through your collection suggesting, at each step, images that you might not have considered.

In the case of J.F.K., I used such descriptions as politician, president, and cross references like Massachusetts, Democrat, etc. In the case of Reagan, I also entered the cross reference "actor," a key which, if that search were made, would retrieve his picture along with those of Dustin Hoffman and Jimmy Cagney.

*PictureBase* also permits users to enter reference information into a text field on the Info window. Although this text is not employed as a sort field by the search routines, it can be very useful for retaining notes about the individual pictures.

Initially, I simply recorded the disk and document names of the clip-art source where the image originated. But, as you use images in your work, information such as that recording the date and location of use may be added to the file without disturbing the system. The same is true for keywords. As you use images, or as you enter others into your database, new reference keys may suggest themselves. Adding them is as easy as calling up the particular Info window and typing in the new words.

The number of library files that can be kept on-line is only limited by disk space. *PictureBase* limits the size of each image to 32,000 (32K) bytes. The amount of text in an Info page is also limited to this figure. In either case, these boundaries are

more than ample. Under normal use, you are unlikely to approach them. For example, when my Portrait library reached 13 images, each with a corresponding Info page, there was still 718K left on an 800K disk. This worked out to about 6.3K of disk space for each image. Assuming this to be a reasonable average, you can expect a capacity of about 125 pictures per 800K disk. Naturally, hard disk storage would permit the creation of a larger library, but if my Portrait library ever grows beyond 125 images, there is nothing to prevent it from extending over multiple disks.

## LOOKING FOR MR. GOODBITS

You'll see the value of all the cutting and pasting necessary to create a library as soon as you need to illustrate a document and begin searching for appropriate images. Finding images is the true forte of *PictureBase*.

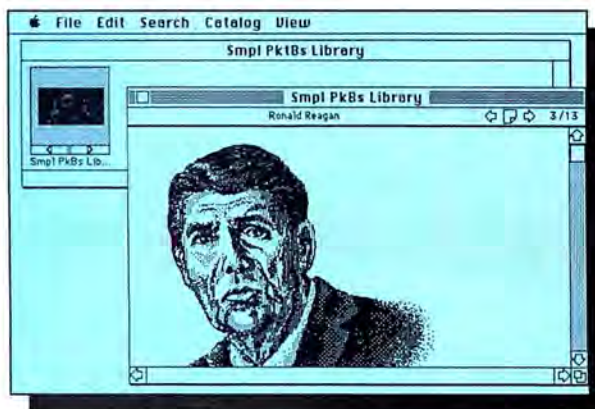
FIND, the only command available

from the Search menu, can only be invoked from the Catalog window. Choosing FIND pops up a dialog box, where your search options are arrayed. Searches may be defined by title, keywords, or both, and be conducted in all libraries or only on the currently selected file.

*PictureBase* searches are literal, meaning that only the exact character string (including spaces) will be matched. Titles are reviewed character by character; keywords, word by word. The program will also attempt to match your character string internally with each key. So, an image with the key "household" will be returned on a search looking for "house." However, the reverse, searching on the "household" key, will not yield images identified by the key "house."

Searches can be resumed or discontinued by clicking on the NEXT or CANCEL buttons. CANCEL leaves the selected image in a Picture window ready for editing, while NEXT contin-

The Portraits library opened to a Picture window. The Ronald Reagan picture was taken from *ClickArt Personal Graphics*.



An Info window. Note the number of keywords the program can use to locate the image.







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# THE GRAPHICS GALLERY



Picture of Dustin Hoffman from *ClickArt Personal Graphics* as returned by a *PictureBase* search using the "actor" key.

ues to bring appropriate images to the fore.

After a while, looking through *PictureBase* libraries becomes an exercise in suggestion. Creative cross referencing will bring suitable but forgotten images to the screen and to mind. And, because *PictureBase* can search all your libraries, you are less likely to fall into the pattern of using the same picture over and over.

## PICTUREBASE AS A DESK ACCESSORY

Once your clip-art images are organized into *PictureBase* libraries, employing them with other programs is quite convenient with the *PB/Retriever*. This utility, an integral part of the *PictureBase* system, gives you the ability of employing *PictureBase* as a desk accessory from within other applications. This is important because images organized in library files cannot be accessed as standard *MacPaint* documents by other programs. To use them, you must retrieve them using the *PictureBase* program or the *PB/Retriever* DA.

Most *PictureBase* functions are available from within the target application when you choose the *PB/Retriever* DA. The icons representing the library files on the selected disk are displayed on the left of the screen, and using the control buttons on the right, you can open any file or find any image in those files. Once a *Picture* window with the desired image is opened, you can copy the graphic for transfer into your working application.

*PB/Retriever* limits users to working with library files. The capability

to look at standard *MacPaint* documents is missing. And the cut, paste and clear functions are disabled within the desk accessory.

## RELIEF IS JUST AN ICON AWAY

Included on the *PictureBase* disk is a copy of *Switcher*, and a preconfigured *Switcher* document, allowing you to process words, call up images from library files, adapt them, and integrate them into a document — going from one application to the next, transferring information, and returning to the original program without having to quit any to start the other.

A double-click on the *PB/Switcher* document automatically launches *Switcher* and installs *PictureBase*. To install other programs, simply choose *INSTALL* from the *Switcher* menu and choose the applications from the dialog box showing the options available on your disk. You may also install *PictureBase* in *Switcher* without using *PB/Switcher* startup document. In that case, the only stipulation is that the *ALWAYS CONVERT CLIPBOARD* selection should be set in the Options menu.

*PictureBase* runs normally when used with *Switcher*. The major difference is speed, not in the execution of the program but in the time saved changing applications.

## LATE-BREAKING DEVELOPMENTS

During the preparation of this article, a new version of *PictureBase* was released. Version 1.1 has some very useful enhancements over the original version 1.0. Program execution has been speeded-up, HFS sup-

port has been improved for both the program and the *PB/Retriever*, the *Catalog* window may now be double-clicked (on the title bar) to full screen size, and copying full *MacDraw* images is now possible.

However, the enhancement that will probably be most important to most users is the inclusion of a *COPY-TO-PAINT* option. With this selection, users can now restore an image from the *PictureBase* library file format to the standard *MacPaint* format directly from the program. (With version 1.0, the only way to restore an image to its original format was to transfer it through the Clipboard into a *MacPaint* document.) This feature can be used to circumvent the *MacPaint* restriction of pasting only what may be viewed in its window, and may also be employed to transfer *MacDraw* graphics (in PICT format) to *MacPaint*.

## PICTURES AT AN EXHIBITION

In practice, creating library files isn't that much trouble with *PictureBase*. Describing the operation of the program is several times more difficult than actually using it. And the end result is well worth the effort. With *PictureBase*, eclectic collections of images can be transformed into well-organized picture galleries. □

Carlos Domingo Martinez is a freelance writer from Queens, NY.

## PICTUREBASE

Overall Rating	■ ■ ■ ■ ■
Follows Mac Interface	■ ■ ■ ■ ■
On-Screen Help	None
Performance	■ ■ ■ ■ □
Support	■ ■ ■ ■ □
Consumer Value	■ ■ ■ ■ ■

**Comments:** An easy to use database for graphics. Create libraries of *MacPaint* or *MacDraw* images organized by category. Can be moved to hard disk. **Best Feature:** Simplicity of operation. **Worst Feature:** Adequate, but skimpy, manual. **List Price:** \$69.95. 512K+ required, external drive recommended. Versions reviewed: 1.0 and 1.1. Published by Symmetry Corp., 761 East University Dr. #3, Mesa, AZ 85203. (800) 624-2485, (602) 844-2199.



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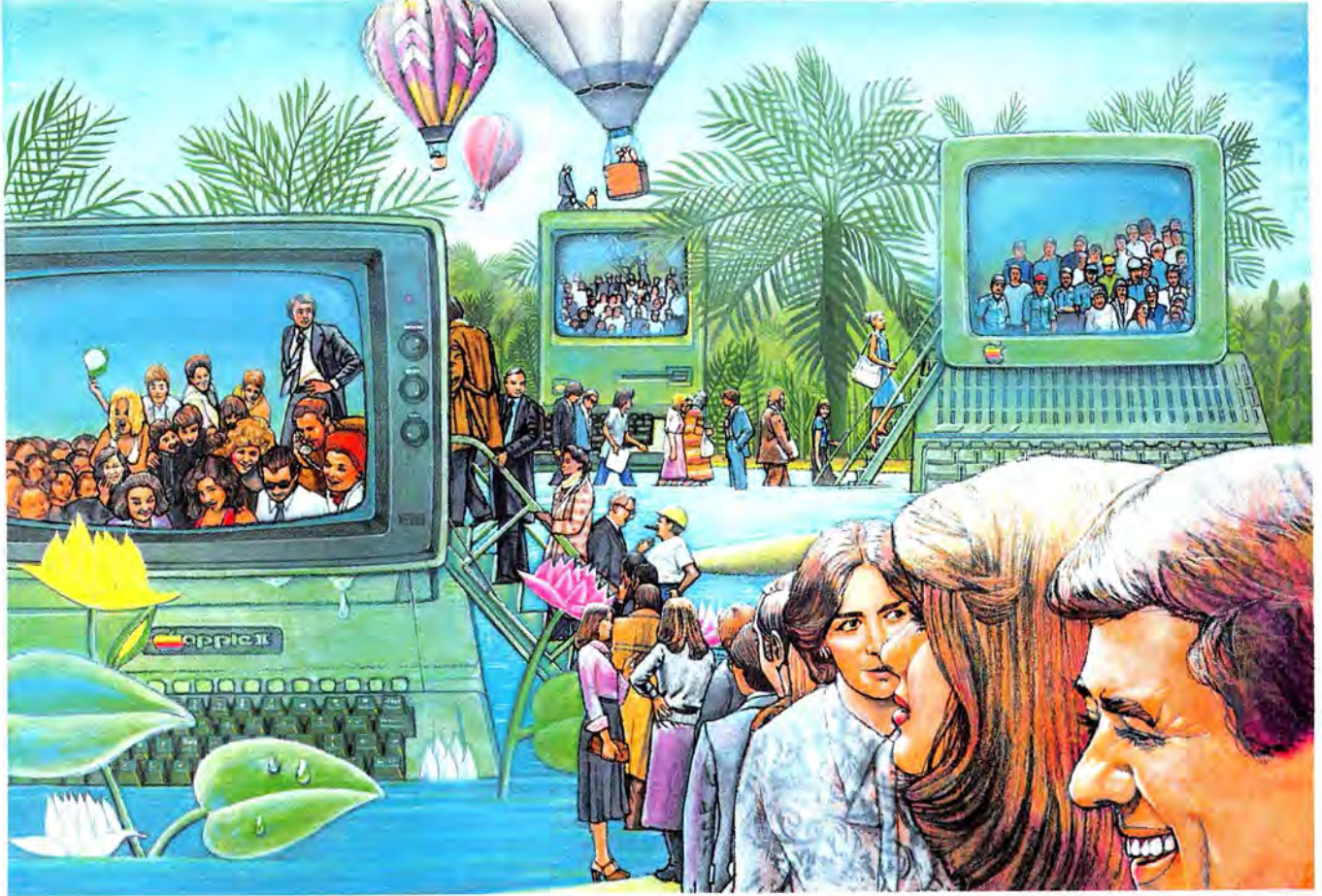
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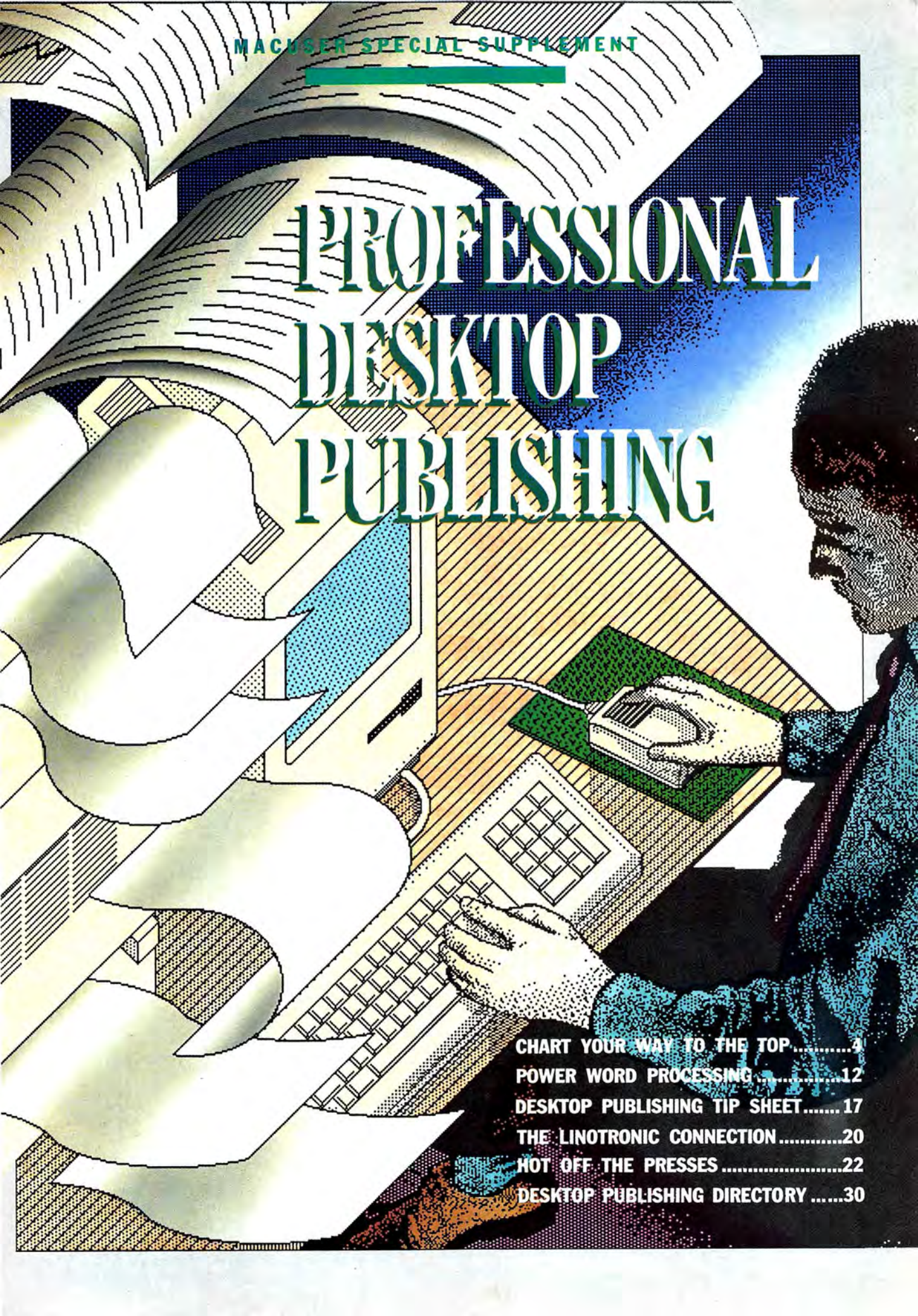
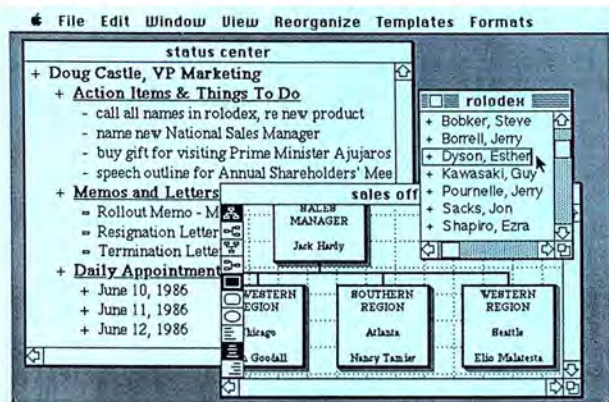


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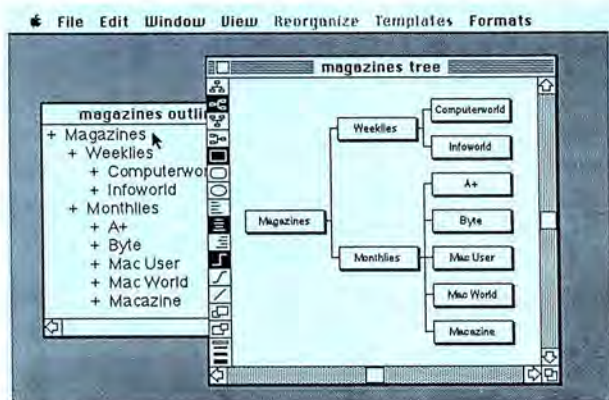
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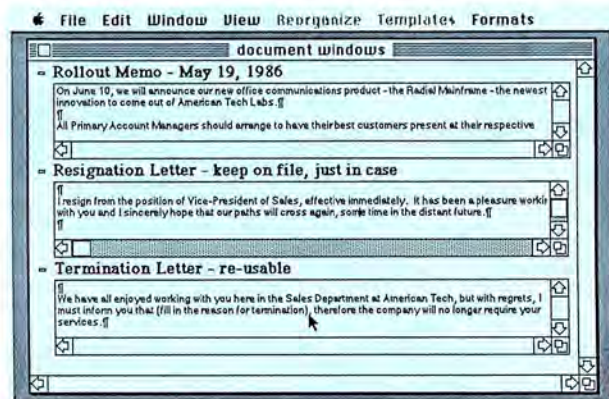


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# CHART YOUR WAY

by  
*Robert R.  
Wiggins*







# TO THE TOP

**Charts are the  
heart of business  
presentations. Here's  
how pros do them.**

IF THERE'S ONE THING MANAGEMENT likes even more than the word "productivity," it's business graphics. Charts and graphs allow busy executives to figure out how their company or department is doing at a glance, without having to add up figures, or even be able to read. There are two kinds of business graphics, presentation and analytical, but management is typically only interested in presentation graphics. Bar charts and pie charts are the stuff boardroom presentations are made of. Scatter charts and curve-fitting are best left to the lower echelons for doing the data analysis needed to support the conclusions reached in the bar and pie charts.

## GETTING STARTED

If you have a Macintosh at the office, odds are you already have a dynamite piece of software for preparing business graphs: *Excel* (and you thought it was a spreadsheet package). *Excel* is an excellent choice for a number of reasons. First, it is a first-rate graphics package offering more options for business graphs than any other currently on the market. Second, it is easy to use, yet

powerful and flexible. Third, the data you want to chart is very likely to be available in spreadsheet format, which eliminates data entry. Fourth, you probably already own it, making it a cheap alternative.

Creating a graph with *Excel* is simple. Use the mouse to select the data on an *Excel* spreadsheet that you want to graph, then select NEW under the File menu. When asked, click on CHART and *Excel* draws the graph for you, automatically using the first row and column selected as labels, and automatically using the chart format you have defined as your preference.

*Excel* has a large selection of chart types under its Gallery menu, so experiment until you find the one that shows off the data best. For management presentations, most often this will be one of the variations of the bar, column or pie chart. Bosses understand column charts and pie charts.

*Excel* can also overlay charts and allow you to put a second axis on the right side. This lets you compare apples and oranges at the same time on the same chart. The two graphs can be different types. For example, you could plot monthly production of widgets as a column chart and overlay monthly profits as a line chart, demonstrating the relationship (if any) between production and profits.



# CHART YOUR WAY TO THE TOP

On the minus side, *Excel* has so many options and tries so hard to anticipate what you want that it can sometimes be difficult to get a graph exactly the way you want it. For example, *Excel* assumes you want more values than categories, and so will chart your data differently depending on whether there are more rows or columns selected on the spreadsheet (getting around this involves using the "Paste Special" command on the Edit menu). So read the manual. This isn't standard operating procedure for most Macintosh users, but in this case it can definitely be rewarding. The manual gives some good examples, so work from them and experiment. *Excel* takes some getting used to, particularly if you are used to another package such as *Chart*.

The trick to successful charting with *Excel* is learning how the menus work. In general, the menu items work on whatever is selected at the time. Click on the Value axis (the vertical one) and the Format menu works on that axis. You can change the font, move or eliminate the tick marks, or change the scale. Click on the legend (after adding one from

the Chart menu) and the fonts used and position of the legend can be altered using the Format menu. Choose SELECT CHART from the Chart menu and you can globally change fonts and sizes, or add a border shadow. There are many different options, and what each menu item means varies according to what is selected on the screen.

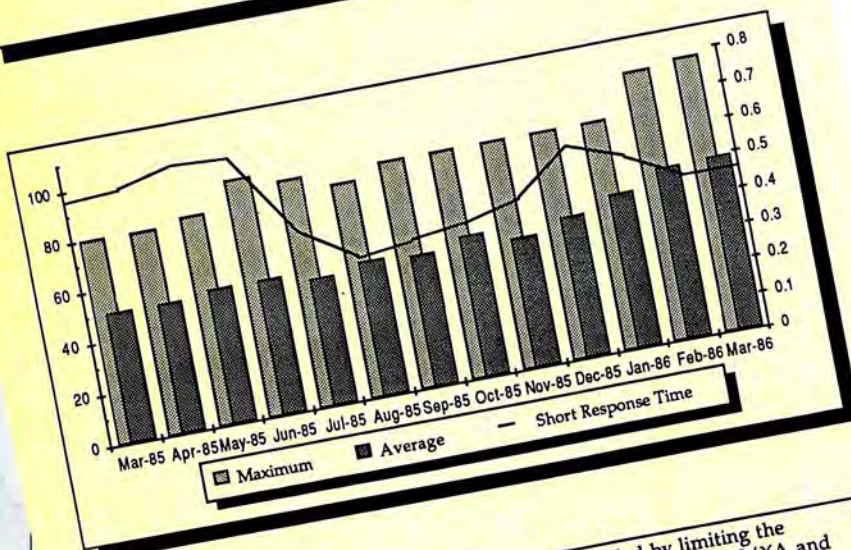
## A MORE bullet chart.

Below is a full page final chart. The center portion was created in *Excel*. It was moved to *MacDraw*, where it was touched up and text added. This is a LaserWriter print of a *MacDraw* document.

## Effective Presentations

- Keep it simple
- Avoid too many fonts
- Turn disadvantages into advantages
- Never photocopy color charts

### Prime Time TSO Usage First Quarter 1986



Growth in TSO usage during 1985 was artificially curtailed by limiting the number of concurrent logged-on users. With the conversion to MVS/XA and the installation of the new processor, this limit is has now been increased with a subsequent increase in the average number of logged-on users. Changes were made to the MVS Installation Performance Specifications during January to halt the upward trend in TSO response times, and in February changes were made to the I/O subsystem and to the system paging configuration to further enhance TSO response and at the same time position the system to allow for further growth in TSO usage without a corresponding increase in response times.

## FLIP THE CARD, PLEASE

Business presentations involving graphs often include bullet charts. Until recently, you had to make do with *MacWrite* or *MacDraw* and roll your own, spending time getting the formatting right and aligning the text. But that was before Living Videotext brought out *MORE*. Perhaps you've been using *ThinkTank* for putting presentation outlines together. Now you can use *MORE*, and when you've laid out the presentation you can use it to automatically create your bullet charts, then intersperse your charts and graphs. *MORE* can also make tree charts, so if your presentation includes any kind of organization chart, you can use *MORE* to create it for you also.

## BUT WHAT ABOUT COLOR?

So you take your beautiful charts to the boss, who looks at them and says, "Nice job. But what about color?" Don't stammer. Say "No problem, boss." And run out and buy *Cricket Graph* or *ColorChart*.

*Cricket Graph* isn't just a color chart printer. It's a full-featured graphics package that offers a range of graph types, and it provides a good alternative to *Excel*. For analytical graphics, *Cricket Graph* is superior to *Excel*, offering curve-fitting and regression analysis and several statistical chart types. *Cricket Graph* also



has some features that *Excel* lacks, such as adding depth to pie and column charts, and it's somewhat easier to use. But it lacks some of the "fine-tuning" options that *Excel* offers, such as setting the distance between columns and the degree of overlap of columns.

Creating a graph with *Cricket Graph* is almost as easy as with *Excel*. Getting the data in is the only part that's harder, but *Cricket Graph* has many ways to import data so you shouldn't have to type it all in again. The simplest way is copying the data from another application to the Clipboard, then pasting it into *Cricket Graph*. Using *Switcher* can make this very quick (in fact, there is an appen-

dix to the manual describing how to use *Switcher*). *Cricket Graph* can read *StatWorks* files directly, and will also read text files and SYLK files (the kind that can be produced by most spreadsheets and several databases), but doing so is not very straightforward and requires quitting the program. There is an appendix to the manual that describes in detail how to import and export data from and to other applications. Once the data is in place, simply select the type of graph from the Graph menu and *Cricket Graph* asks which column contains the categories and which columns you want to plot against the category column. Be aware that the data must be in columns, so if your

data is in a spreadsheet in rows, you may want to stick with *Excel*.

*Cricket Graph* will also do overlay charts, but with only one vertical axis, so you can only compare apples with apples. Our example charts show the difference in "look" between *Cricket Graph* and *Excel*, and the extra information that *Excel* can impart with the second vertical axis for the overlay chart.

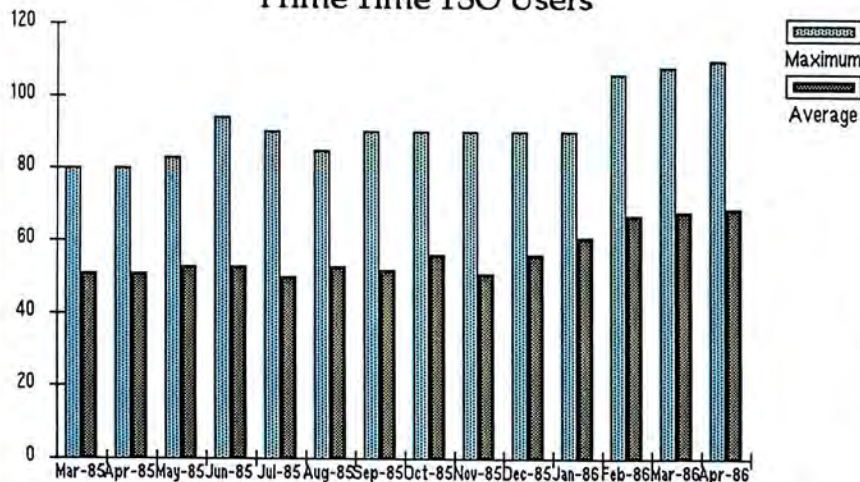
The trick to using *Cricket Graph* is discovering all the things you can do, since many times they don't appear in a menu. Double-click on the vertical axis and you get a dialog box in which you can change the scale or placement of the axis. Double-click on the axis labels and you get a dialog box in which you can select the font, style, orientation and notation of the tick mark labels. As with *Excel*, reading the manual is not a bad idea. It is clearly written and offers some excellent tips on graphing in general, using *MacDraw* to put on finishing touches, and other useful information.

*Cricket Graph* also has a special kind of chart, a text chart. This can be used to make cover pages, or bullet charts, or tree charts or whatever you want. There is a palette of tools available for drawing ovals, rectangles, placing text, and so forth. Why not use *MORE*? Because *Cricket Graph* can draw these freeform charts (called text charts) in color. Each line, oval, rectangle and text item can have its color defined. True, it's not as easy as using *MORE*, and the value of color text charts is not as clear cut as the value of color graphs, but the capability exists.

#### COLORFUL ALTERNATIVES

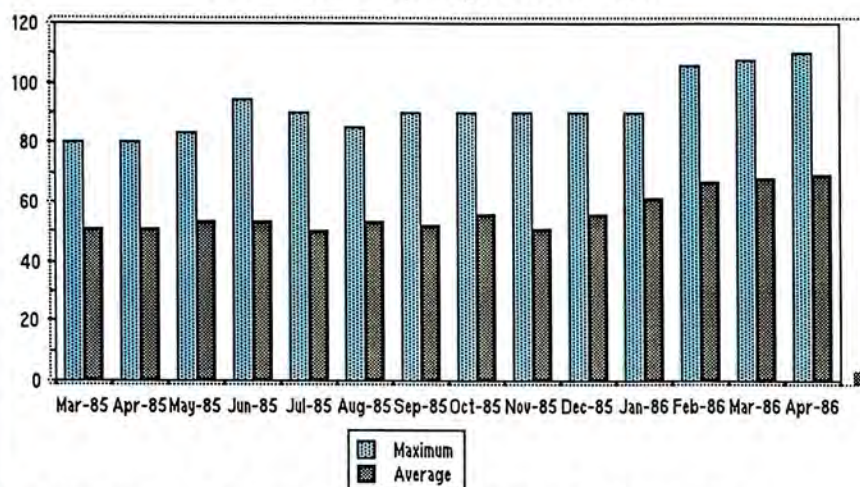
*ColorChart* is another possibility for business charting, but it runs a distant third to *Excel* and *Cricket Graph* in the flexibility category, although it is fairly easy to use, and is the only one of the three that will fill a whole page with a single chart. Like *Cricket Graph*, it has a column-oriented approach and provides a mini-spreadsheet for data entry. But the lack of flexibility, such as the inability to place text or draw reference lines, makes *ColorChart* a less desirable choice than *Excel* or *Cricket*

Prime Time TSO Users



The same chart as in the *Excel/MacDraw* example as printed by *ColorChart*.

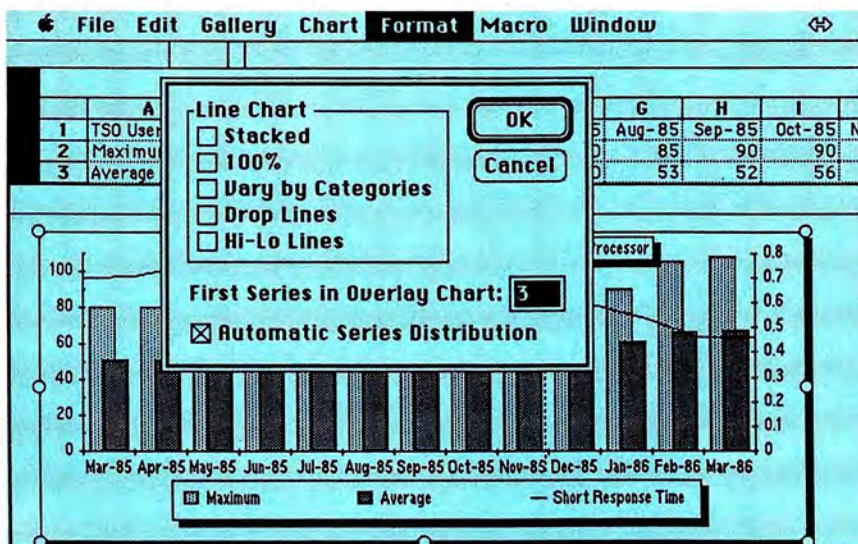
TSO Users During Prime Time



The same chart as in the *Excel/MacDraw* example as printed by *Cricket Graph*.



# CHART YOUR WAY TO THE TOP



Creating a chart in Excel.

Graph. If you need some of the capabilities *ColorChart* offers, you can copy the charts to *MacDraw* to get around some of the limitations and to "pretty" the charts up, although they can no longer be printed in color.

## GETTING THE MOST MILEAGE

So which one is best? For all-around utility, flexibility, readability, ease of use and good looking charts, *Excel* is the clear winner. But if you need color output, or do more scientific graphing and need polar charts

or quality control charts, *Cricket Graph* would get the nod. If you must be able to print full page charts, either in color or black and white, and are willing to give up a lot of flexibility, then you may find *ColorChart* useful.

Once you've decided which package to use, and whether or not you'll need color, you're ready to embark on a charting expedition. Here are some hints and tips for successful business graphing (the *Cricket Graph* manual has an appendix with additional tips for successful charting).

Keep your charts simple. The reason managers like charts in the first place is that they don't have to think. They do have to think if you clutter the chart or make it hard to read. Avoid text on the chart.

Stick to one or two fonts and styles. Different sizes are all right, but too many fonts look messy. Try Helvetica Narrow for the axis tick-mark labels. It makes the chart look less busy.

Turn disadvantages into advantages. *Excel* won't cover a page with a chart. So copy the chart to *MacDraw*, where you can put a more pronounced title on the chart. Use the space at the bottom for explanatory comments. Have the first charts in your company that are completely standalone and don't need paging back and forth between a report and a graph.

Don't embed charts in *MacWrite* documents, especially if you're using a LaserWriter. Not only is there a loss of print quality, but you lose the very reason management likes charts. Managers don't want to read the text. They want to read the management overview and skip to the charts, so don't force them to read the text.

If you go the color route, you'll have to print a copy of the chart for each recipient. Never ever send out photocopies of a color chart. Color does not photocopy well. If you have a very large distribution list, make black and white copies of the chart on the LaserWriter and use the color copies for the people that really matter.

Robert R. Wiggins is a New York-based consultant and author.

## CHART COMPARISONS

	Excel	Cricket Graph	ColorChart
Area	Yes	Yes	No
Bar	Yes	Yes	No
Column	Yes	Yes	Yes
Line	Yes	Yes	Yes
Pie	Yes	Yes	Yes
Scatter	Yes	Yes	Yes
Combination	Yes	Yes	Yes
Polar	No	Yes	No
QC	No	Yes	No
Stock Market	No	No	Yes
Overlay?	Yes	Yes	Yes
Fonts	Any part	Any part	Any part
Text	Anywhere	Anywhere	Titles only
Patterns	15	Automatic	38
Shadow	Yes	Yes	No
Add lines	Yes	Yes	No

## B&W PRINTERS

ImageWriter I /15"/II	Yes	Yes	Yes
LaserWriter	Yes	Yes	Yes

## COLOR PRINTERS

ImageWriter II	No	Yes	Yes
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## COLOR PLOTTERS

HP7475A	No	Yes	Yes
HP7470A	No	Yes	No
Apple Color	No	Yes	Yes



# Presenting Two Drives...

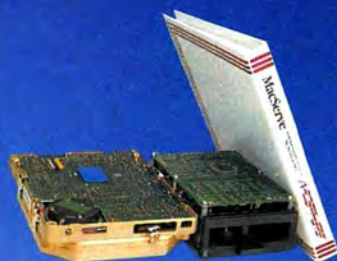
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We based the MagNet 40/40 on the NEC hard drive and the 3M tape 40. Two giants in the industry. We figured it just made sense to work with the best. We added MacServe from Infosphere to give you multiuser, multitasking along with more features than ad space. The result is your hard driving with confidence.

## **The Power/Value Package.**

The MagNet 30X with 30 Meg of storage and MacServe software is the perfect choice for users who feel their storage needs will grow. (That about covers all of us, right?) Priced only slightly higher than other 20 Meg hard drives, the 30X gives you 50% more storage.

We designed the 30X with the Seagate ST225 "engine" in mind. Seagate has over 3 million hard drives in use today and was selected by Apple as their hard drive supplier. To complete the package we have included MacServe from Infosphere, the Apple recommended networking solution. We figured why argue with success...



**The MagNet 30X, 30 Megabytes  
of Storage for the Value Minded**



**Seagate and MacServe, Apple™'s Choice**

The Macintosh Storage Specialists.

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# ...From a Hard

Mirror Technologies. The



Magnum Tape 20

At Mirror Technologies, we've become Macintosh experts by designing storage systems and devices only for the Macintosh. The result is a line of products advanced in concept, quality and reliability. You chose the Mac for its potential as well as its performance. By choosing Mirror Technologies products, you'll finally realize that potential *and* dramatically increase your performance.

## The Tape Drive Worth Waiting For.

The Magnum Tape 20 will backup and restore data on practically any Mac-compatible hard disk. It's quiet because there's no need for a cooling fan. It's compact because we designed it to fit on your desktop with the smallest possible footprint. And it's accurate because it simply has to be. Our software update policy allows you to keep up with our latest utilities. When we improve our Magnum Tape 20, you can improve yours . . . Free.

## How'd We Put 20 Meg Into Something This Small?

It wasn't easy. But when you use our MagNet 20X™ external 20 Meg hard drive, you'll agree it was worth the effort. We packed speed, portability and great software into the most powerful single or multiuser hard drive around. Plug it straight into your Mac Plus SCSI port. Or get SCSI "Plus" performance from your 512K Mac with our FastPort option. The MagNet 20X bundled with MacServe™ features print spooling, disk cache, volume partitioning, full or incremental file backup and true multiuser/multitasking. There's no question why we did it. The only question is how.



MagNet 20 External

## The Money Saving 800K Drive

When we first introduced our Magnum 800™, Mac owners snapped it up. That's understandable. After all, it was not only the first 800K drive for the Mac, it was also very affordable. The Magnum 800 is fully compatible with your 128K, 512K or Mac Plus. It will recognize 400 or 800K formatted disks and write to them accordingly. And it's priced far less than the comparable Apple drive. Now with our new slim line cabinet!



Magnum 800

## One Year Product Warranty

We warranty our drives for one full year. That kind of buyer protection is usually available only as an extended warranty, costing as much as \$300. It's our standard warranty and it doesn't cost you a thing. Naturally, we wouldn't do this if we didn't have complete confidence in everything we make. Well, we have . . . so we do.



# Drivin' Company

## Macintosh Storage Specialists

### Our MagNet 20. The Full Inside Story.

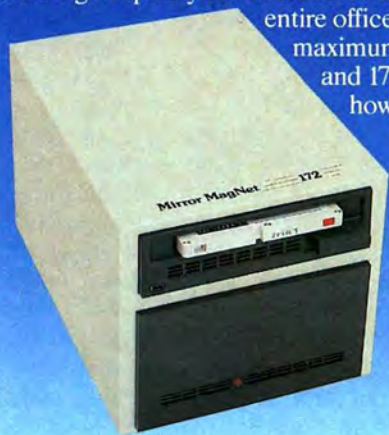
The MagNet 20 internal offers you the capability to build your Mac into a powerhouse computer by internally mounting our drive. Imagine all the speed, portability and convenience of an internally mounted hard drive for considerably less than you would expect to pay the competition. The MagNet 20 also comes bundled with MacServe to give you the power to grow into. **Now every MagNet 20 comes with our WindChill™ option to make the MagNet the coolest running, most reliable internal Mac drive available.**



MagNet 20 Internal

### Hungry For Power?

The MagNet 85 Meg and 172 Meg hard drives combine blistering speed and enormous capacity with tape backup and multiuser/multitasking software to make your Macintosh office an incredibly productive reality. Using voice coil technology, these high capacity drives are three times faster than standard hard drives. Now an entire office of Macs can share data and peripherals for maximum performance and efficiency. The MagNet 85 and 172 can satisfy your hunger for power, no matter how big your appetite.



MagNet 85/172

### Great Hard Drives Deserve Great Software.

And so do their users. That's why all our hard drive products come with MacServe™ from InfoSphere™ at no extra cost. MacServe includes some great single user features but also allows multiuser access to your Mac. With our MagNet drives and their MacServe software, you'll have the kind of power and performance you and your Mac deserve.

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# POWER WORD PROCESSING

BY SHARON ZARDETTO AKER

SHIFT-COMMA and COMMAND-SHIFT-PERIOD will make selected text a size smaller or larger (font size 10 is ignored.)

If you don't want to cycle through the sizes to get where you want to go, you can make a size change from the keyboard by typing COMMAND-D, the size you want, and then pressing RETURN.

## Character

Plain Text	⌘-Shift	Space
Bold	⌘-Shift	B
<i>Italic</i>	⌘-Shift	I
<u>Underline</u>	⌘-Shift	U
<u>Outline</u>	⌘-Shift	O
<b>Shadow</b>	⌘-Shift	D
Small Caps	⌘-Shift	K
Superscript	⌘-Shift	=
Subscript	⌘-Shift	-

**Font** Font changes can also be made directly from the keyboard. Hold down COMMAND-SHIFT-E and press the number of the font you want: 0 is Chicago, 1 is New York, 2 is Geneva, and 3 is Monaco. The fonts called by 4 through 9 vary, depending on which fonts are installed in the *System* file.

**Copying formats** To copy character formats that you have already made someplace in your document, select the text to be formatted and click in the formatted text while holding down COMMAND-OPTION.

## PARAGRAPH FORMATS

*Word* lets you do anything you can think of to paragraphs, as well as a few things that probably never occurred to you. Obvious formatting options are available from the Ruler and the Paragraph menus; you

## Paragraph

Normal	⌘-Shift	P
Left	⌘-Shift	L
Centered	⌘-Shift	C
Right	⌘-Shift	R
Justified	⌘-Shift	J
Single Space		
Double Space		
Open Space	⌘-Shift	O

**Don't let word processing become the weak link in your operations.**

"POWER" IS THE BUZZWORD these days. You may be sick of hearing it (I am), but the concept is important. Using powerful tools efficiently is the essence of professional work. That's particularly true with regard to professional desktop publishing. To achieve maximum high-quality output for the least effort, each step must be optimized. It's not enough to become expert at your page layout program and your graphics programs. A lot of desktop publishing involves words — writing copy, entering copy, manipulating copy. You should master your word processor to the same degree you've mastered your other programs to be truly efficient — a power word processor.

Power word processing can be summed up in a single word — speed. Speed in word processing comes from having a lot of program features, and a lot of different ways to get at them. (It also comes from using more than 20 percent of your fingers on the keyboard, but you know about that already.) What program should you use for maximum power word processing? In a word — *Word*.

Speed is most important in the things that you do most often, and those are the items for which Microsoft's *Word* provides so many options. Selecting portions of text,

moving around in your document, and moving parts of your document around, are the basics of editing (a round-up of *Word's* capabilities in these areas are covered in sidebars to this article). Formatting your document is the other basic of word processing, and using *Word's* levels of formatting options will put you on the path to power.

When you're up to speed with *Word* itself, get an additional spurt by adding *Tempo* to your Apple menu — you can't be a power user if you don't use macros.

## CHARACTER FORMATS

The first formatting level in *Word* is for characters.

**Style** The obvious way to change the style of your text is to make the appropriate selection from the Character menu. The faster way (especially for on-the-fly changes like putting an italicized word in the middle of a sentence you're typing) is to use the keyboard equivalents for any of the style changes. The Character menu is pretty bare of command keys, but that doesn't mean they're not available. COMMAND-SHIFT and the proper letter will affect the style of any selected text. COMMAND-SHIFT B, for instance, gets you Bold.

Multiple character formats — underlined, italic and small caps, for instance — are more quickly done from the character Format window, since you can click them all without having to make separate menu selections. And, of course, if you're changing font and/or size at the same time, the format window is the most direct way to do it.

**Size** Size changes aren't available as direct menu selections, but you can change sizes without opening the Format window. COMMAND-



can also change paragraphs with keyboard commands and from the Format window.

**From the keyboard** Justification options have keyboard alternatives, as does the NORMAL command (single space, no indentation, full-width margins); of the spacing commands, only OPEN-SPACE has a keyboard equivalent.

## Hidden Options

Nest	⌘-Shift	N
Un-Nest	⌘-Shift	M
First line indent	⌘-Shift	F
Hanging indent	⌘-Shift	T

**From the Format window** Everything you can do from the ruler or the Paragraph menu can also be done in the Format window. In addition, you can “glue” lines or paragraphs together so they won’t be split across pages, or add an empty line after every paragraph. If you are only entering information into the edit fields of the window, the operation can be done entirely from the keyboard — COMMAND-M opens the window, and TAB moves you around in the fields.

**Hidden shortcuts** There are four paragraph formatting commands that you won’t find in the menu or in the Format window. Although you can get the same effect with ruler adjustments or window entries, it’s faster to use the keyboard shortcuts. With COMMAND-SHIFT held down, use: N for a nested paragraph (the left margin and indent markers move in a half-inch); M to unnest a paragraph; F to set the first line indent to a half-inch; T to create a hanging indent.

**Copying format** To copy formats from one paragraph to another, click in the paragraph you want to format, and click at the already formatted paragraph from the selection bar.

## STORING FORMATS

The Glossary is a *Word* feature packed with hidden power. You can, of course, store words and phrases in it — almost any amount of text, as a matter of fact, depending on the memory and disk space available.

You can even store pictures in it. One of the best things about the Glossary, however, is that you can store all sorts of formats in it.

**Character formats** There’s no benefit to storing simple character formats, but when you have multiple formats that you use often (24-point bold underlined New York, for instance) it’s faster to retrieve the combination from the Glossary than to re-create it for each new document. Format a word, or even a single letter, the way you want it. Copy it, pull out the Glossary, type a name — like headline — and paste. The copied letter appears in Chicago font in the Glossary window, but the formats are stored.

To retrieve the character formats, type the name and hit COMMAND-BACKSPACE; the letter you originally formatted appears. BACKSPACE over it and type your text.

**Paragraph formats** First format a paragraph (or line) of text the way

you want it: margins, indents, tabs and so on. Press COMMAND-Y so all the paragraph markers will show; the paragraph formats are actually stored in these little markers. Select only the paragraph marker at the end of the formatted paragraph by dragging across it or double-clicking on it. COPY the marker and store it in the Glossary under an appropriate name. Nothing shows in the Glossary window except the name, but the formats are there nonetheless.

To use the stored “template,” type its name and press COMMAND-BACKSPACE. If you do this at the end of a paragraph, that paragraph will be formatted to match the template. You’ll probably want to set the format before you type a paragraph so you can see the format as you type. Retrieve the template as usual, then use the up cursor control to get back to the formatted area — the paragraph marker that is pasted into your document when you retrieve the





# POWER WORD PROCESSING

template moves the cursor down to the next paragraph.

**Division formats** To store the information that is entered in the Division Layout dialog box (pagination, footnote placement, columns and so on), create a division marker by pressing COMMAND-ENTER. Select the double line, open the Layout box, and set your parameters. Close the Layout window, cut the division marker, and paste it into the Glossary. (Only a box will appear in the Glossary window.) Retrieve the division format in the usual way, putting it at the end of the section you want formatted.

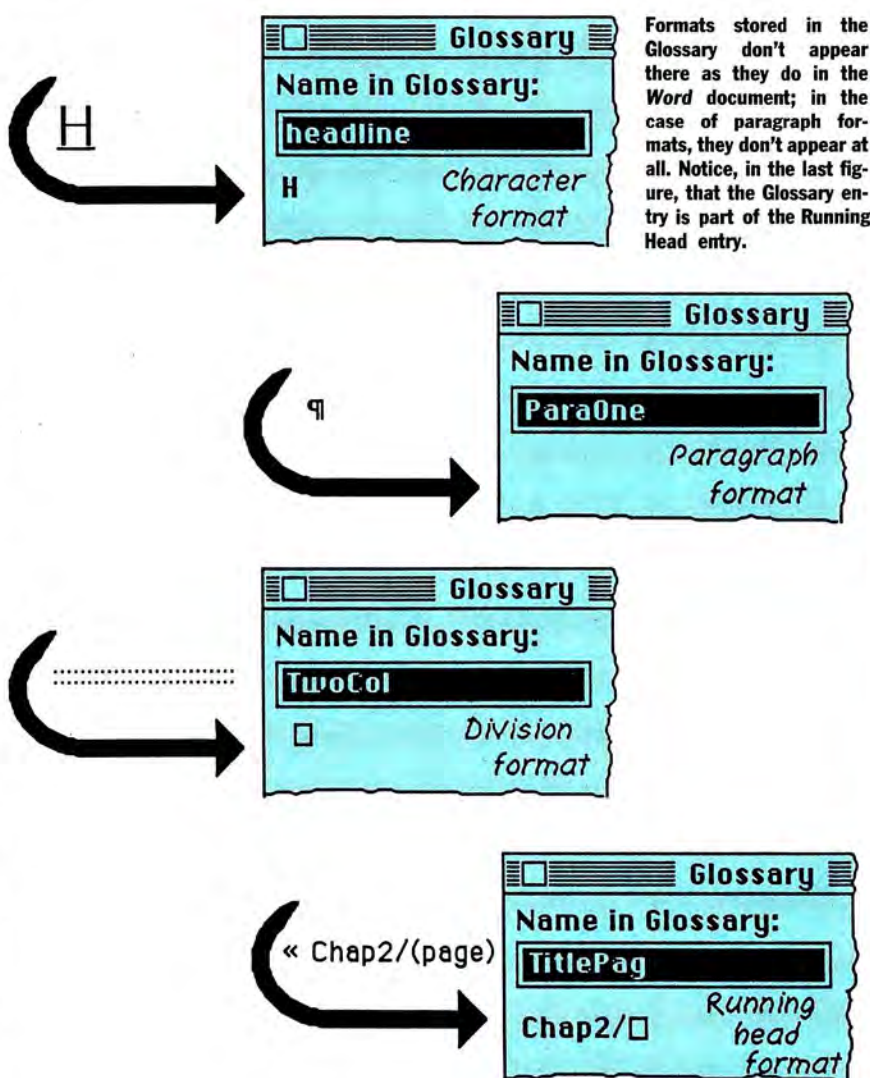
**Running heads** You can store headers and footers in the glossary — not just the text that you want in them, but the justification, character formatting, and the running head marker itself.

Create a running head and select it from the selection bar (the marker won't be highlighted, but it is selected), copy or cut the information and paste it in the Glossary. When you retrieve it, the running head is re-created.

**Words** If the spelling of a word can be considered its format, then it's another type of formatting that can be stored in the Glossary. Store your misspellings for quick corrections. Do you type "teh" a lot? Paste the word "the" into the Glossary under the name "teh." (And maybe another copy under the name "hte.") When you type the wrong spelling, hit COMMAND-BACKSPACE, and it's replaced with the correct one.

## USING TEMPO

*Tempo* is good for a lot of things in *Word*, both minor and major. Any menu command without a keyboard equivalent (Save As, Glossary, Running Head) can be given one with *Tempo*. *Tempo*'s command keys override an application's commands, so you can reconfigure the command key structure any way you want. When *Tempo* takes over one of *Word*'s commands, *Word* "shifts" its command if the key is available. I use a *Tempo* COMMAND-A for Save As, replacing the built-in AGAIN command; COMMAND-SHIFT-A, however, automatically now performs the



Formats stored in the Glossary don't appear there as they do in the *Word* document; in the case of paragraph formats, they don't appear at all. Notice, in the last figure, that the Glossary entry is part of the Running Head entry.

## SELECTION OPTIONS

Besides the usual click, double-click, and shift-click methods for selecting text, *Word* offers fast keyboard and mouse-and-keyboard selection options.

One of the handiest, and simplest, is the SHIFT-BACKSPACE combination that selects the word to the left of the cursor — the one you just typed. It's great for typing over a short misspelled word, or to select it for style formatting. OPTION-BACKSPACE selects and deletes the word to the left of the cursor.

Within the document window, you can select a sentence by a command-click anywhere within it.

The selection bar — the narrow margin at the left of the document window — lets you click and select the line you're pointing to, or double-click and select the paragraph. A command-click in the selection bar selects the entire document.

AGAIN function. The same "shift" wouldn't be available if I created a COMMAND-N macro: the NEW command would not be invoked by COMMAND-SHIFT-N because that combination is already taken by the NEST command.

*Tempo* is also good for storing multiple menu pull-downs, or dialog box information — try COMMAND-1 for high quality printing, COMMAND-2 for standard quality and COMMAND-3 for draft. You can store character, paragraph, and division layouts on a single key — and throw in the Page Setup, too. *Tempo* recordings are also convenient for such mouse-only operations as closing the footnote window.

A few not-too-obvious *Word* macros you can create:

- Current window: If you scroll



your document with cursor keys (as explained in the sidebar "Cursor Control"), and find the spot you want, you can't get the cursor to the current window without using the mouse. Record a macro that is simply a single click in the top left corner of the window; with this macro (I use COMMAND-PERIOD on the keypad), you can bring the cursor to the current window without leaving the keyboard.

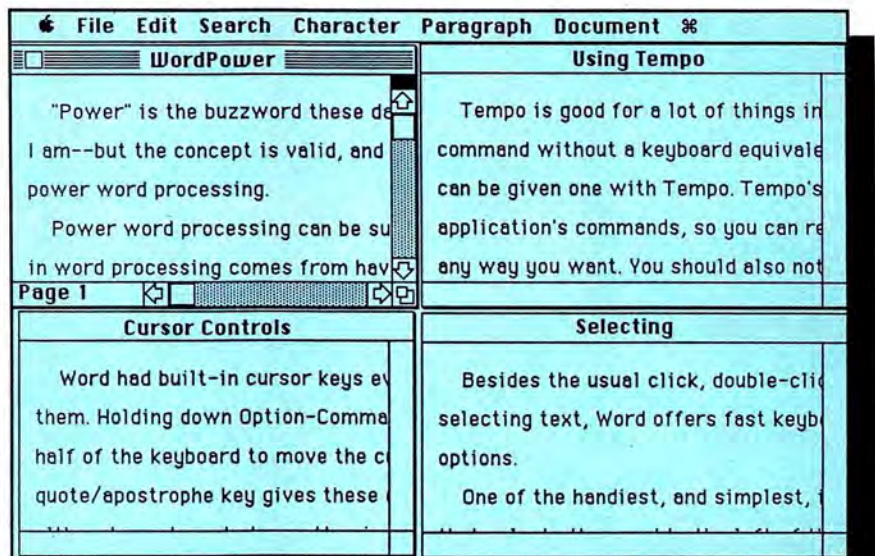
•**Tile toggler:** Tiling is placing multiple windows on the screen so that no edges are overlapping. With four windows on the screen, record one macro for each: click in the window to activate it, then double-click on the title bar to expand it to full size. Also create a macro that double-clicks on the title bar of the expanded window to shrink it down again. (Make sure you include the click that activates the window before you expand it. Although this is not necessary with a direct double-click expansion, on the replay you'll have the COMMAND key down to play the macro. Holding the COMMAND key while manipulating a window changes its size and position, but does not make it the active window.)

You can also make a macro that creates the four tiles from four full-sized windows. Once you have your windows tiled and your macros ready, it's easy to manipulate four windows on the screen without ever reaching for the mouse.

•**Transposition:** If your fingers get away from you when you're typing and two letters come out transposed, you can use a macro to switch the letters to their proper positions no matter what the individual letters might be. Record this sequence: SHIFT-LEFT CURSOR / COMMAND-X / LEFT CURSOR / COMMAND-V / RIGHT CURSOR

This selects and cuts the letter to the left of the cursor, moves the cursor to the left, pastes the letter back down, and moves the cursor back to its original position. Although this "fix" is eight keystrokes versus the four it would take to backspace and retype the letters, playing back the macro takes only two keystrokes.

• **Up with HFS:** With cursor keys,



Using *Tempo* macros, you can handle four windows at a time without reaching for the mouse.

you can move up a folder in the OPEN box by pressing COMMAND-UP cursor. Those without cursor keys can create a macro to do this.

You can't access the *Tempo* menu when the Open box is on the screen, so start the recording before selecting Open; suspend the recording with COMMAND-COMMA, select OPEN, and resume the recording with COMMAND-COMMA. Pull down the HFS menu and select the first item under the title — or, just fake it by dragging the mouse from the disk name to the area immediately beneath it. Suspend the recording again and cancel the Open box; stop the recording and name the macro. Next time you're in the Open box, use the macro command to move up

a folder without reaching for the mouse.

•**A shut down macro:** Even if you have no *Word* windows open, it's not safe to just turn off your computer — *Word's* documents aren't really closed until you quit from *Word*. You can record a macro that quits you from *Word* and then shuts down the Mac from the *Finder* — using one macro, or two linked macros. Either way, it's the SHUT DOWN command from the *Finder* that's tricky. Think about it: to record a macro, you have to perform it, then name it — if you perform the SHUT DOWN, you can't name it.

You can take advantage of the fact that *Tempo* records only the beginning and end points of a mouse drag when you play back anything not in "real time." In the *Finder*, start the recording process, and open the Special menu; without releasing the button, slide over to the View menu, and drag down until you just slip off the bottom of the menu. With the button still pressed, slide over to the right, underneath the Special menu: this is where the SHUT DOWN command would be if the Special menu were open. Stop the recording and name the macro. Voila! A shutdown macro. Link this to a "save and quit" macro you create in *Word*, or record the entire SAVE/QUIT/SHUT DOWN sequence as a single macro.

(continued on page 18)

## BYPASSING THE CLIPBOARD

There are lots of ways to move around in your document, but there's also more than one way to move parts of your document around.

You can perform a COPY and PASTE or a CUT and PASTE without using the Clipboard; the alternative is faster, and preserves whatever you might have on the Clipboard.

Select the text you want, hold down the OPTION key, and click wherever you want the copy to appear. If you want the original text moved to the new spot, hold down SHIFT-OPTION while you click.



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The issue of Fortune magazine on the left side of this ad was painstakingly created by a large staff of editors and proof-readers and art directors and typesetters and camera operators and keyliners.

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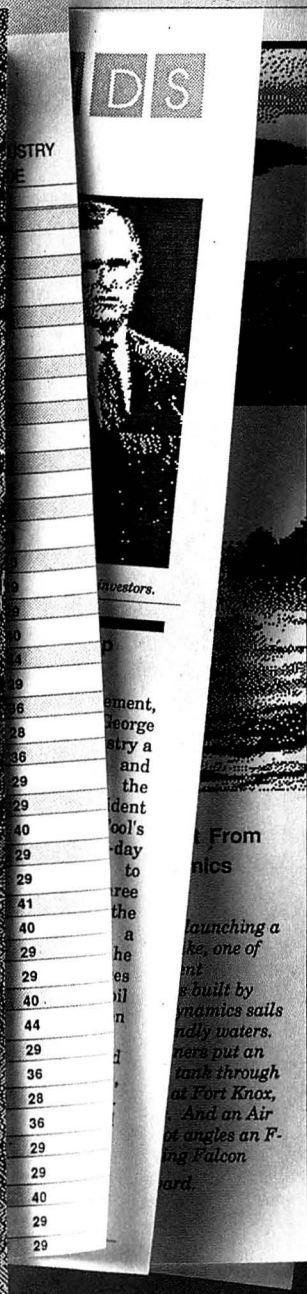
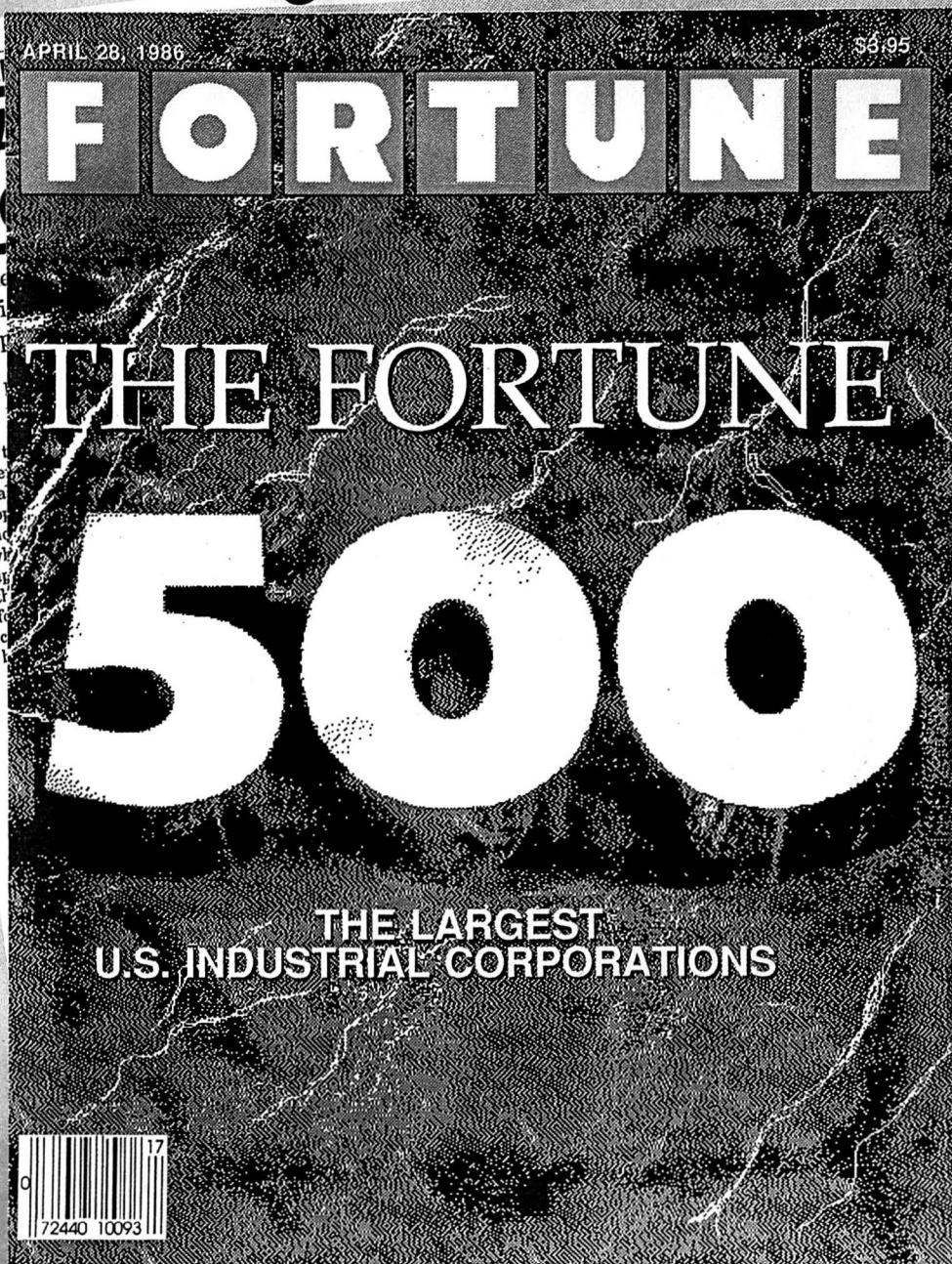
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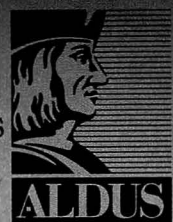
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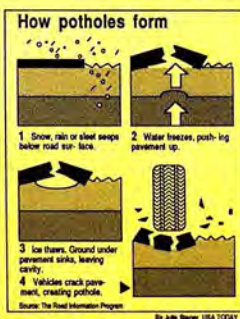


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## Liberty News

Published Bi-monthly by Liberty Technologies, Inc.



Volume One Number One

April / May 1986

## Dispensing with Dispensing Problems

**NO COST SYSTEMS,  
NO COST MAINTENANCE A REALITY**

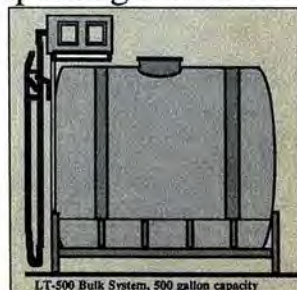
Liberty Technologies, Inc., long a leader in developing innovative detergents and dispensing systems, is stepping up its manufacturing schedule to meet an industry-wide demand for its various bulk dispensing systems.

The LT-500 bulk dispensing system (right) continues to be the most popular of the bulk systems. Offering large bulk storage to meet a wide range of tasks from floor cleaner to parts cleaners dispensing.

The metering head remains one of the most accurate and maintenance free of any type now in use. Mixing ratios from 1 : 3 to 1 : 600 can easily be set, maintained and re-set. Thus, enabling the system to dispense any Liberty product designed to be metered.

Since the introduction of the basic dispensing system, auto plant customers have welcomed the new technology with open arms. While the dispensing systems can never be all things to all people, a bulk metering system does:

1. **Eliminate handling drums**, approx. 10 drums per LT-500 system
2. **Automatically mix cleaners** at the exact desired ratio, regardless of any change in water pressure. No more hand mixing chemicals that can expose workers directly to concentrated chemicals and no more wasted chemicals due to inaccurate measuring and mixing methods
3. **Scheduled automatic system re-fills** at your convenience, you can arrange to have your system filled when you want it to be, or, let Liberty keep it full so you never have to worry about running out of product



LT-500 Bulk System, 500 gallon capacity

4. **No maintenance worries**, Liberty will maintain your bulk system at no cost to you or your department.
  5. **No cost use of bulk equipment**, when you use Liberty products in them.
- Reasons like these make Liberty bulk dispensing systems the way to go for now and the future.

By combining outstanding synthetic detergents with bulk dispensing and metering systems, Liberty has a one-two punch to handle any industrial cleaning problem the Automakers can dish out.

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## Steelcase

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DIVISION	DATE	REASON FOR SURVEY <input type="checkbox"/> INTRODUCTORY <input type="checkbox"/> SCHEDULED <input type="checkbox"/> UNSCHEDULED <input type="checkbox"/> PROBLEM INVESTIGATION	
SURVEYOR		SUPPLIER NUMBER	PARENT COMPANY PHONE
SUPPLIER NAME			
STREET ADDRESS		CITY, STATE AND ZIP CODE	
PERSONS CONTACTED			
NAME	1	2	3
TITLE			
NAME	4	5	6
TITLE			
PART NAME		PART NUMBER (include ECN Number)	
<b>A. SUPPLIER ORGANIZATION</b> <input type="checkbox"/> Plant Manager 1. The quality organization reports to: (obtain organization chart) <input type="checkbox"/> Production Mgr. <input type="checkbox"/> Other _____ 2. The quality organization consists of: (obtain organization chart) <input type="checkbox"/> Engineers HOW MANY <input type="checkbox"/> Inspectors <input type="checkbox"/> Analysts 3. Inspection function reports to: <input type="checkbox"/> Quality Manager <input type="checkbox"/> Other _____ <input type="checkbox"/> Production 4. Does the quality organization have a quality manual? <input type="checkbox"/> Yes <input type="checkbox"/> No Is it followed? <input type="checkbox"/> Yes <input type="checkbox"/> No Last Time It Was Revised _____ Is there a program for training quality personnel? <input type="checkbox"/> Yes <input type="checkbox"/> No 5. Does quality review new products before they are introduced? <input type="checkbox"/> Yes <input type="checkbox"/> No 6. Is quality involved in purchase materials selection and approval? <input type="checkbox"/> Yes <input type="checkbox"/> No			
INSTRUCTIONS: Indicate YES, NO, or N/A (not applicable) in each column		7. TOTAL EMPLOYEES: SHOP _____ OFFICE _____  REMARKS	
<b>B. STEELCASE INSPECTION</b>		Steelcase	
1. Are the latest drawings and specifications available?		Suppliers	
2. Are there sufficient and properly trained inspectors?			
3. Are inspections performed in accordance with written instructions? Prepared by whom? _____		Quality Other _____	
4a. What method and frequency of inspection is used? 100% Inspection		Sampling per MIL Std. 105	
		SPC	
		OTHER _____	
b. Is statistical process control being used?			
c. What type? (Attach Charts)			
d. Is the process being controlled within limits?			
5. Are production operations promptly corrected or shut down until corrected when quality problems occur?		QUALITY	
By whose authority?		PRODUCTION	

660-073.1

Page 1 of \_\_\_\_\_ Pages

*If you're forming your own business, you can create your own business forms.*



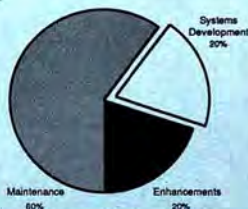


TO: SAN JOSE OFFICE  
Robert Donzell  
FROM: NATIONAL OFFICE  
John Sifonis  
SUBJECT: Increasing Productivity  
DATE: March 18, 1986

Dear Bob,

The following graphs vividly depict the productivity gains a company could achieve by using the tools and techniques we discussed in our telephone conversation last week. As we discussed, the implementation of these productivity tools will save much time and effort, and result in re-directing maintenance and enhancement resources to the systems development area.

FY '86 - Current Projection



FY '86 - With Productivity Tools



Based on our experience, additional improvements may be possible through the application of our systems methodology. We believe that further analysis may define opportunities to provide additional competitive advantages. Please call me to discuss the details.

Best regards,

*John Sifonis*

cc: Dick Welsh

We take business personally.

Now you can integrate graphics with text without using smudgy, not-so-magic markers.

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There are times when a duplicating job is just too much work for an office copy machine. And times when there just isn't enough time to do the job yourself. Now is the time to bring your overflow copying work to Kinko's for fast, quality copies. On time, everytime.



store manager:  
place coupon here

**Kinko's**

Great Copies • Great People

Anyone with a reasonably nimble index finger can now prepare camera-ready art for ads, flyers and the like.

# IT'LL TAKE US AT LEAST SIX PAGES TO EXPLAIN DESKTOP PUBLISHING.

These six pages should do nicely. No, they aren't the work of a professional artist.

Or a professional typesetter.

Or a professional printer.

But the handiwork of an ordinary pair of human hands. Using our not-so-ordinary Macintosh™ Plus computer, LaserWriter™ Plus printer and software like our own MacDraw™ and MacProject™, Microsoft's Word and Excel, and Aldus' PageMaker.

Which is the whole idea behind desktop publishing, a concept Apple virtually invented.

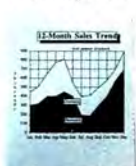
That concept being, the people who are responsible for business communications can now use our Macintosh Plus and LaserWriter Plus to save two things they had problems saving before. Time and money.

Time, because you can create and print your own newsletters, contracts, data sheets, overhead transparencies, manuals, memos and forms faster than you can run downstairs for coffee and donuts.

And money, because of all the big type and art production bills you won't be paying.

Which, in the end, means an Apple® Desktop Publishing System will vastly improve the looks of one more very important page in your company:

Your budget sheet.



It's easy to turn rows of incomprehensible numbers like the traditional output on the left, into a single comprehensive chart with an Apple Desktop Publishing System.





# Mac3D

...a new dimension in software

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## Now Includes These Features:

### • Expanded Shape-Creation Ability:

You can now create three-dimensional solids out of two-dimensional outlines with the Revolve command. This function complements the 24 standard shape tools that are used to create basic objects.

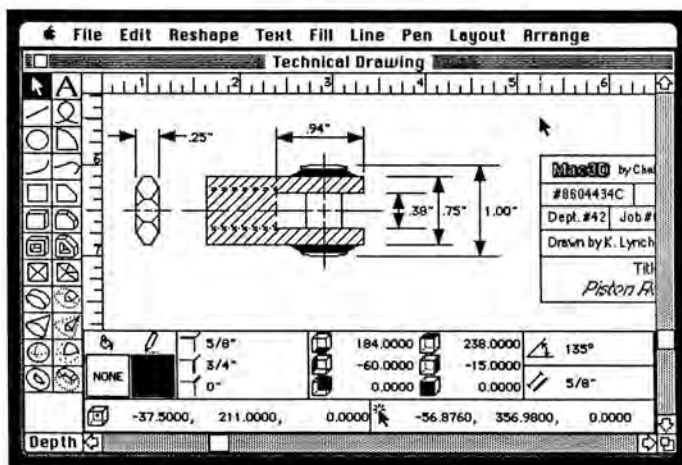
### • Complete Reshaping Capability:

You may edit any object by dragging its vertices, edges or surfaces. The adjacent edges and surfaces move dynamically to make the new shape complete. This feature lets you customize the standard shapes, much like you might mold a piece of clay.

### • Enhanced Precision:

Mac3D has always had precision tools, such as custom rulers and information displays with

four-point accuracy. In Version 1.1, several new features enhance the precision capabilities. Automatic Dimension lines show their length in any font, size, or style. Customized Scaling, not limited to menu choices, allows the flexibility to create models in one scale and then change to another - Mac3D automatically adjusts the size of your entire model. New Proportional Resizing gives you the ability to change any object's size, without changing its proper proportions. These capabilities combine to make Mac3D the most precise Macintosh graphics package available.



## Plus these powerful Mac3D features:

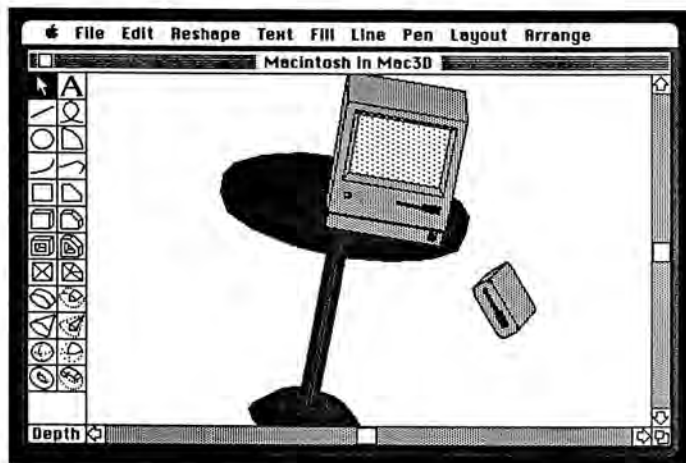
- View or create objects from any location
- Complete text capability
- One-degree rotation in 3D
- Hidden surface concealment
- 96 customizable fill patterns
- 3D beveling and rounding

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In Illinois, (312) 957-3475  
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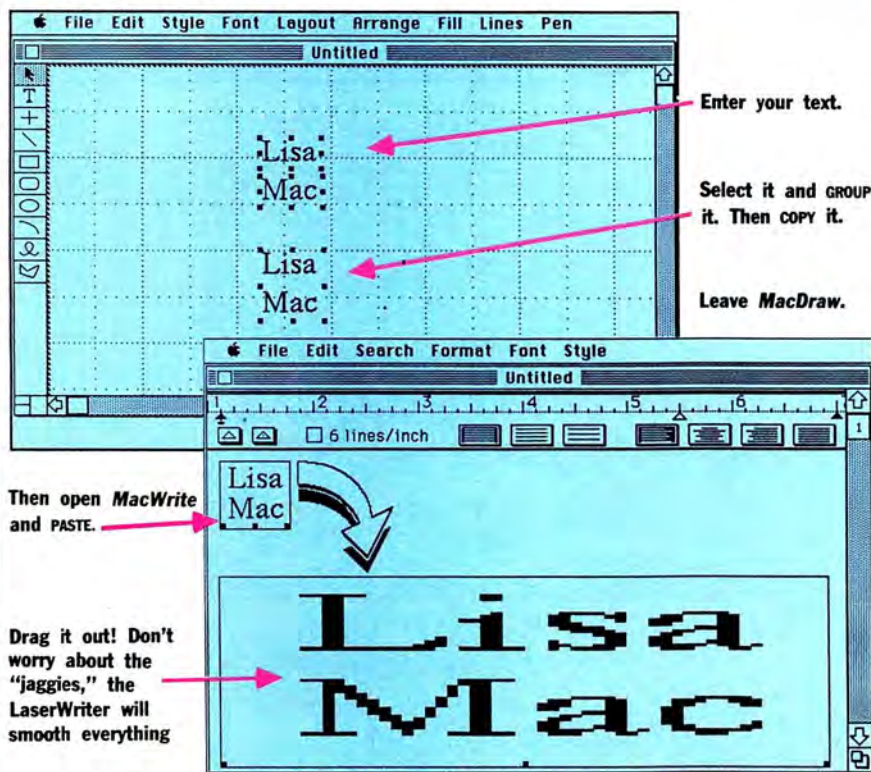
Mac3D requires a 512K Macintosh or Macintosh Plus and an external disk drive. Mac3D supports the Apple ImageWriter and LaserWriter printers.

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# TIP SHEET

## MACWRITE/ MACDRAW



# Lisa Mac

The jaggies disappear.

You can combine *MacWrite* and *MacDraw* to create stunning headline text effects. The technique is simple. It works well in *Switcher*.

Here's how to do it. Type your headline in *MacDraw*. Make sure that the font and line breaks are the way you want them, since they can't be changed later. Use a type size close to your final intended size if you want mild effects, or a size very different from your intended size for really wild effects. Small words can be expanded the most and are capable of producing the most startling effects. After the words are entered SELECT the whole type area, GROUP it, and

COPY it. Now either transfer to *MacWrite* via *Switcher*, or quit and open *MacWrite*. Do a PASTE. The type will appear in the document. Click anywhere in the image and a box with three blocks along the bottom edge will appear. Drag on the blocks and watch the type stretch. The results will look real jagged and broken up, but don't let that bother you. When you print the *MacWrite* document on the LaserWriter, the letters will smooth out and become wonderful to look at. Just keep experimenting and you're sure to come up with something great.

H. BUNCH, LONDON, ENGLAND

## READYSETGO

Be careful when reducing graphics. If you use a 25% reduction, you'll wind up with thin white lines in the end product. To avoid this problem, use a 24% reduction.

JANE WILSON, CEDAR RAPIDS, IA

To draw very thin lines (usually called hairlines) on material that will be printed on the LaserWriter, pick the line you want to make a hairline and select MODIFY from the Block menu. You are actually referring to a solid block here. Now simply type a 0 as the width or depth (depending upon whether the chosen line is vertical or horizontal). This spec will cause the LaserWriter to default to a hairline.

ImageWriter output will remain unaffected by this trick. For Linotronic output, change all the 0 width hairlines back to 0.0139 to get visible rules.

MICHAEL TCHONG, BROOKLYN, NY

## LASERWRITER

Develop a sense of timing when making multiple copies using manual feed. If you wait until the first sheet clears the machine before inserting the next, the machine takes an additional 10 seconds or so before accepting the next sheet. The trick is to insert the new sheet as the previous sheet is a third to a half of the way out. If you insert the next sheet too quickly, the top to bottom alignment will be off, and it may not print at all.

TED REYNOLDS, CHATTANOOGA, TN

## PAGEMAKER 1.2

Move from page size to page size quickly with these Command key combinations. COMMAND-Click: This, when using the pointer arrow tool, toggles back and forth between Actual Size and Fit In Window or returns from 200% Size to Actual Size. Select where you wish to work on the Actual Size page while looking at Fit In Window by pointing with the crosshairs before clicking with the mouse button. COMMAND-OPTION-Click: This, when using the pointer arrow tool, will shift up to 200% Size from Actual Size. OPTION-Hold Mouse Button Down: Gives the Grabber (Hand) icon when using text or the pointer arrow. This allows you to scroll the page up, down, or diagonally, and is usually easier than using the scroll bars. And finally OPTION-Click: When in text mode, this selects the entire paragraph at once.

GREGG GUNKEL, MT. SHASTA, CA

Compiled by Steven Bobker




# POWER WORD PROCESSING

## MORE POWER TO YOU

While this article plumbed the depths of *Word's* formatting options, there are still a lot of other

features in the program that can add to your word processing power. I like to think that before we really get used to them all, there'll be a new

version and we can start all over.  Sharon Zardetto Aker is a Contributing Editor of *MacUser* and the author of numerous Mac books and articles.

## CURSOR CONTROLS

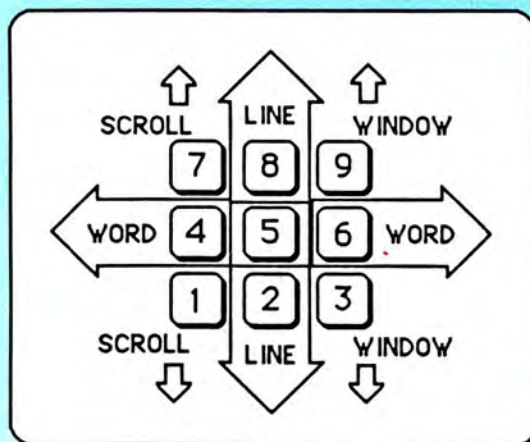
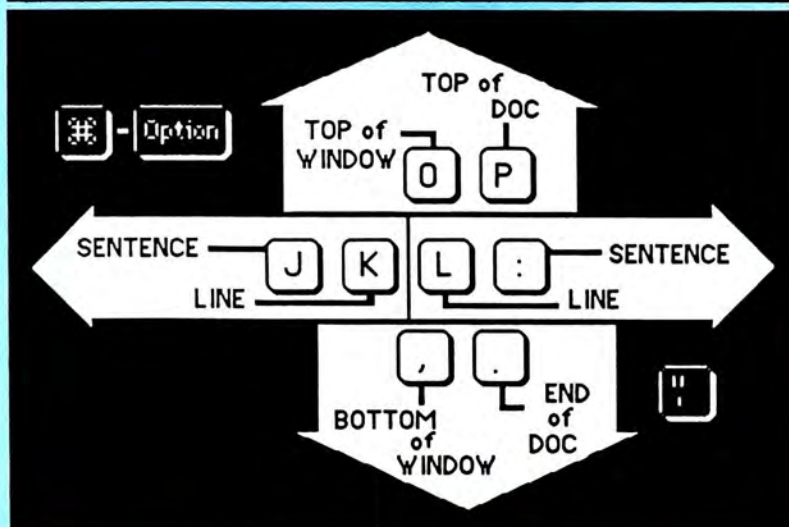
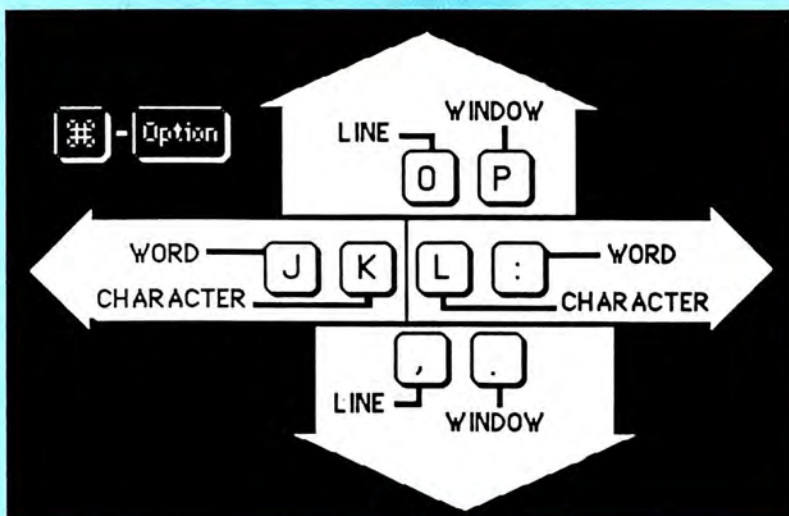
*Word* had built-in cursor keys even before the Mac Plus keyboard provided them. Holding down the OPTION and COMMAND keys, you can use certain keys to move the cursor around in the text. Adding the QUOTE/APOSTROPHE key gives these ersatz cursor keys further powers, although you have to be pretty nimble-fingered to use them all. Adding the SHIFT key to any of the other key combinations not only moves the cursor, but selects all the text it passes over as well.

The cursor keys on the Mac Plus keyboard moves you left and right a character at a time, or up and down a line at a time; adding the SHIFT key selects the text. The keypad, though, acts as an extended cursor control. The four keys forming a cross around the center 5 move the cursor left and right a word at a time, and up and down a line at a time. The 9 and 3 at the right corners of this square move the cursor up or down a full window. The 7 and 1 in the left corners are equivalent to pressing the up and down scroll arrows — the cursor doesn't move in the text, but the text scrolls in the window.

Moving outside of the immediate square of numbers, you'll find that the PLUS and ASTERISK keys select a character at a time to the left or right of the cursor, while the BACKSLASH moves the cursor up a line, selecting the text as it moves.

Wait...there's more. You can use the CLEAR key in the numeric pad to change some of the cursor controls. With the cursor keys, hitting CLEAR first (or simultaneously) results in the cursor moving to the beginning or end of a line, or the top or bottom of the window. Press CLEAR before you use the 4 or 6 keys, and you jump forward or backward a sentence. CLEAR-8 and CLEAR-2 jump the cursor to the top or bottom of the window, keeping its original horizontal position. CLEAR-ASTERISK selects everything from the current position to the end of the line, while CLEAR-PLUS selects from the current position to the beginning of the line.

As with other cursor controls, holding the SHIFT key selects all the text between cursor positions. Holding the SHIFT key as you move the cursor in already selected text will deselect that text.



▲ With COMMAND-OPTION held down, keys on the regular keyboard can act as cursor controls; with the quote key also down, the keys have additional functions.

◀ The numbers on the numeric pad in the Mac Plus keyboard function as cursor controls; adding the CLEAR key changes the functions. Other keys on the pad also move the cursor and select text.



## For Future Reference

Keep your copies of **MacUser** in these specially designed binders or library file cases. Binder holds 12 issues. Box file holds 10-12 issues. Binder and box file are constructed of heavy bookbinder board with maroon leatherette cover. **MacUser's** logo is hot-stamped in gold. Very attractive!



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# THE LINOTRONIC CONNECTION

by David Biedny

**Connect the Mac to the world of professional typesetting.**

THE LASERWRITER IS A TEASE. Publishing professionals may love it, but they still need more quality than it can deliver. Camera-ready text and graphics for commercial-quality printing require higher resolution than the LaserWriter's 300 dots per inch.

One professional-level solution is the new line of typesetters from Allied Linotype, the Linotronic 100 and 300. These are full-featured typesetting machines, and along with the LaserWriter, use Adobe's PostScript page description language, making linking them to a Macintosh-based desktop publishing system easy.

Thanks to PostScript, a page created on the Macintosh can be printed on a Linotronic, with all of the original text and graphics printed at a commercial-level resolution of 1250 or 2540 lines per inch. Graphics created with an object-oriented graphics program (such as *MacDraw* or *MacDraft*) print at full Linotronic resolution, and are perfect for fine line art. All the detail in a drawing is faithfully reproduced, even if it has

been reduced on-screen, and the results are sharp enough for photo reproduction or statting. As an added plus, gray tones print as real grays, adding a new dimension to scanned photographs.

## LASERWRITER VERSUS LINOTRONIC

Although the Linotronic and the LaserWriter both connect to the Mac through AppleTalk, they are beasts of very different stripes. For example, each printer uses a different type of paper. The Linotronic uses photographic paper (in roll form) for hard copy, requiring a separate photo-developing laboratory, as well as personnel trained in the required developing procedures.

The LaserWriter prints on regular paper. It's an excellent proofing tool for the Linotronic, since it costs much less to create a print on the LaserWriter than with the Linotronic. Modifications are easier, cheaper and faster on the LaserWriter than on the Linotronic. Because both units use PostScript, LaserWriter prints closely match Linotronic prints in terms of positioning and spacing of characters and other elements. In fact, except for the resolution, they are the same documents.

## THE MAIN EVENTS

The low-end side of the line, the Linotronic 100, has a resolution of 1270 lines per inch. This resolution

provides extremely crisp type at virtually any point size. It costs \$28,950 with a RIP. The high-end machine, the Linotronic 300, has a maximum resolution of 2540 lines per inch. This one goes for \$49,950 with the required RIP. The RIP is an external PostScript translation device. The printer hooks up to AppleTalk through the RIP, which uses a standard AppleTalk connector. Special Linotronic print drivers must be installed on all disks that will be used for printing.

The Linotronic printers aren't dumb devices — they contain the same Motorola 68000 CPU that's in the Mac, but run at 10 MHz (about 25 percent faster than the Mac), and have two megabytes of random access memory (RAM). And since PostScript is located in the memory of the RIP translator, and not in the printer, as it is in the LaserWriter, the entire two megabytes are available to process pages.

Operating the Linotronic is fairly straightforward. The output paper is loaded into its holder in a darkroom, or it can be purchased pre-loaded from the paper supplier. (Be prepared to dedicate a room in your facility for loading paper. The paper is photographic, meaning that it should be kept away from light. The room should also contain a sink with running water.)

The paper cartridge is inserted





into the Linotronic, and from there it works much (if not exactly) like a LaserWriter. Depending on what's being printed, the Linotronic typically processes information more slowly than the LaserWriter.

Linotronic output paper (red-sensitive grade S or RC typesetting paper) comes in rolls up to 150 feet long and up to 12 inches wide (other widths include 4 and 8 inches). Film rolls are also available for transparencies and for color separations.

### SOFTWARE COMPATIBILITY

What software you run on the Mac is up to you. Just about anything that works well with the LaserWriter works that much better with the Linotronic. Some software, though, will be of particular interest.

●*Just Text* and *LaserTools*: The fine control over character positioning that can be achieved with *Just Text* is perfect for the Linotronic. Extremely fine control over leading and inter-character spacing is possible. The *LaserTools* utilities are vital for serious processing of ThunderScan, MacPaint and MacVision images. Using *LaserTools*, a ThunderScan document can be printed with much of the original gray scale information, approximating the quality of a Velox (a photograph converted to dot information for preparing printing plates). These documents take a long time to process in the Linotronic, but the cost is much less than that of a Velox prepared by an outside service, and there is much more direct quality control. It typically

takes a commercial service between 2 to 4 hours to process a Velox.

●*PageMaker*: This is the product that Allied itself is promoting for use with the Linotronic. The program runs exactly the same as it does when used with the LaserWriter. You'll probably wind up wishing you had more features that allow precise control of variables such as leading.

●*MacPublisher II*: Its newest version offers some fine tuning features that will be valuable on the Linotronic, such as kerning and leading justification. If the program were just a bit less buggy....

●*ReadySetGo*: Those comfortable and content with RSG will be happy to know that it works fine with the Linotronic. *ReadySetGo*'s extremely precise block positioning capabilities finally serve a purpose when utilized on the Linotronic.

### IT GETS HARDER

A Linotronic isn't the last hardware acquisition you'll end up making. There are a few devices that will help you make optimum use of your Linotronic:

●The MicroTek and Abaton scanners (flat-bed digitizing devices that can scan at 300 DPI) produce digitized picture files that contain up to 33 levels of gray scale information. When printed on either of the Linotronics, the full range of gray tones is accurately reproduced, resulting in decent quality photo-half-tones (equivalent to 60 to 100 line Veloxes).

●The ThunderScan digitizer, as

cheap as it is, provides usable imagery with 32 levels of gray scale information. Processed through *LaserTools (Just Text)*, a ThunderScan file printed on a Linotronic looks great.

### PRODUCT SUPPORT

We had both good and bad experiences trying to obtain support and get questions answered. While Allied seemed willing to help, they were sometimes very slow returning calls. Since we were calling as customers, and not as press, this was inexcusable. When you pay the price for these machines, you should get prompt, excellent support, which is what we did get, most of the time.

It appears that Allied still has not finalized its policies regarding the marketing and support of the Linotronic series to the Macintosh community. It's still too early to tell what the ultimate quality of support will be, but taking into consideration the price level of this technology, we expect that it will be fine.

### HIGH RESOLUTION — HIGH PRICE

Acquiring a Linotronic represents a substantial economic commitment. The purchase price of these units puts them beyond the reach of most small- to medium-sized businesses.

Then again, maybe not. Allied offers a lease plan, which can put a Linotronic 300 in your office for about \$1600 a month, (about \$800 for a Linotronic 100). This price includes all required cabling, the paper developer equipment (ML-314 processor), and even a Macintosh to drive the system (these prices will vary depending on your area). The cost is reasonable, and the equipment is more than likely to pay for itself in jobs.

### THE CONNECTION IS MADE

Linotronic printers are certainly the Rolls Royces of the desktop publishing world. If your publishing needs require commercial quality output, these machines have the power to provide it, without separating you from the Mac and your favorite software. ☐

David Biedny is the Technical Editor of *MacUser*.

LaserWriter vs. Linotronic output. Note the extreme smoothness of the Linotronic text, and the difference in the clarity of the dropshadows.

shadow  
shadow



# HOT OFF THE PRESSES



**The latest scoop in desktop publishing is**

## **MacPublisher II.**

NOT MANY SOFTWARE PACKAGES have the advantage of being both the first and most recent products of their kind on the market. The original incarnation of *MacPublisher* was one of the very first desktop publishing packages available for the Mac, and as such it garnered a lot of early sales based on software scarcity alone. But with the release of *ReadySetGo* and *PageMaker*, *MacPublisher* lost its early advantage. Even its significantly lower price tag (\$99) failed to give it the competitive edge it needed to face off against the other two packages' superior features.

Boston Software recently released its long-awaited *MacPublisher II*, a low-cost page layout program designed to go head-to-head against the big boys of desktop publishing. The product was under development for a long time — long enough for the authors to get a good look at what the competition had done.

Most of *MacPublisher's* early defi-

ciencies have been corrected in *MacPublisher II*. But does this new version have enough features to go against the giants? That depends on what you're looking for.

### **THE SECOND WAVE OF MACPUBLISHING**

The look and feel of the program hasn't changed much since the original *MacPublisher*. Each text or graphic element is saved as a separate file on the disk, with the specific issue saved as a separate entity. The text is saved as plain text, meaning that font attributes (bold, shadow, underline, etc.) are saved in the main *MacPublisher* document. This document stores the instructions for placing each element on the page, which allows for modular page creation—that is, elements that are to be used in more than one publication can be stored as individual entities.

This can be good or bad, depending on how you look at it. For

**BY DAVID BIEDNY AND TRACIE FORMAN HINES**



example, if you're using the same block of text in four different publications, any changes to the file in one publication will also appear in the other three. (Graphics are not saved in the same way.)

Elements can be placed freeform on the page, or can be forced into predefined constraints with the Snap To Grid function. This option brings up a dialog box that lets users define exactly where the edges of the grid elements will fall on the page. *MacPublisher II* also features full support of master elements, which are the items that appear in the same place in each publication.

## THE REAL NEWS

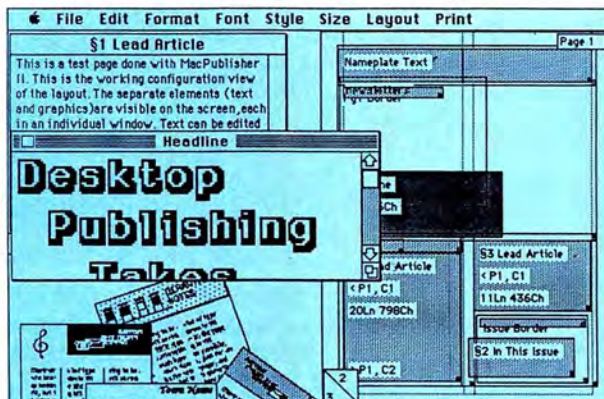
*MacPublisher II* is the first desktop publishing program on the market with its own built-in table of kerned pairs. (Rumor has it that the newest version of *PageMaker* will also have a set of built-in kerned pairs, but we have yet to see it.)

Kerned pairs are predefined. This automatic kerning means that the spacing will always look good between, say, the capital T and the small i. Thirty-four kerning pairs are built in, but while users are allowed to manually kern pairs not found in the dictionary, unfortunately these changes can't be saved to the program's dictionary.

Despite its many features, one of the most important things about *MacPublisher II* is that it can run on a 128K, single-drive system, although of course, the more memory you have, the faster it will run.

Each *MacPublisher II* document can have up to 96 pages (limited by memory). Up to 256 articles and 256 graphic elements can be used in a single issue. The program also allows up to 48 columns per page, although few will ever push it so far to the limit — which is a good thing, since the harder it works, the higher the chances that it will bomb.

No other desktop publishing software available as of this writing offers a depth justification option. With it, a block of text can be made to fit into a specific vertical space. The program automatically adjusts the leading (space between lines) so that the text will fit properly.



The main *MacPublisher II* screen. Each text and graphic element of the layout can be displayed and edited in its own window.

Clicking on a text block while pressing the Shift key summons the Type Spec Sheet dialog. Fine tuning of a text block's position, leading, font, justification, color (for the ImageWriter II), and other parameters are viewed and modified here.

Type Spec Sheet				OK
Lead Article - §2				Cancel
10/13 Geneva				Replace
Ragged Right, Normal Letterspacing.				
20 lines, 798 chars. Laid Out On Page 1.				
x Across	41	Leading	3	Color
y Down	447	Base Line	11	Red
Width	235	Kerning	0	Gray Screen
Depth	260	Justify Depth	<input type="checkbox"/>	
Repeat <input type="checkbox"/> Left/Right <input type="checkbox"/> Left <input type="checkbox"/> Right <input type="checkbox"/>				
Reset Format Font Style Size				Open This Article

Layout Spec Sheet				Up	Down	OK
H	V	W	D	Item		
34	33	504	68	Nameplate Text		
38	283	322	132	Headline		
43	111	200	23	Edition Quick		
42	419	120	31	Initial letter		
70	420	211	26	§1 Lead Article		
41	447	235	260	§2 Lead Article		
301	421	235	143	§3 Lead Article		
313	577	211	19	§1 In This Issue		
290	617	211	80	§2 In This Issue		
30	106	518	611	Pg1 Border		
30	25	518	82	Nameplate Border		
36	90	293	265	newsletters		
31	407	516	15	Single2		
305	570	225	140	Issue Border		
275	413	29	303	Single1		
9382 Bytes in Page						

The Layout Spec sheet lists all elements on a page, with corresponding positions and sizes, and the total size of the page in bytes. Clicking the Up and Down buttons advances or goes back a page at a time.

The Picture Spec Sheet shows the position, gray value and/or color of a picture element and what page the picture is located on. Using the Replace command, a graphic object placed in the layout can be replaced with another.

Picture Spec Sheet				OK
Pg1 Border				Cancel
Laid Out On Page 1.				Replace
x Across	30	Color	Blk	
y Down	106	Gray Screen	<input type="checkbox"/>	
Width	518	Revert to Original		
Depth	611	Open This Picture		
Repeat <input type="checkbox"/> Left/Right <input type="checkbox"/> Left <input type="checkbox"/> Right <input type="checkbox"/>				



# HOT OFF THE PRESSES

As was the case in the original *MacPublisher*, text blocks are referred to as "articles." An article can be any block of text, such as a headline or a story, that is on the page. *MacWrite*, *Word*, and text files can be opened directly from within *MacPublisher II*, or users can create new text documents right within the program.

Downloading files for use in newsletters is relatively painless, thanks to the *NewsWire* DA, which resembles a slightly modified version of *MockTerminal*, a shareware communications DA by CE Software. *NewsWire* is used to send and receive text files for use in articles. (A separate program is provided to transmit pictures, which are sent in Xmodem format, standard for binary files.)

The Table of Contents command creates a separate article with the title, page number, and column number of each article. It can be edited and modified in order to produce a true table of contents.

## TAKING PICTURES

Importing graphics was never *MacPublisher's* strong point, and the

procedure is still a bit odd and time-consuming when you use the CAMERA option. (*MacPaint* — or *MacDraw* documents saved in PICT format — can be opened with the OPEN PICTURE command. This makes a *MacPublisher II*-compatible copy of the document without corrupting the original file.)

Using the CAMERA to import graphics is a bit less straightforward. While a CAMERA might make a good metaphor, its execution requires too many steps. First a graphic must be saved to the Clipboard, then the CAMERA option is selected and the Clipboard is automatically opened underneath the CAMERA window. The *MacPublisher II* Clipboard features scroll bars as well as a size box, so limited cropping facilities are immediately available. (The scroll bars also allow large graphics to be viewed in their entirety.)

More precise cropping is available via the vertical and horizontal rulers in the Window Ruler command. These rulers can measure in inches, centimeters or points.

Graphics can be expanded and

reduced proportionally by holding down the Option key when resizing. A graphic can also be reduced or enlarged in variable horizontal and vertical dimensions.

*MacPublisher II* also has the ability to generate block graphics from within the program. Its Graphics Palette dialog lets users choose from horizontal or vertical lines, boxes (square or rounded corners), and circles. Every element is a combination of three lines, each of which can have its own line thickness and pattern. We liked the triple pen feature, which allows complex block graphics to be created quickly and easily.

## LAYING IT ON THE LINE

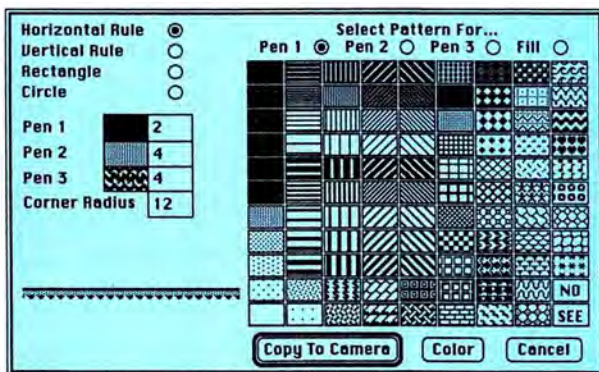
Laying text and graphics out on each page is pretty straightforward, accomplished through a number of options.

There are four types of Spec sheets: Type, Picture, Camera and Layout. Using the Type Spec sheet, one article can be directly replaced with another. The exact position of the article on the page, the article's physical dimensions, whether or not it's carried over from another page (and if so, what page), the font, and much more is also displayed in this dialog box.

The Layout Spec sheet lists all the elements in the current layout page, with their coordinates on the page, as well as their dimensions (all specified in points), and the amount of memory occupied by that page.

Articles can be laid out in any of the viewing modes, MiniPage, Dummy Page and MaxiPage. The MiniPage view shows a scaled-down version of the page, with full, scaled-down text and graphics displays. The Dummy Page view shows a page the same size as the MiniPage, but the elements are represented by solid blocks. Each block shows vital information about the element it represents. Text blocks are displayed with their name, number of lines, and number of characters, against a light gray background. Carryover text also includes the page and column in which the original copy is first displayed. Picture blocks are white, and whichever element is currently active is shown as a black block.

The Graphics Palette is for creating rules, rectangles and circles. Each can consist of a combination of three lines, and the width and pen pattern of the lines can be modified. The number next to each pen pattern is the width of the line in pixels.



The MaxiPage mode displays the page at real-size. Elements can be repositioned in this view.





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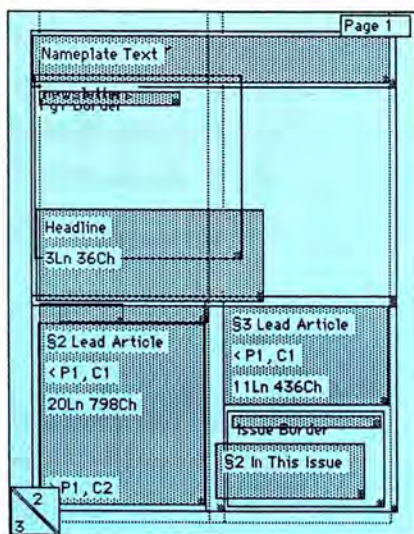
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# HOT OFF THE PRESSES



Dummy Page and MiniPage views of the same page. You'll probably be looking at one of these views when laying out pages.

The scissors tool, accessed by clicking the pointer on the gray desktop background, is used to select graphics and text and drop them onto the page. To place a block of text onto a page, open the article window you want to place, select the scissors tool from the Layout menu, and click in the title bar of the text's window. Drag onto the MiniPage window and the outline of the text block appears, scaled down proportionally to match the smaller layout.

Styling changes don't appear in the Articles menu. But you can view fonts and font styles in the MaxiPage window, which displays the page as it will look when it's printed. Style specifications can be pre-set by opening an article that contains the same font and format, before choosing New Article option.

The Automatic Save option saves every editing or layout change made during a session. It's a nice feature, although the program runs faster without it. Blocks of text or graphics can be resized quickly by dragging the small gray square in the lower right corner of the block.

## PRINTED MATTER

MacPublisher II's copy-protection scheme is relatively painless. Boston Software suggests that users make a working copy (which will be used for everything except printing) with a Finder drag. The only time you'll ever need the master is for printing.

Work copies will print out your document just fine, except for a small MacPublisher ad in the lower right corner of each page. When the PRINT option is selected, a dialog box asks if this is a work copy or an original (which shouldn't have the ad). Choose Original and the Mac will ask for the original MacPublisher II disk, which it uses as a key disk. When the master disk is used as a key, the small ad is eliminated from printed copies. The master disk only has to be inserted once for every 24 hours of printing time before the ad appears again in print, and again, inserting the key disk will eliminate it from printed copies. Mounting the program on a hard disk is as easy as making a Finder drag, although the master disk will still have to be inserted for a clean printed copy.

Color printing is fully supported on the ImageWriter II, for both text and graphics. Each article can have its own color, as can each graphic element. Text and graphics can also be printed in eight shades of gray, regardless of their original patterns. This is a particularly useful feature for turning graphics into 20 to 30 percent backgrounds.

(A valuable tip for those who plan on creating color separations for off-set printing: holding down the Option key while selecting either the PRINT PAGE or PRINT ISSUE will produce registration marks in the four corners of the page. These marks are used to correctly line up the separations.)

## READ ALL ABOUT IT

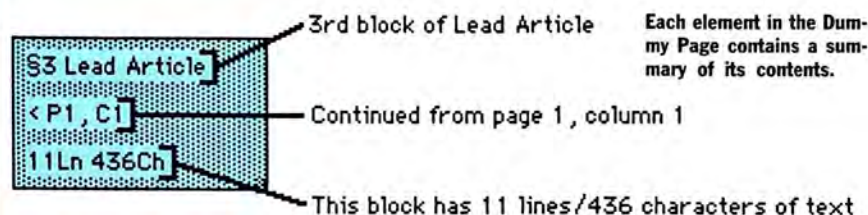
The documentation is huge, exhaustive, and pretty well-written, covering everything from quick and dirty 10-minute issues to colorizing pictures and graphic elements. It can be a little confusing the first time you read through it, especially since the index is incomplete, but after two or three sessions with the program everything in the manual becomes pretty clear.

MacPublisher II has some very advanced features that may be over the heads of small users. If you can deal with the program's unusual interface (especially the CAMERA), though, you'll find that it delivers a lot of bang for relatively little bucks.

## MACPUBLISHER II

Overall Rating	■ ■ ■ ■ ■
Follows Mac Interface	■ ■ ■ ■ □
Printed Documentation	■ ■ ■ ■ □
On-Screen Help	■ ■ ■ ■ □
Performance	■ ■ ■ ■ □
Support	■ ■ ■ ■ □
Consumer Value	■ ■ ■ ■ □

**Comments:** Inexpensive desktop publishing program that stores each article as an individual file. **Best Feature:** Features an extensive library of kerned pairs. Also allows depth justification option. And it runs on 128K, single-drive Macs. **Worst Feature:** The CAMERA metaphor for importing graphics involves too many tedious steps. **List Price:** \$195. Published by Boston Software Publishers, 19 Ledge Hill Rd., Boston, MA 02132. (617) 327-5775. Copy protected.





# ALLOTYPE TYPOGRAPHICS

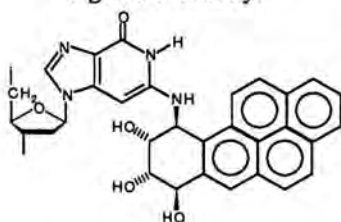
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**Easy3D**, Enabling Technologies, 600 S. Dearborn, Suite 1306, Chicago, IL 60605, 312-427-0408. \$99.

**FullPaint**, Ann Arbor Softworks, 308 1/2 S. State St., Ann Arbor, MI 48104, 313-996-3838. \$99.95.

**Mac3D**, Challenger Software, 18350 Kedzie Ave., Homewood, IL 60430, 312-857-3475. \$195.

**MacDraft**, Innovative Data Design, 1975 Willow Pass Rd., Concord, CA 94520, 415-680-6818. \$239.

**MacDraw**, Apple Computer, 20525 Mariani Ave., Cupertino, CA 95014, 408-996-1010. \$195.

**MacPaint**, Apple Computer, 20525 Mariani Ave., Cupertino, CA 95014, 408-996-1010. \$125.

**Microsoft Chart**, Microsoft, 16011 NE 36th Way, Redmond, WA 98052, 206-882-8080. \$125.

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**Mac-Art Library**, compuCraft, PO Box 3155, Englewood, CO 80155, 303-850-7472. 11 disks, \$29.95 each.

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**MacMemories Series**, ImageWorld,

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### PAGE LAYOUT/FORMS DESIGN

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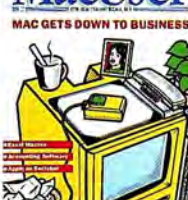
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## MacUser

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# YOU ARE CORDIALLY UNINVITED

by

Tracie

Forman

Hines

**And if you're lucky, you  
have a ghost of a  
chance to survive.**

WELCOME TO THE HAUNTED mansion. Sorry about that little accident in the road, the one that stranded you on the doorstep of this uninhabited mansion as a storm rolls

in. The good news is, you're just in time for lunch. The bad news is, you could be it — but then, you *were* cordially *Uninvited*.

This icon-based adventure was designed by Icom Simulations, the same highly talented group responsible for the groundbreaking *Deja Vu: A Nightmare Comes True*. *Uninvited* takes the *Deja Vu* game style one step further, though, by using limited animation sequences and digitized sound effects to add color and depth to the game. But if you think this game will be any easier than *Deja Vu*, you're dead wrong. And probably just plain dead as well.

## INVITATION TO A NIGHTMARE

The story begins in the aftermath of a car accident. It seems you were behind the wheel of your car during a storm when a shadowy figure suddenly seemed to jump out of nowhere in front of the car. You swerved to avoid it, crashed into a tree, and awoke to find your young

brother gone. Luckily (you think), there's an old mansion just up the road. He must have gone in there to call a tow truck. At least, that is the logical explanation.

But finding your little brother is going to be a bit harder than you might have thought at first. It seems that, although no one presently lives in the mansion, the house is inhabited by malevolent ghosts, goblins and things that go bump in the night. They've managed to capture your brother and spirit him away, and it will take sharp wits and a strong stomach to piece together the information you'll need to save him.

There's more at work here than meets the eye. Upon exploring the mansion, players will learn that this house was once the home of an occultist and his acolyte. The acolyte grew incredibly powerful, so powerful that he outgrew the restraints of his teacher. To unlock the secrets of the house and find your lost brother, you'll have to dabble in a bit of sorcery yourself, by finding the arcane commands and then properly using them, and by learning the right way to countereffect the various evil spirits that haunt the mansion.

The more time players spend in the mansion, the less they'll be able to resist the malevolent spirit — seen in the form of a skull that pops into your mind out of nowhere — and the siren song of the restless undead. If you don't solve the adventure in a predetermined number of moves, you — and your little brother — will become the newest additions to the mansion's cast of creeps.

## COMMUNING WITH THE SPIRITS

As in *Deja Vu: A Nightmare Comes True*, the game's sentence parser is extremely simple and very Mac-like. All possible commands are shown on buttons that line the top of the screen. These are: EXAMINE, OPEN, CLOSE, SPEAK, OPERATE, GO, HIT and CONSUME. Each location is illus-



# YOU ARE CORDIALLY UNINVITED

trated in the main graphics window, and objects that might be useful in the game behave as icons. For example, to leave the car before it explodes, click on the door to highlight it, then click OPEN. The door instantly follows the command.

The sequence in which things are done isn't that important. To open a door, you can double-click on the picture of a door; double-click on the corresponding square in the Exits window; click the door, then click OPEN; or click OPEN and then click on the door. This open-ended approach to communicating with the program makes it easy to get into the game's plot and story, instead of wasting time and effort puzzling over the proper phrasing of a command.

The program also adjusts itself to the situation it sees. For example, most of the time, double-clicking on an object is another way of "phrasing" the command, EXAMINE (item). But if you double-click a closed door, *Uninvited* knows you probably mean to open it.

As in *Deja Vu: A Nightmare Comes True*, players are given an inventory window, which stores objects they find along the way. See something you want to take on a table? Mouse to the object, click to highlight it, and drag it into your inventory window. Unless it's something incredibly cumbersome (like a couch), or unless you're already carrying a full load, the object moves to the inventory window.

The only time things get a little choppy is when you try to OPEN a saved game. The *Uninvited* game disk only holds a single game-in-progress, so you'll probably end up saving your games to a third disk. A program quirk sometimes results in *Uninvited* bringing up the Minifinder on the first disk. After choosing EJECT, the Minifinder switched to the second drive's disk, which contained no saved games. We tried inserting the scenario disk and clicking the DRIVE button, but it was mysteriously dimmed.

The way around that was simply to choose CANCEL once the scenario

disk was placed in the internal drive. Then, when OPEN was selected again, the proper Minifinder box appeared.

## OF SECRETS AND SORCERY

Each puzzle may seem maddeningly impossible at first, but give yourself a chance to mull over problems before you get too frustrated. There is a simple, usually very logical solution to each mystery. In fact, each step in the puzzle is so logical that we found ourselves wondering how we couldn't have figured it out immediately — after we had spent two days pondering it, of course. If things get too bad, Mindscape will be marketing its own clue book (unavailable at press time). But try it on your own first. Or better yet, sit down with a friend. Sometimes a fresh perspective can be just the jolt you need.

There are a number of red herrings thrown in for good measure. Objects that look tantalizingly useful turn out to do nothing at all of value, while some items that appear mundane can help get you past the worst of stumbling blocks.

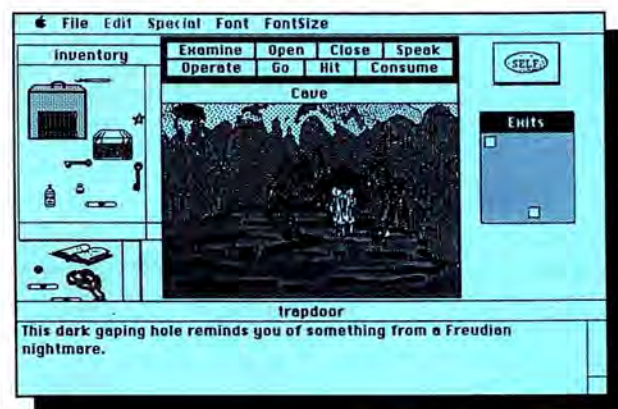
The Note Pad desk accessory is always available through the Apple menu, and you can save a bit of space in your inventory by writing down notes as you go, then pulling the note pad on-screen when you need a particular bit of information. While you won't be required to remember a slew of addresses and combinations, the proper spelling and phrasing of arcane words makes the difference between success and failure. It's also a good idea to write down the entries you find in books, so that you won't have to cart heavy tomes from room to room.

## THE HORROR SHOW

The graphics are tuned to a fine art, and the animation is both surprising and amusing. The first time I played I actually found myself a little weak-kneed in that way you get leaving a particularly frightening horror movie. As time elapses in the game, a skull pops up at intervals to remind players how close they are to being possessed by the evil house. That skull — and the ominous chime



An example of one of the charming fellows you can look forward to meeting in the haunted mansion.



Ghosts won't be your only worry when you venture outside the house. Note the cage in the Inventory window, which can be used to carry more items.



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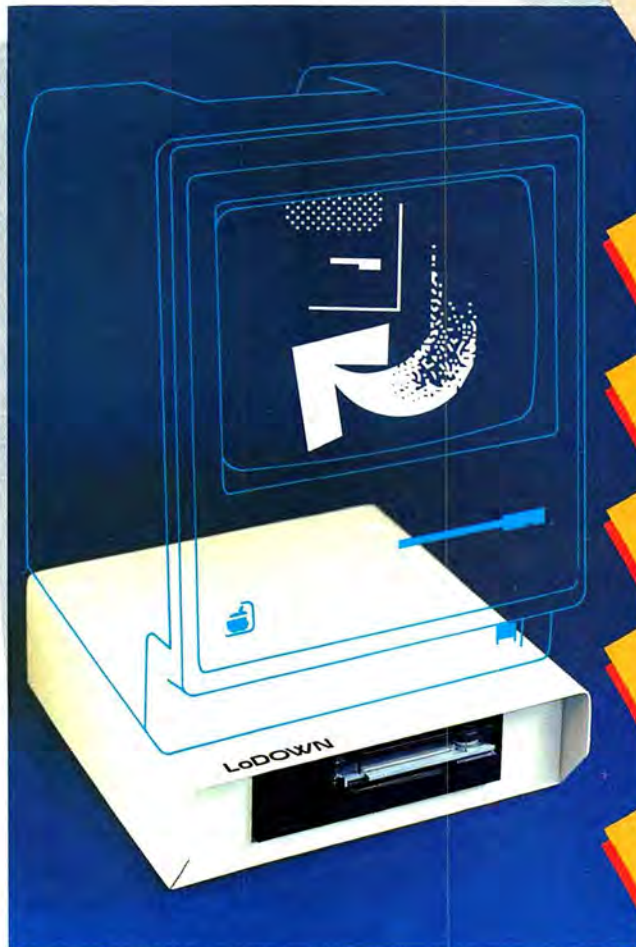
Software	Time In Seconds
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MacDraw	3.2
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Action measured to nearest .5 second with a Mac Plus using Finder V5.2 and average over 3 consecutive executions, system cache on. Timings are based on the amount of time to open application.

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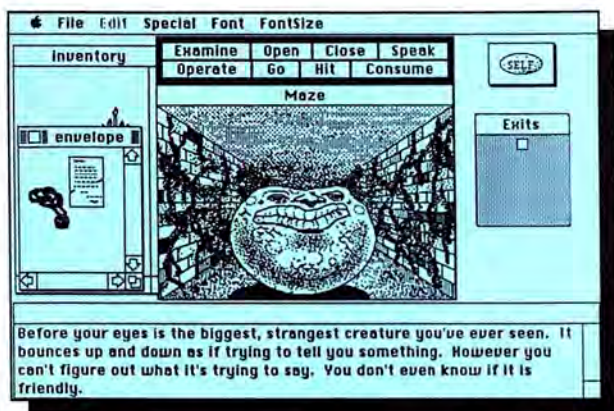
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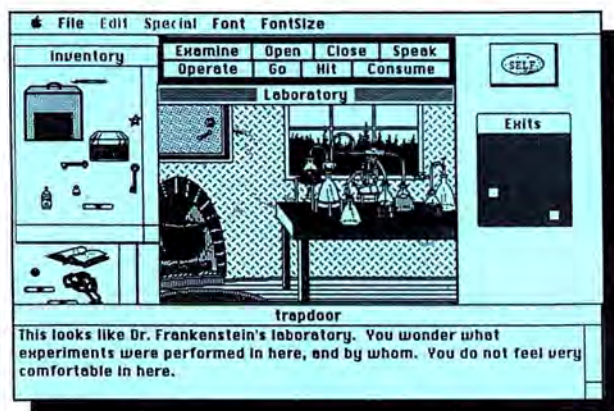
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# YOU ARE CORDIALLY UNINVITED



Is it alive or dead? And do you really care?



This room offers a host of tantalizing possibilities. Just save the game before you start playing with anything.

that sounds when it suddenly appears — made more than one *MacUser* editor jump the first time it showed up in the game.

Likewise, the animation is neither too showy or too cute, enhancing the horrific mood rather than distracting from it. Generally, the animation is for show only, and the cursor turns into a watch icon for the duration of the sequence. For example, not long into the adventure you'll see a tiny, mischievous gremlin running through the walls holding a key. Your first temptation will be to grab the little guy and shake him down for his treasure, but it won't be that easy, since as soon as he appears your cursor (and means of communication with the program) is frozen until he's gone. That means anything you try to do to him will have to be set up before he appears.

The sound effects are equally good, although they're used more to embellish the plot than to advance it. The only sound that seems less than realistic is the growl of thunder that signals an approaching storm, which

sounded too much like the car exploding early in the game.

Be sure to check out the About... sequence at least once. It displays the entire Icom team as residents of a graveyard, popping in and out of their graves in time with digitized music, and it's really a scream.

## THE NEXT STEP

*Uninvited* is considerably more difficult than Icom's earlier adventure, *Deja Vu: A Nightmare Comes True*. Solving the mystery will probably take longer, since there are so many tricks and curves thrown in. For example, a particular door seems to hold the key to everything you need to know. But we've solved the game, now, and have never seen what's behind that door — if anything. On the other hand, I walked around the haunted mansion with my inventory crammed with all sorts of interesting gadgets — but only used two or three of them to gain the final solution.

The end of the game is ingenious, with bone-chilling sound effects

goading you on towards your brother. There's a little surprise twist at the end, but it will be relatively easy to figure out the answers (provided, of course, that you have a few games in progress saved). Considering the overall complexity of the game, I found the final sequences to be a little easy, but the congratulatory sequence made it all worthwhile. As in *Deja Vu: A Nightmare Comes True*, completing the game earns you a reward in the form of a musical interlude and a printed certificate that details your victory.

With *Uninvited*, Icom Simulations has once again asserted itself as the Mac's foremost adventure game design team. These guys (yes, they're all male) can do things with adventure games that you've barely even dreamed of. The only bad thing about *Uninvited* is that, once you've solved it, you've solved it, and you have to wait until the next release for new adventuring thrills.

Wonder what genre will be the next Icom tackles...fantasy, perhaps? Science fiction? Or maybe a reprisal of the detective or mystery scenarios? Whatever the next game will be about, if it receives the same tender, loving care in terms of plotting, graphics and sound, it too will be a winner. ☞

Tracie Forman Hines is the Senior Editor of *MacUser*.

## UNINVITED

### Overall Rating

Follows Mac Interface  
Printed Documentation  
On-Screen Help  
Performance  
Support  
Consumer Value



None

**Comments:** Icon-based adventure game set in a haunted mansion. Features limited animation and digitized sound effects. **Best Feature:** The button-controlled sentence parser shows players all possible verb commands, making the game easy to learn to play. **Worst Feature:** Once you solve the game, that's it. **List Price:** \$49.95. Requires 512K, external disk drive a plus. Published by Mindscape, 3444 Dundee Road, Northbrook, IL 60062, (312) 480-7667. Copy-protected.



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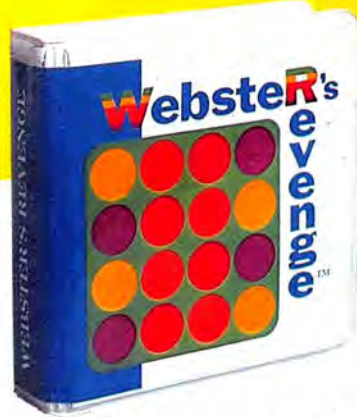


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Cathy Yoder reviews **WEBSTER'S REVENGE:**

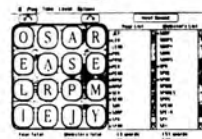
## Webster's Revenge™

AS ADDICTING AS THE RUBIKS CUBE

—Cathy Yoder

Cathy Yoder is a free lance author and computer education specialist from Dallas, Texas.

I almost didn't make the deadline for this magazine because every time I tried to review this program I became so engrossed in Webster's Revenge that I would spend hours trying to beat Webster. Warning: This is an addictive program and may be hazardous to performing your regular routine. Proceed with caution in the evening hours. Webster can lure you into 3 AM sessions. If you enjoy the rubiks cube, boggle, scrabble, solitaire, crossword puzzles, word search, or beat the clock you will love Webster's Revenge. It is a challenging fast paced game that can entertain for hours

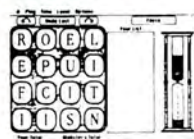


**Scoring:** When the time limit expires, Webster's Revenge will compare the list of words you've found with the list it's found. Since Webster invented the dictionary, he'll throw out any "words" you've found that he doesn't know about. In the unlikely event Webster doesn't like a word that you've found, you may give yourself credit for the word by clicking the word in your list. Your list of words and Webster's list will be available at the end of each game. Words with dots have been found in both lists and you can scroll through the lists to see which words Webster didn't like and which words you didn't find. If Webster's list includes a word that you can't find in the grid, you can click the word to see how it is formed.

**Options:** The LEVEL menu allows you to select the level at which Webster plays the game. The TIME menu allows you to select the length of each round.

**Improvements:** It would be nice to have the capability to input one's own word list. Another feature I would like to see is more sound effects and maybe some music for reward.

Webster's Revenge is priced at \$34.95 and would make a nice stocking stuffer or present for anyone with a Macintosh. Maybe we could have a contest and publish the high scores, but as you can see from my scores and Webster's (Figure 3) I have a lot of practicing to do. I'll get my revenge with Webster yet!!!!!!



Webster's Revenge is a word search game. The display includes a 4 x 4 array of letters and a timer. The objective is to locate, within the time limit, as many words of the highest point value as you can find. Words are recorded in your list using the mouse. Once you've found a word in the array, select the first letter and, with the button depressed, drag the mouse over the remaining letters in the word. After you've completed a word, release the mouse button to record it in your list. Letters must be adjacent (horizontally, vertically, or diagonally) to the preceding letter and letters in the array may be used no more than one time per word. Words must use at least three letters. Two "rotate" buttons at the top of the grid rotate the grid clockwise and counterclockwise to give a different perspective of the game. This function is incredibly fast which shows off Macintosh's capabilities and of course, the programmer's skills.



## Here are some comments from MACazine readers:

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# TAPPING MAC'S NA

by Bob Perez

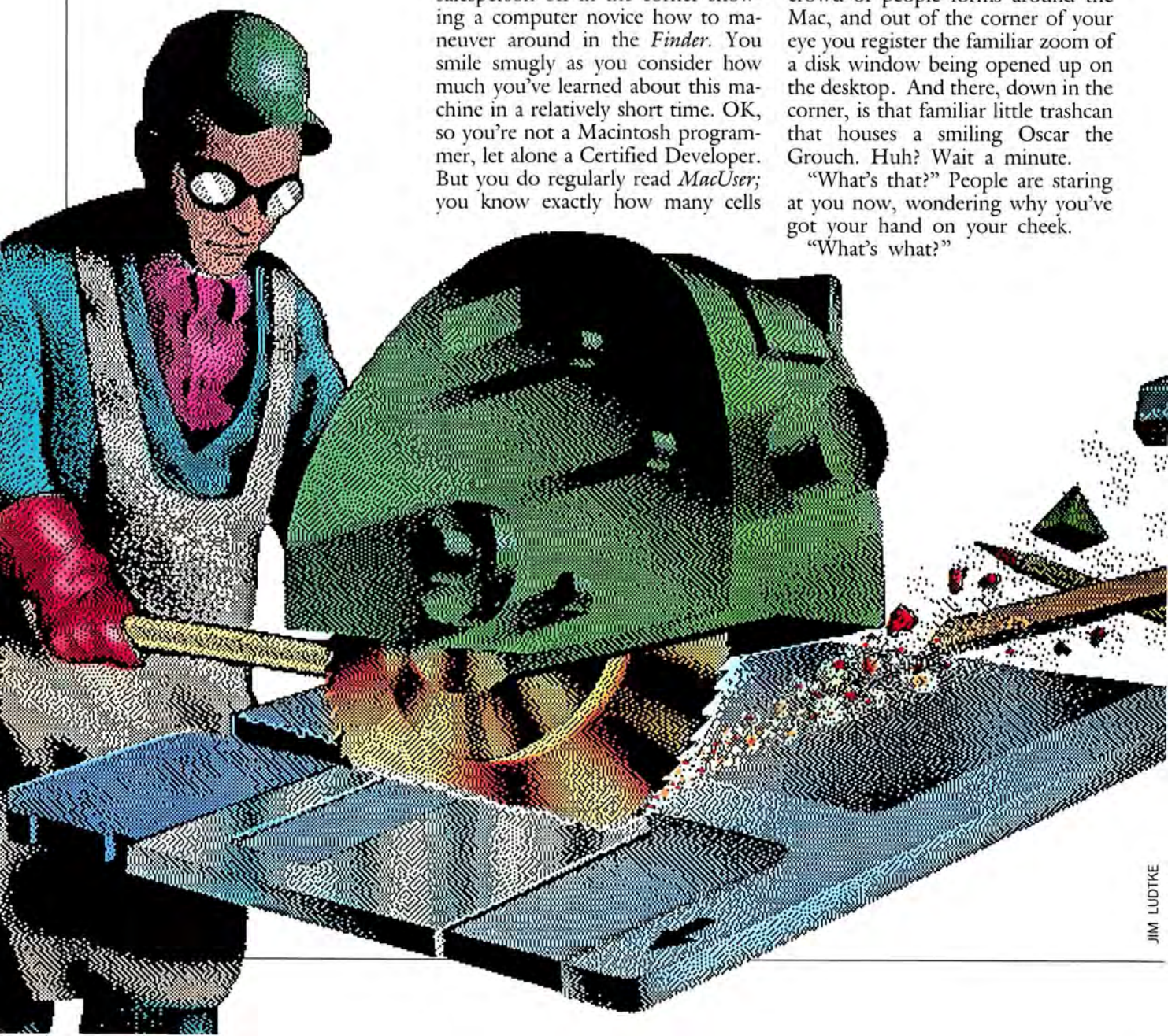
***Ever wonder what's inside your programs and why those things with funny names are there?***

THERE YOU ARE AGAIN, STANDING on the floor of one of your favorite computer stores, checking out some of the latest Macintosh software offerings. You notice a salesperson off in the corner showing a computer novice how to maneuver around in the *Finder*. You smile smugly as you consider how much you've learned about this machine in a relatively short time. OK, so you're not a Macintosh programmer, let alone a Certified Developer. But you do regularly read *MacUser*; you know exactly how many cells

can fit in an *Excel* worksheet (4,194,304); and you stop into CompuServe often enough to know the latest *Finder* version. Hey, you're a Macintosh Power User! A small crowd of people forms around the Mac, and out of the corner of your eye you register the familiar zoom of a disk window being opened up on the desktop. And there, down in the corner, is that familiar little trashcan that houses a smiling Oscar the Grouch. Huh? Wait a minute.

"What's that?" People are staring at you now, wondering why you've got your hand on your cheek.

"What's what?"





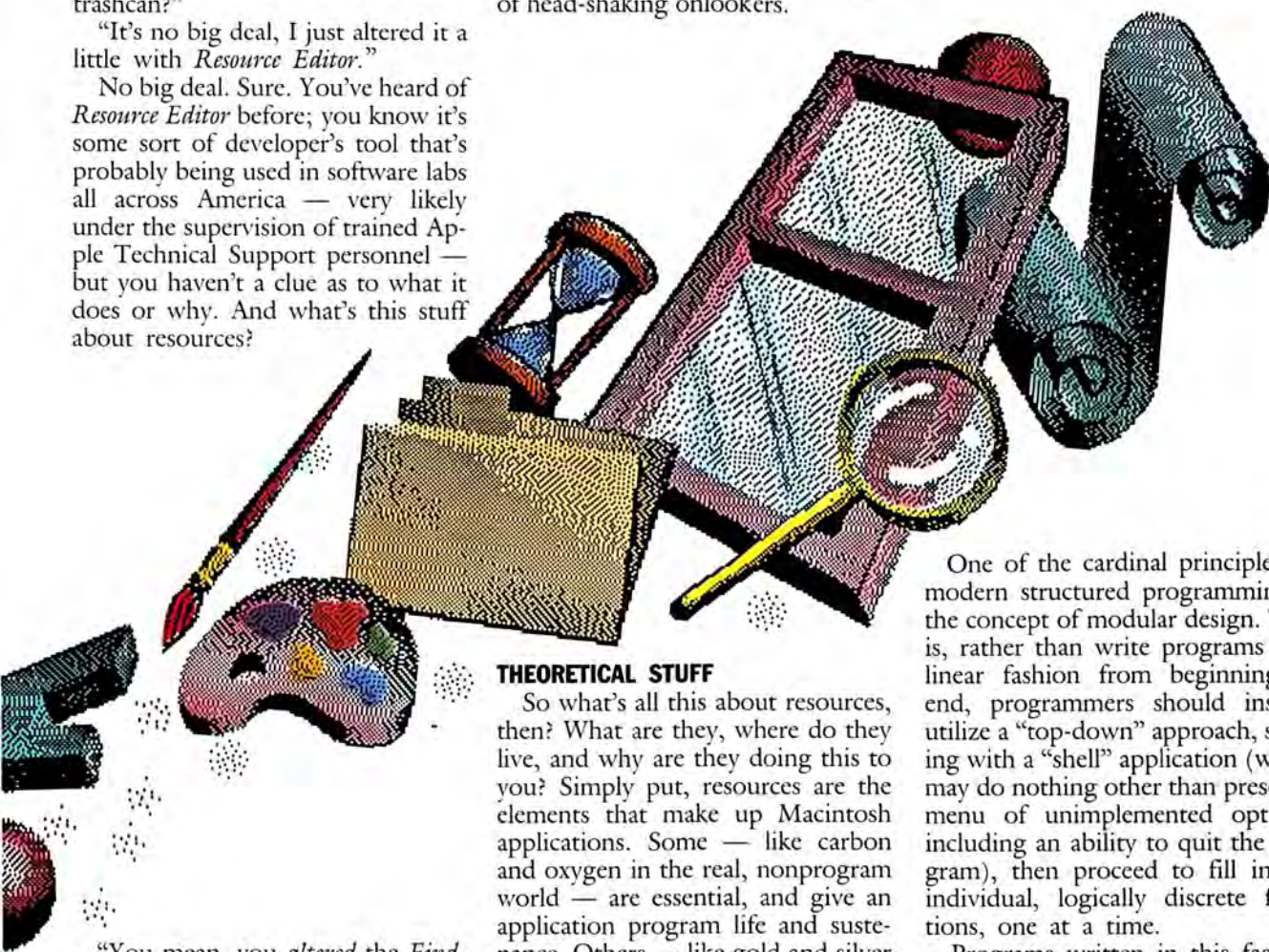
# TURAL RESOURCES

"That trashcan. Where'd it come from? What happened to your Mac's trashcan?"

"It's no big deal, I just altered it a little with *Resource Editor*."

No big deal. Sure. You've heard of *Resource Editor* before; you know it's some sort of developer's tool that's probably being used in software labs all across America — very likely under the supervision of trained Apple Technical Support personnel — but you haven't a clue as to what it does or why. And what's this stuff about resources?

triumph as you lower your head in shame and scurry out past throngs of head-shaking onlookers.



## THEORETICAL STUFF

So what's all this about resources, then? What are they, where do they live, and why are they doing this to you? Simply put, resources are the elements that make up Macintosh applications. Some — like carbon and oxygen in the real, nonprogram world — are essential, and give an application program life and sustenance. Others — like gold and silver — are purely ornamental. Still others — like plutonium — are danger on wheels. But every application program has them.

The whole idea of resources is actually a natural extension of modern thinking in the area of software design. When the Mac was being designed, the programming philosophy known as structured programming was in high vogue at Apple (one result of this was the choice of Pascal — the ultimate linguistic expression of that notion — as the computer language of choice for Macintosh development).

One of the cardinal principles of modern structured programming is the concept of modular design. That is, rather than write programs in a linear fashion from beginning to end, programmers should instead utilize a "top-down" approach, starting with a "shell" application (which may do nothing other than present a menu of unimplemented options, including an ability to quit the program), then proceed to fill in the individual, logically discrete functions, one at a time.

Programs written in this fashion are much easier to develop and maintain, since the individual modules can be tested on their own once the shell is considered "bug-free." If a given module doesn't work correctly, it can be individually replaced or fixed, much like a component in a modular stereo system. It doesn't make sense to drag the whole system back into the shop just because your tuner's on the fritz.

The other main benefit of modular design is the ability to re-use individual components in new, perhaps unforeseen contexts. When writing a program that calculates

"You mean, you *altered* the *Finder*?" you ask, incredulously.

"Sure. It's not hard." The salesperson carefully disguises the fact that this is the first time in 3 years that he's known something that a customer didn't. He smiles smugly.

"You changed the *Finder*'s code? How did you know how to change the *Finder*? How did you know where to look in the program? How did *you* get so smart, anyway?"

"I didn't have to change the code," he replies. "I just altered the trashcan icon in the resource file. You *do* know about resources, don't you?" He slavers openly now, relishing his

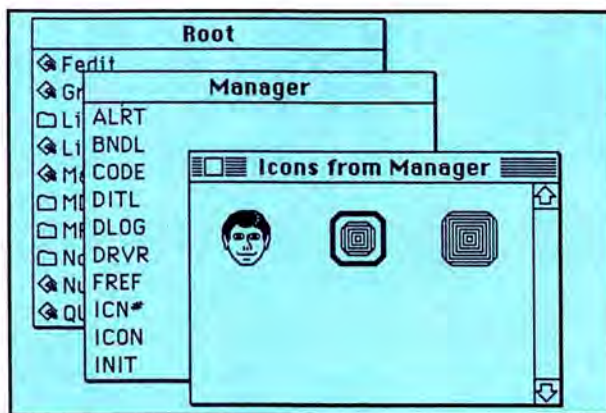


# TAPPING MAC'S NATURAL RESOURCES

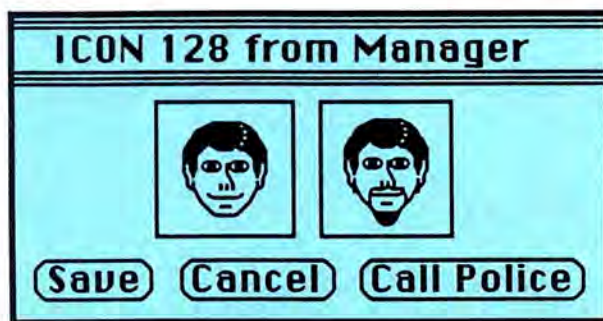
loan balances, for example, it may be a complete waste of the programmer's time to write a small component that calculates interest when the programmer down the hall has already written just such a function. If the function has been carefully designed, it should be easy to incorporate it into the new program without alteration. This has obvious implications for efficiency.

The Macintosh designers took modularity one step further with the resource concept. Resources enjoy both of the advantages noted above. You can replace individual resources as needed, and you can use the same ones in several different applications without modification. But the inspirational genius behind resources was the further notion that resources could be created, altered, extended and removed *without programming*. Part of this inspiration was the perception that the most visible aspects of an application program were its windows, fonts, dialog boxes and other user-interface abstractions. The designers felt that the creation and manipulation of these items should be kept logically distinct from the process of writing the code that determined the actual operation of the program. Thus, they decided that these highly visible items should consist of physically distinct components, or "resources," which are externally accessible and modifiable.

This meant that programmers could write application programs in their usual manner, using their usual programming languages without regard to the exact look or feel of the resources employed. Then, using tools provided by Apple, the resources themselves could be easily



A typical Resource Editor display. Note the visual display of resources (in this case, ICON resources).



A scene from an imaginary ICON Editor. Several public domain and shareware utilities exist for manipulating ICONs and other resources.

and intuitively created and altered, without the need to go back and modify any of the program code. In fact, once a program was completed, someone other than a programmer could actually work on the program's aesthetic aspects, without knowing a thing about programming!

## PRACTICAL STUFF

So where do you find a program's resources and how do you get to them? Unlike most computers (isn't that a familiar phrase?), the Mac keeps its application programs in two physically separate files: One is called the application's "data fork," and the other is the "resource fork." Every application program is made up of these two files, although the duality is completely transparent to the user (when you "look" at the disk's contents, you "see" only one file). The data fork is a file made up of a continuous stream of linear data; it represents the traditional way of storing data in computer files. Both IBM PC and Apple II programs, for example, use only a data fork.

Most computers work by accessing data at a particular offset (count-

able location in memory) from some point in the file (a "mark"), and then continuing in a serial fashion to read or write succeeding locations in the file. The Macintosh file system uses this method to handle its data forks. Using the File Manager routines in the Mac's toolbox, a programmer can open up a data fork and read in the information it contains, or write to the file, and in both cases the data is read or written to a position relative to the same physical point in the file.

Resource forks are handled quite differently. They consist of chunks of logically related data comprising the individual resources, usually containing strings, windows, dialogs, menus and all sorts of other things that make a Macintosh application unique. These discrete units are stored in related groups of "ResTypes," and are clumped together in the resource fork. A ResType is represented by a four-character code that is unique to that ResType. For example, the code FONT represents all font ResTypes, and icons are similarly grouped together under the ICON ResType. These bundles of data (related by class) are ultimately

## BE SAFE, NOT SORRY

Hacking around with the innards of a Macintosh application is not something to be taken lightly; these programs have the power to *totally* mess up your files. (Read that last sentence again!) Make sure that you are working on *backups*, not on originals; there is no reason for you to have to look down at a tear-stained keyboard while ripping out your hair. Don't take the chance of trashing a file (or disk) that you have no backup for.





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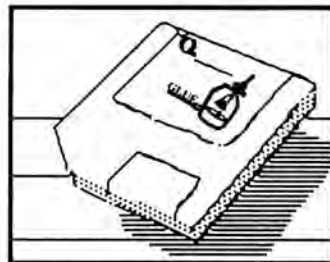
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# TAPPING MAC'S NATURAL RESOURCES

what is referred to when we talk about resources.

The program's operating code calls on the Resource Manager to access these resources, making them accessible to the program and visible (if appropriate) to the user. The Resource Manager is a collection of routines built into the ROM which are used to open up resource forks and manipulate their resource data. Note that the Resource Manager knows absolutely nothing about the actual contents of those resources — it simply extracts and presents previously defined resources. This is a key concept and allows you to alter resources with one of the several available resource tools, virtually without regard to the underlying application. You could, for example, use a resource editor to alter the size of a window that has been defined as a resource in a given application. Later, when you ran that program it would come up with its window sized as you had desired. Alternately, you could use a resource editor to alter the *Finder's* trashcan icon. Sound familiar?

Every individual resource is distinguished by a unique Resource ID within its own ResType. That is, there can only be one resource of the type ICON with a given ID number in memory at any given time, although resources of a different ResType could have the same ID without conflict. Thus, the particular

resource identified as ICON 128 does not conflict with the resource WIND 128. Similarly, there is no conflict between ICON 128 and ICON 129. The Resource Manager uses this unique typing and numbering scheme to locate specific resources which are then read into memory as needed.

When a program requests a particular resource, the Resource Manager searches the pool of currently open resource files. This pool is made up of the currently executing application file's resource fork, the current *System* file (which really is just one big resource file), and any particular resource files that the application has explicitly opened.

When the Resource Manager needs a particular resource it searches all open resource files in a particular order. Typically, it starts with the most recently opened resource files. When you first start up your Mac, the *System* file is opened, so it usually is the last in the chain to be searched. This allows you to override system resources with those of your own. For example, the *System* file contains an ICON with the ID 0 for one of its Alert box displays. If you were to create your own icon with ID 0 and put it in your application program (which is opened *after* the *System* file, and thus searched first), any time the Mac tried to display the Alert box using ICON 0, it would use the first resource fitting that description and

then stop searching. Hence, your icon would show up in the Alert box and the icon appearing in the *System* file would not be used at all.

Some resources are so commonly used that Apple thought it best to include a mechanism for creating templates (or empty patterns) for their most frequently used variations. In all the cases where Apple created these templates they also assigned them their own special ResTypes. An example of this is the WIND type, representing a window template and found in nearly every application. In this case, the window itself does not appear in the resource fork; instead, there is a template from which a window can be built. The template in this case simply specifies the size and location of the window, and some information telling the program how to draw it. The application program would typically call the Resource Manager to get the template from the resource file, and would then supply the specifics to build the particular window. Other very common template types are ALRT (alerts) and CNTL (controls).

One special ResType to be aware of is the DITL. This stands for Dialog Item List and consists of all the items contained in a particular dialog or alert box. Text, controls and icons appearing in dialog boxes will typically be stored in a DITL resource. If there's a DITL, there will always be a corresponding DLOG or ALRT resource which is really the template for the Dialog, specifying only the size and shape of the Dialog box, as well as the ID of its corresponding DITL. The DITL contains the components that make up a particular Dialog or Alert.

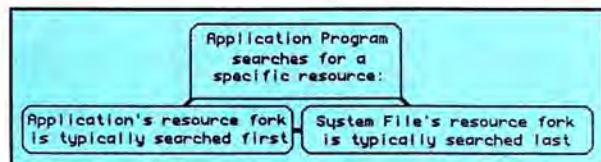
## HANDS ON

What tools are available for manipulating resources? There are two major, general-purpose tools and several more narrowly defined ones. Foremost among the general-purpose tools is *Resource Editor* (*ResEdit*), Apple's own high-powered resource editing utility. With *ResEdit*, you have the power to create, alter and/or destroy virtually any resource in any shape or form. As with any other powerful utility, great care

**ResEdit's opening screen.** This resource editor is considerably friendlier — although less powerful — than *ResEdit*.



The order in which a program searches for resources is important.





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# TAPPING MAC'S NATURAL RESOURCES

should be used with *ResEdit*, as it can and will permanently alter your resource data. Of course, never use it on an original disk and you might want to keep Dennis Brothers' recommendation in mind: "Use *ResEdit* only on a disk with which you wouldn't mind wiping off your shoes."

*ResEdit* is definitely a programmer's tool, and until very recently it wasn't even documented anywhere. And unless you're a Macintosh developer, you won't be able to make much sense out of the documentation that does exist, so you're best off familiarizing yourself with one of the other utilities.

*REdit* (sometimes called the *European Resource Editor*) is another Apple-supplied tool, and its opening dialog box portraying various multilingual expressions of the word "Welcome," immediately conveys a much more user-friendly atmosphere than its more imposing counterpart. With *REdit* you'll still be able to alter many — but not all — resources, including icons, dialogs, controls and windows. Generally, you won't be able to alter anything that can cause trouble. Alterations to the cosmetic features of a program may leave you with an aesthetic mess, but you're not likely to crash the system with an ugly icon. With *ResEdit*, on

the other hand, you could alter even the very code that makes the application run.

This brings up a point about the wide variety of ResTypes. An application's program code is itself stored as a resource of the type CODE. When you double-click on an application's icon, one of the first things that happens is that the Resource Manager opens up the resource fork of the application file, loads resources of the ResType CODE into memory, then calls on the system to attempt to execute appropriate portions of the CODE resources. There are other, related ResTypes such as PROC (procedure), INIT (special initialization code that is executed each time you start up your Macintosh), and DRVr (primarily desk accessory code). These ResTypes should *never* be fiddled with unless you're very confident that you know what you're doing.

From time to time, other resource editors have appeared. *Dialog Creator*, *Menu Editor*, and *IconEdit* are three of the more well-known such editors. Their functions can be surmised from their titles. I haven't found much use for these, as I'm comfortable with the power and generality of *ResEdit* and *REdit*.

Now that you've been introduced to resources, you probably want to go off and start diddling icons and windows. Bearing in mind the warnings I've mentioned, your best bet is to start off with something like *REdit* and try altering resources of the type ICON, DLOG, DITL and WIND. Both *ResEdit* and *REdit* are available in the Software Supplement directly from Apple or on the Mac Developer's Forum on CompuServe's MAUG. They are also available on The Source, on Delphi (ICONtact is the group there), and Genie. Some users' groups make them available on their library disks and they can also be found on Mac-oriented local BBSs. On MAUG, they appear in DL8 under the name REDIT.APP and RESED.APP, respectively. Go forth, seekers, and be resourceful. ☐

Bob Perez is a California lawyer turned programmer and writer.

## RESOURCES TRANSLATED

The list of ResTypes is nearly endless. Here are some of the major ResTypes that you will encounter as you start probing into programs:

ALRT	Alert template (see article)
BNDL	An application program's "Bundle" resource specifying its icons
CNTL	Control template
CODE	An application program's actual program code
CURS	Data for a user-defined cursor
DITL	Dialog item list (see article)
DLOG	Dialog template (see article)
DRVr	Code specifying operation of a desk accessory or other driver
DSAT	"Deep S*** Alert Table"; don't ask
FCMT	Finder comments; holds the Get Info box information for the <i>Finder</i>
FKEY	Code specifying operation of an FKEY (COMMAND-SHIFT) routine
FOBJ	Finder objects; hold folder information for the <i>Finder</i> (MFS)
FONT	Data making up a particular font
FREF	Outlines an application's icon usage for the <i>Finder</i>
ICN#	An icon list; usually contains pairs of ICONs for the <i>Finder</i>
ICON	Data making up an individual icon
INIT	Code executed at system startup time
MACS	Macintosh system file type
MBAR	Menu bar data
MDEF	Code specifying how to draw menus
MENU	Data making up menus
PACK	Package; contains much-used code routines. Examples are Standard File, Floating Point
PAT	(There's a space after the T. It must be there, as all ResTypes must contain four characters.) Data making up a pattern
PAT#	A pattern list
PICT	Picture definition data
PREC	Printing record data
STR	(There's a space after the R.) Data for an individual string
STR#	String list
WDEF	Window definition; code specifying window drawing, actions
WIND	Window template (see article)

In addition, Apple has reserved all ResTypes using all-lower case letters. In the newer systems (for the Mac Plus, for example) Apple has created new ResTypes employing such resources as peek, bmap, ctab and others. Look around in

the resource forks of your *System* and *Finder* files. In particular, play around with the LAYO resource (see "Inside Improvements" in this issue). But remember, be prepared to wipe your shoes off with the disk when you're through.



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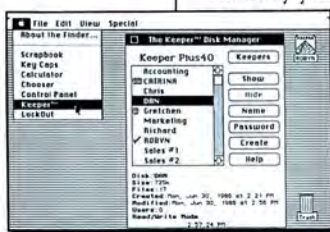
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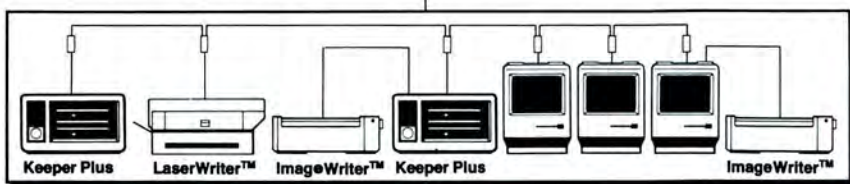
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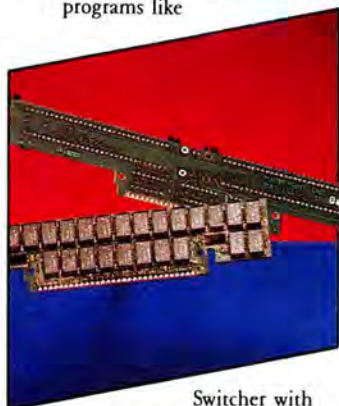
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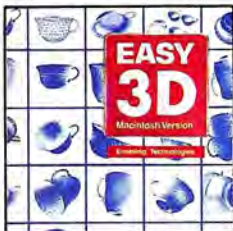
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Adapts MacPlus serial port to Mac 512/128 standard  
Mac-to-ImageWriter II Cable \$18  
Mac-to-ImageWriter III/Apple Personal Modem  
MacPlus-to-ImageWriter II Cable \$18  
Also works with Apple Personal Modem  
Mac Printer Cable \$18  
Mac to serial printer

**Smith & Bellows**  
Mahogany Disk Case \$28  
Holds 90 diskettes

## DISKETTES

Sony 3 1/2" (10) SS/DD **SPECIAL** \$17

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## LoDOWN



### Hard Disks

From LoDOWN

Here's our pick for the best value in a SCSI drive for the Mac Plus! Available in sizes to fit your needs and prices to fit your budget, LoDOWN drives are fast, reliable, and economical. LoDOWN has a well-ventilated case that needs no fan, and it contains a built-in surge suppressor. Daisy-chain as many as eight LoDOWNs for nearly unlimited storage.

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Requires Mac Plus

20 Meg SCSI Drive	\$895
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Includes hard disk install

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Hard Disk Backup **\$39**  
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Removes software copy protection to install on hard disk

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New spelling checker catches capitalization & homonym errors too

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Save time w/ RAM disk & print spooler

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Hacker's backup utility and more!

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Partitions hard disk, network disk server, print spooler & more!  
ProAPP **NEW \$CALL**  
ProAPP Modem **NEW \$CALL**

### TopDesk

From Cortland Computer, Inc.

**\$39**

TopDesk contains seven easily installed desk accessories that add power and versatility to any Mac software. TopDesk lets you print high-quality text and graphics in the background while you work; see up to eight MacWrite documents at one time from within



any application for instant cut and paste; create macros for recalling long paragraphs and even entire Command-key sequences; define your own Command-key assignments for Menu selections; and much more. If you're looking for one answer to many needs, order TopDesk today.

Requires 512K, Mac Plus, or Mac XL

### Fanny Mac

From Beck-Tech

**\$79**

Why risk losing valuable data by letting your Mac overheat when it's so easy and inexpensive to install Fanny Mac? Fanny Mac keeps your Mac cool and your data safe by reducing the operating temperature of your Mac as much as 50 degrees. Its compact design is elegant; Fanny Mac fits almost invisibly into your Mac's handle. And it installs in seconds with no tools. Its "pass through" power assembly means you



need only one power socket for both your Mac and Fanny Mac. And surge suppression for your Mac is built right in. Remember, the more memory and peripherals you have, the more heat your Mac generates. Get Fanny Mac to avoid system burnout.

### Record Holder

From Software Discoveries, Inc.

**\$75**

Record Holder is a full-function file/data manager with more power than packages costing far more. The



concise manual and 100+ on-line help screens make Record Holder easy to learn and use. Flexible report formatting makes this database ideal for small- to medium-size businesses. Searches are fast and versatile; an unlimited number of fields or records are allowed in any file; and a unique Table of Contents allows instant access to all records in a file. Generate invoices and mailing labels with a click of the mouse. Another plus: Record Holder works on any Mac with any drive. Put Record Holder to work for you today.

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Best communications software!  
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Includes 3 connections; send electronic mail over AppleTalk  
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Upgrade your Mac Plus memory to 2 meg. Plugs into standard SIM sockets; includes Mac Chill fan and software

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Absolute plotting device, great for tracing and drawing

## HARDWARE

Cuesta  
90 Watt Datasaver **\$299**  
200 Watt Datasaver **\$399**  
Protection from power blackouts

### New Owner's Kits

From Icon Review

If you're serious about getting the most from your Mac, these kits offer all the accessories you'll need. Save yourself time and money by ordering one of the comprehensive kits we've assembled. Each kit includes:

- **Eichner Disk Holder**—Model 1032 holds a total of 60 diskettes, two across. Internal dividers make it easy to organize disks.

- **Sony Diskettes**—A box of 10 disks, the best available for the Mac. Double-sided disks are shipped with the Mac Plus kit.

- **Mouspad**—Give your mouse nine lives with this 7" x 9" anti-static, foam-backed desktop mouse pad.

- **Dust Covers**—For Mac and keyboard. These well-tailored waterproof ripstop nylon covers offer important protection from dust and static.

- **MacTilt**—This ergonomic stand lets you adjust the height, angle, and rotation of your Mac with ease.



New Owner's Kit for 128/512K Macs with SS/DD disks **\$132**

New Owner's Kit for Mac Plus with DS/DD disks **\$142**

Buy a New Owner's Kit and save on the Ehman 800K External Drive a \$199 value.

New Owner's Kit for 128/512K Macs w/Ehman Drive **\$320**

New Owner's Kit for Mac Plus w/Ehman Drive **\$330**

Systems Control  
Mac Gard **SPECIAL \$55**  
Protect your Mac from power surges

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ThunderScan **SPECIAL \$175**  
ThunderScan Adapter Kit **NEW \$89**  
For MacPlus

## DISK DRIVES

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AST-2000 **\$2195**  
20 meg Winchester; 20 meg tape backup  
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74 meg Winchester; 60 meg tape backup

Ehman Engineering  
800K External Drive **\$199**

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CALIFORNIA **800/824-8175**



### MacTablet

From Summagraphics

MacTablet is the closest thing to a natural input device you can find for the Mac. It's ideal for graphics, perfect for sketching or tracing, and it's more precise and more comfortable to use than either a mouse or trackball. In fact, it's not unlike the expensive graphics systems long available only for large computers.

MacTablet can be connected to either the printer or modem port, and it includes easy-to-use 3.0 Version software. MacTablet works with all Mac software and comes in two sizes. The 6" x 9" size has a resolution of 500 lines/inch; the 12" x 12" size has a resolution of 1000 lines/inch.

6" x 9" MacTablet	\$299
12" x 12" MacTablet	\$399





## Fact Finder \$49

From MindWork Software  
Factfinder is one of our favorite, indispensable tools. Unlike database programs, Factfinder is designed to store and organize text, notes, and other free-form information that might otherwise clutter your desk with scraps of paper. While taking notes, for example, you simply type a note into a factsheet, name the factsheet, select the keywords by which you will retrieve it, and save it to disk. Later Factfinder can sort through all your note factsheets and retrieve them individually by name, keyword, or date created or modified. Factfinder is a must for every researcher, writer, student, teacher, and professional.

## BUSINESS

<b>Aegis</b>	
Doug Clapp's Word Tools	\$45
Checks text for punctuation, wordiness, and more	
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Omnis 3 Plus	<b>SPECIAL</b> \$289
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<b>Borland</b>	
PhoneLink & SideKick	\$59
Desktop phone/schedule organizer; dials for you, too!	
<b>Cricket Software</b>	
StatWorks	\$79
Great value with best statistical graphs	
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MindSight	\$179
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<b>Forethought</b>	
FileMaker	\$105
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ColorChart	<b>NEW</b> \$32
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Excel Notes	<b>SPECIAL</b> \$42
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WillWriter	<b>SPECIAL</b> \$30
<b>Living Videotext</b>	
ThinkTank 512	\$99
<b>Micro Planning Software</b>	
MicroPlanner Plus	\$295
Enhanced version; requires 512K	
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Works	\$225
<b>MindWork Software</b>	
Factfinder	\$49
<b>Monogram</b>	
Dollars and Sense	<b>SPECIAL</b> \$81
Forecast	<b>SPECIAL</b> \$41
<b>Odesta</b>	
Helix 2.0	<b>SPECIAL</b> \$99
Double Helix	<b>SPECIAL</b> \$289
Requires 512K or Mac Plus	

## Bernoulli

Boxes From Iomega

Iomega's Bernoulli Box mass storage devices for Mac Plus offer a fast, reliable, and cost-effective solution for any office. These Bernoulli Boxes work off the Mac Plus' SCSI port, allowing auto-boot, HFS support, lightning-fast speed, and daisy chaining with other SCSI devices. Average access time is 35 milliseconds, with a data transfer rate of 1.13 meg/sec. The unlimited data storage and efficient backup provided by 10- or 20-megabyte removable data cartridges put the Bernoulli Boxes in a class by themselves. While your drive stays in place, the data is highly portable and easily stored for optimum flexibility.

10 Meg Single-Cartridge Drive	\$1499
10 Meg + 10 Meg Dual-Cartridge Drive	\$2099
20 Meg Single-Cartridge Drive	\$1899
20 Meg + 20 Meg Dual-Cartridge Drive	\$2699
10 Meg Cartridges (3pk)	\$169
20 Meg Cartridges (3pk)	\$219
Head Cleaning Kit	\$75

## Electric Checkbook

From State of the Art

\$29

Electric Checkbook is a personal financial manager that handles up to five bank accounts on a 128K Mac or ten on a 512K. Define categories for income, expenses, assets, and liabilities. Reconcile bank statements and checkbooks, calculate profit and loss, and determine net worth. Use a special "What If?" feature to see the effect of a payment schedule before



implementing it. You can even print your checks on continuous forms. (Sample checks and order forms are included.)

ORDERS  
CALIFORNIA

## Mac Zap

From Micro Analyst

\$39

If you mistakenly throw out a file and empty the Trash, Mac Zap



can retrieve it! It can even resurrect your hard disk or a crashed floppy that the Mac wants to reinitialize. And Mac Zap is a superior disk copy and software-backup program - copying master disks and moving protected programs to hard disk. Use Mac Zap to plumb the depths of your Mac - it disassembles applications, searches memory or disk blocks, compares disks, analyzes disk structure, and performs full-screen edits.

Mac Plus compatible

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• Accounts Payable	\$89
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## GRAPHICS

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<b>Altisys Corp</b>	
Fontastic Font Editor	\$25
<b>Ann Arbor Software</b>	
FullPaint	\$59
<b>Casady Company</b>	
Fluent Fonts	<b>SPECIAL</b> \$29
Fluent Laser Fonts	\$49
Six types disks available; call for details	
<b>Challenger Software</b>	
Mac 3D	<b>SPECIAL</b> \$119
<b>Cricket Software</b>	
Cricket Graph	\$129
Plots 20 times more data points than Excel	
<b>Datafoed Software</b>	
DrawForms	<b>SPECIAL</b> \$30
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MacForms	<b>SPECIAL</b> \$42
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DrawArt	<b>NEW</b> \$29
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Indexed clipart accessed as Desk Accessory	
<b>Enabling Technologies</b>	
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Most powerful drafting tool for the Mac	
<b>I/O Design</b>	
ColorPrint	\$25
Print your graphics in color!	
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More	<b>NEW</b> \$CALL
Outlining with presentation graphics	
<b>Manhattan Graphics</b>	
ReadySetGo 2.1	<b>SPECIAL</b> \$99
Best value in page processing—fast, flexible, and powerful!	

<b>Silicon Beach Software</b>	
Accessory Pak #1	\$21
Silicon Press	<b>SPECIAL</b> \$42
Makes color labels on your ImageWriter II	
<b>SoftStyle</b>	
Colormate	\$59
Print MacPaint, other documents in color	
Colormate Art	\$29
Colorful clipart library	
<b>Springboard Software, Inc.</b>	
Art a la Mac	<b>NEW</b> \$29
More than 600 clipart pictures	
<b>Symmetry</b>	
PictureBase	<b>SPECIAL</b> \$48
Organize your picture files for easy access!	
<b>T/Maker</b>	
ClickArt Effects	\$27
Add tools to MacPaint	
ClickArt Letters	\$27
ClickArt Personal Graphics	\$27
ClickArt Publications	<b>NEW</b> \$27

## MUSIC

<b>Kette Group</b>	
MacNifty Sound Digitizer	\$99
MacNifty Stereo System	\$75
New version—better sound—includes speakers	
MacNifty Studio Session	\$69

## HOME

<b>Rubicon</b>	
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<b>X-10</b>	
Powerhouse	<b>NEW</b>
Computerize appliances for convenience & security	
• Appliance, Lamp & Wall Modules	\$15 each
• Burglar Alarm Interface	\$26
• Computer Interface	\$69
• Controller	\$9
• Thermostat Control Set	\$69

## Double Helix

From Odesta

\$289

Double Helix packs double the punch you've come to expect from Odesta. Expanded power, flexibility, and ease of use make this the relational database for professional information management.

Double Helix features: the ability to create customized pull-down menus; three levels of password protection; subforms for easy invoices and powerful reports; expanded data import/export; many new user-oriented additions and modifications; global delete; speed and statistical optimization; compatibility with the Mac Plus, LaserWriter Plus, and HFS; and Odesta's excellent technical support.

Requires 512K or Mac Plus and external drive



## EDUCATION

<b>First Byte</b>	
Kid Talk	<b>SPECIAL</b> \$39
Smoothtalker	<b>SPECIAL</b> \$49
Speller Bee	<b>SPECIAL</b> \$39
<b>Great Wave</b>	
KidsTime	\$35
<b>QED Information Services</b>	
Typing Made Easy	\$35

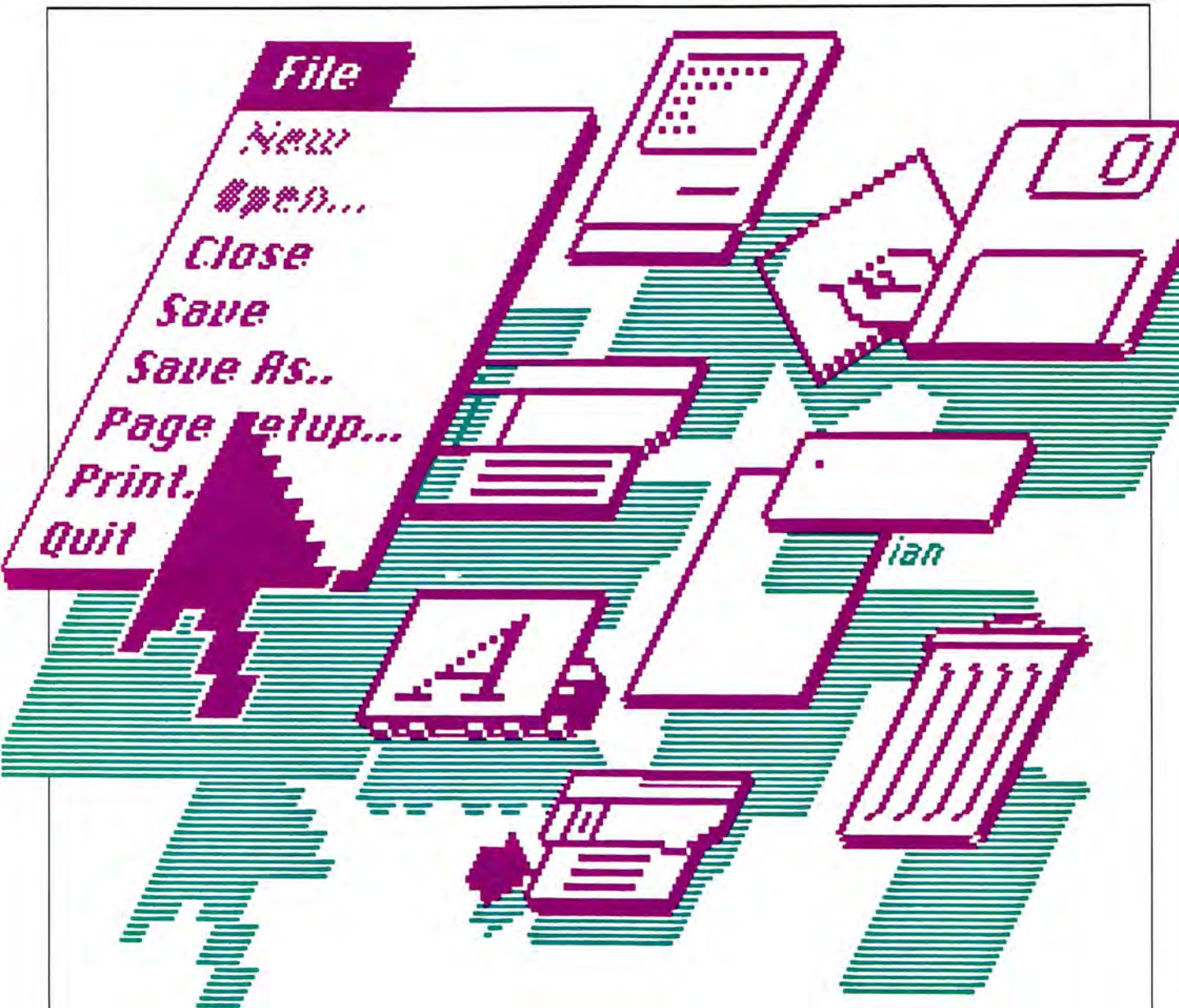
## GAMES

Too many games to list all! Please call for prices of your favorites.	
<b>Broderbund</b>	
Ancient Art of War	\$29
<b>Electronic Arts</b>	
Pinball Construction Set	\$27
<b>Microsoft</b>	
Flight Simulator	<b>NEW</b> \$33
<b>Psion</b>	
Psion Chess	\$31
<b>Simon &amp; Schuster</b>	
Paper Airplane Construction	\$23
<b>Spectrum Holobyte</b>	
Orbiter	<b>SPECIAL</b> \$26

## DESK ACCESSORIES

<b>Cortland</b>	
Top Desk	\$39
<b>Dubl-Click Software</b>	
Calculator Construction Set	\$32
New low price!	
<b>Imagine Software</b>	
Smart Alarms	\$39
Integrates appointment book with alarms—flashes timely reminders for appointments	
<b>Target Software</b>	
MacLightning 2.0	<b>SPECIAL</b> \$54
THE breakthrough design in spelling checkers; requires two drives	
• Legal Dictionary	\$69
• Medical Dictionary	\$69
• Merriam Webster Thesaurus	\$33
Dictionary supplements require MacLightning	





IF AN APPLICATION PROGRAM doesn't meet your needs, consider changing it. While it's not possible to make major functional changes in most programs, you can often easily change the program's appearance, add new COMMAND key combinations, and otherwise make the application more to your taste.

The tool best suited for inside improvement is Apple's *Resource Editor* (*ResEdit*). This powerful program can modify any and all resources to your heart's content. Since it can also modify them to the point of unusability, be sure to read and follow directions carefully and work on a backup copy (call it "My Mucking Around Copy," or something similar).

We'll start by fixing the *Finder*. It's the application that manages the rest of your applications. Both *ResEdit* and *Finder* have gone through many versions. Here, we'll be discussing and using *Finder* version 5.3 and *ResEdit* version 1.0D12. Unless you have a 128K Mac, Apple recommendations (at press time) were that you use *Finder* 5.3 along with *System* 3.2. You can get upgrades of System software at your dealer by bringing in your masters and making a copy at no cost or by buying a \$15 kit that contains two disks and a manual. The latest software is also available from the Mac forums on CompuServe, Delphi and Genie. (If you choose one of these services, you'll have to pay for the connection time

involved in transferring the files to your computer. This can be considerable, but these services may be the easiest way to get the software if you don't have a good dealer nearby.) What we'll do here also works on *Finder* version 5.2, but may not work on earlier versions.

Any version of *ResEdit* from 1.0D5 on up will handle what we're going to do. Earlier versions won't. Get *ResEdit* from a Mac national service, a local BBS, or from one of the users' groups.

#### YOUR PERSONAL DESKTOP

*Finder* versions 5.1 and up contain something called a LAYO resource. LAYO stands for "desktop layout," and the information in this resource



# INSIDE IMPROVEMENTS

**Modify your System and applications  
for improved performance  
and ease of use.**

BY  
STEVEN BOBKER

controls the appearance of your desktop. Fortunately *ResEdit* has a special LAYO template (see "Tapping the Mac's Natural Resources" in this issue for more on templates), so we can change the look of the desktop without resorting to translating and modifying hex code.

Start by launching *ResEdit*. Then, in turn, open (by double-clicking on them) the copy of the *Finder* you have chosen to modify, the LAYO resource in that *Finder*, and, finally, LAYO = 128. After a few seconds the actual resource will open. Move the window (by dragging in the Title bar) up so you can see more of it at once.

Now, starting at the top, here's what each line does. Font ID is the

font number of the font used inside the desktop. Normally this is Geneva (Font number 3), an exceptionally readable font. You can change it to anything you want, but remember that if the font chosen is not available in the size chosen, the Mac will scale another size and the results will be marginally readable (if you're lucky). If you want to change the font and don't know the number of the font you want, use *ResEdit* to look at the FOND resources in the *System* file. There you will find each font listed along with its ID number. You can also examine the actual font resources. However, determining the font ID from the resource IDs is a bit more complicated. The rule for determining the font ID is: Subtract

the font size from the ID number shown and divide by 128. For example, Geneva 9 is ID = 393, so  $393 - 9 = 384$  and  $384/128 = 3$ .

Font Size is the next value in the LAYO window. Simply type in whatever size you want. The normal value is 9 point type. That's a bit small for some users with less than perfect eyesight. Try 12-point type. You may find it a big improvement. Sizes larger than 12 point tend to take up too much screen room. Try 24 point once, just to see what happens.

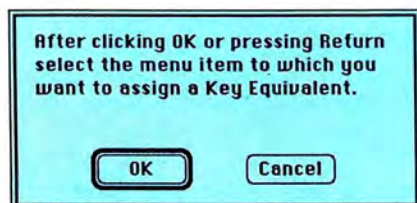
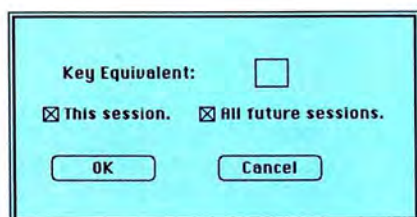
Screen Hdr Hgt is the height (in pixels) of the area where the number of files and space used and available are displayed. The default value is fine for 9-, 10- and 12-point types. If you change this value you'll also have to modify the next four items which control the exact locations of the various rules and the top of the vertical scroll bar. Don't fool with these unless you use very large type.

Window Rect defines the size of a default window (that is, a window that is opened for the first time). If you have not used the grow box, your desktop windows are this size. The values shown are in pixels from the top left corner of the screen. The first value is the distance from the top of the screen to the top of the window, then the distance from the left screen edge to the left edge of the window, then the distance to the bottom of the window and finally the distance to the right edge of the window. Thus the default window starts at a point 62 pixels down and 14 pixels from the left edge.

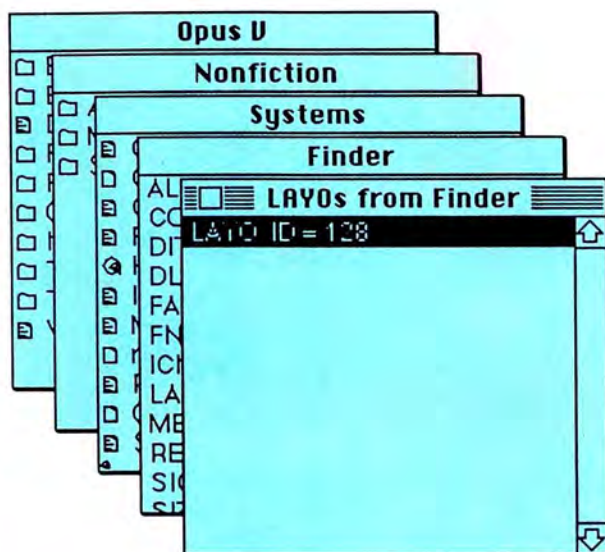
The next ten items, Line Spacing through Reserved, determine how the non-iconic (Name, Date, Size and Kind) views of the desktop appear. Line Spacing is simply the spacing in pixels between entry lines. The default value, 16, is fine for type sizes up to 12 point, although you might want to increase it to 18 or even 20 for easier readability with 12-point type. The tradeoff is that there will be fewer items for a given



## INSIDE IMPROVEMENTS



Menu Key's on-screen presence.



The appearance of the desktop is recorded in the LAYO resource. Get to it in *Resedit* by double-clicking your way.

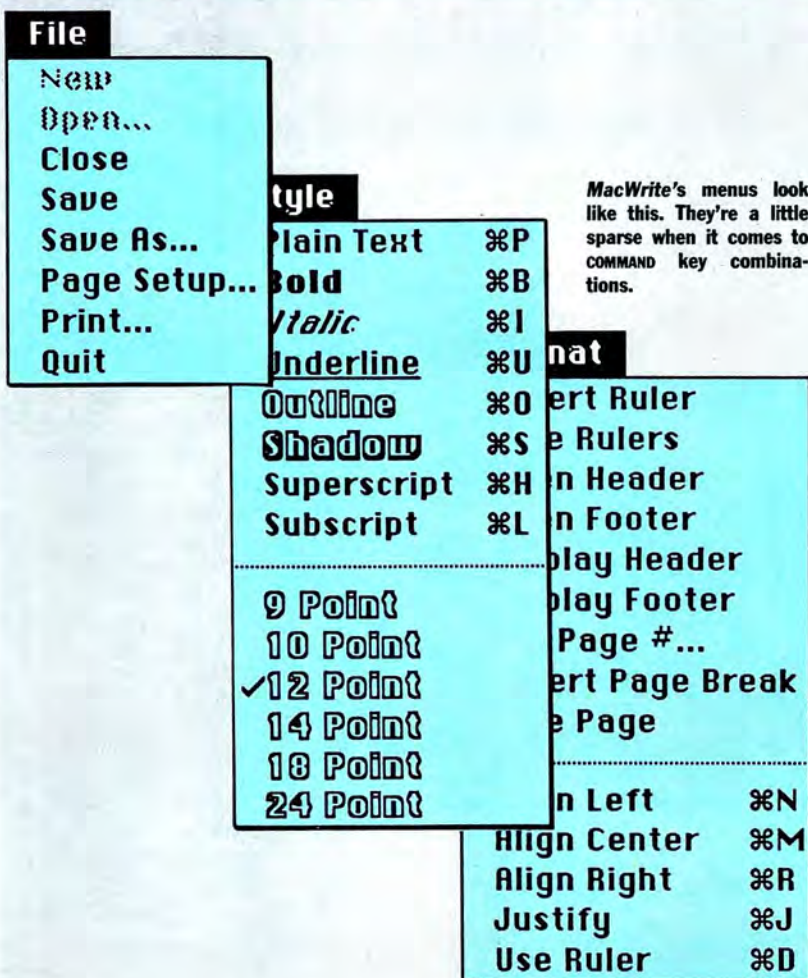
window size. Tab stops 1 to 5 are simply that, the tab positions used in drawing the window. They'll have to be increased a bit (say 6 to 8 pixels for the second, 12 to 16 for the third, and so on) if you use 12 point type. Tab stops 6 to 8 don't seem to have any uses at the moment. They are there in case future *Finders* provide more information.

Column Justification controls the position of the name, size, kind, last modified date and last modified time data. These columns can either be left or right justified. This section requires a hex byte (two hex digits) so there are 256 possible combinations ranging from all columns left justified to all columns right justified. Some combinations are repeated. The default value, \$02, draws everything left justified except for the size data, which is right justified. The Reserved item does not seem to be used.

Moving on, we come to the area where the iconic views are defined. Icon Horz. spacing and Icon Vert. spacing define the center to center distances (in pixels, as usual) of large icons. These values should be increased to approximately 80 when using 12-point type.

Icon Vert. phase defines the vertical offset between adjacent columns. This up and down, wavy effect will make your desktop much more readable, especially if your file names are

## ADDING COMMAND KEY POWER TO MACWRITE



MacWrite's menus look like this. They're a little sparse when it comes to COMMAND key combinations.





The big cursor and the regular cursor.

on the long side. One warning here: A bug will cause total *Finder* failure if you set the phase equal to exactly one-half the vertical distance. Every other value is fine.

Small Icon Horiz. and Vert. define the positions of the small icons, while Default view indicates whether a new window opens showing small icons (0), large icons (1), name (2), size (3), kind (4) or last modified time and date (5).

Filler is apparently a typographical error. I think they meant Killer. Changing the default value causes unpredictable and permanent changes in the LAYO. Changing back to the original value does *not* undo the damage. Stay away from this one!

The Text view date determines the date format in the non-iconic window views (\$0000 gives MM/DD/YY; \$0100 gives Day and date, Month 19XX; \$0200 gives Day abbreviated and date, Month abbreviated, 19XX; and \$0300 and up give Day and date, Month, 19XX).

The next items are a series of eight radio buttons. Only the top three are currently used. In all cases 0 means no, and 1 means yes. Zoom rects are the animations you see when an application is launched. Turning them off results in some ugly screens, but saves a tiny bit of time. Trash warnings are those dialogs you see whenever you drag an application into the trash. Click 1 and you'll never see them again. Think at least twice before taking this step. Do you really trust yourself to not accidentally throw away your only copy of *Excel*?

Always grid drags is automatic Clean Up. Icons can only go to the grid points defined for them. They'll

*Limited Time Offer*

# The Best of Word. The Best of MacWrite.™

**Word Handler™** takes the easy familiarity of MacWrite and combines the flexibility and versatility of Word for fast, professional-level word processing at the astoundingly low price of \$29.95. But you must act fast.

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# INSIDE IMPROVEMENTS

**LAYO ID = 128 from Finder**

Font ID	21
Font Size	12
Screen Hdr Hgt	20
Top line break	-21
Bottom line break	17
Printing hdr hgt	42
Printing footer hgt	32
Window Rect	62 14 250 418 <b>Set</b>
Line spacing	16
Tab stop 1	20
Tab stop 2	144
Tab stop 3	184
Tab stop 4	280
Tab stop 5	376
Tab stop 6	424
Tab stop 7	456

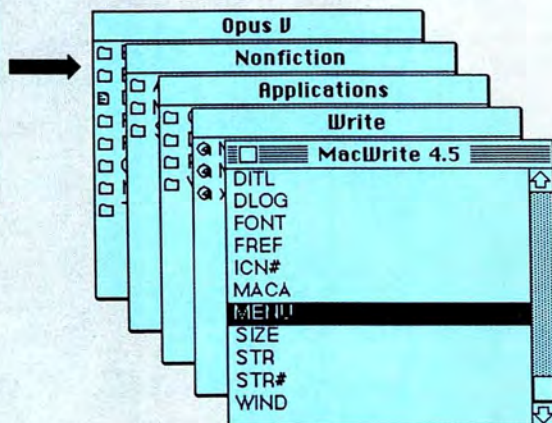
This is the LAYO resource. You'll have to use the scroll bar to see all of it.

Column Justification	\$02
Reserved	\$00
Icon Horz. spacing	80
Icon Vert. spacing	70
Icon Vert. phase	34
Sm. Icon Horz.	96
Sm. Icon Vert.	20
Default view	1
Filler	0
Text view date	\$0200
Use zoom Rects	<input checked="" type="radio"/> 0 <input type="radio"/> 1
Skip trash warnings	<input type="radio"/> 0 <input checked="" type="radio"/> 1
Always grid drags	<input type="radio"/> 0 <input checked="" type="radio"/> 1
unused 4	<input checked="" type="radio"/> 0 <input type="radio"/> 1
unused 3	<input checked="" type="radio"/> 0 <input type="radio"/> 1
unused 2	<input checked="" type="radio"/> 0 <input type="radio"/> 1
unused 1	<input checked="" type="radio"/> 0 <input type="radio"/> 1
unused 0	<input checked="" type="radio"/> 0 <input type="radio"/> 1
Icon-text gap	1

**Opus II**

- ☐ Bad Literature
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- ☒ Desktop
- ☐ Fine Arts
- ☐ Fun
- ☐ Good Literature
- ☐ Nonfiction
- ☐ Toolbox

Open *Resedit* and double-click to the MENU resources of *MacWrite*. MENU 1 is the Apple menu, MENU 2 is the File menu, and so on.



**MENUs from MacWrite 4.5**

- MENU ID = 7
- MENU ID = 6
- MENU ID = 5
- MENU ID = 4
- MENU ID = 3
- MENU ID = 2
- MENU ID = 1



snap to the nearest position, even if something is already there. If that's the case they'll go on top of the other item. If Always grid drags is turned on, ordinary Clean Ups usually don't have anything at all to do.

The final item, Icon—text gap, specifies the distance in pixels that the file name is from its icon. This need never to be changed.

After you've made your changes, quit *ResEdit*, being careful to save your *Finder*. To see the effects of what you've done you'll have to rename the file *Finder*, move it to a start-up disk and reboot using that disk.

#### **DRAT! THAT CURSOR IS TINY!**

While the cursor's shape and the location of the hot spot can easily be modified in *ResEdit*, you're still limited as to its size. The 16-pixel by 16-pixel size is too small for some users. Last summer Andy Hertzfeld got involved in a conversation on MAUG with some people who really needed a much larger cursor. Andy claimed that it wasn't much of a problem to create a larger cursor, and to prove that it wasn't, a day or two later he released (as public domain) a program that installed a 32-pixel by 32-pixel cursor in the *System*. This size seems to meet the needs of all users. To obtain this larger cursor, look for a program called Big Cursor on user group disks or obtain it from one of the national electronic services or a local BBS. On MAUG, where it first appeared, several versions now reside in DL 1. They are called BIGCUR.BIN, BCFKEY.BIN and BIGCR2.BIN.

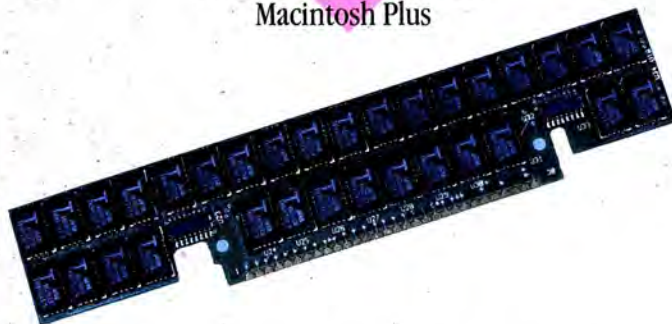
#### **DO YOU HATE YOUR MOUSE?**

Lots of perfectly rational, normal, ordinary people do. Most of them use IBM PCs and similar unfriendly machines, but some do use the Mac for its other wonderful qualities. They've discovered that while the mouse is still the primary cursor location tool, many operations don't require cursor positioning at all. Many operations can't be activated by pressing the COMMAND key along with another key or keys. Every Mac

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## INSIDE IMPROVEMENTS

Open MENU 2. Scroll  
down to the item that you  
want add a COMMAND key  
combination for. Click in  
the box marked "key  
equiv," and type in your  
choice. If you type a low-  
ercase letter, it will ap-  
pear in caps in the menu.  
Close everything, being  
sure to SAVE whenever  
asked to.

user knows that, and every Mac  
application that follows the interface  
guidelines should copy selected mat-  
terial when COMMAND-C is pressed,  
cut it when COMMAND-X is pressed,  
paste it when COMMAND-V is pressed,  
and undo a previous action when  
COMMAND-Z is pressed. Most applica-  
tions, including the *Finder*, have  
some other COMMAND key combina-  
tions built in.

What if there aren't enough for  
your taste? What if you want to be  
able to print and save in *MacWrite*  
from the keyboard?

There are three options. There is a  
very old utility, still in many users'  
group public domain libraries, call  
*MenuEdit*. It's obsolete, a dog in  
operation, and buggy. Don't use it.

The second option is a neat little  
desk accessory called *Menu Key* that  
is part of Cortland Computer's Top  
Desk package. This is a nice, virtual-

ly foolproof tool. Unfortunately,  
*Top Desk* is copy protected in a way  
that might cause you to inadvertent-  
ly lose your master. If the copy  
protection bothers you (as it does  
me) or you simply don't have funds  
in your software budget to buy more  
utilities, try the third option, our old  
standby, *ResEdit*.

Adding COMMAND key combina-  
tions in *ResEdit* is extremely simple  
(see the walk-through). You should  
be aware of certain limitations. Some  
programs don't look for keyboard  
input, either in certain situations or  
ever. Examples are *MacWrite*, which  
doesn't accept COMMAND key combina-  
tions when all document win-  
dows are closed, and many terminal  
programs, which never accept COM-  
MAND key combinations (they could  
cause serious problems at the other  
end of a connection).

While *MacWrite* is a fine pro-





#### File

New	
Open...	
Close	⌘W
Save	⌘A
Save As...	⌘E
Page Setup...	⌘P
Print...	⌘T
Quit	⌘Q

Underline	⌘U
Outline	⌘O
Shadow	⌘S
Superscript	⌘H
Subscript	⌘L

9 Point	⌘9
10 Point	⌘0
✓12 Point	⌘2
14 Point	⌘4
18 Point	⌘8
24 Point	⌘1

Add whatever other combinations you want. My working *MacWrite* looks like this, a power user's delight.

#### Format

Insert Ruler	⌘Y
Hide Rulers	
Open Header	⌘[
Open Footer	⌘]

Display Header	
Display Footer	
Set Page #...	
Insert Page Break	⌘/
Title Page	⌘\

Align Left	⌘N
Align Center	⌘M
Align Right	⌘R
Justify	⌘J
Use Ruler	⌘D

gram, it requires too much mouse usage. You should be able to save, print and do many other common operations from the keyboard. We can add COMMAND key combinations to any of the currently unmarked items in the File, Edit, Search, Format and Style menus. Fonts can't have COMMAND key combinations, because that menu is dynamically built from memory when the application is launched. Even putting the fonts into *MacWrite* (using *ResEdit*, of course) doesn't help. Since all applications treat the Font menu like that, you can't add COMMAND key combinations to font choices. The same is true for desk accessories. (There's a fleeting exception: *Menu Key*, being a DA, can add COMMAND key combinations to *any* menu for that session. The assignments are lost when the program is quit. But if you have

to have the calculator available as COMMAND-T in *Crunch*, it can be done. If you do that sort of thing regularly, use *Tempo* to do it for you!) Be careful what letters and numbers you assign so that you don't use a command already assigned, which will cause confusion, often unexpected results, and possibly crashes.

#### GENERAL CONTRACTING

Using the techniques described here, you can make your Mac both a friendlier and more powerful tool. Don't hesitate to explore the inside of your applications, and, after taking proper precautions, such as backups and isolation (don't do this sort of stuff on something on a hard disk — use a floppy and transfer the end product), experiment. ☐

Steve Bobker is the Editor in Chief of *MacUser*.

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# TIP SHEET


Monthly tips and techniques that save time and trouble.

Found a trick, shortcut or smarter way to get something done with a program? Share your hints with The Rest of Us by mailing them in to Tips, 25 West 39th Street, New York, NY 10018. We'll pay \$25 for every hint we use, plus we'll print your name and hometown in the magazine. So what are you waiting for? Here's your chance to be rich and famous. Well, at least famous!

## MAC PLUS

 Sometimes software still has problems running on the Plus. One solution to this problem is to boot the software using the older *Finder* 4.1 and accompanying *System* file. You just won't be able to use HFS.


RICHARD LASKY, KENSINGTON, CA

 When a System error occurs, press the Interrupt button (the Interrupt button is behind the reset button on the programmers switch). A dialog box appears with a ">" prompt (this is the on-line debugger window). Type in the following:


G 40F6D8

Hit Return, and you should be returned to the *Finder*. This doesn't always work, but sometimes is better than never.

CHARLES WALKER, TYLER, TX


 When activating RAM caching with the control in the new Control Panel, the machine must be rebooted in order for the caching to activate. The same rule also applies when turning off RAM caching.

ROBERT LACY, PALO ALTO, CA

 When selecting files from the Select file dialog, pressing the tilde (~) key automatically scrolls to the bottom of the file list, selecting the last file.

IAN MCLELLAN, ORLEANS, ONTARIO


## GENERAL

 Mac programs seems to be updated more often than any other computers' software. To know what version of a particular program you have at any time, get into the habit of including the version number when naming an application on the desktop (*MacWrite* 4.5, *MacPaint* 1.5). The only files with which this can't be done are the system files (*Finder*, *System*, *ImageWriter*, *LaserWriter* and *Laser Prep*). These files, if renamed, won't work properly.

TERRY MCCAIN, LEBANON, IN


**Option + Shift + [ = , ,      Option + ] = <**

**Option + Shift + ] = ,      Option + [ = <**

 When using quotations marks in writing, most people use the " " characters. However, most Apple and LaserWriter fonts (as well as many third party fonts) have a much more accurate

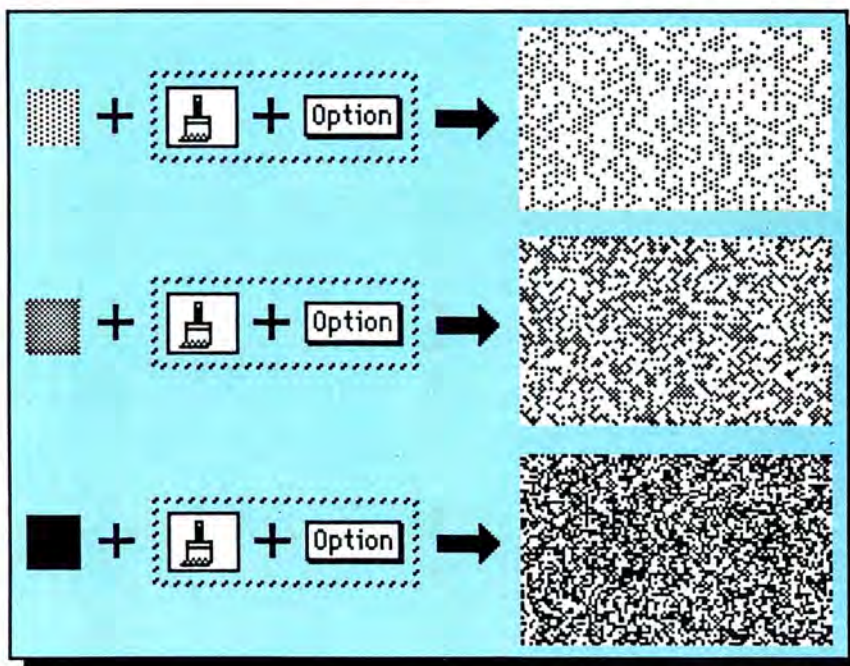
set of quote marks built in. The Option key used in conjunction with the Shift and bracket ([, ]) produces excellent quote marks.

CHRISTOPHER VARGAS, ANN ARBOR, MI


 Need special fonts or symbols while you're working? Running Altsys' *Fontastic* font editor in *Switcher* together with a word processor gives you the capability to design custom symbols or characters on the fly. The

best place to put custom characters is into unused Shift and/or Option key font slots. All your custom symbols can then be melded into a custom font which is available in the standard Font menu.

BRAD PRITCHETT, CAMBRIDGE, MA



## FULLPAINT

 Holding down the Option key while using any of the Paint Brushes causes the paint pattern to randomize, creating a pleasing "wash" effect. Holding down the Command key

before and while selecting an object with the selection rectangle forces the rectangle to close around the object as tightly as it can (like Lasso, except it maintains the rectangular shape).

ERICA HILTON, VIRGINIA BEACH, VA

compiled by David Biedny





Pressing the Command and Option keys when selecting the text insertion point with the cursor creates transparent text; any pattern beneath the

text will show through. Pressing Option when clicking the text cursor on a black background produces white text. ED FRANZESE, WESTPORT, CT

Normally, to move the tool and pattern palettes, they must be grabbed on the upper part of the tool window. Pressing the Option key will allow you to grab these palettes anywhere within their windows.

IRVING DUBOFF, SAN BERNARDINO, CA

Holding down the Option key while filling a shape with the Paint Bucket fills everything outside of the shape with the selected pattern (instead of the shape itself).

DAVID GROMES, RED BANK, NJ

Pressing Option while lassoing an object results in all the white or empty space selected being cut or copied along with the image itself.

JANIS NEWMAN, LOWELL, MA

To create your own paintbrush, double-click on the brush icon on the tools palette and select a brush while holding down the Command key.

EDWARD BOBOL, LOS GATOS, CA

#### FINDER 5.X

It is possible to install HFS on a 400K disk, though the instructions for this procedure in the Mac Plus manual are erroneous. Place the 400K disk in the internal or external disk drive, and choose ERASE DISK from the Special menu. The Mac Plus documentation states that the Option key should be pressed when clicking the "single-sided disk" format option from the Erase dialog. The Option key, in fact, must be held down then and also during the entire initialization process for HFS to

be installed on the 400K floppy. Note that an HFS directory (or desktop file) takes up more room than its MFS equivalent, so you'll end up with less space on your disk than with a standard initialization.

JOSEPH GREEN, GAYS MILLS, WI

#### LASERWRITER

If you're preparing documents to print out on a LaserWriter, make sure the *LaserWriter* printer driver and *Laser Prep* files are on your disk. If the *ImageWriter* driver is on the disk instead of the *LaserWriter* driver, you'll find discrepancies between the screen and printed versions of a document.

KARL SWANSON, YUMA, AZ

#### EXCEL

Sometimes a spreadsheet will contain information that is of a sensitive nature (interest formulas, personnel pay rates, company overhead rates, and so on). In order to remove this information from the screen (but still keep it active within the spreadsheet), select the column with the sensitive information, and set the column width to zero. Though hidden, the values are still used in computations.

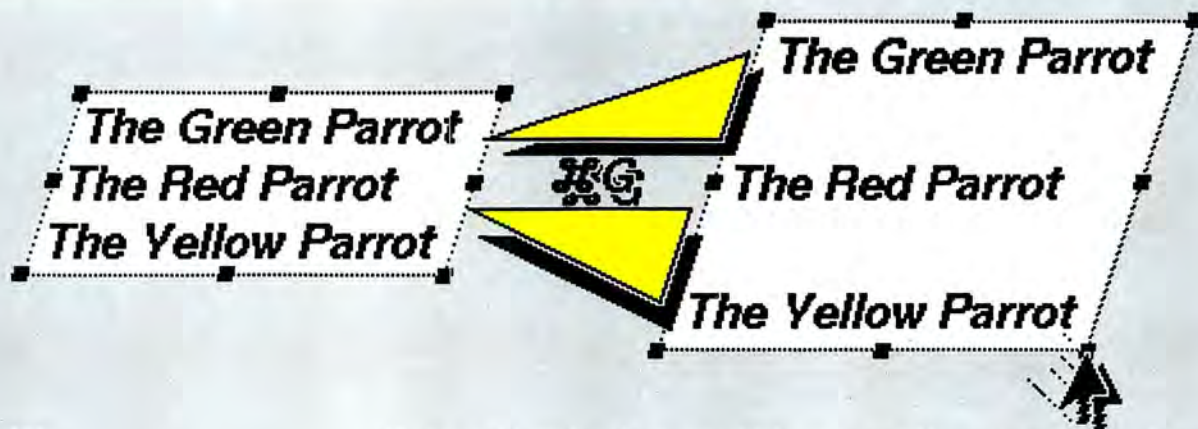
MICHAEL MCLANE, GALES FERRY, CT

#### WORD

When using Hayden's *CheapPaint* desk accessory in conjunction with *Word*, a graphic already in a *Word* document cannot be cut and pasted into a *CheapPaint* easel (it simply won't work); it must be copied and then pasted into an easel.

DAVID RAKOWSKI, BROOKLINE, MA

If you're the victim of a system crash while in *Word*, there's a chance that you can recover your seemingly lost file. Reboot the *Word* disk (if



#### MACDRAW

To create lines of text with proportional spacing, create the indi-

vidual text objects, line them up vertically, select them all with the selection marquee, and GROUP them. By stretching the grouped text with the corner and

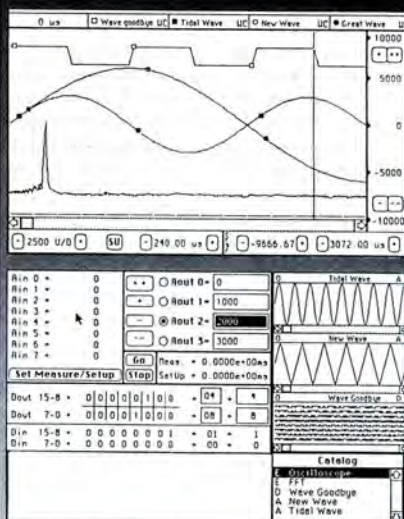
upper and lower resize handles, the vertical spacing between the lines changes proportionally.

JOHN KIRKILIS, BONAPARTE, IA



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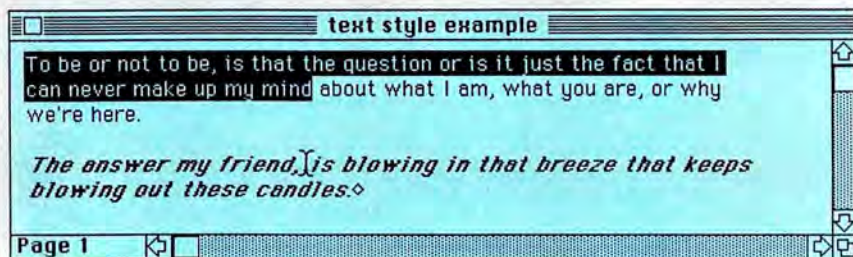
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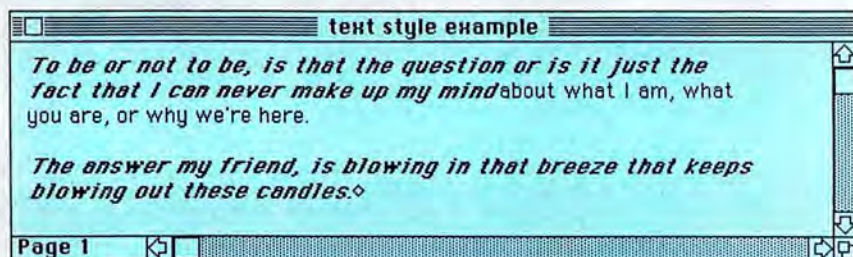
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Highlight the text to be modified.



While holding the Option and Command keys, double-click anywhere in a text block that has the style attributes you want. The highlighted text changes to that style.



A block of text can be given the style attributes of another block of text. Highlight the text you want to change, hold down the Command and Option keys, click on some text that has

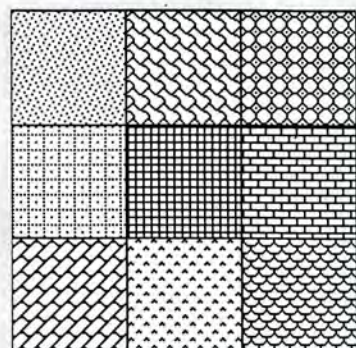
the style attributes you want for the first block, and the original block will change to the new style.

HARRISON GOLDBERG, WOODSTOCK, NY

possible; otherwise, boot from another disk and insert the *Word* disk in the other drive), and you should be able to see a file named "MW0000," or a similar name that starts with MW. Using any utility that can modify a files Type attri-

bute (*MacTools*, *Fedit*, *Resedit*, etc.), change that file's Type from WTMP to WDBM. Change the name of the file to anything but the original "MW0000" name, and *Word* might be able to read it.

ROBERT HAFFER, BOSTON, MA



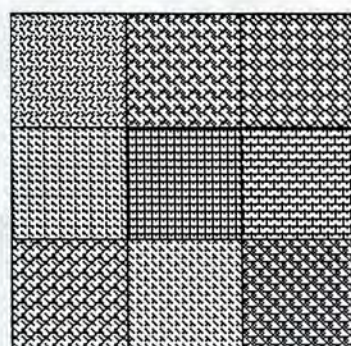
Original MacPaint patterns

## MACDRAFT

Create an object with a pattern in *MacPaint*, Copy an area of the pattern, and Paste it into *MacDraft*. With the object selected, try choosing



MacDraft pattern



Overlaid MacPaint patterns

different patterns from the Fill menu. *MacDraft*'s patterns will fall over the *MacPaint* pattern, resulting in complex and exotic combinations.

FRED DI MARCO, CHERRY HILL, NJ



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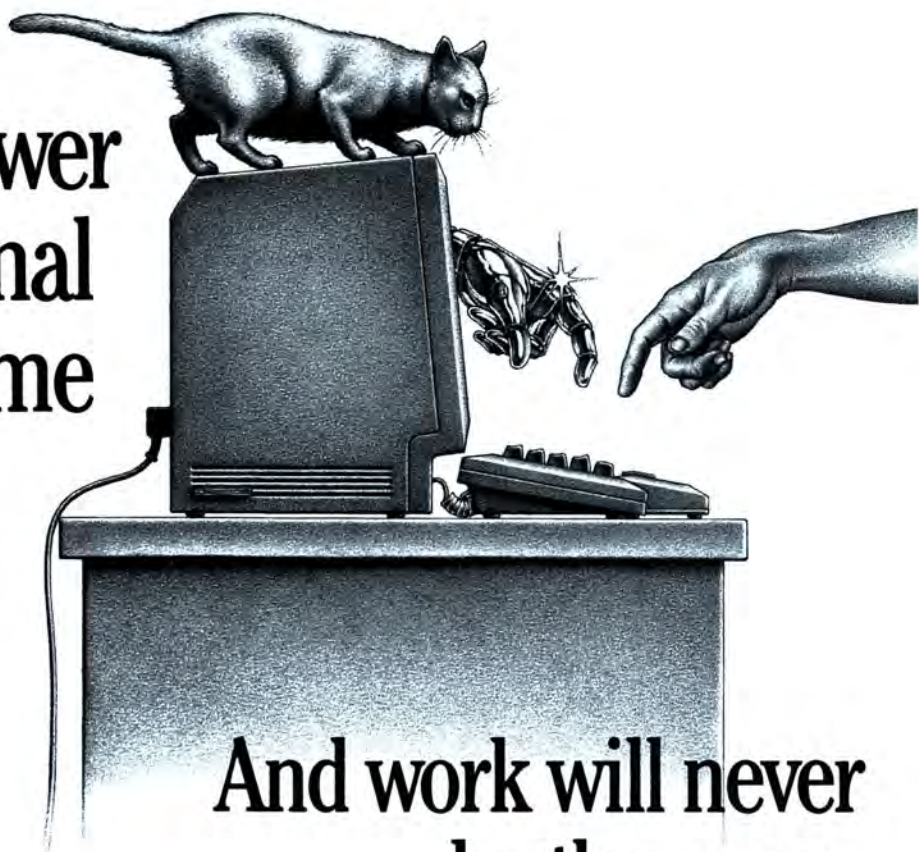
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by Dan Cochran

# ANSWERS FROM THE MAC TEAM

Got a Mac problem? Something that you'd like explained? Something you can't find the answer for anywhere else? Apple's Dan Cochran will answer your questions every month in this space. When the questions are too tough for him, he'll get the answers from other members of the Mac team. So ask what you need to know and get your answers straight from the source!

Send your questions to Dan care of **MacUser**, 25 West 39th Street, New York City, NY 10018. Dan will read all of your questions, but, unfortunately, he may not be able to answer individual queries. Watch this space for the pick of each month's Q & A crop.

## READERS TO THE RESCUE

In the June issue, Jason Mart of Albuquerque, NM asked about the availability of a utility that would allow him to generate periods and commas even when the shift key is depressed, rather than the < and > symbols. I was able to provide a solution (a rather inelegant hack) using Fedit and also referred him to several commercial keyboard mapping products. Well, as several readers (including Donald Strobe, Stanley Dorst, M. E. Nash and Mary Stiller) have pointed out there is a low-cost useful utility available to do just what Jason wants. Toggle Keys is a desk accessory, which, when installed under the Apple menu, toggles between the two keyboard options when selected.

There are a few points I'd like to make. (1) Many Macintosh systems now typically consist of a megabyte of memory and a 10- to 20-megabyte hard disk. (2) The Mac should have multitasking. (3) Lisa 7/7 is a true multitasking environment designed to run on a machine with 1 megabyte of memory and at least a 5-meg hard disk. The conclusion is obvious: Use Lisa 7/7 to get multitasking on the Mac!

Switcher is a neat kludge and other efforts to bring multitasking to the Mac are simply reinventions of the wheel. Macintosh 7/7 would be the right approach. Please don't just answer that it's

an infeasible approach due to reasons technical, political, etc. It's just a great approach and should be seriously considered by Apple!

PAUL WILFONG  
SAN DIEGO, CA

Paul...I don't think I'm gonna win any points with my answer, but your question is a good one and deserves attention. I'll certainly concede to your first three points. There are really three reasons, two technical and one semi-political, why a Macintosh 7/7 port is infeasible.

First, an application (e.g., 7/7) does not necessarily nor usually implement multitasking in the true sense. A true multitasking environment must begin at the operating system level and provide for multiple task start-up, task suspension, task swapping, task communication, and task killing. The Lisa Operating System provided all of these capabilities to the application programmer, and as such, the few people who had the necessary tools for writing Lisa applications could use them. The current Macintosh Operating System does not provide this level of functionality, and therefore it is very difficult to implement true multitasking on the Macintosh from the traditional viewpoint. Switcher is not truly multitasking, but rather a context-switching utility.

Second, the RAM-based libraries used to write the various 7/7 applications and their various interfaces and calls are very different from the ROM- and RAM-based libraries used to write Macintosh applications. Although some libraries like QuickDraw are nearly identical, other libraries are completely different, and in some cases, non-existent on the Macintosh side of the world. Even if the Macintosh OS provided the necessary multitasking facilities, the amount of effort required to recode the 7/7 applications for the Macintosh would run into several man-years.

Third, as a former member of the Lisa Team, I certainly appreciate your devotion to 7/7. As a matter of fact, I was probably the last known holdout in our group to continue using it. However, I switched to MacWorks two years ago and haven't regretted it one bit. Granted, my needs and requirements are probably different from yours, but despite its elegance and simplicity Lisa 7/7 left me nowhere to turn for additional functionality and power. The Macintosh software market has now matured to the point where I can't think of one of the Lisa 7/7 applications that is anywhere nearly as functional or powerful as alternative Macintosh applications.

The real solution lies in your second statement, "The Mac should have multitasking." Maybe someday it will.

I have found that if I open a MacDraw (version 1.7) document under a different System file than it was last saved under, the fonts are all wrong and I need to go through and select and correct all my text objects. It appears as though Draw doesn't associate a text object with a font ID, but rather with its relative position in the Fonts menu. I also discovered that, because of the way Draw has both fonts and sizes in the same menu, I'm restricted as to the number of fonts I can access with Draw. Is this me or a genuine bug?

MIKE MORROW  
ANN ARBOR, MI

You are right on both counts. We are aware of both of these problems and will be fixing them in the next version of MacDraw (that will probably be version 2.0, as 1.9 is now available at your dealer, but still suffers from these problems). In the meantime you can solve the second problem by creating a system disk with only the fonts you wish to use. One official bug-buster T-shirt is on the way.

As a recording studio operator I type a lot of cassette labels. I would like to MacPaint and print these labels and handle sizing, alignment and multiple copies all in one neat program. Can you help me?

RANDY BUGG  
SMYRNA, GA

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Recently, I had the official 1-meg upgrade installed in my old 128K Macintosh. I've converted a number of my disks to the new version of the *System* and *Finder* using the Macintosh Plus System Tools Disk that came with my upgrade. But it seems that the *Chooser* DA always defaults to the modem port rather than to the printer port. The Macintosh Plus manual says that the Plus is supposed to be preset to print documents on the ImageWriter port, but it just ain't so.

Help! I'm getting tired of opening *Chooser* and finding the modem icon highlighted. I don't even own a modem!  
DAVID WILEY  
CHATTANOOGA, TN

*I beat my head on this one too when System 3.0 first came out. I tried replacing my battery and other things until I discovered that this was a known bug with System 3.0 and Chooser 2.0. This problem will be fixed in the next version of the system software which your dealer should have by the time you read this.*

I own a Mac Plus and an ImageWriter II. I'm using *MacWrite* 4.5 and *Printer*

*Driver* V2.1 and 2.2. When I print in correspondence-quality mode (standard) the printhead on the ImageWriter prints unidirectionally. This seems strange, as both other modes are bidirectional.

DAVID METHVEM  
ATLANTA, GA

*The default print mode with Printer Driver 2.1 and 2.2 is unidirectional although it can be overridden. Here's a table prepared by the folks in Apple's Technical Communications Group that should help.*

I've been using a Lisa 2/10 for more than 3 years now. To back up my hard disk I have a very convenient and simple back-up utility that works equally well whether one floppy disk or several are needed to store the contents of a hard disk document. I'm looking into purchasing a new computer, preferably a Macintosh, but my dealer tells me there are no back-up utilities for the Macintosh with an Apple hard disk. Do you know of any back-up utilities that will copy large documents or the entire contents of an HD-20?

DAVID T. O'SULLIVAN  
MADISON, NJ

You can order HD-Backup from PBI Software, 1111 Triton Drive, Suite 201, Foster City, CA 94404, (415) 349-8765. It retails for \$49.95 and works well with the Apple HD-20 and other third-party hard disks. There is also a back-up utility, called *Archiver*, available as shareware from most of the major electronic information services Macintosh boards.

Recently, while attempting to install a copy-protected program (that I own) using *Copy II Mac* onto my HD-20, I got the bomb message. When I restarted I found the files from the protected disk



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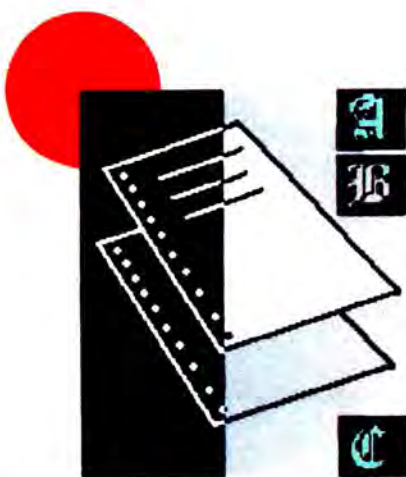


on the HD-20 desktop, but, due to the nature of their arrival, I went to throw them out. I got a "Can't Empty the Trash" message, and after numerous attempts to rectify matters, found it necessary to reinitialize the HD-20. There is no documentation, apparently, for this type of problem. What caused it?

KAREN ATLAS  
SAN FRANCISCO, CA

Copy II Plus, as of this writing, only supports the original Macintosh File System (MFS). The Macintosh HD-20 requires the new Macintosh Hierarchical File System (HFS). When Copy II Mac reads a file it assumes that it's going to write it to an MFS disk. Since the directory formats, file attributes, and file structure of MFS is significantly different from HFS, there is no telling what can happen when Copy II Mac starts to write to an HFS-based volume like an HD-20. I assume that Copy II Mac will eventually support HFS (if it already doesn't). Check with the authors. In the meantime keep it as far away from HFS volumes as possible.

I seem to have stumbled upon a printing problem that is very irritating. The



documentation I have read so far states that the LaserWriter cannot print the full width or length of an 8 1/2 - by 11-inch sheet of paper. I'm more concerned about the width than the length. I accepted that we can only print 8 inches wide and proceeded to design forms and other printed media. However, it seems that with MacDraw I can't print anything wider than 7.5 inches. Is this

problem the same with all systems or is there something I can do to make it print at least what the book says it will?

Also I recently had a paper jam and light spots are showing up all over the printed output. What can be done to correct this?

STUART CAMPBELL  
ALBUQUERQUE, NM

The printable area on the LaserWriter is both a function of the paper size you have selected and the amount of memory on the LaserWriter. Using MacDraw, the actual LaserWriter printable area for U.S. letter is 7.68 inches by 10.16 inches. MacDraw is simply trying to keep the total image area within the limits of the LaserWriter memory. This does disagree with the LaserWriter manual and I've passed this on to the appropriate parties.

As far as your imaging problem, I'd first check the toner cartridge. Remove it and rock it gently back and forth a few times to disperse the toner. Then try to run off 30 to 40 large black rectangles. If the imaging hasn't improved after 30 copies you've got other problems (most likely with the drum components) and should have your machine serviced by your dealer. ☐

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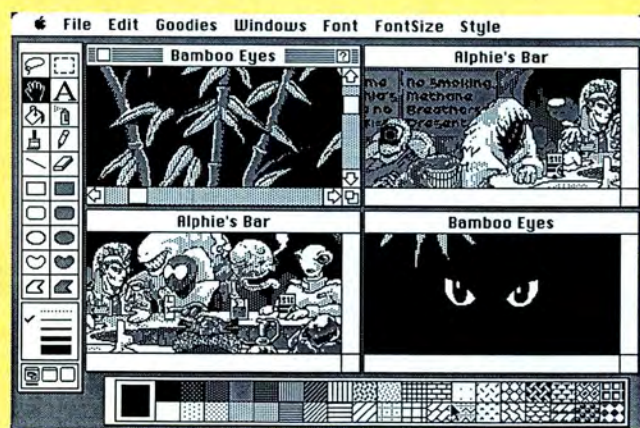
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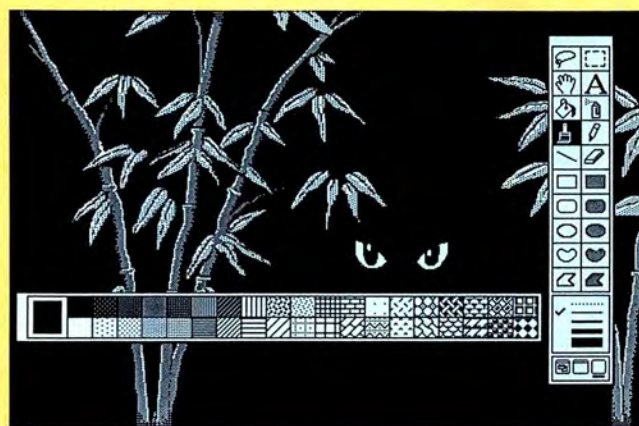
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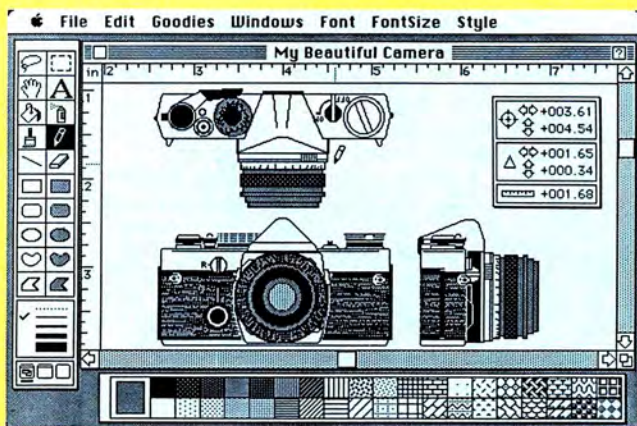
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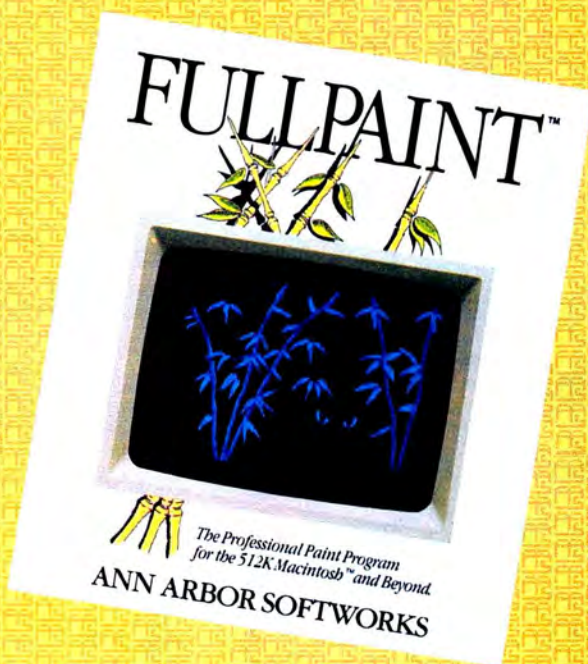
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# MINIFINDERS

Have you often wished for a personal assistant to help in picking software? These MiniFinders may not breathe and move, but they do tell you what products are hot and, better, what these products do. Each of these items has been carefully reviewed and selected by the MacUser editorial staff. Each has been rated from 1 to 5 mice. Ratings are relative within categories, and they can change as categories expand and new products advance the state of the art. You won't see many low ratings or bombs, since we're telling you about the cream of the crop, but we will warn you about the really bad products so that you don't spend your money on them. **Red names indicate this month's additions.** The letters at the end of the entries indicate whether a product is copy protected (CP) or not (NCP). CP? indicates that we don't know. If a product has been reviewed or QuickClicked in MacUser, the date of the review is shown. Next time you have to find products you can count on, count on MacUser!

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## INTEGRATED SOFTWARE

**Crunch** is an icon-driven relational spreadsheet that features versatile charting and database capabilities. Strong financial logic, date and mathematical functions. Spreadsheets can be linked. The manual is clear and concisely written. Macros are not supported. \$195. Paladin, 2895 Zanker Rd., San Jose, CA 95134. CP (Jan 86)

**Ensemble** lets users create a database of words, pictures, and/or numbers; graph data; generate custom forms and link files for applications such as mail merge. Can perform calculations and math functions on data. Capacity limited by RAM and disk size. \$299.95. Hayden, 600 Suffolk St., Lowell, MA 01854. CP

**Excel** is THE power spreadsheet. Of the Mac, of the world. Has 256-column by 16,384-row capability. Features include a powerful, easy to use macro function (with a recorder to make creation simple) and elaborate charting facilities. Can link multiple spreadsheets. 512K+ Mac and external drive required. \$395. Microsoft, 16011 NE 36th Way, Redmond, WA 98052-6399. CP (Prem)

**Jazz** provides well integrated modules for word processing, graphs, worksheets, databases and communications. Each of the modules is substantial. HotView, where data placed in any module automatically updates all other documents that use that data, is best feature. Jazz provides adequate coverage of most data and communications needs of small businesses. Requires 512K+ and external drive. Version 1A requires 800K drive. \$595. Lotus, 55 Cambridge Parkway, Cambridge, MA 02142. CP (Prem)



**Quartet** is an integrated program that works on a 128K Mac, built around a powerful spreadsheet with a full range of functions. It can also be used as a database and provides good quality charts from spreadsheet data. Documentation is adequate, but not too well organized. \$199. Haba Systems, 15154 Stagg St., Van Nuys, CA 91405. CP

## BUSINESS ACCOUNTING

**Accountant's Choice** is a powerful system built around a relational database, with functions accessed through menus. Standard reports are provided but most can be customized. Multiple journals allowed. Number of accounts determined by disk space. General Ledger can stand alone or integrate with other modules, not yet available. Requires 512K+, printer and external drive. \$695. Sierra Information Systems, 10201 Torre Ave., Cupertino, CA 95014. CP (Dec 85)

**BPI General Accounting** is an easy to use system. Six journals, AR, AP, Payroll and GL on one disk. Offset amounts automatically post to ledgers. Up to 8000 accounts, transactions limited by disk space. Number up to \$999,999,999.99. Detailed records, wide range of reports. *Switcher* and HFS compatible. \$425. Requires 512K. BPI Systems, 3001 Bee Cave Rd., Austin, TX 78746. NCP (Aug 86)

**CheckMark** is a Ledger with five preset journals: Cash Disbursements, Receipts, General, Sales, and Purchases. Other modules are planned. Account ranges are preset. Menus and data entry are very straightforward. Flexible summary reports are built in, but customer and vendor information is very minimal. \$295. CheckMark Software, PO Box 860, Fort Collins, CO 80522. CP

**Gallery Finance** is a one-write system with General Ledger, Cash Disbursements, Payables and Receivables in a single package. Additional modules to be added. Data entered in a journal is automatically posted to appropriate record card. Excellent manual includes tutorial on basic accounting principles. Requires 512K+, printer and external drive. \$795. Micromax Systems, 6868 Nancy Ridge Dr., San Diego, CA 92121. CP (Dec 85)

**Hardisk** is a complex integrated hard disk system (General Ledger, Receivables, Payables, Inventory, Payroll and Job Cost modules) that does not use Mac interface. Fully menu driven. Manual is detailed but complicated, with a few extra pages that make it Mac-specific. Flexible reporting, statements and account numbering; huge numbers of accounts, transactions, profit centers and detailed financial analysis. Requires hard disk and printer. \$695 per module. Great Plains, Box 9739, Fargo, ND 58109. CP? (Dec 85)

**MacOneWrite** Cash Disbursements is a simple, one-write check writing system. Limited functionality, but does allow some detailed information. Menus clear and easy to follow, but check printing can be confusing. Other modules planned. 512K+ and printer required. \$245. Sierra, PO Box 485, Coarsegold, CA 93614. CP (Dec 85)

**Rags to Riches** integrated accounting modules (General Ledger and Accounts Receivable) uses Mac interface to the hilt. Information entered in one window automatically transfers. Menu commands all have command keystrokes, as can accounts. No detailed or flexible reporting. Very easy to use, although it can be confusing to operate with several windows on screen. Requires 512K+ and printer. \$195 per module. Chang Labs, 5300 Stevens Creek Blvd., San Jose, CA 95129. CP (Dec 85)

**Strictly Business** General Ledger features clear, well-outlined set-up procedures and operations. Very flexible, with a custom chart of accounts; user-defined journals; up to 99 profit centers per company with up to 100 departments each; and customized reports. Program print spools and allows printing of multiple documents. Requires 512K+, printer and external drive. \$395. Future Design, 13681 Williamette Dr., Westminster, CA 92683. NCP (Dec 85)





## PERSONAL FINANCE

**Dollars & Sense** is a bookkeeping program suitable for personal, home and small-business use. Easy to use, with a good manual and excellent on-screen help. Will handle up to 120 separate accounts or money categories. Uses standard double-entry accounting techniques. Reports can be generated and either viewed on-screen or printed. Has simple graphing and charting facilities. \$149.95. Monogram, 8295 S. La Cienega Blvd., Inglewood, CA 90301. CP

**Electric Checkbook** does exactly what the name says: keeps a running account of checkbook transactions, balances checkbook to bank statements, tracks bills, and even prints out checks. Provides detailed financial statements, calculates net worth, lists expenses by category and tracks your personal cash flow. \$79.95. State of the Art, 3191-C Airport Loop, Costa Mesa, CA 92626. CP

**Financial Cookbook** provides nearly 3 dozen "recipes" to help users figure out financial formulas (i.e., mortgage costs at different percentage rates) by inputting pertinent data. Very user-friendly. \$44.95. Electronic Arts, 2755 Campus Dr., San Mateo, CA 94403. CP

**Financial Utilities Pack** is a set of applications that allow users to figure annuities, compound and simple interest, depreciation and amortization. Simple and well documented. \$69. Cognitive Software, PO Box 26948, Austin, TX 78755. NCP

**Forecast** is a tax estimating and what-if program designed to work with and use *Dollars & Sense* files. Straightforward, easy to use program. \$69.95. Monogram, 8295 S. La Cienega Blvd., Inglewood, CA 90301. CP

**The Home Accountant** is a complete and easy to use financial system. Data entry is intuitive. All kinds of reports, including charts and checks, are easily generated. Entered data will update all relevant material. \$150. Arrays, 11223 South Hindry Ave., Los Angeles, CA 90045. NCP (Apr 86)

**Profit Stalker II**, Technical Analysis Toolkit for the Macintosh, is a program for the generation of charts and graphs in order to organize data on stocks, mutual funds and commodities. The data can be downloaded with the program or manually entered. There are plentiful options, free upgrades and excellent support. A class act. Requires 512K+ and a Hayes-compatible modem. \$250. ButtonDown Software, PO Box 19493, San Diego, CA 92119. NCP (Aug 86)

## DATABASES

**Business Filevision** is a masterpiece of Macintosh programming, the only true graphic database on any micro. Much more powerful than the original, accepts *MacPaint* graphics. \$395. Telos Software, 3420 Ocean Park Blvd, Santa Monica, CA 90405. CP (Feb 86)

**Factfinder** is a free-form information organizer (medium-duty database). Users enter data on to factsheets in any manner desired and select keywords. Searches are by name or keyword. Only one factsheet can be open at a time. Publisher offers free telephone support (800 number). \$149.95. Forethought, 1973 Landings Dr., Mountain View, CA 94943. NCP (Feb 86)

**File** is a flexible data manager. Creates files for a variety of data, including simple graphics. Files are created in simple row/column format, but reports and forms are easily customized by moving field names around on a blank form. \$195. Microsoft, 16011 NE 36th Way, Redmond, WA 98052. CP

**FileMaker** is a nonrelational database that combines lots of power with ease of use. Data entry is extremely flexible and all items in all fields are indexed so that multiple criteria searches are both simple and fast. Calculation fields make the creation of invoices and similar documents a snap. Reports can include graphics and multiple data layouts are easy to construct. \$195. Forethought, 1973 Landings Dr., Mountain View, CA 94943. NCP

**Filevision** is a simple database that can change the way you think about data and data organization. Records are based around user created graphics screens. Screens and records can be linked in complex ways. \$195. Telos Software, 3420 Ocean Park Boulevard, Santa Monica, CA 90405. CP

**Helix** is a relational database that makes extensive use of icons. Excels in database setup and forms generation. Setup is made easy by the adherence to the Mac interface. The manual is clear, thorough and well-indexed. Too complicated for most simple database applications, excellent where a relational database application is required. Requires a 512K+ Mac and external drive. \$395. Odesta, 4084 Commercial Blvd., Northbrook, IL 60062. NCP (Mar 86)

**The Housekeeper** is a home inventory database. Users can keep track of assets for both tax and casualty purposes. Specialized reports are easily generated. \$59.95. Aegis Development, 2210 Wilshire Blvd., Santa Monica, CA 90403. NCP (Dec 85)

**Interlace** is a flexible relational database that makes it simple to create single or multiple files and establish links between files. Excellent report generator gives full control over appearance, style of output. Requires 512K+, second drive or hard disk highly recommended. \$129 retail, \$95 direct. Singular Software, 5888 Castano Dr., San Jose, CA 95129. CP (Apr 86)

**MacBase** is a forms-oriented relational database. Unfortunately, precise forms are hard to create. Allows calculated fields and has quick and powerful search capabilities. Best when much data is to be looked up, but not frequently entered. Requires 512K+. \$195. Eqtron Corp., 330 Bay St., Toronto, Ont. M5H 2S8, Canada. NCP (Jul 86)

**MegaFiler** is a simple file manager. Its limited capabilities have been far surpassed by cheaper and easier to use programs. Valuable only in conjunction with *MegaForm*. \$195. Megahaus, 5703 Oberlin Dr., San Diego, CA 92121. CP

**Omnis 3** is a power database, featuring concurrent multiple file management. Can handle 24 files, 12 at a time, and is fully relational. Allows user to create custom environments including user-defined menus, commands and dialogs. Good report generation capability. Comes in single and multiple user versions. \$495 (single user version). Blyth, 2655 Campus Drive, San Mateo, CA 94403. CP (Mar 86)

**OverVUE** is a power-packed relational database that has extensive sorting, summarizing and report generation capacity. Has macros and a charting function. Good manual. The program tries to anticipate every need conceivable in manipulating data. It can exchange files with a very wide variety of other programs (including IBM software). \$295. ProVUE, 222 22nd St., Huntington Beach, CA 92648. NCP (Nov 85)

**Professional Bibliographic System** is a database designed for storing and retrieving bibliographies. Predesigned forms for 20 types of entries. Citations automatically formatted with correct punctuation for printing. \$295. Personal Bibliographic Software, PO Box 4250, Ann Arbor, MI 48106. CP (Feb 86)

**Record Holder** is a flexible, easy-to-use form-oriented data manager. Set up is particularly simple and the search features are powerful. \$49.95. Software Discoveries, 99 Crestwood Rd., Tolland, CT 06084. NCP (Apr 86)

## NUMBER CRUNCHING

**ClickOn Worksheet** is a 50-row by 20-column spreadsheet that loads onto any system disk as a desk accessory. Though small in size, it has remarkable capabilities for a desk accessory. It produces line, bar and pie charts and changes in the worksheet automatically reflect in charts. \$79.95. T/Maker Company, 2115 Landings Dr., Mountain View, CA 94043. NCP

**DesignScope** is a construction kit for digital and analog circuits. Up to 254 components can be utilized in a single circuit, and the equivalent of a dual trace oscilloscope plots output in



# MINIFINDERS



real-time. 17 analog, 8 digital and 2 I/O components comprise the parts list. Good for testing basic (and not-so-basic) circuitry without touching a breadboard. \$249.95. BrainPower, 24009 Ventura Blvd., Calabasas, CA 91302. NCP

**MacCalc** is a fast, competent, full-featured spreadsheet with  
 •••• impressive built-in functions, font control, on-line help, ability to expand columns and rows and read/write SYLK or WKS files. The worksheet is 125 columns by 999 rows. Cell names, printing power make MacCalc a very flexible pure spreadsheet. Easy to use and has a good manual. \$99.95. Bravo Technologies, c/o DPAS, PO Box T, Gilroy, CA 95021-2249. NCP (Sep 86)

**Multiplan**, the first Mac product from someone other than Apple is  
 •••• beginning to show age. Still a very capable basic spreadsheet with simple sorting, 63 columns by 255 rows, many built-in functions, other standard spreadsheet features. \$199.95. Microsoft, 16011 NE 36th Way, Redmond, WA 98052-6399. CP (Mar 86)

**ProAnalysis** is a powerful real estate investment analysis program. This program uses the Mac interface as well as any  
 •••• program yet published. Analytic power is combined with report generating so good you have to see it produce an extraordinary product. Requires 512K+. \$295. Technalysis Services, 14555 DeBell Rd., Los Altos Hills, CA 94022. CP

**StatView** is a high-powered statistical calculation package. Easily  
 •••• and efficiently handles all the common statistical techniques and many uncommon tests. Has a user-definable area as well. Easy to use and well documented. \$199.95. BrainPower, 24009 Ventura Blvd., Calabasas, CA 91302. NCP (May 86)

**StatWorks** is a general-purpose statistics package that is both  
 •••• powerful and easy to use. Handles all standard tests and procedures. Single variable and multivariate statistics are supported. \$125. Cricket Software, 3508 Market St., Philadelphia, PA 19104. NCP (May 86)

## GRAPHICS & DESIGN

**Animation Toolkit I** lets users prepare "film clips" of moving  
 •• objects which play back at varying speed, like old-fashioned flip books. Drawings are built pixel by pixel in frames, using some of the tools from MacPaint. They can be copied and altered easily from frame to frame. Each film clip plays repetitiously as it is being constructed. A limited animation tool, but a lot of fun. \$49.95. Ann Arbor Softworks, 308½ S. State St., Ann Arbor, MI 48104. CP

**Art Grabber with Body Shop** is a desk accessory that lets users  
 •••• browse MacPaint documents, selecting and copying as they choose. Selections can be larger than screen size. Also included are MacPaint documents and templates to allow the creation of people in your art. \$49.95. Hayden, 600 Suffolk St., Lowell, MA 01853. NCP

**Chart** can easily create area, bar, column, line, pie, scatter and  
 •••• combination charts. A total of 42 styles are provided. Limited to 100 data items (64 in a series) on a 128K Mac, approximately twice that on a 512K Mac. \$125. Microsoft, 16011 NE 36th Way, Redmond, WA 98052-6399. CP

**ClickArt Special Effects** is a MacPaint enhancement desk  
 •••• accessory. Allows the user to distort, stretch, rotate and use perspective on MacPaint documents. A necessary addition for all serious users of MacPaint. \$49.95. T/Maker, 2115 Landings Dr., Mountain View, CA 94043. NCP (Apr 86)

**ColorPrint** facilitates color printing on the standard ImageWriter.  
 •••• MacPaint files set up as overlays are read into ColorPrint, and the program controls proper positioning registration and colored ribbon switching. Good results require lots of hard work, but it's cheaper than an ImageWriter II. \$49.95. Esoft Enterprises, PO Box 179, Owasso, OK 74055. NCP (Mar 86)

**Cricket Graph** easily generates 12 graph types. Multiple windows  
 •••• can be displayed. Graph prints in up to 8 colors with up to 16 patterns. Self-generating macro formatting. Switcher, HFS,

LaserWriter and plotter compatible. \$195. Cricket Software, 3508 Market St., Philadelphia, PA 19104. NCP (Jun 86)

**DaVinci Building Blocks** features predrawn blocks of brown-  
 •••• stone, garden, and skyscraper portions that can be cut and pasted together to form landscape and architectural drawings. Fun for even non-pro's. \$79.95. Hayden, 600 Suffolk St., Lowell, MA 01853. NCP

**Easy3D** is a three-dimensional, solid modeling masterpiece. Four  
 •••• variable light sources, powerful sculpting tools and an exquisite user interface make this program a must-have for Mac graphics enthusiasts. Requires 512K+. Enabling Technologies, 600 S. Dearborn, Chicago, IL 60605. NCP (May 86)

**Fluent Fonts** is a two-disk collection of fonts. Forty-nine different  
 •••• items are included. All install easily in user Systems. Most are well executed and some are extraordinarily nice. This is a real bargain for font lovers. \$49.95. Casady, PO Box 223779, Carmel, CA 93922. NCP

**Fontastic** is the best font editor now available for the Mac.  
 •••• Features a large editing window with a grid to make positioning easy. Select letters to edit by clicking on a matrix of the font. Allows scaling of existing fonts and previewing the various styles (italic, bold, etc.). \$49.95. Altsys, PO Box 865410, Plano, TX 75086. NCP (Dec 85)

**Fontographer** is a complex, but excellent laser font creator. The  
 •••• fonts created have 300 bits per inch resolution. The fonts are actually downloadable PostScript files. \$395. Altsys Corp., PO Box 865410, Plano, TX 75086. CP

**FullPaint** is an expanded version of MacPaint. Features include  
 •••• full-screen drawing, multiple documents open simultaneously, brush editing, movable tool palettes, special text effects and much more. It fills the gaps left by MacPaint. \$99.95. Ann Arbor Softworks, 308½ State St., Ann Arbor, MI 48104. CP (Jun 86)

**Home Design** is a home planning tool that includes three disks  
 •••• full of MacPaint files of household items needed to design a home. Art Grabber Installer is included for easy maneuvering of items. The professional home designer, as well as the amateur will feel at ease using this program. \$79.95. Hayden, 600 Suffolk St., Lowell, MA 01854. NCP (Jun 86)

**Human Forms** allows users to create perfectly proportioned  
 •• humans in any posture or position. Contains over 1000 separate body parts. Tiny X marks make limb, head and detail placement perfect. Requires MacPaint. \$59.95. Bert Monroy, 205 Luquer St., Brooklyn, NY 11231. NCP

**Icon Switcher** changes icons for applications and the documents  
 •••• they generate, permitting you to customize icons for personal work. New icons can be built pixel by pixel in the program or created in MacPaint and pasted in. \$19.95. PBI Software, 1155B-H Chess Drive, Foster City, CA 94404. NCP

**LaserWorks** is high-resolution font and graphics editor, producing  
 •••• LaserWriter-compatible end products. Its numerous well-designed features make it suitable for users of all levels, from beginners to pros. Has a superb manual and tutorial. Requires 512K+ and external drive or hard disk. \$299. EDO Communications, 63 Arnold Way, W. Hartford, CT 06119. CP (Sep 86)

**The Mac Art Dept.** is a collection of over 150 graphic images  
 •••• ranging from foods to hands holding signs to borders. Best suited for letterheads, memos, other business use. \$39.95. Simon & Schuster, Computer Software Div., 1230 Ave. of the Americas, New York, NY 10020. NCP (Mar 86)

**Mac-a-Mug** is an Identikit type program for creating faces from  
 •••• facial feature files. Uses scroll bars that are slow and jerky. Lots of creative fun. 512K+ Mac required. \$59.95. Shaherazam, PO Box 27731, Milwaukee, WI 53226. CP (May 86)

**Mac the Knife/Vol. 1: Treasury** contains over 500 pieces of clip  
 •••• art in the form of MacPaint documents and two new fonts. The art is well organized and mostly high quality. The rulers, for on-screen measurement, and the disk label templates are particularly useful. If you only plan on getting one clip art disk, this would be a good choice. \$39. Miles Computing, 21018 Osborne Street, Canoga Park, CA 91304. NCP



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# MINIFINDERS



**Mac the Knife/Vol. 2: Fonts** contains over two dozen new fonts.

Some of these (Paris and Stuttgart, for example) are real stunners. If you do a lot of word processing try Paris 9 point (it's a big 9 point) as your text face and use High quality printing. Some fonts have single key fractions ( $\frac{1}{2}$ ,  $\frac{3}{4}$ ). \$49. Miles Computing, 21018 Osborne Street, Canoga Park, CA 91304. NCP

**Mac The Ripper** is a two-disk set of highly stylized graphics and large display typefaces. Both are extremely well done, and represent the high end of the clip-art disk category. \$49.95. Miles Computing, 21018 Osborne Street, Canoga Park, CA 91304. NCP (May 86)

**MacDraft** is an object-oriented graphics program. It sports advanced features such as variable scaling, single degree rotation, complex arcs and a FatBits-like magnification mode. It has some annoying quirks and a few bugs, and is best used to complement *MacDraw*, not replace it. \$239. Innovative Data Design, 1975 Willow Pass Rd., Concord, CA 94520. CP (Feb 86)

**MacDraw** is an object-oriented structured graphics program. Can be used to design forms, create presentation materials and do technical illustrations. Drawing sizes up to 8 feet by 10 feet are possible. Text can be easily generated and integrated in the graphics. *MacPaint* documents can be pasted into *MacDraw*, but not manipulated. \$195. Apple Computer, 20525 Mariani Ave., Cupertino, CA 95014. NCP (Nov 85)

**MacModel** is an economical 3D package with shading. Somewhat sketchy Mac interface, shading speed slow (but acceptable), grainy image resolution. On-line help screens are a welcome addition. Frequent updates and low price make this a reasonably good buy. \$40. A.P.P.L.E. CO-OP, 290 SW 43 St., Renton, WA 98055. NCP (Aug 86)

**MacPaint** is the graphics program that started a whole new genre. Still the best freehand graphics tool. Version 1.5 supports 512K+ Macs and the LaserWriter. Multiple tools, patterns and features too numerous to describe. A work of art for artists. \$125. Apple Computer, 20525 Mariani Ave., Cupertino, CA 95014. NCP (Nov 85)

**MacPublisher** is a tool for creating newsletters. Allows multiple page issues. Layout is fairly easy but hard to do precisely. Runs on a 128K-Mac but is slow; a 512K should be considered a requirement. Printer support, including LaserWriter, is good. Ideal for informal newsletters, not yet a professional tool. \$99.95. Boston Software Publishers, 19 Ledge Hill Rd., Boston, MA 02132. CP

**MacPublisher II** is the souped-up version of *MacPublisher*. Allows *MacWrite* and *Word* files to be imported and edited from within the program; saves each element separately; allows up to 96 pages in an issue (limited by memory); supports kerning, borders, cropping, telecommunications, command keys and a wide variety of printers; and it runs on 128K, single-drive Macs. \$195. Boston Software Publishers, 1260 Boylston St., Boston, MA 02215. CP

**Mac3D** is a very Macish 3D drawing package. Easy to use, many primitive shapes, good LaserWriter support, and lots of 3D goodies will please Mac graphics fans. Not a fully professional CAD package. \$195. Challenger Software, 18350 Kedzie Ave., Homewood, IL 60430. NCP

**Magic Slate** is a graphics and design program with built-in special effects and custom features. Fun but sometimes difficult to use. Great for pattern design, block and geometric graphics and watercolor-style "washes." Requires 512K+. \$99. Devionics, PO Box 2126, Covina, CA 91722. CP (Feb 86)

**M.U.D. (MacroMind Utility Disk)** is a disk of various utilities for *MusicWorks* and *VideoWorks* owners. It also contains *CheapPaint* and *Art Grabber+*, two graphics desk accessories that are musts for graphics enthusiasts. Hayden, 600 Suffolk St., Lowell, MA 01854. NCP (Feb 86)

**PageMaker** is an advanced layout and makeup program. Can easily create multiple page documents. Output is optimized for LaserWriter. Good documentation. \$495. Aldus, 411 First Avenue South, Seattle, WA 98104. CP (Nov 85)

**PictureBase** is a program and accompanying desk accessory for organizing *MacPaint* and *MacDraw* elements and files. Graphics are organized into libraries, and can be searched for by keywords. A multitude of display options, and an advanced interface make this package indispensable for quick access to graphics files. \$69.95. Symmetry Corporation, 761 E. University, Mesa, AZ 85203. NCP (Jul 86)

**PosterMaker** can enlarge *MacPaint* drawings by up to 3200 percent. Full-screen cut and copy are supported, so any portion of a *Paint* document can be selected and scaled. Borders can be added automatically. Includes some nice digitized graphics files. \$39.95. Strider Software, Beecher Lake Rd., Pembine, WI 54156. NCP (Jul 86)

**ReadySetGo** is a page makeup program for 512K+ Macs. Users build up pages from blocks of text, graphics and rules. Resizing and scaling of blocks are supported. Each block can be precisely positioned. Text and art may be pasted in from another source or created within the program. Good LaserWriter support. \$195. Manhattan Graphics, 163 Varick St., New York, NY 10013. CP (Apr 86)

**Slide Show Magician 1.3** is useful for creating full screen audiovisual presentations on the Mac. Frame branching, improved editing capabilities, external cassette recorder synchronization and digitized sound capabilities make this much more powerful than the original. \$59.95. Magnum, 21115 Devonshire St., Chatsworth, CA 91311. CP (Mar 86)

**Storyboarder** produces working animated storyboards for use in film and video production. Imports graphics from *MacPaint*; allows screen masking to simulate television, 35mm or 70mm screen widths; allows limited animation and special effects. Storyboards can be printed in several formats. \$495. American Intellware, 330 Washington St., Marina Del Ray, CA 90292.

**VideoWorks** is a full-featured animation package. Professional quality animations are easily accomplished using the tools provided. Features frame-by-frame and real-time modes. Comes with an art disk of predrawn images and *Art Grabber* (which allows the user to use any part of a *MacPaint* document in *VideoWorks*). Includes many special video and sound effects, and on-disk examples. \$99.95. Hayden, 600 Suffolk St., Lowell, MA 01854. CP (Nov 85)

## COMMUNICATIONS

**HomePak** is a package consisting of *HomeTerm*, an excellent simple telecommunications program with strong macro features; *HomeFind*, an electronic filer as bad as *HomeTerm* is good; and Apple's *Edit*, a simple, non-HFS-compatible text-file editor. \$49.95. Batteries Included, 30 Mural St., Richmond Hill, Ontario L4B 1B5, Canada. NCP (Aug 86)

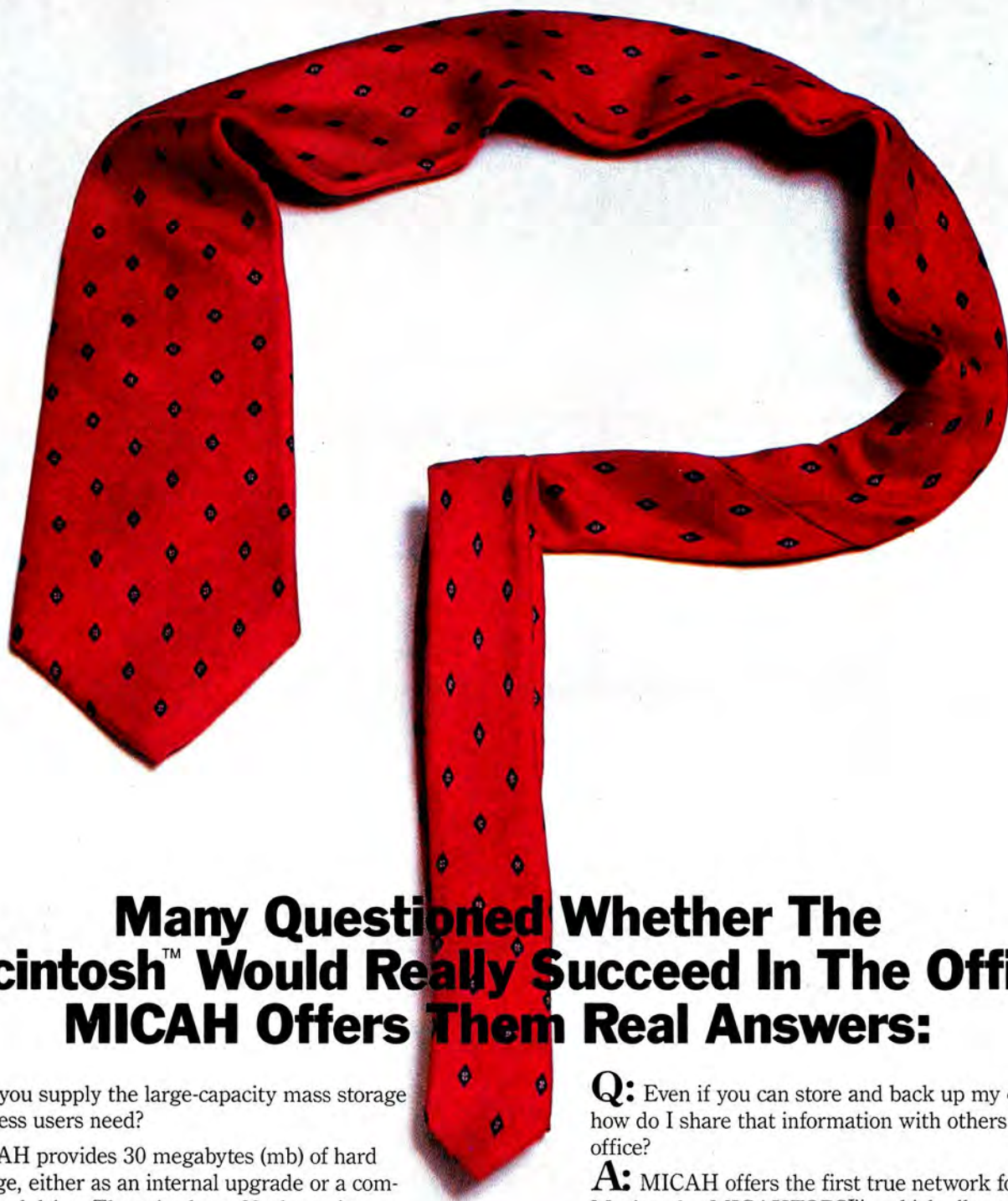
**InTouch** comes with its own communications command language able to do unattended sessions. Supports Xmodem, MacBinary and Kermit. Has a macro key function. Many sample set up documents and command language files provided. \$145. Palantir, 12777 Jones Rd., Houston, TX 77070. CP (Prem)

**MacTerminal** provides basic telecommunications and terminal emulation for the Mac user. Doesn't have macros nor any sort of auto redial/auto logon capability. Best for those needing faithful VT100 or IBM 3278 emulation — it is superb at those. \$99. Apple Computer, 20525 Mariani Ave., Cupertino, CA 95014. NCP (Prem)

**Microphone** is a high-powered terminal program that's easy enough for novices. Very powerful command language allows full automation of communications, if desired. \$74.95. Software Ventures, 2907 Claremont Ave., Berkeley, CA 94705. NCP (Jun 86)

**Red Ryder** is a full-featured telecommunications program that supports MacBinary, Xmodem and Kermit. Remote service procedures, auto procedure writer and keyboard macros allow automation of many operations. It is shareware and a real bargain. \$40. The FreeSoft Corp., 10828 Lacklink, St. Louis, MO 63114. NCP (Prem)





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# MINIFINDERS



**Smartcom II** balances power and ease of use. Capable of unattended operation and has a very powerful command language. Supports MacBinary, Xmodem, and Hayes Verification protocols. The large screen buffer can easily be archived both to the printer and to disk. \$149. Hayes, 5923 Peachtree Industrial Blvd., Norcross, GA 30092. NCP (Prem)

**Telescope** is the power telecommunicator's terminal program. Can be configured to emulate any terminal and has all the advanced features (except unattended operation). The documentation does not adequately explain the many features and much of the power will be unavailable to all but the pros (who can figure it out on their own). \$125. Mainstay, 28611B Canwood St., Agoura Hills, CA 91301. NCP (Prem)

**VersaTerm** features include DEC VT100 and VT52, Tektronix 4014 graphics terminal and Data General DG200 emulation. Supports Xmodem and MacTerminal Xmodem protocols and MacBinary. *VersaTerm* is easy to use and well documented. \$99. Peripherals, Supplies & Computers, 2232 Perkiomen Ave., Mt. Penn, PA 19606. CP (Prem)

## WORD PROCESSORS

**Document Compare** allows users to compare any two *MacWrite* 4.5, ASCII or MDS documents. Differences in spelling, punctuation, formatting and wording are detected. Differences appear highlighted and the documents can be printed out with differences highlighted. Not HFS compatible. \$99. The Model Office Company, Inc., The Gooderham Flatiron Building, 49 Wellington Street East, Toronto, Canada M5E 1C9. CP (May 86)

**EgWord** is a *MacWrite* lookalike that allows full Japanese kanji word processing on the Mac. Does a superlative job of making Japanese text-entry as easy as possible, given the difficulties of the language. Great for students of Japanese, may find a place in international business as well. \$300. Counterpoint Systems, PO Box 1685, Cambridge, MA 02138. CP (Apr 86)

**Just Text** is a professional level word processor and page makeup program that generates PostScript output. Comes with a set of LaserWriter utilities that allow total manipulation of art and text. Requires LaserWriter or other PostScript compatible output device. \$195. Knowledge Engineering, GPO Box 2139, New York, NY 10116. NCP (Dec 85)

**LaserFonts** are new fonts designed for the LaserWriter. Users download them to their machines. Very high quality and very simple to use. *Willamette* (in Medium, Light and Extra Light) looks like Avant Garde. *MicroFonts* provides tiny, expanded and condensed versions of the LaserWriter's own fonts. \$29.95 each. Century Software, 2306 Cotner Ave., Los Angeles, CA 90064. NCP

**Le Conjugueur** is a desk accessory that simplifies finding the right spelling for a French verb. Type a verb, select a person and a tense, and *Le Conjugueur* presents the correct form (and can even insert it for you). Good for casual French speakers or students. \$49.95. Editions Ad Lib, 220 Grande-allee, Quebec City, Quebec, Canada, G1R 2J1. NCP (Aug 86)

**Liberty Spell Checker** is a fast, effective interactive checker. The dictionary is smaller than average, but well chosen. Unfortunately, it has a few misspelled words. \$59.95. DataPak, 14011 Ventura Blvd., Sherman Oaks, CA 91423. CP

**Macindexer** is a good writer's utility that takes much of the mechanical work and time out of preparing an index. Works with *MacWrite* and *Word*. Can generate word frequency counts. \$49.95. Boston Software Publishers, 1260 Boylston St., Boston, MA 02215. CP (Jul 86)

**MacLightning** is an interactive spelling checker that is both very fast and has an extensive, well thought out dictionary. Exists in the *System* as a desk accessory. \$99.95. Target Software, 14206 SW 136th St., Miami, FL 33186. NCP

**MacWrite** is the basic word processor that comes with the Mac. While it doesn't have every bell and whistle, it is more than adequate for most users. Features include document size

limited by disk space, global search and replace, page numbers indicated in the scroll bar and excellent LaserWriter compatibility. \$125. Apple Computer, 20525 Mariani Ave., Cupertino, CA 95014. NCP

**MegaForms** is a well designed forms generator and processor. Forms design is easy. Can use data from *MegaFiler*. The form filling and print functions are slow, possibly too much so for large scale use. \$295. Megahaus, 5703 Oberlin Dr., San Diego, CA 92121. CP (Feb 86)

**QuickWord** is a word processing accessory that adds sophisticated glossaries to *MacWrite*. Simple to install and use, yet powerful and efficient. \$49.95. EnterSet, 410 Townsend St., San Francisco, CA 94107. NCP

**Spellswell** is an effective and powerful standalone spelling checker. It has many advanced features such as capitalization and homonym checking and comes with a large, well-chosen dictionary. Full-featured, easy to use, with keyboard equivalents for menu commands. \$49.95. Greene, Johnson, Inc., 15 Via Chualar, Monterey, CA 93940. NCP (May 86)

**Word** is a power word processor for the Mac. It has just about every feature your heart could desire. Supports keyboard commands as well as the mouse. Does mail merge and multicolumn text. Integrates with the rest of the Microsoft line. \$195. Microsoft, 16011 NE 36th Way, Redmond, WA 98052-6399. CP (May 86)

## ORGANIZATIONAL TOOLS

**Acta** is an outline processor in desk accessory format. It has practically all the power of a standalone program, and then some. Can save files as *Acta* outlines, *MacWrite* or text files. A must-have for those who do outlining. \$59.95. Symmetry, 761 E. University Dr., Mesa, AZ 85203. NCP (Jul 86)

**Callope** is a new type of outlining program. Chunks of information are manipulated as small "light bulbs" containing text. Related elements can be graphically connected, and their text information viewed in hierarchical order. Text files can be created for *MacWrite* editing. \$59.95. Innovation, PO Box 1317, Los Altos, CA 94023. NCP (Sep 86)

**DecisionMap** organizes data to facilitate decision making. Unique weighting abilities make this a powerful tool. The decision analysis process is long and some times complex, but never difficult. \$145. SoftStyle, 7192 Kalanianohe Hwy., Honolulu, HI 96825. CP

**MacProject** allows a user to plan and track a project from beginning to end. Uses CPM to produce schedules with start and finish dates for each task. Can report on resource interdependencies and generate all needed printed reports. \$125. Apple Computer, 20525 Mariani Ave., Cupertino, CA 95014. NCP (Mar 86)

**Micro Planner** is a heavy-duty project planner. Excellent, but slow, at the mechanics of project planning. Reports are its weakness. Speed is much improved when a hard disk is used. \$395. MicroPlanning Software USA, 235 Montgomery St., San Francisco, CA 94104. CP (Mar 86)

**Mindsight** is a professional level decision support and business planning package. Can work with IFPS on mainframes, and is able to transmit models in both directions. Powerful and easy to use. Requires 512K+. \$195. Execucom Systems, PO Box 9758, Austin, TX 78766. CP

**More** is an incredibly powerful outline processor with gobs of great features: instant charts, math capabilities, multiple windows, font and style control, templates and more. Prints outlines in any of several standard formats, even in color. Requires 512K+. \$295. Living Videotext, 2432 Charleston Rd., Mountain View, CA 94043. NCP (Sep 86)

**ods/Consultant** is a program that lets users organize ideas and helps in thinking through and solving problems. Easy to use thanks to extensive use of icons and on-screen help. This program introduces some low-level AI (artificial intelligence) concepts. \$200. Organization Development Software, 1011 E. Touhy Ave., Des Plaines, IL 60018. CP (Apr 86)



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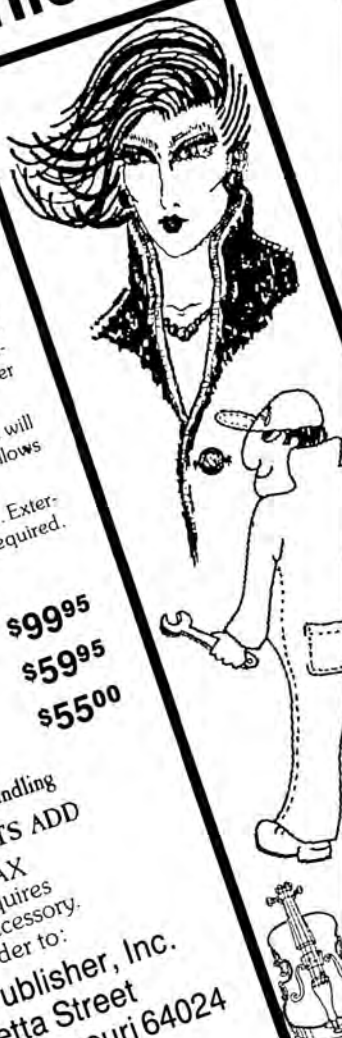


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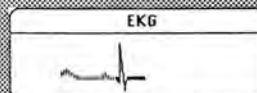
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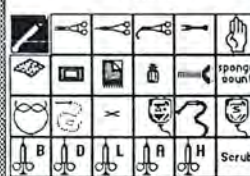
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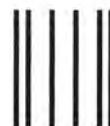


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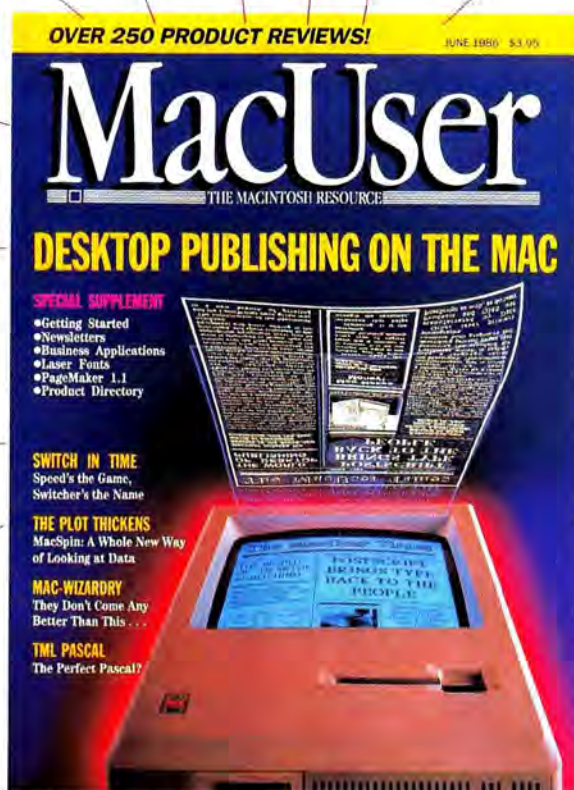
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**ThinkTank 128** is a basic outline processor. The interface is not the standard Mac interface, but is simple to use and efficient. Printer support is limited, but files can be printed in a draft-style mode. Only for 128K owners; 512K+ owners should get **ThinkTank 512**. \$99.95. Living Videotext, 2432 Charleston Rd., Mountain View, CA 94043. CP

**ThinkTank 512** is a very fast and intuitive organizational tool that can handle word processing chores in the midst of structuring a plan or outline. Full keyboard control is possible. Can store and paste graphics into outlines. Slide show features allows high-quality presentations to be created. Good report formatting and printing capability. \$195. Living Videotext, 2432 Charleston Rd., Mountain View, CA 94043. CP (Jan 86)

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**BatteryPak** is a set of 8 handy desk accessories including scientific and RPN calculators, a background text file printer and a 250-page note pad with search and phone dialing capabilities. **Disk Tools** is the best DA currently available. \$49.95. Batteries Included, 30 Mural St., Richmond Hill, Ontario, L4B 1B5, Canada. NCP (Dec 85)

**Front Desk** lets small businesses and offices easily keep track of personnel schedules, activities and payments. The program can keep track of up to 15 employees, functioning as a day-, week- and month-at-a-glance calendar. \$149.95. Layered, 85 Merrimac St., Boston, MA 02114. CP (Dec 85)

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**Mighty Mac** is a personal data manager for those with lots of appointments to keep track of. Features include an on-screen calendar, a Directory, Reminder function (with audio and visual alarm), and an Event function. Very good search capabilities for accessing information. \$59.95. Advanced Logic Systems, 1195 E. Arques Ave., Sunnyvale, CA 94086. CP (Aug 86)

**My Office** lets you handle your files and papers in much the same way you did before you got a computer. Excellent use of graphic symbols makes this program the easiest to use of its type. \$129.95. DataPak, 14011 Ventura Blvd., Sherman Oaks, CA 91423. CP (Prem)

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**Sidekick** is a set of desk organization applications and accessories. Functions include phone dialer and logger, desk accessory terminal, calculator, clock, editor and more. When required resource files are included modules take up a lot of disk space, and are best used with a hard disk. \$84.95. Borland International, 4585 Scotts Valley Dr., Scotts Valley, CA 95066. NCP (Dec 85)

**Top Desk** is a set of 7 self-installing (and self-removing) DAs. Menu Key adds Command key sequences to programs. View allows looking at and moving data between up to 8 MacWrite documents, BackPrint allows background printing from most applications, Shorthand adds a glossary, Blank is a screen saver, Encrypt scrambles files for protection, and Launch transfers to another application. \$59.95. Cortland Computer, PO Box 9916, Berkeley, CA 94709. CP (May 86)

## UTILITIES

**Accessory Pak 1** is a set of useful applications and utilities. **Paint Cutter** alone is worth the price. That program allows users to

browse and manipulate full page MacPaint documents. \$39.95. Silicon Beach, 11212 Dalby Pl., San Diego, CA 92126. NCP (Nov 85)

**Copy II Mac** was one of the first back-up programs available for the Mac. Does efficient sector and bit copies and in its latest version can back-up virtually all Mac software. Features graphic displays of copy progress. Comes with **MacTools**, a multiuse utility that can recover many damaged files. \$39.95. Central Point Software, 9700 S.W. Capitol Highway, Portland, OR 97219. NCP (Apr 86)

**Disk Ranger** is a speedy cataloguing program that doubles as an efficient labelmaker. Comes with pinfeed labels. Works with regular and hard disks. Can catalog HFS systems. \$49.95. Mainstay, 28611B Canwood St., Agoura Hills, CA 91301. NCP (Mar 86)

**Dubl-Click Calculator Construction Set** lets users design personalized calculators with a variety of standard and special functions. Multiple functions can be attached to a single key. Finished calculators can be saved as installable desk accessories or as clickable applications. \$59. Dubl-Click Software, 18201 Gresham St., Northridge, CA 91321. NCP (Apr 86)

**Fedit Plus** is the file and disk editor for everyone, from newest Mac owner to oldest. It can do more for your disks and files than any other application. Write boot blocks, modify a file's Finder attributes, recover deleted MFS files; **Fedit Plus** can do it. If you own a Mac, get it. HFS-compatible, although some features do not function. \$40. MacMaster Systems, 939 E. El Camino Real, #122, Sunnyvale, CA 94087. NCP (Sep 86)

**Hard Disk Util** uses patch files to allow users to mount and run specified programs on their hard disks. The list of patches is constantly expanding. \$89.95. FWB Software, 2040 Polk St., San Francisco, CA. NCP

**HFS Locator Plus** is the essential HFS desk accessory. It can search for a file by name or date of creation, create folders, move files from one folder to another, set a program (or document) to launch while in an application, plus it supports the standard file rename, delete, copy, and get info functions. HFS/hard disk users should own this desk accessory. \$34.95. PBI Software, 1111 Triton Dr., Foster City, CA 94494. NCP (Sep 86)

**MacBooster** is a disk-cache program that adds a great deal of operating speed to a 512K Mac. It installs easily from its master disk. Can increase the speed of your 512K Mac by 2 to 3 times. Not for Mac Plus. \$50. Mainstay, 28611B Canwood St., Agoura Hills, CA 91301. NCP

**Mac Disk Catalog II** is a utility that will quickly organize a moderate size disk library. Easy to use with powerful reporting and label-making features. \$49.95. New Canaan MicroCode, 136 Beech Rd., New Canaan, CT 06840. NCP (Dec 85)

**MacLabeler** lets users instantly index and print labels for all the disks in a burgeoning collection. Choose border type and orientation of your label; index by folder or document. Starter set of labels is included. \$49.95. Ideaform, PO Box 1540, Fairfield, IA 52556. CP (Prem)

**MacLink** lets users transfer data between Macs and PCs. Simple to install and run, high-performance software. Can do special format transfers such as 1-2-3 to **Multiplan** and **WordStar** or **MultiMate** to **MacWrite**. Contains both Mac and PC disks, interface cable is optional. Has Mac and MS-DOS disks. \$125, \$155 with 8-ft interface cable. DataViz, 16 Winfield St., Norwalk, CT 06855. NCP

**MacMatel** combines RAMdisk and print spooling functions in a compact package. Both parts are efficient, work well and have on-screen help. \$49.95. SMB Development Associates, PO Box 3082, Chatsworth, CA 91311. NCP

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# MINIFINDERS



it. The documentation is sparse. For pros only. \$85. Jasik Designs, 343 Trenton Way, Menlo Park, CA 94025. NCP

**Mac + II** lets you run Apple II software on the Mac. Emulation speed is only 35 to 45 percent of a real Apple II, so graphics especially suffer. Games also run slow. Runs AppleWorks (Apple II integrated software). Good for ex-Apple II owners who have large software collections. \$149.95. Meacom, PO Box 272591, Houston, TX 77277. CP

**MacQwerty** is a set of three keyboard utility programs. *Reconfigure* allows users to assign any character to any key, *Standard* sets up a normal qwerty keyboard and *Dvorak* changes the key arrangement to the very efficient Dvorak layout. \$35. Paragon Courseware, 4954 Sun Valley Rd., Del Mar, CA 92014. NCP (Jul 86)

**MacServe** converts a Mac and a hard disk into a disk and print server. Uses the AppleTalk network and is easily hooked up. Users can partition the hard disk into multiple volumes (read-only for common access and read-write for private access). Runs in the background, so users can work on all machines in the network. Comes with a backup and restore utility. \$250. Requires 512+ or Mac XL. Infosphere, 4730 SW Macadam, Portland, OR 97201. CP

**MacZap** is a three-part disk and memory utility. It can be used to recover some damaged files and disks, compare disks, analyze disk structure and make back-up copies of most disks. \$60. Micro Analyst, 5802B Gloucester, Austin, TX 78723. NCP (Jan 86)

**myDiskLabeler** is an excellent label making program. It can read directories, or use large or small icons, or anything else the user desires. This simple and intuitive program comes with 54 precut labels on pinfeed paper. HFS compatible. \$44.95; with color printing ability (on the ImageWriter II), \$54.95. Williams and Macias, PO Box 19206, Spokane, WA 99219. NCP (Aug 86)

**'Ncryptor** is a simple, safe program that lets users password their files. The same program is used for encoding and decoding. This is the best product in its category. \$39.95. Mainstay, 28611B Canwood St., Agoura Hills, CA 91301. NCP

**Packer** is a simple utility that compresses files. It can be used to save disk space and also protect files. Typical space savings range from 20 to 50% depending on the original file type and size. This is the best program of its type so far. \$29. Bobbing Software, 67 Country Oaks Dr., Buda, TX 78610. NCP (Jun 86)

**PC to MAC and BACK** has both Mac and MS-DOS disks. This program easily and efficiently transfers text and other data between PCs and Macs. Fortunately, the documentation is excellent. Does special format transfers such as *WordStar* to *MacWrite*. Includes a cable for direct Mac to PC connections. \$149.95. Dilithium Press, 8285 SW Nimbus, Beaverton, OR 97005. NCP

**Quick & Dirty Utilities, Volume One** is a disk chock full of the handiest programs you have ever bought. Included are a super disk cataloguer, a desk accessory mover and more. Several desk accessories including a menu bar clock and a terminal are on the disk. "File Info" and "Q&D Filer" are two file management desk accessories that you'll wonder how you got along without. \$39.95. Dreams of the Phoenix, PO Box 10273, Jacksonville, FL 32247. NCP (Nov 85)

**Switcher** is Andy Hertzfeld's contribution to Mac productivity. This program lets users run several programs at once (up to 8 on a 1-megabyte or larger machine). Switching between the programs is near instantaneous. Slick and easy to use; every 512K Mac user should get it. Requires 512K+. \$19.95 from Apple, free from MAUG on CompuServe, from Delphi and included with some third-party applications. Apple Computer, 20525 Mariani Ave., Cupertino, CA 95014. NCP

**TurboCharger** is a disk-cache program. Can dramatically speed up operation (250 to 500% improvements are common). Features include auto-startup and write buffering. Only works on a 512K Mac but is a must for one. \$95. Nevins Microsystems, PO Box 1249, Capitola, CA 95010-1249. NCP

**TurboDownload** is a desk accessory designed specifically to increase the speed of Xmodem data transfers from national databases to your Mac. Speed increases range upward from 50% to over 300% at 2400 baud. \$39.95. Mainstay, 28611B Canwood St., Agoura Hills, CA 91301. NCP

**Twelve-C Financial Desk Accessory** brings all the power and functionality of a Hewlett-Packard 12C programmable calculator to your desktop. Can be programmed and all registers can be viewed while calculator is running. \$39.95. Dreams of the Phoenix, PO Box 10273, Jacksonville, FL 32247. NCP

**II in a Mac** is a graphically oriented Apple II emulator with unique features, such as text and graphics copy from Apple screen to Mac Clipboard. 40 column screen is too small, 80 column better. Suffers speed problems associated with "virtual machine" emulation. More consumer-oriented interface, and less compatible with Apple II software than competition. \$69. Micro-W Distributing, Inc., 1342B Route 23, Butler, NJ 07405. CP

**TypeNow** is a desk accessory that allows the Mac and ImageWriter to function as an electronic typewriter. Type can be placed into blanks in complex forms easily. Typing can be recorded and played back or "boilerplate" stored and used as needed. \$39.95. Mainstay, 28611B Canwood St., Agoura Hills, CA 91301. NCP (Jan 86)

## LANGUAGES

**Aztec C** is a C language program system that will appeal to users

with a UNIX background. It uses many UNIX conventions and in the more expensive versions comes with standard UNIX utilities, including the VI editor. Good, solid system. \$199 basic system, can't produce standalone applications; \$299 development system, can produce standalone applications; \$499 commercial system, development system plus utilities and strong technical support by publisher. Manx Software Systems, PO Box 55, Shrewsbury, NJ 07701. NCP (May 86)

**Hippo-C Level 1** offers a good basic learning environment for newcomers to the C programming language. The program's limits and restrictions are severe and standalone applications cannot be created. A good place to begin the study of C. \$149.95. Hippopotamus, 985 University Ave., Los Gatos, CA 95030. CP

**MacAsm** is a software development system that allows programs to be written in assembly language. Programmers can assemble, edit and test software, and an integrated resource compiler lets independent applications run from their own icons. \$125. Mainstay, 28611B Canwood St., Agoura Hills, CA 91301. NCP

**Mac C** is a good, highly Mac-oriented implementation of this popular development language. Assembler and linker built-in. \$375. \$475 with Toolkit and floating point package. Consulair, 140 Campo Dr., Portola Valley, CA 94025. NCP

**MacExpress** is a development environment or shell. Programmers use it to save time and effort when developing standalone applications for the Mac. Easy to use for those with a strong technical background. \$50 test drive package, \$495. AL-Soft, Inc., PO Box 927, Spring, TX 77383. NCP (Feb 86)

**MacForth** is an implementation of the popular Forth programming language. Level 1 is a simple, introductory version with limited support of the Mac Toolbox. Excellent tutorial and references sections in the manual. Level 2 supports the Mac Toolbox fully. Level 3 extends the language so that professionals can produce standalone applications. All levels are supported by the publisher via telephone and electronic BBSs (the publisher even has a private SIG on CompuServe). \$149 (Level 1), \$249 (Level 2), \$499 (Level 3). Creative Solutions, 4701 Randolph Rd., Rockville, MD 20852. NCP

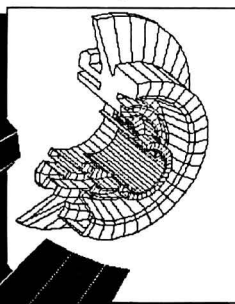
**Mach1** is a multitasking implementation of Forth that allows local variables and text files. Can create standalone applications. Several windows can be up with different operations in each, operating concurrently. Execution is fast. \$49.95. Requires 512K. Palo Alto Shipping, PO Box 7430, Menlo Park, CA 94026. NCP (Apr 86)



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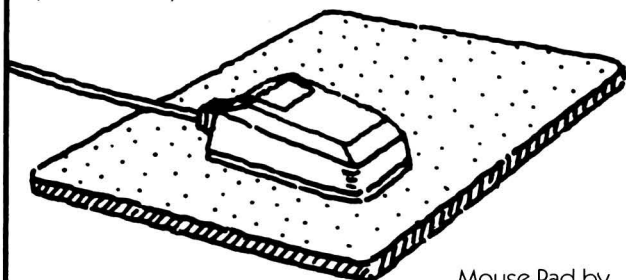
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## MINIFINDERS



**Macintosh 68000 Development System** is a fairly traditional assembly language package. The two-disk set provides an excellent editor (*Edit*), an efficient assembler, a linker, an executive, a resource compiler called *RMaker*. The files included in this two-disk set have all the basic equates, process definitions, and trap calls. \$195. Apple Computer, 20525 Mariani Ave., Cupertino, CA 95014. NCP

**Macintosh Pascal** is Apple Computer's version of this very popular programming language. Loaded as it is with innovative teaching features, this interpreter is an excellent introduction to Pascal. The documents are mostly references, get a good tutorial textbook. \$125. Apple Computer, 20525 Mariani Ave., Cupertino, CA 95014. CP

**MacScheme** is a LISP dialect with "artificial intelligence" capabilities. Has a large appetite for RAM. Interpreted language with Toolbox access limited to a small part of QuickDraw. Includes many examples and a LISP tutorial. \$125. Semantic Microsystems, 4470 S.W. Hall St., Beaverton, OR 97005. CP? (Jun 86)

**Megamax C** is an easy to use, full version of C. Has a compiler, linker, disassembler, editor and much more. Good for beginners. Excellent documentation. \$299.95. Megamax, PO Box 851521, Richardson, TX 75085. NCP

**Microsoft BASIC** was the Mac's first programming language. This interpreter (it's not a compiler) now supports the Toolbox and the whole Mac interface can be implemented in your programs. For nonprogrammers there are lots of programs available (in user group libraries and magazines) to run. There have been several versions. \$150. Microsoft, 16011 NE 36th Way, Redmond, WA 98052-6399. NCP

**Microsoft Logo**, from Microsoft's MacLibrary, written by LCSi. An excellent implementation of Logo, taking full advantage of the Mac's user interface. Uses three windows. Turtle looks

like a turtle, and its screen actions are very precise. Windows can be resized and moved about. \$124.95. Microsoft, 16011 NE 36th Way, Redmond, WA 98052-6399. NCP

**QUED (Quality Editor for Developers)** is the ultimate source code editor. Loaded with useful and well thought out features, it will make any programmer's life much easier. It is not a word processor, however. \$65. Paragon Courseware, 4954 Sun Valley Rd., Del Mar, CA 92014. NCP (Mar 86)

**TML (MacLanguage Series) Pascal** is a good Pascal compiler, capable of producing standalone programs. Can use most existing Lisa Pascal programs with only slight modification. Requires 512K. \$99.95. TML Systems, PO Box 361626, Melbourne, FL 32936. NCP (Jun 86)

## EDUCATION

**ChipWits** is a combination game and teaching tool. Players create programs to maneuver robots through a set of 8 mazes. The programs are written in *ChipWit's* built-in icon-based programming language (IBOL). IBOL is a nearly perfect introduction to programming for nonprogrammers. \$49.95. BrainPower, 24009 Ventura Blvd., Calabasas, CA 91302. NCP

**DietMac** is a database consisting of about 800 foods with nutritional information, from which to choose for planning daily menus. The Modify Food Data option allows users to customize and update data. Some on-screen help. \$79. Tess Data Systems, Inc., 17070 Red Oak Drive, Houston, TX 77090. CP (May 86)

**MacChemistry** is a two-disk set consisting of a titration program (predetermined compounds, not user modifiable), a periodic table program, *MacNest* (a scrapbook with indexing), and a disk of *MacPaint* files depicting everything from lab equipment to molecular structures of many solutions and com-



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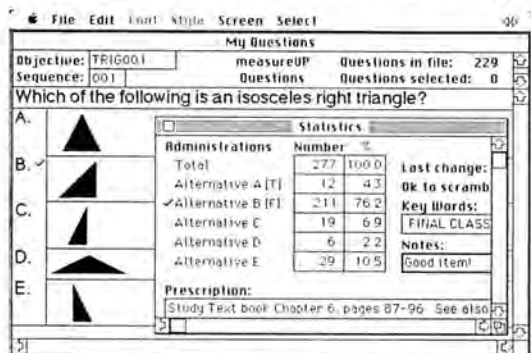
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# MINIFINDERS



pounds. **MacNest** is of general appeal. \$145. Fortnum, 31 W. Sierra Madre Blvd., Sierra Madre, CA 91024. NCP

**MacEdge** and **MacEdge II** each contain 8 reading or math drill programs for basic skills. Programs follow one of three formats, a bit contrived. Contrivances are design flaws — they require learning format as well as skill. Exception is **Alphabet Train**, a clever game with great graphics and sound, poor font definition. \$49.95 each. Think Educational Software, 16 Market St., Potsdam, NY 13676. CP

**MacStromy** is a good package for novice sky watchers. Has expandable database of sky objects that can be customized by the user. New version is very fast. \$75. Etion Software, PO Box 649, Lafayette, Co 80026. CP (Apr 86)

**MacType** offers structured typing instruction. Can teach both standard and Dvorak keyboards. Features include certificates for reaching certain levels. Can be used in a multistudent environment. \$49.95. Palantir Software, 12777 Jones Rd., Houston, TX 77070. CP

**MasterType** is proof that learning to type can be fun. In this arcade-style action game words descend from four corners towards the center ship; the user must type them correctly. Features 18 skill levels, tracks errors, recommends lessons and provides comparison scores. \$49.95. Scarborough Systems, 55 South Broadway, Tarrytown, NY 10591. CP

**NotePro** is an educational package that teaches users to organize and make best use of their notes. Consists of five well designed parts, which can be used individually or as a whole. \$59.95. Learning Skills, PO Box 8038, Reno, NV 89507. NCP (Jul 86)

**PowerMath** is an equation solver. Handles problems ranging from the simplest to the extremely complicated. Step-by-step solutions make this a powerful teaching tool. Results can be displayed numerically or graphically. Slow, but potent pro-

gram. \$99.95. BrainPower, 24009 Ventura Blvd., Calabasas, CA 91302. NCP

**Score Improvement System for the SAT** is a no-nonsense drill and practice session covering practice tests, vocabulary, reading comprehension, math and quantitative comparisons. On-line tutoring for wrong answers. \$99.95. Hayden, 600 Suffolk St., Lowell, MA 01854. CP (May 86)

**Spanish Grammar III** is a teachers' tool consisting of ten modules for students who need tutoring in the Spanish language. Previous knowledge of the language is necessary. Uses multiple choice and fill-in formats. Keeps a Teacher's Management Report for up to 40 names. \$34.95. Queue, 5 Chapel Hill Dr., Fairfield, CT 06432. CP (Apr 86)

**Speed Reader II** builds skills sequentially to develop faster, more efficient reading and improve retention. Scores kept, and can be graphed. High school level selections included, other levels available on data disks. \$69.95. Davidson & Associates, 3135 Kashiwa St., Torrance, CA 90505. CP? (Apr 86)

**Tellstar I & II** are Mac astronomy programs. Have extensive database, quick sky plotting and can locate specific celestial objects. Level II has southern hemisphere star table, Messier objects. \$49.95 (level I), \$79.95 (level II). Spectrum HoloByte, 1050 Walnut, Boulder, CO 80302. NCP (Apr 86)

**Turbo Turtle** is a turtle graphics program primarily designed as a learning tool for children. Uses Logo commands for graphics, but is not a full Logo implementation. Simple to use, good introduction to Logo for young children. \$59.95. Hayden, 600 Suffolk St., Lowell, MA 01854. CP

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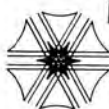
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# MINIFINDERS



than most of the genre. The story here is gripping, but there are only puzzles to solve. Still, this is a trip in the imagination well worth taking. Requires 512K+. \$44.95. Infocom, 125 CambridgePark Dr., Cambridge, MA 02140. CP (Apr 86)

**Airborne** is a classic arcade-style game with "real" sound effects.

\*\*\* The player defends against an assault from flying enemies. Game noises digitized from actual recordings add to the game. \$34.95. Silicon Beach, 11212 Dalby Pl., San Diego, CA 92126. CP

**Alter Ego** simulates the entire lifetime of a fictional character. The

\*\*\* player's reaction to each multiple-choice event shapes the character's future relationships, job, health, etc. Spectacularly impressive the first time you play; after that there are too many similarities to previous characters. \$59.95. Activision, PO Box 7287, Mountain View, CA 94039. CP (June 86)

**Amazon** is an illustrated adventure authored by Michael Crichton.

\*\*\* Unravel the fate of a doomed expedition with the help of Paco the talking parrot. Three difficulty levels, good sentence parser. \$49.95. Telarium, 1 Kendall Sq., Cambridge, MA 02139. CP (Feb 86)

**The Ancient Art of War** gives users a chance to refight some

\*\*\*\*\* famous campaigns on both strategic and tactical levels. Campaigns can also be designed from scratch. Very playable, addicting game. Requires 512K+ Mac. \$49.95. Broderbund, 17 Paul Dr., San Diego, CA 94903. CP (Apr 86)

**Balance of Power** is the world's first computer peace game. This

\*\*\*\*\* simulation allows players to become either the President of the United States or General Secretary of the Soviet Union. Extraordinary artificial intelligence routines and general play make this a classic. \$54.95. Mindscape, 3444 Dundee Rd., Northbrook, IL 60022. CP (Prem)

**Baron** is the world of real estate, in a financial simulation. Buy and

\*\*\*\*\* option properties in five key areas; invest in industrial, residential, or land property; or put cash aside in high-interest accounts. \$59.95. Blue Chip, 6740 Eton Ave., Canoga Park, CA 91303. CP

**Borrowed Time** casts players as detectives who have to solve their

\*\*\*\*\* own murder — before it happens. This game requires players to think and act like a detective to solve the game. Good sentence parser, sketchy Mac interface. \$44.95. Activision, PO Box 7287, Mountain View, CA 94039. CP (May 86)

**Brataccas** is the Mac's first true action adventure in which players

\*\*\* use the mouse or keyboard to control Kyne, the heroic fugitive scientist, as he moves around a planet outpost in search of clues and information. Terrible, confusing instruction manual mars an otherwise good game. Excellent graphics, unusual sentence parser. \$44.95. Mindscape, 3444 Dundee Rd., Northbrook, IL 60062. CP

**Bridge 4.0** provides three other players and the cards for a game

\*\* of rubber bridge. It's an average (Goren) bidder and a less than good card player. Good if it's the only game in town. Plays slowly since it's written in BASIC. \$29.95. Artworx Software, 150 N. Main St. Fairport, NY 14450. CP (Sep 86)

**Brimstone** is a full-text adventure that follows the exploits of Sir

\*\*\*\*\* Gawain as he journeys down to the pits of Hell and back again. A good example of an interactive novel, although the third-person narrative can be disconcerting. \$39.95. Broderbund, 17 Paul Dr., San Rafael, CA 94903. CP (Jul 86)

**Championship Boxing** allows statistical replay involving famous

\*\*\*\*\* boxers. Players can modify existing boxers and can create their own fighters. Good sound and graphics. \$39.95. Sierra, PO Box 485, Coarsegold, CA 93614. CP (Mar 86)

**Cutthroats** casts players in this full-text adventure as a deep-sea

\*\* diver, hired by a band of toughs to locate shipwreck treasure. The game is very closed-ended, requiring almost Pavlovian obedience. Multiple endings. \$39.95. Infocom, 125 CambridgePark Dr., Cambridge, MA 02140. CP

**Cyborg** is a text adventure game with an interesting twist. Robot

\*\*\* brain is implanted in concert with yours. It scans, evaluates, and reports, then carries out actions. Word and sentence understanding is very good. Absorbing game for adventure-

ers. \$39.95. Broderbund, 17 Paul Dr., San Rafael, CA 94903. CP

**Deadline** is a text adventure in which the player is a detective

\*\*\* called in to investigate what seems like a simple drug overdose. The family lawyer thinks it was really a murder. You have 12 game hours to find the killer! \$49.95. Infocom, 125 CambridgePark Dr., Cambridge, MA 02140. CP

**Deja Vu A: Nightmare Comes True** is a graphic adventure that

\*\*\*\*\* breaks new ground. Innovative use of the Mac interface in truly playable and exciting game. A great introduction to graphic adventure games. \$49.95. Mindscape, 3444 Dundee Rd., Northbrook, IL 60062. CP (Jan 86)

**Dinner at Eight** is a useful recipe filing system that includes a

\*\*\* collection of recipes from a nationwide sampling of restaurants. Users enter number of diners and program scales recipes accordingly. \$59.95. Rubicon, 6300 La Calma Dr., Austin, TX 78752. CP (Jan 86)

**Enchanted Scepters** is a surround sound graphic adventure

\*\*\* game. It has a limited vocabulary and virtually no story. Offers extensive and varied scenes and utilizes the Mac interface to the fullest. A worthwhile adventure experience. \$39.95. Silicon Beach Software, PO Box 261430, San Diego, CA 92126. CP (May 86)

**Flight Simulator** puts you at the controls of a small plane (prop or

\*\*\* jet) and lets you roam North America. As difficult as real flying. Mac version has features not found on earlier versions, including spotter aircraft. Not all features available on 128K. \$49.95. Microsoft, 16011 NE 36th Way, Redmond, WA 98052. CP

**Fokker Triplane** is about as near to flying as you can get seated in

\*\*\* front of a computer. Very realistic simulation and excellent graphics. Well designed and implemented. \$59.95. PBI Software, 1155B-H Chess Dr., Foster City, CA 94404. CP (Feb 86)

**Gateway** comes with 3 full-color prints. You inherit a boring old

\*\*\* building from a supposedly rich uncle, eventually learning that the building is a "gateway" to a lost civilization. \$49.95. Priority, 635 Sanborn Rd., Salinas, CA 93901. CP (Prem)

**Gato** puts players in command of an American submarine in World

\*\*\*\*\* War II. This superb simulation game uses all of the Mac's graphic capabilities to really make you feel that "you are there." \$39.95. Spectrum Holobyte, 1050 Walnut St., Boulder, CO 80302. CP (Nov 85)

**Grid Wars** is a three-dimensional arcade-style game. Good play-

\*\*\* ability, for those that enjoy shoot-em-ups. Bizarre graphics. \$39.95. Ann Arbor Softworks, Inc., 308½ S. State Street, Ann Arbor, MI 48104. CP (Apr 86)

**Harrier Strike Mission** pits you against a well defended island.

\*\*\* You fly an advanced Harrier jumpjet from a carrier offshore. Fair graphics and reasonable flight simulation prove that color isn't necessary in a flight simulator. \$49.95. Miles Computing, 21018 Osborne St., Bldg. 5, Canoga Park, CA 91304. CP (Feb 86)

**Legacy** is a two-part text/graphic adventure. A magical orb in Drab

\*\*\*\*\* Castle must be found through the use of spells and careful adventuring. Well-constructed game. \$45. Challenger Software, 18350 Kedzie Ave., Homewood, IL 60430. CP

**Lode Runner** is a 150-screen action-strategy challenge that

\*\*\* requires a joystick for truly effective play. Move around a grid of ladders and platforms collecting treasure; dig a hole to trap pursuers. Build your own challenges. \$39.95. Broderbund, 17 Paul Dr., San Rafael, CA 94903. CP

**The Lüscher Profile** is a psychological profile generator that

\*\*\* bases its conclusions on users' responses to seven different color tests (color charts are enclosed in the package). Select your favorite colors, shades and shapes and the program displays or prints a two- or three-page personality profile. \$39.95. Mindscape, 3444 Dundee Rd., Northbrook, IL 60062. CP (Aug 86)

**MacChallenger** lets players land a space shuttle. The graphics of

\*\*\* this flight simulator are crude and it's a hard machine to fly,



# MINIFINDERS



but it's also a lot of fun. Version 2.0 lets you record your landing attempt (that's what most of them are!) and then review it from any of ten camera angles, a truly unique touch! \$49.95. Aegis Development, 2210 Wilshire Blvd., Santa Monica, CA 90403. CP (Feb 86)

**MacGolf** is a dynamic simulation of real golf. Players have a choice of courses and difficulty levels. Superb playability makes this a must for all golfers and gamers. Requires 512K+. \$59.95. Practical Computer Applications, 1305 Jefferson Highway, Champlin, MN 55316. CP (May 86)

**Macnooga ChooChoo** is a set of electronic toy trains. Run on the layouts provided, or create your own, as complex as you wish. Create scenery using built-in tools or import fancier MacPaint scenery. \$39. Fortnum, 31 W. Sierra Madre Blvd., Sierra Madre, CA 91024. NCP (Apr 86)

**MacVegas** contains seven complete casino-style games: baccarat, blackjack, craps, keno, poker, roulette and slots. All are fairly standard, but generally well designed. House rules can be selected from a menu. The games are all fun to play, but not particularly absorbing. \$59. Videx, 1105 Northeast Circle Blvd., Corvallis, OR 97330. CP

**MacWars** is a Mac version of the popular "Star Wars" arcade game. Three-dimensional graphics are sluggish at times, digitized sound is somewhat less than terrific, and playability is limited. Doesn't work on Mac Plus. Spend your quarters on the arcade version. \$49.95. Miles Computing, 21018 Osborne St., Canoga Park, CA 91304. CP

**Make Millions** is a fascinating business simulation in which the player competes against the computer to take control of five companies, then run them profitably. Different strategic options and human-seeming associates make simulation more complete. Appeals to the closet capitalist in all of us. \$49.95. Scarborough Systems, 55 South Broadway, Tarrytown, NY 10591. CP

**Millionaire** is a financial simulation based on the stock market. "News" affects stock prices, so read it religiously. Turn a pittance into a fortune to win the game. \$49.95. Blue Chip, 6740 Eton Ave., Canoga Park, CA 91303. CP

**Mind Over Mac** features five games. Entertainment for the whole family. Good graphics paired with synthesized sound and on-screen help. \$49.95. Think Educational Software, 16 Market St., Potsdam, NY 13676. CP (Feb 86)

**Mind Prober** is a demonstration of a very simple expert-style system. How well do you know your friends? Answer certain statements as either true or false, and the computer prints a 3- to 5-page psychological profile of subject in business, stress, sex and other situations. \$50. Human Edge Software, 2445 Faber Pl., Palo Alto, CA 94303. CP

**The Mist** is an all-text "interactive novel" based on a short story by Stephen King. Vivid graphic and sometimes gory descriptions compensate for the game's muddled sentence parser. The story is involving, while the game is overly lock-step. \$39.95. Mindscape, 3444 Dundee Rd., Northbrook, IL 60062. CP (May 86)

**NewGammon** is animated backgammon that will challenge even good players. Features include variable skill levels and strategies and options to play the Mac or watch the Mac play itself. Many positions are included so that you can learn how to play them without having to set up a whole game. An arcade-like high speed play mode is also included. \$39.95. Newsoft, PO Box 4035, Newport Beach, CA 92661. CP

**Orbiter** puts a real space shuttle on the Mac screen. A multitude of controls, intelligent on-board computer with speech capabilities, real-time graphics and 16 distinct missions help this program succeed as both a game and a simulation. Recommended. \$49.95. Spectrum HoloByte, Inc., 1050 Walnut Street, Suite 325, Boulder, CO 80302. NCP (Jul 86)

**Perplex** is a board word game based on *Scrabble*. Players can vary the rules and board to suit their tastes and skills. Up to four can play and the game can either be an active player or a scorer and arbiter. Has a 90,000+ word dictionary. \$39.95. Hayden, 600 Suffolk St., Lowell, MA 01854. CP

**Pinball Construction Set** lets users create their own pinball games, as elaborate or as easy as desired. Uses MacPaint for backgrounds and has lifelike sounds (on 512K+ Macs). No documentation to speak of. \$40. Electronic Arts, 2755 Campus Dr., San Mateo, CA 94403. CP (Jan 86)

**Psion Chess** is as good a micro chess player as you'll find. This 1984 World Micro Champion makes superb use of graphics and the Mac interface. Switch between 6 languages for a touch of spice. \$59.95. Psion, 40 Lindeman Dr., Trumbull, CT 06611. CP (Mar 86)

**Real Poker** is five-card draw against five other players with Old West names, distinct personalities and playing styles, in a saloon setting. Dealing and play are very fast. Game evaluates your hand, suggests cards to keep/discard. Dynamic, exciting, addictive game. \$39.95. Henderson Associates, 980 Henderson Ave., Sunnyvale, CA 94086. CP

**Rogue** is a strategy dungeon adventure in which each quest is completely different. Randomly generated rooms, monsters and treasures keep even veterans on their toes. \$39. Epyx, 1043 Kiel Ct., Sunnyvale, CA 94089. CP (Feb 86)

**Sargon III** is a capable chess program with 9 levels of play, problem-solving modes, take back, change color, hint, manual play, etc. Easy Play option blocks Sargon from stealing search time during player's move, effectively doubling number of levels. Pieces are moved graphically. Disk stores 107 classic games for review and replay. \$49.95. Hayden, 600 Suffolk St., Lowell, MA 01854. CP (Mar 86)

**Skyfox** is a sophisticated 3D shoot-em-up. You're fighting tanks, planes, and enemy cities floating in the sky. Fast graphics, good sound, slick on-board attack computer and many levels of difficulty will keep fans of this genre happy for hours. \$39.95. Electronic Arts, 2755 Campus Dr., San Mateo, CA 94403. CP

**Strategic Conquest** is large scale, strategic conflict on the Mac. This very involved war game will be enjoyed by those who like this genre. \$49.95. PBI Software, 1155B-H Chess Dr., Foster City, CA 94404. CP (Dec 85)

**Suspended** is Infocom's most unique text game. Using a small plastic board and six markers, the player keeps track of six uniquely designed robots which check on damage to a complex's machinery and report back what they perceive as the problem. \$49.95. Infocom, 125 CambridgePark Dr., Cambridge, MA 02140. CP

**Ultima II** players take the part of a character who travels through land, sea, air, space and even time itself in a quest to find and defeat the evil sorceress Minax. Good Mac interface; excellent game; confusing graphics. \$59.95. Sierra, PO Box 485, Coarsegold, CA 93614. CP

**Ultima III** allows up to four characters to cooperate to explore the vast wilderness of Sosaria; dungeons, oceans, and the Moon Gates to help solve the adventure. \$59.95. Origin Systems, 340 Harvey Rd., Manchester, NH 03103. CP

**Winter Games** lets up to eight players compete against each other in Olympic events including figure skating, bobsledding, biathlon and ski-jumping. Excellent animation, good graphics, good theme music. \$39. Epyx, 1034 Kiel Ct., Sunnyvale, CA 94089. CP (Mar 86)

**The Witness** is a full-text adventure that casts the player as a detective assigned to get to the bottom of a death threat. When the victim is killed, you have only one night to find the real guilty party. \$39.95. Infocom, 125 CambridgePark Dr., Cambridge, MA 02142. CP

**Wizardry** is an outstanding dungeon exploration adventure pitting a party of up to six characters against the guardian monsters of the evil wizard Werdna. Capture his amulet to earn your reward. Even after solving the game, you'll want to go back into the dungeon. \$59.95. Sir-Tech, 6 Main St., Ogdensburg, NY 13669. CP

**Word Challenge** is a *Boggle* lookalike. Features multiple (26) skill levels and an extensive dictionary. Even "pro" *Boggle* players should find a level that will challenge them. \$39.95. Hayden, 600 Suffolk St., Lowell, MA 01854. CP



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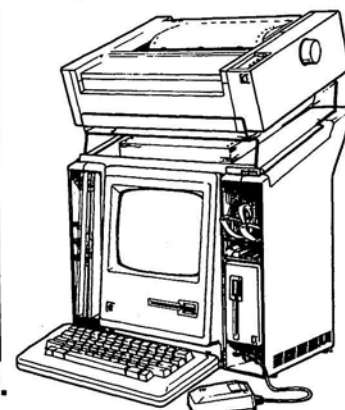
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**Xyphus** is a role-playing game pitting four characters (fighters or wizards) against multiple scenarios that grow increasingly harder. Excellent Mac interface and icon control. \$39.95. Penguin, PO Box 311, Geneva, IL 60134. CP

**Zork II** is where the adventure continues in the underground empire. A wandering wizard keeps things interesting, though there's a way to beat him if you persevere. \$44.95. Infocom, 125 CambridgePark Dr., Cambridge, MA 02140. CP

**Zork III** is the final chapter in the trilogy. Players come up against the ultimate enemy — the Dungeonmaster himself. More closed-ended than previous Zorks. \$44.95. Infocom, 125 CambridgePark Dr., Cambridge, MA 02140. CP

## MUSIC

**ConcertWare+** is an enhanced version of *ConcertWare*. Has  
 \*\*\*\* different instruments and the ability to use any four of a set of eight at any point in a piece. Can read and use *ConcertWare* and *MusicWorks* files. \$69.95. Great Wave Software, 104 Gilbert Ave., Menlo Park, CA 94025. NCP (Nov 85)

**Deluxe Music Construction Set** is a good general purpose music  
 \*\*\*\* program. An active piano keyboard and instant audio feedback make this program perfect for educational applications, and the advanced notational capabilities will satisfy most advanced musicians. \$50. Electronic Arts, 2755 Campus Dr., San Mateo, CA 94403. CP (Mar 86)

**Performer** is a strong contender for the high-end of the MIDI  
 \*\*\*\* sequencer market. Only those experienced with MIDI should get this, and if you are, this is one of the best sequencers out for the Mac. Files can be transported to *Professional Composer* for editing. Serious omission: No direct track or segment looping. \$295. Mark of the Unicorn, 222 Third St., Cambridge, MA 02142. CP

**Professional Composer** is aimed at music professionals. Pro-  
 \*\*\* duces performance-quality sheet music; has only limited playback facilities. \$495. Mark of the Unicorn, 222 Third St., Cambridge, MA 02142. CP (Prem)

**Studio Session** is a six-track recording studio, Macintosh style.  
 \*\*\*\* Over 60 digitized instruments are included, and users can create their own custom instruments with *SoundCap*. The Editor module is fairly friendly for those comfortable with musical notation, but offers no easy way for non-musicians to effectively create their own music. Must be heard to be believed. \$89.95. Kette Group, 6860 Shingle Creek Pkwy, Minneapolis, MN 55445. CP

## HARDWARE & ACCESSORIES

**A+ Mouse** is a replacement mouse. It works by optical tracking on  
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**Cauzin Softstrip Reader** lets users read the new Cauzin Soft-  
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**DiskBook** holds up to 32 disks securely, opening from the side  
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**Ergotron** is a Mac (and external drive) holder that allows a full  
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**Hard Disk 20** is Apple's entry in the exploding hard disk sweep-  
 \*\*\*\* stakes. This quiet, small unit uses Apple's new Hierarchical File System (HFS). The lack of utility software (spooler, backup, security) is its only drawback. \$1499. Apple Computer, 20525 Mariani Ave., Cupertino, CA 95014. (Feb 86)

**HyperDrive HD20** is an internal 20-megabyte hard disk. It only  
 \*\*\*\* adds about 5 pounds to the Mac's weight. Good, full featured unit with all common utilities: spooler, security program and backup utility. It could use memory a bit more efficiently, and it remains to see how well it will work with Apple's new HFS. \$2195 installed in a 512K+ Mac. General Computer Company, 215 First St., Cambridge, MA 02142.

**Macbottom 20** is a small, external unit that sits under the Mac  
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**MacCharlie** is one of the most unusual Mac products imaginable.  
 \*\*\*\* Its components slip around the Mac and the keyboard and convert the Mac into an IBM PC clone. Amazingly it works well. The enlarged keyboard has a few bugs but is a joy to use. \$1,195 with 256K RAM and one floppy drive. \$1,895 with 640K RAM and two floppy drives. Dayna Communications, 50 S. Main St., Salt Lake City, UT 84144. (Dec 85)

**MacNifty Sound Digitizer** turns ordinary analog sound input into  
 \*\*\*\* digital waveforms which can then be manipulated using the *Sound Cap* software it comes with. Capable of truly stunning effects. Requires 512K+. \$129.95. Kette Group, 6860 Shingle Creek Pkwy., Minneapolis, MN 55445.

**MacNifty Stereo Music System** converts Mac sounds to simulat-  
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**MacVision** is a digitizer that uses an ordinary video camera for  
 \*\*\*\* input. Capable of extremely fine results and special effects. Easy to use and well documented. \$399.95. Koala, 3100 Patrick Henry Dr., Santa Clara, CA 95052.

**Magic** is both the most intimidating and easiest to use digitizer  
 \*\*\*\* available. Use a regular video camera for input. Once the crowded screen is mastered, any effect is possible. \$399, \$549 with camera. New Image Technology, 10300 Greenbelt Rd., Seabrook, MD 20706.

**MouseTop** is unquestionably the cutest mouse cover on the  
 \*\*\*\* market. Gray, plush fur, round felt ears and button nose and eyes make your mouse look authentic. \$5.49; \$5.95 for MouseTop wearing wire-frame glasses. H&H Enterprises, PO Box 2672, Corona, CA 91718.

**Moustrak** is a fabric covered foam mousing pad. It will increase  
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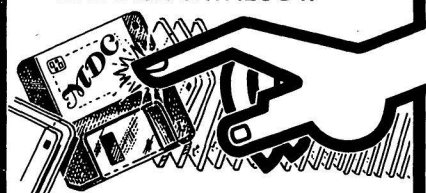
**NoLabelSystem** is a plastic permanent labeling system in which  
 \*\*\*\* users slide new tabs into a transparent plastic case on the disk. The tabs stick out of the case slightly, making them easier to read while in the drive. NLS-3.5 set contains 100 plastic pockets, 100 white tabbed insert cards, 100 color tabbed cards and instructions. \$19.45 plus \$3 shipping. Weber & Sons, NLS Dept., 3468 Hwy 9, Freehold, NJ 07728.

**ThunderScan** replaces the ribbon cartridge in an ImageWriter,  
 \*\*\*\* which is required to use it. Laser scans art that can be run through the ImageWriter, producing high-quality digitized images. The images can be manipulated as they are created or afterward. Mac Plus compatible using optional adapter. Output has been optimized for LaserWriter. \$229. Thunderware, 21 Orinda Way, Orinda, CA 94563. NCP



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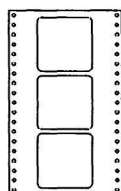
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# MORE THAN ENOUGH!


(continued from page 47)

## ON THE PLUS SIDE

That said, *MORE* works equally well on 512K Macs or the Mac Plus, with MFS files or HFS, with *Switcher* (as with *ThinkTank*, *MORE* gobbles an entire 512K), hard disks, and the LaserWriter. The program is *not* copy protected, making it easy to install on hard disks, or to back up. If you have 800K drives, the whole system can be put on a single disk for convenience.

## LET'S HAVE SOME MORE

*MORE* is almost always pleasurable to use, and sometimes tremendously exciting. The power of the tree chart and bullet features is extraordinary. Used to its fullest, this program could single-handedly revolutionize the way meetings are conducted, dramatically speed up time-consuming tasks and result in significant increases in employee and manager productivity.

In the retail trade, every new piece of software is touted as the program that will sell computer systems. It's a great marketing tool, but nobody pays much attention to it any more because only about two products have ever done it: *VisiCalc* and *Lotus 1-2-3*. *MORE* is a product that could sell *MORE* Macs (and *MORE* Mac software) and help Apple make a substantial penetration into the big business market. 

Michael D. Wesley is the West Coast Editor of *MacUser*.

## MORE

### Overall Rating

Follows Mac Interface

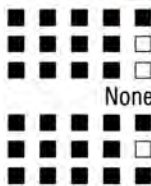
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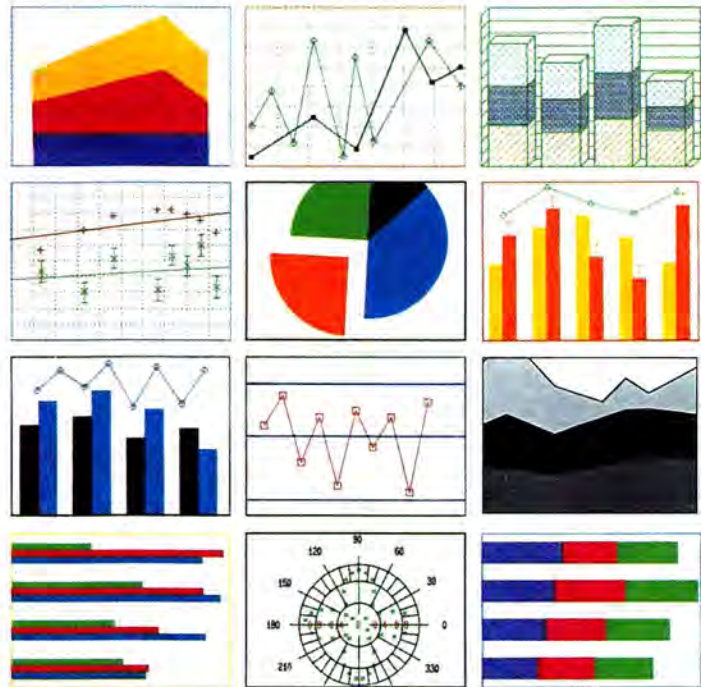
Support

Consumer Value



**Comments:** Extremely powerful outline and idea processor. **Best Feature:** Automatically generates tree and bullet charts. **Worst Feature:** Lack of Undo command. **List Price:** \$295. Requires 512K+. Published by Living Videotext, 2432 Charleston Rd., Mountain View, CA, 94043. (415) 964-3000. Versions reviewed: Prereleases and version 1.0. Not copy protected.

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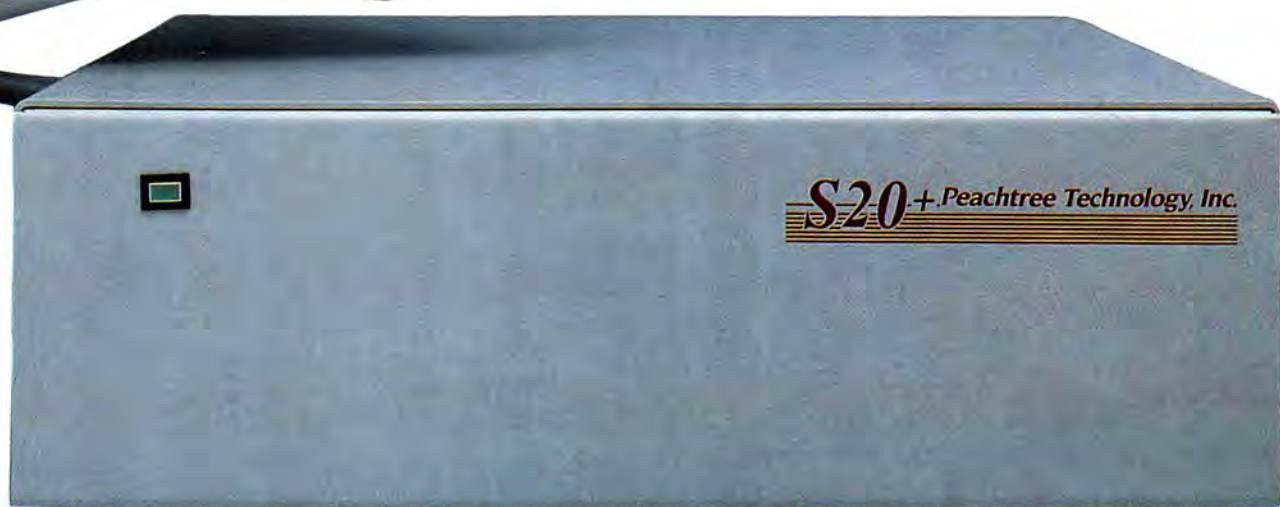
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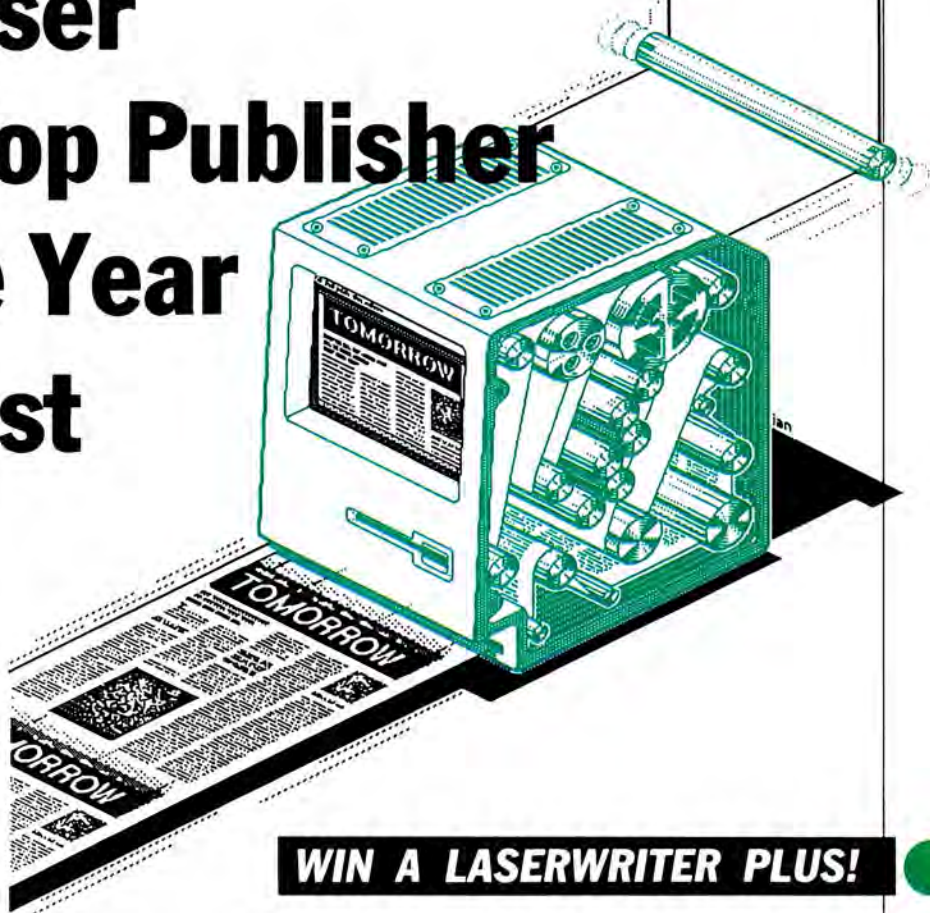


# MacUser Desktop Publisher of the Year Contest

Elsewhere in this issue you will find our second desktop publishing supplement, *Professional Desktop Publishing*. Our first supplement, *Desktop Publishing on the Mac*, published in June, created substantial interest and we received hundreds of requests from corporations, educational institutions, dealers and user groups for reprints of the supplement. In addition, Apple Computer has distributed 30,000 copies of each supplement to its authorized dealers.

In response to this enthusiasm and the astonishing growth of Macintosh desktop publishing among our readers, we are announcing an exciting new annual contest to find the *MacUser Desktop Publisher of the Year*. This contest is open to the entire Macintosh community. That could mean you, whether you are a professional working for a large organization or an individual working from your home.

We want to encourage the widest possible spectrum of entries. There are four categories: (1) Newsletters. (2) Books and manuals. (3) Advertisements. (4) General. (The last category is basically a catch-all and might include superior letterheads, forms, restaurant menus, packaging design, business reports, invitations and other, more esoteric forms of desktop publishing. Surprise us!)



**WIN A LASERWRITER PLUS!**

*MacUser* magazine will gather a panel of editors, graphic designers, publishers, marketing professionals and prominent Macintosh luminaries who will judge all entries on the basis of originality, technical proficiency, aesthetic appeal and effective use of the medium.

One entrant will win the overall award: *MacUser Desktop Publisher of the Year*. Four other entrants will win individual category awards. The prize for the overall winner will be an Apple LaserWriter Plus and an individually engraved plaque from

*MacUser* magazine. Prizes for each individual category winner will be \$500 worth of Mac software of your choice and an individually engraved plaque. A runner-up prize for each category of \$100 of software of your choice will be also awarded at the discretion of the judges.

*MacUser* will be publishing the results of this contest in our January 1987 edition, together with excerpts of prize winning work. Please read the rules below, which govern this contest. May the best desktop publisher win!

## THE FINE PRINT

1. This contest is open to all desktop publishing users, both "amateur" and "professional," except employees of *MacUser* and its affiliates. There is no entry fee.
2. All entries submitted must have been produced on a Macintosh (128K, 512K, 512K Enhanced, Plus or XL). All work, including final assembly and layout, must have been performed on a Mac, with the single exception of book and manual covers.
3. All graphic art used must be original or used with the permission of the creator. If the material was produced for an organization, include the organization's permission with entry.
4. All entries must have been created for distribution of at least 25 copies. (We don't want you to create something specifically for this contest, but rather honor work seen and used by many.)
5. *MacUser* reserves the right to reproduce all winning entries, or portions thereof.

## 6. Here's how to submit your entry:

- A. Send 6 hard copies of your entry.
  - B. Send a disk containing the final product and all component work files.
  - C. On a separate sheet submit your name, the name of the organization for which the material was produced (if any), your address and phone number.
  - D. Also tell us what program or programs were used in the production. Feel free to describe any interesting or unusual techniques used.
7. Mail your entry to **MACUSER DESKTOP PUBLISHER OF THE YEAR**, c/o *MacUser*, 25 West 39th Street, NY, NY 10018. Put the category of your entry on the lower left corner of the envelope. All entries must be postmarked by October 1, 1986. All entries submitted at the entrant's risk. The decisions of the judges will be final, and the results will be published in the January 1987 issue of *MacUser*.

## PRIZES AND AWARDS

One overall grand prize will be awarded. Entries will be judged in categories. In each category, a first prize and a runner-up prizes will be awarded. The four categories will be:

- (1) Newsletters. This category also includes magazines of all sizes and journals.
- (2) Books and manuals. The cover does not have to have been produced on a Mac, but the entire interior, including art, must have been so produced. Remember that mechanically pasted-up work is not eligible.
- (3) Advertisements. This category includes both traditional and nontraditional advertising, including fliers, mailing pieces and brochures.
- (4) General. Everything else, including menus, invitations, and package designs.



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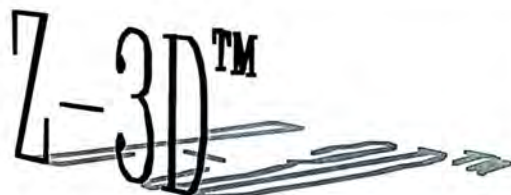
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# HARDER AND FASTER



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(continued from page 56)

disk. Software to back up the disk to floppies is available, and tape backup units can be purchased in 22- and

60-megabyte flavors. These are streaming tape units and, like the MacBack, they can execute backups off-line at a rate of about 4 to 5 megabytes per minute. An extra power outlet is built into the back so you can plug the Mac Plus into the LoDOWN to save outlets.

It is not easy to daisy chain the LoDOWN unless it is the first (0 drive) in the chain, because the jumper block is located very inconveniently, under the drive mechanism.

## INSIDE MACINTOSH

The MicahDrive AT is a 20-megabyte SCSI drive installed inside the case of a Mac or Mac Plus. Early Micah units were user-installable, with alligator clip connections to the

Mac's power supply board. Problems with this type of installation have led to a much more solid and reliable design. Current units have a soldered connection to the power supply and the installation seems very stable.

Stability is very important for an internal drive because its greatest advantage is portability. You can still carry your Mac around in its case and have your hard disk with you wherever you go.

The Micah has one other advantage over the external drives reviewed — speed. Okay, I know I said there wasn't much difference among SCSI drives, but the Micah drive does transfer data faster, 30 to 50 percent faster on average, and sometimes more. This is due not to any mechanical difference, but to some "black magic" in the Micah drive's operating programs. The software, written by Steve Brecher, uses very advanced techniques and Steve's knowledge of the interface to do wonders with data transfer speeds.

The MicahDrive AT installs either in a Mac or a Mac Plus, and, as a bonus, adds an externally accessible SCSI port. In the case of the Plus, this means that there are two external SCSI ports available. The Micah cannot be daisy chained to other drives because of this configuration. The Micah drive works very well and comes with a selection of utilities, including backup to floppies.

## SCSI IN THE SUBURBS

Once you've driven a SCSI hard disk, you'll be spoiled permanently. About the only other way to seriously increase speed on the Mac Plus is with tons of RAM. Put the two together and your Mac can be the first computer to reach hyperspace by itself.

The SCSI market in the Mac community is a new one, but the drives represented here all bode well for the future. Still, look for rapid changes as competition heats up and more companies enter the fray. Hopefully one of the changes to come will be more and better utility software and improved documentation. □

Michael D. Wesley is the West Coast Editor of *MacUser*.

## CHAINING DAISIES

With the right tool (usually a Phillips head screw driver) and a few cables, it is possible to link up to seven disk drives from a single SCSI port.

The first thing to remember is that the SCSI manager looks for drives by number. The "address" of a drive is set on a small panel of switches located inside the case of the drive. The drives will be set to "0" at the factory, because 0 is the number used when only one drive is attached.

If more than one drive is to be used, each drive must have a unique address. In other words, there can't be two drive 0's. To change the number, open the case and look for a four-pin jumper block. This is a set of switches that will probably be attached to the controller card, a printed circuit board with lots of chips on it.

The addresses are set as binary values from 0 to 7, according to the following sequence:

0 0 0 = 0
0 0 1 = 1
0 1 0 = 2
0 1 1 = 3
1 0 0 = 4
1 0 1 = 5
1 1 0 = 6
1 1 1 = 7

The first three pins on the jumper (probably marked W1, W2 and W3) control the SCSI ID number. The fourth pin controls the parity bit and must not be changed.

When a jumper covers both pins, its value is one. When it covers one pin or is nonexistent, its value is zero. To give a drive a device number of 4, set the jumper

to look like this:



The device with the highest ID number in a chain will boot first. However, if one drive is ready to go and another is not, the sequence can be changed by the SCSI port. It will boot whichever drive is ready first.

One other thing has to be done to the drives if there are to more than two attached to the same SCSI port. Each drive has three sets of "terminators," socketed resistors that are used to regulate power and keep voltage balanced. The first and last drives on a chain must have the terminators in place, but they should be removed from any drives in between. This should simply mean pulling the resistors from their sockets.

Another consideration is your *System* file. In that file is a set of DRVr, or driver, resources. Apple has reserved positions 31 through 39 for SCSI devices. When the device installs, it puts its own driver into those slots, starting with device 0 at DRVr ID 31. If the slots are not available there will be problems. Normally nothing uses those reserved positions, but people intent on adding the maximum number of DAs (which also use DRVr positions) sometimes use them.

Until very recently, many of the drives would not talk to each other properly, but Apple has provided an invaluable piece of software called the *SCSI Helper*. SCSI Helper used to be a separate file, but is included in all versions of the *Finder* from version 5.3 on up.



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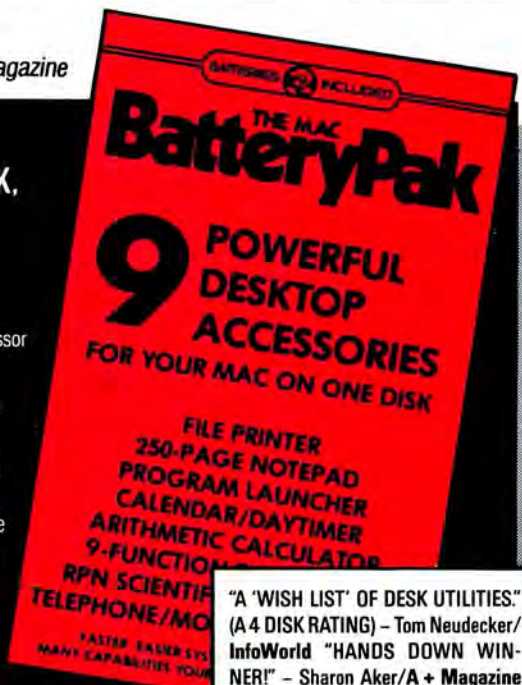
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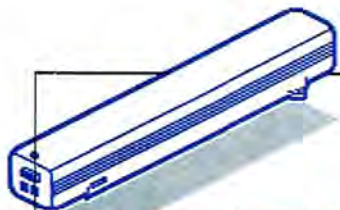
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*Talking Moose* (this is version 1.1) was written by Steve Halls of Edmonton, Alberta, Canada. After the DA is installed (using *Font/DA Mover*), selecting it installs a little moose in your *System*. The moose will then comment on you and about life in general. You can change applications as much as you want and the moose will always stay with you. While the moose can be turned off, you must shut the Mac off (or reset it) to entirely be rid of your moose.

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We plan to create more moose phrase files and provide them in Softstrip form. If you want to create your own moose file, you'll have to use *Resedit* to paste your phrases in. The phrases should be in phonemes. Use programs like *Speech Tutor* and *Speech Lab* (from Apple's Software Supplement) to create phonemes. If you come up with a good file, send it to The Moose Editor, c/o *MacUser*, 25 West 39th St., NYC, NY 10018. We'll publish the best of them in Softstrip form.

After you install the DA, place the *Moose Phrases* file and Apple's *MacInTalk* application in your *System* folder. Be sure to use the version of *MacInTalk* dated May 1985. It's part of the Software Supplement and is available from users groups, BBSs and the major electronic networks, such as MAUG (CompuServe) and Icontact (Delphi).

Happy moosing!



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2

3

4

5

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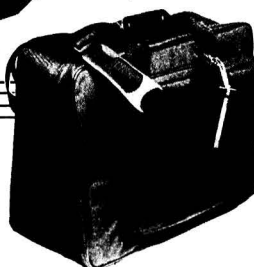


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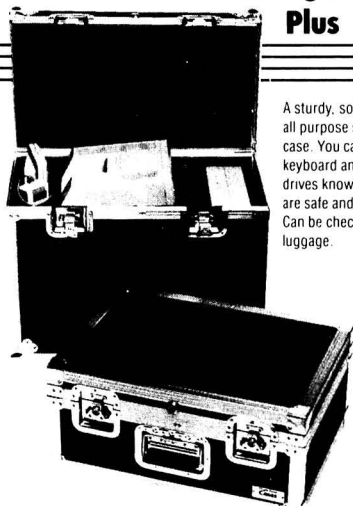
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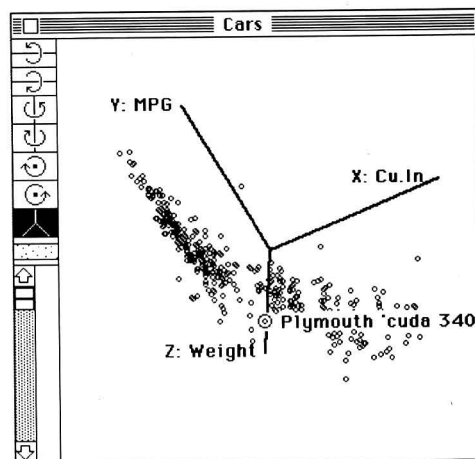
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*A Manifesto  
by John C. Dvorak*

## WHAT'S (STILL) WRONG WITH THE MAC

**I**walked into a friend's office. He was sitting at his desk with a new Mac Plus. There was only one disk drive and he was trying to copy one file. The machine kept asking him to swap disks. After the 15th request he turned off the machine and cursed.

I gloated. "Gee, a megabyte of memory, a new Finder, a new system and the machine is still too stupid to know it can copy an entire disk on one pass. Fine engineering."

Now that the Mac is selling at a brisk 40-50,000 units a month, I think it's high time we stopped pussyfooting around about the inherent defects of the machine that have yet to be corrected. Otherwise we're going to have one huge group of people who hate the guts of every creature who has anything to do with the Mac.

### WHAT'S STILL WRONG WITH THE MAC

**1.** Despite implementation of huge main memory, the Mac's operating system seems to underutilize it. The disk swapping nonsense is a perfect example. What in tarnation is the damn thing doing that it requires any swapping whatsoever? There should be two prompts — Insert disk to be copied from — followed by ejection — followed by the prompt: Insert disk to be copied to — followed by ejection.

**2.** Failure to maintain compatibility. Apple is notorious for this. Each machine, as it's released, becomes incompatible with the next machine and the ones prior. There are always a number of programs that don't work properly on the upgrade. You always have to look for "NEW" software that says something like "Mac Plus Compatible." When the IIe came out it was the same thing. There's something wrong here, it seems to me. Either the programmers are doing things wrong or Apple pays no attention to the compatibility issue.

**3.** Icon Myth. While icons have their place in Paint programs and CAD/CAM applications, they have no place in the world of serious business computing. (The fact that the Mac is really a little CAD/CAM machine with paltry power

is why, incidentally, it is an ideal game machine.)

The real problem with icons is that they work best on a limited 128K machine with 400K disks. With a hard disk, housekeeping 1000 or more files becomes ridiculous because organization is difficult and file maintenance is a nightmare. For example, global erase is an impossibility with icons. So instead of erasing 500 files with one simple command, the user has to sweat like a Roman slave and hand-delete file after file. What a timesaving machine!

**4.** User Idiocy. The Mac's worst flaw is that it creates user idiocy. Mac users become dopey after using the machine for more than a few minutes. Soon, like dorky UNIX programmers (many of whom love the Mac) they are redesigning icons (a classic Machabit) and dicking around with the innards of the machine in ways that make the thing unusable to anyone else who comes along. My advice: find real work!

**5.** The keyboard — complaint A. What irritates me is that the hordes of complainers out there moaned and groaned about the PCjr keyboard and moaned and groaned about the IBM keyboard and the placement of the shift key. Yet nobody says squat about the terrible Mac keyboard. "Nice feel to that mouse," they'll tell you.

Apple wants to put these machines in offices, yet it is unlikely that a secretary (the number one keyboard user) has ever had any input into the design. The keys are too high off the desk and all the typists I know complain about it. Worse, there are no adjustments (except a matchbook crammed underneath like on a cheap wobbly table) and the "feel" is flimsy. It astonishes me how many Mac users can actually do production work with this keyboard. I know two or three professional writers that actually write stories on the thing. Obviously they've

never used a real writers' tool — an IBM PC. The fallout from all this is an ailment known as Macwrist, a peculiar form of tendonitis that has doctors all over the country baffled.

**6.** The keyboard — complaint B. Let's not forget the "home" keys on the keyboard. Normally a production typist wants the F and J keys cupped or with little bumps on them...anything to feel something so if they lose position on the keyboard they can quickly recover without having to take their eyes off of whatever it is they're typing. For some unknown reason Apple put little bumps on the D and K keys! Oh brother. Perhaps it was done to remind people how to spell my name D-v-o-r-a-k. Then again, maybe not.

**7.** The keyboard — complaint C. No function keys. While Apple has finally added a key pad and cursor keys, there are still no function keys. It's as if the design of the keyboard has been oriented from day one around the concept of a laptop and the designers failed to realize that the Mac isn't a laptop portable. Maybe someone should have told them. The idea of the Mac as an appliance (and therefore it must look like one) is utter nonsense.

**8.** The keyboard — complaint D. Idiocy or arrogance? Idiocy sometimes takes the form of arrogance. An inheritance from the designers, no doubt. Take the little key with the cloverleaf (please!) as an example. What the heck is this key supposed to be and why choose a cockamamie unduplicable design for it? If I want to write about the key in some documentation, how am I supposed to print it out? You have to hand draw it. This is progress? It's the dumbest key ever put on a computer. What's wrong with CONTROL or ALT?

It doesn't end there. The other dumb key is "option." What the heck character does this thing transmit? It's not in my book of ASCII codes. "We liked it better than ALT or CONTROL," they'll tell you. Well, it makes no sense. It doesn't give you any "options" when you push it. Instead it acts like an ALT or CONTROL key. Why not call it ALT or CONTROL?

*These complaints should be taken seriously if Apple wants to get the Mac into the office. But don't count on it. Apple is into appearance, not substance. It seems that with the upcoming introduction of new equipment, Apple intends to crack the corporate barrier by changing the color of its machines to what it calls "platinum." It's what you and I call gray. Gray machines for faceless nameless gray people wearing gray suits in gray buildings and behind gray doors. How charming. Color coordination.*





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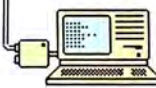
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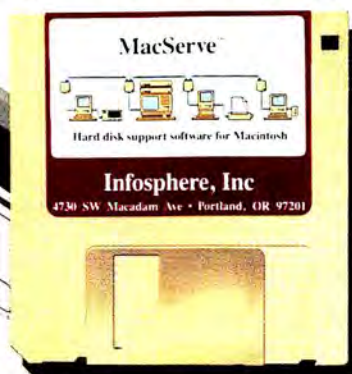


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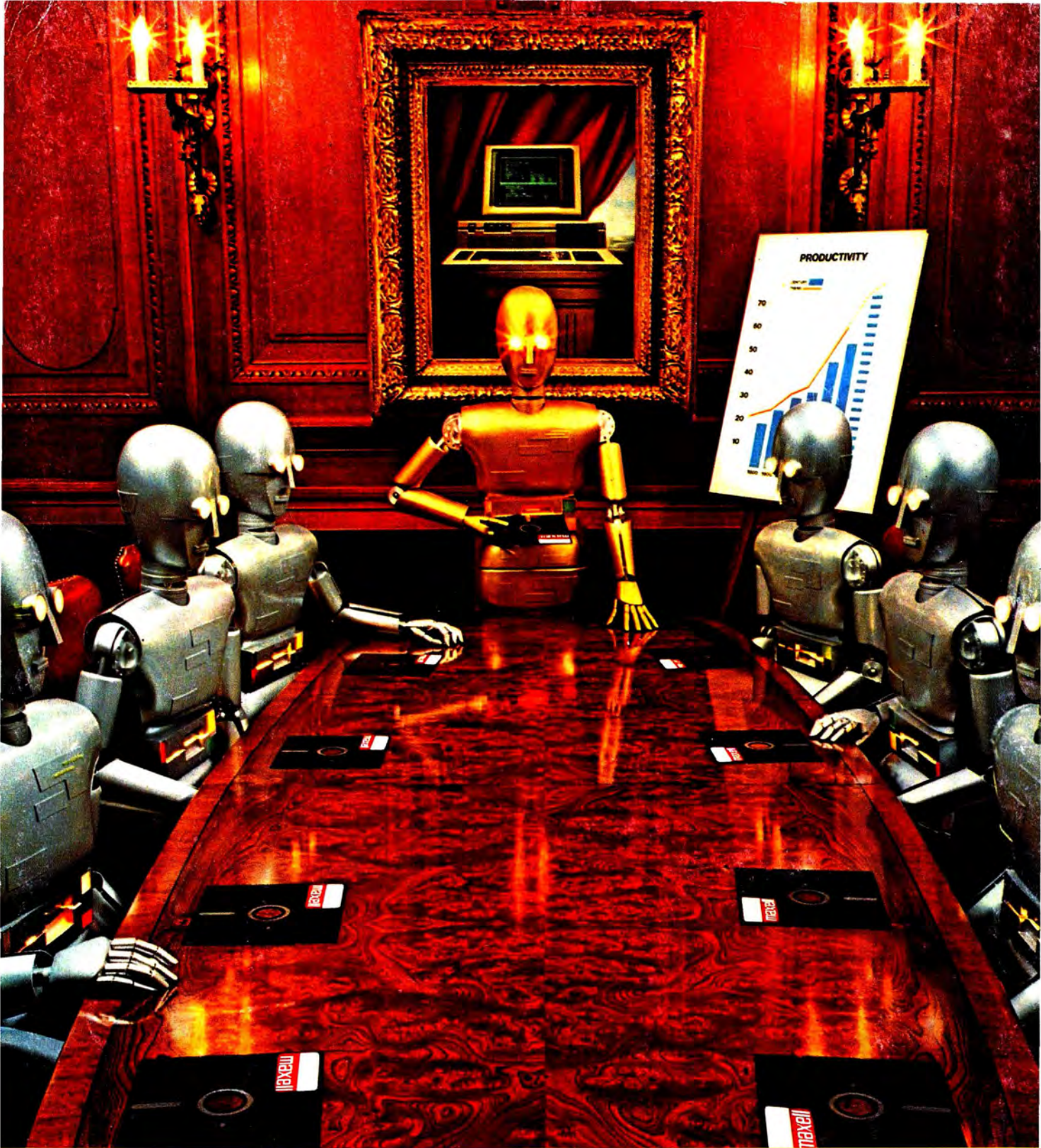


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