

# GETTING ORGANIZED

S T E V E N   A N Z O V I N

**H**ow many times have you looked for that scrap of paper with the crucial phone number on it or searched in every jacket pocket for an important contact's business card? If the answer is *too often*, you need to get organized, and your Macintosh can help you do it—along with the right personal database program.

Personal databases manage your personal and business information—the names, numbers, addresses, dates, and lists that you refer to every day. They're not designed to provide the heavy-duty data massaging of a full-fledged relational database, such as *4th Dimension*, but they're quick, small, convenient, and much easier to use. Yet within these limitations, there's a wide range of capabilities.

In this article, I'll compare five popular personal databases for the Mac: *Address Book Plus* from Power Up Software, *Dynodex* from Portfolio Systems, *QuickDex* from Casady & Greene, *Retriever* from Exodus Software, and Apple's venerable *HyperCard*. I looked at how each program displays data on the screen, searches for and sorts records, imports and exports data, prints, and autodial.

## See How They Run

Since a personal database (DB) is really an everyday tool, you've got to be comfortable with how it presents data on the screen—what I call the *data view*. Most likely, you'll want to choose a DB that corresponds to an information format you're already familiar with. If you're used to looking at real estate listings in list form, for example, you might want to choose one of the DBs with a list-type data view. If you plan to use your DB primarily as an address book, choose one that looks like a FiloFax.

*Address Book Plus* has the most data-view flexibility, offering list, address book, and envelope and label views, among others. *Dynodex* lets you see an address book view and a list view at the same time. *Retriever* shows a list view only, but it has the best features for manipulating the view, with resizable and collapsible columns. *QuickDex* is freeform—you have a single 512-character card that accepts any information in any order you choose—and you can see cards from up to eight different *QuickDex* files at the same time. *HyperCard* has the most customizable data view; you

FIVE PERSONAL DATABASE  
PROGRAMS THAT COST UNDER \$100

can arrange fields, buttons, and pictures in any order within the size limits of a single card, but you have to acquire the skills to do so.

### Hide and Seek

The one thing you'll do most often with a database is search for a specific name or address. All of these programs let you enter a text string and search for it in every field; the more structured databases also let you search only the specific fields that you name or have previously marked. *Dynodex* has the most search options—find, find next, find previous, match case, find and change to, find in marked field(s), and show a list of frequently searched for strings.

Unless you like to waste time, fast and efficient searching is a must. To test search speed, I created a 500-record text document (57K in size) and imported it into each database. On my Mac IIcx, I did a series of five timed searches through all fields for a single four-character word in the last record and then averaged the results. If it's fast access you're looking for, *QuickDex* is the speed champ. It found the key word in a fraction of a second, faster than my stopwatch reaction time. *HyperCard* is nearly as fast, and *Address Book Plus* is acceptably quick at a little over a second. The tortoise of the bunch is *Retriever*, which took at least 16 times longer than *QuickDex* to find the key word.

Sorting your records in a specified order, usually by alphabet, is also a useful feature. All the programs, except *QuickDex*, let you do this on-screen, and *QuickDex* can do it as part of its printing utility, *PrintDex*. You can choose which field to sort by—the last-name field or the company field, for example—and whether to sort in ascending, descending, alphabetic, or integer (by number) order. Also, *Address Book Plus*, *Dynodex*, and *Retriever* let you mark fields for sorting and searching by custom categories.

### Import/Export Business

How easily you can get address lists in and out of a personal database is another factor you'll want to consider. You may want to import a tickler file into your personal DB from a spreadsheet or another database, or you may want to export an address list to a word processor for mail merging with a form letter. Each personal DB has provisions for importing and exporting, though some are easier to use than others.

*Address Book Plus*, *Dynodex*, and *Retriever* all can import and export tab-delimited text files using simple menu and dialog options. If you're importing a word processing docu-

ment, for example, the text to go into each field has to end with a tab, and each record has to be delimited by a carriage return. Before importing, you also have to prepare a new DB file with the proper number and order of named fields. Once you're set up, the conversion should go smoothly.

Importing and exporting to and from *QuickDex* is more of a pain, since it uses a custom file format delimited by carriage returns and asterisks instead of tabs that other databases can't create and no word processing mail merger will recognize. There's a workaround, which involves moving *QuickDex* files to *HyperCard* by using the conversion stack included with *QuickDex* (*Dynodex* and *Retriever* have similar stacks) and then converting the address stack you've just made to a tab-delimited text file using *HyperCard*'s own Export button on the *HyperCard* Ideas disk. This is so cumbersome, however, that you'd be better off using *HyperCard* alone, moving address data with the Import and Export buttons or writing your own scripts. *HyperCard* is also the only one of these programs that accepts graphics.

### The Right Connections

If you need a personal database, you're already likely to be using a paper-based personal organizer like a Filofax or Day-Timer. At least that's the thinking behind *Address Book Plus*, *QuickDex*, and *Dynodex*, which can print pages that fit these and other popular address books; *Dynodex* can also print double-sided pages. *QuickDex* requires a separate printing utility, *PrintDex*, which comes in the *QuickDex* package. *Retriever* can only print a WYSIWYG version of its datasheet screen display, while *HyperCard* can print list and column reports, labels, and pictures of cards, but not organizer pages. Interestingly, none of these programs are set up to feed data to the latest incarnation of the personal organizer, the palmtop computers such as Sharp's Wizard and Casio's B.O.S.S.

One thing no paper organizer can do is dial the phone for you, but most of these programs can. Select a phone number, click on the dial button or choose the Dial menu option, and your call will go through—assuming you've got a phone and/or modem hooked up to your computer and have set up the right dialing protocols. *Address Book Plus* has its dialer available as a DA, *Dynodex* and *QuickDex* have dialing integrated into the program, in *HyperCard* you have to install a Dial button or write a script for that function, and *Retriever* doesn't offer dialing at all.

### People's Choice

If all you're looking for is a place to store names and numbers with the least fuss, *QuickDex* can't be beat. If you need a more structured environment, however, *Address Book Plus* and *Retriever* offer many of the features of bigger flat-file databases, but at less cost.

The fact that *Retriever* is a DA, and thus is accessible from any program, is a big advantage over *Address Book Plus*, unless you have enough RAM to run MultiFinder. It's also easy to modify the appearance of *Retriever*'s list display. On the other hand, I like *Address Book Plus*'s wider choice of data views, and it has a quicker, more responsive feel.

*Dynodex* is also fast, and with its flexible printing options, it's well suited to people who live by a Filofax or Day-Timer.

And *HyperCard*, despite its much larger application size and relatively inefficient data view, can do much more than any of the others—if you're willing to take the time to learn the necessary programming skills.

No matter which program you choose, though, putting your personal data on your Mac will save you time, effort, and lost opportunities.

Steven Anzovin is a freelance writer and consultant based in Amherst, Massachusetts. He's the author of *Exploring HyperCard* and *Macintosh Desktop Presentations*, both from COMPUTE Books. □

For more information about the products mentioned in this feature, contact the software companies listed below.

**Address Book Plus 1.0—\$89.95**  
Power Up Software  
P.O. Box 7600  
San Mateo, CA 94403  
(415) 345-2662

**Dynodex 1.2—\$99.95**  
Portfolio Systems  
21 E. Market St.  
Rhinebeck, NY 12572  
(800) 729-3966

**HyperCard 1.2.5—\$49.95**  
(Free with purchase of Mac)  
Apple Computer  
20525 Mariani Ave.  
Cupertino, CA 95014  
(408) 974-6144

**QuickDex 1.4d—\$60.00**  
Casady & Greene  
P.O. Box 223779  
Carmel, CA 93922  
(408) 624-8716

**Retriever 1.01—\$89.95**  
Exodus Software  
8620 Winton Rd.  
Suite 304  
Cincinnati, OH 45231  
(513) 522-0011



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# HOMECARD

R O G E R W O O D

**T**he Macintosh changed the nature of word processing by bringing multiple fonts and styles to the computer screen. So when *HyperCard* allowed only a single font and style in any field, many dyed-in-the-wool Mac users cried foul. What's so great about a Mac application with only one text style per field?

*HyperCard* 2.0 finally remedies the situation. Now you can mix fonts, sizes, and styles in any combination in any field. These text attributes can be assigned through the normal *HyperCard* Text Style dialog box, under script control, or via two familiar menus, Font and Style.

Another big complaint came from those who hoped that the *hyper* in *HyperCard* stood for hypertext capabilities but found the application short on real hypertext features.

In its simplest form, hypertext can let you click on a word—a scientific term, for example—and be whisked away to a glossary that defines and illustrates the word. In hypertext parlance, we say that the word in the field is *hot*.

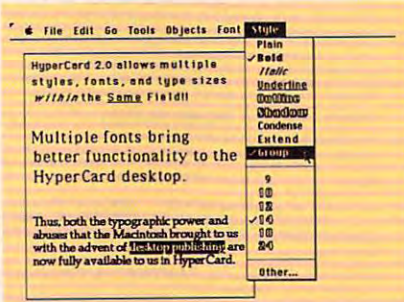
As simple as this seems, *HyperCard* didn't have a device to tie script actions directly to a single word in a field. You could paste buttons over words and thus easily find where the mouse was clicked. But if a word had been moved within the field during editing, the button wouldn't stick to the word, and the button could even end up over the wrong word.

Enter three new functions in *HyperCard* 2.0: *clickText*, *clickChunk*, and *clickLine*. To use any of these functions, you just lock the field that contains the text with the hypertext capabilities. Then you can use these new functions in the field's mouseUp script to cause some hypertext action.

For example, let's say you're writing a *HyperCard* stack about astronomy and want use the term *azimuth* without having to define it within the field. Lock the field and put the following in the field script.

**on mouseUp  
if the clickText is "azimuth" then  
go to card "azimuth definition"  
end mouseUp**

Then create a card called *azimuth definition* that defines it and has an illustrative drawing, and your main discussion won't be cluttered with duplicate definitions.



**HyperCard 2.0 allows multiple fonts.**

The *clickChunk* function is a bit more obscure if you're not well versed in *HyperTalk* terminology. A *chunk* is a *HyperTalk* expression that describes a particular segment of text—both within a field or within a *HyperTalk* variable. It can be defined in terms of characters (chars), words, or lines.

For example, if card field 1 begins "HyperCard 2.0 allows multiple styles, fonts, and type sizes within the same field," *HyperCard* would be described as "char 1 to 9 of card field 1." Similarly, a word is defined as a number of characters separated by spaces, thus *HyperCard* is "word 1 of card field 1."

These chunk expressions provide the key to altering the font, size, or style of part of the text within a field. For example, if you wish to change the style of the word *HyperCard* in the above example to italic, you would use "set the textStyle of char 1 to 9 of card field 1 to italic." You could also refer to "word 1" in place of "chars 1 to 9" to accomplish the same thing.

The concept of the line can be a relatively elusive chunk expression. It doesn't matter how many physical

lines appear in a field on the screen; a line is any number of characters with a carriage return (ASCII 13) at the end. It can be several physical lines.

In our example, even though the text wraps after the word *multiple*, line 1 would be the entire sentence because there's no carriage return until the end of the third physical line. The *clickLine* function simply returns the number of the line that was clicked in a locked field. It returns "line 1 of card field 1" no matter which word in the sentence you click on.

The new style, *group*, is another great feature for those doing hypertext applications. Using our example, let's say you want both *desktop* and *desktop publishing* to be hot. If you use only the three functions I described above, when the user clicks on desktop, you would have no way of knowing whether the selected word was next to *publishing*.

The group text style solves that. By selecting both *desktop* and *publishing* together and choosing group from the Style menu, the *clickText* function returns both words together if either is clicked on—thus making it easy to distinguish which *desktop* was selected.

The major drawback to these new hypertext enabling functions is that they don't provide a standard device for users to identify a word that's hot.

That is, a word can be hot and look just like every other word. One *HyperTalk* programmer might use bold text to identify a hot word, while another might use italic, and another might use underlining. *ToolBook*, an application from Asymetrix for PCs and compatibles that runs under *Windows* 3.0, has standardized hot text by drawing a box around every hot word—a device not available in *HyperCard*.

With this one caveat, *HyperCard* 2.0 has come a long way toward being the hypertext application that many educators have been looking for.

Roger Wood has worked as editor of *HyperLink Magazine* and managing editor of *Home Computer Magazine*. □



# APPLE PICKS

G R E G G K E I Z E R

**C**hristmas already? That means my cards and letters need to go out—now! Wait, I don't have time to write a hundred letters and still make a living and have a life.

The solution? Mass mailings. I've taken a page out of my Congressman's playbook—his slick newsletter regularly hits my mail slot to remind me what a great guy he is. I've gone high-tech in order to keep in touch with far-flung friends and distant relatives.

I know, I know. You're dead set against anything that reminds you of those gruesome mimeographed holiday letters you got years ago. Don't worry. Everyone will love your message if the medium is nicely designed and attractively illustrated.

I've been designing, writing, and mailing a holiday newsletter for years. Maybe it's the only written communication some people get from my family all year, but it hits the family highlights, it's fun to read, and best of all, it looks good.

Until this year, I've created our family newsletter on a Macintosh. No more. This year, I switched to *Graphic Writer III* (Seven Hills Software, 1310 Oxford Road, Tallahassee, Florida 32304; \$149.95), a great desktop publishing program for the IIGS. Like most other desktop publishing programs, *Graphic Writer* works with frames, which are boxes you build to hold text or graphics.

Designing a four-page newsletter with *Graphic Writer* took less than 30 minutes. The process is easy because of features like color-coded column and snap-to guides and master pages you define to set up margins and page numbers. Onscreen rulers ensure you've got things lined up right, and the program quickly sets up a multi-column format.

Other topnotch features include frame linking, which automatically flows text from one column to another, and text wrapping, which allows words to cunningly wind around illustrations.

Though typing text in *Graphic Writer* isn't as unbearably slow as in some other Apple IIGS programs, I

still prefer to write with something faster, like *AppleWorks*. *Graphic Writer* really shines here, for its translation capabilities are most impressive. I wrote with *AppleWorks* 3.0 at blitzkrieg speed, then poured the copy into a *Graphic Writer* layout with bold-facing and underlining intact. Nice.

A desktop publishing program on the IIGS wouldn't be much without graphics or color. *Graphic Writer* doesn't let you down here, either. The built-in graphics tools are nothing special—the typical pencil, brush, eraser, magnifying glass, and geometric shape-makers—but the program makes it as easy to import graphics as it does text.



*Print Shop* (both the classic and the IIGS versions) and single-, double-, and super-hi-res images can all be grabbed and placed within *Graphic Writer* documents. Because *Print Shop* graphics are so easy to find, I scattered several throughout my newsletter.

Color is often vastly overrated in Apple IIGS software, and, though I still think it has limited application, I did find a way to put *Graphic Writer*'s color capabilities to work for me. I spotted the first page of the newsletter with color, primarily in the masthead (the name of the newsletter) and a great graphic, and then printed it out on an ImageWriter II.

For a moment, I was stumped—my printer would be tied up past Christmas printing 100 originals. Then

I remembered that a local copy shop—a Kinko's outlet—had a color copier. Down to the copy shop I went, and in a half hour I had a four-color newsletter (all right, just the first page, but at those prices, I couldn't afford more).

*Graphic Writer* comes packed with extras, such as a disk full of new fonts and two disks of clip art. I didn't have much use for the fonts—I like to stick with classic font families such as Times and Helvetica—but the clip art was terrific. I used the map of the U.S. to show the family's 1990 travels.

Printing is slow, really slow. There's not much you can do about that. I didn't think much of the program's dot-matrix output anyway, so I headed to the local Apple dealer to make master copies of my newsletter's remaining three pages on a LaserWriter NT. Everything worked flawlessly, and the output was super.

*Graphic Writer III* is fast and feature-heavy, yet friendly. It's the first Apple IIGS-specific desktop publishing package I've been willing to recommend, and it made my annual newsletter creation chore as much fun for me as I hope its reading is for my friends and relatives.

If you're launching your first-ever holiday newsletter, here are some things to keep in mind.

- Use at least ten-point type. Twelve-point is better, especially if you're sending the newsletter to anyone over 35. No one likes to squint.
- To personalize each newsletter, create an empty frame on the last page of your newsletter and save the file as MASTER. Write short, individual notes to each recipient; then import them into the empty frame. Remember that you'll have to save each newsletter as a separate file and print out that page for each newsletter.
- If you have access to a scanner, digitize a family photo and place the resulting graphic on the second page, above a frame labeled *Staff*. Even if the picture is crude, your readers will get a kick out of it. □



# NEWS & NOTES

## New Nitpicker

If you're one of the 20,000 Mac users who purchased *Grammatik Mac*, you're in luck. Reference Software is offering a free upgrade to version 2.0, which features a new interface and expanded word processor support. If you haven't registered your copy of version 1.0, you can call the company on its toll-free line and provide the serial number from the distribution disk.

## Commie Network Exposed

Old-style communism has undergone radical changes in the last two years. Now the Soviets are linking their computers in a way that would have made Karl Marx proud. Currently, five deputies in the Soviet Parliament have their Macs networked together, and seven other Macs are being used by the Parliament's technical staff.

In order to increase the Parliament's efficiency, the government has commissioned the Moscow-based Interproject to create a Mac-based "information system." It will use a Russian version of the Macintosh System software that was developed by Interproject and Apple programmers.

## Running Late

Apple finally admitted what most industry watchers have suspected for months—System 7.0 won't ship until 1991 or, as Apple put it, "the first half of calendar 1991." Alpha versions have been available to developers since May, but the first beta version wasn't expected to be ready before October—a full year behind schedule.

While some developers will have to delay their new products once again, Apple insists the new system software will be worth it. According to Roger Heinen, Apple's vice president of software engineering, "With the additional feedback from our developers, we are confident that System 7.0 will shatter traditional notions of what personal computers can do."

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### MISCELLANEOUS

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## New Math

The most recent version of the Mac operating system has been System 6.0.5, and the new low-cost Macs are shipping with System 6.0.7. So what happened to 6.0.6?

Apple had planned to release System 6.0.6 with the changes needed for the three new Macs—including a new Sound Manager—but it discovered two nasty bugs at the last minute. The first can cause a Mac to act as though it's no longer connected to a printer or AppleShare server. The second can cause a Mac LC to ignore the keyboard until the mouse is moved.

The bugs have been fixed in System 6.0.7, and Apple has "re-worked" its inventory to include the newer system. The company is shipping 6.0.6 to Europe with an INIT that fixes the bugs while it works to complete a European version of 6.0.7.

## Talk Is Cheap

How can owners of older Macs add the sound-input capabilities of the new Macintosh LC and Macintosh IIsi? Premier Technology offers an inexpensive solution.

The MacMic, pronounced *mac mike*, consists of a 2 x 2 x .75 inch digitizing microphone, a 6-foot cable, and a Velcro fastener that lets you attach the microphone to your computer or monitor. It plugs into either of the two serial ports and comes with software that lets your Mac recognize the unit as a standard sound-input device.

The MacMic is available for \$59.95 from Premier Technology, 2040 Polk Street, Suite 288, San Francisco, California 94109; (415) 424-1963.

News & Notes by David English



# REVIEWS

REDISCOVER A CLASSIC • CREATE PRESENTATIONS  
UNLEASH ARTISTIC TALENTS • FIND THE RIGHT WORD

## WORDSTAR 6.0

**B**ig but not unwieldy, powerful but not too complex, packed with desktop publishing capabilities and advanced integration capabilities for power users—*WordStar* 6.0 is all these things and more. If you know the *WordStar* interface but haven't taken a look at the program in a few years, you'll welcome its new power and versatility. If you're unfamiliar with this word processing classic, fasten your seatbelt.

Over the years, *WordStar* has grown from a friendly little CP/M program occupying part of a disk to an MS-DOS power package that comes on 21 floppy disks. What keeps *WordStar* fast, sleek, and manageable—rather than lumbering and forbidding, as you might expect—is a sensible set of strategies, including selective installation of features, numerous default settings, clever memory management, selective help levels, and nesting and chaining capabilities.

*WordStar's* tower of powerful disks contains all you'd expect in a first-rate word processor: spelling checker, thesaurus, cut and paste, find and replace, undelete, macros, mail merge, page preview, footnotes, endnotes, word counting, and a multitude of formatting options. Numerous additional features enhance and simplify your routine word processing, such as vertical centering (no more counting lines to center your correspondence), printing from the keyboard (no more going to typewriters to address envelopes), and one I particularly like, the definitions dictionary, which helps you pick just the right word from the thesaurus. An extra-window capability lets you compare documents or passages in the same document and cut and paste with ease. Then there are *WordStar's* dot commands, which control everything from headers and footers to page numbering and sheet

feeding. In short, you have tremendous control over the writing process and product.

More advanced features make this a program you can grow into. *WordStar* lets you insert work sheets from *Lotus 1-2-3*, *Symphony*, or *Quattro*, as well as files from *DBase*. The Inset program included with the package puts graphics anywhere in your text. You can use a variety of fonts if you have a printer that supports them. *WordStar* supports scalable fonts on the HP LaserJet III, Canon LBP-4, and PostScript printers; and you can kern if you have PostScript or certain HP LaserJet printers. Save time with *WordStar* paragraph styles, which let



Check graphics, fonts, and more in *WordStar's* Advanced Page Preview.

you preset print attributes, margins, tabs, line height, fonts, and more. Instead of starting over with every document, just choose an appropriate paragraph style. *WordStar's* page preview lets you see how fonts, graphics, and other features of a document will look before you go to the trouble of printing. As you can see, these are features that people in business can take advantage of to create highly polished, professional documents that get results.

As if all this weren't enough, you also get several companion programs. With MailList, you create form letters and print envelopes, labels, Rolodex cards, and reports (for example, a

phone list). PC-Outline helps you plan writing and keep track of your work; ProFinder is a handy DOS shell; Star Exchange allows file conversions between *WordStar* and several other word processors; and TelMerge is a sophisticated telecommunications package that allows file transfers, E-mail, and script files for easy access to online services.

Obviously, everyone won't take advantage of every feature of the program, and that's why you shouldn't let all the disks disconcert you. Seven of the disks contain printer information, and you'll use only a small part of it. What's more, the straightforward installation program lets you install only what you need. There's even a way to set up a bare-bones version of the program to run on a two-floppy system in 384K (Run README.COM), although the program is really optimized for use with a hard disk.

A mere novice can take advantage of this full-featured program, thanks to a great tutorial disk, a choice of interfaces, built-in defaults, and excellent help and documentation. Beginners will want to install the program to use the pull-down menus, which allow you to highlight and choose instead of using the old control-key combinations. *WordStar* comes with default settings for nearly every feature—even several paragraph styles—so that beginners won't have to change or customize settings till they're ready.

Context-sensitive online help is always available, and *WordStar* provides four excellent manuals. I particularly like the step-by-step examples of applications, which showed me how to easily create a newsletter.

The classic menus are still there to give you the touch-typing speed and convenience for which *WordStar* is famous, and you can still set your help level to include or exclude particular menus. You can also use your function keys to execute oft-used

MS-DOS

commands. Throughout the program, *WordStar* offers a tremendous degree of flexibility, allowing you to customize it according to your likes and needs.

Clever memory management keeps *WordStar* fast, despite its great size. It resides in memory, and if you have enough memory, the spelling checker and text files can run RAM resident. With enough memory, you can print one file while editing another. A RAM usage display helps you make the best use of the program.

If you work with long documents and dread navigating long files and waiting for saves or finds, you'll love the nesting and chaining feature. It ties together several small files and provides continuous pagination; this feature has saved me untold time and effort. *WordStar* also lets you place markers in files and specify a particular page to move to so that you won't waste time creeping paragraph by paragraph through your document. Need an index? *WordStar* can index selected words or every word in a document. The program can also simplify your creation of a table of contents.

Of all the versions of the program I've used, this is the fastest and easiest. If there's any significant shortcoming, it's the lack of better mouse support; only a Logitech mouse driver comes with the program, and you can use the mouse only with menus. This may discourage some users, but not the touch-typists who've enjoyed and remained faithful to this program for years. This latest version of *WordStar* makes it a contender among high-end word processors. It might very well attract new converts.

MIKE HUDNALL

**Ease of Use** ..... ★★★★★  
**Documentation** ..... ★★★★★  
**Features** ..... ★★★★★  
**Innovation** ..... ★★★★★

IBM and compatibles, 384K (512K to use Advanced Page Preview, outline, or graphics), graphics card for Advanced Page Preview, two floppy drives or one floppy and one hard drive—\$495

WORDSTAR INTERNATIONAL  
 201 Alameda del Prado  
 Novato, CA 94949  
 (800) 227-5609  
 (415) 382-8000

## MIRROR III 2.0

Softklone's original *Mirror* was designed to be a clone of *Crosstalk*, a popular business communications program. The latest version of *Mirror*, although completely compatible with *Crosstalk XVI*, offers a number of substantial improvements: additional file-transfer protocols, MNP support, a built-in text editor, a background mode, mouse support, and much more. Best of all, *Mirror III* costs less than *Crosstalk XVI* (\$149 rather than \$195).

*Mirror III*'s status screen lets you view parameter settings and includes a command line for entering two-letter mnemonic commands, such as NU (Number), CA (Capture), RX (Receive XMODEM), and EM (EMulate).



*Mirror III*'s Dialing Directory features easy-to-use pull-down menus.

The dialing directory provides easy access to a list of phone numbers and can indicate system names, transfer rates (such as 1200 or 2400 bits per second), formats (parity, data bits, duplex, and stop bits), and scripts (if you're using them). *Mirror* provides an unlimited number of directories and entries within directories and lets you chain-dial as many as 30 entries at a time. You can access the commands necessary for just about any online session with the easy-to-use pull-down menus.

Beginners will especially like the *newuser* option, which will write a script to get you online with databases you're currently using, such as CompuServe, NewsNet, Delphi, MCI Mail, and Dow Jones. For systems not listed, you can use the learn command, which watches you log on to a system and writes a log-on script.

Experienced users will appreciate the variety of file-transfer protocols, including XMODEM, YMODEM, Kermit, Crosstalk, Hayes, CompuServe-B, and CommPressor. Support for ZMODEM is included through a shareware program (\$20 to register) that's provided with the package.

*Mirror*'s PRISM script language is an expanded version of *Crosstalk XVI*'s script language and is upwardly compatible. PRISM's most significant improvement over *Crosstalk*'s language is its ability to run script programs in the background.

There are many other features, including the ability to capture all or part of an online session to memory, disk, or printer. A backscroll command lets you recall text that has scrolled off the screen. A host mode lets other computers call your computer, leave messages, and download files. You can also redefine your computer's function keys.

*Mirror III* is well supported with frequent software upgrades and an excellent BBS. It has a 60-day money-back guarantee, and it gives you a lot for your money. You're not likely to outgrow this program.

DAVID ENGLISH

**Ease of Use** ..... ★★★★★  
**Documentation** ..... ★★★★★  
**Features** ..... ★★★★★  
**Innovation** ..... ★★★★★

IBM PC and compatibles, 256K (640K recommended for optimum background operation), DOS 2.0 or higher, modem—\$149

SOFTKLONE  
 327 Office Plaza Dr.  
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 (800) 634-8670

## BAD BLOOD

Origin's *Bad Blood* presents a barren postapocalyptic wasteland in which the mutants and humes (humans) maintain a dangerously delicate balance of power. Because an all-out war would be disastrous for the mutants, you're sent on a mission to find out just what's got the humes so "wadded up."





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To accomplish this, you have a choice of three characters: Varrigg, a powerful mute who reportedly once slugged a whole band of Kejeks single-handedly; Jakka, a shivvy slicer who can down a buzzar at 40 paces with a blast from her eye beam; or Dekker, the only human ever born to the mutes. Set out from the village of Mardok and travel throughout the plains, interacting with mutes from surrounding villages and battling the numerous beasts of the Plains along the way. Fortunately, there are plenty of weapons and ammo available on the Plains, including nades, sodoffs, buzooks, oozees, clubs, and vibrablades.

As you play *Bad Blood*, a detailed overhead view of your character appears on the screen of an ancient television set abandoned on the Plains.

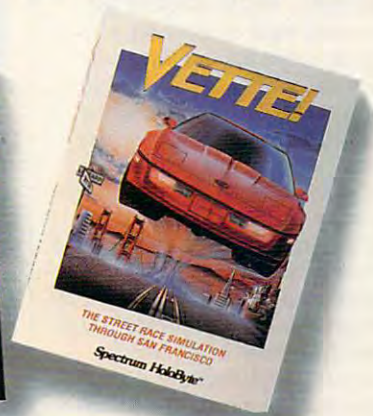
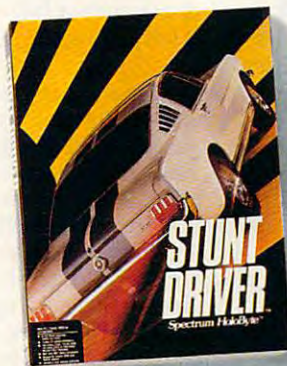


Use an ancient television in *Bad Blood* to make choices for your character.

The TV's knobs describe your choices—Talk, Inventory, Examine, Use, and Options (Pause, Save, Load, and so on). To the right of the TV is a green bottle filled with water. The water level serves as a visual indicator of your state of health. Finally, message windows below the television set contain important text and dialogue. *Bad Blood* uses a menu-driven conversation system that lets you choose from a range of topics appropriate to your progress in the game.

The game comes with a 20-page manual that includes a map of the Plains and a list of Mutant Chat terms, a reference card, and a copy of *Thale's Comprehensive Guide to the Beasts & Savages of the Plains*. This foldout not only describes the beasts you'll encounter on the plains, but it also serves as copy protection for the program. Before starting, for instance, you must answer a question such as *Where does a Bushbug usually hide?*

# DRIVE IT



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*Bad Blood* is a first-rate role-playing game with appealing graphics and a terrific musical soundtrack (which can be toggled off once you've had enough of a good thing). Up to three games can be saved in progress, but unfortunately, beginning a new game erases all of your previously saved games. This is the only fault in an otherwise very playable RPG.

BOB GUERRA

Playability	★★★★
Documentation	★★★
Originality	★★★
Graphics	★★★★
Sound	★★★★

IBM PC and compatibles; 512K RAM (640K for VGA); CGA, EGA, MCGA, VGA (256-color), Tandy 16-color; joystick optional; supports Tandy 3-voice, Roland, Ad Lib, GameBlaster (CMS), Innovation, and Covox sound boards—\$49.95

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## HOME LAWYER

Many of the most important decisions you'll make require expert legal assistance. Unfortunately, legal advice can be expensive and hard to understand. To the rescue comes *Home Lawyer* from Meca Ventures, a user-friendly expert program that helps you create simple legal documents and special letters.

*Home Lawyer* generates documents in plain English from your responses to simple questions. You can respond directly onscreen or first print a paper work sheet and then transfer information from the work sheet to the screen. To help you out, the program offers response choices (sometimes samples); these appear on the screen and in the very clear and complete manual provided with the program.

With *Home Lawyer*, you can create simple legal documents, including wills, powers of attorney, residential leases, promissory notes, bills of sale, and independent contractor agree-

# REVIEWS

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ments. Special letters the program helps you write include demands for money owed, bad-check notices, and requests for credit reports.

The public has always had the right to create legal documents without attorneys; but the legalese that comprises most laws, forms, and instructions makes writing legal documents an arduous—and sometimes dangerous—task. *Home Lawyer's* greatest strength is the fact that it's user friendly. It allows you to do for yourself much of what you once relied on lawyers to do for you.

Consequently, *Home Lawyer* carries various disclaimers, including an initial comprehensive one which states that the manufacturer does not guarantee that the program is valid when used, will lead to the desired result, or will carry out the intentions of the user. It also includes a directory of State Bar Associations and notes when to consult an attorney.

*Home Lawyer* allows no customizing of documents other than in response to its questions. I found this particularly frustrating because its durable power of attorney provides consent for medical and personal care. Powers of attorney for medical care are valuable documents that should be left for babysitters, neighbors, and schools responsible for children when the parents are unavailable. However, *Home Lawyer's* version incorporates the right to make decisions regarding personal care, support, maintenance, and living arrangements, as well—virtually giving custody to the caretaker.

At a list price of \$119, I would've expected more choices or more ability to customize. Perhaps future versions will correct these problems by expanding the types of documents which can be created. Then you could truly say that you had a lawyer in your PC.

SUSAN PARATO

Ease of Use . . . . .	★★★★
Documentation . . . . .	★★★★
Features . . . . .	★★
Innovation . . . . .	★★

IBM PC and compatibles, 256K RAM, DOS 2.0 or higher—\$119

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## FACES . . . TRIS III

The Russian game-making master Alexey Pajitnov is at it again. The creator of the now-legendary *Tetris* and its standout follow-up *Welltris* has written another one—*Faces . . . Tris III*.

Having exhausted, in his two earlier games, the dimensions in which to manipulate falling blocks, Pajitnov brings forth a new concept. In *Faces*, blocks still fall against a graphic mural background. The difference is that each block contains one of five pieces of a face. Your job is to pile up a chin, lips, a nose, eyes, and a top of the head in the right order. You get more points if they happen to be from the same person, but mixed faces are OK, too. A face constructed out of order turns into a marble block, which obstructs further progress.



See how your skills stack up in *Faces*.

It sounds simple—and it is. Simplicity and elegance are Pajitnov's trademarks. But whereas his two earlier hits resembled interactive creative puzzles, *Faces* too often resembles an animated jigsaw puzzle without the interactive variety of *Tetris* or *Welltris*.

The 60 faces themselves are a delightful mix of historical figures (Napoleon), whimsical monsters, holiday faces (Santa Claus, Uncle Sam), and a variety of cultural images (Mona Lisa, Shakespeare). Only 16 of the faces are identified in the manual as part of the documentation-based copy protection.

Watch for some amusing touches in the faces. Gorbachev's eyes shift back and forth as they fall down the screen, for example, and there are other small, unexpected bits of animation in the faces.

The graphic mural backdrops are

intricate gray-scaled American scenes and patterns matching the set of faces used in each of the ten levels. The vanity board and several sign-on screens use the full VGA color palette, as do the faces themselves.

*Faces* is a good game with excellent and entertaining graphics and enough challenge to make it worth playing. It faces an uphill battle, however, in its unenviable position as the third in the Tetris series. What may be more compelling than the game itself is anticipating what Pajitnov will accomplish the next time around—especially if he abandons falling blocks.

RICHARD O. MANN

Playability . . . . .	★★★★
Documentation . . . . .	★★★★
Originality . . . . .	★★★★
Graphics . . . . .	★★★★

IBM PC and compatibles; 512K RAM (640K for VGA); CGA, EGA, MCGA, VGA, Hercules, or Tandy 1000; supports Ad Lib and SoundBlaster boards and Tandy 1000 sound; joystick optional—\$39.95

SPECTRUM HOLOBYTE  
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(415) 522-3584

## CIRCUIT'S EDGE

In the Budayeen, a quasi-Middle Eastern environment surrounded by walls, rough trade flourishes in alleys, on back streets, and along the main thoroughfare, known only as The Street. This is a criminal neighborhood, seamy and dangerous. This is the setting of Infocom's *Circuit's Edge*.

Based on the Audran stories of George Alec Effinger, the game is played from the perspective of Audran, an addictive, not really likable sort, whose talents and inclinations continually bring him to the edge of disaster. The most successful players will learn how to see the world through Audran's jaundiced eyes.

Infocom has done a fine job of making the Budayeen, the game's centerpiece, come alive. More than any of its earlier attempts at graphic adventures, this one communicates a real sense of place. You can stroll along the garish Street, dropping into vari-

MS-DOS

ous places of business, or skulk through darkened alleys where anything can happen. Onscreen mapping helps you get a feel for the game's locale. The Budayeen is the story, in many ways, although there's naturally a problem-solving plot to navigate through.

The game's manual includes a map of the Budayeen, complete with a directory and addresses of various businesses and establishments. Three pages of hints help you through the tougher problems. Lists of characters and a glossary also contain hints and tips that can be exploited during play.



In the seamy setting of Infocom's *Circuit's Edge*, there are many dangers.

While *Circuit's Edge* can be played via the keyboard, the program works best with a mouse. Effinger's characters can use technology to alter or enhance personality by way of "moddies"—modules inserted into sockets in the skull. "Daddies" are modules that extend characters' powers and abilities. Audran can use daddies to dampen pain, fatigue, and so on. There is, as players discover, a price to be paid for using modules.

*Circuit's Edge* is more adult than most software, and parents might want to consider this before passing the program to preadolescent kids. The Street is populated with drug dealers and prostitutes, among others, and it's possible to interact with them. Admittedly, taking drugs or engaging in illicit sex results in losing points, but the distinction may be too fine for younger players. I'd rate this game at least PG-13, perhaps even R.

While *Circuit's Edge* suffers from some of the problems typical to adventure games—repetitive dialogue loops, scenes that rest on puzzles rather than on plot—the game also repre-

sents an attempt to extend the materials on which adventures are based. There's little that's smutty about the game's adult scenarios; rather, they represent the context of the Budayeen, and do so well. *Circuit's Edge* is the most sophisticated of Infocom's recent crop of games and a good indication that the company may make the transition from text-based adventures to graphical storytelling.

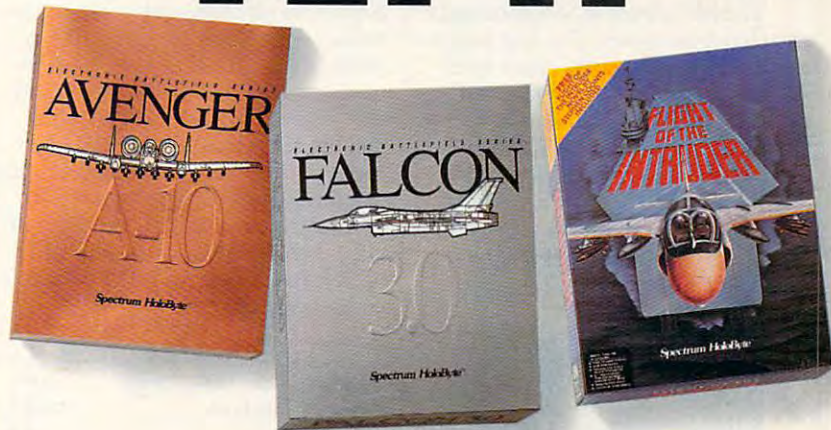
KEITH FERRELL

Playability	★★★★
Documentation	★★★★
Originality	★★★★
Graphics	★★★★

IBM PC and compatibles; 512K RAM; DOS 2.11 or higher; CGA, EGA, VGA, or Tandy 16-color graphics; supports AdLib, Roland, and MT-32 sound cards and Microsoft and compatible mice—\$49.95

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## PSION MC-400 MOBILE COMPUTER

The MC-400 Mobile Computer makes a great first impression with its Macintosh-like graphic user interface (GUI), multitasking operating system, and nifty touch pad.

Weighing only 4.3 pounds and measuring about 2 × 12.5 × 9 inches, the MC offers an acceptable 640 × 400 LCD screen (black letters, no backlight). It has 256K EPROM and 256K RAM, with connectors for options: Fast Serial Link, microphone and speaker, and 12V adapter.

The MC offers great battery life—60 hours of continuous use with eight AA alkalines and 8 hours with NiCads. When the computer is inactive for five minutes, it turns off to save power.

To be valuable, though, a non-compatible must offer distinct advantages outweighing the benefits of



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compatibility. It must be friendly with PCs without undue additional effort and expense.

The MC's built-in software looks great but lacks power. The text processor doesn't count words, check spelling, or display the current line and character position. The diary is useful, but the monthly calendar displays Monday through Sunday (instead of Sunday through Saturday). The alarm function works but lacks a snooze feature. The free-form database is simple but not very powerful.



The Psion MC-400 accepts up to four solid-state disks at one time.

The MC is hurt by a general lack of standardization. Although it includes a standard parallel port, you have to provide the instructions that let your printer take advantage of special capabilities, such as bold or italic print. (A company spokesman says that a word processor to be sold separately will contain printer drivers. —Ed.) It includes an RS-232 serial port and file-transfer software for sending files to a PC, but you must use a noncompatible cable with a round, miniature serial plug (not included).

The MC uses solid-state disks (SSDs), which are really just memory but which emulate disks. The MC accepts up to four SSDs at once, available in several styles and sizes: Flash EPROM and RAM (each up to 512K) and ROM (2MB). Psion offers an SSD drive for a PC.

The full-sized keyboard has a good feel and layout but isn't exactly like a PC keyboard; some of the symbol keys are swapped. A numeric keypad is part of the alphabet keys.

At first the touch pad is fun, but it can be difficult. It's easy to move the pointer but hard to be accurate.

The MC-400 is unique, but for about the same amount of money you can get a lightweight PC compatible with more memory and standard keyboard, connectors, keys, and floppy drive. It may not have the MC-400's visual appeal, battery life, touch pad, and futuristic memory disks, but it will run far more software and offer easier data exchange via floppies. Add a desktop tools package, and you'll have more powerful and flexible software than the MC-400's—and you'll be able to get help from PC users and computer dealers.

J. BLAKE LAMBERT

Ease of Use/Installation . . . . .	★★★
Documentation . . . . .	★★★
Features . . . . .	★★
Compatibility . . . . .	★

Psion MC-400—\$1,795  
Optional SSD drive for a PC or compatible—\$300

PSION  
118 Echo Lake Rd.  
Watertown, CT 06795  
(203) 274-7521

## PERSONAL TRAINER FOR THE SAT

**W**e expect athletes to hone their talents through practice, yet we throw our kids to the wolves when it comes to helping them prepare for the Scholastic Aptitude Test (SAT). Davidson's *Your Personal Trainer for the SAT* package offers students a way to prepare for this all-important exam.

The program builds vocabulary and reading skills as well as areas of math covered in the SAT. If students adhere to the 6-7 hour weekly training schedule suggested in the manual, they should be able to tackle SAT problems and considerably increase their chances for success.

Since I'm not planning to take the SAT anytime soon but my 15-year-old son will take it this year, I let him use the program to help in his preparation for the test. After running through a few practice sessions in the

Visitor mode, he felt less threatened by the types of questions asked on the SAT.

The Visitor mode allows you to browse through the questions asked on the SAT without actually taking a test. It's a nonthreatening way to develop a feel for the kinds of questions asked, and learning how to approach certain kinds of questions is as valuable as mastering the content areas of an exam. If you choose the wrong answer, you're told why the answer is wrong. Picking the right answer prompts an explanation of why the answer is right.

Included with the program is a companion book called *How to Take the SAT*, which includes several practice exams. After every practice exercise, you can look at the answers and explanations in the book. The Assessment option in the program lets you evaluate your progress. You'll get a score and a personalized analysis of each test. Then you can get a personalized training schedule based on your strengths and weaknesses.

The training schedule recommends several methods for building strengths and minimizing weaknesses, methods such as making flash cards for vocabulary words or math problems missed. Your training may include reviewing a specific topic on a page in the book, or you may need to work through one of the training activities using the program's onscreen hints and the glossary.

I won't know for sure whether this training has helped my son until he takes the SAT later in the year, but I plan to make sure he completes the entire training schedule. I'll keep reminding him of what a football coach tells his players: Games are won or lost on the practice field.

JOYCE SIDES

Ease of Use . . . . .	★★★
Documentation . . . . .	★★★★
Features . . . . .	★★★
Innovation . . . . .	★★★

IBM PC and compatibles; 512K; CGA, EGA, MCGA, VGA, Tandy 16-color, or Hercules; hard disk optional—\$49.95

DAVIDSON & ASSOCIATES  
P.O. Box 2961  
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# REVIEWS

## Amiga

### AMIGAVISION

Commodore stepped out in 1984 when it bought a little company with a revolutionary personal computer. It saw in this machine a price/performance potential offered by no other PC and successfully brought it to market in 1985. The Amiga has since made interesting inroads in video production, but it has really stayed alive thanks to the enthusiasm of evangelists and a couple of zingers like *DeluxePaint* and *Digi-View*—splendid products but not quite strong enough to push the Amiga ahead.

Commodore just made another innovative move, this time in software. *AmigaVision*, which has been two years in the making, may well do for the Amiga what desktop publishing did for Apple's Macintosh—put it on the map.

*AmigaVision* is an authoring system. It's designed to help people with no programming experience put together interactive audiovisual presentations, the component parts of which have been produced with other tools. It helps you put together things like touchscreen information systems, corporate business presentations, educational reports, quizzes and documentaries, and even animated Christmas cards with MIDI-produced background music. It does this by combining data stored on floppy and hard disks, videocassettes, and videodiscs.

This technique is called *multimedia* (the industry's latest buzzword) and involves melding components from various sources into a single presentation. You'll need paint and animation programs, digitizers, and music composition and word processing software in order to create those presentations. You can also include prerecorded sounds and images from videodiscs, videocassettes, and MIDI synthesizers. *AmigaVision* helps mold these elements into a unified presentation by tying them together; organizing their sequence, flow, and timing; and adding mouse-selectable hit boxes

so that users of your presentation can control it interactively. *AmigaVision* presentations can also accept input from the keyboard.

*AmigaVision* helps you do all this with surprising ease. In general, after you've created your components and decided how you want to present them, you select appropriate *AmigaVision* icons by dragging them from a



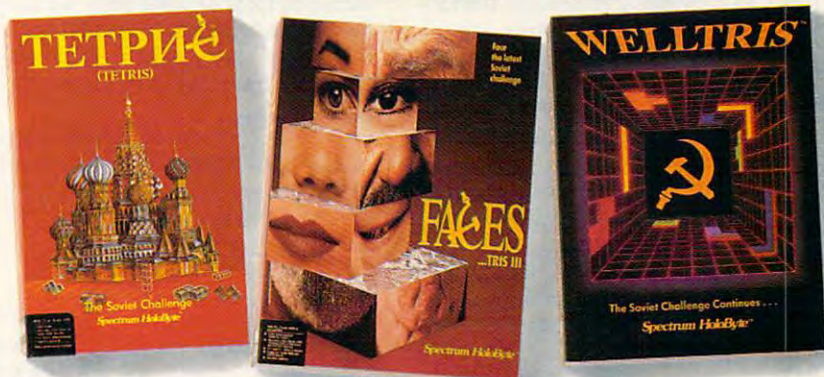
Commodore's point-of-sale system uses *AmigaVision* and a videodisc player to show off the Amiga to potential buyers.

box at the bottom of the screen to a large, scrollable grid above. It's on this grid that you arrange the icons in logical groups (called *parent* and *child*), tying them to your components with specific parameters entered through requesters and pull-down menus. You must know what you want to do and which icons do what, but *AmigaVision* comes with one of the best manuals I've ever seen and two tutorial disks.

I made an interactive presentation incorporating things I found lying around my house and hard drive. I used *AmigaVision* on my A2000 with 3MB of RAM, the new SuperAgnus, WorkBench 2.0, a VCR and genlock, and a MIDI music synthesizer. My presentation consisted of three primary parts: a home video of the kids, a database of text-based articles and screen shots, and a slide show with background music.

I superimposed stationary and animated captions over the video with flashy color fonts. *AmigaVision* will put ANIM5-format animations (but not ANIM brushes) over video

# PLAY IT



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## AMIGA

and will synchronize internally produced sound effects as well.

I made a database to call up articles and reviews I've written, displaying the text with screen shots. I had planned on using a variety of fonts for the text, but that became tedious, as special codes for both fonts and screen format must be inserted into the text by hand. You can move up or down through the text by a line or screen at a time, but *AmigaVision* won't automatically scroll your text.

Then I fashioned a slide show that included digitized photographs of the kids in HAM overscan. I moved between the pictures using several of the great wipes and fades available in *AmigaVision*. I added SMUS background music using sampled 8SVX-format instruments. When I turned to add MIDI, I found that *AmigaVision* plays a MIDI-connected synthesizer by sending a SMUS score out the serial port, which works but isn't entirely satisfactory. And it plays only four voices at once—MIDI or internal but not both. Shortcomings such as these could be overcome by launching external programs, such as the *Sonix* music player, through *AmigaVision's* CLI or *ARexx* interfaces.

I made my presentation interactive through use of a main screen (made with *DPaint*) of images representing each section. Using *AmigaVision*, I easily made hit boxes out of these irregular-shaped images so that the corresponding section would be activated when the mouse was clicked anywhere on it. I also made my sections available on a pull-down menu.

I had little trouble making my presentation perform the way I had envisioned it. The problems I encountered were sins of omission—things *AmigaVision* cannot do. My *AmigaVision* wish list includes a freestanding runtime module so others can enjoy presentations without owning *AmigaVision*, ANIM brush support, smooth-scrolling text, a compatible WYSIWYG word processor for fonts and text formatting, true MIDI support, and joystick support.

These wishes may come true. Commodore is working on *AmigaVision* 2.0 now. It should be available in 1991, and I'm told that the company is considering adding these features and more. Even as it stands, the variety of media *AmigaVision* can incor-

porate and its extraordinary ease of use make it truly innovative. By comparison, *HyperCard* on the Macintosh seems clumsy. *AmigaVision* has more features than *Deluxe Video III* or *CanDo*, and after using it, I find using *UltraCard* and *The Director* downright painful.

By its very nature, the multitasking Amiga is the perfect platform for multimedia, and *AmigaVision* is the easiest-to-use authoring system I've seen for any personal computer.

PEGGY HERRINGTON

Ease of Use	★★★★★
Documentation	★★★★★
Features	★★★★
Innovation	★★★★★

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## A-MAX II

Last year ReadySoft released A-Max, a Macintosh emulator for the Amiga. After plugging a set of used Macintosh ROM chips into the A-Max cartridge, you plugged the cartridge into your disk drive port, loaded the A-Max software, and could run almost all non-copy-protected Macintosh software on your Amiga. Unfortunately, the emulator lacked the ability to use Amiga hard drives and to play Mac sounds. A Macintosh with no hard drive is no more fun to use than an Amiga with no hard drive, so ReadySoft addressed these shortcomings with the A-Max II.

The A-Max II now allows you to create Macintosh-format partitions on Amiga hard drives, as well as allowing access to Macintosh-specific SCSI devices attached to an Amiga SCSI controller. Your Amiga hard disk controller must, however, be supported with an A-Max II-compatible device driver. Drivers are shipped with the A-Max II for Commodore's 2090, 2090A, 2091, and A590; GVP controllers; the IVS Trumpcard; the Xetec

FastCard; and the Preferred Technologies multifunction board. Drivers for Supra hard drives and the ICD AdSCSI board are now available from the respective controller manufacturers. If your controller isn't on this list, you should contact the manufacturer to determine if it is developing an A-Max II driver.

The second major addition is support for Mac-digitized sounds. The Macintosh operating system includes several system sounds that can now be played through the Amiga's sound system. Some older Macintosh software accesses the Mac's hardware to create sounds and won't provide sound using the A-Max II. Most newer Mac programs use digitized sound files and work well under the A-Max II.

The A-Max II makes transferring files between Amiga format and A-Max- or Mac-formatted disks much easier. With the A-Max II's file-transfer utility, you can transfer files from a standard AmigaDOS disk in DF0: to a Macintosh disk or from any Mac file to the Amiga disk. The file-transfer utility will translate text files, convert pictures between MacPaint and Amiga IFF format, transfer binary files between the systems, and convert PostScript files to Amiga format.

Like its predecessor, the A-Max II uses the standard Amiga drives to create 800K A-Max-format disks that can be used while emulating the Macintosh. Also included are utilities to transfer files from a real Macintosh using a 272K disk that can be created on the Mac and read by the Amiga. The Full Disk Transfer utility is supposed to transfer a complete Macintosh disk by creating several transfer disks that are reassembled under the A-Max. However, I was never able to successfully reassemble a disk on the A-Max side. I recommend that you invest in a Macintosh drive.

As if these improvements weren't enough, the A-Max II also has added support for Amigas with Memory Management Units (MMUs), allowing increased compatibility during emulation. Finally, the A-Max II looks at your system preferences to determine how to center the Macintosh screen on your monitor. The emulator supports the new screen modes available with the Enhanced Chip Set and 2024 high-resolution monitor. >

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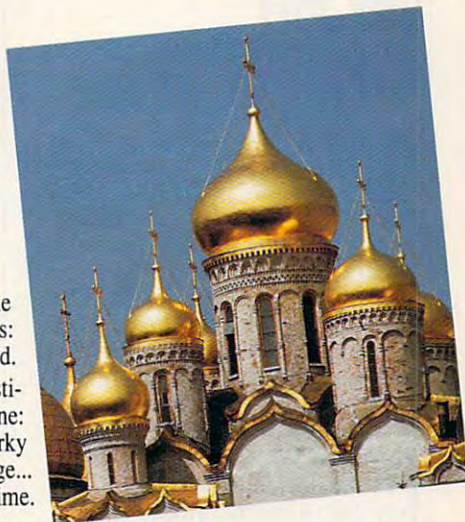
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# REVIEWS

## AMIGA

If you have an Amiga and need to use Macintosh software, the A-Max II is a wise investment. I've found that all the Mac software I need to use (*Althus PageMaker 4.0*, *Microsoft Excel* and *Word*, and Silicon Beach's *SuperPaint*) runs perfectly. With the added use of my Amiga hard disk and the sounds emanating from my monitor, the only clue that I'm not using a real Mac is the larger Amiga screen—and the money I saved by not buying a second computer.

BOB ELLER

Ease of Use/Installation . . . ★★★★★  
 Documentation . . . . . ★★★★★  
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 Compatibility . . . . . ★★★★★

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## THE ART DEPARTMENT

**A**SDG's *The Art Department* (*TAD*) is a 24-bit image-processing program for the Amiga. This means that each screen pixel is represented by three bytes (24 bits) of memory, allowing a palette of 16 million colors instead of just 4096. *TAD* can use this extra information when converting pictures from other computers or when choosing colors to display the best possible Amiga picture.

*The Art Department* loads *Sculpt 4D*, *Turbo Silver*, *DigiView*, and all IFF files, including Sliced Ham and NewTek's Dynamic modes. It can save in 24-bit IFF and standard IFF modes (including Dynamic, but not Sliced Ham). Separately available disks allow you to import GIF, *DeluxePaint IIe* for the IBM PC, PCX, TIFF, Targa, and *Rendition* image files. Unfortunately, while you can load images in these formats, you can't save them in these formats. You can't use *TAD* as an image processor for VGA or Targa screens.

*TAD* is related to ASDG's software for the Sharp scanner. As such, it performs many of the same image-processing functions as NewTek's *DigiView* software. Unfortunately, *TAD* is missing a few of *DigiView*'s bells and whistles. I especially missed control over color saturation. On the plus side, *TAD* has a new control, Gamma, and a variety of dithering algorithms. The Gamma control allows you to compensate for the fact that the visual intensity of the Amiga's 16 brightness levels are not linear. Using Gamma can help you bring out hidden detail in your images.

*TAD* does a very nice job of converting screens from one Amiga screen resolution to another. It does an especially nice job converting to colorful images in HAM and EHB into high-resolution 16-color screens.



Match palettes using *The Art Department* and combine pictures on one screen.

The user interface is attractive but difficult. I found a few procedures tortuous. One advantage of *TAD* over *DigiView* is that you can reserve part of the palette and let *TAD* automatically make the best selection for the rest of the palette. *TAD* makes the task difficult, though. Converting a picture from HAM to EHB with a reserved palette of 20 colors took a friend and me the better part of an afternoon. Though we now have the procedure memorized, it's a laborious process that takes numerous mouse clicks and even a bit of typing.

Although many of *TAD*'s features have been seen before, it has one that's been missing from Amiga programs for a long time: the ability to scale an image to any size. This is especially handy for importing GIF and Targa files that were created on screens with a higher resolution. This makes *TAD* worth its price.

The documentation is adequate, but only so. Although its descriptions are reasonable, it lacks step-by-step tutorials.

Although I am happy with *The Art Department*, I'd like to see an upgrade that allows you to save in any format you can load. I'd also like to see saturation control and genuine image-processing capabilities such as those in Progressive Peripherals' *PIX-Mate*. Unfortunately, the memory requirements for this program make it unusable for the great majority of Amiga owners. I would not recommend *The Art Department* to an Amiga owner with less than two megabytes of memory and a hard drive. ASDG recommends four megabytes. (*Editor's note: ASDG recently announced The Art Department Professional, which adds the capability to save in non-IFF formats, full ARExx support, external effects modules, 8-bit rendering, and multiple palette sizes. The upgrade should be available this fall; contact ASDG for details.*)

RHETT ANDERSON

Ease of Use . . . . . ★★  
 Features . . . . . ★★★★★  
 Value . . . . . ★★★  
 Documentation . . . . . ★★★

Amiga with 2MB, 4MB recommended—\$89.85  
 Art Department Loader disks are available for \$19.95—\$39.95

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## PIRATES

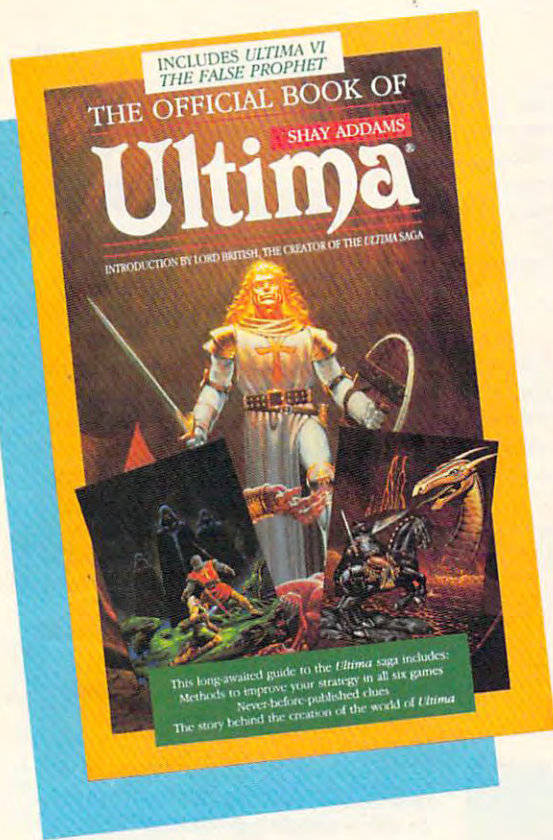
**M**icroProse's *Pirates* puts you in the boots of a pirate captain. In this combination adventure game and simulation, you amass your ill-gotten fortune by sailing around the Caribbean, trading with merchants, plundering cities, and attacking treasure-laden vessels.

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ner-take-all duel. You use the joystick to control your animated character as you take on your foe in a deadly sword fight. If you win, you can take his ship as your own or plunder and sink it. If you lose, you're likely to be thrown in the brig and lose all of your possessions.

When you approach a port city, you can sail into port or attack and plunder the town. If you choose to attack, you can bombard the city and storm the fortress or land near the town and proceed over land to fight the local army.

You may decide to sail peacefully into the harbor. Once in town, you can visit the merchant to buy and sell goods (whose prices vary from port to port) and repair your vessels. You can also visit the tavern to recruit rowdy crew members and buy important information. Finally, you should visit the governor; he can make you special offers and bestow awards upon you. He might even introduce you to his beautiful daughter. You continue your travels until you're captured or you decide to divide the booty, disband your crew, and start over.

Microprose did an excellent job porting this game to the Amiga. The

64-color HalfBrite graphics are plentiful and detailed. The game comes on two non-copy-protected, hard disk-installable disks and has an 80-page manual chock-full of tips, statistics, history and folklore. *Pirates* will please both the arcade gamer and the simulation lover.

STEVE KING

Playability	★★★★
Documentation	★★★★★
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Sound	★★★★

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64/128

## DIGITAL ARTIST

Does anyone need a powerful drawing program for the 64 or 128? *Digital Artist* is a fast, powerful, easy-to-use, menu-driven draw package designed specifically for your computer.

*Digital Artist* has many great features that let you produce a wide variety of images and artwork using a mouse or joystick. You have 18 drawing tools from the tool palette, along with eight graphics-editing functions.

The tool palette's 18 drawing tools include the capture box, fillet, spray can, line, arc, text, color, brush, polylines, and right-angle lines. Shapes, such as triangles, rectangles, ellipses, or parallelograms, can also be created and either filled or not filled with colors or patterns.

The eight graphics-editing functions work with the capture box, which selects the graphic area for the graphics-editing function to be performed. These functions include cut, paste, copy, move, clear, inverse, mirror, and rotate. *Digital Artist* has an alarm clock as well as a 22-function

scientific calculator, which can be displayed at any time from the Tool menu.

Text can also be created quickly and easily using this program. First, you select the font, style, size, alignment, and line spacing. Next, use the WYSIWYG text editor in a selected area on the screen, called the *text box*. *Digital Artist* automatically wraps the last word on a line to the beginning of the next line. You can use the arrow, Insert/Delete, and Clear/Home keys to edit your text.

Many program features help you view images in detail on the drawing page. Several levels of magnification let you perform detailed graphic editing. Except for text, color, and spray can, you can use all graphic tools under magnification. Scrolling up or down the page is accomplished manually by using the page-scrolling arrows or automatically by using the page guide.

Since the 64 is limited in memory, only part of a file can be displayed on the screen at a given time. Thus, the page guide is a useful feature, since it allows you to quickly go to and work on other parts of a file. Drawings are available in three different sizes, depending on whether you plan to view graphics on the screen only, print on a low-resolution graphic printer, or print on a high-resolution graphic printer.



*Digital Artist* is a fast and powerful drawing and painting program.

As mentioned earlier, you cannot see the whole file on the screen at once because of the 64's memory limitations. However, the preview function lets you view the placement of images on the full page before printing it out. The images appear as shadows on the screen. While you cannot view the exact appearance of the file, this func-

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tion does let you see how the images are placed on the page in relation to each other.

*Digital Artist* also gives you a choice of 16 colors, 23 predefined patterns, 14 predefined brush shapes, and three styles of lines. You can even create your own patterns or brush shapes. Another special feature of the program is the Digital Parameter Display (DPD). This feature updates your drawing parameters right on the screen. Coordinate, dimension, length, and angle parameters are displayed in near-accurate measurements.

You can build your own clip-art library with *Digital Artist*. Once you've created a graphic image, use the capture box to select it. A dialog box appears after you've selected CUT from the EDIT menu. Just type in a filename and save the image to a disk for future use. When you need the clip-art image, select PASTE from the EDIT menu and paste the image anywhere on the page. It's that easy!

Graphic creations can be printed on several Commodore and non-Commodore dot-matrix graphic printers. The program provides you with 17 printer drivers. Four of the printer drivers are designed for low-resolution printers (480 dots horizontal resolution). This means images will not print in their proper shapes. There are also 10 drivers for high-resolution printers (640 dots horizontal resolution), as well as three that work with color printers. These printers present a much higher quality of output. At first, I experienced some difficulties in printing because of an incompatible printer. However, I did print with an Epson printer without a problem. If your printer is not listed, experiment with the different drivers. If you have any questions concerning printers and compatibility, I'd advise you to call Digital Technology.

*Digital Artist* is a powerful program overall. One of its greatest strengths is its fast operating speed, which results from the program code's being written in assembly language. *Digital Artist* also includes a feature called Turbo DOS. This lets you perform functions, which include save, load, and format, in significantly less time than using the 64's traditional disk operating system.

Another strength is its wide variety of features and functions. The pro-

gram does not include online help; however, its well-documented, easy-to-understand manual and its menu system make it user friendly. Most of the onscreen icons, which represent functions, are also self-explanatory.

Another advantage is its error handling. It's nearly impossible to make a fatal error with this program. If you do make a mistake, you will get an error message that tells you what to do. For example, I had the wrong disk in the drive, and an error message alerted me to insert the correct one.

One major drawback of this program is its inability to display the full page of images. First, you can't view a full page of images exactly as they're supposed to appear. Second, it's hard to draw a full-page image if you can't see the full image on the screen as you draw. However, as mentioned earlier, this is due to the 64's memory limitations and is not a flaw in the software program.

Overall, I rate this program highly. It has enough features to make it useful and productive. If you're looking for a great drawing program for the 64, why not consider *Digital Artist*?

CHRIS STAWASZ

Ease of Use . . . . .	★★★★
Documentation . . . . .	★★★★
Features . . . . .	★★★★
Innovation . . . . .	★★★

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## JIFFYDOS 6.0

**J**iffyDOS 6.0, a worthy successor to an excellent version 5.0, is a set of ROM chips for the 64 or 128 and disk drive. The 128 set contains three chips; the 64 set contains two. JiffyDOS speeds up disk access for all functions except FORMAT and VALIDATE and offers an enhanced wedge that works in conjunction with an onscreen directory. JiffyDOS ROMs are available for all Commodore and most compatible drives.

JiffyDOS offers this increased speed without tying up any ports, and

it doesn't require additional cables. One can switch easily between JiffyDOS and the computer's standard configuration, and its price is reasonable.

JiffyDOS is particularly useful when using music synthesizers where the cartridge port is occupied with a MIDI interface. It's also ideal when used with cartridge word processors and modems that tie up the parallel port.

Installation is quite simple. It is aided by the clearest and most comprehensive set of instructions that I've seen, and its manual is a model of clarity. The installation process took me 90 minutes. This included testing and installing defeat switches for both the 64 and 1541 disk drives. The most challenging task was drilling holes for the two switches. I actually used my soldering iron to burn the holes through the plastic case.

One note of caution! Check first before buying JiffyDOS to see if your ROM chips are soldered into their sockets. If this is the case, do not attempt the conversion. I haven't encountered this situation, but it is a good idea to open your 64 and check first.

As with JiffyDOS 5.0, version 6.0 includes programmed function keys, a listing freeze, and an OLD command. Major enhancements with 6.0 are user-programmable function keys, an enhanced list freezer/stepper, a built-in two-drive file/disk copier, and the ability to set sector interleaves. This last feature permits you to achieve through experimentation the ultimate disk access drive speed for a particular program on your model disk drive.

Two of these features require comment. Very rarely do the function keys come programmed the way I like them. JiffyDOS is probably the exception. (The keys are configured differently in versions 5.0 and 6.0.) You can configure them any way you wish in the new version, with unlimited characters per function key. A welcome addition to the documentation is a function-key template for both the 64 and 128.

The bad news is that you have to create, load, and run a program to load the custom functions. A short model in BASIC is given in the manual, and no particular programming skill is required to make the modifica-

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field goals, or safeties. Although plays have strange names, Capture Daflag, for example, they all appear to be quite conventional.

Other features are available from user-friendly menus. Choose the length of quarters, a computer or human opponent, computer or human selection of various options, and whether to play or to create a new team, field, or playbook.

You make your play selections between downs, but loading each play takes about 30 seconds. This adds approximately 20 minutes of waiting time to an 8-minute game and nearly two hours to a 40-minute one. Imagine an NFL game taking ten hours and you'll have some idea of how long that is.

The program's graphics make only moderate use of the 64's capabilities. The fields and moving figures are colorful and individualized, yet they and the text especially appear unclear and indistinct.

Sound effects are somewhat disappointing. We do hear the slashing of swords, the cannon's roar, and a variety of other bells and whistles. Missing, however, are the cheering of the crowd, the grunting of players, and the sound of bodies crunching.

The instruction manual is geared toward the MS-DOS version, but an insert lists the specifics for the 64. Though not error free, the documentation is concise and easy to follow.

The rules of the sport have been so simplified that most strategy-oriented football fans will find that the game lacks challenge. Likewise, because the hacking and slashing techniques are so basic, Dungeons & Dragons fans may lose interest quickly. Those who like their football down and dirty, however, will want to bury themselves in *Grave Yardage* for hours.

LEN POGGIALI

Playability	★★★★
Documentation	★★★★
Originality	★★★★
Graphics/Sound	★★

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## MACARTHUR'S WAR

Employing an updated version of its classic Battlefront play system, Australia's Strategic Studies Group presents *MacArthur's War*, a war game that depicts eight battles in the Korean Conflict.

Termed a *police action*, this three-year struggle that pitted American-led U.N. forces against North Korean and Red Chinese armies ended in a stalemate. Its early battles, however, were dramatic and decisive. By focusing on the first ten months of the hostilities (June 1950 to April 1951), SSG extracts exciting military encounters from what many historians have called "The Forgotten War."

To be successful, however, combat simulations need more than entertaining and historically accurate scenarios. The game system must be complex enough to control the many facets of the program, yet simple enough to be mastered quickly. Action should move along at a reasonable pace, and the documentation should be clear yet thorough. Finally, a construction set should be available so scenarios can be modified or new battles created. *MacArthur's War* scores high in all of these areas.

The entire game is menu driven. Your first choices, via keyboard, include whether to play an existing scenario or to create your own, how much of a handicap to give yourself or your opponent, and which army to control against the computer or another human. Once inside the game, branching menus allow you to issue orders and gather vital information about the armies, objectives, and other elements. With the help of the instruction booklet and the handy menu cards, in a short time you'll become skillful in manipulating this system.

Scenarios vary in length, allowing for contests lasting from 30 minutes to 3-4 hours of realtime. As a corps commander, you control up to three divisions, each consisting of up to four regiments, which in turn are comprised of a number of battalions.

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issue orders to your regiments, and battalions move out to best carry out your directives. As a result, your orders are quickly carried out. Combat is also resolved speedily, without lengthy disk access.

In addition to detailed game instructions and descriptions of each menu, the easy-to-read, 56-page player's manual has other worthwhile elements. These include a tutorial to help you get quickly into the game, informative essays dealing with the various battles, and directions for revising existing scenarios or fashioning new ones. Also, an attractive, colorful poster containing all eight battle maps and a terrain key is included as part of the documentation.

With WarPlan, SSG's war game construction set, modifying any of the scenarios is a snap. Creating unique situations, however, can be a chore, despite a menu-driven interface, extensive explanatory notes, and blank forms, rosters, charts, and layout grids. These last items may be photocopied and used to store statistics and graphic designs.

Constructing maps, defining terrain, forging armies, and editing shapes with the game's construction set all require a great deal of time and patience—and a certain amount of artistry. Map making is complicated somewhat by confusing keyboard commands. A joystick or mouse option would simplify and speed up this process; it also would be welcome within the graphics editor and throughout gameplay as well.

Simulations of this sort rarely boast impressive visuals and audio. *MacArthur's War* is no exception. Its graphics are bland and two-dimensional; its sound, merely functional. By way of compensation, all Battlefront play system programs are compatible, so you can use any scenario with any master disk in the series.

Original scenarios and games in progress may be stored on a separate disk. Saving as often as possible is particularly important because of a nasty glitch. If you accidentally hit the Restore key instead of Return, the program will lock up and you'll be forced to reboot.

Minor reservations aside, *MacArthur's War* provides just the right mixture of historical perspective, stimulating gameplay, and creative

opportunities. Compared to some arcade games costing as much, the price you pay for this program is money well spent.

LEN POGGIALI

Playability	★★★★
Documentation	★★★
Originality	★★★
Graphics	★★

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## Macintosh

### INSIDE INFORMATION

According to Microlytics, *Inside Information* is the "first new classification system for language in nearly 150 years." Unlike conventional English dictionaries, which organize words alphabetically, this innovative program classifies entries hierarchically by categories.

The application's seven major categories are Nature, Science and Technology, Domestic Life, Institutions, Arts and Entertainment, Language, and The Human Condition. These are further subdivided into subclasses and subcategories. The subcategories contain the definitions.

*Inside Information* is full of surprises. First, there's the shock of having to pay \$119 for an electronic reference tool when a conventional spelling checker or desktop thesaurus costs considerably less. Next, users must resign themselves to giving up a tremendous amount of valuable disk space. The five-disk package gobbles up 3½ megabytes when fully installed. Finally, the application is limited to 65,000 entries, which is small by dictionary standards.

If space is a problem, you can exclude all but the Basic Data file, which is needed to run the program and in-

stall the other menu items. But there's really no reason to purchase the product if space limitations make it impossible to install the optional Definitions (consisting of dictionary words), Reverse Dictionary (which lets you find a word by its definition), or Explicit Material (containing "sexually explicit language and insulting terms").

The program's desk accessory lets you access the data in four ways: Outline view, Graphic view, Tree view, and Reverse Dictionary. You



**Inside Information from Microlytics includes a unique Reverse Dictionary.**

can also choose a particular method or view with the pull-down menu.

The Outline view presents you with the program's seven major word classes. Double-clicking on a particular class calls up its subclasses. Double-clicking on a specific subclass displays categories, and double-clicking on a category yields subcategories. Each subcategory presents a starred word list, and double-clicking on a starred entry yields a definition. For example, Science and Technology leads to Transportation, which leads to Automobiles, which leads to *woodie*, a "wood-paneled station wagon (slang)." You can bypass all the double-clicking by entering a lookup word.

The Graphic and Tree views present alternative visual perspectives on the hierarchical word flow for any currently selected word. When you select the Graphic view, the hierarchy flows from left to right. You can expand or collapse particular categories or levels to see how *Inside Information* handles classifications. In the Tree view, the hierarchy flows from top to bottom.

The Outline, Graphic, and Tree views offer Find, Show Path, and Last Word options. Find searches the dictionary for a particular word. Show

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Path traces the word through the classification hierarchy. Last Word keeps track of the last 30 words found and lets you easily reselect a particular word from the list.

*Inside Information's* most innovative feature is its Reverse Dictionary. This option makes it possible to find matches for words, partial words, or phrases. The desk accessory conducts a search and presents a list of possible matches. For example, if you type in *left side of ship*, you'll get back the match, *port*. You can scroll through the list (which unfortunately isn't alphabetized) and double-click on an entry to call up a definition. You can also switch to any other view to see how the word fits in a hierarchical classification.

Anyone interested in organizing the English language into categories of defined words will find *Inside Information* useful, though its definitions are often terse. The utility does a good job of showing the logical relationships among words. It can even come in handy when solving crossword puzzles. On the other hand, if you're only

interested in hunting for a synonym or verifying a correct spelling, *Inside Information* takes up more disk space than it's worth.

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## WELLTRIS

Few games are as addictive as *Tetris*. Some have called it a communist plot, tracing our country's lack of productivity to the game's initial release. Whatever the political intentions may be, the game has become a national obsession. Nintendo

even includes a *Tetris* cartridge with its portable Game Boy.

Now its sequel, *Welltris*, has won the 1989 Best Action/Arcade award from the Software Publishers' Association. Created by the same Soviet programmer who designed *Tetris*, Alexey Pajitnov, *Welltris* takes the variously shaped blocks of *Tetris* and adds a three-dimensional perspective.

As in *Tetris*, your goal is to maneuver the blocks as they fall so they form complete rows. After you fill in a row, it disappears, leaving you more room—and time—to carry out your strategy. Time is especially valuable because as the game progresses, the blocks fall faster.



*Welltris adds a three-dimensional perspective to the popular Tetris.*

That's where the similarity ends. In *Welltris*, your view is from the top of a well, looking down on a grid. You slide the blocks along any of the four walls as you guide the blocks into place at the bottom. You can eliminate rows vertically or horizontally or both at the same time.

If any part of a block comes to rest on a wall, that wall is blocked for your next three moves. The game ends when any of the walls is stacked to the top or when all four walls are blocked.

As a *Tetris* devotee (that's one step short of an addict), I've taken to *Welltris* in a big way. While *Tetris* is simpler and more elegant, *Welltris's* added complexity brings new layers of strategy: figuring out how to place the two-dimensional pieces into a three-dimensional grid, getting used to both vertical and horizontal scoring, and learning to use the well's four corners to create new shapes from old ones.

I especially like to use the corner strategy. If you wrap a block across one of the four corners and drop it, the block splits in two. When either of

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the split pieces hits an obstruction, both it and the other piece freeze in place.

The Mac version features excellent Russian folk music to put you in the *glasnost* mood (you can also turn off the music), separate black-and-white and color versions in the same package (unfortunately, there's no desk accessory version, as there is with *Tetris*), and easy-to-use pull-down menus for the various game options.

If you're one of the unsuspecting millions who fell in love with *Tetris*, you owe it to yourself to try *Welltris*. It's more than just a quickie sequel—it's an authentic chip off the old block.

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## AMAZING PAINT

As I booted up CE Software's new \$99 black-and-white paint program for the Macintosh, *Amazing Paint*, I had to ask myself why the Mac world needs yet another 1-bit paintbox. The zillions of free copies of *MacPaint* and *SuperPaint* floating around have soured the market for competitors; *NuPaint* and *Cricket Paint* bombed in that market last year, and *Studio/1* survives only on its animation capabilities. Meanwhile, many Mac artists are being lured away from 1-bit programs with ultrasexy 32-bit color paint/retouching programs such as *Pixel Paint Professional*, *PhotoShop*, *ColorStudio*, and *Studio/32*—or they're abandoning bit-mapped graphics entirely for PostScript drawing programs such as *Illustrator* and *Freehand*. So who needs a modest little program like *Amazing Paint*?

There's nothing flashy or mind-expanding about *Amazing Paint*—no integrated draw tools, animation, im-

age processing, talking lassos, or anything like that. This is pure black-and-white paint, pretty much the way you remember it from *MacPaint*. In fact, if you've used any other Macintosh paint program, you know how to use almost everything in *Amazing Paint*, it's so easy to learn. But the program is well named: It has all of the little enhancements that you wish *MacPaint* had, as well as some amazing tools that, frankly, I fell in love with.

There's all the usual stuff, of course: a variety of selection and shape tools, the pencil, eraser, fill bucket, and so on—all available from a tear-off toolbox. However, most of the tools have new options that can be called from a panel on the right of the toolbox—which is much easier than going to the menu bar for everything.

For example, pop-up windows allow the spray can to be adjusted for spray size, spray pattern, and spray speed, making it more like a real airbrush. The spray-pattern options window offers several ways to superimpose the selected pattern on your drawing (under the existing drawing, over the drawing, blended with it, and so on), with each method shown in a test window as you select it. Instant feedback like this is a timesaving feature that's typical of this program.

Other thoughtful touches include smooth autoscrolling; multiple levels of undo and redo; rotation and scaling of selections in angles and percentages; a magic wand that selects only inside a bounded region; several ways to magnify the screen, including one that follows the movement of the cursor; and a billboard-printing feature that blows up your graphic to fill multiple pages, with crop and registration marks for taping the sheets together after printing. And the program is satisfyingly fast. Effects rarely lagged behind the cursor even on my Mac Plus; on an IIcx, everything snapped to instantly.

This program has two of the nicest gadgets I've seen in any paintbox. One customizes the shape of arrowheads for use with dimensioning lines and technical-drawing callouts. By dragging just three handles, you can make any arrowhead under the sun in about two seconds, something that can't be accomplished even on many high-end CAD programs.

The other gadget is the mouse-

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tracking window. It tells you, in real-time, the exact (x,y) screen coordinates of the cursor, in pixels, inches, or centimeters, as well everything you'd ever want to know about how you're moving a selection—size of selection, distance moved from original position, and angle moved. I'm not sure how useful mouse tracking is (if you want exact placement of selections, there's a fully adjustable grid that's a snap to use) but I sure enjoyed playing with it.

The feeling I got when I used *Amazing Paint* was, "Finally, someone took *MacPaint* and did it over right, at the right price." It makes you want to try 1-bit paint again, for the first time.

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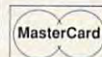
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<p><b>Wings of Fury</b></p> <p><b>PC</b></p>	<p>Enjoy real seat-of-the-pants flying fun with this arcade-action aerial-combat game. Flying your F6F Hellcat, you must dive-bomb, fly nearly suicidal low-altitude torpedo runs, and shake leechlike Zero fighters from your tail. You'll need practice because this game's perspective is two dimensional. <i>Wings of Fury</i> keeps your eyes on the screen, your fingers on the keyboard, and your mind on entertainment.</p> <p><i>Gregg Keizer</i></p>	<p>IBM PC and compatibles; 512K; CGA, EGA, VGA, Tandy 16-color, or Hercules graphics; joystick recommended</p>	<p>Bröderbund 17 Paul Dr. San Rafael, CA 94903-2101 (800) 521-6263 \$39.95</p>
<p><b>Doctor Ami</b></p> <p><b>AMIGA</b></p>	<p>This unique utility for the Amiga diagnoses memory and hard disk problems. The program includes information on virtually every controller, hard drive, and memory card that you can put into an Amiga, so <i>Doctor Ami</i> does a good job of pinpointing your problems. <i>Doctor Ami</i> even lets you map out bad memory and bad drive blocks. This program is a must for cautious, paranoid, or just plain unlucky Amiga owners.</p> <p><i>Rhett Anderson</i></p>	<p>Amiga</p>	<p>Free Spirit Software P.O. Box 128 58 Noble St. Kutztown, PA 19530 (215) 683-5609 \$49.95</p>
<p><b>Aldus PageMaker 4.0</b></p> <p><b>MAC</b></p>	<p>Version 4.0 of this top-selling desktop publishing program adds a Story Editor (a separate text-entry and editing window with an integrated spelling checker), text rotation (in 90-degree increments), and more precise typographical controls (type sizes from 4 to 650 points in 0.1-point increments and kerning to 1/100 of an em space). Despite its many features, <i>PageMaker</i> is still relatively easy to use. Highly recommended.</p> <p><i>David English</i></p>	<p>Macintosh Plus, SE series, II series, or Portable with 1MB of RAM (2MB recommended); System 6.0.3 or higher; Finder 6.1 or higher; hard disk</p>	<p>Aldus 411 First Ave. S Seattle, WA 98104 (206) 622-5500 \$795.00</p>
<p><b>Brief 3.0</b></p> <p><b>PC</b></p>	<p>This is the best text editor I've ever used. In addition to the basics, it offers multiple windows, file buffers, and hooks to all the major screen languages. With <i>Brief's</i> bookmarks, navigating multiple buffers is a breeze. A C-like language lets you write, compile, and use macros in <i>Brief</i> as if they were part of the original program. And <i>Brief</i> lets you undo as many as the last 300 editing changes of any kind.</p> <p><i>Richard C. Leinecker</i></p>	<p>IBM PC and compatibles, 200K (512K recommended), hard drive</p>	<p>Solution Systems 541 Main St. Suite 410 South Weymouth, MA 02190 (800) 821-2492 \$199.00</p>
<p><b>Duck Tales: The Quest for Gold</b></p> <p><b>AMIGA</b></p>	<p>Join Huey, Dewey, and Louie on a worldwide adventure to help their Uncle Scrooge become Duck of the Year. Fly around the world picking up treasures Scrooge McDuck needs to regain his title. Excellent graphics and sound effects accompany you on a journey that takes you into the jungle, through caves, up mountains, and on a photo safari. Unfortunately, frequent disk accesses and unresponsive controls may frustrate kids.</p> <p><i>Kim Horn</i></p>	<p>Amiga with 512K</p>	<p>Walt Disney Computer Software 50C S. Buena Vista St. Burbank, CA 91521 (818) 841-3326 \$44.95</p>
<p><b>After Dark 2.0</b></p> <p><b>MAC</b></p>	<p>Who would've thought that screen blankers would become a hot software category? <i>After Dark 2.0</i> includes 30 different displays (many with built-in sound), a randomizer mode (cycles through displays in random or sequential order), and a PICS Player (uses animation files from <i>MacroMind Director</i>, <i>Studio One</i>, or <i>Super3D</i>). A MultiModule mode runs several displays at the same time. Loads of fun and practical, too.</p> <p><i>David English</i></p>	<p>Macintosh 512KE, Plus, SE series, II series, or Portable; sound capability requires System 6.0.3 or higher</p>	<p>Berkeley Systems 1700 Shattuck Ave. Berkeley, CA 94709 (415) 540-5535 \$39.95</p>
<p><b>F40 Pursuit Simulator</b></p> <p><b>PC</b></p>	<p>Realistic dips and curves in the road impair your vision as you race the clock. Earn points for distance traveled and bonus points for every roadblock and police car you pass, but watch out for retaining posts, telephone poles, and spinouts. <i>F40's</i> graphics are very good. Because of this game's run-from-the-cops aspect, it isn't a good game for children too young to differentiate between fantasy and reality.</p> <p><i>Lisa Wroble</i></p>	<p>IBM PC and compatibles, 512K, DOS 2.0 or higher, CGA or EGA; joystick optional</p>	<p>Titus 20432 Corisco St. Chatsworth, CA 91311 (818) 709-3692 \$44.95</p>
<p><b>Northgate OmniKey Ultra</b></p> <p><b>AMIGA</b></p>	<p>The OmniKey Ultra keyboard can now be used on the Amiga 2000, 2500, 3000, and, with a third-party adaptor, even the 1000. Just flip two switches and replace a few keycaps with their Amiga equivalents. It has over 120 keys, including an extra set of function keys that can be defined as normal, Shift+fkey, Alt+fkey, or Ctrl+fkey. It has a firm feel and solid feedback but isn't as loud as an IBM keyboard. A great replacement keyboard. <i>Denny Atkin</i></p>	<p>Amiga 2000, 2500, or 3000</p>	<p>Northgate 7075 Flying Cloud Dr. Eden Prairie, MN 55344 (900) 548-1993 \$149.95 (Amiga keycap set \$15.00 extra)</p>





## AstroNUMBERS

PC

With the right guidance, this package will complement your children's learning and give them the edge they need. Cute graphics and sound smack of a real videogame. Then the learning sneaks in with whole-number math problems. Unfortunately, it will take an adult to wade through the manual and figure out how to play. With an educational game, I want kids to be able to put a disk in and go.

*Richard C. Leinecker*

IBM PC and compatibles, 256K, CGA graphics; joystick optional

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8640M Guilford Rd.  
Suite 204  
Columbia, MD 21046  
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## Red Storm Rising

AMIGA

*Red Storm Rising* shows that MicroProse has mastered the art of porting programs to the Amiga. Multitasking and hard disk-installable, the program takes advantage of all available expansion memory and has 64-color graphics, mouse support, and digitized sounds. This is modern sub combat—you'll be watching computer displays, not your periscope, but the action is still as nonstop as in Tom Clancy's book of the same name.

*Denny Atkin*

Amiga with 512K; 1MB recommended

MicroProse  
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Hunt Valley, MD 21030  
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## OnTime

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This calendar and to-do list manager is a breeze to navigate by day, month, or year. Tasks you jot down roll over if you don't delete them. The program can run memory resident (15K) and sound its appointment reminder within other applications. The daily planner screen includes a time availability box, and you can display a weekly grid with appointments blocked out or display both appointments and nonscheduled notes.

*Dee Shneiderman*

IBM PC and compatibles, 320K, DOS 3.1 or higher for resident mode

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Southfield, MI 48075  
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## HardBall II

AMIGA

*Hardball II* gives you the great arcade-style gameplay of the original, plus a slew of new options. Statistics are maintained in every category, and they change from game to game. You can view the games from several different perspectives. Runners have lead control and can attempt to steal at any time—you can even get caught in a rundown. And, if you don't agree with the calls, an instant-replay feature is included.

*Troy Tucker*

Amiga

Accolade  
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## Quicken 1.5

MAC

I never thought I'd recommend a check-writing program, but this impressive personal-finance package has changed my mind. It's easy to use, can print checks to a dot-matrix or laser printer, and can export tax data to *MacInTax*. For small-business bookkeeping, *Quicken* has a surprisingly powerful selection of business reports and can perform accounts payable, accounts receivable, and payroll. Includes sample checks and an order form.

*David English*

Any Macintosh with at least 512K; printer required to print checks and reports

Intuit  
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## Bill & Ted's Excellent Adventure

PC

Bill and Ted score points for bringing back "dudes" from the past and getting Ted's stepmother to drive them to school. The clock is ticking, but some characters won't come along unless they have certain items. Unfortunately, the simplicity of timing and movement would make the Mario Brothers weep. Sound and animation are disappointing, and the history books are far more interesting.

*Barry Brenesal*

IBM PC and compatibles; 256K (CGA), 384K (EGA), 512K (VGA); hard drive with 2MB recommended; supports joystick and Ad Lib sound card

IntraCorp  
14160 SW 139 Ct.  
Miami, FL 33186  
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## Hoyle Official Book of Games, Volume 2: Solitaire

AMIGA

With 28 game variations to choose from, *Hoyle* will hold your attention for hours at a time. The game is challenging, even on the easy level. Variations range from the easy-to-learn Scorpion, similar to standard seven-column solitaire, to Cribbage Square, where you'll need in-depth knowledge of cribbage rules to win. Cute animations add a touch of humor, and the few sounds are excellent. The Amiga makes a great solitaire partner.

*Kim Horn*

Amiga with 1MB

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## MacRecorder 2.0

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*David English*

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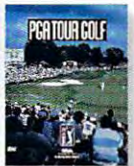
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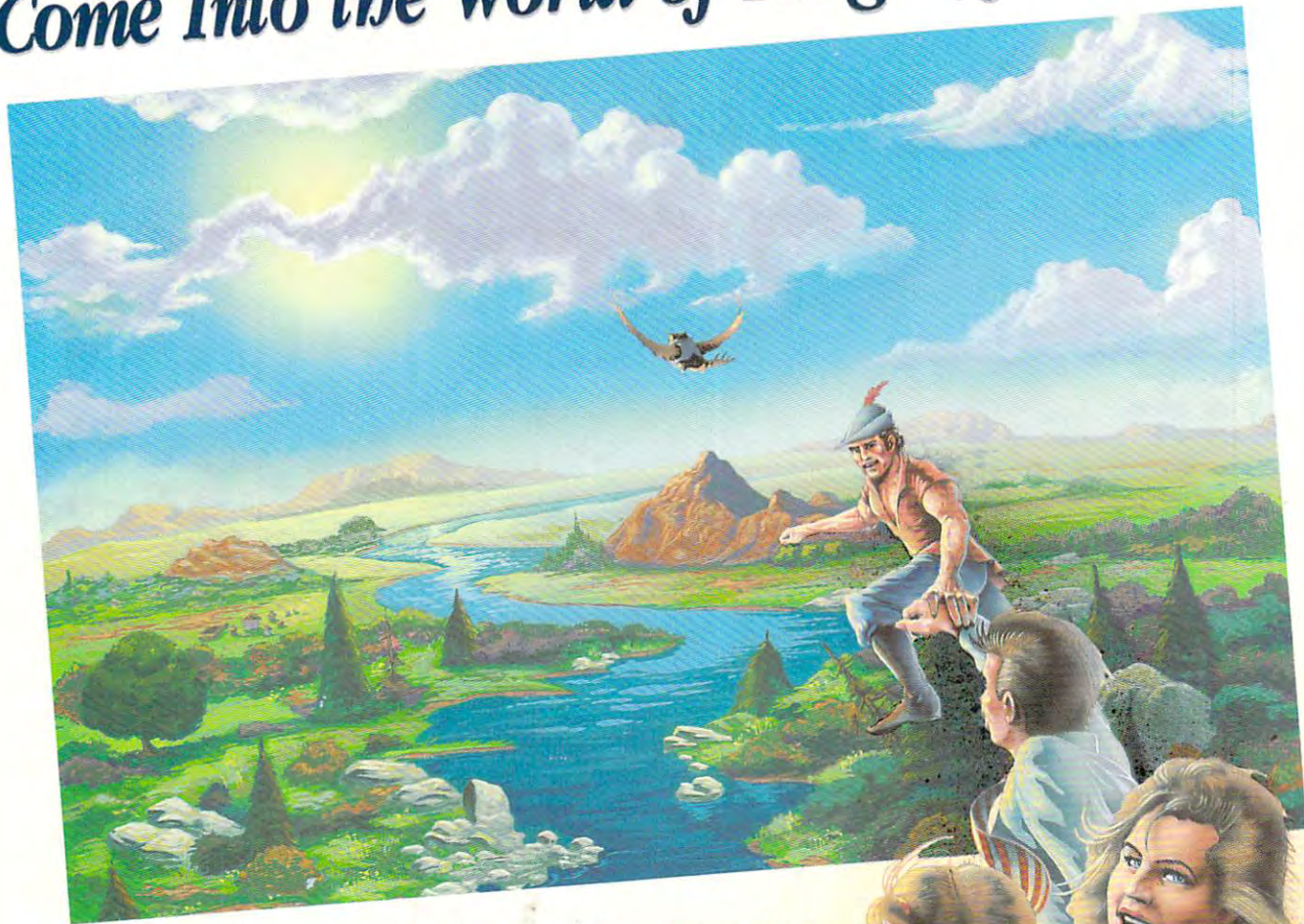
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