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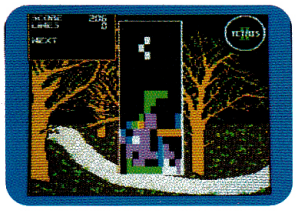

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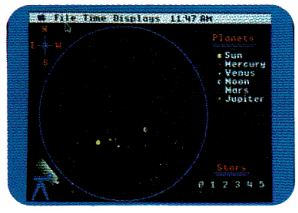

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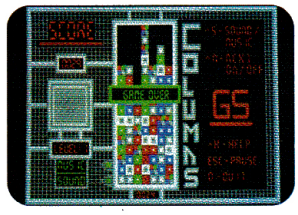

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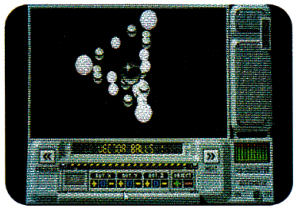

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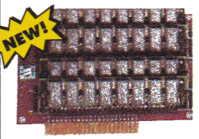

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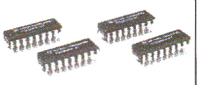

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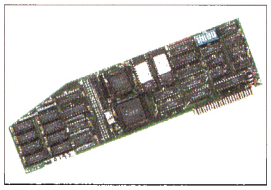

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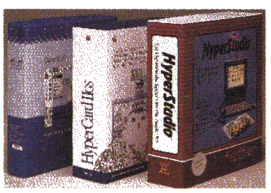

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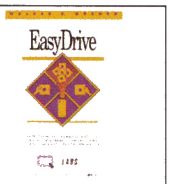

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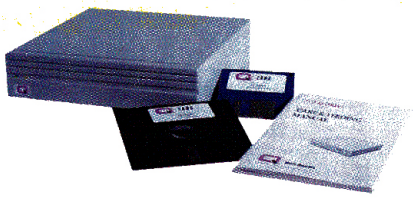

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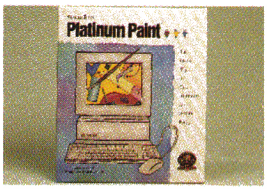

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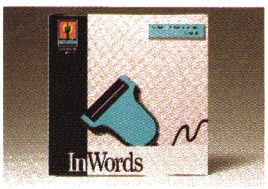

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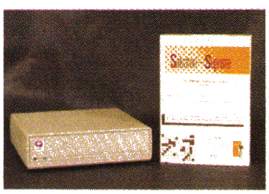

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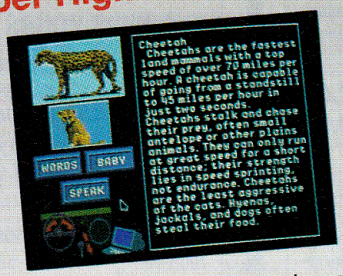

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DECEMBER

1991 Vol. 9 No. 12

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42 **The Year in Review** by Cynthia E. Field, Ph.D.
It was Oscar night in August at *inCider/A+* as we screen-tested scores of recent Apple II packages for our blockbuster roundup. Dozens of new programs for home and school made their débuts this past year. It was also a big year for remakes and sequels to classic Apple II products — so here's a look back at the hits of '91.

56 **It's a Bird, It's a Plane . . . It's System 6** by Owen W. Linzmayer
Faster than a silver Flash file, more powerful than a speeding hard disk, able to leap tall folders in a single bound . . . . Disguised as mild-mannered System 6 — a less-demanding operating system — a hefty assortment of System 7-style utilities and add-ons fight a neverending battle for TrueType, aliases, and the Macintosh way.



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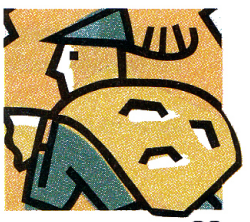

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RASPUTIN AND THE II

The Apple II may be going,
but it's not going easily or quickly.

When we asked Contributing Editor Cindy Field to research new Apple II products announced in 1991, we expected to have a list of maybe 50 titles. We were shocked — pleasantly shocked — to see Cindy's whopping list of 150 new products. Okay, some of them are upgrades and some aren't exactly headline grabbers. Still, this month's cover story shows that there's life in them thar' Apple IIs. And while there's no reason to believe that 1992 won't yield another sizable crop of products, you can't help but wonder when Apple will officially call an end to the manufacturing and sale of the II.



By DAN MUSE * EDITOR IN CHIEF

Unfortunately, it's clear that Apple has no intention of resuscitating the II line. We enjoyed the rumors of a new beefed-up GS that would be sold through channels other than the traditional Apple dealer network. And we were disappointed to discover that while a new machine was more than speculation and plans were being laid for the cheaper and better GS, Apple executives eventually quashed it. Upper management undoubtedly realized that the GS on the drawing board would be a threat to the Mac LC. They were right; it would have been.

So with no new CPU planned and dismal dealer and developer support getting even worse, what's left for the Apple II but to go gentle into that good night?

The Apple II may be going, but it's not going easily or quickly. Like Rasputin, the monk whose legendary mystical powers made him one of the most influential figures of the Russian Revolution, the Apple II just doesn't want to die. Rasputin survived poison and bullets, but was finally done in by a combination of a second round of gunshots, clubbing, and drowning. History tells us that Rasputin — poisoned, shot, beaten, and bound — was dumped through the ice into the Neva River. When the body was finally discovered, the lungs were filled with water and he had managed to somehow get a hand free before he died.

To me that's the image that personifies the Apple II. You'd have to be blind to not see that it's going down, but it's certainly not going down without a fight. The Apple II has also survived a lot, and, inevitably, the fatal blow to the II comes not from users, developers, or the press, but from Apple itself. You have to wonder how long the II could have prospered had Apple shown even a modicum of support for it.

We expect that Apple will praise but bury the Apple II shortly. In fact, some official pronouncement may have come by the time you read this. The important thing to remember, however, is that while Apple may not recognize the II anymore, that doesn't mean the developers that produced the 13 pages of new products listed on page 42 will suddenly stop making software.

As for *inCider/A+*, even though we added Mac coverage a year ago, we remain dedicated to providing information on the Apple II. In addition to our ongoing monthly coverage of AppleWorks and Publish It!, we'll report on System 6.0 for the GS when it's released, as well as HyperStudio 3.0 and other Apple II products, such as Westcode's Pointless, which in short is Adobe Type Manager for the GS. What we won't do is treat Apple II users as if they're stranded on a desert island. Apple IIs and Macs work side by side in schools and small businesses across the country. Educators, in particular, want to know how the two computers complement one another.

But even if you're not an educator and have no interest in Mac/II connectivity, expect new products for the II in 1992. The six million Apple IIs out there won't go away after Apple announces the end of the line. The installed base of IIs is large enough to warrant further development as long as those millions of Apple II users continue to buy software and peripherals. ❑

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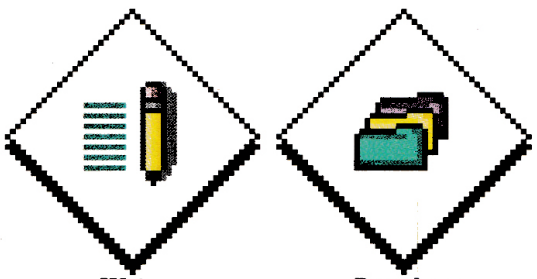



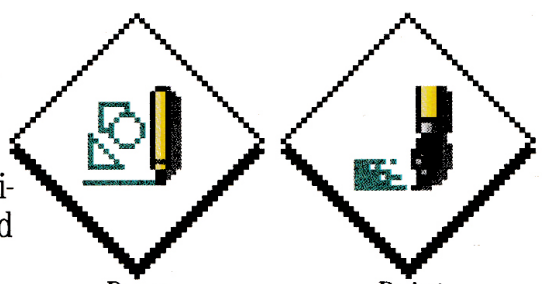



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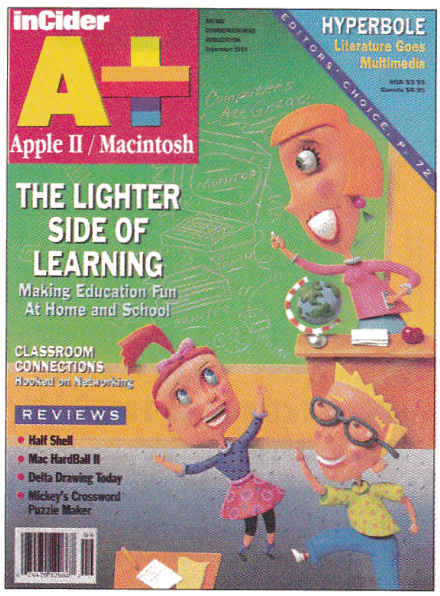

INSIDER'S VIEW

THIS LETTER IS IN RESPONSE TO "Reality Check" (*inCider*'s View, September 1991, p. 8). I'm glad to see that Mr. Muse isn't naive enough to believe that all schools are showcases of technology. Many in the computer/education industry aren't as aware. But Mr. Muse's desire to have school systems spend more money on technology seems rather self-serving. After all, if it weren't for the dollars spent on educational computing, *inCider/A+* would probably cease to exist.

My career also depends on the use of computers in education, and it has for over ten years. As a parent and taxpayer, however, I question many schools' use of this technology. Similarly to Mr. Muse, I was at the National Educational Computing Conference (NECC) in Phoenix, and saw the technology being promoted. The experience was discouraging. Everyone seemed to be admiring the latest technological toy.

I don't want my children using junk technology in the classroom, just as I don't want them eating junk food in the cafeteria. And I certainly don't want to see any tax money spent on technology that will turn our schools into carnivals. Some of this hardware and software will make excellent tools for library research when sufficient reference materials exist to make them practical. Most of the technology, though, distracts the students from the hard work of learning. I'd rather my children learn to calculate MPG than produce MTV.

Instead of buying more hardware and software for schools, let's learn to use the existing technology effectively. Every day I see school computer labs that are nothing more than electronic babysitters. I can relate to Mr. Muse's astonishment on hearing about a school purchasing an Apple IIe without planning for its implementation. I hear frequently of district technology coordinators who buy labs of Macintosh LCs without planning for their implementation. It seems as though some computers serve as status symbols rather than educational tools. I agree that we should "apply pressure on local, district, state, and federal levels." The message, however, shouldn't be to spend more — it should be to spend wisely.

Brian Walker
1410 Rocky Lane
Eagan, MN 55122

We agree with you that giving out money blindly is no way to solve this problem. We don't agree, though, that our nation's teachers have enough hardware and software, and therefore should simply get to work using it. Until school systems, educators, parents, and students recognize that computers are valuable educational tools, this



CROSSTALK

We asked you to whip up the next Apple II (September 1991, p. 10), and did you ever! Some of your blueprints were a little outlandish (50 megahertz and 1024 by 1024 pixels), but most were within the bounds of reason. Many of you created a next-generation IIGS, bundled with 2.5 megabytes of memory, a 40-megabyte internal hard drive, and a TransWarp/Zip-style accelerator. Sam Bertic of San Diego, California, demanded a built-in SCSI port. Others added Macintosh features. Robert Burnell of Buffalo, New York, and Doug Jacobson of Cincinnati, Ohio, wanted a PDS (processor direct slot). A surprising number of callers suggested a portable IIGS with an LCD monitor — businesspeople, take note. The award for technological vision, though, goes to William Wemberly of Los Angeles, California, who'd create a cartridge-based CPU so that you could plug in whatever processor you wanted to use — Apple II, Mac, or IBM. Talk about the computer for everyone.

Christmas time is here, by golly. Time to make up those wish lists, all you greedy computer folks. So tell us: What do you want in your stocking this holiday season? A new hard drive? More memory? Don't be bashful. Remember, Christmas comes but once a year.

The weather outside is frightful, but CrossTalk is so delightful. Call us at (603) 924-0301 and sound off on our topic of the month. Make sure you tell us who you are and where you're from, and we'll print the best responses right here.

kind of technology won't carry the same weight in the classroom as other tools, such as textbooks. When the school system's decision makers believe that computers are nothing more than status symbols and toys, no one in the school plans properly for the machines' integration into curricula.

So by all means, push for careful planning in your school district. You should demand to know who will use the equipment and how. Make sure that your educators are fully trained and can use these new tools. But denying teachers (and therefore our children) access to the wonders of the Information Age is intellectual suicide. — eds.

POWER TO THE PEOPLE

THANK YOU FOR THE TERRIFIC review of Delta Drawing Today (September 1991, p. 61). Ms. Webb really understood the program and wrote a clear explanation of it.

As the head of Power Industries, I'm trying hard to practice what Delta Drawing Today preaches: peer teaching and cooperative learning. To this end, I'm going on line to establish an electronic community of users who can teach and support each other. I'm maintaining the following on-line forums and addresses currently:

- America Online: Apple Education Forum, also e-mail to JOCKGILL or DELTAPOWER
- GEnie: e-mail JOCKGILL
- CompuServe: Library 15 in the LOGO FORUM, e-mail 70670,2477
- Prodigy: e-mail VJSV64A
- AppleLink: e-mail DELTA.POWER

Of course, I realize that many teachers don't have telephones in their classrooms, much less modems. Isn't it ironic that we're trying to encourage teachers to use modern tools such as computers, but we won't give them a direct connection to the outside world? What would happen if we forced businesses to do without telephones for corporate communications? Perhaps when we recognize teachers as the professionals they are, they'll be allowed to have telephones on their desks.

Jock Gill
Chief of Operations
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WORKS IN

I'M ENJOYING GREGG KEIZER'S Bridging the Gap column about linking the Apple II and Mac worlds. I'd like to see him mention the Classic and LC systems more specifically, and the peripherals more commonly used with them. Also, please keep up the Apple II coverage.

What's the latest on SmartWorks, the integrated-software package for the Mac that the Leonard Group was developing? Your article several months ago made it sound attractive. (See "Sneak Preview: SmartWorks," January 1991, p. 66.) Since then, there's been no mention of it, nor has there been any advertising.

Mike Millard
5465 Greenleaf Road
West Vancouver, B.C.
Canada V7W 1F5

The Leonard Development Group sold SmartWorks to Symantec, who finished it and calls it ***GreatWorks****. Look for a review on p. 38 in this issue.* — *eds.*

NOT SO SUPER

I'M WRITING TO CAUTION READERS about using Remarkable Technologies' SuperWorks for large files. (For more information about this program see the review section, November 1991, p. 23.) The desktop is limited to only about 250K, so before you convert a large AppleWorks file to SuperWorks you must split it into smaller files for manipulation and saving.

Remarkable Technologies told us that it was working to fix this problem in the next version of SuperWorks. The company wouldn't commit to a release date. — *eds.*

LET'S TALK

BEING AN AVID READER OF *inCider/A+*, as well as a fellow writer, I think your publication is excellent. Can you help me out? I'd like to start an on-line conference for users interested in computer communications and privacy/security topics. Please print my address in full so that interested readers may contact me. Keep up the great work.

Shannon Roxborough
5139 South Clarendon
Detroit, MI 48204

NEW FACES

YOUR READERS MAY BE INTERested in an "Easter egg" I discovered while using The Print Shop IIGS. While at the main menu, hold down the option key as you double-click on *Exit Program*.

Instead of quitting to ProDOS, the application calls up a seventh menu titled *La La Land*. You may choose to view digitized photos of the various programmers (their names will appear as you move the cursor directly over their faces) or to select *Return to Reality* and escape to the main menu. Nicely done, Broderbund.

Bill Starn
1732 Wade Drive
Paso Robles, CA 93446

A SINGLE STEP

I PLAN TO BUY AN INEXPENSIVE Apple II compatible soon, and I want to know as much as possible before I purchase it. Are any books available that sum up the Apple in a nutshell? I don't need a 5000-page tutorial, just a beginner's guide with a taste of everything.

Robert Pepe
25-22 48th Street
Astoria, NY 11103

Broad-based introductory books for 8-bit Apples are few and far between, but we can suggest two titles that might help you. A2-Central *offers* **The IIc, Your First Computer** *by Paul Freiberger and Dan McNeill (published by COMPUTE! Books, Greensboro, NC). Some of the information is IIc specific, but the book is a serviceable introductory text.* **Your IIGS Guide** *(CompuShare Press, Bothell, WA) is another good resource.* — *eds.*

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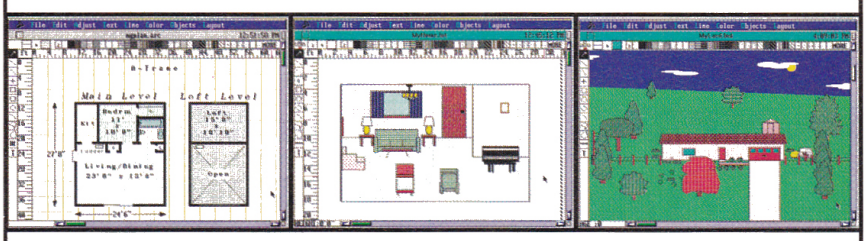

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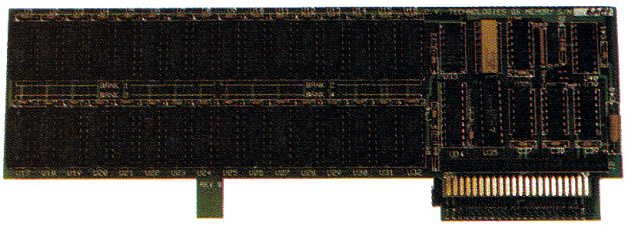

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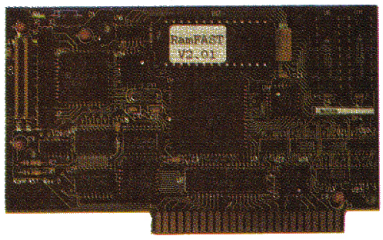

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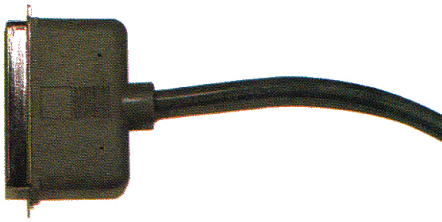

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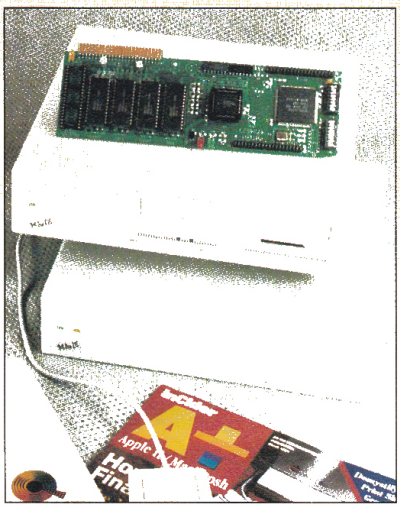

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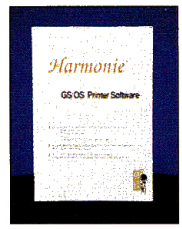

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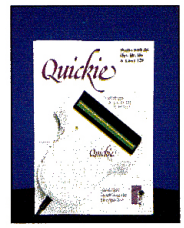
QUICKIE SCANNER

This is the only hand -held, grey-scale image scanner for all "slot equipped" Apple IIs—the IIgs, IIe, II+ and the Laser 128. Quickie allows you to digitize flat page images quickly in multiple sizes and save all or parts of them to disk in standard Apple II graphic file formats. Software is provided in both GS/OS and ProDOS 8 formats.



$195.95

Editor's Choice, inCider, June 1990

Salvation Utilities

This is the complete utilities series for IIgs users. Includes virus detection & cure, backup utility, hard disk optimizer, manager, and file repair & recovery.

Bakkup, Renaissance & The Exorciser—

Editor's Spotlight, Nibble Magazine, October 1990

SALVATION SUPREME Only $89.95

ALL 5 Salvation Utilities for the IIgs.

Bakkup, Renaissance or Deliverance	$28.95
Exorciser	$27.95
Wings	$45.95

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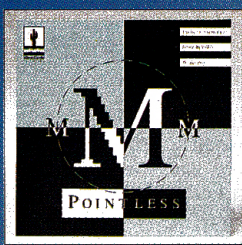
PLATINUM PAINT	**$58.95**
Beagle Compiler	$43.95
BeagleWrite	$47.95
BeagleWrite GS	$58.95
GS Desk Accessories	$34.95
Point-to-Point	$59.95
GS Font Editor, Program Writer, T.O. DeskTools, T.O. DeskTools II, T.O. FileMaster, T.O. PowerPack, T.O. SideSpread, T.O. TextTools, T.O. Thesaurus	$29.95
T.O. Graph	$51.95
T.O. MacroEase	$24.95
T.O. QuickSpell, T.O. SuperFonts, T.O. SuperForms, T.O. TeleComm	$41.95
T.O. ReportWriter	$47.95
T.O. SpreadTools	$39.95
T.O. UltraMacros	$35.95

WestCode SOFTWARE

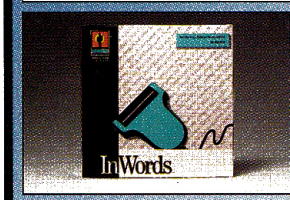
New!!!

TrueType™ Font Technology for the IIGS is here NOW!



POINTLESS

Improve printed output with most printers—including ImageWriter™ and DeskWriter™. Pointless' INIT/CDEV generates characters at any point size, providing laser-sharp text, transparently from the GS/OS System Folder. Includes a variety of TrueType fonts. *System 6.0—O.K.* **$49.95**



INWORDS **$79.95**

Discover the power and ease of InWords™ today—InWords provides a revolutionary new way to enter text into your Apple II, at up to 500 words per minute. Requires 512K and Quickie or LightningScan

SoftSpoken

CROSS-WORKS 2.0

Now you can exchange any AppleWorks (Version 1.0–3.0) data files with popular MS-DOS programs including Microsoft Works, Lotus 1-2-3, WordPerfect and dBase III, III+ and IV. Manual and a universal cable included. $68.95

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Kid Pix	$35.95
Geometry GS	$53.95
The New Print Shop	$28.95
McGee at the Fun Fair, IIGS	$23.95
Macintosh Version	$26.95
Katie's Farm or McGee, IIGS	$23.95
Macintosh Version	$26.95
Where in the World is Carmen Sandiego?, IIGS	$28.95
Macintosh Version	$28.95
Carmen USA, Europe or Time, IIGS	$28.95
Macintosh Version	$28.95
The Playroom, Apple II	$23.95
Macintosh Version	$28.95
Science ToolKit—Modules 1 or 2	$26.95
Science ToolKit—Master Module	$53.95

GLEN BREDON

ProSel 16	$66.95
ProSel 8	$29.95
DOS.Master	$19.95

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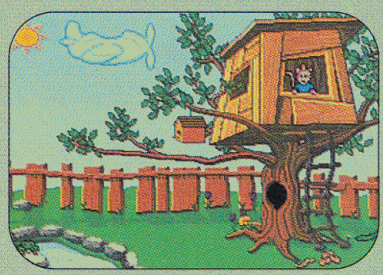
BRODERBUND IS BUSTLING

Broderbund Software is busy this holiday season. Among its new releases is Chris Crawford's **Patton Strikes Back** (Macintosh, $59.95), a war game based on the Battle of the Bulge. Seasoned war gamers can test battlefield strategies, while novices can concentrate on single-skirmish tactics; everyone can play, thanks to a simple, intuitive command system that features point-and-click control and timely on-screen progress reports.



Kids in grades 1 through 4 in quest of more peaceful pursuits can graduate from The Playroom to **The Treehouse** ($59.95, Macintosh or Apple II), an on-screen hideaway filled with games and activities that hide educational topics such as music, science, math, and language.

Broderbund has also released a color version of **The Playroom** for the Macintosh ($59.95) and **Print Shop Classroom Packs** for the Apple IIe/c ($99.95) and IIGS ($139.95).

One Broderbund graduate, Carmen Sandiego, is appearing this season on her own PBS TV game show, **Where in the World Is Carmen Sandiego?** The Western Publishing Company (Racine, WI) is also publishing a new line of adventure and activity books featuring Carmen and the gang — including four **"You-Are-the-Detective"** storybooks.

For more information, write to 17 Paul Drive, San Rafael, CA 94903-2101, (415) 492-3200. **— P.S.**

FAR OUT

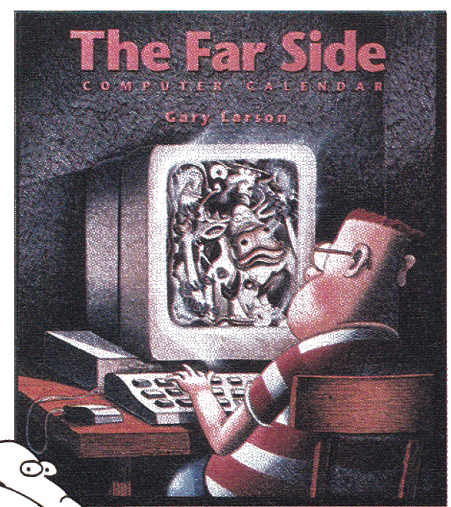
The *Far Side* is a popular cartoon. The *Far Side* desk calendar was the most popular appointment keeper sold last year. And now, resisting the temptation to write a syndicated television show, Gary Larson has brought his peculiar sense of humor to the Macintosh.

"Frankly, I started off contemplating **The Far Side Computer Calendar** with my usual paranoid suspicions," reports Larson, whose worries include an elephant who never forgets ("Remember me, Mr. Schneider? Kenya. 1947. If you're going to shoot at an elephant, you better be prepared to finish the job.") and a flock of hens cutting loose in an egg fight. "But over a period of a few weeks," he says, "it evolved into something that was genuinely unique — a medium that not only allowed my work to remain faithful to its original form and intent, but even enhanced it with its own special capabilities."

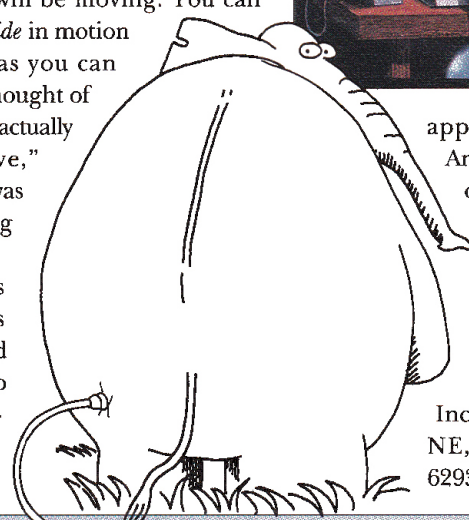
That means that animation has come to some *Far Side* cartoons. Not only will your Mac offer you a chuckle a day, some of those cartoons will be moving. You can expect *The Far Side* in motion to be as weird as you can imagine. "The thought of the things I draw actually starting to move," Larson recalls, "was both frightening and exciting."

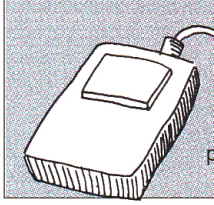
The cartoons are scanned as Mac graphics and then touched up by Larson himself — and as anyone who has ever handled a scanner knows, what you get is not exactly what you started with. "Sometimes, ironically, the distortions seemed to improve certain characters — a somewhat eerie sensation," Larson says.

By the way, The Far Side Computer Calendar is a fully functional personal appointment calendar. You can plan and view your schedule by the day, week, month, or year — and print a paper calendar in a variety of sizes. On a single screen you can edit the date, time, and appointment information. Animated icons give you an overview of your day.



It's priced at $69.95, and requires System 6.0 or later and a hard drive with at least 3 megabytes available. For information, contact Amaze Inc. at 11810 115th Street NE, Kirkland, WA 98034-6293, (206) 820-7007. **— P.S.**





FREE FROM THE NATIONAL AW USERS GROUP

For the price of a stamp, you can get a free copy of "Our Ten Favorite AppleWorks Tips," describing how to use templates, multiple printers, cursor-movement commands, and other ideas. Send a self-addressed business envelope with 52 cents postage to AW Tips, NAUG, Box 87453, Canton, MI 48187.

Illustration • Gary Larson

"Apple II" indicates an 8-bit product compatible with IIes, IIcs, IIc Pluses, and IIGses unless noted otherwise.

NEW SOFTWARE

■

BRINGING LOGO TOGETHER

LogoEnsemble, from Logo Computer Systems for the Apple IIGS, combines the popular Logo programming language with a database manager, word processor, graphics system, and communications program.

LogoEnsemble has all the features of LogoWriter, an earlier integrated product that combined Logo programming with word processing, and adds an easy-to-use database manager. According to Susan Fischer at LCSI, "The ability to use or create a database adds a totally new dimension to Logo — one in which information can be explored, organized, and analyzed."

Using some new Logo commands such as "average" and "total," users will be able to make a LogoEnsemble database work almost like a spreadsheet. If students aren't going to create their own databases, LogoEnsemble comes with several useful examples, full of information on topics such as nutrition, the planets, geography, and the Olympic Games.

Under LCSI's site-license agreement, a school may make unlimited copies of the LogoEnsemble disk for a one-time fee of $798. A single user pays $299. Special discounts are also available for schools that already have a LogoWriter site license. LogoEnsemble requires an Apple IIGS with at least 1 megabyte of memory. For more information circle number 351 on the Reader Service card.

◆

IT'S MAGIC

The Magic File Cabinet is an exciting addition to the AppleWorks database manager. It turns any AppleWorks database into a bottomless well of information, using a technique similar to that used in hypermedia.

You can add a button — actually a Beagle Bros TimeOut UltraMacro — to any field. You can define the button to link to any AppleWorks word-processor document. When you press the button, the word-processor file appears on screen — containing notes, comments, records, tables, or whatever you need.

The Magic File Cabinet requires AppleWorks 3.0 and TimeOut UltraMacros. It's available on 3.5- or 5.25-inch disks for $17, and includes many sample files. For more information, contact Magical Software, 8255 Canning Terrace, Greenbelt, MD 20770, (301) 345-3230, or circle number 352 on the Reader Service card.

■

TRUETYPE IIGS

Apple IIGS users can now print text with the clarity and precision that only "outline fonts" can provide, thanks to WestCode Software's new program **Pointless**.

Outline fonts, unlike the bit-mapped fonts that are standard on the GS, look exactly the same when printed as they do on screen — smooth, crisp, and clear even at the largest sizes.

Like Apple's TrueType outline fonts, Pointless fonts don't come in sizes. You buy the font, and then make it any size you choose. This feature reduces the disk space needed to store your collection of fonts.

Pointless works transparently with any GS program, including AppleWorks GS, HyperStudio, HyperCard IIGS, GraphicWriter, and Platinum Paint. It's compatible with any printer for which you have a GS driver, including Apple's ImageWriter and LaserWriter lines, and the Hewlitt-Packard DeskWriter.

Pointless is the latest in a long list of outstanding programs from Alan Bird — from Beagle Bros' TimeOut series of AppleWorks enhancements to WestCode's InWords optical character-reading software. Pointless sells for $69.95, from WestCode Software, 11835 Carmel Mountain Road, Suite 1304, San Diego, CA 92128, (619) 679-9200. For more information, circle number 357 on the Reader Service card.

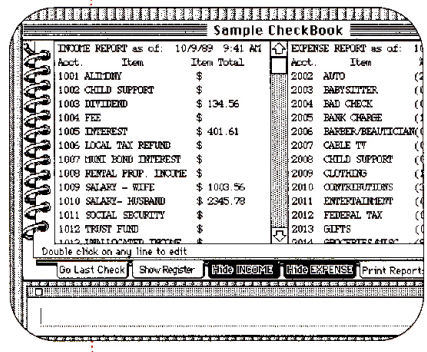
▲ ◆

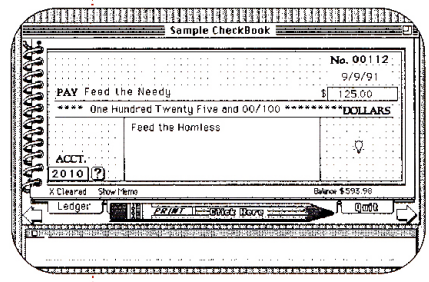
BACK TO BASICS

If you're the kind of bookkeeper who got along just fine with your checkbook before you bought a Macintosh, **AlphaCheck: Back to Basics** may be the only financial program you'll ever need.

ACTAsoft, publisher of Back to Basics, which requires HyperCard 2.0, also publishes AlphaCheck for AppleWorks. AlphaCheck: Back to Basics includes a general ledger, as well as income and expense ledgers. You can print checks and reconcile your checkbook.

According to Don Aquilino, president of ACTAsoft, "We all want to put our financial data on slips of paper and put them in a shoebox to figure out later. That's what this program does."





AlphaCheck: Back to Basics sells for $59.95; **AlphaCheck Plus**, a double-entry bookkeeping system for AppleWorks, sells for $69.95; **Family Finance** for AppleWorks is priced at $49.95.

For more information, contact ACTASoft, 19700 Wells Drive, Woodland Hills, CA 91364, (818) 996-6731, or circle number 350 on the Reader Service card.

◆

TIME TRAVELING

Time Navigator Around the World and **Vacation Nation Travel** are two new Apple II products from MECC that follow in the tradition of two successful and popular MECC series.

Time Navigator Around the World, like **Time Navigator** and **Time Navigator Leaps Back**, focuses on teaching the skill of

Apple IIGS, Apple IIe, Macintosh



Software Stuffers for Under $10

APPLE IIGS 3½" DISKS

Print Shop™ IIgs Graphics – PDE Exclusives!

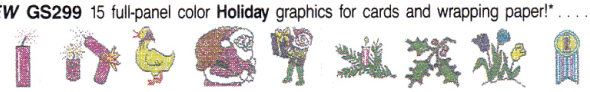
☐ **GS156** 100 color pictures of people, faces, clothing* $9
☐ **GS178** 100 pictures of **fonts**, plus **color borders** to frame Xmas cards* $9



☐ ***NEW* GS297, GS298** 30 full-panel color **Christian** graphics* (2 DISK SET) $18



☐ ***NEW* GS299** 15 full-panel color **Holiday** graphics for cards and wrapping paper!* $9



☐ ***NEW* GS300** 60 color **Fairytale** graphics for kids to have fun with!* $9



☐ ***NEW* GS301** 50 color **Borders** to frame Xmas cards or make wrapping paper!* $9



* Requires Print Shop™ IIGS to use.

Graphics/Graphic Utilities

☐ **GS63 Cheap Paint**—full-featured color painting program (768K REQ.) (SHAREWARE†) $9
☐ **GS131, GS132 84 fonts** for desktop publishing, Xmas cards, etc. (2 DISK SET) $18
☐ **GS229 Elfwrite** Easy-to-use with instructions plus 117 fonts! ★*Best Seller* $9

Games/Entertainment/Education

☐ **GS221,GS222 Cosmocade**—blow away aliens in jungle/space, joystick (2 DISK SET) (SW†) $18
☐ **GS248 Star Trek Classic**—celebrate 25 years of Star Trek—w/this graphic/sound game $9
☐ **GS252 Loderunner.GS**—collect prizes, avoid monsters! $9
☐ **GS271 Milestones 2000**—addictive car racing game! (RELIEFWARE FOR THE HOMELESS†) . . $9
☐ ***NEW* GS287 Dr. Mario**—Kill viruses in Tetris™ style game $9
☐ ***NEW* GS288 Explorer**—enter a world of adventure + magic, create char. + graphics! (SW†) $9
☐ **GS295, GS296** Six **Mean 18™ courses**, new themes like dinosaur trees! (SW†) (2 DISKS) $18

Utilities

☐ ***NEW* GS281 Command Com**—MS-DOS style utilities + Xterm telecom. prog (SW†) . . . $9

Adult Graphics

☐ **GS234, GS237** Gorgeous girls dazzle you (2 DISK SET) (SW†) $18
☐ **GS255** thru **GS262** Sizzling swimsuits, R-rated. 150+, 3200-color graphics **8** disks $49

APPLE II 5¼" DISKS

Apple II New Print Shop™ Graphics

☐ **939** 70+ b/w pictures of animals of every kind!* $5
☐ **1016,1017** 10 full-panel color **Christian** pix.* (2 DISKS) $10
☐ **1018,1019** 10 full-panel color **Holiday** pix.* (2 DISKS) $10
☐ **1020** 60 color **Fairytale** graphics for kids!* $5
☐ **1021** 50 color **borders** for holiday cards!* $5

*Requires New Print Shop™ to use.

Word Processing

☐ **037 Freewriter**: Full-featured word processor (II+ NEEDS PADDLES, LOWER CASE CHIP) $5

Games/Education

☐ **814 Monopoly:** The popular board game! $5
☐ **974 Flobynoid**—great Tetris™ clone, more. (SW†) $5
☐ **976, 977 World of Pinball**—14 games (SW†) (2 DISKS) $10
☐ ***NEW* 1005 Berzap!**—Fight robots & mazes (SW†) $5
☐ ***NEW* 1006 Columns**—Dbl-hires 128K arcade . . $5

Passion

☐ **190,800** X-Rated graphics for adults only (2 DISKS) $10
☐ **961,962 Beach Girl**, more lovely ladies (2 DISKS) $10

Telecommunications

☐ **1002 Agate** ANSI modem program with Zmodem $5

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Any 6 disks
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One Yr Membership (**$20 value**):
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  - ☐ Apple IIGS directory describing 1000 programs
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- Members-only discounts!
- Plus **6 Disks** of your choice (**ONLY $3.33** each!—only as part of this special)

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☐ **404 Christmas Clip Art**—Santa's wisemen, animals, ornaments, more! $7

† The author requests a specified donation if you decide to use the program.

Add $4.50 US / $5 Canada / $15 foreign shipping / handling for orders. CA orders add sales tax.
If ordering a **6 disk Special**, please check 1 box: ☐ **Apple II Membership** ☐ **Apple IIGS Membership**
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NEW-PRODUCT FOCUS

sequencing — placing historical events, persons, and artifacts in a correct chronological order.

In Time Navigator Around the World, students travel into the past and must find their way to the present. They do so by considering three persons, events, or artifacts, and correctly selecting the most recent. Each correct selection moves them forward.

By including "current events"and "best-selling books" of the past, Time Navigator Around the World helps students learn about inventions, discoveries, and culture, as well as standard historical facts.

Fascinating facts about the histories of Africa, Asia, and pre-Columbian America broaden the appeal of Time Navigator Around the World.

Vacation Nation Travel is the second in the Frames: Reading Comprehension Series from MECC. Students act as travel agents and have to suggest trips to clients.

In order to make popular recommendations, they need to read things such as travel brochures and letters from previous travelers. Vacation Nation Travel can generate hundred of different vacations.

Both Vacation Nation Travel and Time Navigator Around the World cost $59, run on any Apple II computer with 128K of memory and a single disk drive, and are available on either 3.5 or 5.25-inch disks.

For more information, contact MECC, 3490 Lexington Avenue North, St. Paul, MN 55126-8097, (612) 481-3500, or circle number 354 on the Reader Service card.

NEW RESOURCES

SCHOOL DEALS

Farallon Computing is now offering its widely known Macintosh networking products to educators at greatly reduced prices.

"The **Education Program** enables Farallon to easily reach the education market with products and services to network computers," says Petra Nielsen, Farallon's education sales manager. "Farallon offers a complete plan, with comprehensive services that will supplement education prices."

Farallon's authorized education resellers, many of whom already work with schools, can now offer special prices on a number of popular hardware and software products. Included in the program are 10- and 50-packs of **PhoneNET** AppleTalk connectors, **PhoneNET StarController Series 300** hubs, **Timbuktu** software for "remote control" of Macs, **MacRecorder** sound systems for Macs that lack microphones, and **MediaTracks** software for making multimedia presentations.

In addition to the volume discounts, the Farallon Education Program also includes a 30-day evaluation period for all products and free technical support — on the phone, online, through an educators' newsletter, and at major educational computing conferences.

Interested educators should contact Farallon, 2000 Powell Street, Suite 600, Emeryville, CA 94608, (415) 586-9000, or circle number 355 on the Reader Service card.

How you see 'em...

Now you don't.



You've seen them before, those unsightly "jaggies" that make your text look a little rough around the edges.

Well, it's time to clear things up. Introducing *Pointless*,™ a new font technology for the Apple IIGS.

With Pointless, letters displayed on the screen appear smooth, crisp and clear at even the largest point sizes.

What's more, Pointless improves printed output with almost any kind of printer, including the ImageWriter® and DeskWriter,™ providing impressive laser-sharp text.

To make all this possible, Pointless uses TrueType™ outline fonts, the new font standard on the Macintosh and Windows. Now GS users can share the benefits of this new font technology.

A snap to install, Pointless works transparently with any GS program, including favorites like AppleWorks GS,® HyperStudio™ and Platinum Paint.™

Simply pull-down the Font menu and your TrueType fonts show up along with your other GS fonts. But unlike regular GS fonts, Pointless will instantly create any point size you need from a single TrueType font.

To help you design great-looking pages immediately, a variety of popular TrueType fonts are included with Pointless. And, to add even more style to your projects, pick up one of WestCode's Type Collections. Each library of fonts contains several outstanding typefaces.

Now that you've seen what Pointless™ can do, wouldn't it be pointless to use your GS without it?

Look for Pointless at your favorite software dealer. Only $69.95. Or call us at 619-679-9200.

WestCode SOFTWARE

This ad's headline was created using Pointless (excluding the first line) and printed with a DeskWriter.

Pointless requires an Apple IIGS with GS/OS 5.0 or later. Appropriate printer drivers required. Network/School Site licenses available. All brand and product names are trademarks of their respective companies, and you know who they are. © 1991 WestCode Software, 11835 Carmel Mountain Road, Suite 1304, San Diego, California 92128 (619) 679-9200 • Fax (619) 451-0276.

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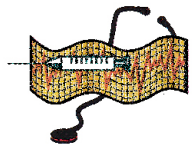

APPLE CLINIC

GOING TO WORK

The IIGS has a powerful toolbox, but learning to use it takes some elbow grease.

BY CECIL FRETWELL

BOX O' TOOLS

I UNDERSTAND THAT THE APPLE IIGS comes with a powerful toolbox. What is it and how can I access it?

Daniel Becker
Phoenix, AZ

The Apple IIGS Toolbox is a GS/OS resource that lets programmers create software that conforms to Apple's Human Interface standards. The "tools" are specialized routines that handle everything from creating menus to drawing windows to managing input from the mouse and keyboard. If you're familiar with Applesoft BASIC, these tools are much like BASIC commands. You pass them a set of parameters, and they perform a desired action based on those parameters.

These routines are described in detail in the **Apple IIGS Toolbox Reference**, *a three-volume series available either from Addison-Wesley (Jacob Way, Reading, MA 01867, 800-447-2226) or at your local bookstore ($26.95 each, volumes 1 and 2, $39.95 for volume 3). If you can get ahold of a copy of Dan Gookin and Morgan Davis'* **Mastering the Apple IIGS Toolbox** *(out of print, but published originally by Compute!, P.O. Box 5406, Greensboro, NC 27403, 919-275-9809) or Mark Andrews'* **Programming the Apple IIGS in C or Assembly Language** *(also out of print, but published originally by Howard W. Sams & Company, 11711 North College, Carmel, IN 46032, 800-428-5331), either of those books will also get you up and running.*

I should warn you that using the toolbox isn't easy. If you truly want to tackle it, you should be familiar already with assembly language, Pascal, or C. If you know only BASIC, though, and are really determined, you can use So What Software's ***Call Box****, a BASIC compiler that lets you access the GS toolbox (10221 Slater Ave., Suite 103, Fountain Valley, CA 92708, 714-964-4928, $110).*

There are also programs available that make talking to the GS Toolbox easier by letting you "draw" your desktop, complete with menus and dialog boxes. These programs then generate source code automatically for the environment you've created. ***Genesys*** *(Simple Software Systems International, 4612 North Landing Drive NE, Marietta, GA 30066, 404-928-4388, $150) and* ***Design Master*** *(The ByteWorks, 4700 Irving Blvd. NW, Suite 207, Albuquerque, NM 87114, 505-898-8183, $95) are two such programs. (See our comparative review in April 1991, p. 34, for details.)*

One way to learn to use the toolbox is to develop a skeleton desktop program that you can then fill out and modify to your specific needs. Dr. Sandy Mossberg described this procedure in a five-part series of articles; the first three parts were published in the last three issues of the now defunct Call -A.P.P.L.E. *magazine. Having been its technical editor, I have the complete series of articles in both assembly language and C on disk. If you'd like a copy, send $20 to me at inCider/A+'s address, listed below.*

JOYSTICK ADJUSTMENT

I HAVE A NUMBER OF JOYSTICKS (Gravis, Apple, and so on) for my Apple IIGS. How can I check to see whether they're centered properly?

Michael Hudson
Portland, OR

Michael, I really tried to re-invent the wheel on this one. I had a page-long beauty of an answer all worked out, complete with oscilloscopes and ohmmeters. My thanks goes to Christopher Allen (a.k.a. NonaDAbov2 on America Online) for clearing the air. According to Mr. Allen, all you have to do is run this simple program from Applesoft BASIC:

```
10 HOME
20 X = PDL(0): Y = PDL(1)
30 PRINT X,Y
40 GOTO 20
```

The value range for the joystick is between 0 and 255; about 127 means it's centered perfectly. Most software isn't too picky, so anywhere within 5 to 10 percent of that should be good enough. Press CTRL-C to stop the program.

ACCIDENTAL DELETION

I RECENTLY DELETED A FILE accidentally. I had to re-key the entire document, which took a lot of time and proofreading. Can you "undelete" a file?

Diane Infen
Detroit, MI

First, immediately stop using the disk from which you deleted the file. If you continue, you'll need a lot of luck to find the file intact. When a file is deleted, its data remains on disk until another program's data replaces it. The operating system deletes the file only by removing its entry in a directory block.

I know of a couple of software packages that undelete a file. ***ProSEL*** *by Glen Bredon is a powerful program selector that lets you move quickly from one application to another (distributed by Charlie's Apple Seeds, 9081 Hadley Place, San Diego, CA 92126, 619-566-1297, $40). It includes utilities to copy, move, delete and undelete files, and format disks.*

You could also try Central Point Software's ***Copy II+****, which copies disks and handles other file-maintenance tasks (15220 Northwest Greenbrier Parkway, #200, Beaverton, OR 97006, 503-690-8090, $39.95). The program is also available from mail-order houses.*

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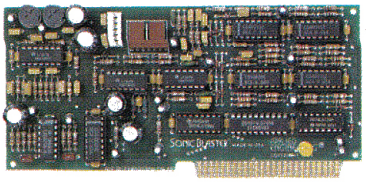

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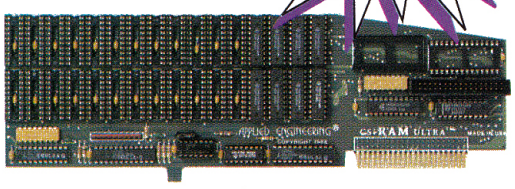

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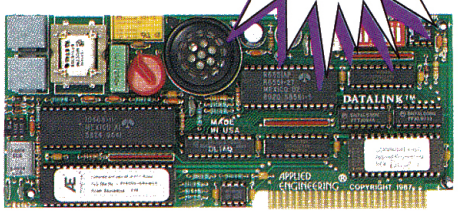

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PRODOS INFO

I'M LOOKING FOR INFORMATION about ProDOS. Do you know how can I obtain Apple's ProDOS manuals?

Mike Hollenbeck
Indio, CA

You can obtain the **ProDOS 8 Technical Reference Manual** *($29.95), the* **Apple IIGS ProDOS 16 Reference** *($29.95), and the three-volume series* **Apple IIGS Toolbox Reference** *($26.95 each, volumes 1 and 2, $39.95 for volume 3) either from Addison-Wesley directly (Jacob Way, Reading, MA 01867, 800-447-2226) or at your local bookstore.*

A2-Central *(P.O. Box 11250, Overland Park, KS 66207, 913-469-6502) offers some good deals on Apple II-related books and manuals. Another source you may want to check is the* ***Apple Programmers and Developers Association*** *(Apple Computer, 20525 Mariani Avenue, MS 33-G, Cupertino, CA 95014-6299, 800-282-2732). APDA no longer has an annual membership fee.*

You may also find Gary Little's **Exploring Apple GS/OS and ProDOS 8** *helpful (Addison-Wesley, $21.95). Another classic is Michael Fischer's* **Apple IIGS Technical Reference** *(Osborne McGraw-Hill, 2600 Tenth Street, Berkeley, CA 94710, 800-227-0900, $19.95).*

FRANKLIN RAM

I OWN A FRANKLIN ACE 2200. WILL Applied Engineering's RamFactor memory card work on my system?

Jeffrey H. Hinzy
Somerset, PA

According to AE's technical support, there's no reason why you can't use a RamFactor card in your Franklin Ace 2200. As a side note to anyone who might be considering purchasing more memory, go ahead and splurge on that extra 256K or 1 megabyte. Memory is like hard-disk space: You can never have too much.

CORRECTIONS

The system-speed listings in the October 1991 Apple Clinic (p. 20) contain bugs. To make them run properly, correct the following lines:

```
BUILD.SPEED
150 S = S + J
220 PRINT CHR$(4); "BSAVE DO.SPEED,
    A$300, L$4F"
340 DATA 6794:REM SUM CHECK

CHANGE.SPEED
90  PRINT CHR$(4);"BLOAD DO.SPEED, A$300"
140 S = S + PEEK(I)
160 IF S = 6794 THEN 190
```

Our thanks to J. Morris Prosser.

WRITE TO APPLE CLINIC, *INCIDER/A+*, 80 ELM STREET, PETERBOROUGH, NH 03458.

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*inCider/A+ Magazine August, 1991

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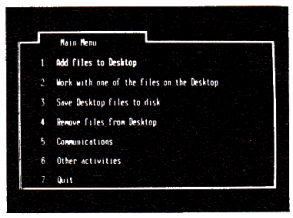

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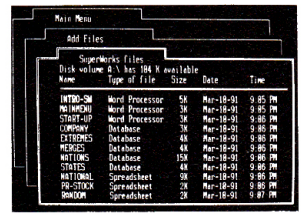
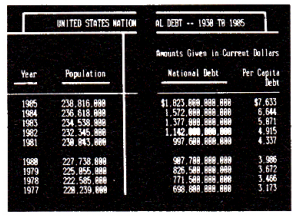


FILE MENU



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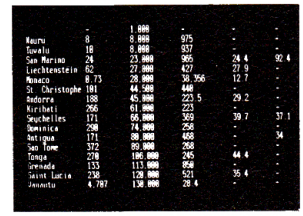

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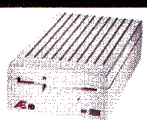

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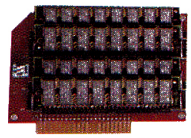

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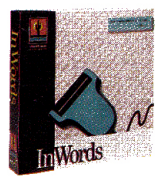

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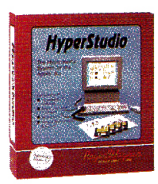

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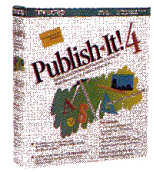

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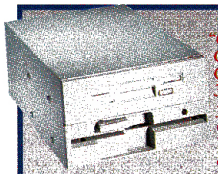

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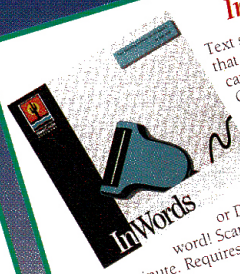

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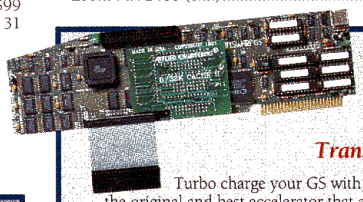

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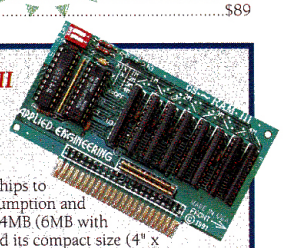

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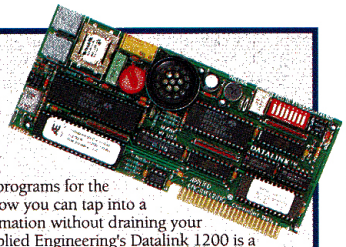

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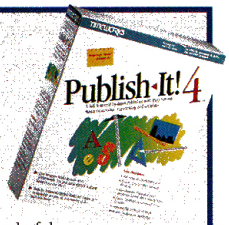

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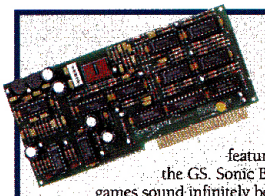

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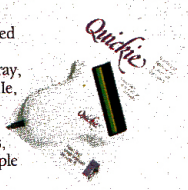

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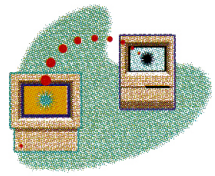


BRIDGING THE GAP

GRAPHICS DECODER

If you think understanding graphics formats is like reading hieroglyphics, have we got some utilities for you.

By GREGG KEIZER

GRAPHICS IMAGES HAVE BUILT bridges between people for centuries. After all, the ancient Egyptians wrote with icons, not an alphabet. Even today art spans the communication gap between 20th-century minds. If you use a personal computer, you know the vital role graphics plays on your screen. Even when you're working mostly with words, pictures amplify the signal you're trying to send.

If you can move graphics between computers, between the Apple II and the Mac, say, you open up once-closed tombs of artwork on each machine. Desktop-published documents can sparkle when you shift Mac art to the GS. Mac projects are easier when you use art created on the Apple II as a foundation, then expand on it with more sophisticated drawing and painting tools. Whether you're swapping art in the class or at home, the Apple II-to-Mac connection is alive and well, thanks to several outstanding utilities.

To some users the computer world's graphics formats seem as indecipherable as the symbols on an ancient pyramid's walls. Mac pictures come coded with names such as EPS, TIFF, and PICT. Apple II art comes wrapped in hi-res, double-hi-res, super-hi-res, and Print Shop formats, among others. IBM PCs, Amigas, Commodore 64s, and Atari STs all own peculiar graphics identities. How can you share anything when everything's so confusing?

GIF it. *Graphics-interchange format* provides a way to swap pictures from one computer to another, often with little or no loss of color or clarity. Created by CompuServe, the on-line-service giant, GIF bridges the graphics gap between different machines and incompatible paint programs.

To make the exchange, you need a translation utility on both ends of the bridge. If you're moving art from a Mac LC to an Apple IIGS, for instance, both machines require their own specific software. On the Mac it's called **GIFConverter**, a $40 piece of shareware you can download from most on-line services and many bulletin boards. At the other end of the GIF food chain, the GS needs **SuperConvert**, a $40 commercial utility published by Seven Hills Software. You may be familiar with this product's original incarnation, SHRConvert, which was a shareware utility offered on on-line services and bulletin boards. SuperConvert loads 16 more file formats than its shareware original, lets you manipulate the image at will, and includes poster printing and desktop-art generation.

Let's say you have a color illustration you've created with **Easy Color Paint** on the Mac. You've saved the graphics image as a PICT file, and you're ready to take it to the GS. The procedure, though time-consuming, is pretty straightforward.

From the Mac, run GIFConverter. When the program's menu



Illustration • Elizabeth Auer

bar appears, open the PICT document, then save it as a GIF-format file (**Figure 1**). Is it ready to take to a GS now? Not quite. You can't simply put that GIF file on a floppy disk and expect the Apple II to make sense of it. Just as with any Mac/II data-sharing scenario, you've got to get the file from one machine to the other. Two methods — networking and telecommunications — work best.

If both machines are on an AppleTalk network and the Mac is running System 7.0, you can stick the GIF file in a shared folder, then retrieve it once you're in front of the GS. (See "Long Live 7.0," August 1991, p. 24, for details on operating a System 7.0-equipped network.) An AppleShare-driven network, common in schools but uneconomical at home, handles such transfers, too. (See "In the Network Groove," September 1991, p. 40, for information on classroom-based networks.)

If long distance separates the two machines — perhaps the Mac is at school, but you'd like to play with the image on the GS at home — telecommunications may serve you better. Assuming you have modems at both computers and a membership in an on-line service such as America Online, you can simply send yourself a message, appending the GIF file to the electronic letter. From the home GS you reconnect to America Online, read your mail, and download the file to your II.

With the file available to the GS, SuperConvert handles the rest. Pick *Computer Independent* and *GIF* as the loading file format, then remap the image (**Figure 2**). SuperConvert offers plenty of options, from graphics modes and palettes to pattern dithering and automatic clipping. Super-hi-res 320-by-200 mode gives the best results most of the time, especially with color images, but 640-by-400 mode should be your choice when you're dealing with gray-scale images.

Depending on the size and complexity of the image, the translation can take anywhere from a moment to a couple of minutes as SuperConvert distills the graphic into something the GS comprehends. That often means a loss of detail and color, but the results can still be stunning. **Figures 3** and 4, for example, show the Mac and GS versions, respectively, of the same GIF image of the Voyager spacecraft.

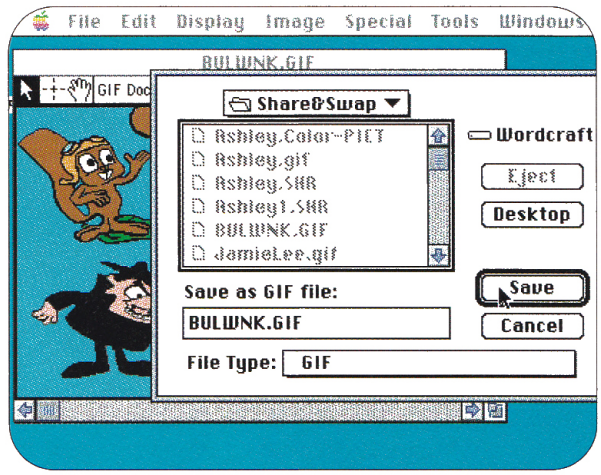


Figure 1. From a Mac running GIFConverter you can save a PICT document as a GIF-format file.

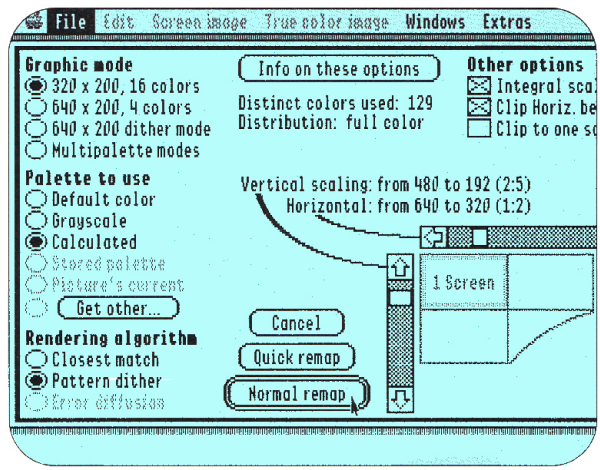


Figure 2. Use SuperConvert on your GS to remap a Macintosh graphics image.

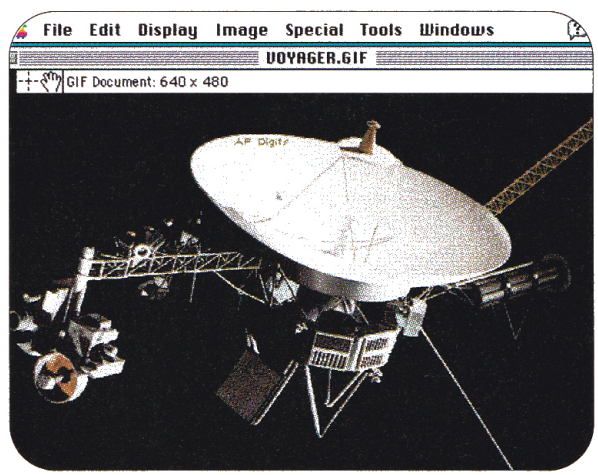


Figure 3. Macintosh version of a GIF image.

Most GIF pictures gleaned from a service such as America Online translate perfectly with SuperConvert or GIFConverter. Occasionally, though, a downloaded GIF file won't show up when you select that format within SuperConvert. Images pulled from the Mac software libraries of America Online for translation on the GS are particularly troublesome. The fix, fortunately, is simple.

Look through the Apple II software collection for **The Stripper**, a short shareware program. Stripper removes the file header — usually a group of 32 bytes that identifies the file as Mac — which causes the confusion. (If you run Stripper on a GIF file and it tells you that the file has no header, type *20* in response to the strip-to-byte request and the offending bytes will be erased.)

Playing around with the image on the receiving end is worth your while. With SuperConvert you can map and remap the image in memory easily, first trying one setting — 640-by-400 mode with a calculated palette, and pattern dithering turned on, perhaps — then another. Experiment and you'll discover quickly the optimum settings for the bulk of your translations.

If you're shifting pictures from the GS to the Mac, GIFConverter offers plenty of tools on its end, too. At the click of the mouse you can flip from color to gray scale and back, or change resolution, number of colors, and palette.

GS users aren't the only Apple II aficionados who can swap pics. **IIGIF**, yet another shareware utility created by Jason Harper, author of SHRConvert and SuperConvert, translates GIF files into several 8-bit Apple II graphics formats. Though naturally cruder in interface and operation than its slick GS cousin, IIGIF twists a GIF file into

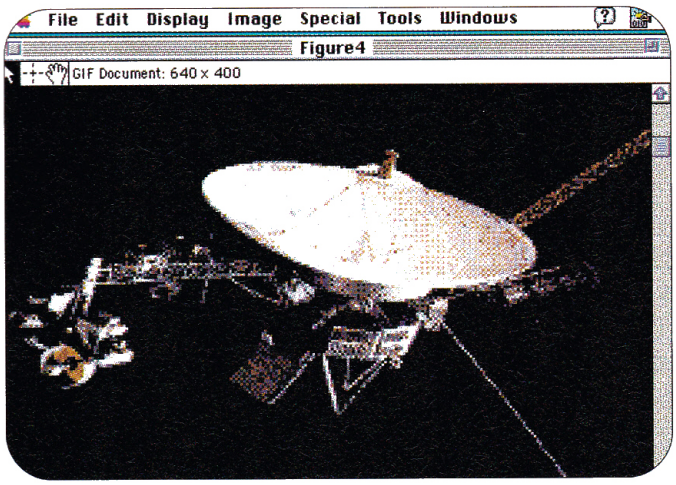


Figure 4. GS version of the same GIF image.

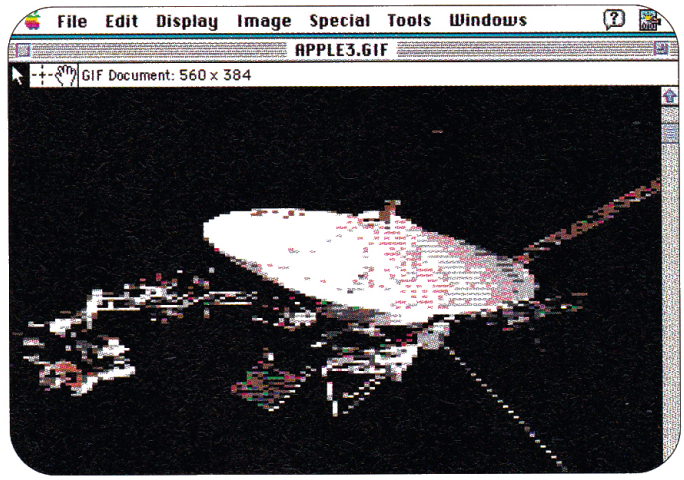


Figure 5. 140-by-192 resolution makes some Apple II illustrations look blocky and abstract.

double-hi-res (both black-and-white and color) or hi-res (again, color or monochrome) images. The results range from the impressive to the not-so-pretty. The fault lies in the older Apple graphics limitations. Double-hi-res color images are strangled by their puny 140-by-192 resolution. Compared to art processed on the Mac or GS, 8-bit II illustrations look blocky, scattered, and nearly abstract. (**Figure 5**).

Originals with tighter resolutions — 320-by-200 mode images — and bright, primary colors come through fine. Detailed pictures created in higher resolutions translate adequately only when you drop the color and go for 560-by-192 mode in black-and-white double-hi-res.

Remember, you may need to run Stripper to discard the header on incoming files before running them through IIGIF, especially if they're arriving from a Macintosh graphics collection.

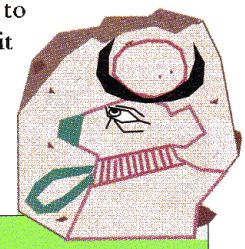
Bridging the graphics gap can be more than swapping GS and Mac images, of course. Not only are other computers' paint programs fair game, but you may want to span different generations of Apple II art, too. SuperConvert is a good pick for the former, because it can directly translate images created by such disparate machines as the Amiga and the IBM PC for you to use on your GS.

The best place to pick up such images is on the various telecommunications services and bulletin boards. You can skim an IBM PC graphics library, for example, select some .PCX format artwork, download it to your GS, and process it with SuperConvert or GIFConverter. Images built in the PC's 16-color EGA mode translate quite well to the GS' 320-by-200 16-color super-hi-res format, while PC 256-color VGA art looks great on a color Macintosh such as the LC.

You can load most of the common graphics-file formats into SuperConvert. But what if you're trying to get something to the Mac, instead? GIFConverter is more of a GIF viewer than anything else, because it doesn't make provisions for reading alien file formats. If you have a GS handy, the solution is simple: Just import the file with SuperConvert, turn it into a GIF file to retain color, and move it to the Macintosh where you can transform it into a format your paint program accepts, such as PICT.

INSIDE APPLE

The Apple world isn't much easier on graphics — it has more than a dozen different formats to worry about. You could use SuperConvert to turn double-hi-res pictures into super-hi-res fit for GS paint programs, but if you move graphics across Apple-to-Apple bridges frequently, you'll be better off with Roger Wagner Publishing's **The Graphics Exchange** for the GS. Don't bother with it if you're moving from Mac to Apple II or back — it can read only MacPaint-format images. Though MacPaint is the oldest graphics



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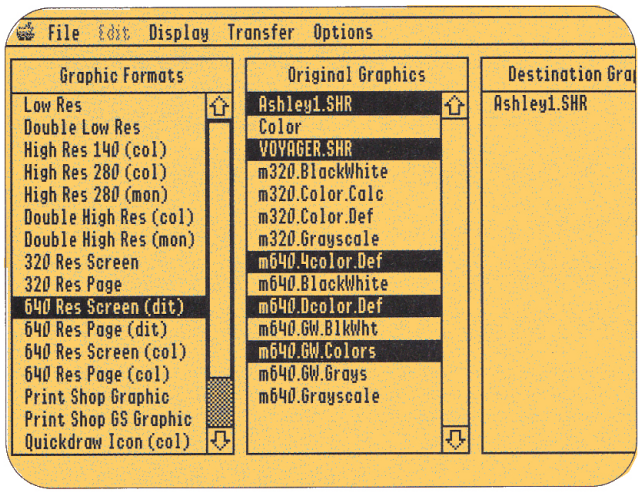

Figure 6. The Graphics Exchange works under a menu-and-mouse interface.

style in the Macintosh world, its black-and-white limitations are out of date in a colored computing world.

But if you've got a slew of Apple II images you want to share, TGE can't be beat. Supporting 19 Apple II and Macintosh graphics formats — from the lowly lo-res to the super 640-by-200 super-hi-res — TGE works under a menu-and-mouse GS/OS interface. (See **Figure 6.**) You pick the original format, select the image you want to transform, and decide on the destination format. Then click away.

Unlike SuperConvert, TGE processes batches of graphics in a single session. With it you can quickly turn those scads of Apple II double-hi-res Dazzle Draw images into something that Platinum Paint recognizes.

Or you can select just a piece of any image and translate that part into any other format — something that's especially handy when you want to create Print Shop or Print Shop GS clip art from bits and pieces of larger images.

TGE's extras are impressive. As you process graphics, you can mask out colors in the original selectively before translation takes place. If you have a brilliant picture of a bright blue Mustang on a dark-brown background, but you want only the car, you can eliminate everything but the car's colors easily.

LEND A HAND

Helping hands are all around. **Apple File Exchange**, the file-translation and transfer utility bundled with the Macintosh system software, lets you shift Apple II-made GIF files to the Macintosh, and Macintosh GIF and MacPaint files to the Apple II. Save the GIF files to a ProDOS 3.5-inch disk, run the Apple File Exchange program on the Mac, stick the disk into the Macintosh's internal floppy drive, and turn Apple II files into Macintosh format or Mac into ProDOS. (You still must run GIFConverter to complete the transformation from Apple II image to Macintosh compatible, or SuperConvert or IIGIF on the Apple side to spin Mac images into II pictures.)

Individual paint programs make allowances for selected foreign formats, too. **Platinum Paint**, for instance, imports MacPaint files directly (though it can't work with them unless you've run them through Apple File Exchange and they're on a ProDOS disk). **Studio 8**, a color Macintosh paint program from Electronic Arts, loads and understands **Deluxe Paint II** GS-formatted files. And The Graphics Exchange even reads 400K and 800K Macintosh floppies directly, saving you the step through Apple File Exchange if you're moving MacPaint pics to the GS.

MAKE THE MOST OF IT

Moving graphics from place to place, whether between Apple IIs or from Apple IIs to Macs, may get quirky — the machines suffer from a plague of file formats — but the rewards are great, and great looking.

Build a bridge with pictures between the Apple II and the Macintosh, and you'll get twice the art for half the work. Even Michelangelo wouldn't have passed up that deal. ❑

CONTRIBUTING EDITOR GREGG KEIZER WAS A FOUNDING EDITOR OF *COMPUTE!'S APPLE APPLICATIONS*, A BIMONTHLY PUBLICATION. WRITE TO HIM AT 4420 HILYARD STREET, EUGENE, OR 97405. ENCLOSE A SELF-ADDRESSED, STAMPED ENVELOPE IF YOU'D LIKE A REPLY.

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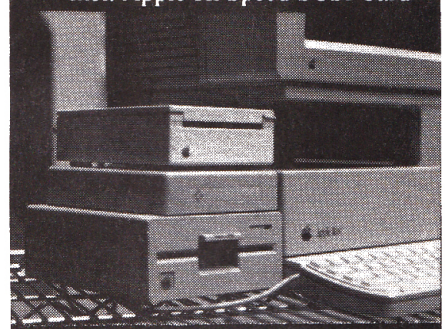

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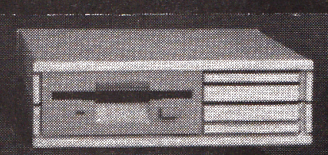

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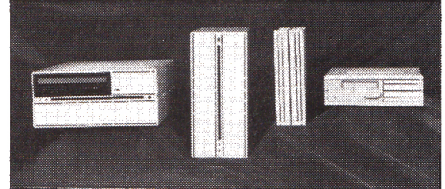

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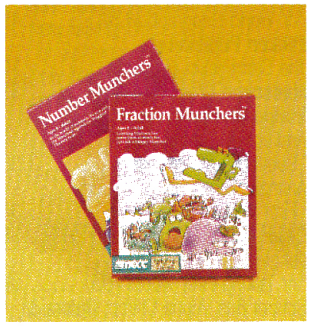

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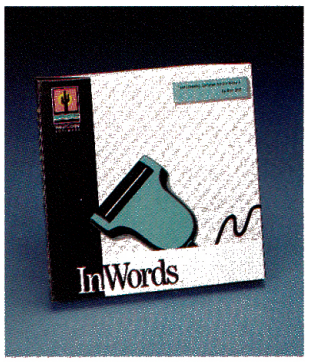

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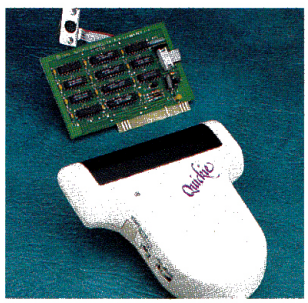

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HARMONIE VS. INDEPENDENCE

What's all the excitement about Seven Hills Software's Independence v.1.0 and Vitesse's Harmonie v.2.0 printer drivers? Independence and Harmonie provide IIGS owners with GS/OS drivers for cheap, high-quality laser, ink-jet, and Epson-compatible 24-pin dot-matrix printers. Excitement enough? Be still, my beating heart! Until now, IIGS owners had to make do with average dot-matrix or noisy letter-quality-style printers. But luckily for us, GS/OS is a modular operating system, which you can update easily with driver software, such as printer drivers. Enter Vitesse and Seven Hills Software. With Independence or Harmonie installed, the IIGS will provide 300-dpi-quality (dots per inch) text or graphics objects from a variety of printers. Three hundred dpi isn't as sharp as commercial output, but it's certainly adequate for correspondence, desktop-publishing projects, and simple graphics presentations.



★ ★ ★ ★ ★

Harmonie v.2.0
Vitesse, Inc.
13909 Amar Road
Suite 2
La Puente, CA 91746
(818) 813-1270

- printer driver for the Apple IIGS and GS/OS
- $54.95

★ ★ ★ ½ ☆

Independence v.1.0
Seven Hills Software
2310 Oxford Road
Tallahassee, FL
32304-3930
(904) 575-0566

- printer driver for the Apple IIGS and GS/OS
- $39.95

THE CONTENDERS

Independence v.1.0 is the original release of GS/OS DeskJet, LaserJet IIP, and LaserJet III printer drivers from Seven Hills Software. The package contains two disks and a well-written 65-page manual. One disk contains system files with printer drivers, a print-test new desk accessory (NDA), Apple's installer program, and installer scripts. Font.Disk.3 contains 9- to 96-point Times and Helvetica font files and demo versions of Disk Access NDA and Font Factory GS.

Harmonie v.1.0 was the first release of high-resolution GS/OS printer drivers. Harmonie v.2.0, which is now shipping, fixes quirks in v.1.0, adds several new drivers and features, and is free to owners of v.1.0. Harmonie comes on a single disk and includes a 10-page documentation file, which complements the original 10-page manual.

Harmonie v.1.0 provided drivers for the LaserJet II and III, DeskJet, PaintJet, "new" Epson LQ printers, enhanced ImageWriter II drivers, high-speed port drivers for the ProGrappler, Grappler+, and Parallel-Pro parallel-interface cards, and the 19,200-baud port driver for GS/OS v.5.02 and 5.03. (GS/OS v.5.04 comes equipped with a high-speed port driver.)

The Harmonie v.2.0 upgrade adds drivers for the DeskJet 500's extra fonts, the LaserJet and LaserJet II, Okimate 20,

Photography • Larry Dunn

BeagleWorks Has A Leg Up On The Competition

$99.95 Upgrade Offer!*



A Mac's Best Friend

With the introduction of BeagleWorks, the true meaning of integrated software has finally been defined. BeagleWorks includes seven modules: **Word Processor, Database, Spreadsheet, Chart, Paint, Draw and Communications.**

The word processor features irregular text wrap, multiple columns anywhere on a page and a spelling checker and thesaurus. The Paint and Draw modules let you use up to 256 colors. The Spreadsheet boasts an automatic sum tool, as well as in-cell editing.

BeagleWorks has many other powerful features found in stand-alone programs. It's easy to use, yet you won't outgrow its capabilities. And since it requires only one megabyte of RAM, BeagleWorks is an excellent solution for any Macintosh user.

Beagle Makes Its Mark

Exclusive to BeagleWorks is the revolutionary technology called **In-Context Editing**™. This gives you the ability to access one file from within another simply by double-clicking. For example, if you have placed a graphic from a paint file into a word processor document and decide to make a change, all you need to do is double-click on the graphic in the word processor. The Paint tools are added to the tool bar, the graphic becomes active and any changes you make are also made to the original file.

Integrated Software: Who Leads The Pack?

	BeagleWorks	ClarisWorks™	GreatWorks™	Microsoft Works®
System 7 Savvy	YES	NO	NO	NO
In-Context Editing™ (multiple documents)	YES	NO	NO	NO
Paint module	256 Colors	NO	Black&White	NO
Common tool bar w/module-specific tools	YES	NO	NO	NO
Automatic irregular text wrap	YES	NO	NO	NO
Multiple columns can be turned on/off anywhere on the page	YES	NO	NO	NO

Savvy: You Bet! No Bones About It

BeagleWorks is **System 7 savvy**; it supports everything System 7 has to offer, including Publish & Subscribe™! BeagleWorks also simplifies the process with Quick Publish™ and Quick Subscribe™ keyboard shortcuts. You can even use Publish & Subscribe under **System 6.0!**

Champion Breed

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Common Tool Bar
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In-Context Editing™
Allows editing of one file from within another simply by double-clicking.

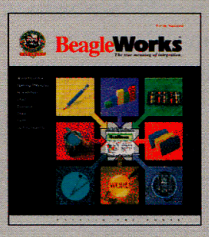
Automatic Irregular Text Wrap
Text takes on the shape of the graphic.

Multiple Columns
Can be turned on/off anywhere on the page.



BeagleWorks™
The true meaning of integration.





**UPGRADE from ClarisWorks, GreatWorks, Microsoft Works, RagTime, Desk, AppleWorks 3.0 or AppleWorks GS for $99.95 plus shipping. Contact MacZone (800-248-0800), MacConnection (800-334-4444), Learning Services (800-877-9378), Quality Computers (800-443-6697) or Beagle Bros (619-452-5500) for more information.*

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U N L E A S H T H E P O W E R®

Panasonic KX-P1124, QuadJet, "older" Epson LQ printers, Fingerprint G parallel cards, and a 57.6-kilobaud serial-port driver for DeskWriter and PaintWriter printers. Color printing on the HP PaintJet, Okimate 20, and ImageWriter II is now supported, as well.

COMMON FEATURES

Independence and Harmonie have a number of features in common. Either one lets you select a page's orientation and choose the paper type, the character height and aspect ratios (the printout's width and height), and the quality (75, 150, and 300 dpi) of the printout. Both let you determine the number of copies and pages to print; choose a forward or reverse printing order; select odd pages, even pages, or all pages to print; advance the printer with auto or manual paper feed (it'll pause between pages); or use a "save ink" feature. Independence also lets you make collated copies.

Harmonie v.2.0 sports a number of additional features, including a 100-dpi print setting, internal or external rendering (using bit-mapped or built-in fonts), compression (speeds data transmission, slows processing), unidirectional printing (for dot-matrix printers), and an additional print menu. This print menu hosts selections such as shading, contrast and brightness controls, dithering (checkerboard for color and half-tone for gray-scale prints), and RGB sliders (with a range of 1 to 400 percent).

TO THE TEST

I evaluated the accelerated and unaccelerated print speed and quality of Independence and Harmonie at 75-, 150-, and 300-dpi settings. To compare text output, I used Softdisk GS' Wordworks with a 2148-word sample of the United States Constitution. To test graphics, I used Beagle Bros' Platinum Paint and chose a gray-scale picture of Saturn. The results of the speed test, summarized in the accompanying **Table**, put Harmonie out in front of Independence.

Acceleration provided an advantage of up to one minute of printing time at 300-dpi text resolution, and up to three-and-one-half minutes at 300-dpi graphics resolution, but significantly less at 150 and 75 dpi. Harmonie enjoyed a 10- to 75-second time advantage over Independence throughout the test. Unlike Harmonie, Independence can't use a printer's internal fonts.

Both Independence and Harmonie use a font bit map four times larger than that requested to produce 300 dpi, and twice the size of the font requested to produce 150-dpi resolution. The font desk included with Independence provides the fonts required to print properly right out of the shrink wrap, but you'll need to look elsewhere for some additional point sizes in your preferred font(s) to get the most out of Harmonie.

Both packages provide excellent 300-dpi text quality and good 150-dpi output. Independence's text looked just a bit better, especially at 150 dpi, but Harmonie had the edge in graphics output and was compatible with everything I tested.

WHEREVER YOU GO

I tested AppleWorks GS, Paintworks Plus, Platinum Paint, BeagleDraw, GraphicWriter III v.1.0, and Wordworks for compatibility with Harmonie and Independence. (Program-compatibility notes are included with both programs.) With some exceptions, printing worked well.

Independence couldn't print 300-dpi graphics with Platinum Paint, nor could I get it to print collated, even, or odd copies in AppleWorks GS 1.1. There were also a number of compatibility problems with GraphicWriter III v.1.0 (apparently resolved with v.1.1). Harmonie's only major problem was that it set the color sliders on the alternate print menu to extreme values on AppleWorks GS v.1.1. After being reset once, this doesn't recur.

Seven Hills Software and Vitesse have a good reputation for upgrades and customer support. No major upgrade is planned for Independence v.1.0, but Seven Hills will be adding a 57.6-kilobaud IIGS port driver for the DeskWriter and PaintWriter. Vitesse has added a number of features and a lot of flexibility to Harmonie v.2.0 already.

IN CONCLUSION

I'm impressed with both printer-driver packages. Incompatibilities are minor and both products produce top-quality text and graphics images from any GS/OS desktop program. Independence will have you ready to go with text output almost immediately after you take it out of the box, but overall Harmonie comes out on top with the highest speed, drivers, largest number of drivers and features, and the better compatibility of the two products.

We IIGS owners owe the good folks at Vitesse and Seven Hills Software thanks for increasing the versatility of our machines and expanding the number of printers available to us.

We can also thank the popularity of these packages for prompting the release of Orange Micro's Grappler 300 drivers and Apple's forthcoming StyleWriter driver, included with GS/OS v.6.0. Way to push the envelope.

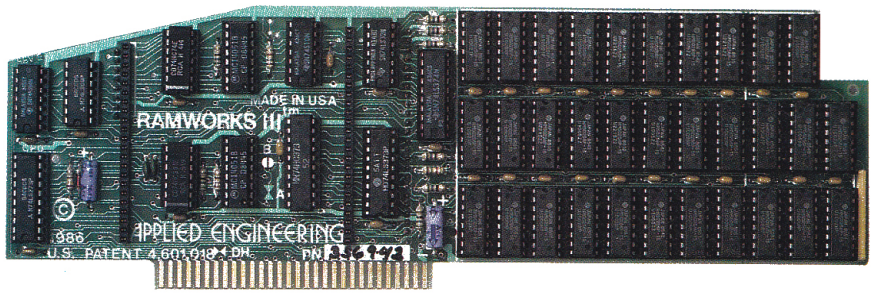
Garry Howard
Calgary, Alberta, Canada

		INDEPENDENCE		HARMONIE	
	DPI	unaccelerated	accelerated	unaccelerated	accelerated
TEXT	300	5 min 45 sec	4 min 50 sec	5 min 5 sec	3 min 45 sec
	150	1 min 55 sec	1 min 20 sec	1 min 30 sec	1 min 10 sec
	75	1 min 10 sec	1 min	50 sec	48 sec
	internal fonts	not available	not available	1 min 6 sec	1 min 10 sec
	DPI	unaccelerated	accelerated	unaccelerated	accelerated
GRAPHICS	300	would not print*	would not print*	5 min 50 sec	2 min 20 sec
	150	1 min 30 sec	1 min 15 sec	1 min 40 sec	1 min

* one of only a few compatibility problems

Table. Printing times (including rendering time) of a one-page document. Print tests done on an HP DeskJet+, with 8MHz ZipGS accelerator.

RamWorks III™



The best selling, most compatible, most recommended, most expandable card available.

While RamWorks III™ is recognized by all memory intensive programs, NO other expansion card comes close to offering the multitude of enhancements to AppleWorks that RamWorks III does.

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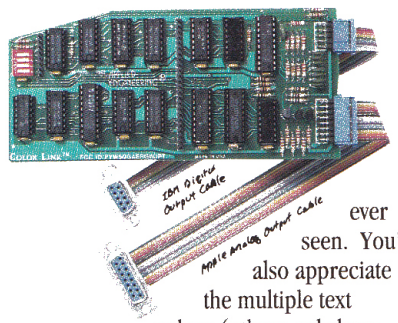
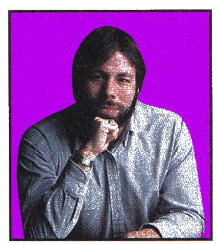
The most friendly, most compatible card available. Using RamWorks III couldn't be easier because it's compatible with more off-the-shelf software than any other RAM card. But unlike other cards, RamWorks plugs into the IIe auxiliary slot, providing our super sharp 80-column text (U.S. Patent #4601018) in a completely integrated system.

The ultimate in RGB color. RGB color is an option on RamWorks and with good reason. For only $129. it can be added to RamWorks, giving you razor-sharp vivid brilliance that most claim is the best they've



ever seen. You'll also appreciate the multiple text colors (others only have green) that come standard. But the RamWorks RGB option is more than just the ultimate in color output because unlike others, it's fully compatible with all the Apple standards for RGB output control, making it more compatible with off-the-shelf software. With its FCC certified design, you can use almost any RGB monitor because only the RamWorks RGB option provides both the new Apple standard analog and the IBM standard digital RGB outputs (cables included). The RGB option plugs into the back of RamWorks with no slot 1 interference. And remember you can order the RGB option with your RamWorks or add it on at a later date.



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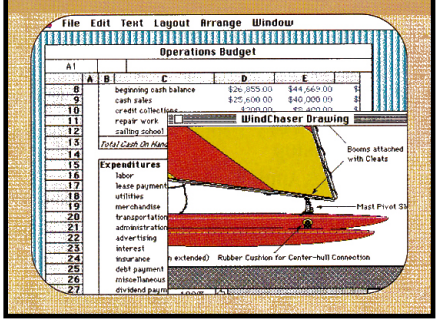


With Apple and IBM getting cozy these days, it may seem like heated battles are a thing of the past. Not so! They've just moved to the integrated-software arena, where everybody seems to be taking on Microsoft's war-horse, Microsoft Works.

The major contenders include Symantec's GreatWorks, Beagle Bros' BeagleWorks, and Claris Corporation's ClarisWorks. At press time, though, GreatWorks had at least one indisputable advantage: It's the only one that's already available to the public. Symantec is even offering AppleWorks and Microsoft Works users a $99 "trade-up." Call the company for details.

LET'S GET INTEGRATED

There are two kinds of computer users in the world: those who swear by integrated software and those who swear at it. Mac users in the former group, who haven't had a choice in this area up to now, would do well to take a look at GreatWorks.

GreatWorks comes on four floppy disks, and you install it via a custom installer. Along with the application itself, you get help, spelling, and translator (XTND and Symantec) files. The application itself consists of eight modules: word processing, database, spreadsheet, charting, paint, draw, outliner, and communications. This count is three more than Microsoft Works, which lacks the graphics modules, and two more than AppleWorks GS, which lacks the charting and outlining capabilities. (AppleWorks 3.0 provides only word-processing, database, and spreadsheet features.)

All modules have on-line and balloon help under System 7.0. Symantec's "CORE technologies" (*cooperative-resource* technologies) cover the application features the different modules share, such as file translation and the handling of text and objects. Don't let the fancy term intimidate you; it's just a complex phrase that means you have to learn program fundamentals only once for all eight modules, and you can access features such as the spelling checker from all parts of the GreatWorks program.

GreatWorks' file-translation capabilities are much more extensive than those of the existing competition. The application comes with both Claris XTND and Symantec translators, and GreatWorks can import AppleWorks and AppleWorks GS, Microsoft Works and Word (Mac and DOS formats), MacWrite, WordPerfect, Excel, RTF, Acta, and WriteNow files. You must open files formatted in programs other than GreatWorks from the application's main window, rather than within a module.

Both data and text are preserved during translation, but some formatting (such as Word tables and Excel formulas) are lost. This isn't uncommon when importing and exporting files between applications. I ran into an anomaly with the Word translators: GreatWorks opened a Word 4 file just fine, but when I saved in Word format, the program said *Exporting data to Word 3.0*. You'll find both Word 3.0 and Word 4.0 translator files.

Symantec has designed each of the GreatWorks modules to bee similar to the more popular Macintosh stand-alone applications in each of the eight areas. The word-processing module is perhaps the closest to a full-featured stand-alone product. It supports multiple columns, date and time stamping, and a range of text styles. There's a select-all command that highlights all text in a document automatically, and a copy-ruler command, such as the one in MacWrite. The module also includes a number of predefined key commands (keyboard shortcuts), which are listed in the manual and in the on-line help. You can set paragraph indentations and spacing via a special dialog box or the traditional ruler. GreatWorks also supports user-definable, dimensional sizing for graphics.

Full word-processing functions are available in the outliner module, as well. It has a click-and-drag approach to topic/subtopic arrangement and permits up to 15 topic levels in six styles. I found the click-and-drag function an improvement over traditional cut-and-paste methods.

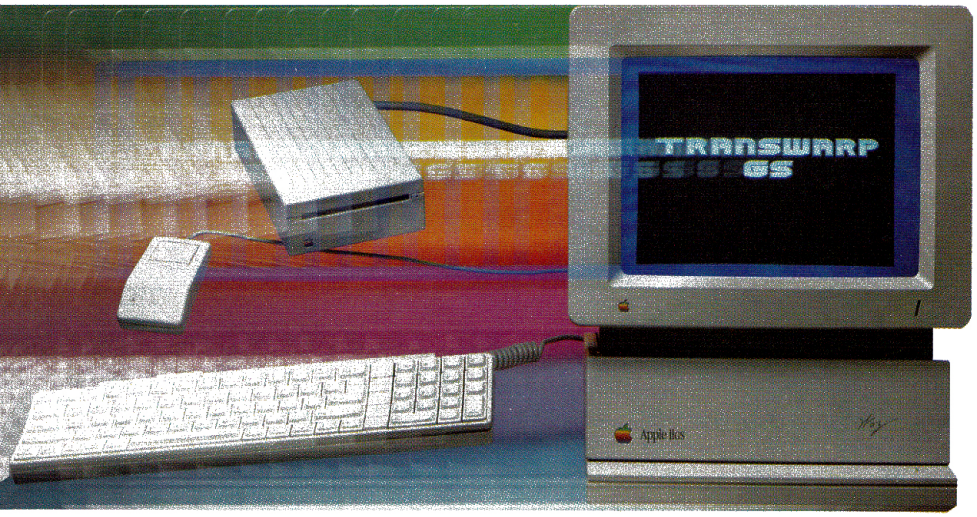
The GreatWorks database module can accommodate any file size you can fit on your hard disk, and an unlimited number of records. There are eight field types and more than 100 preset calculation and summary functions. The program supports multiple-criteria sorts, selection, and retrieval, and the module includes a full-featured form generator. The word-processing module includes a mail-merge function that lets you merge database information into a word-processing document. Spell checking, find-and-replace, and date- and-time-stamping features are among the CORE technologies and are available in the database module.

The 256-column-by-16,384-row spreadsheet allows ascending and descending sorts over any number of columns and rows. Text styles are supported and you can move from this module to the *Chart* module via the *Window* menu. You have access to eight chart types — two picture charts, plus pie, scatter, bar, line, column, and area graphs. You also have access to fonts, styles, type sizes, and colors, as well as pattern styles for the various chart elements.

The graphics modules — *Paint* and *Draw* — aren't going to put FreeHand or MacDraw out of business, but they're solid, useful programs with more features than you may expect. The *Paint* module offers eight different modes, 14 paint tools, custom patterns, and a "transformation" menu including stretch, fill, inversion, and scaling options. The *Draw* module has nine tools, including freehand and group options, and you can zoom in on your work up to 800 percent.

The only module I find less useful than its full-featured counterpart is the communications program, chiefly because of the absence of scripts for automatic log-on/log-off. You can save access phone numbers as documents, however. On line this module

40,000 TransWarps Sold!



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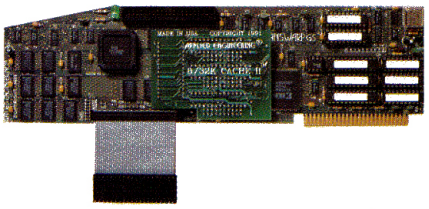

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worked smoothly and was easy enough to set up. It appeared to be faster on screen than my regular telecom program, but a problem arose during a download: I got a number of *Checksum error* notifications when using the 1K block option to try downloading a file. Without this option, the file would have taken more than 35 minutes to download, according to GreatWorks. With it (in another program), the file downloaded in around 12 minutes.

Overall, GreatWorks' feature list stacks up more than favorably against both Microsoft Works and AppleWorks/AppleWorks GS. And the interface and help functions are more attractive and accessible. The CORE-technology features, the modules' wider scope, and a more consistent, user-friendly interface make GreatWorks an excellent choice for new Mac users in particular.

For many people, the modules in this package will be all they'll ever need. This is a software package — and category — that will merit closer attention.

Louise Kohl
Austin, TX

★ ★ ★ ★ ★

AMAZING WINDOW

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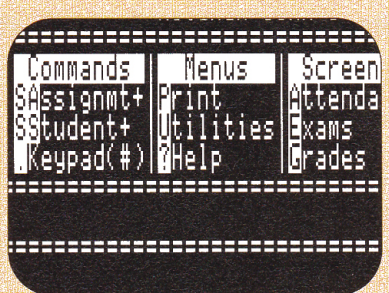

First impressions can be deceiving: That bit of folk wisdom seems to apply to Amazing Window, a fast, flexible, feature-filled "electronic gradebook" from Kitchen Sink Software. Even with this in mind, the homely *Shop Assistant Collection System* (SAC) that appears in 40-column uppercase text when you initially boot this gradebook disk, will surprise you.

SAC is an easy-to-use program selector that launches Amazing Window and any other Kitchen Sink Software products you may have used it to collectively install on a single 3.5-inch disk or hard disk. But while SAC may be a boon to loyal Kitchen Sink Software customers who are trying to bypass the floppy-disk shuffle, teachers who don't use the company's other products (or large-capacity drives for that matter) may feel unnecessarily inconvenienced as they consider whether or not to "UNSAC" a working copy of the program disk — in effect removing the *SAC Applications* menu to start the gradebook program directly.

That said, I want to emphasize how impressed I was by Amazing Window itself. Although essentially text-screen-based, this gradebook program incorporates an abundance of pop-up menus that boast handsome inverse video borders. These finishing touches may not constitute a true GUI (graphical user interface), but they add a satisfying, almost contemporary look and feel to Kitchen Sink's new teacher's assistant on disk. (For this review, I evaluated versions 1.5 and 1.7.1.)

What's more, AppleWorking educators will find Amazing Window easy to get along with. Many program commands perform functions similar to those in AppleWorks: Open apple-F (OA-F) finds students, for example, while OA-S saves your gradebook to a data disk located in a drive you select. The program formats disks, too.

You'd guess correctly if you assumed that OA-P prints gradebook-related reports such as *Daily Attendance*, *Class Summary*, *Incomplete Assignments*, *Student Codes*, and *Report Cards*. A newly implemented OA-H command lets you print a spreadsheet-like version of the grade information appearing on screen. According to the company, Amazing Window supports all 80-column printers.

The company also provides a preformatted worksheet to help you track attendance and assignments. Just print the worksheet (it lists students' names) and make photocopies, then organize the copies in a three-ring binder or notebook. Substitute the computer-generated version for your off-the-shelf class register. Amazing Window's data-entry screen may remind you of a typical rows-and-columns spreadsheet, but this one's a lot more helpful. The upper right-hand corner of the screen displays a list of the commands you use to add students, log assignments, track attendance, or program your numeric keypad (if your Apple has one) for even speedier data entry.

Amazing Window's solid apple-A (SA-A) command adds assignments — up to 50 per grading period — and, if your assignments don't vary substantially from semester to semester (or year to year), you can save your gradebook as a template or style sheet. Although Amazing Window handles an unlimited number of classes, it tracks a maximum of 50 students in each. This capacity's adequate for most K–12 classes, but the limitation will give you pause if you teach Biology 101, for example, to a lecture hall of 250 university freshmen.

TO THE TEST

I tested the program on an unaccelerated IIGS running in fast and normal modes, and was amazed at the program's operating speed in both cases. Program-loading time was another story, however. It took from one-half to one minute to load the program, depending on the GS system speed I selected and the type of drive I used. (I loaded the program from 5.25- and 3.5-inch drives, but didn't test any hard drives.)

Amazing Window provides many noteworthy features, especially the ability to enter special codes for missed, incomplete, or excused assignments; to post coded grades so that you don't invade a student's right to privacy; to implement as many as nine weighted areas for homework, quizzes, special assignments, and labs (or up to nine elementary-school subjects); and to calculate statistics (mean and standard deviation) automatically along with grades.

I found a few misspellings and at least one apostrophe error in the manual, and another in the UNSAC utility's screen. I'd like to see future editions of the written documentation rise to the same high standard as the software it describes.

At only $39.95, Amazing Window is unquestionably a good value. And at $1 per teacher, the program's site-license pricing is downright revolutionary.

Whether or not you already use a computer program to streamline your grade-keeping chores, a good grade from us means you should give Amazing

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FILLING YOUR HOLIDAYS WITH MERRIMENT & SAVINGS!



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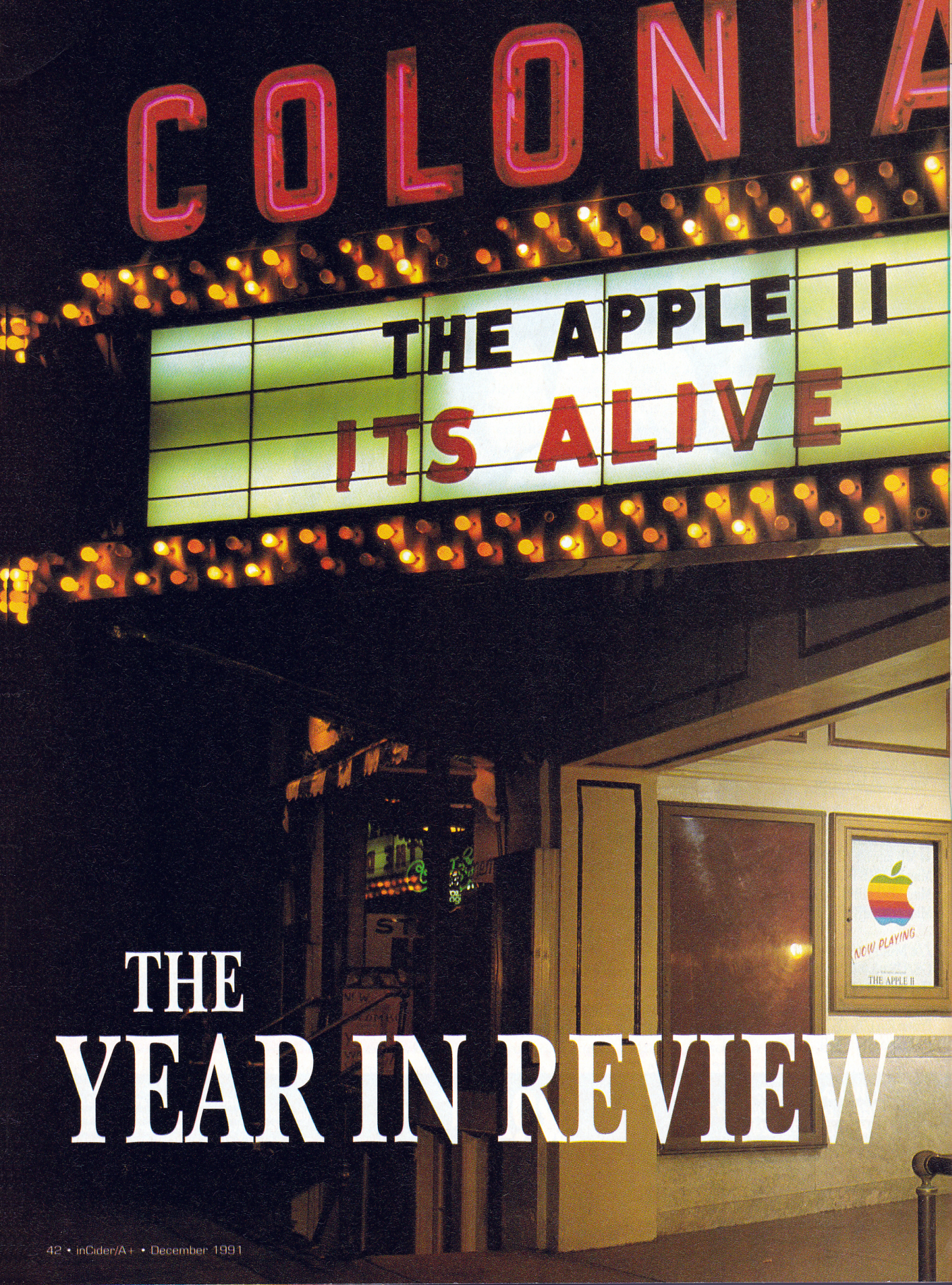


THE YEAR IN REVIEW



1991

Dozens of new Apple II programs for home and school made their débuts this past year — here's a look back at the hits of '91.

It was Oscar night in August at *inCider/A+* as we screen-tested scores of recent Apple II packages for this "Year in Review" roundup. Although a few of the finalists described below are significant updates of earlier versions, the vast majority of the 150 or so products listed here and in the accompanying sidebar, "More 1991 Headliners," were brand-new releases this year. Where noted, some products were in development at press time; they should be available this month.

Be aware that although you'll discover dozens of new products described below, one article can't tell the whole story. Among other limitations, we weren't able to contact every Apple II software publisher. Moreover, we haven't included the hundreds of recently released shareware and public-domain programs out there — another rich resource for your growing software library.

Although we've highlighted some new productivity software in the writeups below, our main focus is on education products. For parents and teachers, 1991 was yet another banner year for Apple II software. Keep in mind that in general, educational-software companies let schools take a look at their programs before paying for them. Sunburst's shrink-wrap message is one typical example of this kind of policy: "Please open this package! We want you to preview our program. Opening it places you under no obligation." What a refreshing change from companies that hermetically seal their disks under those penalty-of-death warning labels we're all familiar with.

For those of you who've made the switch, theoretically all Apple II-family products should run on the Macintosh LC with the IIe Emulation Card. We didn't test this feature; if you have questions about compatibility or any other program function, why not call the product's publisher for details? Many Apple II software companies offer toll-free numbers. Publishers can bring you up to date on current availability, as well as pricing for network versions and site or district licenses, as well.

We salute software publishers such as those included in this "Year in Review" who continue to support the Apple II. Let's support them in '92 and beyond.

By CYNTHIA E. FIELD, Ph.D. * CONTRIBUTING EDITOR

Photograph © Patrick Harbron/Outline

AIDS Stack

- $20
- new
- requires 1MB GS, HyperStudio
- HyperStudio Network

This timely stack, prepared by David Levy, M.D., presents information about the history, biology, transmission, and prevention of AIDS. A built-in quiz is included. Two dollars from the sale of each AIDS Stack is donated to research. Other new stacks include **Human Body Stacks II** (bones and kidneys), **Human Body Stacks III** (vision, smell, hearing, and taste), **Mastery Castle** (adventure quiz game), and **Steam Engine** (for train buffs), priced at $15 each; and **HyperSounds Disk #2** (clip sounds) and **Meet the Staff** (music education), priced at $20 each.

Algebra from 0 to 3: Constants to Cubics

- $99
- new
- requires 128K Apple II
- Sunburst Communications

From Sunburst's Middle and High School Division comes this new courseware for beginning algebra students. With Algebra from 0 to 3: Constants to Cubics, kids can experiment with algebraic expressions (polynomial functions from zero to the third power), view results on a graph, and then alter coefficients to display a revised graph.



Animal Rescue

- $65
- new
- requires 128K Apple II
- Sunburst Communications

First- and second-graders save a mystery animal stolen by an evil troll. Reassemble the chimps' tree and catapult apples to a stranded elephant to learn the kidnapped animal's identity. Solve puzzles to find the secret entrance to the troll's cave and rescue the animal.

Apex System Builder

- $39.95 5.25" disk
- $44.95 3.5" disk, extra programs and fonts
- new version
- requires 128K Apple II
- MicroGram Systems

This programmer's development system lets you take advantage of the auxiliary memory in your 128K Apple II to create complex programs featuring double-hi-res, Mac-style graphics with display fonts, mouse pointer, icons, pull-down menus, and screen buttons. Some programming knowledge is required.

AppleWorks GS Productivity Pak II

- $29.95
- new
- requires 1.25MB GS, AppleWorks GS 1.1
- inCider/A+ Special Products

It's a little embarrassing to write about our own products . . . . Let's just say that if your copy of AppleWorks GS has been languishing on a shelf somewhere, these templates may provide the inspiration you need to create a handsome family tree, compare car costs, or shape up your videotape library, among other things. This disk tackles ten different projects in all.

AppleWorks 3.0 Productivity Pak II

- $29.95
- new
- requires 128K Apple II, AppleWorks 3.0
- inCider/A+ Special Products

If, like us, you think that AppleWorks is good for a lot more than just tracking investments, retirement savings, and cash flow, test-drive our latest Productivity Pak. Among the files you'll discover ready-to-customize templates that print recipe cards and family trees. As a concession to financial reality, we include an income-tax template — and a college guide to help you spend your refund.

Art Gallery Volume 2

- $39.95
- new
- requires 1.25MB GS
- inCider/A+ Special Products

Clip art we got! If you need hundreds of top-quality illustrations, whether in AppleWorks GS or Apple Preferred format, this is your one-stop-shopping art store on disk. Public-domain art is nice (cheap, too), but why not make a New Year's resolution to dress up your publications with professional-quality illustrations.

BIG and little

- $59
- new
- requires 128K Apple II, Muppet Slate
- Sunburst Communications

Name a kids' desktop-publishing project and BIG and little can help your students create it, whether you're designing a greeting card, a small book, a program guide, a big book, or a poster. In short, you can create publications of all types sized from 5.5 inches to 5.5 feet tall!

Birthdays!

- $59
- new
- requires 128K Apple II, Magic Slate II (20-column version)
- Sunburst Communications

Celebrate with Writing is an apt subtitle for Birthdays!, one in an innovative series of Sunburst products that combine language-arts skill development with enhancement of self-esteem. This K–3 program offers 20 individual and group writing lessons. The program even offers a Back in Time activity for those of us with summer birthdays! Another product in this series — **V.I.P. – You!** for grades 3 to 6 — is described elsewhere in this article.

Bluegrass Bluff

- $59
- new
- requires 128K Apple II
- MECC

This unique social-studies program turns your students (grades 6 to 12) into amateur archeologists as they "dig" for artifacts (carvings, jewelry, pottery, and statuettes) from early American historic sites, such as an ancient Native American settlement, a plantation, a Civil War battleground, and a frontier stockade. Collecting information about artifacts and reading about various cultures can help students design a 10,000-year timeline of American history.

Bowling Scores

- $12.45, send SASE for brochure
- new
- requires 128K Apple II, AppleWorks 3.0
- Bemak Enterprises

If you're an AppleWorks enthusiast and bowling-team member, take a look at this double-sided disk of templates from Bemak Enterprises. Among its offerings are a bowling-league database and spreadsheets for tracking individual and team stats. Complete documentation is provided on disk.

Bridge Builder 1.0

- $49.50
- $103.50 school site license
- new
- requires 64K Apple II
- Pre-Engineering Software

The center of our market is 14-year-olds," quips Robert Wolf III, co-author of this structural-engineering construction kit that lets you design and evaluate bridges. Let the program automatically analyze your bridge's survivability during the "80,000-pound-truck test." Oops!

Business Master Bookkeeping Series

- $195
- new
- requires 128K Apple II, AppleWorks 3.0
- ACTAsoft

Why not start the New Year off right by launching a small business — or automating more fully the business you already run with your Apple II? Business Master works with AppleWorks 3.0 to balance the books, print checks, send invoices, and even print Rolodex cards. This program lets you run practically your whole business from the AppleWorks Desktop.

Cavity Busters

- $59
- new
- requires 128K Apple II
- MECC

This new MECC product should be available this month. Cavity Busters helps students learn the scientific method by playing with variables such as the amount of sugar and milk kids consume and frequency of brushing. Says MECC, "The primary goal of Cavity Busters is to provide students with an environment that promotes discovery learning, reinforces science-process skills, and encourages the development of sound thinking skills.

A Chance Look

- $75
- new
- requires 64K Apple II
- Sunburst Communications

This unique program lets kids in grades 5 to 12 test probability by flipping coins, tossing cubes, and turning spinners on screen. Attractive graphics images display the results. Like all Sunburst products, A Chance Look comes with wonderful lesson plans and activity sheets — including a reproducible for making your own custom 3D cubes.



Cleanwater Detectives

- $59
- new
- requires 128K Apple II
- MECC

This program, like Cavity Busters also from the Science Inquiry Collection, is an ecological simulation covering water pollution. Students "sample" water from a hypothetical river and measure its clarity, color, temperature, and odor. In the on-screen lab, you can compare the river sample to a clean-water control or to samples with known pollutants. Play the on-screen "VCR": Anecdotes from citizens(and talking animals) can help you find the cause of the pollution you've discovered. The manual suggests follow-up activities such as testing actual water samples for pH (acidity).

Clifford's Big Book Publisher

- $39.95
- new
- requires 128K Apple II
- Scholastic Software

Tolstoy never had it this good when he wrote his big book. The Clifford package — for kids aged 4 to 7 — includes ready-to-select background graphics images, clip art, frames, and fonts. You can even frame pages with Clifford the Big Red Dog's paw prints. Print your books in any of four sizes.

College Application Essay Writer

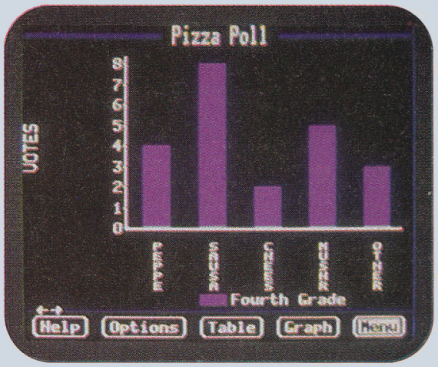
- $29.95
- new
- requires 128K Apple II
- Scholastic Software

If you haven't begun applying for college yet, get on the stick — but not before you get Scholastic's College Application Essay Writer. This AppleWorks-style product is designed to inspire "fast-flowing ideas" through free writing and brainstorming. A built-in outliner and word processor help you organize and polish your prose.

CORE Reading and Vocabulary Development Program

- $650
- new
- requires 48K Apple II
- Educational Activities

Designed primarily for older or ESL (English as a second language) students reading at primary levels, each of the CORE system's activity-rich lessons includes Word List; Reading; Phrase Reading; Fill-In; Questions; Practice Writing; See, Say, and Spell; Spell It Right; and Writing modules. The program's Management System tracks students' progress.



Data and Decisions: Bar Grapher

- $89 teacher kit, $17/group kit (4 students)
- new
- requires 128K Apple II
- Wings for Learning

If you used to think that constructing graphs — or teaching about them — was a chore, think again. The excellent activity booklet (Penny Power) and reproducibles accompanying this Journeys in Mathematics package help kids have fun collecting

data, plotting it, and analyzing it — by focusing on activities such as chocolate-chip-cookie taste tests and cereal-box advertising promotions.

Data Insights

- $99
- new

Insights into Science Data

- $59
- new
- requires 128K Apple II, Data Insights
- Sunburst Communications

Data Insights, a "data plotting tool," helps students create box plots, histograms, line graphs, scatter plots, and stem and leaf plots. Insights, an enhancement disk, offers experiments in six areas (biology, chemistry, ecology, life science, physical science, and physics) for grades 7 to 12. Among the exercises are tracking fruit-fly population changes, profiling the surface of the ocean floor, and interpreting selected periodic properties of elements.

Diascriptive Reading IV

- $335
- new
- requires 48K Apple II
- Educational Activities

This latest "diagnostic-prescriptive-tutorial reading program" from Educational Activities is designed for students reading at levels 8 to 12. (Diascriptive I, II, and III cover levels 1.5 to 5.5, 3 to 8, and 6 to 10, respectively.) The series' management system records each student's progress and automatically advances him or her through each successive skill area. Diascriptive IV topics include biographies, health, sports, and travel.

Dilemma II: Making Choices in Difficult Real-Life Situations

- $159
- new

Dilemma/Dilemma II

- $295
- 2-disk-set package price
- requires 48K Apple II
- Educational Activities

Years ago we were impressed with the original Dilemma, a program for junior- and senior-high-school students that presents age-appropriate, realistic stories for youngsters reading at a lower grade level. Dillemma II topics include Runaways, Drunk Driving, AIDS, Lure of Drugs, and Gangs.

Electronic Arts Games

- $6 to $30 each
- new low pricing
- requires Apple IIe/c or GS
- memory requirements vary
- Big Red Computer Club

Okay, so these fantastic products from Electronic Arts aren't new. What is new is the absurdly low price you'll pay for such hall-of-famers as **Music Construction Set** ($10), **One on One** ($8), and **The Bard's Tale I** ($15). At those prices, you can afford to stuff a slew of Christmas stockings! Be sure to check out the BRCC catalogue for the latest HyperStudio stacks, shareware, and public-domain programs, too.

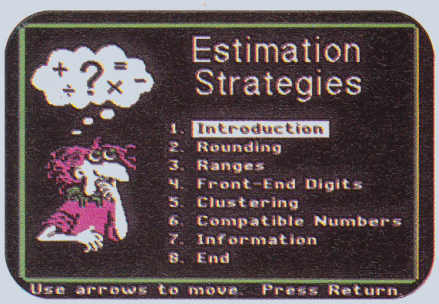
Elementary School Grade Builder 3 Pack

- Body Transparent
- Grammar Examiner
- States & Traits
- $29.95
- new low-cost packaging
- requires 64K Apple II

Elementary School Grade Builder 3 Pack

- Designasaurus
- Math Maze
- Spellicopter
- $29.95
- new low-cost packaging
- requires 128K Apple II
- Britannica Software

Britannica has taken a new tack in packaging six classics in these appealing 3 Packs. Over the years we've played with all these fine products, and we know a good deal when we see one.



Estimation Activities Estimation Strategies

- $59 each
- new
- requires 128K Apple II
- MECC

Through a series of five Estimation Activities games — Range Finder, Tic-Tac-Toe, Get in Line, Estimation Chompers, and Flip-Out Challenge — children in grades 4 to 8 can practice number-sense skills. Strategies, a second program in MECC's Estimation Collection, introduces students to processes such as Clustering, Compatible Numbers, Front-End Digits, Ranges, and Rounding to help them "guesstimate" solutions to math problems.

Exploring Sequences and Series

- $59
- new
- requires 128K Apple II
- MECC

According to MECC, this program — which should be available this month — "provides students with a quick and convenient method for generating sequences simply by supplying the starting number(s) and the algorithm (arithmetic or geometric). Once a sequence is generated by the computer, students can view the terms, find partial sums, or combine it with other sequences to make new ones."

FantasyWorks: Elite Fantasy Football League Management System

- $59.95 special pre-1992 season price
- $5 demo disk
- new
- requires 128K Apple II, AppleWorks 2.0 or higher; Publish It! 2 or higher for newsletter templates; TimeOut UltraMacros 2.1 or 3.1 for TaskFiles; DataTerm 2.06, Point-to-Point 4.1.1, ProTERM 2.2, ReadyLink 1.32, or Talk Is Cheap 3.2 for communications macro

Plan now to coach your own NFL team next fall. The Fantasy Football package includes everything you need to manage a 4- to 12-team league: AppleWorks templates for compiling team data, Publish It! layouts for a weekly league newsletter, and communications macros for downloading stats from Computer Sports World.

A Field Trip to the Rainforest A Field Trip into the Sea

- $99 each
- new

Learn About: Dinosaurs

- $75
- new
- requires 128K Apple II
- Wings for Learning

Only recently have tropical rainforests received the attention they deserve. That's why we were pleased to discover a multicomponent program that lets children

explore this fascinating biome, study facts about the 49 animal species and 21 plant species featured, and learn about food chains. Two other science programs — A Field Trip into the Sea and Learn About: Dinosaurs — were announced as this article went to press and should be available this month.

Flicks 'n' Chips

- $60
- new
- requires 128K Apple II
- Robert A. Brent

Trivial Pursuit goes to the movies with this game disk for the Apple II family. Three games — Typecast, Questar, and Blastar — cover some 5000 films produced from 1938 to 1982. Cast members are included and top Academy Award winners flagged. Play alone, with friends, or against the computer. A video-tape-library module lets you organize your personal film collection.

Font Factory GS 2.0

- $39.95
- new version
- requires 768K GS
- Seven Hills Software

Does your GS suffer from a font inferiority complex? Font Factory GS helps you resize and smooth existing fonts from Publish It!, BeagleWrite, MultiScribe, The Print Shop (all versions), and Printrix and lets you create custom fonts and type styles. A Macintosh font converter is also included.

Formulate

- $49.95
- new
- requires 1MB GS
- Seven Hills Software

Like a "word processor for math," Formulate can help you create and print worksheets, exams, and other publications that include formulas and symbols. In testing at press time, the program is said to "know when something is missing from a formula." That's more than we can say for ourselves.

Fractal World

- $9.95 5.25" disk
- $14.95 3.5" disk, 10 sample full-color pictures
- new
- requires 128K Apple II, color monitor

Fractal World IIgs

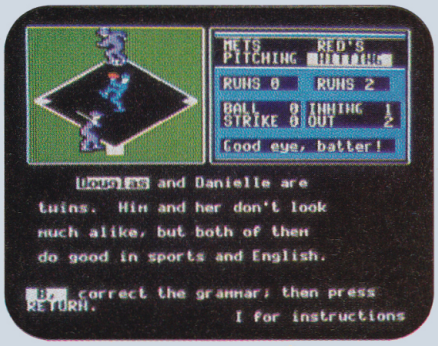
- $14.95 5.25" disk
- $19.95 3.5" disk, 10 sample full-color pictures
- requires 1.25MB GS, color monitor
- $29.95 4-disk set, site license, all FW/FWGS formats
- MicroGram Systems

Thanks to Fractal World's machine-coded Mandelbrot algorithm, you can create stunning pictures in seconds (for a "quick look"), minutes, or hours (at highest magnification). Fractals are a hot topic for the '90s computerist, and at these low prices every educator and hobbyist can afford to check it out.

Fundamentals of Genetics and Heredity

- $119
- new
- requires 48K Apple II
- Educational Activities

Learn from Mendel: Growing peas takes time. The simulations included in this program can help your students grasp concepts such as sexual reproduction, the laws of heredity, punnett squares, and genotype versus phenotype faster than you can say "fruit fly."



Grammar Baseball Level A
Grammar Baseball Level B
Punctuation Baseball Level A
Punctuation Baseball Level B

- $49.95 each
- new
- requires 64K Apple II
- Gamco Industries

If students seem to strike out when it comes to mastery of grammatical rules, batter up with Grammar Baseball. Level A is suitable for students in grades 3 to 6, while Level B's designed for kids in grades 7 to 10. The program displays a brief story beneath a graphics baseball diamond. Students playing as pitchers correct grammar mistakes to get the hitter out. Hitters clean up prose to earn base hits or home runs. You guessed it: Punctuation Baseball plays the same way, but tests students' knowledge of punctuation rules.



Grammar Gazette

- $59
- new
- requires 128K Apple II
- MECC

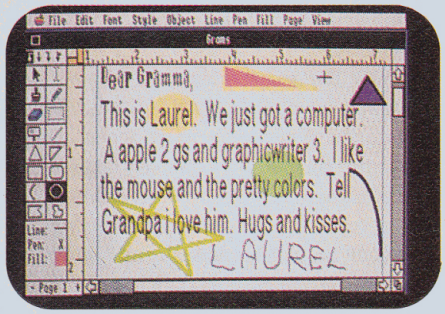
Fifth- and sixth-grade students play reporter, staff writer, or editor as they participate in four activities: Mad News, Weird News, Pig Tales, and Cryptogrammar (a decoding game). The program manual provides textbook correlations and suggestions for uses in the classroom.



Grammar Monsters

- $59
- new
- requires 128K Apple II
- MECC

Like Grammar Gazette, this program is from MECC's Grammar Series. Grammar Monsters helps first- and second-grade students recognize parts of speech and create complete sentences. Three activities — Monster Munch, Monster Maker, and Monster Madness — lend a fun twist to drill-and-practice software.



GraphicWriter III 1.1

- $149.95
- $3.50 upgrade from 1.0, return upgrade notice from 1.0 documentation
- new version
- requires 768K GS
- Seven Hills Software

Our favorite desktop-publishing program for the GS offers nearly unlimited viewing modes, custom guides, and a generous supply of graphics tools. According to the publisher, this latest version includes bug fixes, faster speed, and full compatibility with GS/OS 5.0.4.

Hunt

- $65
- new
- requires 64K Apple II
- Sunburst Communications

Each 5- to 20-minute Hunt adventure game can help students in fourth to eighth grade master skills such as using compass directions and understanding map coordinates. Eight hunts, at increasingly difficult challenge levels, are featured, including Princess (a simple hunt to rescue a princess) and Utah (requiring U.S. geography knowledge and research).

HyperBole

- $42/year 6 issues
- 2 3.5" disks/issue
- $3 sampler
- new
- requires 1.25MB GS, HyperStudio
- Resource-Central

If you enjoy hypermedia in general and HyperStudio-based media in particular, read — or rather launch — HyperBole, the "Eclectic HyperMedia Journal." Each two-disk issue features original poems, short stories, animated graphics, music, and art. Submissions are welcome.

HyperStudio 3.0

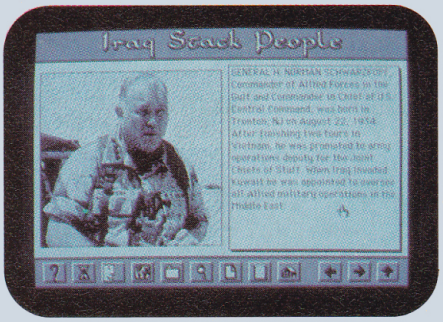
- $149.95
- new version
- requires 1.25MB GS
- Roger Wagner Publishing

Perhaps the best creativity product written specifically for the Apple IIgs, HyperStudio 3.0 is now faster as well as easier to use, according to Roger Wagner. In 1991 his company — which markets "Multimedia Tools for Multi-Talented Minds!" — released a number of new StudioWare products, as well. Among them are **HyperStudio Clip Art Volume 2**, **Fancy Fonts**, and **Functional Fonts** (two volumes), all priced at $19.95 each. Stackware products include **Dragons & Fairy Tales** ($14.95) and **Much Ado About Shakespeare** ($29.95).

Independence

- $39.95
- new version
- requires 768K GS
- Seven Hills Software

This assortment of drivers makes your GS compatible with 300-dpi (dots per inch) printers such as Hewlett-Packard's DeskJet, DeskJet Plus, DeskJet 500, DeskWriter, and LaserJet IIP, III, and IIIP. According to the publisher, Independence drivers work with all standard GS fonts.



Iraq Stack

- $59
- new
- requires 128K Apple II
- Techware Corp.

Here's an exceptional stack that provides an interactive look at the recent Persian Gulf War. A timeline offers a month-by-month retrospective on events leading up to the war, with a week-by-week rundown on its progress. A "personalities" database contains digitized images and profiles of some two dozen people, including Lt. General Charles Horner. (Sorry, "Scud Stud" reporter Arthur Kent's not included.) Classroom activities and issues presented here — with both pro and con arguments addressed — should provide plenty of grist for student discussion. Iraq Stack is just one in a series of new self-running stacks published in 1991 by Techware Corp. Others include **Apology by Plato**, **Astronomy: The Planets**, **Guitar Chords: Practice & Songs**, **The Metric Machine**, **Stackimals** (full-color clip art), and **U.S. Presidents: Facts and Stories** ($39 each).

Label Land

- $65
- new
- requires 64K Apple II
- Wings for Learning

Label Land is a three-games-in-one program that encourages youngsters to use powers of observation to find differences and similarities among the objects displayed. Bird Land's birds may have different bills, crests, feets, or tails, for instance, while Number Land numbers might be divisible by a given number from 1 to 9 or have special characteristics (odd, even, prime, composite, or square).

La Fabrica

- $65
- new Spanish version of The Factory
- requires 64K Apple II
- Wings for Learning

Fans of The Factory ($65) can now practice their assembly-line savoir faire with La Fabrica, the new Spanish version of the popular classic. Both English and Spanish versions of the program help students in grades 4 to 12 hone inductive-reasoning and sequencing skills as they try to duplicate a "challenge product" by combining up to eight punch, rotate, and stripe machines.

Lewis and Clark Stayed Home

- $59
- new
- requires 128K Apple II
- MECC

In this social-studies simulation — which should be available this month — you're chosen "to explore and map the Louisiana Purchase while collecting as many specimens of plant and animal life as possible; establish friendly contact with Native American tribes and convince them to trade with the United States instead of Great Britain and Spain; and attempt to find a water route to the Pacific Ocean." All in one class period (just kidding). Players do have to accomplish these tasks within a specified time limit to score points.



Littletown Zoo

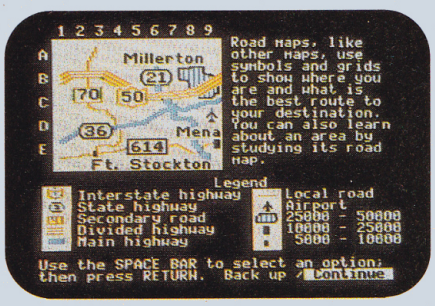
- $59
- new
- requires 128K Apple II
- MECC

This simulation is the third product in MECC's Frames: A Reading Comprehension Series, emphasizing discovery learning. Students in grades 3 and 4 decide which animals to exhibit. That means "research": reading Data Cards, Documents, Maps/Charts, and Records. Students analyze results and make recommendations.

The Living Cell

- $59
- new
- requires 128K Apple II
- MECC

Junior-high and high-school students assume the role of the cell membrane, and in the process learn about respiration and active transport of ions (chloride, sodium, and potassium), glucose, oxygen, water, and waste products. Two options — Living with Oxygen and Living without Oxygen — let students experiment with both aerobic and anaerobic respiration (fermentation). An ATP Meter tracks cell-energy levels.



Making Sense of Information

- Charts, Graphs, and Schedules
- Maps
- $84.95 2-disk set
- new
- requires 128K Apple II
- Gamco Industries

From Gamco's Reading for Successful Living series, this program helps junior-high-school students learn to interpret informational graphics such as bar graphs, pie charts, and maps. The program uses everyday examples such as a TV guide, a movie schedule, baseball stats, and a mall map as examples. A disk-based management system keeps track of scores for up to 200 students.

MatchMaker

- $65
- new
- requires 128K Apple II
- Sunburst Communications

Children in grades 4 to 8 will have fun trying to determine attributes such as color, shading, and shape that characterize a hidden drawing. This program, designed for cooperative-learning environments, is supported by a series of guidelines for teachers working with groups consisting of three to five students each.

Math in the Workplace

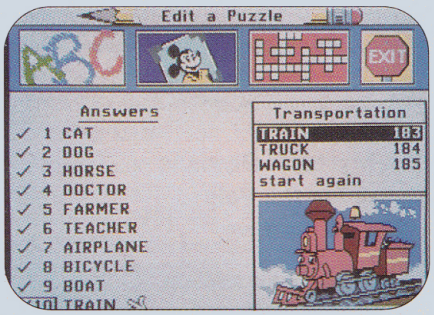
- $295
- new
- requires 48K Apple II
- Educational Activities

If you like programs that make basic skills seem more "relevant" to real life, you'll like Math in the Workplace, which helps students get a grip on measurement units (including metric), presentation graphics (tables, charts, and graphs), and geometric entities (lines, circles, and angles). Practical, job-related activities center on agriculture, the building trades, marketing, the health-care industry, home economics, and industrial technology.

Math Shop Spotlight: Fractions & Decimals I
Math Shop Spotlight: Weights & Measures

- $29.95 each
- new
- requires 128K Apple II
- Scholastic Software

For years we've been admirers of Scholastic Software's fine Math Shop series. Like earlier products in this line, Fractions & Decimals and Weights & Measures make math real for children aged 9 to 14. Imagine practicing math skills in make-belive stores at a simulated shopping mall.



Mickey's Crossword Puzzle Maker

- $39.95
- new
- requires 128K Apple II
- Walt Disney Computer Software

With a little assist from friends Mickey, Donald, and Goofy, kids aged 5 to 8 will enjoy creating, printing, and playing crossword puzzles with word or picture clues. A child-style picture menu makes the program easy to use. Multimedia special effects — music and a fireworks display — make learning fun.

Mind Winder

- $49.95
- new
- requires 48K Apple II
- Educational Activities

This game-like program helps develop a student's ability to discriminate among attributes such as color, direction, number, shape, and size. Mind Winder includes five increasingly difficult challenge levels for critical thinkers in fourth grade through junior high school.



Muppet Math

- $65
- new
- requires 128K Apple II
- Sunburst Communications

Join Kermit in the Art Room if you want to learn about shapes. Or help Miss Piggy shape up in the Gymnasium for lessons on counting, adding, and interpreting graphs. Muppet Math supports the

Muppet Learning Keys ($129) children's keyboard and the TouchWindow screen ($275) — two hardware products that make computer interaction easy for kids.

The Myths of Olympus
Quest for the Pole

- $69.95 together
- new
- requires 128K Apple II
- Scholastic Software

These two Twistaplot stories comprise volume 3 in Scholastic's Reading Explorers series. Children in grades 4 to 6 participate — individually or in groups — in each story by making choices that lead to variable endings. The Myths of Olympus is based on Greek mythology, while Quest for the Pole transforms young readers into Arctic explorers.

Newspaper Literacy

- $119
- new
- requires 128K Apple II
- Educational Activities

Whether your favorite daily is The New York Times or USA Today, Newspaper Literacy can help your students understand how publications are organized. Learn about headlines, datelines, bylines, charts, and the five Ws (who, what, when, where, why). On a deeper level, students learn to separate fact from opinion — and to understand editorials and political cartoons, as well.



Paper Plane Pilot

- $59
- new
- requires 128K Apple II
- MECC

Another fine product from MECC's Science Inquiry Series, this program is a flight simulator for the paper-airplane enthusiast. Students test four variables — launch angle, launch force, shape, and weight — and their effect on travel distance.



Problem Solving with Nim

- $59
- new
- requires 128K Apple II
- MECC

Four variations on this ancient game — Fish Nim, Calculator Nim, Space Nim, and Moonlight Nim — help students in grades 3 to 8 develop logical-thinking skills. In Space Nim, for instance, students blast asteroids from rows until the winner — or loser, depending on how you play the game — blasts the last one.

Publish It! 4

- $149.95
- new version
- requires 128K Apple II, 65C02 for IIe, mouse or joystick

Publish It! 4 Accessory Art Packs

- Design Ideas
- Education Graphics
- People, Places & Things
- Symbols & Slogans
- $12.95 each
- 4 in 1 Art Portfolio: $39.95 all four packs

Publish It! 4 Accessory Font Packs

- Font Pack 1
- Font Pack 2
- Font Pack 3
- $12.95 each
- Timeworks, Inc.

The best desktop-publishing program for the Apple II family produces superb dot-matrix (or laser-printed) publications. Need we say more?

PuppetMaker

- $75
- new
- requires 128K Apple II
- Sunburst Communications

Judging from the large number of new specialty programs we've seen, puppets will be a hot item in '92. PuppetMaker is a creativity program that helps children of all ages design, print, and construct any of four types of puppets: shoebox, finger, paper bag, or walking. The program features scenarios ranging from castles to safaris to sports. PuppetMaker's the perfect complement to Puppet Plays, described below.

Puppet Playhouse

- $49.95
- new
- requires 128K Apple II

Journey through Time

- $49.95
- new
- requires 128K Apple II

Journey through Time IIgs

- $59.95
- new
- requires 1MB GS
- Compu-Teach Inc.

How many programs can you name that come with popsicle sticks, glue, and colored pencils? Puppet Playhouse lets kids literally have hands-on fun designing and coloring stage backdrops and stick puppets printed in assorted sizes. Other Once Upon a Time products help children aged 6 to 12 write and illustrate puppet stories. The newest entry — Journey through Time — encourages children to write plays or storybooks based on themes such as Medieval Times, The Wild West, and Space Odyssey.

Puppet Plays

- $65
- new
- requires 128K Apple II, Magic Slate II (20- or 40-column)
- Sunburst Communications

Programs like this one make us wish we were back in the classroom again — either as a teacher or as a student. After progressing through Puppet Plays' seven lessons, you're ready to stage your very own presentation. Initial preparation includes prewriting, writing, proofreading, and revising the script and constructing the stage. The Teacher's Guide includes instructions for making a dozen different kinds of puppets from everyday materials.

Reading in the Workplace: Building and Construction Trades
Reading in the Workplace: Automotive Trades

- $295 each
- new
- requires 64K Apple II
- Educational Activities

Drill-and-practice lessons in each of these reading-skills development programs focus on interesting real-life

applications. The Construction program, for example, offers stories titled Taking Care of Tools, Carpentry Jobs, Masonry Work, and Carpet Padding. Follow-up questions test the student's ability to recognize the main idea, find details, make inferences, and draw conclusions.

The Scholastic Process Writer

- $129.95
- new
- requires 128K Apple II
- Scholastic Software

Hefty's the word that comes to mind when you take your first look at The Scholastic Process Writer. And we're not talking trash bags here. This substantial product helps students in grades 4 to 7 learn to write essays, stories, reports, letters, and poems by prewriting, writing, revising, proofreading, and publishing. The package includes a 165-page activity-filled Teaching Guide.

SchoolWorks: Dept. Head

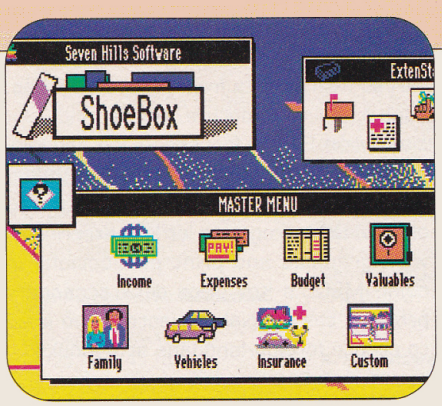
- $55
- new
- requires 64K Apple II, AppleWorks
- K-12 MicroMedia Publishing

Now department chairpersons can enjoy the same AppleWorking style as teachers, athletic directors, and other administrators. Dept. Head includes a rich assortment of word-processing, database, and spreadsheet templates for automating budgets, purchasing and managing equipment, keeping parents informed, and organizing in-service programs.

Science Explorers: Animal Adaptations
Science Explorers: Plants
Science Explorers: Simple Machines
Science Explorers: Skeletons

- $24.95 each
- new
- requires 128K Apple II
- Scholastic Software

If you know any kids who are scientifically impaired, take a look at Scholastic's new low-priced Science Explorers products. Children aged 6 to 8 can perform plant or human-bone-growth simulations, while older siblings have fun learning about animal survival skills or testing levers and fulcrums.



ShoeBox 1.0

- $49.95
- new
- requires 1.5MB GS, hard disk, HyperCard IIgs
- Seven Hills Software

ShoeBox is a HyperCard IIgs application that can help you keep track of a variety of household information, thanks to preformatted records for such necessities as important phone numbers and addresses, personal family data, and budgeting. According to the publisher, it's also easy to customize records for any other type of information you need to keep tabs on. A family messaging system with mail, notepads, to-do lists, and calendars is included.



Sidewalk Sneakers

- $75
- new
- requires 128K Apple II
- Sunburst Communications

This entertaining program, which meets standards set by the National Council of Teachers of Mathematics, helps children in grades 1 to 6 reinforce counting skills and develop number sense through a series of board games featuring banana peels, roller skates, and high-top sneakers.

Softdisk

- $69.95 per year (12 issues)
- new issues
- requires 64K Apple II

Softdisk G-S

- $89.95 per year 12 issues
- new issues
- requires 768K GS
- 1.25MB recommended
- Softdisk Publishing

These disk-based magazines of "monthly software" include programs, games, utilities, desk accessories, fonts, clip art, and templates. Order now and enjoy new Apple II software during every month of 1992.

Solutions: An Integrated Computerized Literacy System

- $3500
- new
- requires 48K Apple II
- Educational Activities

A multiprogram literacy system for adult learners, Solutions includes more than a dozen Educational Activities products such as CORE Reading and Vocabulary Development (see above) and Math for Everyday Living. Check lists, summary sheets, and worksheet activities are included in this comprehensive system covering preprimary through grade-6 skills.

Solve It! American History Mysteries 1492-1865

- $75
- new
- requires 64K Apple II
- Sunburst Communications

Help children develop "information-age research skills" with Solve It! Kids gather clues, track suspects, take notes, and solve mysteries based on actual events, such as the Boston Tea Party and the California Gold Rush. Lessons, activities, and support materials (maps, worksheets, and certificates of achievement) underscore the quality instruction

Spectrum

- $124.95
- $65 trade-up plus telecommunications program's original disk and manual
- new
- requires 1MB GS
- Seven Hills Software

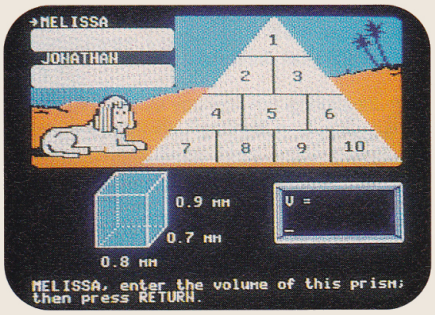
In testing at press time, Spectrum sports the easy-to-use GS interface, but adds a powerful scripting feature so that

you can tailor the program, whether you want to emulate a BBS or send e-mail. The program supports virtually all modems and popular send-receive protocols.

S-P-E-L-L: Grade 5

- $75
- new
- requires 64K Apple II
- Sunburst Communications

Dubbed "The Reading/Writing Connection," S-P-E-L-L includes 30 weekly lessons (and six review lessons) to help fifth-graders learn 750 new words and use them in paragraphs. Lessons sport a game-style format. In Play on Words, for instance, you can play either Spell That Word (complete a word from letter clues) or Word Scanner (find a word in a word-maze puzzle).



Sphinx's Secret: A Perimeter, Area, and Volume Game

- $49.95
- new
- requires 64K Apple II
- Gamco Industries

Junior-high-school students pretend to be archeologists in this drill-and-practice game. They search for artifacts — ankh symbol, jeweled comb, and royal mask, to name a few — in their efforts to find the mummy's chamber. Answering problems correctly gives you the opportunity to open a pyramid block that may lead to the treasures. Play alone or with a competitor.

Storybook Weaver: World of Adventure
Storybook Weaver: World of Make-Believe

- $59 each
- new
- requires 1MB GS
- MECC

Children in grades K–6 can write their own storybooks and illustrate pages with foreground or background scenes, as well as with objects from eight categories, such as animals, nature, people, and vehicles. Make-Believe focuses on folk and fairy tales, while Adventure includes Alpine, Canyon, Sea, and Tropic scenes, among others. Both programs let kids experiment with graphics and print publications in color. MECC's Key Caps desk accessory provides the special characters you need to create foreign-language storybooks.

Studymate

- $49.95
- new
- requires 128K Apple II
- Compu-Teach Inc.

If, like most of us, you need a little assist in the memory department, Studymate can help you create study lists and self-tests from your own class notes in fill-in, multiple-choice, question/response, true/false, or even "spell scramble" format. A vocabulary Power Disk and a 148-page How to Study book, complete with lots of tips, accompany the program.

SuperPrint II: The Next Generation

- $79.95
- new
- requires 128K Apple II
- Scholastic Software

Make way, Print Shop — Scholastic's new creativity program lets you create small publications such as bulletins, banners, and calendars. But imagine being able to print colorful posters up to 6 feet tall, as well! SuperPrint II comes with a generous supply of fonts, clip art, and poster graphics. Why not customize and print the Santa, Snowman, or Fir Tree poster this holiday season?

Swiftax

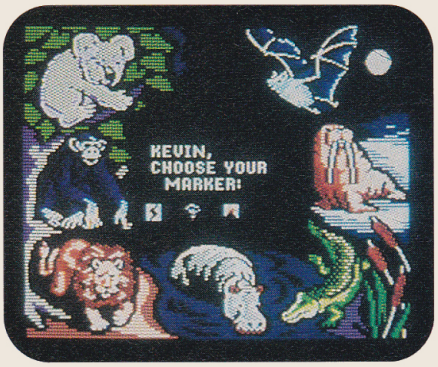
- $79.95
- 50% discount on yearly updates
- new version
- requires 128K Apple II
- mouse recommended
- Timeworks, Inc.

Now you can prepare your federal income-tax return with your Apple II and a mouse (recommended but not required). The program's pull-down menus make this unavoidable chore a little less . . . taxing. Pass the Maalox.

Taking Chances

- $65
- new
- requires 64K Apple II
- Sunburst Communications

Crank up the Marble Machine to introduce your students (aged 8 and up) to probability theory. In the program's Word Rooms and Quality Control Rooms kids try to predict which color marble will eject from the Marble Machine. In some games, marbles are returned to the machine (sampling with replacement), while in other games the marbles aren't added back to the mix.



3-2-1 Contact: Wild Things!

- $75
- new
- requires 128K Apple II
- color monitor recommended
- Wings for Learning

Based on the award-winning TV series, this science game for elementary- and middle-school scientists challenges you to make comparisons among 150 animals and plants. When you think about it, chameleons and parrot fish really are alike!

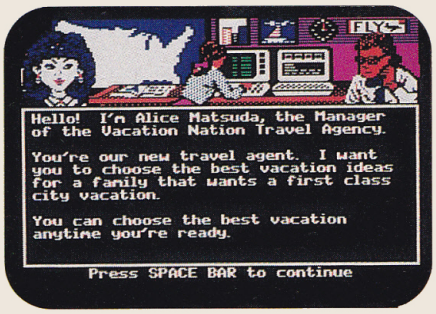


Time Navigator Around the World

- $59
- new
- requires 128K Apple II
- MECC

Simulation products were "big" at MECC in '91, and Time Navigator around the World is no exception. This program helps

junior-high and high-school students explore world history from 3999 B.C. to the present. The program sends students back to a random point in history. Through research (Headlines, Conversations, Artifacts, Arts and Literature, and People), students figure how to get back to the future —or at least to the present.



Vacation Nation Travel

- **$59**
- **new**
- **requires 128K Apple II**
- **MECC**

Like Littletown Zoo (see the description above), Vacation Nation Travel is a discovery-learning program from the Frames: A Reading Comprehension Series. In this program students in grades 4 and 5 pretend to be travel agents trying to select the best vacation getaway for their clients. Research includes poring over Data Cards, Letters, and other documents.

V.I.P. – You!

- **$59**
- **new**
- **requires 128K Apple II, Magic Slate II (40-column)**
- **Sunburst Communications**

V.I.P.– You!, like Birthdays! (described above), is a writing program designed to enhance children's self-esteem. The software, designed for students in grades 3 to 6, provides imaginative lessons such as My Own Time Line, Positive Profiles, and 50 Years from Now. Sunburst's **Someone Special** ($9.95), a wipe-off poster, helps you feature the student-of-the-day or special occasions — a great way to show off students and their work!

PUBLISHER INFORMATION

ACTAsoft
19700 Wells Drive
Woodland Hills, CA 91364
(818) 996-6731

Apple Computer Inc.
20525 Mariani Ave.
Cupertino, CA 95014
(800) 538-9696
(408) 996-1010

The AppleWorks Educator
P.O. Box 72
Leetsdale, PA 15056
(412) 741-4110

Bemak Enterprises
728 Royal Street
Alton, IL 62002

Big Red Computer Club
423 Norfolk Ave.
Norfolk, NE 68701
(402) 379-4680

Britannica Software Inc.
545 Fourth Street
San Francisco, CA 94107
(415) 597-5555
(415) 546-1887 (fax)

Broderbund Software, Inc.
17 Paul Drive
San Rafael, CA 94903-2101
(800) 521-6263
(415) 492-3200

Claris Corporation
5201 Patrick Henry Drive
P.O. Box 58168
Santa Clara, CA
95052-8168
(408) 727-8227

Compu-Teach Inc.
78 Olive Street
New Haven, CT 06511
(800) 44-TEACH
(203) 777-7738
(203) 624-0900 (fax)

Educational Activities
1937 Grand Avenue
Baldwin, NY 11510
(800) 645-3739
(516) 223-4666
(516) 623-9282

FantasyWorks Software
2333 Don Dodson Drive
Suite 256
Bedford, TX 76021
(817) 283-7440

Gamco Industries
Box 1911
Big Spring, TX 79721-1911
(800) 351-1404
(915) 267-6327
(915) 267-7480 (fax)

HyperStudio Network
Box 103
Blawenburg, NJ 08504
(609) 466-3196
(609) 466-1085 (fax)
$29/year
individual membership
$99/year
institutional membership

inCider/A+
Special Products
80 Elm Street
Peterborough, NH 03458
(800) 343-0728
(603) 924-0100

K-12 MicroMedia Publishing
6 Arrow Road
Ramsey, NJ 07446
(800) 292-1997
(201) 825-8888

Krell Software Corp.
Flowerfield Building #7
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St. James, NY 11780
(800) 245-7355
(516) 584-7900

MECC
6160 Summit Drive North
Minneapolis, MN
55430-4003
(800) 685-MECC
(612) 569-1500

MicroGram Systems
P.O. Box 252
La Honda, CA 94020-0252
(415) 747-0811

Milliken Publishing Co.
1100 Research Blvd.
P.O. Box 21579
St. Louis, MO 63132-0579
(800) 643-0008
(314) 991-4220
(314) 991-4807 (fax)

Mindplay/
Methods & Solutions, Inc.
3130 North Dodge Blvd.
Tucson, AZ 85716
(800) 221-7911

National AppleWorks Users Group (NAUG)
Box 87453
Canton, MI 48187
(313) 454-1115

Power Industries LP
37 Walnut Street
Wellesley Hills, MA 02181
(800) 395-5009
(617) 235-7733

Pre-Engineering Software
1266 Kimbro Drive
Baton Rouge, LA 70808
(504) 769-3728

Prelude Software
P.O. Box 1317
Costa Mesa, CA
92628-1317
(714) 751-5736

Quality Computers
20200 East Nine Mile Road
Box 665
St. Clair Shores, MI
48080-0665
(800) 443-6697
(313) 774-7200
(313) 774-2698 (fax)

Resource-Central
P.O. Box 11250
Overland Park, KS 66207
(913) 469-6502

Robert A. Brent
Station B
P.O. Box 26183
San Francisco, CA 94126
(415) 397-5759

Roger Wagner Publishing
1050 Pioneer Way
Suite P
El Cajon, CA 92020
(800) 421-6526
(619) 442-0522

Scholastic Software
2931 East McCarty St.
P.O. Box 7502
Jefferson City, MO
65102-9968
(800) 541-5513

Seven Hills Software Corp.
2310 Oxford Road
Tallahassee, FL 32304-3930
(904) 575-0566

Softdisk Publishing
606 Common St.
Shreveport, LA 71101
(800) 831-2694
(318) 221-8718
(318) 221-8870 (fax)

Sunburst Communications
39 Washington Avenue
Pleasantville, NY
10570-3498
(800) 628-8897
(914) 747-3310 collect

Teachers' Idea & Information Exchange (TI&IE)
P.O. Box 6229
Lincoln, NE 68506
(402) 483-6987

Techware Corp.
P.O. Box 151085
Altamonte Springs, FL
32715-1085
(800) 34-REACH
(407) 695-9000
Techware (AppleLink)
DLampert (America Online)

Timeworks, Inc.
625 Academy Drive
Northbrook, IL 60062
(800) 323-7744
(708) 559-1310
(708) 559-1360
(customer-service fax)

Tom Snyder Productions
90 Sherman Street
Cambridge, MA 02140
(800) 342-0236
(617) 876-4433

Walt Disney Computer Software
500 S. Buena Vista Street
Burbank, CA 91521
(818) 567-5360

WestCode Software
11835 Carmel
Mountain Road
Suite 1304
San Diego, CA 92128
(619) 679-9200
(619) 451-0276 (fax)



Power to spare

With today's advanced peripherals and applications Apple didn't dream of a few years ago, it's easy to overload the standard Apple power supply. That's why Applied Engineering now offers a heavy duty power supply for the IIGS, IIe and II+. AE's Heavy Duty Power Supply more than doubles your Apple's power output.

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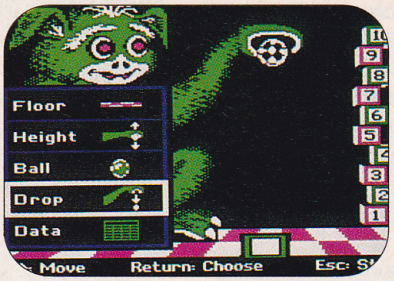

Woolly Bounce

- **$59**
- **new**
- **requires 128K Apple II**
- **MECC**

This K–2 physical-science program from MECC's Science Inquiry Collection lets kids have fun dropping things — specifically balls with different physical characteristics. At more challenging levels, students can also vary the height from which a ball is dropped and the type of surface the balls hit. Ouch!

Zeroing In

- **$65**
- **new**
- **requires 64K Apple II**
- **Sunburst Communications**

Play against a human opponent — or against a computer opponent like Harold — but by all means play Zeroing In, a new Sunburst math game that strangely enough reminds us of both Scrabble and tic-tac-toe. The program gives you three playing numbers (say, 3, 6, and 7). Your goal is to add or subtract one of your playing numbers with one of the numbers shown in a 3-by-3 grid and arrive at a result of zero. Sounds easy enough — and it is — until you reach levels where two-digit numbers require as many as four operations to reach a zero answer. ❑

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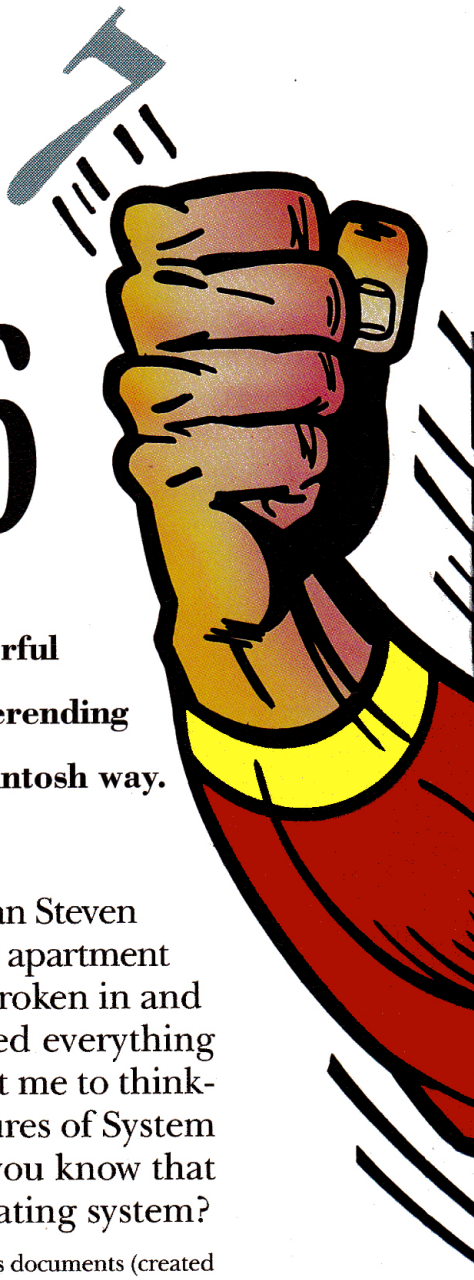
SYSTEM 6



Disguised as mild-mannered System 6, a powerful assortment of utilities and add-ons fight a neverending battle for TrueType, aliases, and the new Macintosh way.

In his patented monotone delivery, the comedian Steven Wright tells a classic joke about returning to his apartment one night only to discover that burglars had broken in and stolen all his worldly possessions, then replaced everything with exact duplicates. This ultimate psych-out got me to thinking: If you could duplicate all the whiz-bang features of System 7 without upgrading from System 6, how would you know that you weren't really running the Mac's newest operating system?

Preparing your Mac to run System 7 can be troublesome. First, you need a hard-disk drive and at least 2 megabytes of memory (4 megabytes is a more realistic minimum). Then you have to upgrade scads of applications, desk accessories (DAs), startup documents (INITs), and Control Panel devices (cdevs). Who needs the hassle?

Ignore all the marketing hype for a moment and the truth becomes self-evident: You can emulate most System 7 features — file sharing, multitasking, color icons, aliases, TrueType, and virtual memory — rather easily and convincingly under System 6. The notable exception is the much-ballyhooed "interapplication communication" (IAC), which links documents (created with the same application or different programs) so that you can update any copied-and-pasted material just once and see it reflected in all linked files. But if you can do without this "publish and subscribe" function — and most users can — there's little reason to switch to System 7 just yet.

How can you fool your Mac into thinking you're using System 7 when you're actually sticking with tried-and-true System 6? Read on, and we'll show you some System 6 tips you may have overlooked, introduce you to some nifty shareware and public-domain utilities, and recommend a handful of invaluable commer-

By OWEN W. LINZMAYER

Illustration * Robert Dale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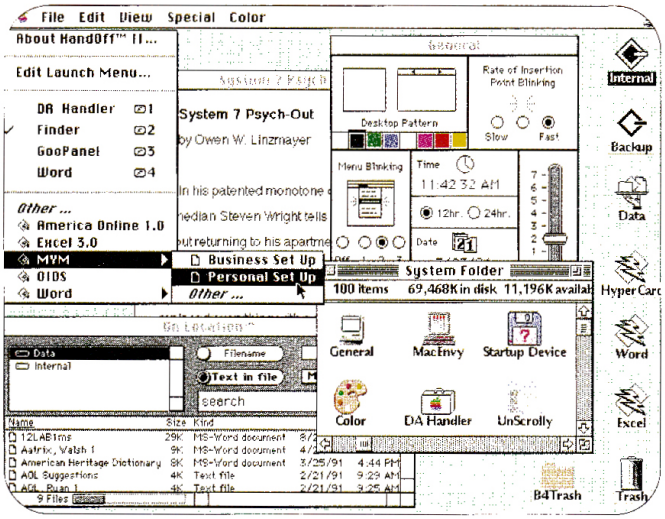

Figure 1. System 6 desktop, with MultiFinder and numerous add-on utilities installed. Note EasyShare folders, POWERicons aliases, On Location file search, Now Utilties' Customizer font switch, ClickChange modifications, and the user-created pre-Trash folder.

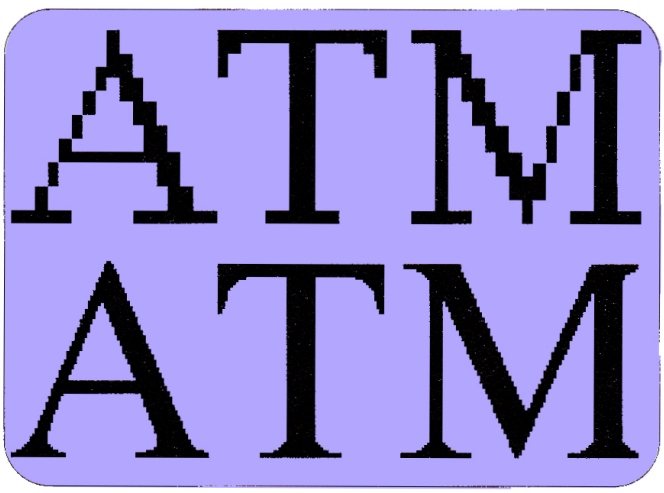

Figure 2. Adobe Type Manager creates screen fonts that are truer to their PostScript print appearance at any size.

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ALL AT ONCE

System 7 is a multitasking operating system, which basically means you can run more than one application at the same time. For instance, your telecommunications package can be downloading all your electronic-mail messages while you're writing a memo with your word processor.

System 6 users can accomplish the same thing by running Apple's **MultiFinder** program. After installing it in your System folder, highlight your startup volume, choose *Set Startup* from the Finder's *Special* menu, then click on the *MultiFinder* radio button at the top of the dialog box to enable it. The next time you restart, MultiFinder will be active and you can open as many applications as you want, memory permitting (**Figure 1**).

If you always start off by opening a particular DA or launching your favorite application, you can use *Set Startup* to automate the procedure. First, open all files that you want opened upon each startup, choose *Set Startup* from the Finder's *Special* menu, then click on the *MultiFinder* radio button at the top of the dialog box. Finally, click on *Opened Applications and DAs*. This duplicates the function of System 7's *Startup Items* folder.

SHARE ALIKE

Macs have always had built-in AppleTalk-networking capability. But Apple advertisements would have you believe that until System 7 came along, you needed to dedicate a Mac as a file server if you wanted to exchange files with others on the network. In reality, all you need to trade files under System 6 are two or more Macs connected by AppleTalk cables. If you share a printer currently, you already have all the network you need.

Flash from Beagle Bros is an INIT that lets you send files to other Macs on your AppleTalk network by simply dragging those files to special folders on your hard disk. Conversely, files sent to you appear in special "in box" folders. For the security minded among you, you can require the recipients of your files to provide passwords before the system grants access. In addition to providing file exchange, Flash also offers a bare-bones electronic-mail mode that lets you "chat" with other users in real time — just type notes to one another in the *Chat* window. Incidentally, Flash creates a "paper" trail of chat sessions automatically. You can use Flash across zones, but you must purchase one copy for each zone. (All members of any one zone can use a single package.)

Like Flash, **EasyShare** from Symmetry lets you exchange files with other users, but instead of creating special folders, it functions as an *AppleShare* file server. Using the EasyShare DA, you specify which volumes or folders to "publish" (make available to other users). If you like, you can assign individual passwords. To access your folders, users select the AppleShare icon in the Chooser, then highlight your "file server." Once they close the Chooser, whatever you published appears as a standard AppleShare file server on their Finder's desktop (**Figure 1**).

allShare from EveryWare also relies on AppleShare. Using this cdev, you can allow access to an entire volume, a single folder, or all folders except one you want to keep private. A password option restricts access to authorized users. If server operations slow down your Mac too much, you can allocate greater priority to your own tasks.

Also available is a utility called **Public Folder**, a file-transfer and -sharing Chooser document offered free to users of Claris products. Just create a special "public" folder on your hard disk and place into it any files and folders you want to make available to other Public Folder users connected to your AppleTalk network. Access is via the Chooser: Users mount the public folder as an AppleShare volume on their desktops. Public Folder provides no security options, but, remember, it's free.

A.K.A. . . .

Under System 7 it's possible for a file to be in more than one folder simultaneously. Click on a file, choose *Make Alias* from the Finder's *File* menu, and you have an alias — a tiny clone file that you can place anywhere you like. The alias acts just like the original; double-click on it to open or launch the original. So if you're not sure whether to place a particular program in your *Applications* folder or your *Utilities* folder, for instance, make an alias and put it in both.

POWERicons from Magic Software is a program that creates aliases under System 6. Just select an application you want to clone, then specify where the alias should be located. (Unlike System 7, which lets you make aliases of any type of file, POWER-

icons works with applications only.) For example, you can place a Microsoft Word alias on the Finder's desktop to eliminate the need to delve into nested folders each time you want to write a letter (**Figure 1**). You can even attach frequently used documents so that the system opens them automatically when you launch the alias.

POWERicons aliases take up just 5K of disk space each, though they may point to multimegabyte applications. And, like System 7 aliases, POWERicons aliases can point to original applications on another machine on the same network.

For example, you can put aliases of your hard drive's applications on a floppy, pop it into another workstation on the network, and access your applications and related documents as if they actually resided on the floppy.

ON THE TRAIL

Despite its name, the Finder couldn't really find anything until System 7 came along and gave it the ability to track a file by its name, size, type, label, date created, date modified, version, comments, or lock status.

DiskTop from CE Software is a file-maintenance DA that — among many other things — lets System 6 users find files based on name, size, type, date created, and date modified.

DiskTop is better than System 7's *Find* command in that it can locate files whose attributes match more than one search criterion. For instance, you can search for all filenames containing *Read* and whose size is less than 20K.

On Location from ON Technology can also hunt down files based on their names, but it's most useful for finding documents based on their contents. For example, it can quickly locate all documents containing the root of the word *search* (**Figure 1**). Its speed is made possible by maintaining indexes for each volume. The program updates indexes automatically in the background; they usually require no more than 2 percent of the disk space taken up by the volume's files.

TAKE A LOOK

Like System 7's *View* Control Panel, the *Customizer* application in the **Now Utilities** package gives you control over — among other things — the display of icons and text in the Finder under System 6. Instead of the usual straight rows and columns, you can specify a staggered grid pattern for your icons. Also, you can change the Finder's 9-point Geneva default font (**Figure 1**).

If this last item interests you, Peter S. Bryant's shareware cdev called **sysFont** does the same thing for the default Mac system font (12-point Chicago) used in menus, dialog boxes, buttons, and so on.

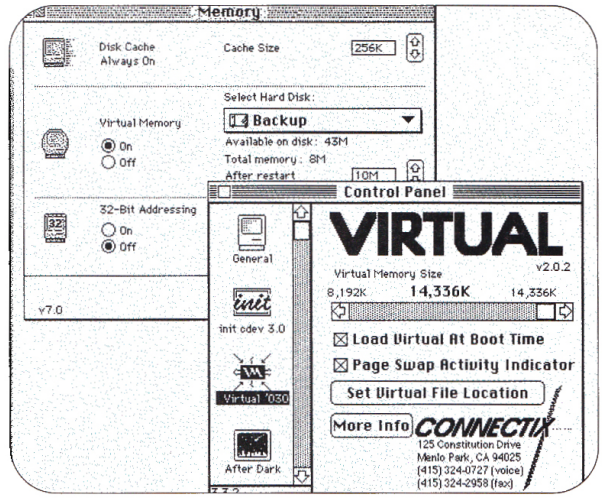

Figure 3. Virtual captures up to 14 megabytes on your hard drive to simulate RAM.

GETTING A FACELIFT

Along with many new features, System 7 offers a facelift to the Mac's sagging WIMP (windows, icons, mouse, pull-down menus) interface. The Finder can finally display icons in color, and windows are dressed up with 3D shading of elements such as title bars, scroll bars, and close, zoom, and resize boxes.

System 6 users needn't be jealous; with **SunDesk**, an INIT that displays Finder icons in 8-bit color (up to 256 different hues), you can gussy up your interfaces, too. It comes with dozens of color icons for common applications and other Finder elements, such as the *System* folder and the *Trash* (**Figure 1**). Using the *ResEdit* option, creating more color icons is easy. SunDesk is copyrighted, but it's free. Additional icons are available free through user groups and on-line services, or you can purchase them from Immedium Design.

ClickChange is a cdev from Dubl-Click Software; its six modules let you customize almost every aspect of the Mac's look and feel. ClickChange lets you alter standard interface elements: cursors, windows, buttons, colors, and sounds. The *Window*, *Scroll*, and *Button* modules let you modify screen elements to look as they do under System 7, as well as NeXT, IBM, and Sun platforms (**Figure 1**). Additional modules let you link sound effects to Mac events, change the colors of screen objects, and replace the standard cursors with animated substitutes.

TRASH IT

Under System 7, items you place in the Trash aren't deleted whenever you choose *Restart* or *Shut Down* from the Finder's *Special* menu; launch an application; copy a file; or drag the disk's icon to the Trash. Instead, tossed items remain in the dustbin until you specifically choose *Empty Trash* from the Finder's *Special* menu.

Simulating this arrangement under System 6 is easy enough. To prevent the Finder from deleting a file before you really want to, create a new folder named *B4Trash*, or whatever you like. Place it on the desktop next to the real *Trash* icon, but instead of dragging files to the *Trash*, toss them in this folder (**Figure 1**). When you're positive you no longer need any of the files in the *B4Trash* folder, drag its contents to the real *Trash* and choose *Empty Trash* from the *Special* menu.

HANDY DEVICES

System 7 makes great strides toward improving consistency in the way the Mac operates. Instead of selecting via a centralized Control Panel DA, you can now double-click on individual cdevs just like applications.

With Steve Bollinger's **GooPanel** you can add this capability to System 6 (**Figure 1**). This freeware application works in conjunction with an INIT to turn individual cdevs into double-clickable "applications."

TYPESET QUALITY

TrueType is Apple's new outline-font technology, providing smooth type at virtually any size — both on screen and in printouts — using a single font file. With TrueType, the stair-stepping jaggies are a thing of the past, as are those vast collections of bit-mapped (screen) fonts in myriad sizes necessary for good-looking output.

Originally slated for introduction as part and parcel of System 7, **TrueType** was actually released earlier as an INIT for System 6.0.7 and is available free from any

Apple dealer. Unfortunately, to take advantage of TrueType, you must either purchase TrueType fonts or convert your existing PostScript fonts with a utility such as Ares Software's **FontMonger** or **Metamorphosis Professional** from Altsys.

If you opt for **Adobe Type Manager** instead of Apple's TrueType INIT, there's no need to convert PostScript fonts you already own. ATM incorporates Adobe's PostScript language outline-font software, eliminating jagged characters so that your screen can display high-quality typefaces of any size or style (**Figure 2**). ATM also enables inexpensive QuickDraw printers to print PostScript fonts (but not graphics), and when used in conjunction with fax modems, it produces the best-looking fax printouts ever seen.

A LONG MEMORY

As applications become increasingly complex, so too do their memory demands grow. To address this problem, System 7 has built-in virtual-memory capability. When engaged, the Mac uses excess space on your hard disk to simulate RAM (random-access memory), swapping data and program code between actual and virtual memory as needed for working with large documents and multiple applications.

You don't need System 7 to take advantage of virtual memory. All you need is a Mac equipped with a **Motorola MC68851 PMMU** (paged memory-management unit) chip and a copy of Connectix's **Virtual**. With Virtual, you can have up to 14 megabytes at your disposal (**Figure 3**). True, virtual memory is considerably slower than real memory, but it's a cost-efficient way of satisfying the demands of memory-hungry applications.

LAUNCH MENU

One of the most convenient touches of System 7 is that you can place just about anything — applications, documents, folders, Control Panels, and aliases — on the *Apple* menu, not just DAs. To install an item on the *Apple* menu, you simply copy it into the *Apple Menu Items* folder within the *System* folder. Kiss Font/DA Mover goodbye!

While nothing can compare to the simplicity of dragging files into a folder, System 6 users have several alternatives. **On Cue** from ICOM Simulations is one of the oldest file-launching utilities. It places a special menu on either corner of the Finder's menu bar, from which you can launch applications or related documents, regardless of where the files actually reside on your hard drive.

In addition to launching files like On Cue, **Hand-Off II** from Connectix also lets you assign sound level and color depth to individual applications, then adjusts those features automatically whenever you launch a program (**Figure 1**). That's nice, but the utility earned its name because it eliminates that annoying *Application Not Found* dialog box that appears whenever you double-click on a document and the Finder can't locate the application that created it. Instead, Hand-Off launches a substitute application of your choice that can open the desired document.

Don't get me wrong — I think System 7's swell. But do you really want to live with the uncertainty that accompanies any software release whose version number ends in zero? You can have the best of both worlds — stick with System 6 and add System 7-style innovations, too. Whether you're talking cosmetics or file organization, tried-and-true doesn't have to mean old-and-worn-out, thanks to a wide assortment of utilities and add-ons that can streamline your Mac's operation. System 7's got great potential, but for now — at least until Apple works out the bugs — I'd rather fight than switch. ❑

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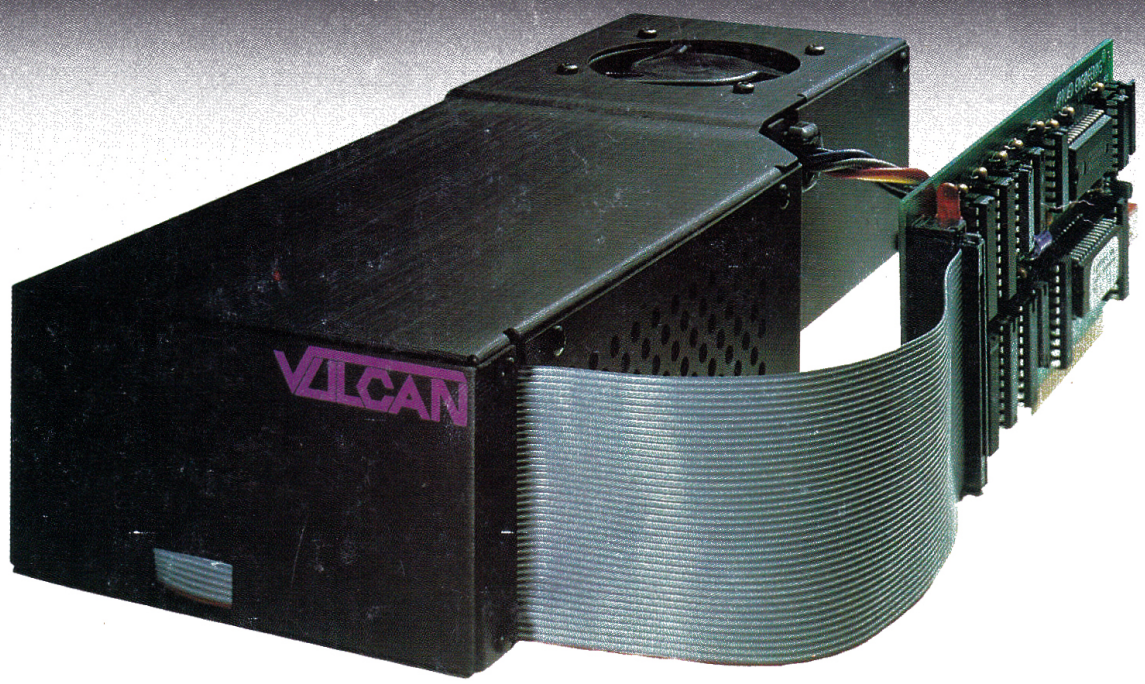

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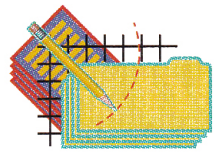

PICK A CARD

Stay happy this holiday season with phone-and-address rotary index cards printed from an AppleWorks database.

By RUTH K. WITKIN

IT'S HOLIDAY-CARD TIME, SEASONAL soirée time. Do you know where your family and friends' phone numbers and addresses are? Well, maybe yes and maybe no. You may keep them in spanking good order all year round, ready for all occasions. Then again, maybe all you have is scribbled bits of paper that would take a decoder ring to figure out.

This month's database can help. It's a place to store names, addresses, phone numbers, and notes that you can then print on rotary index (a.k.a. Rolodex) cards. The best part is that you can update the information quickly and print new cards instantly.

In developing this database, I used pin-fed 4-by-2-and-one-sixth-inch rotary cards in 100-pound card stock — sturdy enough to withstand frazzled fingers. (See **Figure 1**.) It doesn't matter if you don't have card stock now. Regular printer paper can give you a good idea what the cards will look like.

A DATABASE FROM SCRATCH

Create a new AppleWorks database file named **ROTARY**. The *Review/Add/Change* screen appears with the cursor on *Category 1*.

The accompanying **Table** shows all the categories — 15 active and six spares that you can use later for additional information. Separating first and last names as well as cities, states, and zip codes gives you full flexibility in sorting records.

The number of items on rotary cards varies. Some cards — such as ones for a book shop or an airline — may show only a company name and phone number. Others — say, for a business or a computer group — may be filled with names, addresses, phone numbers, comments, and the like. To accommodate this variability, I gave two categories double duty — *Last Name/Company* and *Title/Contact*.

The *Last Name/Company* category, which is filled in every record, can hold either an individual's last name or a company name. When you enter a last name, you enter the person's title, if any, in the *Title/Contact* category. When you add a company name, you enter the contact's name in the *Title/Contact* category and leave the *Company* category empty. All of this will make more sense when you fill the records.

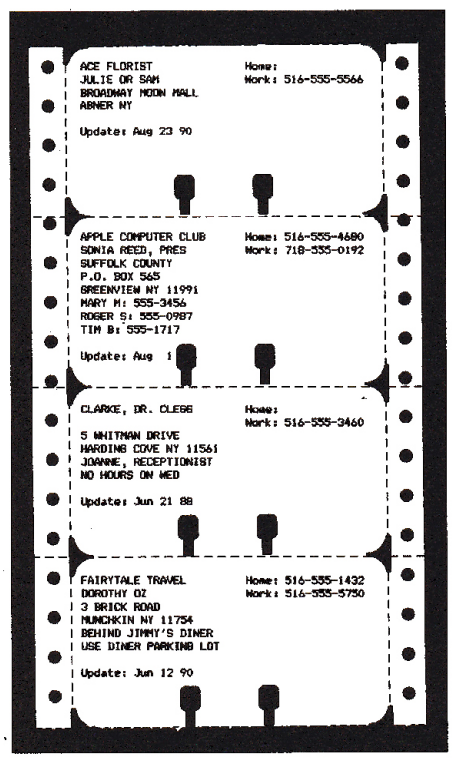

Figure 1. Rotary-type cards produced with the sample records in the ROTARY database.

Now press Open apple-Y (OA-Y) to erase *Category 1*. Referring to the accompanying **Table**, enter the category names and press Return after each one. The first 15 categories will appear in the left column, the other six (all spares) will show up in the right.

When you finish, press OA-S to store the database on disk. AppleWorks announces that you're entering *Insert New Records* mode, which is what you want, so press Return or the space bar and an empty *Record 1* appears, awaiting your entries.

FILL 'ER UP

Before starting to fill records, it's always wise to scan for common entries. You can have AppleWorks type these common entries, called *standard values*, automatically, saving you the trouble. *Record 1* contains the following entries (all other categories are empty):

Last Name/Company	ACE FLORIST
Title/Contact	JULIE OR SAM
Street	BROADWAY MOON MALL
City	ABNER
State	NY
Work	516-555-5566
Update	8-23-90

Figure 2 shows entries in the other records. One entry — *NY* in the *State* field — appears in almost every record, so make it a standard value: Press OA-V to bring up the *Set Standard Values* screen. Press Return seven times to move the cursor to the *State* category, type **NY**, press Return

again, and hit Escape to go back to the *Insert New Records* screen.

The *State* category now contains **NY**. Every time you start a new record, AppleWorks inserts this entry into that category. (When a standard entry outlives its usefulness, you can delete it from the *Set Standard Values* screen. This deletion affects future records only, not existing ones.)

Move the cursor up to the *Last Name/Company* category, then, referring to the entries mentioned earlier, fill *Record 1*: Type an entry, then press Return as many times as necessary to move to the next category needing an entry, type that one, and so on (skipping the *State* entry, of course). After you fill the update section, pause a moment and press Return.

Update contains the word *date*, so when you press Return or the spacebar, AppleWorks converts what you type — *8-23-90* — to a three-character month, two-digit day, and two-digit year. Now press OA-Down Arrow to move to the *Last Name/Company* category in *Record 2*.

Referring to **Figure 2**, fill the other records in the same way. In *Records 4*, *6*, and *7* through *10*, be sure to type the comma after the last name. It separates the last name from the first on the rotary card. In *Records 6*, *7*, and *10*, overtype *NY* with the proper state characters. (Press OA-E to toggle to the overtype cursor.) After you type the date in the *Update* section in *Record 10* and press Return, press OA-S to store the database on disk.

GOOD TO LOOK AT

AppleWorks now brings up the *multiple-record layout* screen. Press OA-< to bring the first few categories into view. To accommodate entries of varying lengths as much as possible and to fit another category on screen, change the column widths: Press OA-L to bring up the *Change Record Layout* screen.

The cursor is in the *Last Name/Company* column, which, like all columns here, is 15 characters wide. Press OA-Right Arrow four times to widen it to 19 characters. Press Tab to move to the *First* column. Press OA-Left Arrow five times to reduce it to ten characters. In the same way, adjust the other column widths as follows:

MI	-13	Home	-2
Title/Contact	-1	Work	-2
Company	-4	Note1	+3
Street	+4	Note2	+3
City	-2	Note3	+3
State	-10	Update	-5
Zip	-9		

Now hit Escape. You want the cursor to move to the right when you change a record in *multiple-record layout*, so type **2** and hit Return. The last few categories appear in the *Review/Add/Change* screen.

It's easier to keep track of records in alphabetical order: Press OA-< three times to reach the *Last Name/Company* category, and press OA-A to start the *Arrange* command. Confirm *Category* (*Last Name/Company*), then *From A to Z*. The *Review/Add/Change* screen returns with all records in alphabetical order.

REPORT: ROTARY CARDS

Now create the rotary-card report format: Press OA-P to bring up the *Report* menu, type **3** to select *Create a new "labels" format*, and hit Return twice, the second time to confirm *From scratch*. Type **ROTARY CARD**, the name of this report, and hit Return. AppleWorks brings up a screen containing all the category names. Your goal is to make this screen look like the one in **Figure 3**.

First, get rid of the unnecessary spare categories: Hold down Right Arrow until the cursor reaches the *S* in *Spare1*. Press OA-D, then Down Arrow, OA-D again, then Down Arrow again. Continue in this way to delete all six spares.

Next, combine the first three categories. Press Return, then Up Arrow five times to reach the *F* in *First*. Press OA-Right Arrow five times and OA-Up Arrow once to put *First* one character behind *Last*. Press OA-J. The less-than sign (<) tells AppleWorks to left-justify the *First* category entry, regardless of the length of the *Last* category entry, thus preventing gaps between them, or truncated entries.

Press Return twice to move to the *MI* (middle initial) category. Press OA-Right Arrow 12 times and OA-Up Arrow twice to move *MI* behind *First*. Again, press OA-J. Hit Return, then OA-D twice to delete both blank lines.

Last Name/Company	Note1
First	Note2
MI	Note3
Title/Contact	Update
Company	Spare1
Street	Spare2
City	Spare3
State	Spare4
Zip	Spare5
Home	Spare6
Work	

Table. Category names in the ROTARY AppleWorks database.

```
File: ROTARY                        REPORT FORMAT              Escape: Report Menu
Report: ROTARY CARD
Selection: All records


================================================================================
Last <First <MI              Home:
Title/Contact                Work: 516-555-5566
Company
Street
City <State <Zip
Note1
Note2
Note3

Update: Aug 23 90


-----------------------Each record will print 13 lines-------------------------

--------------------------------------------------------------------------------
Use options shown on Help Screen                                        5:11 pm
```

Figure 2. Records in the ROTARY database.

Next, combine the *City*, *State*, and *Zip* categories: Move the cursor to the *S* in *State*, press OA-Right Arrow five times and OA-Up Arrow once, then press OA-J to left-justify. Move to the *Z* in *Zip*, press OA-Right Arrow 12 times, then OA-Up Arrow twice. Press OA-J.

Hit Return three times to move to *Home*. Now press OA-Right Arrow 25 times, then OA-Up Arrow seven times to place it in the second column. Printing the category name before the entry helps distinguish a home phone from a work phone, so press OA-V to turn on this feature for this category. AppleWorks nows displays a colon after *Home*. In the same way, move *Work* to its place below *Home*, then press OA-V. This time AppleWorks shows a colon and a phone number after the category. The phone number is the entry in the work category in the first record.

Referring to **Figure 3**, shift all other categories into place, pressing OA-V only after *Update*. When you finish, your screen should look just like the one in **Figure 3**.

Now press OA-O to bring up the *Printer Options* screen. First, change the paper-length setting: Type **PL** and hit Return. Each record is a complete page. The paper-length equivalent of a 2-and-one-sixth-inch rotary card at six lines to the inch is 2.1 inches, so type **2.1** and hit Return.

To fit more characters on a line, print them smaller: Type **CI**, press Return, type **12**, and hit Return again. A header on each page is a hindrance, so type **PH** and hit Return once more to turn off the header.

Now press OA-S to save the database, and return to the *multiple-record layout* screen.

PRINT THE RECORDS

If you have rotary-card stock, this is a good time to load it. (Otherwise use regular printer paper, then hold the printout over a strip of cards to check the fit.) Typically, the top of the print shield on your printer should be flush with the top of the first card. Printers vary, however, and a fraction of an inch up or down may improve positioning.

HARDCOPY RESULTS

Now turn on your printer so that you can print the records. Press OA-P and hit the return key twice to confirm *Get a report format* and *ROTARY CARD*. Press OA-P again to bring up the *Print the Report* screen, hit the return key again to confirm the printer (or type a printer number, then hit the return key), and confirm one copy. The printer whirs, producing a batch of records in rotary-card layout.

If something's amiss after you print the records — for instance, you end up with only one record on a page — chances are you need to change the AppleWorks *top-of-page* setting from *Yes* to *No*.

To change this setting, go back to the main menu and select *Other Activities*, then choose *Select standard settings for AppleWorks* and *Specify information about your printer(s)*. Then select the number under *Change printer specifications* that corresponds to your model.

In the *Change a Printer* screen, type **2** for *Accepts top-of-page command*, hit Return, and type **Y** to change the value to *No*. Be sure that the third item, *Stop at end of each page*, is also set to *No*.

Print the records the same way as before. If changing the *top-of-page* setting doesn't solve the problem, refer to your printer manual.

CATEGORY	RECORD 2	RECORD 3	RECORD 4
Last Name/Company	FAIRYTALE TRAVEL	APPLE COMPUTER CLUB	CLARKE,
First			DR. CLEGG
MI			
Title/Contact	DOROTHY OZ	SONIA REED, PRES	
Company		SUFFOLK COUNTY	
Street	3 BRICK ROAD	P.O. BOX 565	5 WHITMAN DRIVE
City	MUNCHKIN	GREENVIEW	HARDING COVE
State	NY	NY	NY
Zip	11754	11911	11561
Home Phone	516-555-1432	516-555-4680	
Work Phone	516-555-5750	718-555-0192	516-555-3460
Note1	BEHIND JIMMY'S DINER	MARY M: 555-3456	JOANNE, RECEPTIONIST
Note2	USE DINER PARKING LOT	ROGER S: 555-0987	NO HOURS ON WED
Note3		TIM B: 555-1717	
Update	6-12-90	8-1-91	6-21-88
CATEGORY	RECORD 5	RECORD 6	RECORD 7
Last Name/Company	MARLEE'S	JACKSON,	MILLER,
First		HAROLD	BARBARA
MI		A.	
Title/Contact		TECH SALES REP	
Company		APPLE COMPUTER	FHS FINANCIAL SERVICE
Street	89 TREMDY AVENUE	72 CHAVEZ HIGHWAY	567 THREEPENNY DRIVE
City	ABNER	CUPERTINO	PLYMOUTH
State	NY	CA	MI
Zip	11804	95014	48170
Home Phone			
Work Phone	516-555-2713	408-555-1010	313-555-1115
Note1	FRIDAYS TIL MIDNIGHT	THE II PERSON	
Note2			
Note3			
Update	11-2-89	1-12-91	6-14-87
CATEGORY	RECORD 8	RECORD 9	RECORD 10
Last Name/Company	SAULTER,	PETERSON,	THOMPSON,
First	SOFIA/SIMON	JANIE	KAREN
MI		C.	E.
Title/Contact			
Company			
Street	6789 B STREET	17 ACORN LANE	210 DAVIDSON #5
City	BROOKLYN	EASTPORT	PLEASANTON
State	NY	NY	CA
Zip	11097	11789	94566
Home Phone	718-555-0987	516-555-1234	415-555-2308
Work Phone	SOFIA: 212-555-6540	212-555-5678	415-555-9530
Note1	KIDS ALEX, CORKY	BIRTHDAY MAY 23	HUSBAND COREY
Note2	SOFIA'S MOM HARRIET		
Note3	SIMON IS SHOP TEACHER		
Update	1-31-87	2-12-88	11-23-89

Figure 3. Report format for printing rotary cards.

NEW RECORDS ONLY

When you create a new record or update an existing one, you want to be able to print a card for that record only, not every record in the database.

Imagine that you've just updated the *Karen Thompson* record and now want to print it. You're still in the *Report Format* screen. Press OA-R to start the record-selection process. AppleWorks brings up the *Select Records* screen containing all 21 categories. Hit Return twice to confirm *Last Name/Company* and *equals*. Type **THOMPSON,** (don't forget the comma) as the comparison information, and hit Return.

You could have another Thompson record, so zero in on Karen's by confirming *and*. Now type **2** to select *First* and hit Return twice. Type

KAREN and hit Return again. That does it, so hit Escape. You can see the record-selection criteria in the upper-left corner of the screen.

To print the selected record, make sure your printer is on, press OA-P, select the printer, and confirm one copy. And there's the Karen Thompson record. Piece of cake! To return record selection to all records, press OA-R and type **Y**.

This ends the hands-on session. What follows are ideas to use when working with this database.

CHANGING A SPARE

Let's suppose you want to activate a spare to hold directions on how to get to an individual or company, for instance. Press OA-N to bring up the *Change Name/Category* screen. Hold down the down-arrow key until the cursor rests on *Spare1*. Press OA-E to switch to the over-type cursor (a flashing rectangle). Type **Get There** and hit Return. You now have a place in your database for route numbers, cross streets, and the like. If one line isn't enough, convert other spares to hold more.

CROSS-REFERENCING

Even though you arrange cards in alphabetical order, you may not always remember the name of the company or person under which a card is filed. You may want to call Dorothy, your travel agent, for example, but you don't remember her last name or the name of the travel agency. That's a good reason for having several cards — it gives you more than one shot at finding a record quickly.

You don't have to retype an entire record to cross-reference. All you do is copy an existing record and change the necessary entries. Let's use the *Fairytale Travel* record as an example. Without going into all the details, first use OA-C to make two copies of the record. In the first copy, enter **OZ** in the *Last Name/Company* category, then **DOROTHY** in the *First* category, and **FAIRYTALE TRAVEL** in the *Company* category. Using OA-Y, delete **DOROTHY OZ** in the *Title/Contact* category.

In the second copy, enter **TRAVEL AGENT** in the *Last Name/Company* category and **FAIRYTALE TRAVEL** in the *Company* category. Now when wanderlust strikes, you're sure to find Dorothy and her travel agency at the flip of a card.

STAY TUNED

Next month, we'll talk about a no-frills budget that can get your spending under control to help you start the new year right. ❑

CONTRIBUTING EDITOR RUTH K. WITKIN IS THE CREATOR OF THE *SUCCESS WITH APPLEWORKS* TEMPLATE SERIES (*INCIDER/A+*, IDG COMMUNICATIONS) AND *RUTH WITKIN'S BEST NEW APPLEWORKS TEMPLATES* (QUALITY COMPUTERS). SHE'S THE AUTHOR OF *THE BEST BOOK OF APPLEWORKS* (MACMILLAN PUBLISHING COMPANY) AND *PERSONAL MONEY MANAGEMENT WITH APPLEWORKS* (JOHN WILEY & SONS). WRITE TO HER AT 5 PATRICIA ST., PLAINVIEW, NY 11803. ENCLOSE AN SASE IF YOU'D LIKE A REPLY.

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MADE IN THE SHADE

Want to know how to make your pictures really shine? Brush up on the basics of light and shadow.

By ROGER GOODE

SO YOU THINK YOU'VE GOT THAT painting program right where you want it — you've read the documentation at least three times, experimented with all its important tools, and created a diskful of work. But something's just not right. Although you've got the implementation down, your artwork still looks humdrum. The cure? Well, put away that manual for a while. It's time to brush up on some fundamental art principles, starting with form, light, and shade. No matter the medium in which you're creating, the same basic rules apply.

IN THE BEGINNING

Just because your canvas here is a computer, you can't forget to give your pictures dimension. Learning to use light and shade — the shadow patterns you see on objects, which change with direction of light and the shape of each object — in your creations is integral to making two-dimensional renditions look three-dimensional. The first thing you need, naturally, is light. You need to locate the light source in your picture, even though it may not be within the frame of the picture itself.

Try setting up a few simple still lifes in the corner of a room, then try lighting them in a variety of ways. See how the shadows move as you shift the light, and how this changes the character and feel of the arrangement? Lighting can make the difference in the mood of a picture, and depending on the subject you've chosen, can make the picture look more dramatic.

Setting up an actual still life next to your computer each time you create a picture isn't really practical (or necessary), but becoming familiar with the character of different lighting effects is an important lesson. With this understanding you can apply your knowledge to any subject — real or imaginary.

If you're a beginning artist, you'll have best results if you stick with only one strong light source (real or figurative), coming from the left or right side, from below or above, or from almost any angle except from the direction of the viewer. (See **Figure 1**.) Frontal lighting destroys the illusion of form, because it washes out all shadow patterns on the object — it casts all shadows behind it. Even experienced artists generally avoid frontal lighting, unless they're trying to create a specific effect.

And once you establish the location of your picture's light source, stay true to it. A common mistake is to cast shadows in all directions by lighting some objects from one side and others from another side. Each object may look its best with different lighting, but the picture as a whole doesn't hang together. The result is a confusing and unconvincing illusion of reality.

Note the characteristics of the light on each object in **Figure 1** and on the apple in **Figure 2**. The light enters from the left of all objects and casts shadows to the right. When you have a single light source, you can generally follow the rule that light travels from light, to dark, to reflected light (never as light as the front, but a

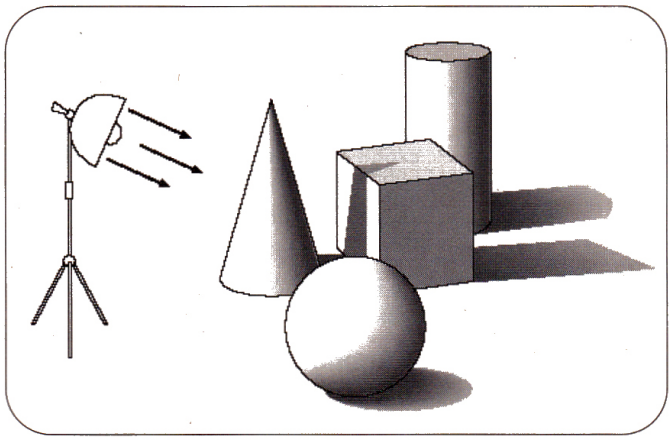

Figure 1. Note the way light at an angle casts shadow patterns on these objects in the same direction.

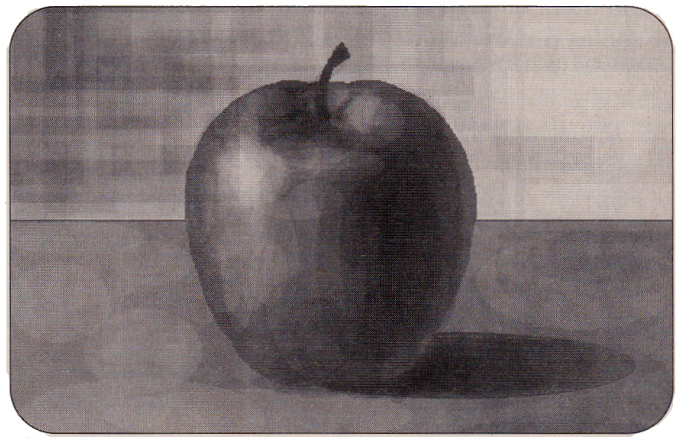

Figure 2. Note the shadow pattern on the object itself — light to dark to reflected light — as well as the cast shadow behind it.

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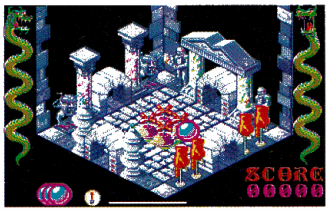

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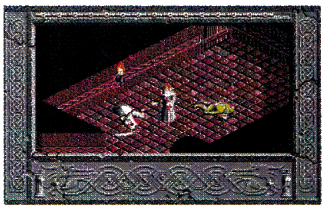

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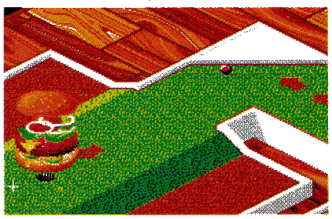

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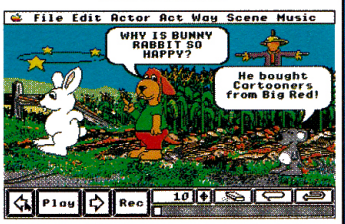

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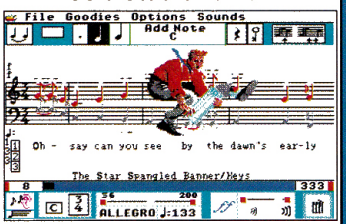

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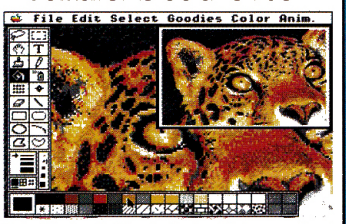

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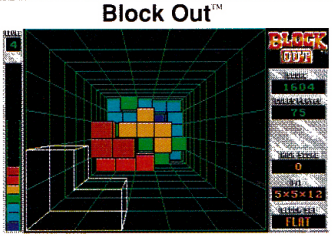

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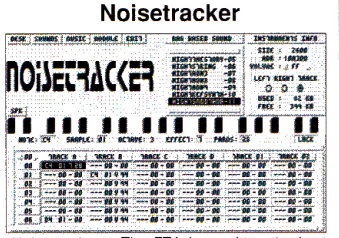

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lighter area within the shadow pattern on the object), to cast shadow as it moves across and away from an opaque object.

That may sound simple (and it is, really), but it's surprising to see the number of people who render an object in light and shade, then omit the cast shadow that places it firmly in its environment. Many other aspiring artists perhaps remember the cast shadow, but draw an unconvincingly flat shadow pattern on the object itself.

Now let's look again at the lighting effects in still lifes, this time in more detail. Note the subtle variation of tone within an object's shadow: After the shadow has reached its darkest dark, it subtly grows lighter again at the point farthest from the light. This variation in shading, which you should incorporate into your pictures, is a result of reflected light from other objects nearby, or from a nearby wall, or in the case of objects outdoors, from the sky itself, reflecting the original light source back from the opposite direction.

The darkest dark in your picture should be in the cast shadow, closest to the point where the shadow trails away from the object. After all, the object itself blocks even reflected light from creeping into that area. As the cast shadow moves away from the object it should gradually become lighter and the edges softer as more and more ambient light gets into it.

WORKING THE EDGES

Paying close attention to a shadow pattern's edges (shading on the object itself) is particularly important if you want to create a convincing illusion of form. The larger and rounder the form, the softer its edge should be.

If you were to shine light on the side of a small white cylinder (about the size of a cigarette), for example, then enlarge the same cylinder to about the size of a telephone pole and put it in the same light, the larger cylinder would have a broad, very soft edge as it went from light to dark, while the smaller cylinder would have a narrow, almost sharp edge in contrast. Also, the "faster" an edge turns, the sharper it should appear in shading. A cylinder's shadow pattern, for example, has a softer rounded edge, but the edge of a box's shadow pattern is quite sharp.

Cast shadows can help you define the edges and the form of your original object. If you draw a straight-on view of a object with a light source shining on its side, for example, its shadow will reveal the shape of its body. (See **Figure 1.**)

PLUGGING IT INTO THE SYSTEM

With these lessons in mind, let's focus on your chosen medium — the computer. This electronic easel provides a few interesting tools that should help you apply some of these principles.

Gradient-fill mode, which most programs offer, will go a long way toward creating a convincingly shaded object. I use it only in a limited way, though, because too often the results look mechanically perfect. This mode also has difficulty with irregularly shaped objects. In fact, sometimes it can create more work than it saves.

You'll have better luck if you use your program's *blend control*. (It may have a different name, depending on your program.) Most programs for the Apple IIGS have a paint mode for shading or blending that's perfect for a technique that resembles charcoal drawing. (In fact, in Platinum Paint it's aptly called *charcoal mode*.)

As we discussed last time in "Palette Primer" (October 1991, p. 56), using this mode requires some careful preparatory work as you set up the palette. You must first create a range of greys (or whatever color you want to work in) that go in an unbroken row from light to dark (or vice versa). The more shades in the range, the better for this technique. A monochromatic palette of 16 shades of the same color is best. (See your manual for set-up instructions.) For those of you using a Macintosh, setting up the palette may be simpler, and the mode for painting is more likely *transparency*.

Then you might begin by roughing out your initial drawing, blocking in the basic shapes and composition. When you're satisfied, it's easiest to fill the shape with a middle value from your range, or if you want to finesse it a little, fill the shape with a middle tone relative to the object's overall value. If it's a dark object, such as an apple, fill it with a dark value. If it's a lighter-toned object, such as an orange, make it a light tone. With that done, you can start on the fun stuff.

Again, working with your program's shade mode is much like using a soft charcoal: If you want an area darker, apply a little more charcoal. If you want it lighter, just rub some of it away. Each spot you rub with the brush (in an area that's filled with part of the range) will shift to a darker part of the range, regardless of the number of values under the brush. To make an area lighter, simply hold down the option key and rub again.

You can vary your strokes, and by changing the size and shape of your brush, you can alter the effects you achieve. Experiment with this method and you'll produce endless variations — and from there you can determine your preferences.

Another handy aspect of your paint program's shade mode is that if you leave one color at one end of the palette out of the range, you can use it as a background color. Then, when you work in shade mode, your brush strokes won't affect this background color. You can "go outside the lines" without changing the background.

Sometimes I like to vary the method described above by filling the entire screen with a middle tone from the range (rather than filling objects), then using the brush to pull out lights and darks — it makes a picture emerge from the background. This technique will give you an even tone overall, unifying the entire picture.

When you use your program's shade/charcoal mode and the techniques described here you'll achieve a great amount of control and subtlety of value. It's ideal for applying the principles of light and shadow discussed above, and it's perfect for working with soft edges.

Whatever method you use, or whatever you come up with in your own exploration, if you're careful to keep a strong sense of light and shade, and make sure that the subjects of your pictures "live" in the same light source, your artwork should take on a new feeling of realism and dimension. ❑

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MUG O' CHEER

"Eat, drink, and be merry" with a desktop-publishing project for the holidays.

By CYNTHIA E. FIELD, Ph.D.

STOP RACKING YOUR BRAIN FOR that perfect gift — turn to your Apple II or Macintosh instead. You probably don't realize it, but you've got the know-how to create custom-designed decorative plastic mugs. Not only are these items great for Christmas gifts, but they can help you celebrate special events throughout the year.

Although you probably own the software you need for this project (virtually any Apple II or Mac graphics program will work), you'll have to purchase the main ingredient — the mugs. Each mug you design consists of two pieces of plastic that fit together to produce an outer transparent layer and an inner white liner. Between these two pieces you place your personalized design or message.

MUGS ABOUND

We first discovered these nifty mugs, called **Make It Yourself Mugs**, in Richman Cotton Company's mail-order catalog. (See "Product Information" for details.) Kelly's Crafts, a company also listed in the Product Information box, sells them as **Kelly's Fun Mugs**. You may also find them in your local department store. Ames, the New England-based discount store, carries the line in its crafts section.

Whatever supplier you choose, the basic procedure is the same. Simply rub some glue from a glue stick onto the back of one edge of a 3.5-by-10-inch computer-printed design, then insert it into the see-through part of the mug. Spread the design so that it fits snugly against the inside wall. Match the design's edges carefully and press the seam so that it makes good contact with the glue. Insert the white plastic mug liner and press together the two mug parts. That's all there is to it.

According to the products' accompanying literature, you can take the mugs apart a half-dozen times before they lose their water resistance. (Disassembling the mug means you can change the design you created.) Hand washing is recommended to extend each mug's life.



Figure 1. A sampling of what you can do with a mug-design project.

ANYTHING GOES

Computerized mug designs, such as those shown in **Figure 1**, can consist of anything you like, as long as your artwork fits on a piece of paper that's no more than 10 inches wide and 3.5 inches high. Almost any Apple II or Macintosh graphics program can fill the bill, but a workaround's necessary with some Apple II products. Let's begin by taking an overview of the mug-design process. Later on we'll provide pointers for creating mugs with **The Print Shop IIGS**, **The Print Shop** for the Macintosh, and **Publish It! 4**.

In general, genuine Apple IIGS programs such as **Platinum Paint** or **AppleWorks GS** — and practically all Macintosh programs — support *landscape* printing mode. Before you begin working on a design, usually all you need to do is pull down the *File* menu, select *Page Setup*, and click on the *landscape* orientation icon. Your design will then print sideways. On a standard 8.5-by-11-inch piece of paper, a 3.5-by-10-inch mug

Photography • Larry Dunn

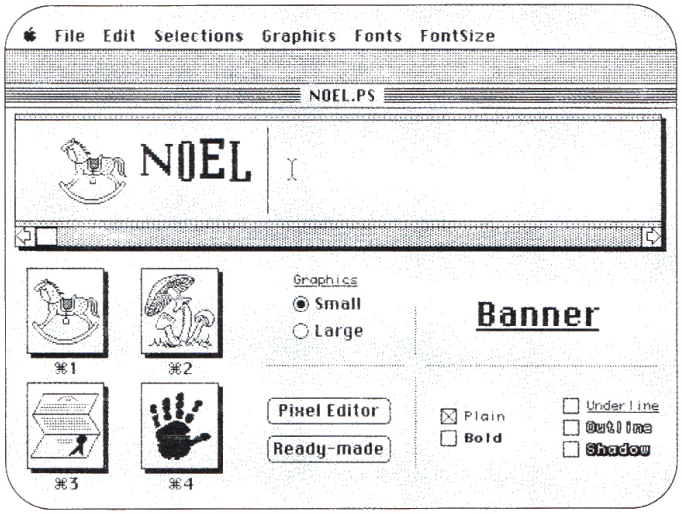

Figure 2. A simple design created on the Mac with The Print Shop.

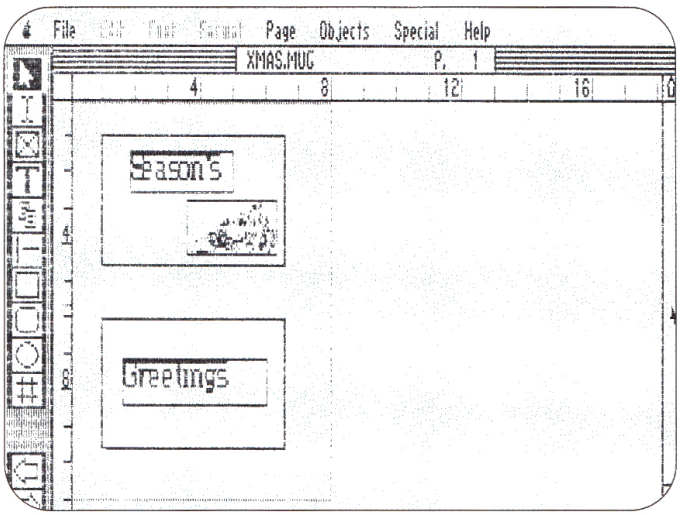

Figure 3. A preview of the design created with Publish It! 4.

template fits fine when printed sideways. (In the interest of saving the environment — or perfecting the art of good old Yankee frugality — use any scrap paper for handwritten notes.)

If you're using an object-oriented page-layout or drawing program such as Publish It! 4 or **MacDraw II**, screen rulers can serve as guides to help keep text frames and graphics images within the boundaries you set for the mug template itself. Depending on your software, you can visualize the outside dimensions of the template by using an appropriate grid, placing custom guides, or *rubber-banding* a bordered text frame or rectangle. (To *rubber-band*, hold down the mouse button, drag the mouse diagonally, and release the button when the rectangle looks correct.) This last option is especially efficient, because you can use the border as a cutting guide.

USING YOUR PAINT PROGRAM

Creating a mug design with a paint program is only a little more challenging. Most paint programs display *x* and *y* coordinates, but because these data provide only a general idea of an object's dimensions, trial and error may be needed to fine-tune a layout that requires some degree of precision.

To their credit, though, bit-mapped graphics programs frequently offer unparalleled design options such as *flip*, *rotate*, *smear*, and *blend*. Paint programs usually let you import a wide variety of graphics formats, too. With an Apple II graphics-conversion utility such as **SuperConvert** for the IIGS you can even use clip art designed originally on "foreign" computers such as the Commodore Amiga.

Although Apple II users can also choose from a variety of object-oriented and bit-mapped graphics programs, the software rarely supports sideways printing. Don't worry, though. Although the procedure requires a smidgen more time and attention, you can split your mug template into two halves, design each part, and use a glue stick to unite the sections before assembling the mug. If the graphics program you use doesn't support sideways printing, the tips we provide below for creating a template with Publish It! 4 will help. Just adapt our method as you see fit.

THE PRINT SHOP IIGS

One Apple II program that "knows" how to print sideways is The Print Shop IIGS, at least when it's churning out banners. Moreover, the program's *Print Options* dialog box lets you reduce a banner to a custom size. Through experimentation, we discovered that size reduction to 33 percent works great. The resulting mini-banner (which is what a mug design is, after all) is about 3.5 inches high.

Be careful to make your horizontal "banner" no longer than 10 inches, though. Otherwise, part of the design won't show when you assemble the mug. For best results, select one of the program's narrower fonts, such as *Sutter*, and keep the message brief. In general, you should be able to fit about 11 characters if you use a single left-justified or right-justified graphics image on the mug. Single- or multicolored Print Shop GS borders seem to have no effect on the amount of space available for text.

Keeping messages brief may seem like a challenge at first, but gather the family together for a Christmas buzzword brainstorming session. Or you could hum some holiday tunes and select appropriate words from the lyrics. *Falalalala*, *Ho-ho-ho*, *Gloria!*, and *Noel* come to mind. Of course, personalizing mugs with recipients' first names or nicknames would be a cinch.

If you want to forgo a message and simply use graphics images for your mug design, you should be able to fit three or four Print Shop GS graphics on each one. We created a colorful design using the *Toot* graphics image provided on the **Print Shop Graphics Library Special Edition** disk that came with our version of The Print Shop IIGS. We were able to fit three of the multicolored trumpets across our minibanner.

MAC PRINT SHOP

Creating designer mugs on the Macintosh is as easy as starting up The Print Shop, double-clicking on the *Banner* illustration, and choosing a graphics image and font. Limited space means you'll want to keep your design relatively simple — such as the one shown in **Figure 2**.

For this sample we chose the *San Francisco* font. Before printing on an ImageWriter II, pull down the *File* menu and choose *Select Colors* to enhance graphics and text. Pull down the *File* menu again and click on the *Top Half* radio button in the *Banner Print Options* dialog box.

PUBLISH IT! 4

Programs such as Publish It! 4 don't support sideways printing, but it's easy to

get around the restriction: Just split the design into two parts. Rubber-band a text frame that's 5.500 inches wide and 3.500 inches high anywhere on the page. Work in *Size to Fit* mode by pressing Open apple-4 (OA-4). Press OA-C to copy, then OA-V to paste and create a "twin" text frame. Drag the second frame so that it doesn't overlap the first.

With the pointer tool, double-click on the first frame (or click on it and press OA-M) to open its *Specifications* dialog box. Click on the *Frame Border* check box. Do the same for the second text frame.

Overlay these text frames with smaller frames that will hold the text of your message. Select the font you want to use. We chose *72-point Wilmette* and put the text in boldface by selecting it with the I-beam, then pressing OA-B. We wanted the *Season's Greeting* message printed in color, so we selected the text, pulled down the *Font* menu, chose *Color*, and clicked on *Red*.

We imported an old-fashioned sleigh scene from **Disk #1011.1A**, one in the series of clip-art disks created by Mollie Ann Matlaf with Vitesse's **Quickie** hand-held scanner. Each **Out of This World** graphics disk provides a self-running slide show for viewing scanned images. Matlaf says that in addition to Publish It!, you can use her clip art with **Tutor-Tech**, **816/Paint**, and **Dazzle Draw**.

After pressing OA-K to preview the design, and generating a couple of draft copies, we printed the final version in double-strike mode. (See **Figure 3**.) Cut out each panel just inside its printed boundary, then use a glue stick to attach the two sections in correct sequence. Proceed in the manner described earlier when it's time for you to assemble the finished mug.

MERRY MUGS

You can have fun experimenting with noncomputerized design elements, too. Consider incorporating some personal photographs or copyright-free clip art from books. You could also try creating collages made from computer-generated text and original artwork — or hand-done calligraphy and electronic art.

Try different kinds of paper in various textures or colors. Cut holiday gift wrap to 8.5-by-11-inch size and print computer-generated text on it — the artwork provides a ready-made background for your holiday greetings. Another quick and painless mug-making product is **Banner Band**, the seamless computer paper that comes in rolls and sports preprinted designs.

Short-run "publications" such as mugs look great printed in color on the ImageWriter II, particularly if you use a fresh four-color ribbon. But you can add color easily without a color printer. Just enter the text of your message in a large font and use the outline style. Then color the letters with markers, pencils, or crayons. Silver or gold glitter adds a festive touch, too.

OPTIONS GALORE

Mugs are endearing, yet inexpensive, gifts. You can fill them with candy, nuts, diminutive soaps in various shapes, or school supplies such as pens and pencils. The possibilities are endless. Personalized mugs make wonderful birthday-party or baby-shower favors. And have you thought about sponsoring a fund-raising mug-athon at your school? Or how about using mugs to promote your business?

Whatever "excuse" you find to have fun making mugs with your Apple II or Macintosh, your creations are sure to be appreciated. Despite petroleum-based origins, plastic mugs can even be good for the environment if they encourage recipients to abandon those made from polystyrene foam.

So sit down at your Apple, fire up your favorite program, and get ready for a very Merry Christmas. See you all next year! ❑

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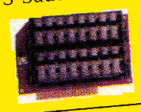

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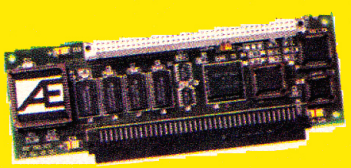

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Continued from page 40

Window a close look. Kitchen Sink Software's 30-day money-back guarantee means you can't afford not to.

Cynthia E. Field, Ph.D.
Wakefield, RI



Fasten your seatbelt and prepare to launch the "latest and greatest" Macintosh educational gameware. With Davidson's New Math Blaster Plus, you join an ecologically minded Blasternaut and his robot friend Spot, cruising the last frontier in search of alien space litter. Four challenging number-crunching missions with colorful graphics images, animated sequences, terrific sound effects, and arcade-style games motivate kids, while six levels of difficulty tax even the most mathematically inclined space cadets.

New Math Blaster Plus is packed with features. In addition to exercise drills and games that focus on a single math operation (such as addition or subtraction) there are review sessions with multiple problem types (such as addition and subtraction, or multiplication and division). A record-keeping system saves student-activity scores to disk, letting parents or teachers track individual performance. You can view records on disk or print them for reference.

Kids who achieve perfect scores in any math activity can print a text scoreboard or graphics certificate acknowledging their success. A program editor lets you, the parent or teacher, create customized problem sets for on-screen drills or printed worksheets. You can also use the editor to generate hardcopies of any New Math Blaster Plus data file in test format. Test makers decide whether the problems display in random or sequential order.

A point-and-shoot user interface with pull-down menus and click-on icons makes the program easy to use. Several menu items feature command-key alternatives for selection by keystroke instead of the mouse. Unfortunately, there are no keystroke alternatives for items in the *Subject* and *Level* menus.

TOUGH CHOICES

New Math Blaster Plus consists of four activities. Each one builds on skills learned previously, but youngsters can proceed in any order. Kids begin with *Rocket Launcher* to review math facts. This exercise features two performance modes: *Study* lets players see a completed equation before they try to solve it; *Solve* requires kids to work out the solution without any hints.

In either mode, correct answers direct the program to assemble a strange-looking rocket on a launching pad on the left side of the screen. After the rocket is completed, a Blasternaut boards the ship and blasts off into outer space. Youngsters have the option of proceeding to the next level for a more difficult round of *Rocket Launcher*, or returning to the main-menu screen to choose a different activity.

In *Trash Zapper*, youngsters must find the missing number in an equation. After five correct answers, the screen changes to an arcade-like trash-zapping game. Challengers must blast floating pieces of trash out of the sky as litter crosses the screen, and earn points for each piece of trash they zap. It takes only a few rounds of trash zapping before addiction sets in; don't be surprised if your child practices solving equations for hours just for a chance to play.

Number Recycler challenges players to make decisions based on number combinations. It features a recycling machine with columns of numbers, operators, and equal signs. Youngsters must analyze an equation to determine whether it's correct. If the equation isn't correct, players enlist the assistance of a Blasternaut who pushes numbers and symbols from the columns into the equation window.

The object of *Number Recycler* is to come up with the right equation while making the fewest possible moves. Like the math exercises in *Rocket Launcher* and *Trash Zapper*, *Number Recycler* doesn't penalize players for taking time to think. There are no clocks to beat — just lots of numbers to analyze. Youngsters solve problems at their own speed, and create strategies to come up with an equation that sends the fewest numbers into the *Zap Chamber*. Its ability to teach kids to analyze problems and plan strategies makes this a terrific game. If it only had a save option, which would enable challengers to quit in midplay and resume later at the same spot, it'd be even better.

The final activity is *Math Blaster*, the game for which the product is named. Elementary-school children have been playing one version or another of this activity for almost ten years — the original Apple II Math Blaster appeared in 1983.

Computer sound, animated graphics, and programming sophistication have come a long way since those pioneering days. The basic game action, however, remains the same, pitting the player against hurtling debris and an encroaching space alien.

BLAST FROM THE PAST

New Math Blaster Plus uses classic drill-and-practice techniques to teach kids basic math facts in a stimulating way. Like its predecessors (Math Blaster and Math Blaster Plus), the software motivates youngsters to master the subject matter for higher scores in action-packed arcade games. Kids don't mind working hard to learn math facts because they receive a lot of audiovisual reinforcement.

Yet New Math Blaster Plus is better than its predecessors. It sports a more sophisticated audiovisual repertoire. Its *Trash Recycler* activity offers more than straight drill. This game encourages critical-thinking skills, because kids must devise problem-solving strategies to do well.

All New Math Blaster Plus activities make math fun. Whether you intend to use this software for math review or to supplement classroom instruction, kids will think it's a blast.

Carol S. Holzberg, Ph.D.
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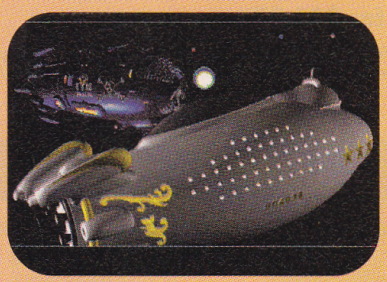

Giant warships, intergalactic space travel, space pirates, and rebel commanders — these are the elements of Saturday-morning cartoons, a cinematic Hollywood extravaganza from LucasFilm, or an exciting *Star Trek* episode. They're hardly the stuff you'd expect to find on CD-ROM for the Macintosh II.

Yet, thanks to the pioneering computer-entertainment efforts of a company called Reactor, Inc. (and its principal programmers, Mike Saenz and Joe Sparks), Spaceship Warlock is now appearing in glorious color on a CD-ROM-equipped Macintosh II near you.

COSMIC OSMO: THE NEXT GENERATION

In many ways, Reactor's Spaceship Warlock resembles Activision's pioneering Cosmic Osmo. Both products invite you to experience the electronic thrills and chills of fantasy space exploration. Both sport an intuitive point-and-click interface with invisible navigational buttons (regions) that permit you to explore and advance your quest. Both offer exciting (but unpredictable) audio-visual reinforcement when you use the mouse to select items on screen.

The similarities stop there, though. Cosmic Osmo is low-tech by comparison. Its two-dimensional black-and-white graphics images pale in comparison to Spaceship Warlock's rich visual artistry. If you like Cosmic Osmo, you'll be amazed by Spaceship Warlock.

Spaceship Warlock takes place in a world dominated by the evil Kroll Imperium — no place for the preschool crowd. This futuristic 8-bit animated wonder spotlights a band of renegade space pirates, led by Hammer, a tough-talking but brilliant rebel commander who makes the Terminator look like a *Sesame Street* character. Hammer's ultimate objective is to overthrow the Imperium and restore the great Terran Empire.

Unfortunately, the Kroll have removed the planet Terra from its orbit and hidden it deep in uncharted space. Whether or not the rebel forces are successful depends on your persistence, your ingenuity, and your control of this fascinating simulation.

THE GAME'S AFOOT

Play begins in the dark alleyways of Stambul City, a seedy concrete jungle that's meaner and more unforgiving than any 20th-century urban metropolis. Stambul monitors, used by the Kroll for propaganda and control, are everywhere. This two-way technology is vaguely reminiscent of Big Brother's watchful eye in George Orwell's *1984*. You must explore the environment in an effort to gain a sense of your mission.

Violence and barroom language (complete with colorful four-letter words) abound. Spaceships and flying cars zoom by overhead. An alien belly dancer struts her stuff in a downtown bar reminiscent of the rough-and-tumble intergalactic establishment encountered in the original *Star Wars* movie.

The game takes several hours to play and doesn't always end successfully. If you get picked up by the planetary police, come face to face with the Galactic Patrol, or bump into other dangerous characters (Hok Tuey, for instance, who is sought by the Stambulian Police Department for armed robbery and assault), the results could be detrimental to your health.

Steal an air car and the sentence is ten years in the salt mines. Run out of fist power and your brain could end up on display, pickled for posterity in a jar filled with Stambulian preservative. It's fortunate that a save option lets you quit in midgame and resume later at the same spot.

THE FUTURE IS NOW

If you're looking for an excuse to purchase a CD-ROM drive and a Macintosh IIsi, Spaceship Warlock may be all the incentive you need. Violence, macho stereotypes, and foul language aside, this product is a feat of masterful programming.

More than 125 megabytes' worth of 8-bit (256-color) high-resolution graphics images are presented in wide-screen letterbox format to heighten the cinematic effect and minimize load times. (They're occasionally difficult to see, though, because they're a bit dark.) The three-dimensional animation sets a new standard for entertainment-software display, as does the slick, pulsating jazz-style musical score. Digitized speech and authentic sound effects transport you from the 20th-century desktop into a futuristic world so real, you'll find yourself reaching for a seat belt to prevent motion sickness during blastoff.

As for technical details, to start the program under System 7.0, you need 3.8 megabytes of free RAM (that's memory over and above what the system is using) plus the Control Panel configured with 32-bit addressing and virtual memory turned off. Reactor recommends a CD-ROM drive with an access time of 380 milliseconds or faster for best results. I tested the product on an original AppleCD SC (500 milliseconds access time) and experienced no major setbacks or noticeable slowdown in animation run time. Regrettably, this hypertext-like movie doesn't play on a Macintosh LC equipped with only a 12-inch display monitor.

Documentation for Spaceship Warlock is skimpy at best. There are no hints to help you work around the seemingly impossible dead ends. Yet, this epic adventure represents a new level for Macintosh CD-ROM entertainment because of its size, 3D graphics, animation quality, and musical score. Now if we can only get the game's designers to make the simulation easier to win. ❑

Carol S. Holzberg, Ph.D.
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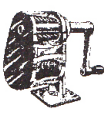
There are  good reasons why you should attend the MACWORLD Expo nearest you. First, attending MACWORLD Expo means you don't have to spend lots of  and  trying to find the best solutions to your computing problems. Second, you can  and  the latest Macintosh products . . . demo hundreds of hardware, software and peripheral exhibits representing the future of  computing. Third, whether you use your  in the , at  or at  you'll learn how to use it better. Fourth, if you develop, produce or sell  products, you'll have a unique opportunity to spot upcoming . And fifth, you'll be able to  your skills, using one of the many   available, to practice what you've learned. So  the coupon below,  and  it for more information. And  this is the original Macintosh-exclusive show. Choose from these upcoming shows:

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MACWORLD EXPOSITION

INC/A 91

SPREADING THE WORD

How can we bring technology into classrooms when school districts are going bankrupt?

By DAVID D. THORNBURG, Ph.D.

As educators, we face a unique challenge: adopt and adapt new technologies into our teaching, or cease to be relevant in the lives of our students. I see no other choice — rapid developments in inexpensive consumer information technologies, such as the Sony Data Discman released last month for under $600, are ensuring that at least some students have far greater access to information outside the classroom than in it. But how can we bring technology into classrooms when school districts are going bankrupt and most vendors seem to be concentrating their new technologies at the high end of the food chain? The answer is to take advantage of the free — or nearly free — technology that's already within the reach of most educators in this country.



ALL THE NEWS THAT FITS

One example is instructional television delivered through cable. While homes pay a few dollars a month for basic cable, most cable companies provide this service to schools at no cost, making the wealth of programming offered by The Discovery Channel, Bravo, CNN, Arts & Entertainment, PBS, The Learning Channel, and Mind Extension University (to name just a few) available for presentation in classrooms.

In addition, many information providers are members of the Cable in the Classroom consortium, dedicated to the provision of commercial-free programming for educational use, often including teacher guides, videotaping rights, and the right to maintain copies of tapes in classroom libraries. All it takes is a cable drop that may already be in your classroom.

If you have an Apple IIe, IIc, or Macintosh in the classroom, your local cable vendor can probably provide access to another service that justifies cable use, even if you never watch television. X*PRESS Information Services (800-7PC-NEWS) crams the contents of numerous wire services (AP, TASS, Kyodo, and many others), along with classroom guides to CNN and other TV offerings, some public-domain software, shareware, and financial information, onto a special channel you receive through a one-way modem. (In addition, Mac users will soon be able to receive a multimedia database, known as The Media Centre, featuring interactive classroom activities supported by color images and sound.)

The modem extracts the coded information from your cable at 9600 baud and ships it to your computer, where you can access it with the X*Change software provided with the unit. (Hardware incompatibilities prevent the IIGS from working with the system; IIes require a serial card.) This information service is part of the basic cable offering in many areas — you may already have X*PRESS signals coming into your school.

Call your cable provider to see whether the company will donate the modem. Some cable services, such as TCI and Heritage, will provide up to two complete setups (modems, cables, and software) per school site at no cost. But even if you have to pay for the modem, it's pretty reasonable — under $100 (including cables and software) for the Apple II version, about $125 for the Mac edition. You'll also want a printer, although you can save the information you've received in a format readable by AppleWorks.

Once you're set up, the software lets you establish categories for information you want to retrieve — weather, news, and so on. The more categories you choose, the faster you'll run out of storage space, but you can trade off breadth for depth by customizing your information stream — extracting only local weather, for example, or news from a specific area. Your computer will scan the header of each incoming story to see whether it fits one of your categories, in

which case it will download the material. You can browse at any time through the stories already received and print them or save them to disk. As you delete stories from the computer, space is freed up for more stories to be downloaded.

If you have an old Apple IIe gathering dust in the closet, you may want to dedicate a computer just for the X*PRESS service and leave it on all the time. Just be sure to have students save and delete the RAM-based files frequently to make room for new information.

THE CHALLENGE

Imagine the impact of this technology on a current-events class. News from TASS on the latest changes in the Soviet Union, for example, streams into your classroom computer at the same time these stories are appearing in newsrooms around the world. Students can collect articles, decide which ones are newsworthy, and create their own daily newspaper. That night, students can watch the evening news to see how the networks deal with the same information. Because wire services from many countries are represented, students get to see the way newspeople from each culture may interpret a given event in its own way — coloring the story as they cover it.

Many schools have cable access, but sometimes teachers don't know it. In addition, many educators lack the time to keep up with all the new technology available. The major challenge in educational restructuring today is not only to bring technology into the classroom, but to provide effective communication on using it with students. The slow pace of technology adoption in the classroom may have less to do with money than with a lack of staff awareness.

If you're a teacher, or know someone who is, spread the word that "multimedia" technology is at our fingertips for free. As Mark Twain said, "Those who don't read have no advantage over those who can't." ❑

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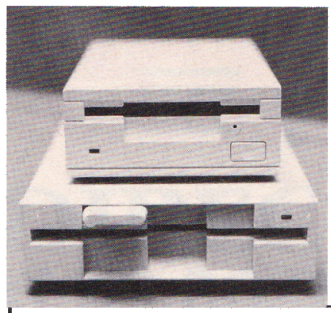

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HINTS

GET THE MESSAGE

A definition here, a shortcut there — our information swap can help you stay one step ahead of frustration.

Edited by THE STAFF OF INCIDER/A+

PROMPTS ON THE MENU

AppleWorks' nested-file-card menu interface makes this package probably the easiest to use, the most logical, of any 8-bit Apple II product — and one of the most imitated. That simplicity of operation comes at a price, though — the time it takes to negotiate up and down through all those menus. If you've enhanced your AppleWorks program with Beagle Bros' TimeOut UltraMacros, though, you can take advantage of some dramatic shortcuts.

This month we'll use a "message menu" to unite October's three file-creation macros under a single keystroke. (See "Automated AppleWorks: Fast File Creation," Hints, October 1991, p. 64.) A *message menu* is an on-screen macro series that prompts you to press one of several keys, selecting some particular action. The keypress is then "trapped" in a macro variable, and the macro determines what happens next. We'll use three special techniques to set it up:

1. First, create a message to appear on the dashed line at the bottom of the AppleWorks screen with the **<msg>** command. Within the macro, the text of the message must be enclosed in quotes — double for standard text, single for inverse — and must always be followed by a colon. **<Msg "">** erases the previous message.

2. Next, define a variable to "capture" the ASCII value of the key to be pressed (as in **<k = key>**), with two effects:

a. This action "pauses" AppleWorks so that the keypress isn't passed along to the program as usual. This way, the macro can use keypresses for tasks other than AppleWorks text or command entry.

b. It makes the key's value available for manipulation by the macro; you can use message prompts as menus, offering the user a choice of actions determined by the key he or she presses.

3. If/then/else logic enables the computer to determine which course of action to follow. In this case, the captured keystroke indicates the action, so the macro examines that information to make its choice. The macro compares the actual content of the variable to criteria provided by the macro author (you). In this macro we use the equal sign (=), so action follows an exact match only.

Include this macro in your default set, along with the three from October. Recompile the set and save it again as your default, and any new file is just two keypresses away.

— Will Nelkin

```
start
=====================================================

N:<all><                                    { NEW FILE CREATION MENU                }
msg ' Create a new file: <1>Word processor  <2>Database  <3>Spreadsheet ':
k = key:                                    { capture keypress in variable "k"      }
if k = 27 then:                             { check for "ESC" keypress              }
msg "" : stop elseoff:                      { if pressed, erase msg and abort macro }
if k = 49 then:                             { check for "1" keypress                }
goto sa-3 elseoff:                          { call "Create AWP" macro, or...        }
if k = 50 then:                             { check for "2" keypress                }
goto sa-1 elseoff:                          { call "Create ADB" macro, or...        }
if k = 51 then:                             { check for "3" keypress                }
goto sa-2 elseoff>!                         [ call "Create ASP" macro               ]

=====================================================
```

Figure. Creating a new AppleWorks file at the press of a key.

TAKE OUT THE PAPERS AND THE TRASH

Don't confuse other users when deleting files on an AppleTalk file-server volume. The icons you carefully put into the trash from one workstation remain visible to other users until you empty the trash, and the file is still available to any other networker who had access privileges in the first place. Why not empty the trash every time you fill it? (On the cutting edge: System 7 eliminates this problem.) **— Paul Statt**

AND NOW FOR SOMETHING COMPLETELY DIFFERENT . . .

For those of you who are wintering on the links down South (and away from computers), here's a tip: When you get up close to the green, don't get stuck in a pitching-wedge mentality. Sure, if you're in the rough, you want the sand wedge, because it gives you the most consistency, but if you're on the first cut and you've got a little green to work with, try different clubs. Take a five- or a seven-iron, choke up, take a nice, easy swing, and think about getting the ball rolling on the green with as little air time as possible. Be careful the first few times you try this, because the ball won't have any backspin and will roll a lot farther than you'd expect. **— Paul Boulé**

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Mac Classic	❑ d	❑ l
Mac LC	❑ e	❑ m
Mac SE/30	❑ f	❑ n
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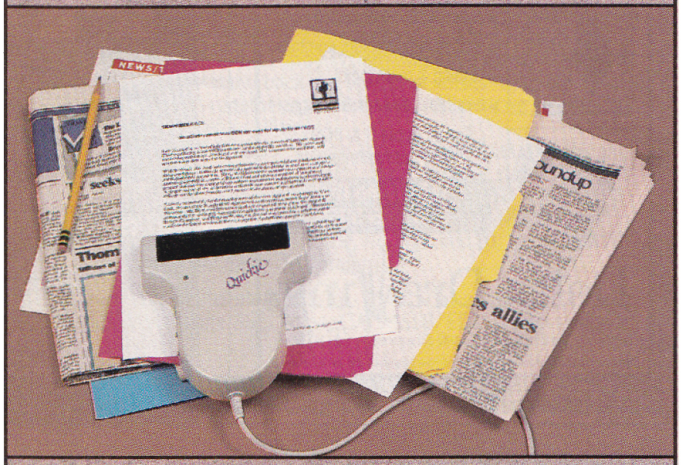

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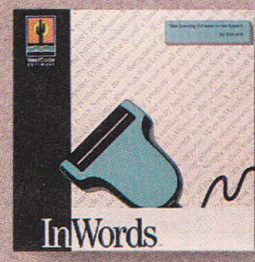

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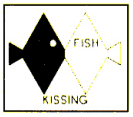

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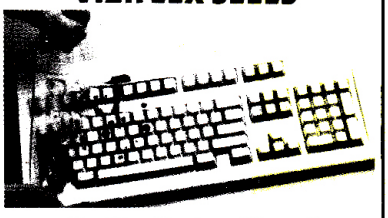

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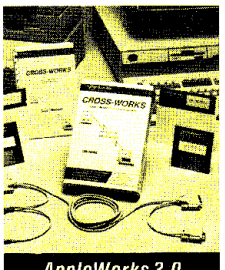

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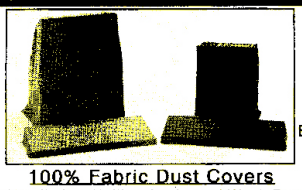

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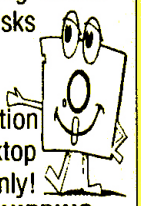

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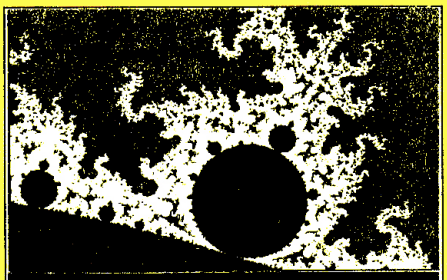

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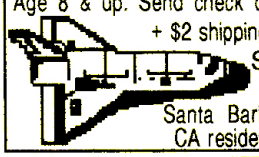

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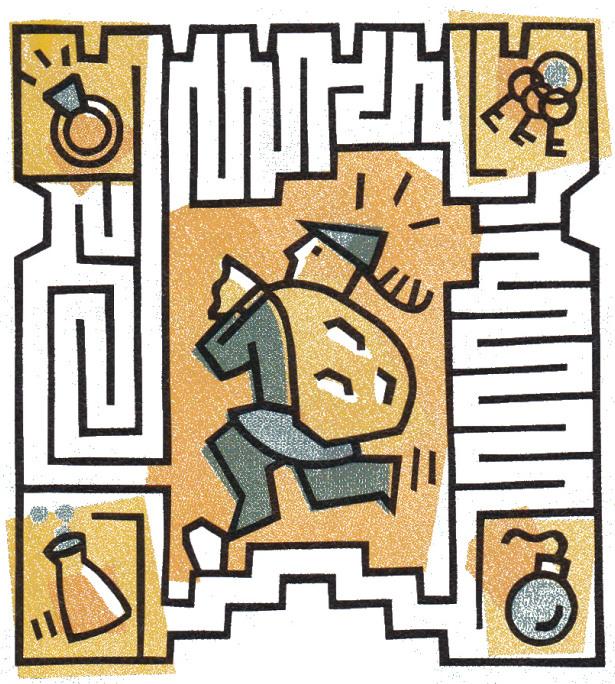
ONCE UPON A TIME

Ever wonder if computer games *have* to be slower and harder to play than Nintendo? They don't. Gate proves it.

Gate is an anachronism — a game that might have been written for the Apple IIGS five years ago. A castle riddled with labyrinths, a prisoner who escapes and must save a bewitched kingdom, magic spells and buried treasure — there's nothing new about any of this. You're charged with the battle against ghosts, magicians, snakes, and other slimy, evil things. You have to sneak through mazes as you seek the gate to the castle's next story. It's the stuff of countless video games. So what makes Gate special?



What's special is that Gate exists at all. The large North American game companies, such as Sierra On-Line and Electronic Arts, no longer write new games for the Apple IIGS. The future of computer games seems to be a machine called Nintendo.

It's fair to compare Gate to a Nintendo game because the new Nintendo Super Entertainment machine just happens to run on the very microprocessor chip the IIGS uses: the 65816. Ever wonder whether computer games *have* to be slower and harder to play than Nintendo games? They don't. Gate proves it.

Gate also looks a lot like Gauntlet, a game that may still be playing at your local pizza parlor or video arcade. Gauntlet lets you choose your character from a cast, but it doesn't offer much intellectual stimulation. Gate is more challenging than an arcade game — it requires you to solve riddles and puzzles. You need your head as much as your trigger finger. (If you know what this is — "The more it grows, the less it is" — please write to "The Game Guys," *inCider/A+*, 80 Elm Street, Peterborough, NH 03458.) Gate has a certain enigmatic appeal. (Apple IIe/IIc and Macintosh owners who like the sound of Gate will be happy to learn that Gauntlet is still available for $14.95 from Mindscape USA, Chicago, Illinois, 312-525-1500.)

Gate has fewer levels than Gauntlet, but there's plenty of action: After sneaking out of a seven-story palace, you still face three mysterious shrines (if you can find them). You can save a game in progress, too.

We did all we could to get to the end, "to find Darg, the master of Fire, and defeat him in a duel in order to restore peace to Divesia," but we never quite uncovered the rascal. We came close because there were two of us — one joystick sharpshooter, two riddle unravelers. But we couldn't have climbed out of the third subbasement without saving a game or two.

Drawbacks are typical of Free Tools Association products (including the popular game Photonix): You can't load Gate onto your hard drive, because it doesn't use GS/OS. Of course, that also makes Gate fast. The graphics images are colorful and quick; the music is bright and moves the action along.

The documentation is sketchy: It's best to learn Gate's ins and outs by flipping to the help screens. Gate runs on ROM 01 and ROM 03 Apple IIGses; it requires only a single 3.5-inch drive and 1 megabyte of memory. It sells for $59, plus a $5 shipping fee.

The best thing that could happen to Gate would be adoption by a benevolent North American distributor with a desire to make a few bucks — a company that could drop the price and simplify Gate's distribution to Americans and Canadians.

Who knows? Maybe if some brave programmer had written Gate in 1986 and had dared to create some other exciting, addictive games for the Apple IIGS in the year of its birth, we might be celebrating the Super Apple IIGS in 1991, not the Nintendo Super Entertainment System. Boot up Gate and see what your IIGS is really made of.

For more information on Gate, contact Bright Software, attention: Henrik Gudat, Pantelweg 2, CF-4135 Reinach, Switzerland 061 711 23 83. ❑

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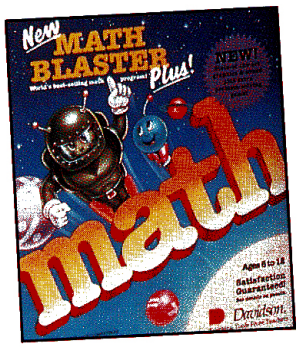

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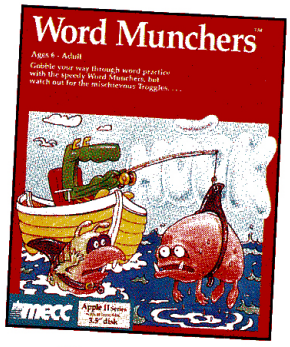

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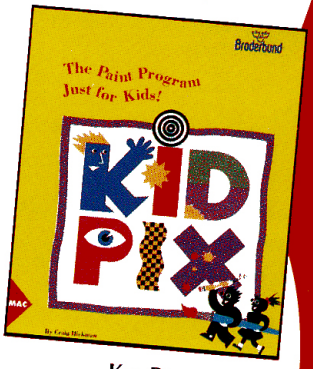

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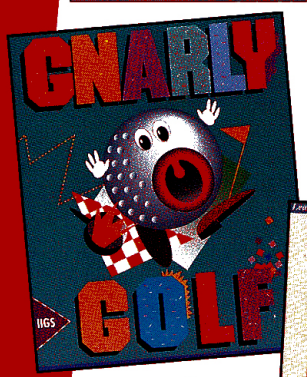

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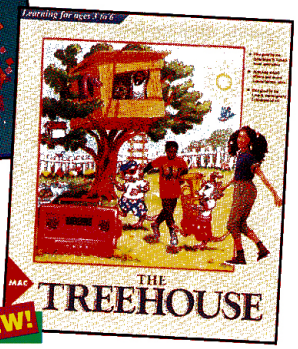

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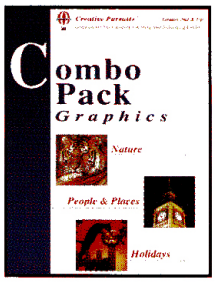

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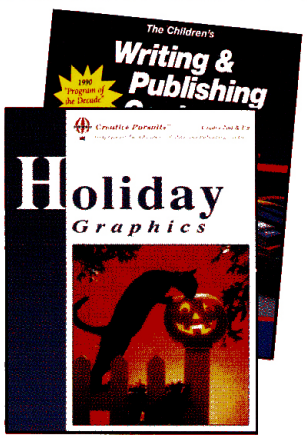

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