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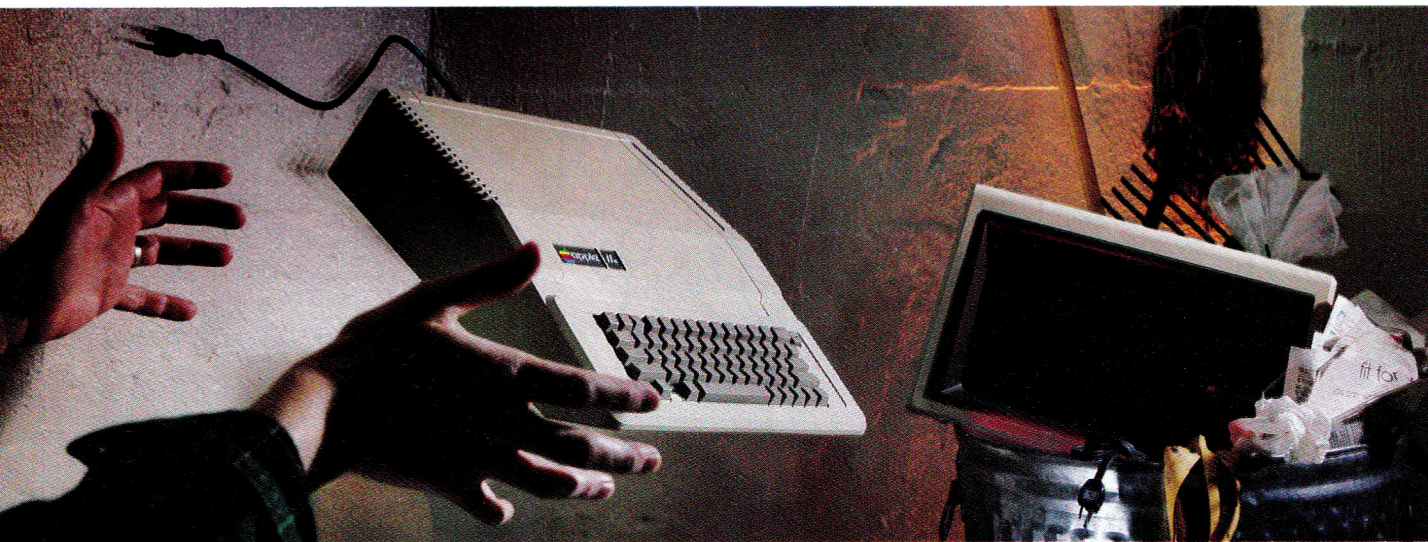
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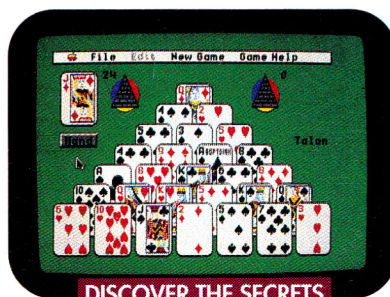
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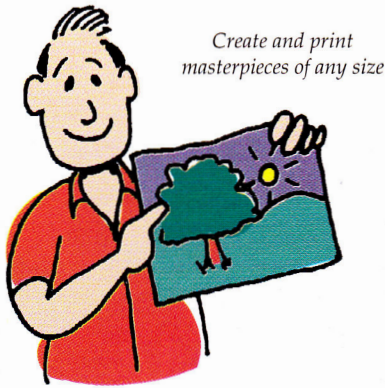
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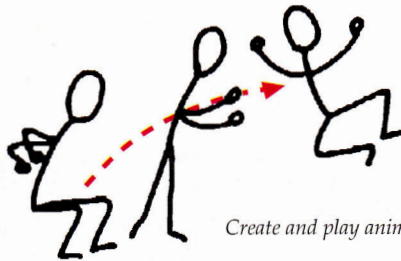
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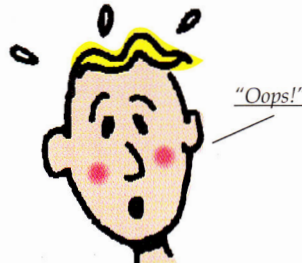
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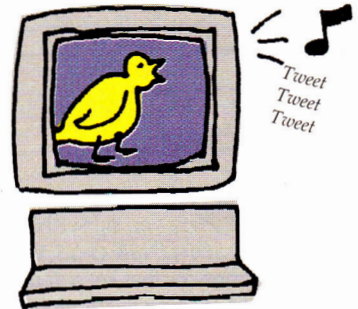
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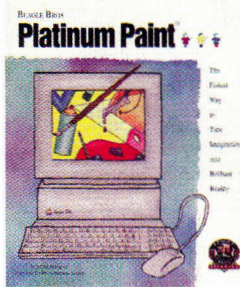
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EXECUTIVE EDITOR Eileen T. Terrill

SENIOR EDITOR Paul Statt

ASSOCIATE EDITOR Cameron Crotty

SPECIAL-PRODUCTS MANAGER Janet Cote

CONTRIBUTING EDITORS Cynthia E. Field

Gregg Keizer

Joe Kohn

Dean Esmay

DESIGN

ART DIRECTOR Jim Fletcher

ASSISTANT ART DIRECTOR Dianne K. Ritson

DTP/MACINTOSH MANAGER Doreen Means

PRODUCTION

PRODUCTION DIRECTOR Sue Gross

ADVERTISING

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SALES REPRESENTATIVE Kevin Gasper
(800) 441-4403

ADVERTISING COORDINATOR Mary Hartwell
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THE VIEW FROM INSIDE

GREAT EXAGGERATIONS

Like Mark Twain's famous response to bogus reports of his demise, news of *inCider/A+*'s death is "greatly exaggerated." The evidence is in front of you. Recent rumors predicting doomsday for *inCider/A+* — with an incumbent reduction or elimination of our commitment to the Apple II — swirled around in every imaginable corner last fall, like maple leaves in a New England windstorm. We heard nearly

every possible scenario, as related to us by individual

By **WILLIAM KENNEDY, Ph.D.** *
EDITOR IN CHIEF

callers and user groups, and in ever-wagging on-line "bulletins" — everything from a report that we're dropping Apple II coverage in favor of Mac, to talk that *inCider/A+* would cease publication.

One caller left an inquiry about our future on my phone mail. He called back a week later and left another message, concluding that since he hadn't heard from me, he was assuming the rumors were true. Too bad he didn't leave a phone number where I could reach him. Such is the stuff of rumors.

Let's set the record straight. At no time did we announce plans to cease publication or abandon the Apple II. In fact, our ongoing concern is how we might *improve* Apple II coverage in 1993, our 11th year of publishing *inCider/A+*.

What started the rumor mill grinding was an unofficial announcement of our since-abandoned plans to redesign *inCider/A+* for the February 1993 issue. We were also toying at that time with ideas for how we're going to treat the Mac in the future. Ah, there's the rub.

Many Apple II owners bristle at any encroachment by the Mac. And perhaps rightly so — for several years now, Apple has been fervently browbeating you to abandon your II and adopt a Mac. Many of us are simply tired of watching the Mac get all the attention. A common theme in our recent conversations with readers is "*inCider/A+* is the only magazine that pays attention to our computing needs. Keep it alive." We intend to.

We also intend to continue our coverage of the Macintosh in *inCider/A+*. That's because many of our traditional

readers, as well as a growing crop of new readers, now

own and use Macs at home or in school to do many of the same things they did with their Apple IIs: desktop publishing, word processing, entertainment, and so on. They, too, like the way we look and read, and turn to us, rather than other publications, for information about their Macs. It only makes sense that we follow and serve our readers.

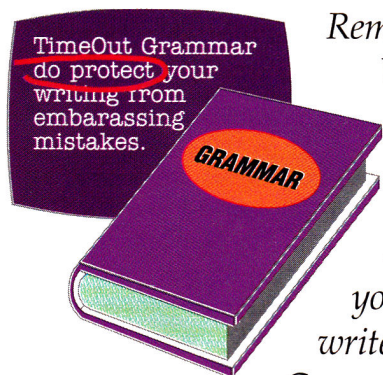
What is now obvious to the editorial staff, and led to all our "redirecting" and "redesigning" soon after I joined *inCider/A+* as editor in chief, is that Apple II and Mac coverage just won't mix regardless of the machines' common uses and products. Our vocal Apple II readers wonder why there's all that Mac stuff in there, and our Mac readers complain they don't get enough Mac coverage.

So next month you're going to see the first issue of the new *inCider/A+*. It'll contain all the classic elements of our Apple II coverage — news, new products, product reviews, Apple Clinic, Shareware Solutions, features, and so on. Inside, in a special section, we'll encapsulate our Mac-oriented editorial, beginning with news, new products, and product reviews. That's what we hear our readers want. That's what we'll keep trying to deliver. Let us know what you think.

Publishing is our business. Honest reporting on the products and technologies in the Apple computing markets is our *raison d'être*, so we must operate independently of any potentially conflicting interest, including Apple Computer. *inCider/A+* is the only magazine that can make that claim in the Apple II world. Help us keep the Apple II alive. □

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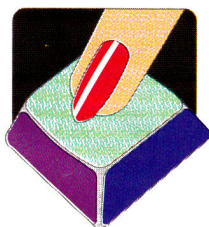
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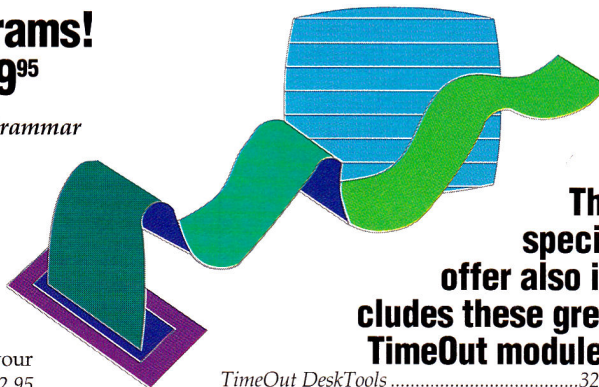
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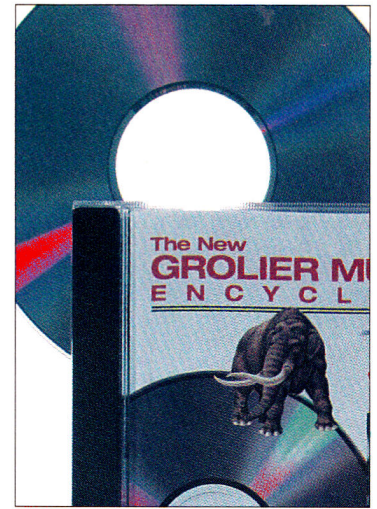
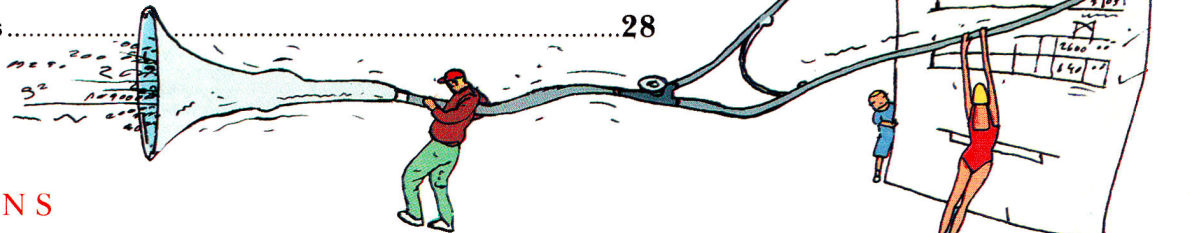
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FEATURES

- Top Ten** by Barry D. Bowen32
 The difference between adults and kids, the saying goes, is the price of their toys. *inCider/A+* presents the CD-ROM hit parade — great classics in ten categories, from fun and games to serious business at home, work, and school.
- Tax Form Reform: Part 1** by the staff of *inCider/A+*38
 Why tax your shoebox and your pocket calculator with the grim task of preparing your federal income-tax return? Come April 15, let your Apple II or Mac do the job. In the first installment of our two-part series, we'll show you in ten easy steps how to itemize your deductions on Schedule A.

DEPARTMENTS

- Letters**8
- What's New**
 Games from Big Red * Apple Expo * New-Product Focus10
- Apple Clinic**
 "Reconcilable Differences": ASCII and Ye Shall Receive * Ta Da! * PC Blues *
 Graphic Language * Font of Knowledge * Happy Campers18
- Reviews**
 Kangaroo22
 Don't let file management tie you down, sport — skip the preliminaries and jump right into the action. *Plus:* Mac Lemmings * Pick 'n' Pile * TimeOut Grammar * MS Works 3.0
- A+ Extracts**28



PAGE 32

COLUMNS

- The View from Inside** * William P. Kennedy, Ph.D.3
 "Great Exaggerations": Like Mark Twain's famous response to bogus reports of his demise, news of *inCider/A+*'s death — or our abandonment of the Apple II — is "greatly exaggerated."
- Shareware Solutions** * Joe Kohn16
 "Lost Classics": Ten thousand software titles have been released in the 15 years since the introduction of the Apple II. Where are they now?
- Grapevine** * Joe Kohn21
 On-line hints, tips, argument, chat, and gossip.
- The Holzberg Report** * Carol S. Holzberg, Ph.D.50
 Hot off the press: quick reviews of recently released software for Apple IIs and Macs.
- HyperActivity** * Dean Esmay58
 "Hiding Places": Simple scripting commands let you stash buttons and graphics in layers concealed within your stack.
- Status Report** * Paul Statt64
 "The Fun of Computing": Lots of programming languages grew up in schools, but only BASIC grew up with a bad reputation.

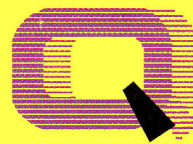


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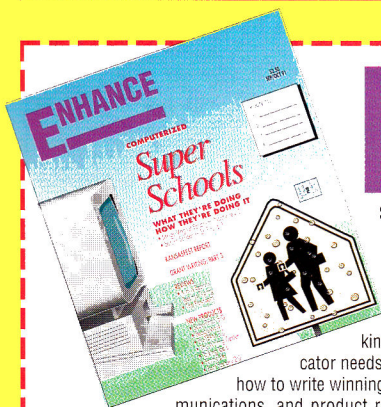
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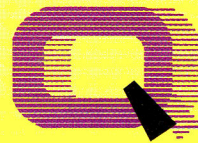
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Memory Solutions for Apple IIe, IIGS

Q-RAM GS

The Q-RAM GS is an economical way to add up to 4 MEG of memory to your Apple IIcs. It's fully compatible with all Apple IIcs hardware and software—including the IIcs RAM Disk and DMA peripherals like the Apple II High Speed SCSI Card. And it's so small that it fits in your shirt pocket.

When you install the Q-RAM GS life becomes just a little easier. Programs load completely into memory at startup, eliminating disk swapping. Out-of-memory error messages disappear. You'll have memory to spare—memory to load desk accessories, or to set up a RAM disk.

Installation is simple. You can expand a Q-RAM GS by snapping in standard SIMMs—we even include the necessary diagnostic software for your peace of mind. And since the Q-RAM GS uses SIMMs, your memory investment won't go to waste.

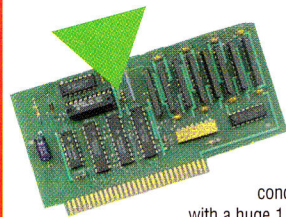
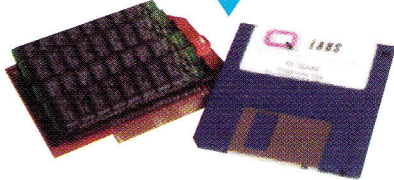
Of course, since you're dealing with Quality Computers, you get an unconditional 30-day money-back guarantee and a five-year warranty. And the price is the best news of all—a 2 MEG Q-RAM GS costs about the same or even less than other IIcs memory cards in a 1 MEG configuration!

Q-RAM GS

1 Meg.	\$99⁹⁵
2 Meg.	139 ⁹⁵
4 Meg.	219 ⁹⁵
Q-RAM II (4 meg. surface mounted)....	199 ⁹⁵

4-Meg. Q-RAM comes with FlashBoot FREE!

Plus, with the 4 MEG Q-RAM GS, you get FlashBoot FREE! FlashBoot lets you quickly save and load a super-fast, super-convenient RAM disk.



Q-RAM IIe

Snap the Q-RAM IIe into your Apple IIe, and you'll create a whole new computing experience. Programs load faster—and completely. A lot less disk swapping. A lot more productivity. All of AppleWorks, plus your TimeOut applications will completely load into RAM. That means you can concentrate on working—not waiting for disk drives. Plus with a huge 1 MEG. treasure trove of RAM, you can create huge documents, and not encounter a single "Out of Memory" message.

The Q-RAM IIe fits snugly into your IIe's auxiliary slot, and comes with diagnostic software, a 5-year warranty, a 30-day money back guarantee, and is 100% software compatible.

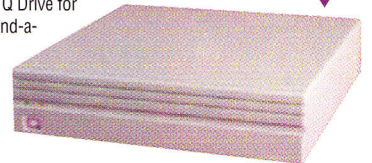
Q-RAM IIe

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ASK ABOUT QUANTITY DISCOUNTS ON Q-RAM CARDS

The Q Drive eliminates disk swapping and helps you work twice as fast!

Thousands of drives later, experts still are praising the Q Drive for its performance and value. *inCider/A+* gave it a four-and-a-half-star rating. Our customers are using words like "amazing" and "fantastic" to describe the way the Q Drive has changed their computing.



The Q Drive features a fast, reliable Quantum mechanism using the latest technology, including auto-parking heads, a voice-coil actuator, and a track buffer. And since the Q Drive uses the industry-standard SCSI interface, you get complete compatibility with your current computer system—and your next, whether it's an Apple II, Macintosh, or IBM.

Comes with Switch Hitter and 15 MEG. of free software

The Q Drive's plain-English manual covers more than installation and setup. It even tells you how to manage your mass storage effectively. From GS/OS and ProDOS to backups and maintenance, it's all there, including a glossary of hard drive jargon. And no hard drive is easier to set up and use—install a card, connect two cables, and turn on the power. The Q Drive automatically configures itself to match your computer, and the latest system software is already installed.

Are you interested in upgrading to System 6 but afraid of compatibility problems? Switch Hitter is your solution, allowing you to keep System 5 on your hard drive when you add System 6! A simple keyboard command selects the desired System version at boot time. Additionally, Switch Hitter lets you change your IIGS's System Speed and Startup Slot at boot time and start up a 3.5" or 5.25" disk, all without having to wait for your hard drive to boot into the Finder.



Q DRIVE

42 Meg.	\$329⁹⁵
85 Meg.	399 ⁹⁵
127 Meg.	499 ⁹⁵
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44 Meg. Removable	499 ⁹⁵
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And remember, you're dealing with Quality Computers, the hard drive leader. The Q Drive comes with a 30-day money-back guarantee and a one-year limited warranty. A great drive and great support, at a great price—that's the Q Drive. Find out why it's the best Apple hard drive value—test drive one today!

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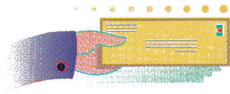
256K (8)	\$19⁹⁵
256K x 4 (2)	19 ⁹⁵
1 Meg. (8)	49 ⁹⁵

SIMMs

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LETTERS



THORN IN HIS SIDE REPLY

I'D LIKE TO COMMENT ON Robert C. Fischer's opinions you published in November 1992 Letters ("Thorn in His Side," p. 11) concerning David Thornburg's July 1992 Learning Curve column ("Small World," p. 64). Fischer's comments suggest that using a computer falls into the realm of fad.

I suspect, however, that Thornburg was expressing regret that the teacher was upset by students' using the computer's alphabetization function to perform a fundamental (but time-consuming) task. Had the computer not been available, the students would have had to do it by hand, all the while wishing a computer were available. I see no reason to be concerned that students use spelling checkers and other time-saving tools. There's ample evidence that mastery of spelling comes about when students read correctly spelled words — what is seen frequently enough becomes memorized.

John M. Longfield
Toronto, Ontario, Canada

GS VS. WINDOWS

THIS LETTER IS ADDRESSED TO all of you who are thinking of replacing your "old" Apple IIGs with a brand-new 386/486 PC-compatible computer. Beware!

I'm especially devoted to the GS now, after thinking I was missing out on something and going out to purchase a 386/40 machine. Forty megahertz, oh, wow — fast! And I get to run Windows, too. To put it bluntly, Windows is *sooo sloooooow*. The GS' Finder blows it away any day of the week.

I'm not saying this because I love Apple, to be honest with you. I was really fed up with Apple Computer: no support and all. I was mad at Apple when I decided to purchase an IBM PC clone.

Well, after buying a 900-page manual on how to optimize the system for Windows, I've come to the conclusion that if you *must* run Windows you must literally spend a fortune: super-fast VGA card, \$200; 10 more megabytes of RAM, \$500; bigger, faster hard-disk drive, \$600; and so on. Your "cheap" 386/40 clone soon costs more than a full-fledged Mac, the machine I was trying to stay away from because I thought it was too expensive.

I ended up with an expensive machine that still doesn't measure up. The GS is *the* "Windows Machine." So please don't make the same mistake and sell or give away your GS because you think it's old. Put a TransWarp or Zip accelerator in it and show the 386 machines how things are done. Upgrade your current system for a third of the price of a Windows clone, and be happy — *you* may feel outdated, but your system's definitely *not*.

Richard W. Custer
Canal Fulton, OH

IIE ENTHUSIASM

I LIKE YOUR MAGAZINE — BUT I'm not going to renew my subscription unless you include more articles about the Apple IIe. I'm not interested in the IIGs or Macintosh or any other computer. I'm interested only in the IIe because that's the one I have and I'm not going to buy another. I do realize that my computer is an older make, but I got it as a prize from Avon. I'm spending my money to update my IIe and learn all I can about it so that I can get the most enjoyment and use out of it.

Bonnie J. Parker
Bremerton, WA

FAMILY-TREE UPDATE

THANK YOU FOR INCLUDING MY Family Tree genealogy program in Cynthia Field's article "Classics in the Making" (December 1992, p. 32). There are a few errors in the description that I'd like to correct.

The price for Family Tree is \$49.95, not \$39.95 as listed, plus a \$2.50 service charge, not \$3.50. The price increase became effective August 1, 1992, and appears in our ad in the same issue on p. 61. AppleWorks isn't required; Family Tree is an independent program that can import and export AppleWorks files. Finally, the address is *Carpinteria*, not *Carpenteria*. Small point, but Please set the record straight — my business depends on it.

Robert M. Merrill
Carpinteria, CA

INCIDER/A+ WELCOMES READERS' COMMENTS. WE RESERVE THE RIGHT TO EDIT FOR CLARITY, STYLE, AND SPACE. ADDRESS YOUR CORRESPONDENCE TO LETTERS, *INCIDER/A+*, 80 ELM STREET, PETERBOROUGH, NH 03458.

CREATIVE VISION IN A CHANGING WORLD

MACWORLD San Francisco 1993

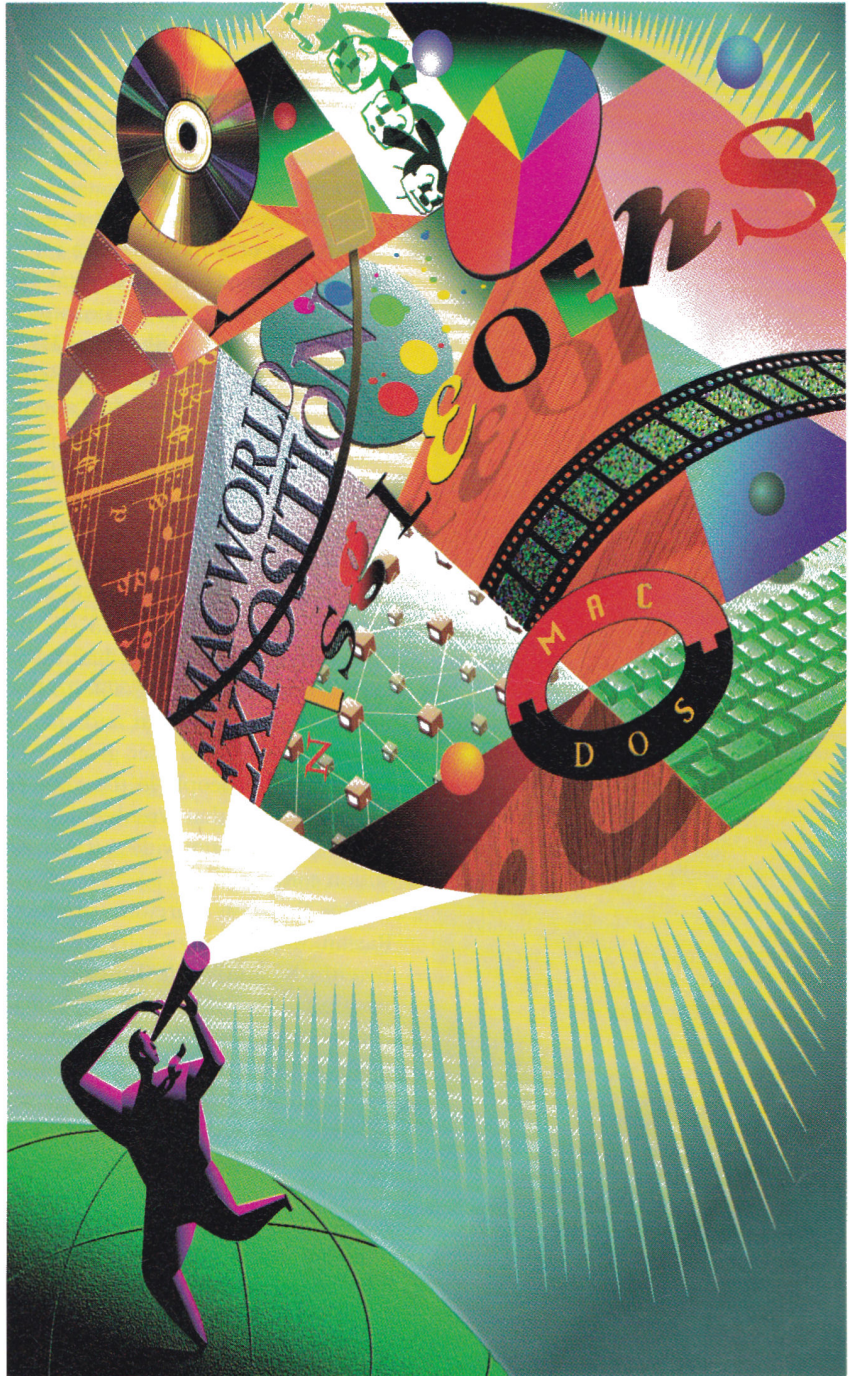
January 6-9, 1993 at Moscone Center

When you look out over the exhibit floor at MACWORLD Expo, it's like looking through a kaleidoscope. Just a slight turn to the left or right, and you get an entirely new and fantastic view. With over 500 exhibitors, at the newly expanded Moscone Center, MACWORLD Expo/ San Francisco 1993 promises you more Macintosh excitement than ever before.

In addition to the exhibition, MACWORLD Expo/San Francisco also offers a complete Conference Program. Guided by a distinguished faculty, the Conference Program provides insights that are simply not available anywhere else. And if your speciality is education, look for MACWORLD Expo's twenty education-specific conference sessions that will demonstrate the many uses of the MAC as a teaching tool. You should also assign yourself to the MACWORLD Expo *MacResource Center*. Sponsored by Apple Computer, Inc., A+ Publishing and MACWORLD Expo, the center is a place for Macintosh-using educators to take a break from the show floor, discover new software solutions and review the *MACWORLD Expo Guide for Educators*. Visit the Center and you may be eligible to win free software, Apple gifts, or a new PowerBook computer!

For more information, please complete and mail the coupon found below. Then mark your calendar for January 6-9, and get ready to see the Macintosh at its absolute best!

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WHAT'S NEW

Apple Expo: East Meets West

A

Apple Expo East in Boston last October attracted almost 7000 people to see the latest Apple II and Macintosh hardware and software — and an even bigger crowd is expected at Apple Expo West in San Francisco on April 23.

Produced in conjunction with the Berkeley Macintosh Users Group (BMUG) and the Bay Area Apple II Users Group, Apple Expo West is expected to draw 12,000 enthusiastic computer users to Brooks Hall for three days of exciting product demonstrations and conferences.

All conferences are free to all attendees; you can expect to hear about the latest trends in multimedia, educational computing, voice recognition, file transfer, and more.

A+ Publishing, the publishers of *inCider/A+*, will be there, as will Quality Computers and the other big mail-order houses. In addition, Roger Wagner will be showing off the new Macintosh version of *HyperStudio*. Whether you have a Mac, a Performa, an Apple IIe/c, or a IIGS, or if you're thinking of buying any Apple computer, San Francisco will be the place to be in April.

At Apple Expo West you'll be able to buy anything on the floor — sometimes at reduced "show special" prices. Apple II owners can choose products from Seven Hills Software, Econ Technologies, Learning Services, Educational Resources, and more. Mac users will find booths of home and educational software from Claris, Intellimation, Scholastic, Wings for Learning, Aldus, and Adobe. Californians can check out the Boston Computer Society to see what East Coast computerists are up to.

Advance tickets for all three days cost only \$15 — remember, that includes conferences as well as exhibits. Contact Events Specialists at (617) 784-4531 for details.

— P.S.

GAMES FROM BIG RED

Everybody talks about the dearth of Apple IIGS games, but Big Red Computer Club of Norfolk, Nebraska, is doing something about it.

Big Red is releasing great new games such as **Out of This World**, re-releasing great old games such as **Crystal Quest**, and even creating new versions of some older games, such as **Shanghai II**. Why? Jon Wrenholt, president of Big Red, says it helps to know something about the company's history.

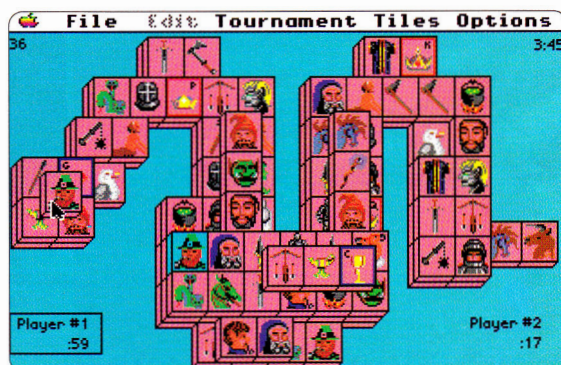
"Big Red Computer Club was founded because there wasn't a local user group in our small rural community," Wrenholt recalls. In 1981 he was working as an accountant, but took out a small ad in *SoftTalk* magazine, "just to see if any other users in small towns had the same experience" of not being able to find all the great public-domain and shareware software available to user groups. There were plenty of people in the same situation — so many that Wrenholt left his job and created a nationwide software distribution company.

"Our first non-shareware product was **Rastan**, which we took over from Taito," Wrenholt says. "We bought all the remaining stock of that game when Taito left the Apple II business." Wrenholt says that's one of two ways by which Big Red can acquire software: It can buy a company's stock of a certain game, as it has with Taito, Accolade, Mindscape, California Dreams, Interplay, and others. Wrenholt prefers this method, because Big Red doesn't have to copy disks or write documentation. "It's cheaper," he admits cheerfully, and the savings are passed on to the consumer. Buying remaining stock doesn't necessarily mean that supplies are limited, either. "Often a manufacturer will create brand-new copies of a game if we run out," Wrenholt explains.

Big Red has also licensed the Apple II games of Electronic Arts, Sierra On-Line, Activision, and MicroIllusions, among others. While this method of acquiring titles carries the drawback of costing more for disks and documentation, it also gives Big Red the chance to bring old games up to date. "For example, we're bringing out **The Lost Classics of Infocom**," Wrenholt says. "These are 25 or so text adventures we've completely rewritten for the IIGS — we added menus, mouse control, and the whole graphical interface." The four **Zork** adventures are expected first, at a price of around \$50 each.

Big Red has also updated Activision's popular **Shanghai: Shanghai II** (\$49.95) looks better and has added different types of game play. And, of course, Bill Heinemann's highly praised version of **Out of This World** (\$49.95) for the Apple IIGS is based on Interplay's widely known PC game. "We have another four new GS games in the works," Wrenholt reports. He says game manufacturers are usually happy to learn that somebody wants to sell their II titles, so he's open to suggestions.

Wrenholt's also curious to learn whether there are any Mac or PC games that have you wondering, "Where are they now?" If you have an idea, want a free catalogue, or want to become a member (and receive substantial discounts), call or write Big Red Computer Club, 423 Norfolk Avenue, Norfolk, NE 68701, (402) 379-4680. — P.S.



BRCC has rewritten Activision's popular Shanghai for the GS. It's bigger, better, and thoroughly addictive.

NEW SOFTWARE

IT'S ABOUT TIME

If time zones, the seasons, and the obliquity of the ecliptic have ever confused you, **The Chronosphere** can show you in beautiful dynamic color just how the sun's light affects Earth.

The Chronosphere is just one of the four modules comprising **Small Blue Planet: The Electronic Satellite Atlas**, a forthcoming CD-ROM for the Macintosh, but it's also available separately on floppy disk for \$59.

The Chronosphere displays a satellite map of Earth — a photograph, actually — on your color Mac's screen, as well as a spinning globe. The part of the world that's in daylight is represented by a precision bathymetric map licensed from the National Oceanographic and Atmospheric Administration; nighttime is shown in the intriguing photo of the world illuminated. You can display the areas of light and dark on the earth for any hour of any day of the year.

Teachers will certainly find this product useful, because, as designer Eleesa Hager notes, "the visual nature of The Chronosphere facilitates quick comprehension of some very technical information through the use of maps that move for viewing the seasons and the rotations of the earth."

But anybody with a color Macintosh will also agree that The Chronosphere is quite beautiful.

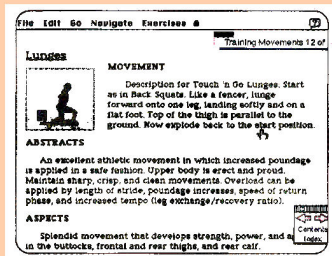
For details, or for more information on the Small Blue Planet CD-ROM, which will also include a wide selection of topographic and political maps

for \$199, contact Now What Software, 2303 Sacramento Street, San Francisco, CA 94115, (415) 885-1689, or circle number 350 on the Reader Service card.

SHAPE UP

Are you a Mac potato, spending altogether too much time exercising your wrists and too little working out?

The Outdoor Athlete: Steve Ilg's Cross-Training Guide for Wholistic Fitness and Sport Performance is one CD-ROM that will get you up and moving.



Steve Ilg is one of the most-creative personal trainers in the business and the author of **The Outdoor Athlete: Total Training for Outdoor Performance**. But a book is static and can't really show you how to exercise, while a videotape is too bulky and too linear. That's where CD-ROM and Apple QuickTime come in.

The Outdoor Athlete lets you pick a training program specific to your sport and print a list of exercises and a schedule. But you can also watch a QuickTime video clip of Steve Ilg performing each exercise and explaining its value as well as how to do it. Because it's QuickTime, you can stop, reverse, or step through each exercise.

The Outdoor Athlete also supplies an interactive journal in which to record your daily workout routines.

The Outdoor Athlete requires a Mac with a CD-ROM drive and 4 megabytes of RAM, but the disc also includes a black-and-white version without QuickTime to take along when you and your PowerBook hit the road.

The retail price is \$39.95, from Cordillera Press, P.O. Box 3699, Evergreen, CO 80439, (303) 670-3010. For more information, circle number 351 on the Reader Service card.

FROM A to Z

Alphabet blocks are an old-fashioned way to teach preschoolers to read and speak English, but Sierra On-Line's **Alphabet Blocks** for the Mac is an interactive, encouraging, and fun way to reach the same end.

And you won't have to patiently repeat each sound, either: Two talking cartoon characters named Bananas and Jack do the job for you.

Bananas, a lovable toy monkey, and Jack the friendly jack-in-the-box, guide children through four different games, teaching letter sounds, letter names, word sounds,

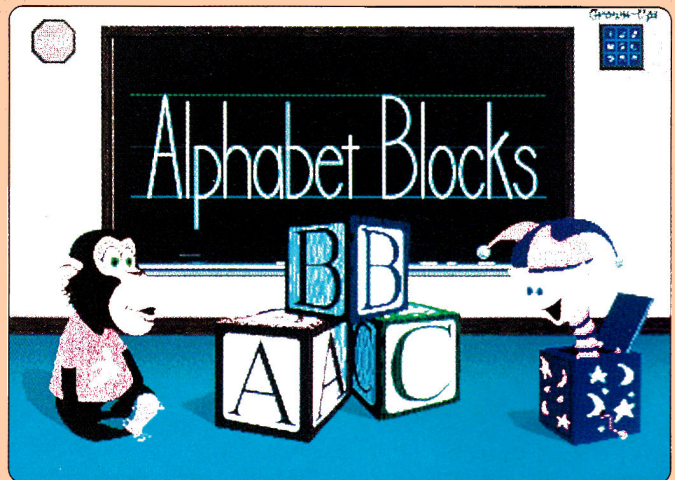


vowel/consonant recognition, and some basic vocabulary. Alphabet Blocks' simple interface introduces children to fundamental computer and mouse operations, but requires no keyboarding skill.

Alphabet Blocks is available for \$49.95 from Sierra On-Line and comes with a money-back guarantee: If parents aren't convinced of the game's learning value, they can return it for a full refund. Contact Sierra at P.O. Box 485, Coarsegold, CA 93614, (209) 683-4468, or circle number 352 on the Reader Service card for more information.

ARTHUR'S CD TROUBLE

Arthur's Teacher Trouble is one story in Marc Brown's popular series of books about the eponymous young aardvark, and is also



Alphabet Blocks updates a tried-and-true kids' favorite as Bananas and Jack teach simple word and letter games.

the latest addition to Broderbund's **Living Books** series on CD-ROM.

The story is delightful. Arthur begins third grade full of hopes, which are dashed when his new teacher turns out to be the evil Mr. Ratburn. But that's not the worst: Arthur now has to represent his class in the school spelling bee, as well.

Good triumphs in the end, and along the way readers of this CD-ROM will learn several dozen spelling words themselves, while being entertained by an animated storybook in which anything and everything can move and speak.

Or young readers may simply ask the computer to read the story aloud, in Spanish or English. However they use it, they'll be entertained and educated at the same time.

Arthur's Teacher Trouble is available for any color Mac with 4 megabytes of RAM and a CD-ROM drive; the paperback book is included with the compact disc.

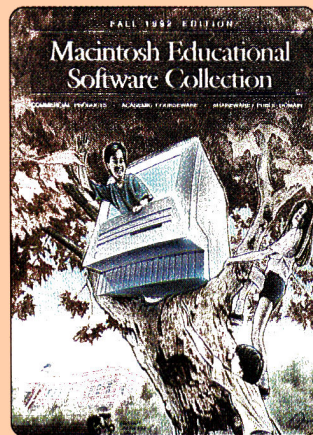
Like **Just Grandma and Me**, the first Living Book, the package is priced at \$59.95. For more information, contact Broderbund Software, 500 Redwood Boulevard, P.O. Box 6121, Novato, CA 94948, (415) 382-4400, or circle number 353 on the Reader Service card for more information.

▲ CLASSROOM COMPUTING

The latest catalogue from Chariot Software Group, the **Macintosh Educational Software Collection**, showcases 360 diverse commercial programs and courseware

products developed by educators for the Macintosh.

New titles include **Create an Ideal Society**, a program that challenges students to visualize and construct a complete community of the future, while enhancing composition skills; **Growing Crystals**, which offers science students alternative ways of



presenting what they've learned; and **Frog and Toad Are Friends**, a bilingual language-arts link between Arthur Lobel's famous story and the student's own perception of the tale.

Other new programs offer instruction in both Spanish and English: **The Life Cycle of a Frog**, **La Historia de California**, and **El Viaje**. **Prewriting Stacks** and **La Preescritura** teach writing skills by providing guidance in content and structure.

The Collection offers a wide selection of shareware and public-domain Macintosh software as well, particularly for early education. Priced at \$8 apiece, these programs are an affordable way to build a school software library.

The Macintosh Educational Software Collection is available to teachers at no cost from Chariot Software Group,

3659 India Street, San Diego, CA 92103, (619) 298-0202. For more information, circle number 354 on the Reader Service card.

■ EASY DOES IT

WestCode's new **HardPressed** is a software solution to a hardware problem: the continual lack of space on a hard-disk drive. With HardPressed, Apple IIGS owners will be able to reclaim up to 50 percent of their valuable hard-disk space — essentially doubling any drive's capacity.

HardPressed is a GS/OS INIT/CDEV. You can install it easily on your **Startup** disk, then simply specify which disks or folders you want to compress.

From then on, HardPressed does its work automatically and transparently. Whenever you create or copy a new file to a HardPressed folder or disk, it's compressed.

Unlike other Apple IIGS compression utilities, HardPressed actually works on files as you use them — it doesn't just create a backup archive.

HardPressed is available for \$69.95 from WestCode Software, 15050 Avenue of Science, Suite 112, San Diego, CA 92128, (800) 448-4250.

For more information, circle number 355 on the Reader Service card.

▲ ■ MISTER CLEAN

Seven Hills Software's **Drive Cleaner** package for 3.5-inch disk drives combines custom software with a 3M cleaning disk and fluid to provide safe and efficient care

of sensitive drive heads. This kit is the only one approved and recommended by Apple Computer for use with its disk drives.

Drive Cleaner software simplifies and improves the process by providing features not available from generic cleaning systems; it eliminates error messages, for instance, by keeping drive heads in contact with an unused part of the cleaning pad. The cleaning disk is inserted only once and rotates until the job is done. The software can even remind you when it's time to clean again.

Drive Cleaner provides 30 cleanings for \$34.95; additional 3M cleaning disks may be purchased separately. The Mac version requires System Software 6.0.2 or higher; the GS version, GS/OS 5.0.4 or higher. For details, call or



write Seven Hills Software, 2310 Oxford Road, Tallahassee, FL 32304, (904) 575-0566, or circle number 356 on the Reader Service card for more information.

■ TO THE POINT

WestCode has now significantly upgraded Pointless, the software interpreter that brings TrueType font technology to the Apple IIGS. **Pointless 2.0** includes many noteworthy new features, including increased speed, decreased memory

requirements, and easier operation. It's faster than earlier versions because it uses a smarter algorithm to generate fonts: Instead of building an entire set of characters in each typeface, Pointless 2.0 creates each character "on the fly" as you type.

Not only does this new algorithm increase the speed of the program, it greatly reduces the memory Pointless requires and lets you use any character without configuring a font first: You simply type.

Pointless 2.0 sells for \$69.95; registered Pointless users can upgrade for \$19.95. Contact WestCode Software, 15050 Avenue of Science, Suite 112, San Diego, CA 92128, (800) 448-4250, or circle number 357 on the Reader Service card for more information.

▲ **MATH ADVENTURES**

You can learn math and have fun, too, thanks to two new educational programs for the Macintosh from Nordic Software.

Your goal in **Jungle Quest** (\$59.95) is to gather all your

tools, retrieve King Solomon's treasures, and rescue King Whatshisname; to proceed, you must solve math problems. It's an H. Rider Haggard romp via HyperCard through African jungles, deserts, and caverns, and safe passage depends on your math skills.

Turbo Math Facts 1.0 (\$49.95) sounds like a day at the race track — engines roar, the crowd cheers, trumpets sound, and cars crash — but it's really a serious educational product. Racers advance by solving math problems; the concept is easy for young learners, but the higher-level problems will challenge everyone.

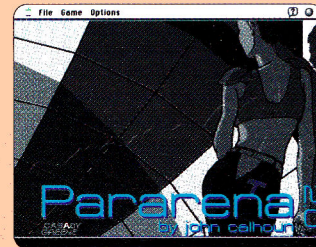
Both products are published by Nordic Software, 917 Carlos Drive, Lincoln, NE 68505, (402) 488-5086. Circle number 358 on the Reader Service card for more information.

◆ **APPLEWORKS FOR THE TEACHER**

The **AppleWorks Educator** newsletter now includes a valuable disk of files and

templates with each quarterly issue. Four times a year, teachers receive a newsletter full of application ideas, tips, and news for and about AppleWorks and AppleWorks GS — and they can put them to work immediately, thanks to the related files and templates on the enclosed disk.

The **AppleWorks Educator** costs \$35 a year for the quarterly newsletter and disk. An even better deal is the \$44.95 subscription that includes the **AppleWorks Teacher Resource Disk** — a double-sided floppy disk containing useful files for teaching and learning AppleWorks. Call or write The AppleWorks Educator, P.O. Box 72, Leetsdale, PA 15056, (412) 741-4110, or circle number 359 on the Reader Service card for more information.



▲ **FLY ME TO THE MOON**

Casady & Greene's latest offering pits you against your Mac, a friend, or your coworkers on the network in a game of intergalactic skateboard roller derby — and it's some wild ride. Players glide on on-screen hoverboards across the surface of a spinning flying disk as they try to bump, push, or knock a ball into one another.

Formerly a shareware product, **Pararena 2.0** has been upgraded with color,



graphics, sound, and network compatibility. The suggested retail price is \$59.95, from Casady & Greene, 22734 Portola Drive, Salinas, CA 93908, (408) 484-9228.

Circle number 360 on the Reader Service card for more information.

◆ **THE GROUP**

Mastery Development has improved its **School Network and Tracking System** software for Apple IIs with powerful **Groupload**, a utility that lets a teacher load software onto every computer on the network simultaneously with just a single keystroke.

For example, a lab of 30 computers in a Mastery Development network can be up and running the Children's Writing and Publishing Center (The Learning Company) in fewer than 8 seconds, or 30 MECC programs in as little as 3 seconds.

The Mastery System is unique: It lets teachers track individual student progress electronically. The system prescribes further student activity and reports progress to student, teacher, and parent. The principal can evaluate the performance of the entire student body. The network lets schools run whatever software they like.



Math is the key to King Solomon's treasures in **Jungle Quest's** rollicking romp across Africa.

For a free 30-day test drive, call or write Mastery Development, P.O. Box 3126, Redmond, WA 98073, (206) 885-6927. For more information, circle number 361 on the Reader Service card.

▲ OUNCE OF PREVENTION

Backing up is like brushing your teeth: Everybody does it, but nobody does it enough. **FileDuo** makes backing up your Mac hard drive practically invisible. It's a control panel that lets you set automatic backups easily; it waits in the background for the scheduled backup, which it performs in an instant. You can customize the types of files you want to back up and the times for backups. And FileDuo backups need no restoration — they're exact duplicates of original files.

FileDuo's suggested retail price is \$149; site licenses are available. Contact ASD Software, 4650 Arrow Highway, Suite E-6, Montclair, CA 91763, (714) 624-2594, or circle number 362 on the Reader Service card for more information.

■ THROUGH THE PRISM

Prim, a fast and powerful conversion utility from New Concepts, exploits the graphics abilities of the Apple IIGS fully. Prism lets you load and convert images created with Macintoshes, PCs, or Amigas, and save them in Apple IIGS format for use with HyperStudio, HyperCard IIGS, Platinum Paint, DreamGrafix, AppleWorks GS, or Graphic-Writer III.

Prism supports both 320- and 640-mode Apple IIGS

graphics, in gray scale, 16, 256, or even 3200 colors. It can load and convert GIFF, IFF, and Allison (or Visionary) raw data files. You can resize images, and dither, mix, blend, or sharpen colors. The program is fast and easy to use, and is priced at \$54.95, from New Concepts, 665 West Jackson Street, Woodstock, IL 60098, (815) 338-4227. For more information circle number 363 on the Reader Service card.

■ 3, 2, 1 — CONTACTS

Contacts **GS** is a handy address and phone-list desk accessory for the Apple IIGS — it'll keep all your friends' and business associates' names and phone numbers at your fingertips for maximum convenience. Best of all, this program can call your contacts for you. You don't need a modem — just a Touch-Tone phone that will reach your GS' internal speaker. (But it'll work with your modem if you have one.)

You can access the program easily from any desktop application. Search for entries by first or last name, city, area code or number, or by either

Contacts **GS** requires HyperCard IIGS, and costs only \$14.95, from Simplicity Software, 13045 Chapman Avenue, Suite 302, Orange, CA 92668, (714) 283-3957. For more information circle number 364 on the Reader Service card.

▲ NEW HARDWARE

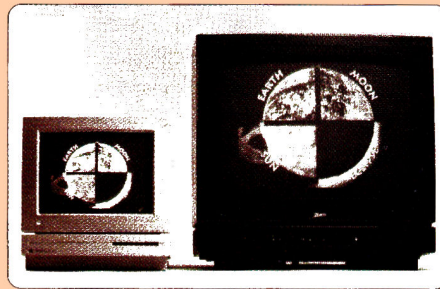
▲ TURN ON YOUR LC

Thanks to Lapis' new **L-TV** board, it's finally possible to view your favorite software programs on a television screen hooked up to your Mac LC. It's a simple interface card, providing NTSC-standard RCA output to the television and composite video to the Mac monitor for less than \$300.

That means that for classroom lessons, closed-circuit TV, training demos, presentations, or recording on videotape, you can use a television set to display the software and your color computer monitor at the same time as the master control. Because the cable connecting your LC to the television set is 25 feet long, you can easily arrange your space with the computer in the back of your classroom, say, and the TV in front.

Mac software will look great on television with L-TV — it can display as many as 32,768 colors at

512-by-384 resolution. The card includes a socket for a math co-processor, too, so you won't give up your LC's single expansion slot completely.



of two miscellaneous note fields. Contacts **GS** isn't a database program, but it can import ASCII data from yours into its convenient format.



L-TV sells for \$299, from Lapis Technologies, 1100 Marina Village Parkway, Suite 100, Alameda, CA 94501, (510) 748-1600. For more information, circle number 365 on the Reader Service card.

■ FAST CHIP

Western Design Center is now offering an improved, fully static **W65C816PL-E** microprocessor chip for the Apple IIGS. In combination with an Applied Engineering TransWarp **GS** or Zip**GS** card, the chip can almost double the speed of your machine.

By replacing a single chip — used in both of the popular accelerator cards named above — with a W65C816PL-E, you can increase the speed of your Apple IIGS by 176 percent: from 7 to 12.3 megahertz. You can learn how to replace the chip through the newsletters of the National AppleWorks Users Group (NAUG, Canton, Michigan, 313-454-1115), or from Western Design Center directly.

For more information, circle 366 on the Reader Service card, or send a self-addressed, stamped (52 cents) envelope to Western Design Center, 2166 East Brown Road, Mesa, AZ 85213, (602) 962-4545.

Memory Expansion - Apple IIgs

Applied Engineering

AE GS-RAM Ultra 1MB\$115 2MB\$155 3MB\$209 4MB\$235

Sequential Systems

RAM GS 2MB\$109 4MB\$134.95

New Concepts

NCS RAM III 1MB\$109 2MB\$159 4MB\$249

CV-Technologies

RAM GS Expander 1MB\$88 2MB\$121 3MB\$155 4MB\$189

CV-Tech/RAM GS Bundle 5MB\$219 6MB\$257 8MB\$325

The CV-Tech memory card lets you piggy-back your existing 1 or 4 megabyte RAM card onto the CV-Tech card for a total expansion of up to 8 megabytes.

NOTE: GS-RAM and GS-RAM Plus are NOT compatible!

Memory Expansion - Apple IIe/IIc/IIcx

Applied Engineering

AE RAMWorks III 256K\$129 512K\$145 1MB\$175

AE Z-RAM Ultra III (IIc) 256K\$174 512K\$199 1MB\$229

AE RAM Express II (IIc+) 256K\$149 512K\$169 1MB\$199

Sequential Systems

MEG 80 Apple IIe expander 1MB \$69.95
80 columns built-in

RAM IIc w/80 columns 256K\$95 512K\$109 1MB\$119

ImageBuffer 32/64K \$49.95 Apple IIe 80 column card \$27.95

Parallel card IIe, IIcS \$59 Serial card IIe, IIcS \$79

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1meg RAMFast upgrade kit \$54.95

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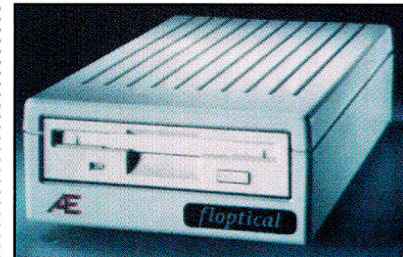
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Looks like a Duck, Quacks like a Duck...?

The new 21 megabyte optical drive from Applied Engineering.

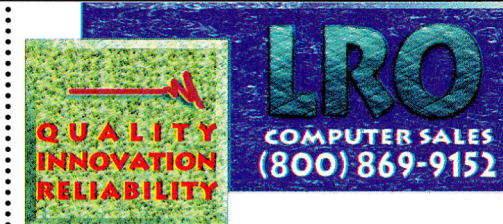
Just because this slick new drive looks like yet another external floppy drive, doesn't mean it is just that. This drive gives you the convenience of removable storage with its low-cost 21 megabyte optical disks, yet is capable of reading and writing your existing 720K and 1.44MB floppies as well. You get two drives for about the same cost as a new Apple 3.5" drive. It has dual SCSI ports and supports the PC Transporter. If you're in the market for another drive, this one just might fit the bill...ahem... (besides, it looks great next to our NCS Pro drives...)

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ZIP GS accelerator 8/32.....	\$233.95
ZIP GS accelerator 8/16.....	\$173.95
ZIP GS accelerator 7/8.....	\$133.95
ZIP 8000 IIe, II+.....	\$135.95

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AE DataLink Macintosh LC w/send FAX.....	\$219
AE DataLink 2400 GS w/send FAX.....	\$209
ZOOM 2400 modem w/cable.....	\$99
ZOOM 2400 modem w/cable and ReadyLink/IIe,IIcS.....	\$119
AE ReadyLink software.....	\$58
ProTerm 3.0.....	\$77

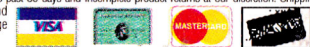
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SHAREWARE SOLUTIONS
BY JOE KOHN

LOST CLASSICS

Ten thousand software titles have been released in the 15 years since the introduction of the Apple II. Where are they now?

Software products have a limited shelf life. Many are sold for a year or two and then disappear; as with books and records, there are more titles out of print than in print. Even the largest Apple II mail-order vendors stock no more than 1000 titles at a time. What about the other 9000?

Commercial software may be created in house at large publishing firms, or licensed by publishers from independent programmers. Either way, once the software is no longer available for purchase, the copyright reverts to the programmer. Unfortunately, thousands of titles from the '70s and '80s are just occupying space in programmers' garages.

In 1987, however, Ken and Roberta Williams of Sierra On-Line initiated a new trend in the Apple II world: They re-released their first-ever hi-res adventure, **Mystery House**, in the public domain, with the request that if people enjoyed the game they should send \$5 to the Williams' favorite charity organization.

That was only the beginning: Over the next five years, hundreds of titles that were once available commercially have been re-released as either freeware or shareware. **Command.Com**, for example — a ProDOS 8 shell that simulates the MS-DOS command-line interface — was sold for several years by Pinpoint Publishing. When Pinpoint went out of business, the copyright reverted to the program's authors, David Sugar and Les Kay, and they re-released it as a \$35 shareware program for the II.

Around that time, too, Barney Stone of Stoneware Technologies developed DB Master Professional, a relational database for Apple IIs, and consequently re-released **DB Master 5.0**, the most powerful flat-file database program ever available for the Apple II, as a \$45 shareware offering.

Programs that once cost up to \$200 are now available from on-line services and Apple II user groups. Everybody benefits: Authors make a little money, and Apple II users are acquiring fantastic software at a fraction of its original cost. It's a "win/win" situation.

Some longtime Apple II programmers also want to give something back to the Apple II community in thanks for years of support. Bob Garth, creator of **Apple Conference Terminal**, a telecommunications program that lets two people with modems play chess over the phone lines, and **ProTree Elite**, a powerful bulletin-board system (BBS), now offers both programs as freeware. Peter Ward once tried to sell his fast-action arcade game **South Pacific Quest** commercially, but was rejected, so he's released it as freeware.

In 1992, Tim Tobin, an aerospace engineer and longtime Apple II owner from Southern California, became the librarian on GEnie's on-line Apple II area. One of Tobin's first acts was to launch the **Lost Classics** project. "We're embarking on a search for people who programmed old Apple II software, to get them to update, or let us update, their software, and to make it available again," explains Tobin. "We also want to provide an 'archive' place for them, free of charge, even if they aren't interested in having the software updated or released."

In a press release published on GEnie, Tobin expands on his plan and outlines the three main goals of the project: "to find and preserve classic Apple II software, including source code whenever possible, [in an effort] to prevent inadvertent loss owing to accident or misplacement; to provide access to commercial software titles that have become unavailable otherwise; to provide a center for dated software in need of updating [so that it can] remain compatible with modern Apple II hardware and system software."

Tobin emphasizes that programmers who don't want to distribute their software on line are invited to partake of the other services offered by the Lost Classics project — particularly registration in the programmers' clearinghouse database and safe storage of their software. Tobin says that GEnie is in the process of setting up an optical-disc cartridge system for off-line storage of programs and source code. "This provides geographically separate 'safety' storage," he explains, "which we guarantee won't be distributed without express permission, and which the author can use to support whatever update/upgrade plan he or she may have in mind."

Through his diligence and detective work, Tobin has already located a number of first-generation Apple II programmers and convinced them to re-release their old software as freeware.

Tobin tracked down Paul Lutus, for one, at his mountaintop cabin and learned that he's now involved in programming virtual-reality animations on IBM and compatible PCs. Lutus attained superstar status in the early days of the II by creating **AppleWriter**, a powerful word-processing program that even includes a built-in language allowing PostScript output from a stock IIe or later computer. Thanks to Tim Tobin and Paul Lutus, AppleWriter is now available as freeware, as are all Lutus' other programs from the early '80s, including **GraForth**, a graphics-based Forth language compiler, and **Electric Duet**, a two-voice music program that thrilled the II community a dozen years ago.

Tobin next located the one and only Bill Budge, another Apple II luminary. Budge is currently spending a lot of his time windsurfing on San Francisco Bay and creating pinball games for the Sega Genesis machine. Budge stunned the Apple II community a decade ago when he released **Raster Blaster**, a hi-res pinball game that looked and played just like the real thing. He embraced Tobin's Lost Classics project readily and donated Raster Blaster and its associated source code, as well as **Space Album**, **3-D Graphics System**, **Tranquillity Base**, **Night Driver**, **Pinball**, and **Space Wars**, to the Apple II community as freeware.

The Lost Classics Project continues to grow and currently offers a large body of high-quality freeware and shareware. If you own the legal rights to any Apple II lost classics, contact Tim Tobin or Shareware Solutions to work out the details of re-releasing your older software as freeware or shareware. With your help, the Lost Classics project can help transform the phrase "Apple II Forever" from a slogan into a reality. "The Apple II's effect on modern computing has changed the way an entire generation thinks and acts," comments Dean Esmay, GEnie's Apple II Roundtable manager and **inCider/A+** contributing editor. "We're not about to let that pass into oblivion."

CONTACT TIM TOBIN ON LINE AT HIS GENIE E-MAIL ADDRESS (A2.TIM), OR AT LOST CLASSICS PROJECT, 23002 CAROLDALE AVE., CARSON, CA 90745-4606, (310) 813-5697. IF YOU HAVE QUESTIONS OR ARE HAVING DIFFICULTY LOCATING ANY LOST CLASSICS, WRITE TO JOE KOHN, 166 ALPINE ST., SAN RAFAEL, CA 94901. ENCLOSE A SELF-ADDRESSED, STAMPED ENVELOPE FOR A REPLY.

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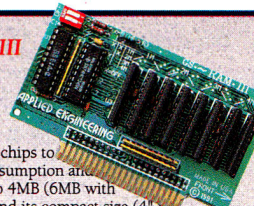
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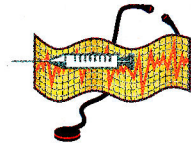
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BY CYNTHIA E. FIELD, Ph.D.

ASCII AND YE SHALL RECEIVE

I HAVE A GS, AND MY KIDS USE MACS in school. System 6 recognizes the Mac disks and transfers the word-processing files to a ProDOS disk, but AppleWorks GS can't open them. I need to switch files between machines.

Charles Fox
Wilmette, IL

You don't say which Mac word-processing program your children use at school, Charles, but *ClarisWorks* and *MacWrite II* are among the most popular. *AppleWorks GS* snubs native Mac files, so the trick is to save each word-processing document in a form the GS and the Mac both recognize. For *ClarisWorks* and *MacWrite II*, that's *AppleWorks 2.0* or text, listed in the Save as... menu, located near the bottom of the Mac's Save as... dialog box.

At home, *AppleWorks GS* will open the *AppleWorks 2.0* word-processing file or the generic text file. Then, after editing his or her homework assignment, essay, or report, your child can save the document as an *AppleWorks GS* file. (Make sure the With formatting radio button is selected in the Save as... dialog.) At school, *ClarisWorks* or *MacWrite II* will open the *AppleWorks GS* document correctly and with most formatting features intact.

If your children use a Mac word processor that doesn't recognize *AppleWorks GS* documents, though, save the files in ASCII (American Standard Code for Information Interchange) format by selecting the As ASCII Text radio button in *AppleWorks GS 1.1*'s Save as... dialog. Although text files lose special formatting features such as paragraph justifi-

cation and type-style effects, they're perhaps the easiest kind to share among seemingly incompatible computers. For additional insights into sharing files between Macs and Apple IIs, see "Works in Progress" (August 1992, p. 36).

TA DA!

IN AN EVER-CHANGING INDUSTRY like personal computing, it pays to stay on top of the latest trends. Take "competitive upgrades," for example — deals commonly offered to Mac and PC users. In the typical competitive upgrade, a software publisher lures people to his or her program by offering it at a significantly reduced price to users who make the switch from another company's product. Is it capitalism or cannibalism? Who cares as long as the consumer wins? Well, here's one such offer that's too good to pass up.

Seven Hills Software is now offering **GraphicWriter III**, regularly priced at \$149.95, for only \$60. To qualify, send the company an original **Publish It!** program disk or the front cover of your **Publish It!** manual. (Any version of **Publish It!** is acceptable.) Besides providing innumerable desktop-publishing features, **GraphicWriter III** is an authentic System 6.0-savvy GS program (1 megabyte required). That means you can use all your "way cool" desk accessories as well as **Pointless**, WestCode's TrueType font manager for the GS.

By the time you read this column, Seven Hills Software is expected to release an updated version of **GraphicWriter III**, which company president Earl Childers says incorporates new features gleaned from user wish lists.

PC BLUES

FOR THE LAST SEVERAL YEARS I've been using an Apple II Plus with CP/M and WordStar to write manuscripts. I recently purchased an IBM PC compatible. How can I access the data saved on my Apple disks? Is there any program that will let the two machines communicate with each other? If not, can they communicate through modems?

John E. Ward
Sacramento, CA

When I began toting an IBM PC-compatible laptop a few years ago, John, I encountered a similar problem, except in reverse: I needed to transfer files from the PC to the Apple IIGs. **Cross-Works** always did the trick. This handy product from **SoftSpoken** includes Apple II and PC software disks and a null-modem cable to connect the two computers' serial ports. (A null modem isn't a modem at all; it just subs for one in the absence of a phone line.)

But **SoftSpoken** President Bruce Carbrey says that **Cross-Works** requires at least an Apple IIe. Moreover, **Cross-Works** doesn't support CP/M-formatted disks — just ProDOS disks. Carbrey says some **Cross-Works** fans use **ProDOS System Utilities**, provided on disk with most Apple IIs, to convert files from DOS 3.3 or Pascal to ProDOS. Neither Carbrey nor I know of a utility to convert CP/M to ProDOS, though.

The good news is that you don't need any utility software to transfer files from your II Plus to your PC. All you need is this straightforward method described by Greg Schaefer, author of the Apple II telecommunications program **ProTerm 3.0**. First, unless you have one already, beg or borrow a **Super Serial Card** to use in your Apple II Plus. Set the card's jumper block to the printer position and install the card in slot 1. These settings will trick the Apple II Plus into seeing your PC as a printer.

On the PC side, all you need are a telecommunications program and a PC-to-modem cable. Schaefer says you can order the cable from virtually any purveyor of PC peripherals. The shape of your PC's communications port

determines the type of cable you need. Generally speaking, COM1 and COM2 ports take either a DB-25 or a DB-9 connector. On the Apple end, the cable should have a DB-25 male connector to match the Super Serial Card pigtail cable's female DB-25.

Make sure both computers are turned off before you plug in cables. Touch the II Plus power supply before inserting the Super Serial Card to dissipate static electricity, which could harm the computer's sensitive innards.

When you've made all the connections, fire up both computers. Set the PC's telecomm program to capture mode. Start up CP/M and WordStar on your II Plus. Load a file. When you print the document, the Super Serial Card zips the file through the modem cable to your PC, where the telecommunications software grabs the text. Save the file to a DOS-formatted floppy disk. Repeat for each file you want to convert. Mission accomplished. (Schaefer suggests you try the modem position on the Super Serial Card's jumper block if the printer position doesn't work.)

GRAPHIC LANGUAGE

IS THERE ANY GS SOFTWARE THAT would let me include small drawings in my letters? I'm eager to use more graphics in my word-processing documents.

**Arlette Irving
Roseburg, OR**

Dressing up documents is easier than you might think, Arlette. A Quality Computers spokesman suggests you try **BeagleWrite GS**.

In addition, one of our favorite programs is the multifaceted **AppleWorks GS**. You can type the text of your document in the word-processing module and create (or import) graphics in the built-in paint program. AWGS' page-layout module then makes it easy to combine text and graphics to create stylish correspondence, school reports, fliers, and newsletters. If you need stronger page-layout capabilities, consider **GraphicWriter III** from Seven Hills.

Will kids be using the software? If so, **The Children's Writing & Publishing Center** is unparalleled. It's not GS specific, but this easy-to-use Apple II program features ready-made layouts and dozens of clip-art pictures. You can even use some types of Print Shop graphics. Mac-using readers should test-drive this program's classy Mac counterpart — **The Writing Center**. A bilingual (English/Spanish) version was in the works at press time, but is currently available only with a site license.

America Online

8619 Westwood Center Drive
Vienna, VA 22182
(800) 827-6364

AppleWorks 3.0, \$249
AppleWorks GS 1.1, \$299
AppleWorks GS

1.1 Upgrade, \$29

plus \$7 shipping

ClarisWorks, \$299

MacWrite II, \$129

Claris Corporation
5201 Patrick Henry Drive
Santa Clara, CA 95052
(800) 544-8554 upgrades

BeagleWrite, \$48.95

BeagleWrite GS, \$59.95

TimeOut SuperFonts,

\$42.95

requires AppleWorks 2.0
or later

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

The Children's Writing &

Publishing Center, \$59.95

The Writing Center, \$89.95

\$1499 bilingual

English/Spanish version

site license

The Learning Company

6493 Kaiser Drive

Fremont, CA 94555

(800) 852-2255

(510) 792-2101

(510) 792-9628 fax

Cross-Works

SoftSpoken, Inc.

P.O. Box 18343

Raleigh, NC 27619

(919) 870-5694

(919) 870-5696 fax

\$99.95

CLINIC REFERRALS

Font Factory GS, \$39.95

GraphicWriter III, \$149.95

GraphicWriter III

Competitive Upgrade, \$60

plus \$3.50 shipping

Seven Hills Software

2310 Oxford Road

Tallahassee, FL

32304-3930

(904) 575-0566

(904) 576-9415 technical
information

Pointless 2.0

WestCode Software

15050 Avenue of Science

Suite 112

San Diego, CA 92128

(619) 487-9200

(619) 487-9255 fax

\$69.95

\$19.95 upgrade

ProTerm 3.0, \$129.95

ProTerm 3.0

Demonstration Disk, free

InSync Software

3035 East Topaz Circle

Phoenix, AZ 85028-4423

(602) 992-5515 sales

(602) 992-1345

technical support

(602) 992-0232 fax

(602) 992-9789 BBS

America Online: InSync JC

AppleLink: InSync.SW

CompuServe: 75300,735

GEnie: InSync.SW

Publish It! 4

Timeworks, Inc.

625 Academy Drive

Northbrook, IL 60062

(800) 323-7744 orders

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(708) 559-1399 fax

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(513) 435-9554 fax

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System 6.0

Resource Central

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Overland Park, KS 66207

(913) 469-6502

(913) 469-6507 fax

\$39

includes **Apple IIGS**

System 6 User's Reference

by Apple Computer

Vulcan Gold

Applied Engineering

P.O. Box 5100

Carrollton, TX 75011

(214) 241-6060

(214) 484-1365 fax

\$899 40MB

\$1795 100 MB

FONT OF KNOWLEDGE

DUG IN THIS MORNING AND DID some "experimenting" with TimeOut SuperFonts typefaces and Publish It! 4 on my Apple IIe. I struck out trying to get my BeagleWrite, Print Shop, and Fontrix fonts to work with Publish It! 4, though. What do I need to use them? Also, is there a utility somewhere that can convert other fonts to BeagleWrite?

**Jeff Siler
Perris, CA**

It pays to have friends, Jeff — in this case, friends with an Apple IIGS. The only program we know of that performs the bit-mapped font conversions you need is **Font Factory GS** from Seven Hills Software. Font Factory requires an

Apple IIGS, but converted fonts work on other Apple IIs, including those running **Publish It! 4** and **TimeOut SuperFonts** (with AppleWorks). If you don't have a GS-using friend who owes you a favor, perhaps an Apple user-group member would be willing to convert the fonts for you. To locate a nearby club, call **Apple Computer's User Group Connection** at 1-800-538-9696 extension 500. You can learn a lot from user-group members.

Meanwhile, we did find a public-domain utility called **FontConvert**, which claims to be able to transform **Fontrix** fonts into **BeagleWrite** format.

We downloaded the program from **America Online**, but because we didn't have any Fontrix fonts to fool around with, we're sending you the **FontConvert** disk to test yourself.



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APPLE CLINIC

HAPPY CAMPERS

AT LAST, SYSTEM 6.0 FOR THE GS has been released. What a nightmare, though — it's difficult to install it on GSeS equipped with Vulcan hard drives. On several of our GSeS, windows fill with colored speckles and lines.

John de la Fontaine
Gloucester, Ontario, Canada

EVER SINCE I MOVED UP TO System 6.0, I've experienced a baffling loss of the "answer" portion of dialog boxes. Each box is blank at the bottom where the OK or Cancel button ought to be.

Jeff Blondeau
Salida, CO

Your letters were just two of the many we've received from frustrated System 6.0 users. Problems with System 6.0 generally fall into three categories. According to Tom Weishaar, president of Resource Central, most are easy to fix.

First, if your GS hardware includes a Vulcan hard drive from Applied Engineering, copy the existing Vulcan driver from the /System/Drivers folder on your hard drive to the /System/Drivers folder on a backup copy of the System 6.0 Install disk. If there isn't enough room, trash some unneeded scripts first (such as AppleShare and CD-ROM); you'll find them in the /Scripts folder on the Install disk.

Second, if you use CV Technologies' RAM-Fast SCSI Card to connect a hard-disk drive to your GS, call LRO Computer Sales or TMS Peripherals for a ROM version 3.0 upgrade. CV's Andrew Vogan says that before ordering the upgrade, you should take a look at your SCSI card and jot down its version number (1 or 2) and revision (C or D). That way, TMS or LRO can send you the correct chips. Vogan says the ROM chips are easy to install; follow the instructions in the upgrade package.

Third is "weirdness" — things that defy immediate explanation, but are usually caused by interfering INITs (initialization files) and DAs (desk accessories). Hold down the shift key while starting up your GS to load System 6.0 without activating INITs or DAs. If the strange behavior stops, you can be certain (almost) that an offending INIT or DA was at fault. Remove all INITs and DAs by trashing them. Then add them back one by one until the weirdness reappears. When it does, you'll know exactly which add-on was at fault and can remove it from your system permanently. □

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G R A P E V I N E

EASTER EGGS

✓ With Interplay's **Out of This World**, you can activate a hidden "Easter egg" by pressing and holding down your option key when the title screen appears. Rather than seeing the Star Wars-style scrolling text that introduces the game, you'll instead see a scrolling text listing of famous Apple IIgs personalities to whom programmer Bill Heineman sends his greetings.

✓ With Seven Hills' GS/OS utility program **Kangaroo**, you can activate a hidden "Easter egg" by holding down the control key as GS/OS is loading. On top of the GS/OS thermometer bar, you'll see a familiar-looking hopping marsupial.

✓ In a message posted on America Online, we learned that there are a total of 19 "Easter egg" words in the FTA's **NoiseTracker** program. To activate the Welcome To menu item, hold the shift key down when accessing the Desk pull-down menu, and then type Show all the magik words.

APPLE II CLASSICS

✓ If you want to connect your computer via modem to an Apple II-oriented technical-support bulletin-board system, call **Quality Computers' BBS** at 1-313-774-2652. Once on line, you can get answers to your technical questions, and you'll be able to download 19 Apple II programs that used to be sold commercially by Beagle Bros, but are now part of the "**Beagle Oldies**" copyrighted freeware collection. Included are **Alpha Plot**, **Beagle Bag**, **Beagle BASIC**, **Big U**, **D Code**, **DOS Boss**, **Double Take**, **Extra K**, **Fatcat**, **Flex Type**, **Font Mechanic**, **Power Print**, **Pro Byter**, **Pronto DOS**, **Shape Mechanic**, **Silicon Salad**, **Tip Disk**, **Typefaces**, and **Utility City**. You may distribute any of these programs freely to your friends, but because they're copyrighted, you may not sell them. There are no fees, aside from long-distance telephone charges, to download any of these programs.

ONLY CONNECT

✓ If you own InSync's **ProTerm** telecommunications program, you can download the latest updates to version 3.0. Dial the **InSync BBS** (via modem) at 1-602-992-9789.

✓ If you use **AppleWorks Classic**, you can connect with the **National AppleWorks User Group's BBS** by dialing (via modem) 1-615-359-8238.

UPDATE

✓ The latest freeware edition of Andy Nicholas' **ShrinkIt** for the GS, version 1.1, is now 15 to 20 percent faster than older versions and can create self-extracting archives. That means you can now share compressed files and disks with friends who don't own ShrinkIt yet. New modem users can download ShrinkIt faster and more easily. ShrinkIt is the single most-important utility program for Apple II modem owners.

"SETTING" THE RECORD STRAIGHT

✓ Listen up, all you modem jockeys: Despite what the **CompuServe** starter pack advises, make sure you always log onto CompuServe with your Data Format settings as **8N1**.

GROUND CONTROL TO MAJOR TOM . . .

✓ If you have an external Hayes-compatible modem connected to the GS' modem port, make sure your Control Panel is set up correctly. The final three handshake options — DCD, DSR/DTR, and XON/XOFF — should all be set to no.

— Joe Kohn,
Contributing Editor

GRAPEVINE IS A MONTHLY COLUMN OF ON-LINE HINTS, TIPS, ARGUMENT, CHAT, AND GOSSIP. CONTACT JOE KOHN AT JOKO (AMERICA ONLINE), 76702,565 (COMPU-SERVE), J.KOHN.GENIE,76702.565@COMPU-SERVE.COM (INTERNET), OR JOKO@AOL.COM (INTERNET).

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Are you about to give up on your Apple IIgs? Thinking about getting one of those 'other' machines? Well think again! We're ECON Technologies and we're fully committed to the Apple IIgs community. The IIgs is just as capable as those others. All your GS needs is the right products to show off what it can do. That's why we're developing a whole new line of hardware & software that will satisfy even the most demanding IIgs users...



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Put the 'S' back into your Apple IIgs with the SoundMeister! The IIgs has better built-in sound capabilities than any other personal computer. Let the SoundMeister make it come alive! Both cards feature super high quality stereo output, separate line/amplified outputs, support for mic/line level input and complete sound digitizing/editing software. The Pro card offers high sampling (>100kHz), stereo digitizers for serious sound enthusiasts.

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Don't own a hard disk without it! The only integrated desktop utility developed exclusively for System 6, Universe Master will backup, restore, analyze, repair and optimize your data in addition to providing tools to better organize your files. Supports all standard block devices. Compatibility with AutoArk means you can directly access your backup data within applications! The only disk management program that's thorough and in-depth yet remarkably easy to use!



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ECON Products are presently available from: LRO Computer Sales, Quality Computers, Resource Central and other fine Apple II retailers.

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REVIEWS

★ ★ ★ ★ ★
POOR GOOD GREAT

KANGAROO

File management shouldn't tie you down — now you can skip the preliminaries and jump right into the action.

The ties between the Macintosh's and the Apple IIGS' operating systems have always been close; the latest trend in GS/OS software is to take advantage of those similarities, porting Mac functionality over to the GS. Kangaroo, a new GS utility from the French publisher BrainStorm Software, traces its lineage directly to the Mac-based Boomerang (currently available from Now Software). Kangaroo gives GS users convenient, fast, and customizable access to all their data files and provides several disk and file

utilities accessible from within any standard GS/OS-based application.

Seven Hills Software supplies Kangaroo on a single, non-copy-protected, 3.5-inch disk. It comes with an *Installer* module that copies a number of permanent initialization files from the Kangaroo program disk to your GS' *Startup* disk.

Two installation options are available; installing all features requires approximately 150K of free disk space on your GS *Startup* disk or hard drive, while installing Kangaroo without its on-line help system takes up 100K.

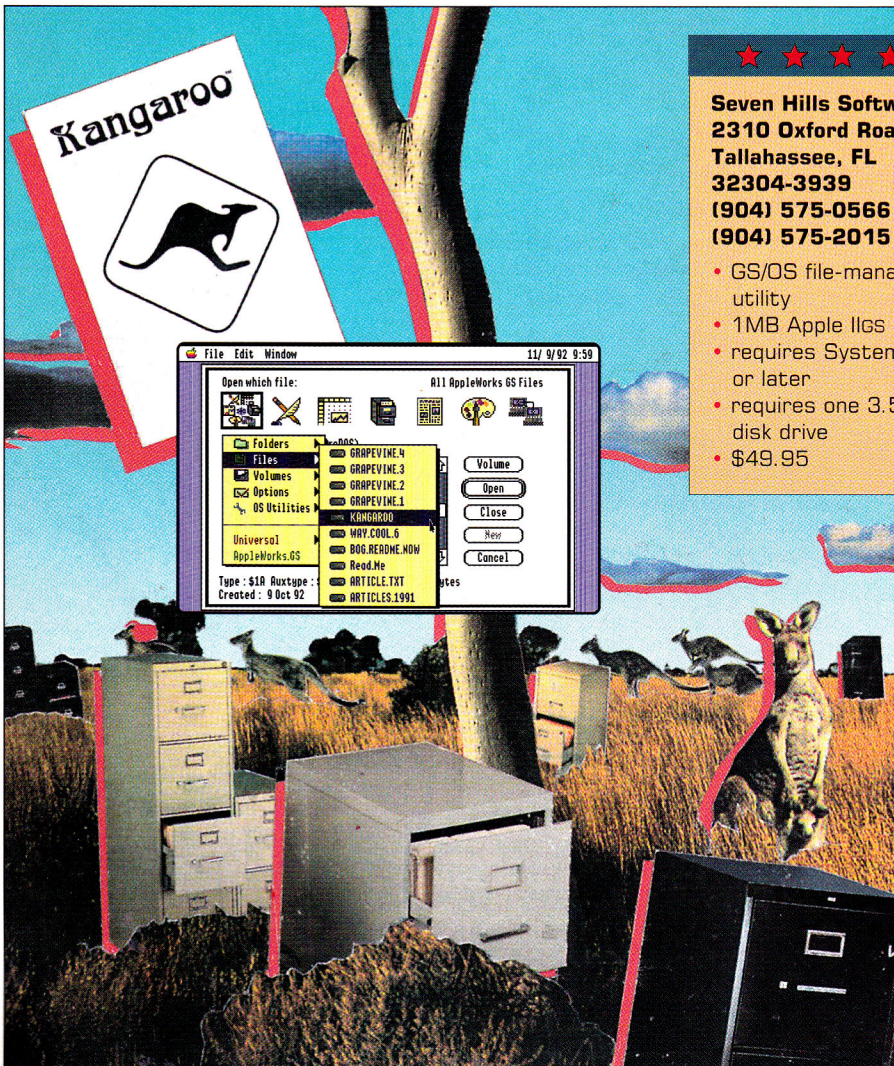
Once installed, the program adds itself to the standard GS/OS *File* dialog box as a small graphic of a kangaroo above the list of files. When you click on

the kangaroo, a menu appears, offering *Folders*, *Files*, *Options*, and a few other choices. If you hold down the mouse button and point at the small right-facing triangle next to *Files*, a hierarchical submenu pops up with a list of the last ten files you used. No more hunting through stacks of folders for that document you were just working on — Kangaroo hands it to you on a silver platter.

You can assign default data files and folders that will always appear, as well. Kangaroo's

hierarchical menus can store up to ten files or folders; those ten can be user definable, or they can be the previous ten files worked on, or a combination of the two. The file and folder listings can be permanent, or you can purge them whenever you reboot your system.

You can assign an application to a specific folder, too. If you store all your AppleWorks GS data files on the second partition of your hard drive in a folder named *AWGS.DATA*, for example, you can set up Kangaroo so that whenever you open a document from AppleWorks GS, it will automatically bring up the *AWGS.DATA* folder.



★ ★ ★ ★ ★

Seven Hills Software
2310 Oxford Road
Tallahassee, FL
32304-3939
(904) 575-0566
(904) 575-2015 fax

- GS/OS file-management utility
- 1MB Apple IIGS
- requires System 5.0.4 or later
- requires one 3.5" disk drive
- \$49.95

Once you've used Kangaroo from a *File* dialog box, you'll see a red *Open* or *Save* command on your *File* menu. Highlighting either one calls up a submenu of recently used files.

Kangaroo also lets you define up to ten groups of applications — putting all your graphics-related applications into one group, for example — so that you can access the same type of program and swap data files quickly and easily. And you can configure Kangaroo so that it not only displays lists of files or folders, but can automatically load the last file you were working on or any file of your choice.

SMOOTH OPERATOR

Kangaroo brings improvements to GS/OS itself. Whenever you open the GS/OS *File* dialog box, Kangaroo highlights the top file in the alphabetized listing. In addition, Kangaroo can display type and creation file information similar to that available by pressing Open apple-I from the Finder.

Popping back to the Finder for file management is a thing of the past with Kangaroo — you can create new folders, delete files, rename files, change filetypes, and format or erase disks from the Kangaroo submenu.

A powerful *File Finder* utility lets you search your disks, using any of a number of different criteria, to locate files. For the artistically inclined among you (or just wishful thinkers), Kangaroo also offers multicolored *Open* and *Save* dialog boxes.

During our testing, Kangaroo's operation was consistently smooth and intuitive, requiring only infrequent glances at the well-written (if somewhat stark) manual. Novice users can just install it and go, while more-advanced disciples of high-octane computing will find scads of options they can tweak to their hearts' content.

HANGING IT UP

You can activate and deactivate Kangaroo whenever you want, and, therein lies the only problem we encountered: A bug in version 1.0 hangs up your pull-down menus when you turn Kangaroo off from the supplied classic desk accessory. Seven Hills is aware of the problem

and states that it will offer a free update to registered users when it's completed.

But chances are you'll never run into this problem — after all, why would you want to disable one of the most useful, fun, and time-saving GS utilities ever invented?

Joe Kohn
San Rafael, CA

LEMMINGS 1.4.2

Psygnosis Ltd.
29 Saint Mary's Court
Brookline, MA 02146
(800) 438-7794
(617) 731-3553
(617) 731-8379 fax

- arcade/strategy game
- monochrome requires 1MB Mac Plus or higher under System 6, 2MB under System 7
- color requires 4MB, System 6.0.5 or later, 32-bit QuickDraw
- requires hard drive, 1.6MB free space
- \$59.99

Level 21 Going Their Separate Ways
Number of Lemmings 20
100% To Be Saved
Release Rate 1
Time 5 Minutes
Rating Tricky
Press mouse button to continue

One of the most-popular computer games of all time has finally been translated for the Macintosh, and it's definitely been worth the wait. Lemmings, published by Psygnosis, is an addictive arcade game with great graphics, superb sound effects, and an endless array of challenging levels.

The object of Lemmings is to navigate safe passage for a mob of imperiled green-haired rodents in various hostile environments. Left to their own devices, the mindless lemmings simply march off cliffs, plunge into the ocean, stream into bottomless pits, and in general behave like the doomed drones they are.

But you can save them (at least some of them) by assigning various skills and powers to these creatures in an attempt

to lead them safely to the designated exit. To succeed, you need a keen mind, quick reflexes, and dogged determination.

THIS WAY, GUYS

Each game of Lemmings starts at the *Objective* screen, where you see a mini-map of the play field. Also displayed are the level number and title, the number of lemmings to appear, the number of lemmings you must save to advance to the next level, the rate at which the lemmings are released into the play field, and the amount of time in which you must complete the level.

Once you've absorbed all this information and have formulated a strategy, just click the mouse button to get down to business.

The *Game* screen consists of a play field, a thumbnail view of the play field, a status line, and an icon bar. Each level always starts by showing the hatch from which the lemmings drop into the play field. Often you can also see the exit toward which you try to direct the little buggers once they're in play.

Sometimes the exit is off-screen, though. In such cases, you can scroll the play field smoothly by just moving the mouse to the edge of the screen. Or you can jump to any particular area by clicking within the micro-map in the lower right-hand corner of the screen.

The entire play field is beautifully rendered in 256 colors (Lemmings runs in black-and-white, too), and detailed, whimsical animation gives the lemmings charming character.

HELP FROM MY FRIENDS

As the lemmings drop into play, you must decide how to help them reach the exit safely by parceling out the various skills and powers represented in the icon bar. Your basic lemming has all the common sense of a Congressman and will mindlessly follow the crowd until it meets its maker in any number of brain-dead circumstances.

You can impart a skill, though, by clicking on an icon, then clicking on a lemming. You can make your lemmings climb obstacles, float down great heights with umbrellas, block the progress of others, build bridges, and dig through

walls in a number of directions. The trick is that you have a limited assortment of skills to bestow on the seemingly endless stream of lemmings.

On the easier levels, you're given more than enough skills to hand out willy-nilly. But as the levels progress in difficulty, your supply is restricted to the bare essentials. One wrong move and your lemmings are doomed.

Not only must you decide whom to give what skill, you must time everything precisely so that your path to safety is cleared in the correct order. After all, there's no sense bashing a tunnel through a wall if you're not finished building a bridge over the incinerator on the other side.

If you complete a level successfully by saving the required number of lemmings in the allotted time, you don't get any sort of score. Instead, a ten-character code lets you access the next level. In all, there are 120 levels of progressive difficulty, broken up into four categories.

ALMOST PERFECTION

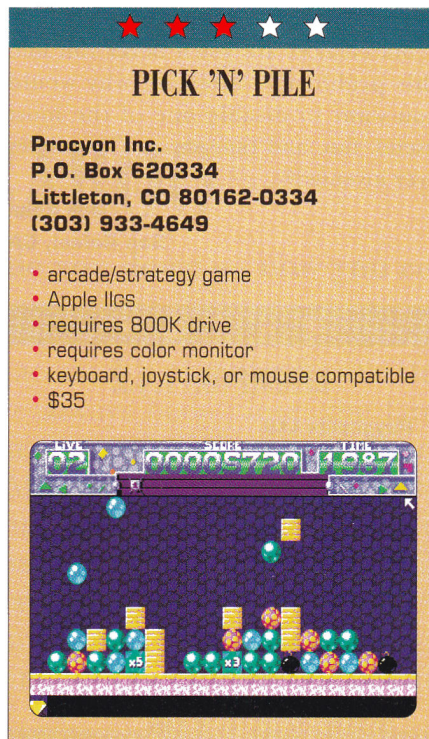
My biggest complaint with Lemmings is that you can't jump to whatever level you want. As a result, you may plateau without experiencing all this game has to offer.

To its credit, Psygnosis gladly gives out hints and passwords on its technical-support line, but that's not a toll-free call. I recommend doing away with this access-code folly, as well as eliminating the annoying documentation-based copy protection, which serves no purpose other than to discourage repeated play.

Lemmings is a cute game with a deceptively simple premise and enough clever puzzles spread across its 120 levels to keep even the most skillful arcade-game player addicted for quite some time.

The basic game play is as close to perfect as I've ever experienced, but the program could be improved with a Mac-specific manual, the addition of some sort of scoring mechanism, and the inclusion of the two-player mode currently offered for Amiga and Atari ST computers.

Owen W. Linzmayer
San Francisco, CA



Some of the best GS software comes from the smallest companies. You won't get any fancy packaging, you may get only scanty printed instructions, and you may not even get a printed label on the disk. But you really can't judge a book by its cover — or by fancy marketing.

Procyon developed Pick 'n' Pile originally for MS-DOS computers and just recently ported to GS/OS. Unlike many other ported programs, this one does it right — by using the GS' unique capabilities. The game is colorful and sports an excellent soundtrack. This is not one of those games that looks pretty much the same whether it's running on a PC, an Amiga, an Atari, a Nintendo, or an Apple.

STACK 'EM

Pick 'n' Pile is a 16-bit program, distributed on a copyable 3.5-inch disk that doesn't include GS/OS. You can either boot GS/OS from another drive and click on the program icon, or drag the program to your hard drive. One of the nicer user features is that you don't have to refer to the documentation or a fancy device for software keys to run the game. This is a company that trusts you not to make or distribute illegal copies — a welcome change in today's world.

The object of the game is to swap different balls and icons so that all balls within a particular column are the same color. The balls in that column then disappear and you earn points. When you've removed all balls from a particular screen, you progress to the next-higher play level.

Strategies are easy to develop. For example, you can assemble columns of blocks to create immovable grooves that prevent objects from falling in the wrong direction. You can deliberately position an incorrect color in a column until you add extra balls, and swap them with balls of the correct color to create big, high-scoring columns. You can save special objects, such as "bombs" that clear large areas, for the final couple of seconds to eliminate several objects at the same time.

One major limitation of the game is that it's easy to end up with leftover balls you can't remove. The game just lets the clock run until your allotted time runs out, instead of realizing that you can't remove the remaining balls. You can instruct the game to release more balls, but because the software chooses the balls' colors randomly, that may be counterproductive in later stages.

DON'T STOP!

Pick 'n' Pile's user interface and selectable options could use some work. While you can shut off the clock sound for a round, for instance, there's no way to shut off the soundtrack or abort the end-round music to save time, or set the volume level within the program.

Documentation is scanty, barely describing the game's objectives. Among other failings, it doesn't describe how to use the keyboard for game play. And while the manual hints that you can destroy the death's head that drops in and messes up your columns, it doesn't indicate how.

If you like games that combine strategy with arcade-style action, Pick 'n' Pile is excellent. Unlike many other games for the GS, it doesn't look the same on all platforms — it feels like a game designed for the GS. With a little bit of polish, Pick 'n' Pile could become the next Tetris.

Philip Chien
Titusville, FL



TIMEOUT GRAMMAR 1.03

Quality Computers

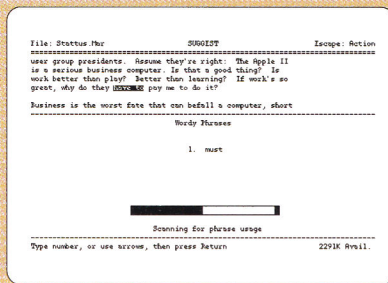
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- grammar and style checker for AppleWorks
- 128K Apple II
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- includes 5.25" and 3.5" disks and manual
- \$79.95



Politics, economics, religion, and grammar: People see decline everywhere. Some things won't change, but TimeOut Grammar might help with the last item. Like one tool in a toolbox, Grammar can't fix all writing problems — but a writer willing to customize the program and learn its options may be able to make good use of it.

TOOLING AROUND

Adding Grammar to your AppleWorks 3.0 toolkit follows the same simple procedure as other TimeOut applications — it comes with its own mini-installer. Choosing *Grammar* from the TimeOut menu lets you verify a word-processing document or the clipboard's contents. The program checks a document in two stages. It looks for grammar and style problems first and then scans the text again for possible punctuation mistakes.

TimeOut Grammar compares your text against a set of phrase lists, loaded

from disk into the AppleWorks desktop the first time you use the program. Unless this memory is needed by another file, the lists will remain on the AppleWorks desktop, so subsequent scans are faster.

When Grammar finds a questionable phrase during the usage scan, it pauses, notes the kind of error, and suggests possible actions. For example, using *won't* in your text generates the message *Remove contractions*. The program's choices are *ignore*, *replace*, *suggest*, and *mark*. *Ignore* moves you on down the document. *Replace* lets you enter your own substitute. *Suggest* brings up a list of choices; in this example, Grammar suggests *will not*. Finally, *mark* puts brackets and a reference number around the offending word. Grammar places an explanation of marked phrases and their reference numbers after your text.

TimeOut Grammar's scan for punctuation works a little differently. Punctuation errors generate messages such as

Let us help you find Apple II Software

Order Your **Free** Apple II Software Newsletter!

Tear off the attached card and send it in today!

We're behind you and your Apple II.



Apple Computer, Inc.

Offer expires April 20, 1993.

This first letter should be capitalized. You can ignore, mark, or correct the error. An on-screen message explains what correcting will do to your text — in this example, *Capitalize first letter.* Ignore and mark behave the same way they do in the usage scan.

TimeOut Grammar isn't so much a grammar checker as it is a style checker. It won't correct verb tense or misplaced adverbs, for example, but it will find potentially offensive or stylistically sloppy phrases.

WORD WHETSTONE

The manual suggests you run your spelling checker and then TimeOut Grammar, making the revisions you feel necessary. Because this will introduce major changes in your text, it's best to do another grammar check of the final text.

Following this procedure shows off TimeOut Grammar's strength: the types of problems it does catch. The usage errors Grammar flags are informal, cliché, faulty, pompous, vague, redundant, foreign, sexist or wordy phrases, acceptable and unacceptable contractions, legalisms, and trademarks. During the punctuation phase the program looks for errors in capitalization, spacing, and abbreviation.

A grammar checker carries the same faults as a spelling checker, however — they may flag words incorrectly and ignore subtleties. For instance, TimeOut Grammar won't catch two errors I commit often: excessive use of the passive voice and inconsistent pronoun references.

The program manual stresses that TimeOut Grammar can't substitute for good writing skills and suggests some standard books that can help. The better your writing skills, the more you can take advantage of Grammar's flexibility. You can turn off punctuation or usage checks; you can also disable, delete, or modify the program's lists; you can create two custom phrase lists focusing on individual weaknesses if you like.

If you're a skillful writer, you may want to use Grammar's quick-scan mode: Instead of checking your grammar interactively, holding down the open-apple key when you verify a document will mark errors without stopping for corrections.

What about weak writers, especially students in junior and senior high school with poor writing skills? I'd hesitate to recommend TimeOut Grammar. Below-average writers in this group often have an attitude problem: They hate any form of writing. Parents and teachers need to use other techniques that improve both attitude and basic skills.

WRITER'S BLOCK

On its own, Grammar won't improve anyone's writing. The manual offers several suggestions for self-help, to which I'd add one more: Read your writing aloud, put it aside, come back to it with a fresh mind, and have someone else check it over. If you want to get your computer involved in the process, TimeOut Grammar is a respectable entry.

Ron Berntson
Saskatoon, Saskatchewan,
Canada

Editor's note: The current version of TimeOut Grammar is 1.03. If you have an earlier version, the upgrade fee is \$5 — or send your disk and a self-addressed, stamped envelope to Quality Computers for a free replacement.

The image shows the Microsoft Works 3.0 software box and a file selection dialog box. The software box is yellow with a blue border and features five stars at the top. The text on the box includes: "MICROSOFT WORKS 3.0", "Microsoft Corporation", "1 Microsoft Way", "Redmond, WA 98052-6399", "(206) 882-8080", "(800) 426-9400", and "(206) 883-8101 fax". Below this is a list of features: "integrated package: word processor, database manager, telecommunications software, spreadsheet, drawing module", "Macintosh Plus or higher", "requires System 6.0.5 or later, 1MB", "2MB System 7", and "\$249, \$79 upgrade". The file selection dialog box is titled "Choose Type:" and shows icons for "All Types", "Word Processor", "Database", "Spreadsheet", "Comm", and "Draw". It lists "Microsoft Works 3.0" as the selected file, with "Getting Started" and "Learning Works" as sub-items. The dialog also shows "Ararat 8455K Free" and buttons for "Open", "Eject", "New", "Desktop", and "Cancel". The "File Format:" dropdown is set to "All Available".

The integrated package Microsoft Works has been the workhorse of the Macintosh since it first appeared on the scene some years ago. Still, it wasn't perfect, and it's been a long time — four years — between upgrades. The competition in the area of integrated applications has heated up in recent months, with a number of new titles appearing on the scene. Longtime Works users will find version 3.0 was worth the wait and that it holds its own in an expanding market. New users may find more reasons than ever for giving Works a second serious look.

The Works package contains word-processor, database-management, telecommunications, spreadsheet, and drawing applications. While the individual modules aren't as powerful as their stand-alone counterparts, many businesspeople have found that Works offers all the features they need.

With the advent of the Macintosh PowerBook laptops, integrated-software packages have become even more important and popular. A program's compactness and speed are at a premium, however, and those qualities aren't among Works' strong suits. In addition, Works comes on five disks and installs only on your startup disk. Your Mac reboots automatically afterward, but the installation process takes a long time.

EVERYTHING OLD IS NEW AGAIN

On the plus side, Microsoft has strengthened all five of Works' modules. The drawing program in particular has been greatly improved — from earlier versions' limited special-layer program with eight-color support to a full application supporting 256 colors, Bezier curves, and 3-D effects. You can also now create "stationery documents" in the drawing module (or use those provided with the program) to set up document macros — in effect, compact page layout. You create document columns in the drawing module, too, though, instead of in the word processor — a rather inefficient approach.

The word processor includes new footnote and endnote functions, word count, and a thesaurus. The spelling checker is faster than earlier versions',

but it's still not exactly speedy — and, like most spelling checkers, it's not particularly imaginative in suggesting alternatives for misspelled or unknown words. In default mode, the program suggests alternatives automatically, so you have to wait even to tell it to “learn” or “ignore” questionable words. You can turn this feature off, though, which improves speed.

Works' word processor provides filters for opening a number of file formats, including AppleWorks and AppleWorks GS files, MacWrite documents, and Word and Word for DOS documents. You can save files in Word-for-just-about-anything, RTF, MacWrite, text, AppleWorks, and WordPerfect formats. Again, this is a slow process — at least it was on my 4-megabyte machine. Works took more than three minutes to open a 38K text file created in Microsoft Word 4.0

The spreadsheet and database modules have also been intelligently enhanced. The spreadsheet will look and feel familiar to anyone who has ever used Microsoft's

bestselling Excel. It can open Excel 2.2 and 3.0 files, as well as Lotus 1-2-3, MultiPlan, PC Works, and AppleWorks files. The spreadsheet now includes a good charting function, as well. You can use Works' database manager in conjunction with the drawing module to create forms; the database manager's mail-merge capabilities, for label and envelope printing, are also improved.

Of all Works 3.0's modules, the communications application is the closest in speed to its standalone competition. Logging on to CompuServe, for example, was fast and smooth. On the other hand, I couldn't get my entire e-mail list (37 messages) to scroll to the end, even after two tries. And when I clicked on the button to break the connection, I exited not only the communications module, but the entire Works application.

Probably Works 3.0's most impressive features are its floating palettes. Each module has one, keeping your most frequently used menu choices always at hand, just a mouse click away. In the word processor, for example, the palette gives you ready access to fonts,

type sizes, and styles. You can also go directly to the drawing module by clicking on the palette's pencil icon. A 9-inch screen can get pretty crowded, though, so you'll appreciate a palette's “floating” aspect as you move it around while trying to see all the parts of your document. Still, the palettes' convenience wins out in the long run.

BOTTOM LINE

Most of us don't need warp-powered, state-of-the-art applications for day-to-day computing — or the high cost such programs command. An integrated package with easy movement among modules, especially one that allows reasonable access to files created in other formats, can do more for your productivity than a pile of separate programs, each with its own learning curve and collection of quirks. If you're in the market for an integrated package, check out Works 3.0.

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A+ EXTRACTS



Looking for the right Apple II or Mac software or hardware? Here's a quick summary of the more than 60 products we looked at in depth in 1992. In each category is the product name, the critical rating it received from the *inCider/A+* reviewer, which Apple computer(s) it runs on, its retail price, the publisher or manufacturer you can contact to purchase the product, a nutshell summary of the review, and the review's issue date and page number. Although the product version, price, and ordering information are up to date, we've indicated those cases when we reviewed an earlier version of the product.

APPLICATIONS

Bank Street Writer ★★★
Mac, \$162.45; school, \$129.95. Scholastic Software Inc., 2931 East McCarty Street, Jefferson City, MO 65102, orders: (800) 541-5513; (314) 636-5271. Combination word processor/desktop publisher. Good early word-processor for teaching youngsters, but too limited to be a serious word-processing solution. (7/92, pg. 54)

DreamGrafix 1.06 ★★★1/2
IIGS, \$99.95 plus \$5 shipping. DreamWorld Software, P.O. Box 830, Iowa City, IA 52244-0830, (319) 338-6491 or (212) 853-6785. 3200-color drawing program. Version 1.02: Proof that it's possible to push the envelope hard enough to stretch the seams. You *can* create and edit 3200-color pictures on your Apple IIGS — but just barely. (8/92, pg. 22)

HyperStudio 3.1 ★★★★★
IIGS, \$179.95; version update from 2.1 or earlier, \$45 plus \$5 shipping; update from version 3.0 free with returned disks. Roger Wagner Publishing, 1050 Pioneer Way, Suite P, El Cajon, C, 92020, orders: (800) 421-6526; tech. support: (619) 442-0522. Hypermedia authoring system. Version 3.0: Substantial update to already robust authoring system. Includes new menu-driven scripting language. (5/92, pg. 22)

LogoEnsemble ★★★
IIGS, \$299. Logo Computer Systems Inc., 3300 Cote Vertu Road, Suite 201, Montreal, Quebec H4R 2B7, Canada, (800) 321-LOGO. LogoWriter combination pack: database manager, word processor, graphics system, communications package. (5/92, pg. 50)

The Miracle Piano Teaching System ★★★1/2
Mac, \$419.95. The Software Toolworks, 60 Leveroni Court, Novato, CA 94949, (415) 883-3000. Piano-instruction program with MIDI keyboard. Revolutionary computer-aided instruction, but the miracle happens only if you can stick with the practice schedule. (12/92, pg. 24)

ORCA Integer BASIC ★★★★★
IIGS, \$50. The Byte Works Inc., 4700 Irving Blvd. NW, Suite 207, Albuquerque, NM 87114, (505) 898-8183. Integer BASIC compiler and learning aid. Good introduction for beginning programmers. (1/92, pg. 29)

ProLine ★★★★★
Apple II, \$259.95. Morgan Davis Group, 10079 Nuerto Lane, Rancho San Diego, CA 91977-7132, (619) 670-0563; fax: (619) 670-9643; BBS: (619) 670-5379. Apple bulletin-board program. Outstanding for wanna-be sysops with advanced messaging, electronic mail forwarding, and file-library options. (12/92, pg. 27)

ProTerm 3.0 ★★★★★1/2
Apple IIe, \$129.95. InSync Software, 3035 East Topaz Circle, Phoenix, AZ 85028-4423, (602) 992-5515; BBS/fax: (602) 992-9789. State-of-the-art telecommunications software with scripting capabilities. You *can* get there from here. (6/92, pg. 26)

Storybook Weaver: World of Adventure ★★★★★
IIGS, \$59. MECC, 6160 Summit Drive North, Minneapolis, MN 55430-4003, (800) 685-6322, (612) 569-1500. Creative-writing tool with words and pictures. MECC supplies the pictures, the kids write about them, and it seems to work. (2/92, pg. 27)

The Writing Center ★★★★★
Mac, \$89.95; school, \$129.95. The Learning Company, 6493 Kaiser Drive, Fremont, CA 94555, (800) 852-2255. Word processor with desktop-publishing features. A good way to introduce grade-schoolers to DTP concepts. Enough flexibility to create basic newsletters, etc. (2/92, pg. 26)

EDUCATION

Elementary School Grade Builder ★★★
Apple II, \$29.95. Compton's New Media/Britannica Software, 2320 Camino Via Roble, Carlsbad, CA 92009, (619) 929-2500.
Designasaurus: dinosaur information; **Math Maze:** arithmetic skill builder; **Spellicopter:** arcade spelling game. (2/92, pg. 60)

First Aid with Reddy ★★★
Apple II, \$29.95. Quality Computers, 20200 East Nine Mile Road, St. Clair Shores, MI 48080, orders: (800) 443-6697; (313) 774-7200. First-aid education. Good information as far as it goes, but very young children should be supervised — several graphics of dangerous situations could be misinterpreted. (6/92, pg. 54)

Gold of the Americas: The Conquest of the New World 1.0 ★★★★★
IIGS and Mac, \$49.95. Strategic Studies Group, 8348 Monticello Drive, Pensacola, FL 32514, (904) 494-9373; fax: (904) 494-9374. Historical simulation of New World colonial expansion. Not particularly accurate, but plenty of fun nonetheless. (6/92, pg. 30)

GSymbolix 1.7 ★★★
IIGS, \$134. Bright Software, P.O. Box 18; 4153 Reinach 2, Switzerland, 061-711-23-83; fax: 061-711-52-63. In U.S.: Larry Schneider, P.O. Box 120, Exeter, ME 04435-0120, (207) 379-3181. Algebraic calculator/graphing software. Version 1.6: Remarkably powerful computing engine hampered by poor documentation and platform speed limitations. Not much use for teaching concepts — better at crunching numbers. (12/92, pg. 29)

Headline Harry and the Great Paper Race ★★★
Mac, \$59.95. Davidson & Associates Inc., P.O. Box 2961, Torrance, CA 90509, (800) 556-6141. U.S. history (1950 to 1990) and geography game. Good idea, but flawed execution. This Carmen Sandiego play-alike features a few QuickTime movies — but too few of them. (11/92, pg. 54)

Iraq Stack ★★
Apple II and Mac, \$59; lab packs/network versions: 10 computers \$79, 25 computers \$149, 50 computers \$249. Techware Corporation, P.O. Box 151085, Altamonte Springs, FL 32715-1085, orders: (800) 347-3224; (407) 695-9000. Middle East crisis educational program. More judgmental than informational. Teachers will want to supplement use with frequent discussion. (1/92, pg. 28)

Just Grandma and Me ★★★1/2
Mac, \$49.95. Broderbund Software, 500 Redwood Boulevard, Novato, CA 94948-6121, (415) 382-4400. Interactive story on CD-ROM. Top-shelf electronic storybook for kids. Great graphics, great sound, engaging characters. (8/92, pg. 53)

Jr. High School Grade Builder ★★★
Apple II, \$29.95. Britannica Software, 345 Fourth Street, San Francisco, CA 94107, (415) 597-5555. Anatomy, grammar, geography programs. (2/92, pg. 61)

MacFrog 1.4 ★★★
Mac, \$35 b/w; \$39 color; site license \$129 b/w; \$159 color. Intellimation, P.O. Box 1530, Santa Barbara, CA 9316-1530, (800) 3-INTELL, (805) 685-2100. Dissection simulation. Won't replace the formaldehyde frog, but could be useful as introduction or post-operative refresher. (5/92, pg. 52)

Reading Maze ★★★
Mac, \$69.95. Great Wave Software, 5353 Scotts Valley Drive, Scotts Valley, CA 95066, (408) 438-1990. Early-reading software. Gentle reading-drill program with attractive graphics and sounds. (1/92, pg. 28)

Spelunx and the Caves of Mr. Seudo ★★★★★
Mac, \$49.95. Broderbund Software, 500 Redwood Boulevard, Novato, CA, 94948-6121, (415) 382-4400. Non-competitive fantasy exploration and creative environment for the young at heart. This HyperCard-based gem ends up enthralling grown-ups, as well. (8/92, pg. 26)

Super Solvers Outnumbered ★★★1/2
Mac, \$59.95 consumer; \$79.95 school (includes binder of classroom activities); lab \$169.95. The Learning Company, 6493 Kaiser Drive, Fremont, CA 94555, (800) 852-2255. Math and problem-solving skill builder. Colorful and fun instruction for grade-school mathematicians. (4/92, pg. 54)

Swamp Gas ★★★★★
Mac, \$49.95. Inline Design, 308 Main St., Lakeville, CT 06039, (203) 435-4995. USA geography game. Fly across the USA and collect points for geographic knowledge. (1/92, pg. 27)

Time Treks ★★
Mac, \$59.95 consumer; \$89.95 school. Davidson & Associates Inc., P.O. Box 2961, Torrance, CA 90509, (800) 556-6141. History game. HyperCard-based attempt at open-ended, discovery-based learning. Falls short in several categories, including historical accuracy. (10/92, pg. 28)

The Treehouse ★★★1/2
Apple II, \$49.95. Broderbund Software Inc., 500 Redwood Blvd., P.O. Box 6121, Novato, CA 94948-6121, (415) 382-4400. Music, math, and science games. Entertaining and mildly educational mind candy for young kids. The premise is a treehouse filled with games and animal friends. (10/92, pg. 52)

Toolbox Programming in Pascal ★★★★★
IIGS, \$75. The Byte Works, 4700 Irving Blvd. NW, Suite 207, Albuquerque, NM 87114, (505) 898-8183. Pascal desktop-programming tutorial. Clear, well-written tutorial with loads of examples. This product makes you think anyone could be a programmer. (11/1/92, pg. 56)

Where in America's Past Is Carmen Sandiego? ★★★★★
Apple II, \$49.95. Broderbund Software Inc., 500 Redwood Boulevard, P.O. Box 6121, Novato, CA 94948-6121, orders: (800) 521-6263; (415) 382-4400; fax: (425) 382-4582. Educational adventure game, featuring detective motif and the infamous inscrutable villainess. This latest in the Carmen series is just as good as the previous ones — maybe better. (10/92, pg. 26)

Weekly Reader Fractions and Decimals Math Word Problems ★★★★★
Apple II, \$49.95. Optimum Resource Inc., 10 Station Place, Norfolk, CT 06058, (203) 542-5553. Drill-and-practice math program. Drill and kill from acknowledged leaders in the field. Weekly Reader manages to make an educational necessity at least bearable. (10/92, pg. 30)

Wordtris ★★★
Mac, \$49.95. Spectrum HoloByte, 2490 Mariner Square Loop, Alameda, CA 94501, orders: (800) 695-GAME; (510) 522-3584. Arcade game: word spelling with falling letters. Not as addictive as the original, but an interesting idea. Success often depends more on luck than any acumen with words. (6/92, pg. 54)

GAMES

Glider 4.0 ★★★★★1/2
Mac, \$49.95. Casady & Greene, 22734 Portola Drive, Salinas, CA 93908-1119, (408) 484-9228. Action/strategy game. Shareware classic becomes commercial classic. Can you get your paper airplane to fly through the house? (3/92, pg. 57)

Neurobics ★★★★★
Apple II, \$46. Ocean Isle Software/DLM Inc., 1 DLM Park, Allen, TX 75002, (800) 527-5030, (214) 248-6300. Six brain-teasing puzzles for kids and adults. (2/92, pg. 62)

OIDS ★★★
Mac, \$44.95. FTL Games, 6160 Lusk Blvd., Suite C-102, San Diego, CA 92121, (619) 453-5711. Space arcade game with editor. A combination of Asteroids, Defender, and a million other stand-up arcade games. OIDS has a large on-line following. (4/92, pg. 26)

PGA Tour Golf ★★★★★
Mac, \$59.95. Electronic Arts, 1450 Fashion Island Blvd., San Mateo, CA 94404, (415) 571-7171. Golf simulation. Fun and playable, lets you feel like a pro. (4/92, pg. 26)

Prince of Persia ★★★★★
Apple II, \$39.95; Mac, \$49.95. Broderbund Software, 500 Redwood Boulevard, Novato, CA 94948-6121, (415) 382-4400. Animated action adventure. Smooth cinematic-style animation is the highlight of this charming swashbuckling epic. Can you save the princess? (8/92, pg. 25)

The Secrets of Bharas ★★★1/2
IIGS, \$69.95. Victory Software, P.O. Box 821381, Houston, TX 77282-1381, (713) 493-3232. Ultima-style game. Straightforward adventure for the adventuresome. If you liked Ultima, you'll probably enjoy this one. (7/92, pg. 28)

Spectre ★★★★★
Mac, \$59.95 single-user edition, \$99.95 three-user LAN pack. Velocity Development Corporation, 2161 Union Street, San Francisco, CA 94123, (415) 776-8000. 3D arcade battle game. Fast-paced action in an electronic world. Blast your buddies into cyberspace. (5/92, pg. 54)

UTILITIES

DB Pix ★★★★★
Apple II, \$25 plus \$3 shipping. JEM Software, 7578 Lamar Court, Arvada, CO 80003, (303) 422-4856. AppleWorks 3.0 add-on utility. Add pictures to your AppleWorks databases with this extension. You'll be wondering how they did it. (9/92, pg. 50)

A+ EXTRACTS

Desktop Enhancer 2.01 ★★★1/2
IIGS, \$24.95, \$3 demo disk. Simplexity Software, 13045 Chapman Ave., Suite 302, Orange, CA 92668, (714) 283-3957. GS/OS and ProDOS 8 customization program. Version 2.0: Second-rate desktop jewelry might appeal to some. Take advantage of the demo-disk offer before you buy. (12/92, pg. 28)

Express 1.1 ★★★★★
IIGS, \$39.95. Seven Hills Software, 2310 Oxford Road, Tallahassee, FL 32304-3930, orders & info.: (904) 575-0566; tech. support: (904) 576-9415; fax: (904) 575-2015. GS/OS print spooler. Version 1.0: Solid, quality utility for the Apple IIGS. Spooled documents actually take longer to print, but the flexibility to print when you want can be a lifesaver. (9/92, pg. 20)

Pointless 2.0 ★★★★★1/2
IIGS, \$69.95. WestCode Software Inc., 15050 Avenue of Science, Suite 112, San Diego, CA 92128, (619) 487-9200; fax: (619) 487-9255. TrueType font utility. Version 1.0: Outline font capability on the Apple IIGS. Need we say more? (7/92, pg. 24)

Signature GS ★★★
IIGS, \$29.95. Q Labs/Quality Computers, 20200 East Nine Mile Road, St. Clair Shores, MI 48080, (800) 443-6697; (313) 774-7200. GS/OS desktop-environment customization programs. Desktop jewelry for the Apple IIGS. Includes a screen saver and sounds to attach to Finder actions. (8/92, pg. 54)

SuperConvert 3.0.1 ★★★★★
IIGS, \$39.95. Seven Hills Software, 2310 Oxford Road, Tallahassee, FL, 32304-3930, orders & info.: (904) 575-0566; tech. support: (904) 576-9415; fax: (904) 575-2015. Graphics-exchange software. Graphics utility of the decade for the Apple IIGS. (1/92, pg. 26)

Stack Enhancers ★★★1/2
Mac, \$69 U.S., \$79 Canada. Cheshire Grin Productions Ltd., 2145 Sherobee Road, Suite 43, Mississauga, ON L5A 3G8, Canada, (416) 896-8077. HyperCard 2.x-series add-on. Esoteric but fun buttons, XCMDs, and scripts. (3/92, pg. 54)

Talking Tools ★★★
IIGS, \$60. The Byte Works Inc., 4700 Irving Blvd. NW, Suite 207, Albuquerque, NM 87114, (505) 898-8183. Programming tool for speech synthesis. Make your Apple talk back to you. (1/92, pg. 29)

Total Control 2.1 ★★★1/2
Apple IIe, \$60 plus \$3 shipping. JEM Software, 7578 Lamar Court, Arvada, CO 80003, (303) 422-4856; fax: (303) 422-4856. AppleWorks 3.0 add-on. Version 2.0: Enhanced control over your AppleWorks database fields and records. (4/92, pg. 50)

COLLECTIONS

Hyperstuff Collection ★★★
IIGS, \$39.95 **ClipArt Plus**; \$39.95 **ClipTunes**; \$29.95 **Animated Icons**; \$49.95 **SoundConvert**. Triad Venture Inc., P.O. Box 12201, Hauppauge, NY 11788, (516) 360-0797 or (516) 732-3771. HyperStudio tools, clip art, sounds, icons. Nifty hypermedia extras for spicing up your stacks. (7/92, pg. 55)

MacGlobe ★★★★★
Mac, \$49.95. Broderbund Software, 500 Redwood Blvd., Novato, CA 94948-6121, (415) 382-4400. Electronic atlas with maps and national data. You'll have the whole world in your hands with this product, even though the world keeps changing. (3/92, pg. 24)

MacUSA ★★★★★
Mac, \$49.95. Broderbund Software, 500 Redwood Blvd., Novato, CA 94948-6121, (415) 382-4400. U.S. geography maps, charts, and information database. High information content and an easy interface make MacUSA both useful and just plain fun. (11/92, pg. 58)

Shoebox 1.1 ★★★1/2
IIGS, \$59.95; version 1.0 update \$8.50, \$13.50 with HyperCard upgrade. Seven Hills Software, 2310 Oxford Road, Tallahassee, FL 32304-3930, orders & info: (904) 575-0566; tech. support: (904) 576-9415; fax: (904) 575-2015. HyperCard IIGS stacks and extensions. Version 1.0: Solid financial software for advanced and novice bookkeepers. Slowed by HyperCard, but still worthwhile. (8/92, pg. 52)

USA Geograph ★★★★★
Mac, \$69. MECC, 6160 Summit Drive North, Minneapolis, MN 55430-4003, (800) 685-6322; (612) 569-1549. U.S. geography maps, charts, and information database. Just a shade below its competition, this product isn't quite as flexible, but holds its own for depth and breadth of information. (11/92, pg. 58)

PUBLICATIONS

A2-Central on Disk ★★★
Apple II, \$90/year (12 issues). Resource Central, P.O. Box 11250, Overland Park, KS 66207, (913) 469-6502. Monthly Apple II newsletter, shareware, and public-domain software included. Good software, good tips, spotty editorial quality. Great if you don't have a modem. (11/92, pg. 24)

Script-Central ★★★★★
IIGS, \$48/year (6 issues). Resource Central, P.O. Box 11250, Overland Park, KS 66207, (913) 469-6502. Bimonthly HyperCard IIGS electronic publication. One of the best software products on any platform. Imaginative layout, useful content, tremendous entertainment. (11/92, pg. 25)

Studio City ★★★1/2
Apple II, \$48/year (6 issues). Resource Central, P.O. Box 11250, Overland Park, KS 66207, (913) 469-6502. Bimonthly HyperStudio electronic publication. Promising young publication with a lot to offer. Early issues lacked maturity, but there's no getting by the quality content. (11/92, pg. 27)

TimeOut-Central ★★1/2
Apple II, \$48/year (6 issues). Resource Central, P.O. Box 11250, Overland Park, KS 66207, (913) 469-6502. Bimonthly electronic publication on TimeOut products. Somewhat self-serving repository for good TimeOut macros. (11/92, pg. 27)

HARDWARE

A-Hive Jr. ★★★★★
Mac and IIGS, \$499 with Apple high-speed SCSI card; \$559 with RamFast SCSI; includes cables, two 21MB disks, one 1.44MB disk, one 720K disk. Tulin Technology, 2156H O'Toole Avenue, San Jose, CA 95131, (408) 432-9057. Floptical SCSI drive for Macintosh or Apple IIGS. Unlimited high-density storage for data-intensive applications. Not the fastest, but one of the least expensive. (9/92, pg. 22)

DeskWriter 550C ★★★★★
Mac, \$1099. Hewlett-Packard, 19310 Pruneridge Avenue, Cupertino, CA 95014, (800) 752-0900. Color ink-jet printer for Macintosh. Affordable, quality color output from an established name in printer technology. (3/92, pg. 25)

InFocus 1600LC PC Viewer ★★★★★
Mac, IIGS, \$2695 **1600LC** color; \$1695 **1600GS** monochrome. InFocus Systems, 7770 Southwest Mohawk Street, Tualatin, OR 97062, (800) 327-7231; (503) 692-4968. 16-color LCD projection panel. Sometimes you just gotta see the big picture. The color and the monochrome displays are reasonably priced solutions to classroom or business presentations. (9/92, pg. 52)



Just because you use an Apple II doesn't mean you should suffer.

Lately, it seems, owning an Apple II has become a pretty frustrating thing. Not too long ago you made an investment in a personal computer and now you're finding that suddenly you've become a "second class" user with many manufacturers and suppliers. Well not with Sequential Systems. For almost 10 years, we've been a leading manufacturer of quality peripheral devices for Apple II computers and we're still serious about Apple II. As a matter of fact, in 1993 Sequential Systems will introduce no less than 9 new hardware and software products for Apple II & IIGS. And not just more memory expansions and hard disk drives but useful and inge-

nious enhancements in networking, multimedia, telecommunications, and more. Products to help keep you computing with Apple II into the 21st Century!

We're serious about Apple II! So, next time you talk to your favorite computer/peripherals dealer, ask about Sequential Systems products. And while you're at it, ask about Sequential Systems' Free HelpLine and about the personalized service we give each and every customer. Then when you're ready to enhance your Apple II investment with a purchase make sure to ask for Sequential Systems' products by name. Because we ARE serious about Apple II and we'll be with you down the road.



ALL Sequential Systems products include a 2-year prompt replacement warranty.



ALL Sequential Systems products include FREE 800-line technical support.



ALL Sequential Systems products are made exclusively in Colorado, USA.

SEQUENTIAL SYSTEMS

We're Serious About Apple II.

COVER FEATURE



inCider/A+ presents the CD-ROM hit parade — great choices in ten categories, ranging from fun and games to serious business at home, work, and school.

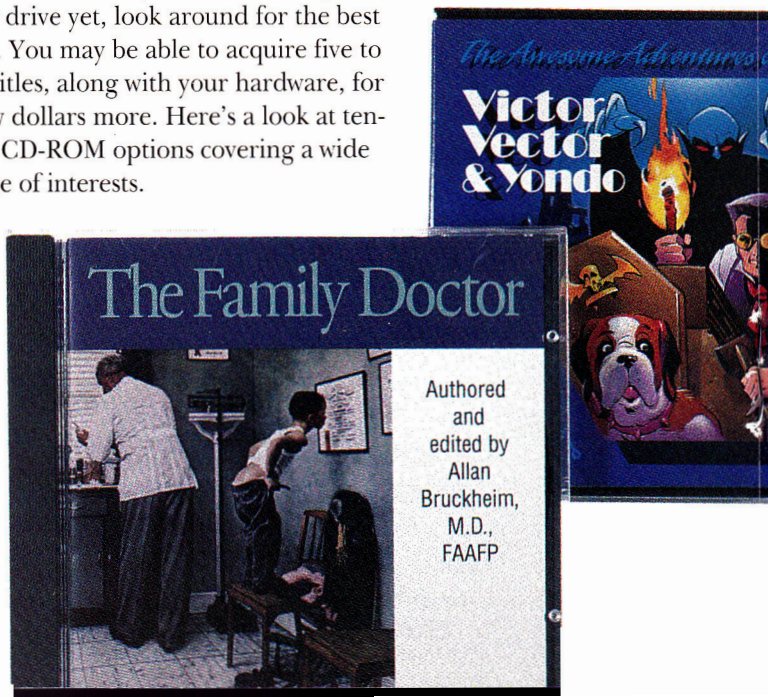
By BARRY D. BOWEN

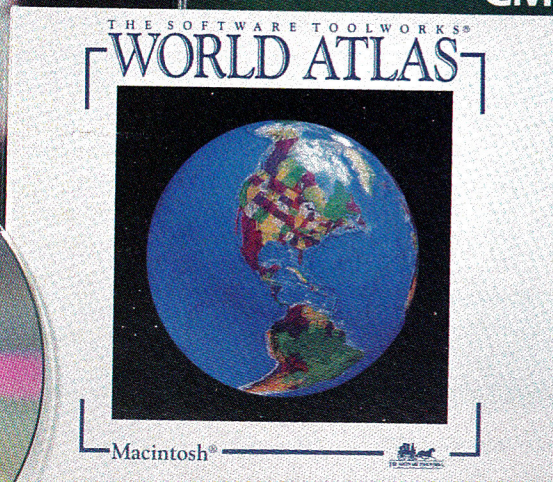
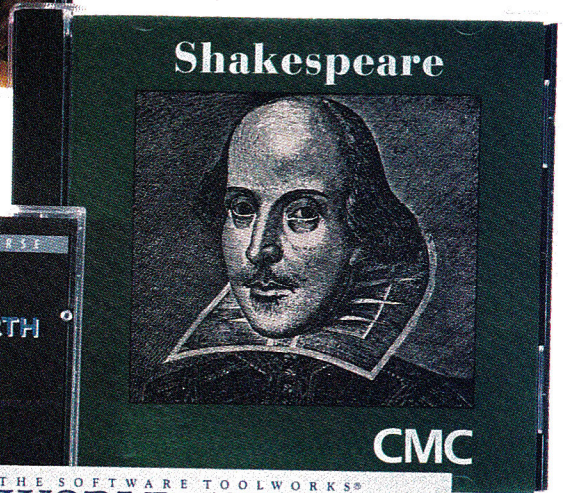
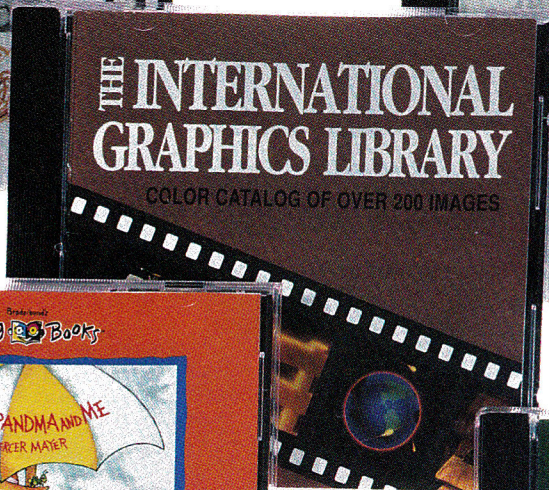
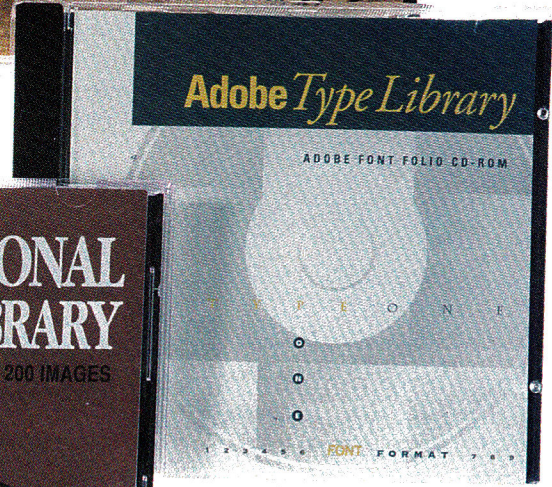
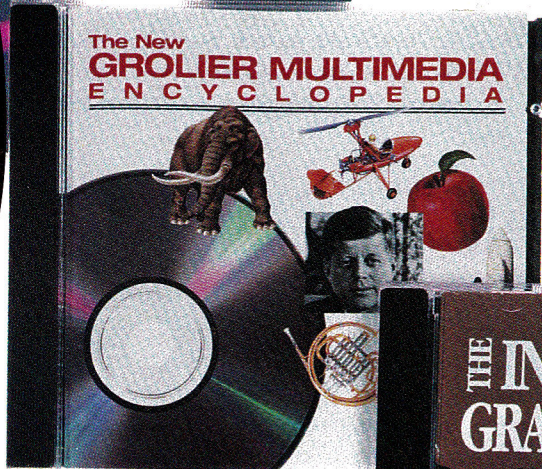
The difference between adults and kids, the saying goes, is the price of their toys. If you've purchased a CD-ROM drive for your Mac or you're thinking of getting one — or if you've just bought a new Performa 600 with a built-in CD-ROM drive — here are ten great options that'll prove either that it's a really neat toy or, if you prefer, a seriously useful peripheral.

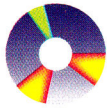
The number and diversity of CD-ROM titles have grown dramatically in recent years. Gone are the days when drive manufacturers had to publish their own discs to give buyers a good reason to lay down their cash — CD publishing is now a booming business. NEC America has, unfortunately, phased out its photo and clip-art volumes for that reason.

The good news, however, is that several manufacturers and resellers are bundling third-party CD-ROM collections with their drives. So if you haven't bought your drive yet, look around for the best deal. You may be able to acquire five to ten titles, along with your hardware, for a few dollars more. Here's a look at ten-plus CD-ROM options covering a wide range of interests.

Photography • Dennis Warnesky

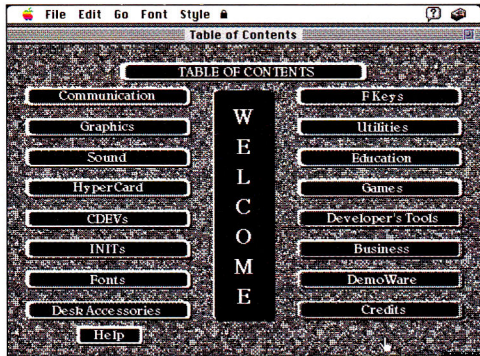




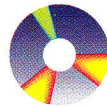


PUBLIC-DOMAIN PLATTERS

The Boston Computer Society's Macintosh User Group, based in Cambridge, Massachusetts, is up to volume 10 in its **Software Spectrum** series of freeware and shareware items on CD-ROM. With more than 600 megabytes of images, sounds, QuickTime movies, fonts,



utilities, system additions, and extensions, it's truly a great bargain at only \$80.



Many popular commercial utilities now bundled into packages began life as shareware offerings in the archives of Mac user

groups. The hard part was getting to these gems. Collections such as Software Spectrum provide mail-order access and have eliminated the need to search through dozens of disks to find what you want. You still have to screen your choices carefully, though — look through the folders first and avoid the temptation to load your system with space-hogging frills.

Some commercial suppliers have put together a number of smaller collections — Wayzata's **GEM Mac 2.0** and Quantum Leap's **CD7 Super Library** are two of the more widely known — presumably by weeding out less-valuable items.

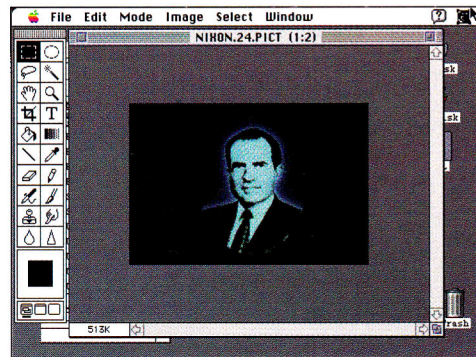
great compromise between price and availability. For about \$60 via mail order, you get 13 standard font families, plus access to any two additional font families you select. Simply copy the screen and printer fonts to your hard disk and you're set.

The CD, however, holds many more font families just waiting to be tapped. With a ready credit card, you can call Adobe and receive an access code that lets you download additional fonts permanently as you need them.

The entire Adobe font collection is available — it's called **Font Folio CD** — but it costs thousands of dollars. Adobe Type on Call is a much more manageable budget item.

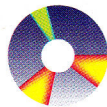
GRAPHICS COLLECTIONS

Clip art and photography represent one of the fastest-growing segments of CD-ROM publishing. Images and photos take up a great deal of disk space, but you can download them easily only as needed —



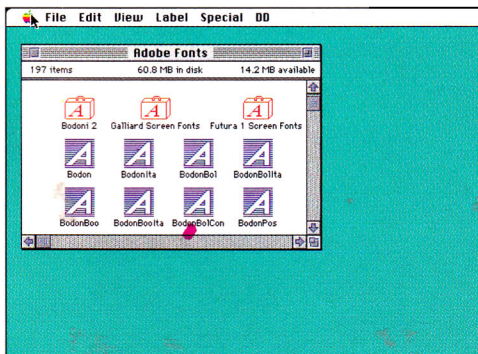
a perfect fit. One interesting option in this exciting CD category is Gazelle Technologies' **International Graphics Library**. More than 200 digital images, created by artists originally for

television, are presented in color and gray-scale. Many of these graphics make ideal backgrounds for slides.

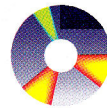


FONT COLLECTIONS

If you're into desktop publishing, you've probably found the fonts supplied with your Mac inadequate or, more to the point, just plain boring. **Adobe Type on Call**, from Adobe Systems, developers of the PostScript language used in most laser printers, represents a

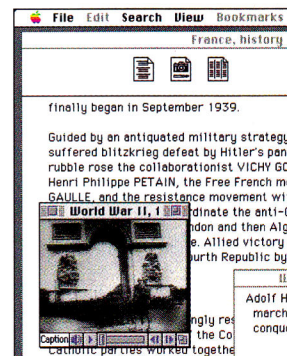


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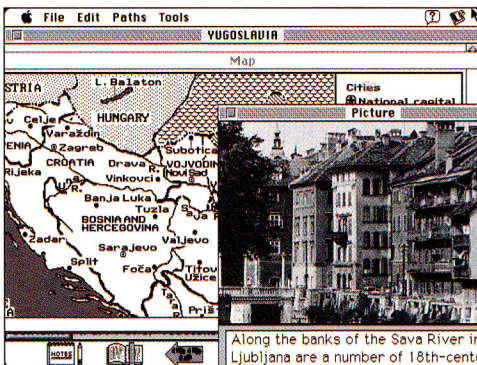


ENCYCLOPEDIAS

There are two good all-purpose references available for the Mac on CD-ROM: **Grolier Multimedia Encyclopedia** and **Compton's Multimedia Encyclopedia**. Both offer extensive text entries, some photos, maps, sounds, animated sequences, and film clips. For instance, in addition to reading concise text entries, you can also see the space



shuttle take off, hear John F. Kennedy speak, and watch the human heart pump blood through its chambers. I prefer Grolier's because it's faster and seems oriented toward adults. Its speed derives from a plainer user interface, though, and fewer links between text articles and related photos, sounds, and movies. Compton's provides a more-colorful interface and easier access to linked graphics. Each is a comprehensive, enjoyable source of information, however, on a wide range of topics.



CD-ROM DRIVE MODELS

Apple CD 300, \$599
includes library of 10 titles

Apple CD 150, \$549
Apple Computer Inc.
20525 Mariani Ave.
Cupertino, CA 95014
(408) 996-1010

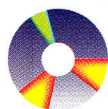
CDR-37
NEC America
1255 Michael Drive
Wood Dale, IL 60191
(312) 860-9500
\$499

CDR-10
Mirror Technologies
2644 Tatton Road
Roseville, MN 55113
(612) 633-4450
\$599

CDU-7211
Sony America
655 River Oaks Parkway
San Jose, CA 95134
(408) 432-0190
\$919.95

DRM-600A, \$1250
DRM-604X, \$1795
Pioneer Communications
3255-1 Scott Blvd.
Suite 103
Santa Clara, CA 95054
(408) 988-1702

RELAX Mesa 680
RELAX Technology
3101 Whipple Road
Union City, CA 94587
(510) 471-6112
\$299

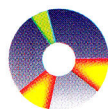


INTERACTIVE STORIES

If your child is in the process of learning to use a Mac, go out and buy **Just Grandma and Me** from Broderbund Software. The company says this CD is appropriate for ages 3 through 8, and that's probably accurate. **Just Grandma and Me** is the story of Little Critter and his grandmother on a trip to the beach. (Don't ask me who Little Critter is, but kids seem to know.)

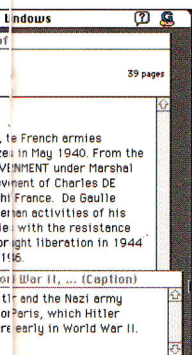
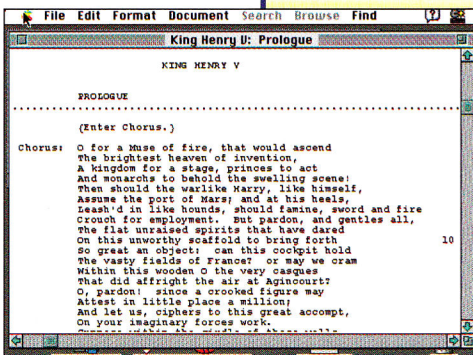
The cartoon animation looks very professional, and the resolution is crisp. Kids can choose to have the Mac read the story aloud, or they can play within each screen, using the mouse to evoke actions, sounds, and dialogue from characters and objects. The program is multi-lingual, supporting English, Spanish, and Japanese. Actual kid testing has proved this one to be a hit.

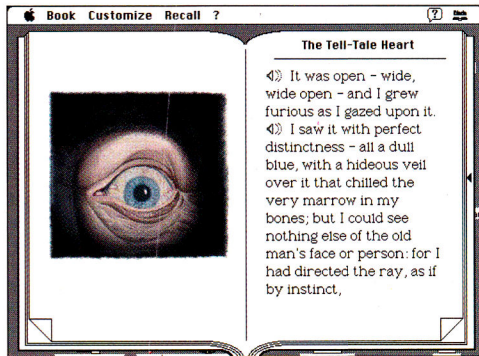
Just Grandma and Me is the first volume in Broderbund's Living Books series. **Arthur's Teacher Trouble** has just been released (see What's New in this issue, p. 11), and **The Tortoise and the Hare** is in the works.



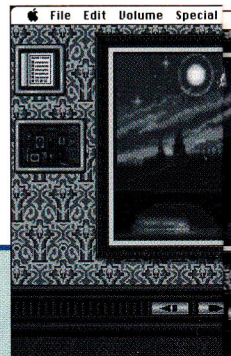
COMPACT LIBRARIES

A range of classics, fiction, and traditional children's books are also becoming available on CD-ROM. Creative Multimedia Corp. offers the works of **Shakespeare** on disc, for example. CMC's products follow a text-based approach, with the goal of compiling a massive amount of





material in one easily stored form — useful for English students, perhaps. Discis Knowledge Research, on the other hand, provides a more entertaining look at a much smaller amount of material — Edgar Allan Poe's work in **The Telltale Heart**, for example, and a disc version of **Aesop's Fables**. While they're in no way interactive books, they do include graphics, and you can choose to have the Mac read aloud, flipping the "pages" as it goes.



PRODUCT INFORMATION A Buyer's Guide to Popular CD-ROM Titles

Adobe Type on Call, \$99

Font Folio CD, \$8250
Adobe Systems
1585 Charleston Road
P.O. Box 7900
Mountain View, CA 94039-7900
(415) 961-4400
(800) 833-6687

Aesop's Fables, \$49.95

Cinderella:
The Original Fairy Tale, \$49.95
The Night Before Christmas,
\$39.95
Scary Poems for Rotten Kids,
\$54.95

The Telltale Heart, \$59.95
Discis Knowledge Research
45 Sheppard Ave. East
Suite 410
Toronto, ON M2N 5W9
Canada
(416) 250-6537

Amanda Stories, \$59.95

Baseball's Greatest Hits,
\$79.95
Beethoven: Symphony No. 9,
\$99.95
Igor Stravinsky:
The Rite of Spring, \$99.95
I Photograph to Remember,
\$39.95
A Silly Noisy House, \$59.95
The Voyager Company
1351 Pacific Coast Highway
Santa Monica, CA 90410
(310) 451-1383

**The Awesome Adventures
of Victor Vector & Yondo**
Sanctuary Woods Multimedia
1124 Fort St.
Victoria, BC V8V 3K8
Canada
(604) 380-7582
\$59.95

CD Fun House, \$49
CIA World Factbook 1992, \$49
GEM Mac 2.0, \$119
Wayzata Technology
P.O. Box 807
Grand Rapids, MN 55744
(218) 326-0597
(800) 735-7321

CD7 Super Library

Quantum Leap Technologies
1399 SE 9th Ave.
Suite 4
Hialeah, FL 33010
(305) 885-9985
(800) 762-2877
\$149

Compton's Multimedia Encyclopedia, \$795

Guinness Multimedia
Disc of Records, \$59.95
Compton's New Media
2320 Camino Vida Roble
Carlsbad, CA 92009
(619) 929-2500
(800) 532-3766

Cosmic Osmo, \$59.95

The Manhole, \$34.95
Cyan
P.O. Box 28096
Spokane, WA 99228
(509) 468-0807

Desert Storm:

The War in the Persian Gulf,
\$39.95
The Magic Flute, \$66
The String Quartet, \$66
The View from Earth, \$79.98
Warner New Media/
Time Warner
3500 Olive Avenue
Burbank, CA 91505
(818) 955-9999

The Family Doctor, \$79.99
Multimedia Audubon's Mammals,
\$49.99

Shakespeare, \$29.99
Sherlock Holmes, \$29.99
Taran Trilogy:
Beyond the Wall of Stars,
\$49.99
Creative Multimedia Corp.
514 NW 11th
Suite 203
Portland, OR 97209
(503) 241-4351
(800) 262-7668 tech support

Grolier Multimedia Encyclopedia 1992

Grolier Electronic Publishing
Sherman Turnpike
Danbury, CT 06816
(203) 797-3500
(800) 356-5590
\$395 plus \$4 shipping

International Graphics Library

Gazelle Technologies
7434 Trade St.
San Diego, CA 92121
(619) 536-9999
\$299

Just Grandma and Me, \$49.95

**Where in the World Is Carmen
Sandiego? Deluxe, \$89.95**
Broderbund Software
550 Redwood Boulevard
P.O. Box 6121
Novato, CA 94948
(415) 382-4400

Learn to Speak French:

Disc 1/Disc 2, \$99 set
Think & Talk German, \$199
Think & Talk Spanish, \$199
Think & Talk French, \$199
Think & Talk Italian, \$199
HyperGlot Software
5108D Kingston Pike
Knoxville, TN 37919
(800) 726-5087
(615) 558-8270

Multimedia World Factbook

Bureau Development
141 New Road
Parsippany, NJ 07054
(201) 808-2700
(800) 828-4766
\$49.95

Sherlock Holmes, Consulting Detective

ICOM Simulations
648 South Wheeling Road
Wheeling, IL 60090
(708) 520-4440
\$69.95

Software Spectrum

Boston Computer Society
Macintosh User Group
1972 Massachusetts Ave.
Cambridge, MA 02140
(617) 864-1700
\$79

Software Toolworks World Atlas

Software Toolworks
60 Leveroni Court
Novato, CA 94949
(415) 883-3000
\$89.95

Time Table of History: Science and Innovation

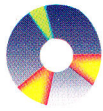
Xiphias
8758 Venice Blvd.
Los Angeles, CA 90034
(310) 841-2790
\$69.95

The Velveteen Rabbit

Queue Inc.
338 Commerce Drive
Fairfield, CT 06430
(203) 335-0908
(800) 232-2224
\$49.95

Webster's Ninth New Collegiate Dictionary

Highlighted Data
4350 North Fairfax Drive
Suite 450
Arlington, VA 22203-1620
(703) 516-9211
\$199.95



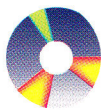
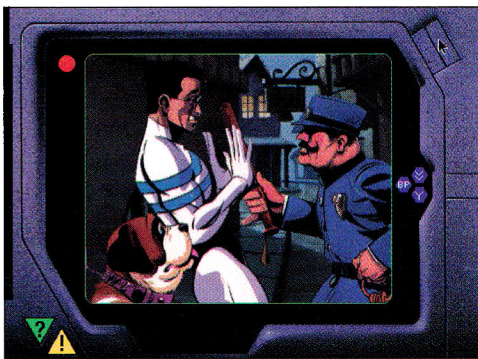
GAMES AND ADVENTURES



When looking for CD-ROM-based entertainment, be careful — it's in this area you'll find both gems and dogs. My own favorite is ICOM Simulations' **Sherlock Holmes, Consulting Detective**. It's an excellent blend of the multimedia arts and board-game sleuthing. Three Holmes mysteries are presented, together

with introductory film clips, maps, suspect lists, and all the relevant clues you'll need to track down the unlikely culprit.

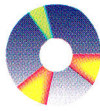
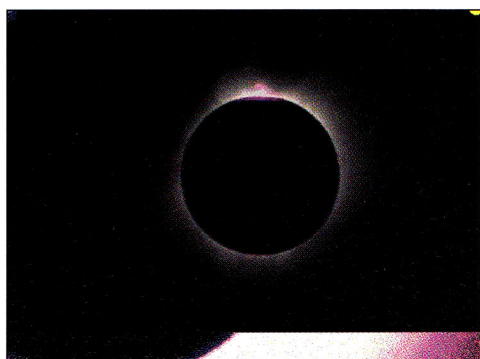
If science fiction is more your style, try **The Awesome Adventures of Victor Vector & Yondo**, from Sanctuary Woods. This CD's graphics images are nice, and the structure is very much like that of an arcade game. This first Victor Vector adventure takes you in search of Count Dracula's coffin.



NEWS AND WORLD EVENTS

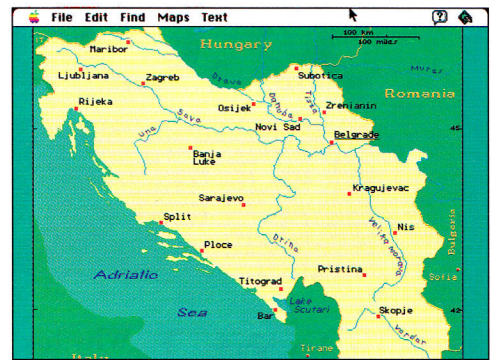
Warner New Media has brought the professional production values of Time-Life Books to the CD-ROM platform. **The View from Earth**, for example, is one of its most exciting products. This excellent multimedia presentation features the July 1991 solar eclipse, with hundreds of color photographs and illustrations of the earth, moon, sun, and planets, all with extensive narration.

If geopolitics is your main interest, Warner New Media has also adapted Time magazine's coverage of 1991's biggest story to CD-ROM in **Desert**



SPECIAL-INTEREST REFERENCE

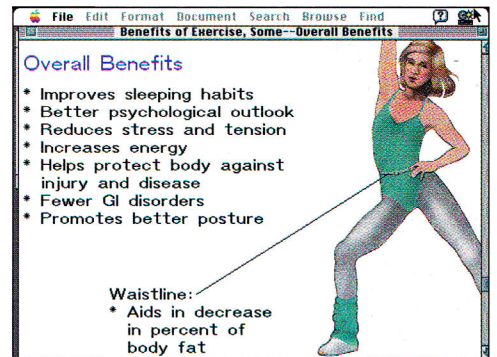
The field's wide open here — we'll take a look at just two of the many titles in the special-interest market. Software Toolworks, for one, has produced a very nice CD-ROM version of



its **World Atlas**, with more than 250 maps, including one for each nation or dependency, as they stood in 1991. Statistical maps illustrate factors such as life expectancy, population density, infant mortality, and electricity production. Text information covers topics such as education, government, crime, economy, communications, and agriculture.

In addition to compiling texts, Creative Multimedia Corp. has also published **The Family Doctor**, by Allan Bruckheim, M.D. This title is a mixture of Physician's Desk Reference, advice

column, and encyclopedia. While it does reflect the text basis of those compendia, this CD adds color photos and illustrations and covers frequently asked medical questions, common health prob-



lems, and basic anatomy. Articles on prescription drugs offer much of the information you wish your doctor would take time to impart, including discussions of the uses of various drugs, reasons for avoiding drugs, and common and serious side effects. □

BARRY BOWEN IS A MACINTOSH CONSULTANT AND FREELANCE WRITER IN CHICAGO, ILLINOIS. WRITE TO HIM C/O INCIDER/A+, 80 ELM STREET, PETERBOROUGH, NH 03458. ENCLOSE AN SASE IF YOU'D LIKE A REPLY.

PROJECT: SCHEDULE A

Tax Form

REFORM

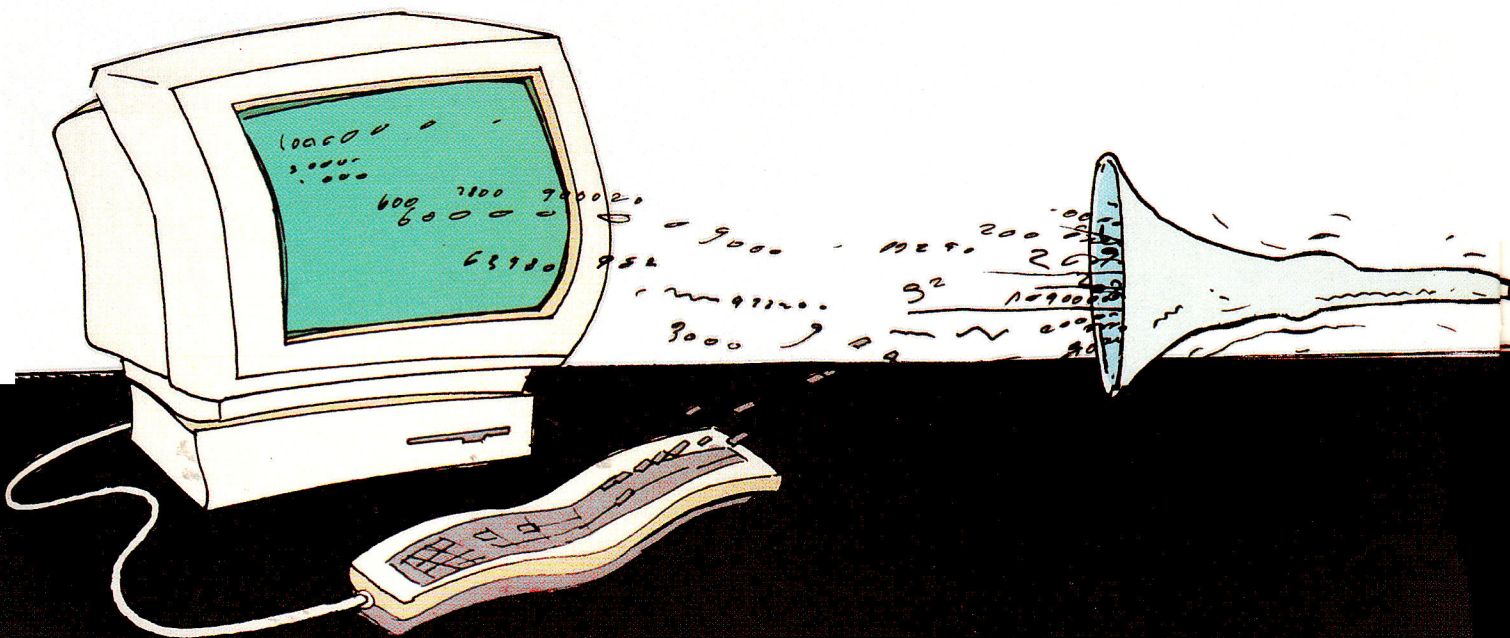
The federal deficit was big news during last fall's presidential campaign — and it's one issue people aren't likely to forget about anytime soon. Whether you're worried that Washington is wasting too much or not spending enough, the bottom line come spring will be just how large a contribution the government expects *you* to make. It's tax time again.

Despite the Internal Revenue Service's continuing efforts toward tax simplification, preparing a return seems to get more complicated each year. That's where your Macintosh, Apple IIGS, or Apple IIe/IIc can help — no sense working like an April fool when all you have to do is spend some quality time with a spreadsheet. In this issue and in March we'll see how easy it is to create electronic versions of two commonly used IRS forms: Schedule A and Form 1040.

Part 1 Why tax your shoebox and your pocket calculator with the grim task of preparing your federal income-tax return? Come April 15, let your Mac or Apple II do the job. This month we'll show you in ten easy steps how to itemize your deductions on Schedule A; in March we'll create a Form 1040.

Long before the government racked up trillions of dollars in debt, accountants were using Apple IIs and VisiCalc — the mother of all spreadsheet programs — to balance budgets, test "what if" scenarios, and estimate taxes. Today, thanks to Apple's advances in user-interface design, spreadsheets are no longer the domain of trained professionals only. Integrated-software products such as

By THE STAFF OF INCIDER/A+



ClarisWorks and **Microsoft Works** for the Mac, and **AppleWorks Classic** or **AppleWorks GS** for the Apple II, are particularly well suited for home-finance projects because they include easy-to-use, easy-on-the-eyes spreadsheet modules offering mathematical precision and good looks, too. (Because our income-tax templates are pretty generic, you should be able to re-create them on any Mac or Apple II model, and with any other spreadsheet program or integrated application. You may have to tweak some of the mathematical function names, but that's probably the only difference you'll encounter.)

Replicating a tax form, or any kind of form for that matter, is easy if you study the document first by breaking it down into smaller, more manageable pieces. That's what we did with Schedule A and Form 1040. To make the electronic versions of these tax forms even more intuitive, we use the same terminology as the original documents wherever possible.

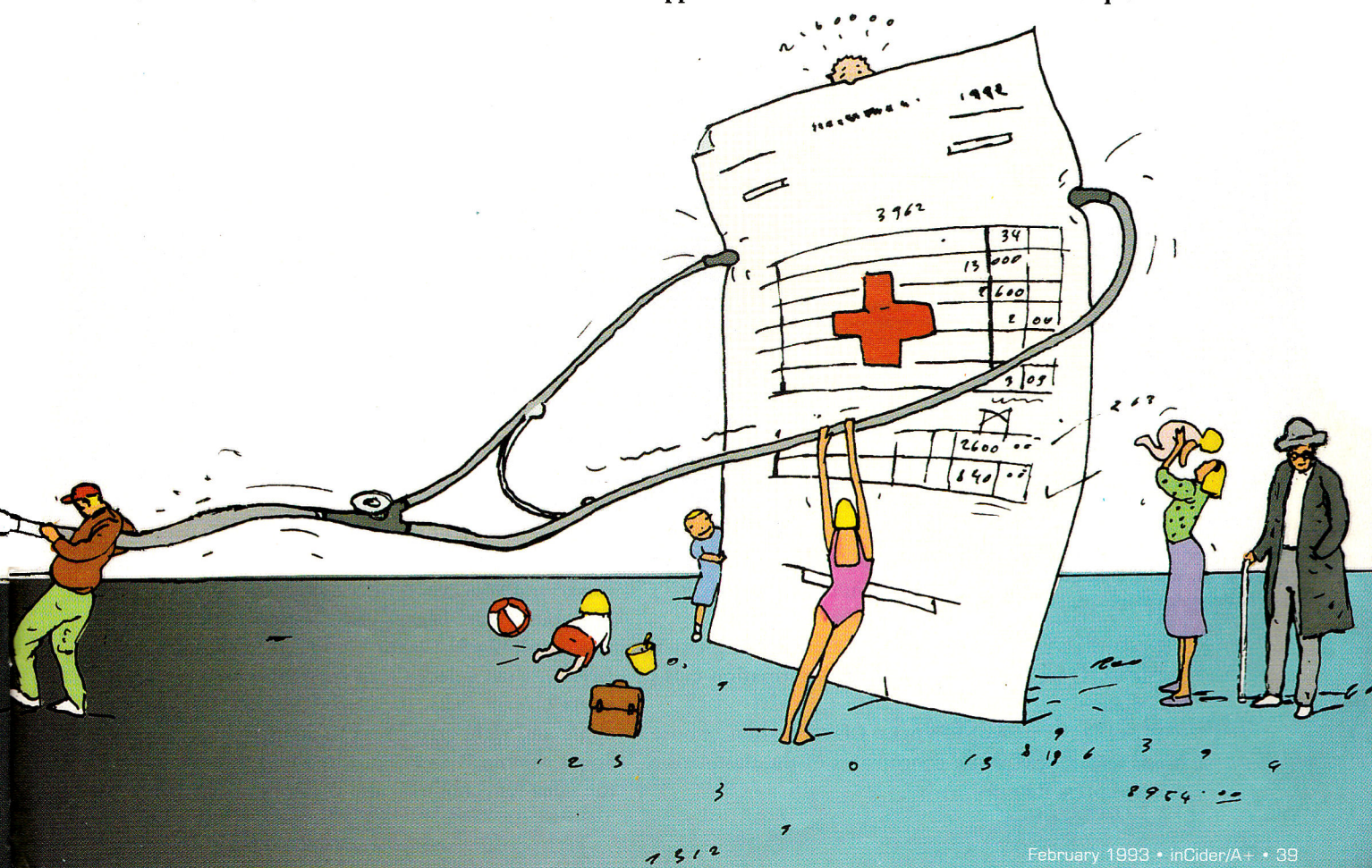
For instance, you use Schedule A to tally your *Itemized Deductions* — the orthodontist's bills, home-mortgage interest, property taxes, charitable donations, union dues, and so on. Form 1040, the *U.S. Individual Income Tax Return*, is the bottom-line document on which you claim all categories of income and figure the amount of tax you owe (or, if you're lucky, the amount the government owes you) after taking the exemptions, adjustments, deductions, and credits the IRS allows.

We've designed these worksheets to help you organize your deductible expenses and estimate your income-tax exposure: Our templates incorporate formulas from 1992 tax-rate tables supplied by the IRS at press time, but be sure to check current IRS publications (including the ones you receive in the mail) to learn about last-minute changes that may affect the accuracy of worksheet results. (Note also that these worksheets only simulate actual tax forms; *do not* submit your ImageWriter or LaserWriter hardcopies to the IRS in place of the official return.) With that in mind, let's design our worksheet, plug in some numbers, and see just who owes what to whom.

1. Launch your program and start a new spreadsheet file.

Like us, you're probably awash in check stubs and receipts saved in 1992. No doubt there are tax savings hidden in those slips of paper, so let's get started.

- With your mouse, click on the spreadsheet radio button in **ClarisWorks**.
- Double-click on the spreadsheet icon in **Microsoft Works**.
- Double-click on the spreadsheet icon in the *Open which file* dialog in **AppleWorks GS**.
- Use the keyboard to choose *Add files to the Desktop*, *Make a new file for the Spreadsheet*, and *From scratch* in **AppleWorks Classic**. Name the file **blank.ss.tmpl**.



PROJECT: SCHEDULE A

2. Get the feel of moving around your spreadsheet.

Some people find the very term *spreadsheet* intimidating. That's probably because a spreadsheet — like the national debt — can become bloated by faulty planning or poor implementation. Try dragging the vertical and horizontal scroll bars bordering the new spreadsheet document you just opened (or hit the arrow keys if you're using AppleWorks Classic), and you'll see how easy it is to get lost in this electronic twilight zone.

If you need a screen the size of a movie theater's to see a whole spreadsheet, you're not exactly a prime candidate for an Academy Award in the ease-of-use category. That's why we design many of our worksheets to look like

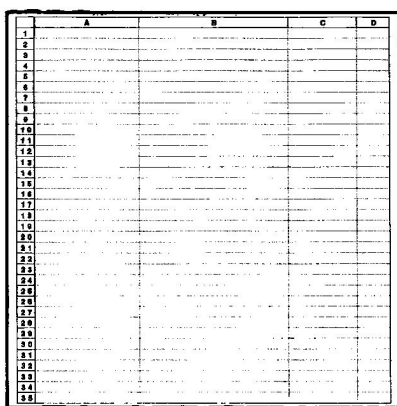


Figure 1a. Page 1 printout of blank ClarisWorks spreadsheet template. Microsoft Works and AppleWorks GS worksheets look similar.

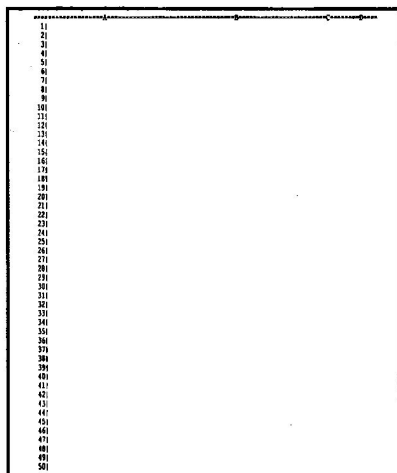


Figure 1b. Blank AppleWorks Classic spreadsheet template, page 1.

- In **AppleWorks GS**, call up *Go To* by hitting Open apple-G (OA-G) and typing in the destination cell's coordinates.

- Press OA-F in **AppleWorks Classic**, then choose *Coordinates*. Type in the coordinates of the destination cell and press Return.

3. Adjust column widths to accommodate different functions.

We'll size the four worksheet columns to conform to their respective functions in the tax templates we'll prepare this month and next. Column A, to begin with, accommodates each tax form's subheadings. For example, our version of Schedule A includes categories called *Medical and Dental Expenses*, *Taxes You Paid*, *Interest You Paid*, *Gifts to Charity*, *Casualty and Theft Losses*, *Moving Expenses*, *Job Expenses and Most Other Miscellaneous Deductions*, and *Other Miscellaneous Deductions*. After you finish preparing the blank template, you'll type these category names into the appropriate cells.

- For now, **ClarisWorks** users should just click on the column header to highlight all of column A. Pull down the *Format* menu, choose *Column Width*, and type **136**. Column B should be somewhat wider than column A to accommodate lengthier text — your physician's or hospital's name, a property-tax description, or a brief explanation of a miscellaneous deduction, for example. Use a value of **196** for column B. C is the "calculation" column, where you type expenses and other data. In column D you'll insert data-entry pointers: arrows consisting of the less-than sign and dashes (like this: <—). If you're using **ClarisWorks**, make column C **90** points wide and column D **42** points wide. When your empty worksheet looks like **Figure 1a**, save it with a meaningful name such as **Blank SS Template**. (SS stands for *spreadsheet*.)

- Note that **ClarisWorks** measures column width in points (72 points equals one inch), while **Microsoft Works** measures column width in characters. If you change the font you use, you may have to adjust the column-width setting, as well. (But by all means, feel free to experiment.) If you're using **Microsoft Works**, first change the default font to *Helvetica* in the *Preferences* dialog box (*Edit* menu). Then select the column A header, pull down the *Format* menu, choose *Column Width*, and type **22**. For column B, use a value of **40**; for C use **15**; for D, use **8**. Save your worksheet as **Blank SS Template**.

- In **AppleWorks GS**, you'll need to set column width by eye. The program asks you to position the pointer on the column-boundary marker in the column-header area. When the pointer turns into a two-headed arrow, drag it left or right to change the column's width. (This trick also works in **ClarisWorks** and **Microsoft Works**, if you're not concerned with numerical precision.) Now save your spreadsheet as **blank.ss.tmplt**.

- In **AppleWorks Classic**, go to cell A1. Press OA-L (for *Layout*), then select *Columns*. At the *Layout?* prompt, select *Column width*, then press Return. Use the open-apple and right-arrow keys to adjust column A's width. Select column B and adjust its width the same way. Do the same for columns C and D. Save your file (OA-S).

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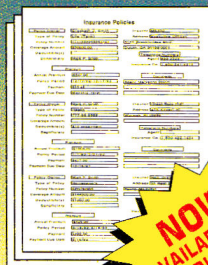
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PROJECT: SCHEDULE A

4. Type in the header information and format your worksheet's title.

Now with the blank tax-form spreadsheet template tucked away safely on your hard drive or floppy disk, you can use the version appearing on screen to create a facsimile of Schedule A. (You'll save it later under a different filename, to avoid writing over the template version now stored on disk.)

GO FIGURE

Learning about spreadsheet formulas as you create our easy tax template will give you some confidence when it's time to design a worksheet using similar expressions to track investments or student grades. Here are a few points to keep in mind:

- The equal sign (=) alerts ClarisWorks, Microsoft Works, or AppleWorks GS that you intend to type a formula into a selected cell. In AppleWorks Classic, though, you use a plus sign (+), unless you're using a built-in spreadsheet function requiring an @ sign.

- Formulas containing the **SUM** function (@SUM in AppleWorks Classic) add up the values in a given range of cells. For instance, the formula in C15 adds up the expenses you entered for health-insurance premiums paid during the four quarters of 1992. ClarisWorks, AppleWorks Classic, and AppleWorks GS all require two periods (..) between the first and last cells of the range; Microsoft Works requires a colon (:) instead. (You may see AppleWorks Classic formulas with three periods instead of two; either format works fine.)

- When you need to add up a discontinuous series of numbers, use a + formula like the one in C125, which enumerates individual cell locations.

- In C110 you multiply (*) the number of miles you drove (to see doctors, visit dentists, buy prescriptions, and get medical tests) by 9 cents per mile (0.09), the rate the IRS allows.

- C127 includes a multiplier, as well. In this case, the worksheet multiplies the amount of adjusted gross income (**AGI**) you type in C126 by 7.5 percent (0.075). The IRS says you can deduct only those medical expenses that exceed 7.5 percent of your AGI. Next month, the Form 1040 worksheet we'll design will calculate your AGI automatically. For now, take an educated guess or use last year's amount.

- The formula in C129 uses the logical function **IF** (@IF in AppleWorks Classic). Translated, it means this: If the amount calculated in cell C128 is more than 1, enter that amount here in C129. Otherwise, enter 0 here. Of course, you don't enter anything in any formula-containing cell, because the computer performs these calculations for you.

- In **ClarisWorks**, click on A2 and begin typing the "disclaimer" at the top of the sample worksheet shown in **Figure 2a**. When you get to the last word (*expenses*) in the first line, press Return. Click on A3 and type the second line, and so on. Click on A7 and type the worksheet title; press the caps-lock key down (or use the shift key) to make it uppercase. Now select the title by clicking within the row 7 header. Pull down the *Format* menu; choose *Style* and then *Bold* from the cascading menu. Now pull down the *File* menu and select *Save As*. Type in a new filename — **Schedule A** — for your newly revised (though incomplete) template.

- In **Microsoft Works**, click on A2 and type the "disclaimer" from **Figure 2a**. When you get to the last word (*expenses*) in the first line, press Return. Click on A3 (or use the arrow keys) and type the second line, and so on. Click on A7 and type the worksheet title. Press the caps-lock key down (or use the shift key) to make the title uppercase. Now select it by clicking within the row 7 header. Choose *Bold* from the *Style* menu in the toolbox. Pull down the *File* menu and select *Save As*. Type in a new filename — **Schedule A** — for your revised template-in-progress.

- In **AppleWorks GS**, click on A2 and type in the "disclaimer" shown in **Figure 2b**. When you get to the last word (*expenses*) in the first line, press Return. Click on A3 and type the second line, and so on. Click on A7 and type in the worksheet title. Press the caps-lock key down (or use the shift key) to make it uppercase. Then click within the row 7 header to select the title. Pull down the *Format* menu and choose *Bold* from the cascading menu. Now pull down the *File* menu and select *Save As*. Type in a new filename — **Schedule.A** — for your newly revised template.

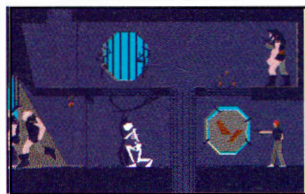
- If you're using **AppleWorks Classic**, go to A2 and begin typing the "disclaimer" shown in **Figure 2b**. When you get to the last word (*expenses*) in the first line, press Return. Use the arrow keys to move to A3 and type the second line, and so on. Move to A7 and type the worksheet title; press the caps-lock key down (or use the shift key) to make it uppercase. (Although boldface is an option on AppleWorks Classic's word-processor *Printer Options* menu, it's not available for the spreadsheet module.) Press OA-N and type in your spreadsheet's new name, **Schedule.A**. Then press the return key and press the OA-S key combination to save your revised template.

5. Enter cell labels to organize your deductions by category.

Click on each appropriate cell in column A (or use the arrow keys) and type its contents as shown in **Figures 2a** and **2b**. For example, in A9, type **Medical and Dental Expenses**. Then skip down to A131 and type **Taxes You Paid**. Now type in the entries in column B and then we'll do some formatting.

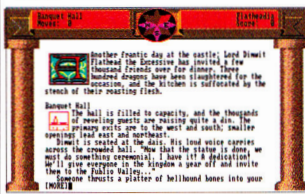
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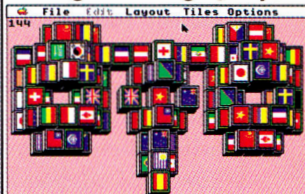
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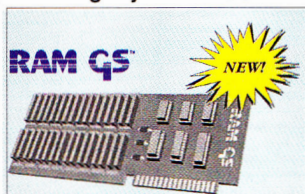
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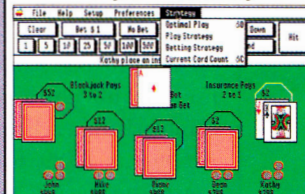
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PROJECT: SCHEDULE A

- In **ClarisWorks**, go back to B11. Click the I-beam before the *J* in *Jan-Mar* in the data-entry area at the top of the worksheet. Press the spacebar four times to indent. Indent the next three quarters of the year (B12, B13, and B14) the same way. To right-justify the label *Subtotal* in B15, click on the cell, pull down the *Format* menu, and choose *Alignment* and then *Right*. For cells with labels summarizing each deduction category (*Deductible Medical Expenses* in B129, for instance), make the text boldface: Pull down the *Format* menu and choose *Style* and then *Bold* from the cascading menu. Then position the text within the cell: Pull down the *Format* menu, and choose *Alignment* and then *Center*.

- In **Microsoft Works**, return to B11. Click the I-beam before the *J* in *Jan-Mar*. Press the spacebar four times to indent. Indent the next three quarters of the year (B12, B13, and B14) the same way. To right-justify the label *Subtotal* in B15, pull down the *Format* menu, choose *Format Cells*, and click on the *Right* radio button. For cells containing labels summarizing each deduction category (*Deductible Medical Expenses* in B129, for instance), first make the text boldface (choose *Bold* from the *Style* menu in the toolbox) and then place it appropriately: Pull down the *Format* menu, choose *Format Cells*, and click on the *Center* radio button.

- For **AppleWorks GS**, go back to B11. Click the I-beam before the *J* in *Jan-Mar* in the data-entry area at the top of the worksheet. Press the spacebar four times to indent. Indent the next three quarters of the year (B12, B13, and B14) the same way. To right-justify the label *Subtotal* in B15, select the cell, pull down the *Format* menu, and choose *Align Right*. To enhance labels summarizing each deduction category (*Deductible Medical Expenses* in B129, for instance), add boldface by pulling down the *Format* menu and choosing *Bold* from the cascading menu. Then position the label within its cell: Select it, pull down the *Format* menu, and choose the *Align Center* option.

- If you're using **AppleWorks Classic**, go to cell B11. To indent the label, start by pressing OA-U. At the blinking cursor at the bottom of the screen, press the spacebar four times and press Return. Do the same for all other labels you want to indent. To right-justify the label *Subtotal* in B15, go to that cell, press OA-L and select *Entry*; at the *Layout?* prompt choose *Label format*, then select *Right justify*. To center a label summarizing a deduction category (*Deductible Medical Expenses* in B129, for instance), go to that cell, press OA-L (*Layout*) and select *Entry*; at the *Layout?* prompt choose *Label format*, then select *Center*.

6. Add your formulas to the worksheet.

Skip column C for a few moments. In D11 let's create data-entry pointer like the one shown in Figures 2a

	A	B	C	D
1				
2	This facsimile of Internal Revenue Service Schedule A helps you organize your deductible expenses			
3	and calculate itemized deductions for tax planning or estimating purposes. Do not submit this			
4	worksheet to the IRS. Although the assumptions and formulas used were accurate at press time,			
5	they may be inaccurate now. Check the appropriate IRS publication for up-to-date information.			
6				
7	WORKSHEET FOR SCHEDULE A: ITEMIZED DEDUCTIONS			
8				
9	Medical and Dental Expenses			
10		Health Insurance Premiums		
11		Jan-Mar	0	<---
12		Apr-Jun	0	<---
13		Jul-Sep	0	<---
14		Oct-Dec	0	<---
15		Subtotal	0	
16				
17		Medications		
18			1	0 <---
19			2	0 <---
20			3	0 <---
21			4	0 <---
22			5	0 <---
23			6	0 <---
24			7	0 <---
25			8	0 <---
26			9	0 <---
27			10	0 <---
28		Subtotal	0	
29				
30		Doctors' Bills		
31			1	0 <---
32			2	0 <---
33			3	0 <---
34			4	0 <---
35			5	0 <---
36			6	0 <---
37			7	0 <---
38			8	0 <---
39			9	0 <---
40			10	0 <---
41		Subtotal	0	
42				
43		Dentists' Bills		
44			1	0 <---
45			2	0 <---
46			3	0 <---
47			4	0 <---
48			5	0 <---
49			6	0 <---
50			7	0 <---

and 2b. Now *Copy* (Command-C, or OA-C in AppleWorks Classic) the pointer. *Paste* it (Command-V, or OA-V in AppleWorks Classic) into all other appropriate cells on the worksheet. Enter a 0 (zero) in each of the cells in column C that's next to a data-entry pointer. Now type the formulas shown in the accompanying **Table** into the appropriate cells in column C. (Next month we'll use even more functions, including LOOKUP, in the Form 1040 worksheets we'll create. See the accompanying sidebar, "Go Figure," for quick tips on using the standard spreadsheet formulas referred to in this template.) Keep in mind the slight differences in formula format among the four programs.

- If you're using **ClarisWorks**, be sure to type an equal sign (=) before each formula. To add the contents of a range of cells, use the expression **SUM** and two ellipsis points, or periods (like this: ..), between the first and last cells of the range.

- In **Microsoft Works** as well, use an equal sign (=) to signify a formula expression. To add up the values in a range of cells, use the expression **SUM** and a colon (:), between the boundary cells of the range.

- **AppleWorks GS** also uses an equal sign (=) to denote a formula. To add the contents of a range of cells, use **SUM** and two ellipsis points (..).

- If you use **AppleWorks Classic**, put a plus sign (+) in front of each formula, except those that begin with a built-in spreadsheet function. For example, to add up the values in a range of cells, use the expression **@SUM** and either

	A	B	C	D
51			8	0 <---
52			9	0 <---
53			10	0 <---
54		Subtotal	0	
55				
56		Hospital & Laboratory Bills		
57			1	0 <---
58			2	0 <---
59			3	0 <---
60			4	0 <---
61			5	0 <---
62			6	0 <---
63			7	0 <---
64			8	0 <---
65			9	0 <---
66			10	0 <---
67		Subtotal	0	
68				
69		Other Medical Expenses		
70			1	0 <---
71			2	0 <---
72			3	0 <---
73			4	0 <---
74			5	0 <---
75			6	0 <---
76			7	0 <---
77			8	0 <---
78			9	0 <---
79			10	0 <---
80		Subtotal	0	
81				
82		Medical Transportation		
83		The per mile rate for 1992 is 9 cents.		
84		Enter mileage for each trip. This worksheet calculates your deduction in C110.		
85				
86			1	0 <---
87			2	0 <---
88			3	0 <---
89			4	0 <---
90			5	0 <---
91			6	0 <---
92			7	0 <---
93			8	0 <---
94			9	0 <---
95			10	0 <---
96			11	0 <---
97			12	0 <---
98			13	0 <---
99			14	0 <---
100			15	0 <---

	A	B	C	D
101			16	0 <---
102			17	0 <---
103			18	0 <---
104			19	0 <---
105			20	0 <---
106			21	0 <---
107			22	0 <---
108			23	0 <---
109			24	0 <---
110		Subtotal	0	
111				
112		Reimbursements		
113			1	0 <---
114			2	0 <---
115			3	0 <---
116			4	0 <---
117			5	0 <---
118			6	0 <---
119			7	0 <---
120			8	0 <---
121			9	0 <---
122			10	0 <---
123		Subtotal	0	
124				
125		Total Medical Expenses		0
126		Adjusted Gross Income: Enter from 1040		0 <---
127		7.5% of AGI		0
128		Difference		0
129		Deductible Medical Expenses		0
130				
131		Taxes You Paid		
132		State & Local Income Taxes		
133		State Tax 1		0 <---
134		State Tax 2		0 <---
135		State Tax 3		0 <---
136		State Tax 4		0 <---
137		Local Tax 1		0 <---
138		Local Tax 2		0 <---
139		Local Tax 3		0 <---
140		Local Tax 4		0 <---
141		Subtotal		0
142				
143		Real Estate Taxes		
144		Property 1		0 <---
145		Property 2		0 <---
146		Subtotal		0
147				
148		Other Taxes		
149		Personal Property Tax 1		0 <---
150		Personal Property Tax 2		0 <---

	A	B	C	D
151		Personal Property Tax 3		0 <---
152		Personal Property Tax 4		0 <---
153		Other Tax 1		0 <---
154		Other Tax 2		0 <---
155		Other Tax 3		0 <---
156		Other Tax 4		0 <---
157		Subtotal		0
158				
159		Deductible Tax Expenses		0
160				
161		Interest You Paid		
162		Home Mortgage Interest		
163		Mortgage 1		0 <---
164		Mortgage 2		0 <---
165		Mortgage 3		0 <---
166		Mortgage 4		0 <---
167		Subtotal		0
168				
169		Deductible Points		0 <---
170				
171		Investment Interest		
172		Loan 1		0 <---
173		Loan 2		0 <---
174		Subtotal		0
175				
176		Deductible Interest Expenses		0
177				
178		Gifts to Charity		
179		Contributions by Cash or Check		
180			1	0 <---
181			2	0 <---
182			3	0 <---
183			4	0 <---
184			5	0 <---
185			6	0 <---
186		Subtotal		0
187				
188		Other Than Cash or Check		
189			1	0 <---
190			2	0 <---
191			3	0 <---
192			4	0 <---
193			5	0 <---
194			6	0 <---
195		Subtotal		0
196				
197		Carryover from Prior Year		0 <---
198				
199		Deductible Charitable Expenses		0
200				

	A	B	C	D
201		Casualty and Theft Losses		
202		Deductible Casualty & Theft Losses		0 <---
203				
204		Moving Expenses		
205		Deductible Moving Expenses		0 <---
206				
207		Job Expenses and Most Other		
208		Miscellaneous Deductions		
209		Unreimbursed Employee Expenses		
210		Union Dues		0 <---
211		Job Travel		0 <---
212		Job Education		0 <---
213		Other Employee Expense		0 <---
214		Subtotal		0
215				
216		Other Expenses		
217		Investment		0 <---
218		Tax Preparation		0 <---
219		Safe Deposit Box Rental		0 <---
220		Subtotal		0
221				
222		Total Miscellaneous Expenses		0
223		Adjusted Gross Income		0 <---
224		2.0% of AGI		0
225		Difference		0
226		Deductible Miscellaneous Expenses		0
227				
228		Other Miscellaneous		
229		Deductions		
230			1	0 <---
231			2	0 <---
232			3	0 <---
233			4	0 <---
234		Deductible Other Expenses		0
235				
236				
237		TOTAL ITEMIZED DEDUCTIONS		0
238		(Enter this value into cell C47 on your 1040 Worksheet.)		
239				
240				

Figure 2a. Schedule A prints on five pages in ClarisWorks. Microsoft Works spreadsheet is similar in format.

PROJECT: SCHEDULE A

two or three periods (your choice, like this: .. or ...) to denote the boundaries of the range. (Similarly, note that the logical function IF is expressed as @IF in AW Classic.)

7. An ounce of prevention can protect your formulas from alteration.

Nothing's more frustrating than losing the fruits of your labor, particularly when you spend an hour or two reproducing a Schedule A worksheet. It's all too easy for you, or anyone with whom you share your template, to "lose" formulas — unless you protect them. (Note that if you protect a data-entry cell by mistake, no one will be able to type anything into it without removing protection first.)

- If you're using **ClarisWorks**, select a formula-containing cell and press Command-H. We offer the same advice for saving worksheets that political cynics offer about voting: Do it early and often. Pull down the *File* menu and choose *Save*, or just press Command-S.
- In **Microsoft Works**, pull down the *Format* menu and choose *Protect Cell*. Now pull down the *File* menu and choose *Save*, or press Command-S.
- In **AppleWorks GS**, use Command-* or select *Protect* from the *Data* menu. Pull down the *File* menu and select *Save*, or press Command-S.

CELL	CLARISWORKS & APPLEWORKS GS	MICROSOFT WORKS	APPLEWORKS CLASSIC
C15	=SUM(C11..C14)	=SUM(C11:C14)	@SUM(C11...C14)
C28	=SUM(C18..C27)	=SUM(C18:C27)	@SUM(C18...C27)
C41	=SUM(C31..C40)	=SUM(C31:C40)	@SUM(C31...C40)
C54	=SUM(C44..C53)	=SUM(C44:C53)	@SUM(C44...C53)
C67	=SUM(C57..C66)	=SUM(C57:C66)	@SUM(C57...C66)
C80	=SUM(C70..C79)	=SUM(C70:C79)	@SUM(C70...C79)
C110	=SUM(C86..C109)*0.09	=SUM(C86:C109)*0.09	@SUM(C86...C109)*0.09
C123	=SUM(C113..C122)	=SUM(C113:C122)	@SUM(C113...C122)
C125	=C15+C28+C41+C54 +C67+C80+C110-C123	=C15+C28+C41+C54 +C67+C80+C110-C123	+C15+C28+C41+C54 +C67+C80+C110-C123
C127	=C126*0.075	=C126*0.075	+C126*0.075
C128	=C125-C127	=C125-C127	+C125-C127
C129	=IF(C128>=1,C128,0)	=IF(C128>=1,C128,0)	@IF(C128>=1,C128,0)
C141	=SUM(C133..C140)	=SUM(C133:C140)	@SUM(C133...C140)
C146	=SUM(C144..C145)	=SUM(C144:C145)	@SUM(C144...C145)
C157	=SUM(C149..C156)	=SUM(C149:C156)	@SUM(C149...C156)
C159	=C141+C146+C157	=C141+C146+C157	+C141+C146+C157
C167	=SUM(C163..C166)	=SUM(C163:C166)	@SUM(C163...C166)
C174	=SUM(C172..C173)	=SUM(C172:C173)	@SUM(C172...C173)
C176	=C167+C169+C174	=C167+C169+C174	+C167+C169+C174
C186	=SUM(C180..C185)	=SUM(C180:C185)	@SUM(C180...C185)
C195	=SUM(C189..C194)	=SUM(C189:C194)	@SUM(C189...C194)
C199	=C186+C195+C197	=C186+C195+C197	+C186+C195+C197
C214	=SUM(C210..C213)	=SUM(C210:C213)	@SUM(C210...C213)
C220	=SUM(C217..C219)	=SUM(C217:C219)	@SUM(C217...C219)
C222	=C214+C220	=C214+C220	+C214+C220
C223	=C126	=C126	+C126
C224	=C223*0.02	=C223*0.02	+C223*0.02
C225	=C222-C224	=C222-C224	+C222-C224
C226	=IF(C225>=1,C225,0)	=IF(C225>=1,C225,0)	@IF(C225>=1,C225,0)
C234	=SUM(C230..C233)	=SUM(C230:C233)	@SUM(C230...C233)
C237	=C129+C159+C176+C199 +C202+C205+C226+C234	=C129+C159+C176+C199 +C202+C205+C226+C234	+C129+C159+C176+C199 +C202+C205+C226+C234

Table. Schedule A worksheet formulas for column C.

	A	B	C	D
511		8	0----	
521		9	0----	
531		10	0----	
541		Subtotal	0	
551				
561	Hospital & Laboratory Bills			
571		1	0----	
581		2	0----	
591		3	0----	
601		4	0----	
611		5	0----	
621		6	0----	
631		7	0----	
641		8	0----	
651		9	0----	
661		10	0----	
671		Subtotal	0	
681				
691	Other Medical Expenses			
701		1	0----	
711		2	0----	
721		3	0----	
731		4	0----	
741		5	0----	
751		6	0----	
761		7	0----	
771		8	0----	
781		9	0----	
791		10	0----	
801		Subtotal	0	
811				
821	Medical Transportation			
831	The per mile rate for 1992 is 9 cents.			
841	Enter mileage for each trip. This work-			
851	sheet calculates your deduction in C110.			
861		1	0----	
871		2	0----	
881		3	0----	
891		4	0----	
901		5	0----	
911		6	0----	
921		7	0----	
931		8	0----	
941		9	0----	
951		10	0----	
961		11	0----	
971		12	0----	
981		13	0----	
991		14	0----	
1001		15	0----	

	A	B	C	D
1011			16	0----
1021			17	0----
1031			18	0----
1041			19	0----
1051			20	0----
1061			21	0----
1071			22	0----
1081			23	0----
1091			24	0----
1101			Subtotal	0
1111				
1121				
1131	Reimbursements			
1141		1	0----	
1151		2	0----	
1161		3	0----	
1171		4	0----	
1181		5	0----	
1191		6	0----	
1201		7	0----	
1211		8	0----	
1221		9	0----	
1231		10	0----	
1241		Subtotal	0	
1251				
1261	Total Medical Expenses		0	
1271	Adjusted Gross Income: Enter from 1040		0----	
1281	7.5% of AGI		0	
1291		Difference		
1301		Deductible Medical Expenses	0	
1311	Taxes You Paid			
1321				
1331	State & Local Income Taxes			
1341	State Tax 1		0----	
1351	State Tax 2		0----	
1361	State Tax 3		0----	
1371	State Tax 4		0----	
1381	Local Tax 1		0----	
1391	Local Tax 2		0----	
1401	Local Tax 3		0----	
1411	Local Tax 4		0----	
1421		Subtotal	0	
1431				
1441	Real Estate Taxes			
1451	Property 1		0----	
1461	Property 2		0----	
1471		Subtotal	0	
1481				
1491	Other Taxes			
1501	Personal Property Tax 1		0----	
	Personal Property Tax 2		0----	

	A	B	C	D
1511	Personal Property Tax 3		0----	
1521	Personal Property Tax 4		0----	
1531	Other Tax 1		0----	
1541	Other Tax 2		0----	
1551	Other Tax 3		0----	
1561	Other Tax 4		0----	
1571		Subtotal	0	
1581				
1591	Deductible Tax Expenses		0	
1601				
1611	Interest You Paid			
1621	Home Mortgage Interest			
1631	Mortgage 1		0----	
1641	Mortgage 2		0----	
1651	Mortgage 3		0----	
1661	Mortgage 4		0----	
1671		Subtotal	0	
1681				
1691	Deductible Points		0----	
1701				
1711	Investment Interest			
1721	Loan 1		0----	
1731	Loan 2		0----	
1741		Subtotal	0	
1751				
1761	Deductible Interest Expenses		0	
1771				
1781	Gifts to Charity			
1791	Contributions by Cash or Check			
1801		1	0----	
1811		2	0----	
1821		3	0----	
1831		4	0----	
1841		5	0----	
1851		6	0----	
1861		Subtotal	0	
1871				
1881	Other Than Cash or Check			
1891		1	0----	
1901		2	0----	
1911		3	0----	
1921		4	0----	
1931		5	0----	
1941		6	0----	
1951		Subtotal	0	
1961				
1971	Carryover from Prior Year		0----	
1981				
1991	Deductible Charitable Expenses		0	
2001				

	A	B	C	D
2011	Casualty and Theft Losses			
2021		Deductible Casualty & Theft Losses	0----	
2031				
2041	Moving Expenses			
2051		Deductible Moving Expenses	0----	
2061				
2071	Job Expenses and Most Other			
2081	Miscellaneous Deductions			
2091	Unreimbursed Employee Expenses			
2101	Union Dues		0----	
2111	Job Travel		0----	
2121	Job Education		0----	
2131	Other Employee Expense		0----	
2141		Subtotal	0	
2151				
2161	Other Expenses			
2171	Investment		0----	
2181	Tax Preparation		0----	
2191	Safe Deposit Box Rental		0----	
2201		Subtotal	0	
2211				
2221	Total Miscellaneous Expenses		0	
2231	Adjusted Gross Income		0----	
2241	2.0% of AGI		0	
2251		Difference		
2261		Deductible Miscellaneous Expenses	0	
2271				
2281	Other Miscellaneous			
2291	Deductions			
2301			1	0----
2311			2	0----
2321			3	0----
2331			4	0----
2341		Deductible Other Expenses	0	
2351				
2361				
2371				
2381	TOTAL ITEMIZED DEDUCTIONS		0	
2391	(Enter this value on your 1040 Worksheet)			
2401				

Figure 2b. Printout (five pages) of Schedule A in AppleWorks Classic. Note that AppleWorks GS users should type the shorter "disclaimer" shown here (instead of the one in Figure 2a).

PROJECT: SCHEDULE A

The Fine Print

These tax-form templates can help you estimate your tax liability. They incorporate formulas that were accurate at press time, but changes in IRS rules may make worksheet results imprecise. Update and customize the template as you like, but don't send worksheet printouts to the folks at the Internal Revenue Service. They won't be amused.

- In **AppleWorks Classic**, move the pointer to the cell you want to protect; press OA-L for *Layout*, then choose *Entry* and *Protection*. At the *Allow?* prompt, choose *Nothing*, and press Return. Then press OA-S to save.

8. Troubleshoot your template.

Type simple numbers into each data-entry cell. For example, type 1 into C11, C12, C13, and C14. If C15 reads 4, you can be reasonably certain that the SUM formula in C15 is working properly. Test other sections of the worksheet by entering hypothetical numbers; use a handheld calculator to check the results of complex operations.

- In **ClarisWorks**, you can read an individual formula in the data-entry box at the top of the screen. To display all spreadsheet formulas in their respective cells, pull down the *Options* menu and choose *Display*; then click on the *Formulas* check box in the dialog box that appears.
- In **Microsoft Works**, check out the data-entry box up top to see an individual formula. To see them all, choose *Show Formulas* from the *Options* menu.
- **AppleWorks GS** also displays a data-entry box at the top of your screen for viewing individual formulas. To see them all, select *View Formulas* from the program's *Options* menu.
- In **AppleWorks Classic**, check an individual formula by moving the pointer to a formula-containing cell and read the display line at the bottom of your screen. To display all formulas in the worksheet, press OA-Z; press OA-Z again to display values.

9. Print your spreadsheet and check it over.

In whatever program you favor, printing the Schedule A worksheet is easy. Just check the following steps.

- In **ClarisWorks**, pull down the *Options* menu, choose *Print Range*, and enter the range: **A1..D240**. Then pull down the *File* menu and select the *Print* command (or press Command-P).

- In **Microsoft Works**, pull down the *File* menu and choose *Print Preview*; if the worksheet looks okay, click on the *Print* button.
- In **AppleWorks GS**, drag with the mouse to select the block of cells A1 to D240, then press OA-P to print.
- In **AppleWorks Classic**, press OA-P and select *Block*. Highlight the block of cells from A1 to D240 and press the return key.

10. Customize your worksheet.

Our Schedule A worksheet is much longer than the document the Internal Revenue Service provides. Our intention isn't solely to reproduce the IRS form; we also want to create a printed log sheet so that you can jot down expenses as they occur. That way, you'll be less likely to forget about deductible expenses at year's end. If the template includes items you don't need, ignore them. If you require additional rows for itemizing your deductions, refer to the manual accompanying your program to insert rows and adjust formulas.

Despite its flaws, a progressive income-tax system asks each of us to pay a fair share of the total cost of running our country. This month we've gotten a handle on deductible expenses (no sense paying more than your fair share); in March we'll create an electronic Form 1040 to help you estimate for 1992 and for years to come the amount of income tax you must pay — or the refund you can expect.

Whether you're married, a widow or widower, a single taxpayer, or a single parent, you'll want to stay tuned. It's your patriotic duty. □

CYNTHIA E. FIELD IS A FREE-LANCE COMPUTER JOURNALIST IN RHODE ISLAND (WHERE THEY KNOW A LOT ABOUT PAYING TAXES). WRITE TO HER C/O *INCIDER/A+*, 80 ELM STREET, PETERBOROUGH, NH 03458. ENCLOSE A SELF-ADDRESSED, STAMPED ENVELOPE IF YOU'D LIKE A PERSONAL REPLY.



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THE HOLZBERG REPORT

APPLE II


-  **MUST BUY!**
-  **FORGET IT**
-  **WORTH A SECOND LOOK**

-  **COMMUNITY ACTIVITY SKILLBUILDER SERIES**

Edmark Corporation
6727 185th Ave. NE
Redmond, WA 98073-3218
(800) 426-0856, (206) 861-8200

- new reading program
- 128K Apple II
- color monitor recommended
- Echo Speech Processor or Echo LC optional (required for speech)
- \$179.95 8-disk bundle

This slow-paced early-reading-skills program is designed for children with learning disabilities. The software introduces more than 600 words and pictures; children visit a fire station, a park, a zoo, a farm, and the beach. They go on a shopping trip, meet different people in typical communities, and spend time in a variety of family settings. Teachers can use the electronic lessons to introduce new concepts, prepare students for class outings, or reinforce observations made on actual field trips. This TouchWindow-compatible program "speaks" simple directions, as well, and provides audio reinforcement with an Echo speech synthesizer. It teaches important academic skills without flashy animation or high-tech sound effects.

-  **CROSSCOUNTRY TEXAS 5.0**

Didatech Software
3812 William Street
Burnaby, BC V5C 3H9
Canada
(800) 665-0667, (604) 299-4435

- new geography simulation
- 128K Apple II
- color monitor recommended
- hard disk installable
- \$77

Kids go on the road as long-distance truck drivers in this challenging interactive geography-skills builder. They put

"the pedal to the metal" while taking a simulated truck ride across Texas; the programs includes scenic views of the countryside, maps to read, and routes to plan. Youngsters make real-life trip decisions, while solving problems of distance and time. As they travel to 135 Texas cities, they gather various commodities listed. The "driver" who delivers all assigned commodities to a target destination in the shortest time (with the lowest expenses) wins. Kids can play at different levels of difficulty, or parents and teachers can customize the game with a built-in authoring system. Cross-Country Texas is an exciting instructional tool. Note, though, that the printed map is difficult to read because it lacks a legend with identifying coordinates for cities and counties.

-  **DIASCRPTIVE READING IV**

Educational Activities, Inc.
P.O. Box 392
Freeport, NY 11520
(800) 645-3739, (516) 223-4666

- new reading program
- 48K Apple II
- \$335/set (4 content areas with back-ups)

Any teacher will tell you that kids' reading abilities differ. This program (grades 8 to 12) evaluates reading skills with diagnostic tests, then delivers personalized instruction with feedback. You can also use the package for remedial work in community-college or basic adult-education classes. Reading improves in five basic areas: details, inference, main idea, vocabulary, and sequence. Students proceed at their own pace, reading short, interesting passages, then answering questions. An "invisible" management system monitors performance; students move to the next level only after completing assignments successfully. Diascriptive Reading has everything students need to develop reading skills with minimal supervision.

-  **ITERATING FUNCTIONS**

William K. Bradford Publishing Co.
310 School Street
Acton, MA 01720
(800) 421-2009, (508) 263-6996

- new math-skills package
- 128K Apple II
- \$60/module

Iterating Functions is a self-directed, upper-level math package for high-school students. It emphasizes "what if" mathematical investigation, not memorization of facts. Investigators work with simple linear, logistic, quadratic, and sine functions. They pose mathematical questions about iteration (problems in which you use the output of one operation as input for the next); the software finds the solution. Students set the number of iterations, then watch graphic interpretations of repeated iterations in an effort to understand emerging patterns. It's true that the concept of iteration is important in a world that depends on computers to make predictions based on models of repetitive change; the program manual, however, doesn't provide enough background material on the subject, and only a few printed activity sheets are included.

-  **NUMBER SKILL-BUILDER SERIES**

Edmark Corporation
6727 185th Ave. NE
Redmond, WA 98073-3218
(800) 426-0856, (206) 861-8200

- new premath-skills builder
- 128K Apple II
- color monitor recommended
- Echo Speech Processor or Echo LC optional (required for speech)
- \$129.95 (6-disk bundle)

In this early-math-skills builder, three sets of lessons teach number recognition, number concepts, and simple addition to youngsters with learning disabilities. The software introduces children to both names and numerals for numbers 0 through 20. Kids learn to count colorful objects and master addition facts for totals up to 10; they can explore materials in either an open-ended fashion or through structured reviews. Number SkillBuilder keeps track of student performance, as well. It's a TouchWindow-compatible program; you can also use the keyboard or a single-switch device. A speech processor is highly recommended for audio feedback and encouragement.

OMNIPRINT

JEM Software
7578 Lamar Court
Arvada, CO 80003
(303) 422-4766

- new AppleWorks/ImageWriter II enhancement
- 128K Apple II, AppleWorks 3.0, 3.5-inch disk drive
- \$40 plus \$3 shipping

OmniPrint is an AppleWorks 3.0 utility designed for anyone who uses an ImageWriter II printer; it works only with the word-processor module. This INIT (mini-program) loads into memory while AppleWorks boots; once it's installed, you can control your printer from within any line of text with just a few embedded commands. OmniPrint lets you change fonts, turn mousetext on or off, select print quality and colors (color ribbon required), or alter the number of characters per inch. In addition, you can change line intervals, print half-height characters or slashed zeros, and use subscripts and superscripts with condensed text. Several additional patches fix known AppleWorks 3.0 bugs. To find out how the product works, though, you must print 36 pages of on-line documentation first. You'll soon discover that embedded OmniPrint commands aren't intuitive; moreover, the product complicates page layout because AppleWorks counts OmniPrint characters when calculating line length (even if the characters don't print).

THE POET'S JOURNAL

Hartley Courseware
P.O. Box 419
Dimondale, MI 48821
(800) 247-1380, (517) 646-6458

- new poetry writing-skills builder
- 48K Apple II
- \$195

Students in junior high and high school can learn to write verse with The Poet's Journal, a comprehensive curriculum containing black-line masters, activity worksheets, and 11 disks' worth of lessons. Youngsters become familiar with different types of poetry, including limericks, acrostics, cinquains, and haiku, then write original poems of

different types, while practicing alliteration, echo, onomatopoeia, rhyme, and rhythm. Unfortunately, the software portion of the package doesn't always utilize computer capabilities fully; in addition, the built-in word processor makes editing difficult. In one mode, kids read short paragraphs, then answer simple multiple-choice questions; in another, the program asks them to type in a word, a line, or a phrase, which it uses to build a poem. Educators could teach poetry in a similar way with a book less expensive than this software.

THE RATIONAL PERSON

PsychSoft Publishing
2503 North Halsted Street
Chicago, IL 60614-2307
(312) 871-2626

- new psychology game
- 48K Apple II
- \$49.95

Do you like playing mind games? Are you a good judge of character? Do you want to become a more-rational thinker? The Rational Person may be just the software to develop your logical-thinking skills. It helps you look for rational explanations of why people do the things they do, based on a nonemotional analysis of their thoughts and feelings. The objective is to teach you to do the same with your own thoughts and feelings. First, the program presents a highly emotional situation (there are 110 situations in all); then it asks you to determine the "psychologically healthiest" alternative from a rational-emotive point of view. You earn points for each correct answer. This software may be fun to play with at a party, but it shouldn't be used as a psychoanalytic tool.

SECRETS OF DYNAMIC TEACHING

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APPLE II

Banish academic "burn out" with a program designed to show teachers how to improve teaching skills, channel student behavior into positive outcomes, and increase student interest. This software promises insights, techniques, and 26 weeks of practical suggestions to make teaching easier and more effective. The author adapts the principles of "neurolinguistic programming" to the classroom, demonstrating how mind, language, and world view determine behavior. He offers a weekly plan of activities designed to help teachers regain enthusiasm and enhance teaching skills. The program reads like a textbook, though. The author presents materials in a boring, "undynamic" way. Suggested activities lack implementation strategies. If you need to boost enthusiasm, escape with a good book, not a dull program.

SCHOOL ACTIVITY SKILLBUILDER SERIES VOLUMES 1 & 2

Edmark Corporation
6727 185th Ave. NE
Redmond, WA 98073-3218
(800) 426-0856, (206) 861-8200

- new reading- and school-skill builder
- 128K Apple II
- \$339.95 (18 disks)

This collection of slow-paced, step-by-step tutorials is designed to teach children with developmental, physical, or other learning disabilities. Interactive lessons, which together introduce more than 800 words, help build reading competence while focusing on a variety of school skills. Students learn techniques for making a sandwich, cooking a meal, caring for classroom pets, visiting the office, operating a computer, playing in the gym, and more. Colorful graphics reinforce many of the concepts. The software supports input from a keyboard, TouchWindow, or single-switch device. It's a solid (albeit expensive) way to expand student problem-solving strategies.

TALKING ACADEMIC QUIZ KID

Orange Cherry Software
Box 390
Westchester Ave.
Pound Ridge, NY 10576
(800) 672-6002, (914) 764-4104

- new Jeopardy-style quiz game
- 1MB Apple IIgs
- \$59

When the weather keeps you huddled indoors but you still want to have some fun, Talking Academic Quiz Kid may be just the computer activity to pass the time. This Jeopardy-like game for one to four players tests knowledge in a variety of subject areas. Categories include Famous Leaders, Past and Present; Science and the Human Body; Historical and News Events; Animals; Presidents of the U.S.; and World Geography. Players answer multiple-choice questions for \$100, \$200, or \$300. Dollar totals remain visible on screen and keep you posted on your standing. Wink Moneydale, the game's host, opens and closes each round with quite of showing of verbal wit and flare. The program offers lots of educational fun for the whole family, especially fans of Jeopardy or Trivial Pursuit.

TRUETYPE FONTS

II Productive
1008 Ridgemoor Street
Round Rock, TX 78664
(512) 255-9235

- new TrueType font collection
- 2MB Apple IIgs
- requires Pointless (WestCode Software)
- \$85 complete collection (300 fonts), \$50 140 fonts, \$30 sampler collection (70 fonts)

If you use an Apple IIgs word processor or desktop publisher (AppleWorks GS or Graphic Writer III, for example) to produce reports, letters, memos, and other publications, this collection of public-domain TrueType fonts has enough typefaces to satisfy your font envy for many years to come. Text and display typefaces come in compressed format on 3.5-inch disks. The company includes a copy of **ShrinkIt-GS** to decompress the files, plus **HyperCard IIgs** with a special TrueType reference stack to locate and select fonts as needed. You'll need a copy of **Pointless** (a TrueType interpreter for the GS) to display and print these TrueType fonts, plus a healthy dose of font restraint to avoid including too many typefaces on a printed page. Some fonts aren't as attractive as others, but this is quite a collection of typeface goodies at an unbelievable price.

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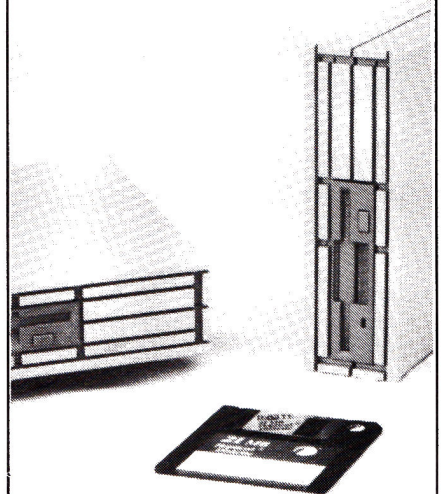
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MACINTOSH



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WORTH A SECOND LOOK



A FIELD TRIP TO THE RAINFOREST

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Sunburst Communications
1600 Green Hills Road
Scotts Valley, CA 95067-0002
(800) 321-7511**

- new science simulation
- 1MB Macintosh monochrome
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- hard disk recommended
- \$99

This field guide is so real, you can almost feel the humidity. There are 34 detailed eco-screens, featuring 49 animals and 21 plants in native habitats. An electronic field guide provides detailed descriptive information on 24 plants and animals, elaborating on topics such as homes, food, enemies, and friends. Additional information sources include eight food chains, plus data tables for at-a-glance comparisons of featured plants and animals. The manual contains lessons plans, activity sheets, and background information. If only this product had sound . . .



AMERICA ALIVE

**MediaAlive
766 San Aleso Ave.
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(408) 752-8500**

- new multimedia tour of USA
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- requires hard disk
- \$49.95

Players travel back in time to the battles of Chattanooga, Chickamauga, Gaines Mill, Gettysburg, and Stones River. Command either North or South against a human or computer opponent. Challengers decide on the personal qualities of commanders, issue orders, read maps, and move troops. The fate of your soldiers depends on their ability to skirmish successfully and cope with changing weather. Do you withdraw or attack? Can you delay Rebel forces until reinforcements arrive? How will you deploy your reserves? If you're a take-charge, "blood and guts" kind of person, here's your chance to replay or rewrite some of the great battles of the Civil War.



ECOADVENTURES: THE OCEANS EDITION

**Chariot Software Group
3659 India Street
Suite 100
San Diego, CA 92103
(800) 242-7468, (619) 298-0202**

- new science simulation
- 1MB Macintosh monochrome
- 2MB monochrome under System 7
- 2MB 256-color Macintosh under System 6.0.5 or later
- 4MB color under System 7
- requires hard disk
- \$49.95 monochrome, \$59.95 color
- \$94.95 school edition (b/w and color versions, teacher's manual)

You don't need to don any scuba gear to explore underwater sealife in the Pacific, Atlantic, and Indian Oceans — as long as you have EcoAdventures. You'll sail through treacherous seas, navigate ominous reefs, fight off sharks, and more while on assignment to photograph rare marine life. This game-style

software teaches children in 5th through 11th grade about endangered species, pollution, weather patterns, and animal behavior. Colorful animated graphics with realistic sound effects enrich the program's educational quality.



LOGOWRITER 2.0 FOR THE MACINTOSH

**Logo Computer Systems Inc.
3300 Cote Vertu Road
Suite 201
Montreal
Quebec H4R 2B7
Canada
(800) 321-5646, (514) 331-7090**

- new version of Logo programming language
- 1MB Macintosh monochrome
- requires System 6.0.4 or later
- 2MB monochrome under System 7, 4 MB color under System 7
- hard disk recommended
- \$199

LogoWriter teaches more than programming: It's a creative environment that combines word processing, graphics, and programming tools in a simple authoring system kids control. When youngsters (aged 8 to 18) work on LogoWriter activities, they develop learning and problem-solving skills. LogoWriter 2.0 for the Mac includes all features found in version 2.0 for the Apple II, plus several enhancements that utilize the Macintosh interface. Click-on buttons, pull-down menus, mouse maneuvers, and scroll bars simplify program operation. (It lacks a keyboard shortcut for the quit command, though.) The package includes new primitives for math, word processing, graphics, time, sound, and communication. Every page includes its own shapes editor, with ten drawing tools and room for up to 90 shapes. LogoWriter encourages open-ended learning and exploration.



MATH MAGIC

**MindPlay/Methods & Solutions
3130 North Dodge Blvd.
Tucson, AZ 85716
(800) 221-7911, (602) 322-6365**

- new elementary math package
- 1MB Macintosh monochrome
- requires System 6.0.5 or later
- 2MB 256-color Macintosh, 4MB color under System 7
- hard disk installable
- \$49.99

MACINTOSH

In this engaging "arcademic" math-skills builder, challengers knock out walls of bricks to free "lovely monsters" captured by an "evil Doomlord." As children paddle the balls, they encounter math problems (counting, addition, and subtraction) hidden behind secret bricks. Players receive three magic bricks and a present for each problem solved correctly. When all bricks have been eliminated, players free a captive monster and move on to the next level. Difficulty settings, which correspond to ages 4 to 9, may be selected only before play. This program is a fun way to master basic math facts, but youngsters can pause the game only from the pull-down menu (not the keyboard).

MILLIE'S MATH HOUSE

Edmark Corporation
6727 185th Ave. NE
Redmond, WA 98073-3218
(800) 426-0856, (206) 861-8200

- new early-math-skills builder
- 1MB Macintosh monochrome
- requires System 6.0.7 or later

- 2MB color, 4MB color under System 7
- requires hard disk
- \$59.95

Children aged 2 to 5 develop early arithmetic skills with this entertaining multi-activity math primer. Kids learn to count and recognize numbers; they complete patterns, explore shapes, select shoes for goofy-looking animated characters, and explore number sequences. These games teach premath concepts with upbeat music, children's voices, animation, and lots of audiovisual reinforcement. A Record folder tracks performance. Kids decide whether to play games in "explore and discover" mode (which rewards curiosity) or "question and answer" mode (which reinforces important concepts). Both types of activities make problem solving fun.

STORYBOOK THEATRE

**Wings for Learning/
Sunburst Communications**
1600 Green Hills Road
Scotts Valley, CA 95067-0002
(800) 321-7511

- new picture/word processor
- 2MB 256-color Macintosh
- requires System 6.0.7 or later
- 4MB under System 7
- requires hard disk
- \$129

Kids in kindergarten through grade 4 use a word processor to write stories and plays with words, colorful animated graphics, and sounds. Picture themes include In My Room, with furniture, toys, and imaginary animals; Animal Adventures, presenting realistic animals from North American woodlands; and Laboratory Scientists, including madcap equipment and wacky techies. Every story-world consists of a title page and five activities. Youngsters add animated characters and props to colorful settings, and use story starters, actors, sounds, and text to write and illustrate original works. They can turn words into moving trains and fanciful rainbows with special graphics effects — even add their own sounds to a storybook page (if your Mac has a microphone). It's a rich audiovisual playground for creative writing.

— Carol S. Holzberg, Ph.D.

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INDEX

Reader Service	Page	Reader Service	Page
103	Alltech Electronics Co. Inc.....	248	Memory Plus Distribution.....
*	Apple Computer Inc.....	55	National AW User Group.....
*	Applied Engineering.....	16	OEM Corporation.....
64	Arminius Publications.....	54	Pacemark Technologies, Inc.....
87	Bible Research Systems.....	59	Perfect Solutions Software.....
19	Big Red Apple.....	*	Perferred Computing.....
45	Caloke Industries, Inc.....	136	Quality Computers.....
47	Christella Enterprises.....	39	Quinsept, Inc.....
21	Co-Du-Co.....	7	Ramco Computer Supplies.....
43	Econ Technologies.....	49	Robert Merrill.....
220	Educational Resources.....	52	Sequential Systems.....
*	Event Specialists.....	29	Shreve Systems.....
*	GE Ridge Services.....	23	SMC Software Publishers.....
*	Hypertalking.....	291	Softdisk.....
*	inCider Financial Planner.....	127	Softspoken, Inc.....
*	inCider Special Products.....	36	Sun Remarketing.....
44	LRO Computer Sales.....	56	TMS Peripherals, Inc.....
*	M.P. Computer Micro Systems.....	231	Tulin Technology.....
*	Macworld Expo/SF.....		



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3	28	53	78	103	128	153	178	203	228	253	278	303	328	353
4	29	54	79	104	129	154	179	204	229	254	279	304	329	354
5	30	55	80	105	130	155	180	205	230	255	280	305	330	355
6	31	56	81	106	131	156	181	206	231	256	281	306	331	356
7	32	57	82	107	132	157	182	207	232	257	282	307	332	357
8	33	58	83	108	133	158	183	208	233	258	283	308	333	358
9	34	59	84	109	134	159	184	209	234	259	284	309	334	359
10	35	60	85	110	135	160	185	210	235	260	285	310	335	360
11	36	61	86	111	136	161	186	211	236	261	286	311	336	361
12	37	62	87	112	137	162	187	212	237	262	287	312	337	362
13	38	63	88	113	138	163	188	213	238	263	288	313	338	363
14	39	64	89	114	139	164	189	214	239	264	289	314	339	364
15	40	65	90	115	140	165	190	215	240	265	290	315	340	365
16	41	66	91	116	141	166	191	216	241	266	291	316	341	366
17	42	67	92	117	142	167	192	217	242	267	292	317	342	367
18	43	68	93	118	143	168	193	218	243	268	293	318	343	368
19	44	69	94	119	144	169	194	219	244	269	294	319	344	369
20	45	70	95	120	145	170	195	220	245	270	295	320	345	370
21	46	71	96	121	146	171	196	221	246	271	296	321	346	371
22	47	72	97	122	147	172	197	222	247	272	297	322	347	372
23	48	73	98	123	148	173	198	223	248	273	298	323	348	373
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5	30	55	80	105	130	155	180	205	230	255	280	305	330	355
6	31	56	81	106	131	156	181	206	231	256	281	306	331	356
7	32	57	82	107	132	157	182	207	232	257	282	307	332	357
8	33	58	83	108	133	158	183	208	233	258	283	308	333	358
9	34	59	84	109	134	159	184	209	234	259	284	309	334	359
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11	36	61	86	111	136	161	186	211	236	261	286	311	336	361
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13	38	63	88	113	138	163	188	213	238	263	288	313	338	363
14	39	64	89	114	139	164	189	214	239	264	289	314	339	364
15	40	65	90	115	140	165	190	215	240	265	290	315	340	365
16	41	66	91	116	141	166	191	216	241	266	291	316	341	366
17	42	67	92	117	142	167	192	217	242	267	292	317	342	367
18	43	68	93	118	143	168	193	218	243	268	293	318	343	368
19	44	69	94	119	144	169	194	219	244	269	294	319	344	369
20	45	70	95	120	145	170	195	220	245	270	295	320	345	370
21	46	71	96	121	146	171	196	221	246	271	296	321	346	371
22	47	72	97	122	147	172	197	222	247	272	297	322	347	372
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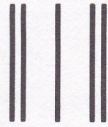
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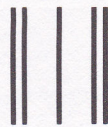


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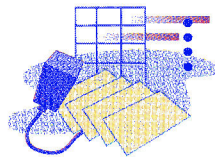
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Simple scripting commands let you stash buttons and graphics in layers concealed within your stack.

By DEAN ESMAY

NOW YOU SEE IT, NOW YOU DON'T — where did that little picture go? One of **HyperStudio**'s neatest and most-powerful features is its *hidden objects* option. For economy of design, or to create special visual effects or a gateway to other branches of your stack, the Apple IIGS authoring program HyperStudio lets you link a number of items (buttons, graphics, or text fields) to one card, but reveal them selectively, one at a time.

AND NOW FOR SOMETHING COMPLETELY DIFFERENT . . .

In previous columns we've explored the concept of *invisible* buttons — transparent buttons you position atop graphics or text to make those screen elements interactive when the user clicks on them. (See "Over and Under," December 1992, p. 57, and "Wake-Up Call," January 1993, p. 46, for details.)

A *hidden* button, graphic, or text field is different: It's not available on the card

at all until the user clicks on some other button to reveal it. We'll demonstrate that idea visually in this month's project by creating some hidden graphics and buttons and linking them to your card with a few fundamental instructions in *SimpleScript* — HyperStudio's built-in "programming" language.

Don't panic — *SimpleScript* is a breeze to use. You don't have to know how to program, you don't have to memorize any commands, you don't have to worry about syntax. *SimpleScript* does it all for you — all its commands are available as pull-down menu items, and the program prompts you through every step of creating a script.

STOWAWAYS

The idea of revealing an object you've hidden previously is what makes this feature so powerful. By setting up hidden items on a card and showing them one by one only as the user chooses, you can make objects appear and disappear.

Let's start by creating the first of the screen objects we'll want to hide — a

picture of a butterfly, taken from a clip-art screen by Mary Ann Trzyna, published in **Studio City** issue 13. For this project, we'll also be using her ladybug and grasshopper (**Figure 1**) images (If you're following along and don't have access to those screens, use your own clip art.)

Pull down the *Objects* menu and choose *Add a Graphic*. Insert the disk containing the clip art you want and choose that filename. A rectangle showing a portion of the graphic screen you selected will appear. (Think of it as a kind of "window" through which you can see part of the picture.) Position the mouse inside the rectangle; hold down the mouse button and drag to move the graphic image around under the window.

To resize the window, grab one of the rectangle's side or corner "handles" with the mouse and drag to adjust. Move the box into position on the card by dragging the frame. (Near the center looks good here, I'd say.) Now click outside the item to tell HyperStudio you've finished that step.

At the *Graphic Appearance* screen (or *Graphic Info*, depending on the program version you're using), click inside the *Name* box and type **butterfly** (**Figure 2**). In some authoring systems, all objects must have names; in HyperStudio it's optional. But if you're not in the habit yet of naming all your screen objects, start now — even in HyperStudio an object has to have a name if you're going to manipulate it in any way.

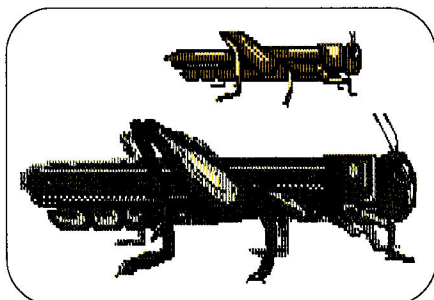


Figure 1. Clip art by Mary Ann Trzyna, from **Studio City** issue #13, a Resource Central publication.

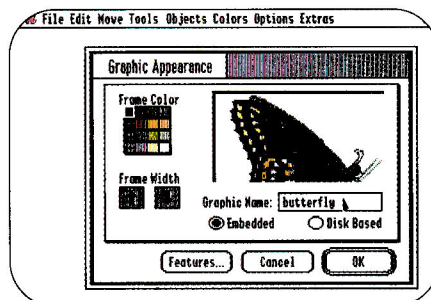


Figure 2. HyperStudio's **Graphic Appearance** submenu, with **Name** dialog box.

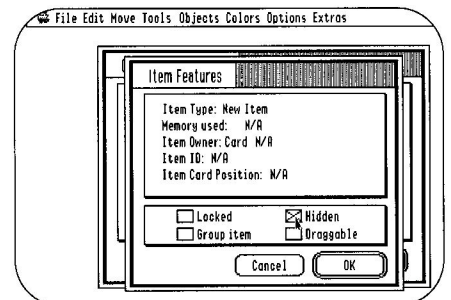


Figure 3. HyperStudio's **Item Features** submenu, showing option to hide graphic image.

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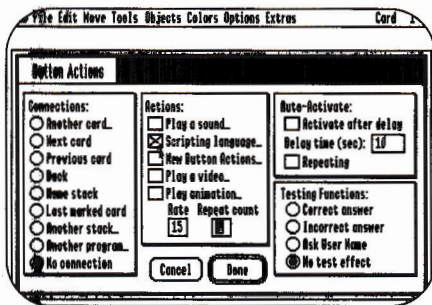


Figure 4. Button Actions submenu shows Scripting language option for SimpleScript editor mode.

Next, still at the *Graphic Appearance* screen, click on the option *Features*. From the *Item Features* submenu (Figure 3), click on *Hidden* and then on *OK*. You'll see a blank screen, because you created a graphic and then hid it — but it's still there in the stack.

You can pull down the *Tools* menu and select one of the edit tools to make the graphic reappear; it's hidden only while you're actually using the stack.

Now go back to your clip-art file and select two more items — the ladybug and the grasshopper for our purposes here. Follow the steps outlined above to name these two graphics and hide them.

SECRET PASSAGES

Time to add our SimpleScript commands. In HyperStudio, you can link scripts only to buttons, so that's where we'll start.

Pull down the *Objects* menu and choose *Add a Button*. From the *Button Appearance* submenu, choose a shape and name the button *show butterfly*.

We won't hide this button; just drag it to the center of your card, near the bottom. Click outside the button to signal that you're done.

Next, from the *Button Actions* submenu, choose *Scripting language* (Figure 4). This

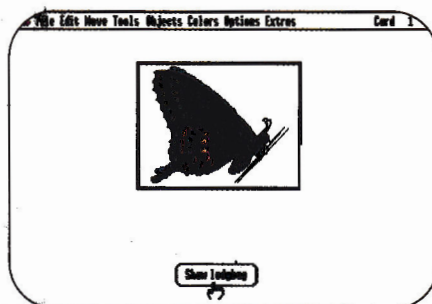


Figure 7. Butterfly graphic is revealed, with button for next option.

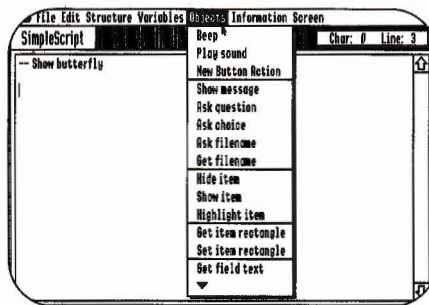


Figure 5. SimpleScript commands are listed as pull-down-menu items, with step-by-step prompts.

option takes you into the SimpleScript editor; you'll see a couple of dashes on screen, followed by the name of your button, like this:

— Show butterfly

Take a moment to check out some of SimpleScript's commands, listed on pull-down menus in the editor (Figure 5). Notice *Hide item* and *Show item* on the *Objects* menu. When you select *Show item*, for example, HyperStudio asks you what kind of object you want to display (*button*, *text field*, or *graphic*) and the name of the object you're hiding, then writes the script line for you:

Show Graphic "butterfly"

Putting our entire butterfly-button sequence together, then, the script should look like this:

— Show butterfly
Hide Button "show butterfly"
Hide Graphic "grasshopper"
Show Graphic "butterfly"
Show Button "show ladybug"
End of script

Note that you'll find the *End of script* command on the *Structure* pull-down menu. It's optional, but it makes your code easier to read.

When you're finished composing your first script, your screen should look like

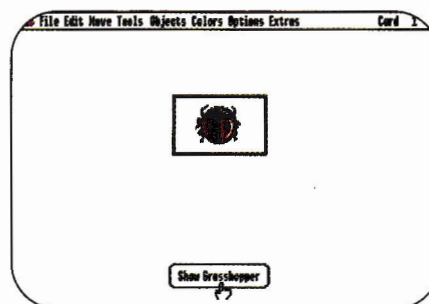


Figure 8. Ladybug graphic is revealed, with button for next option.

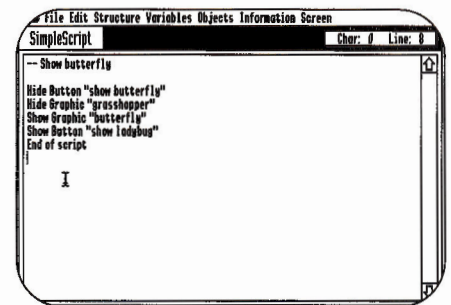


Figure 6. Show butterfly button serves as gateway to hidden options in this SimpleScript program.

Now pull down the *File* menu and choose *Save and quit editor*.

HyperStudio then takes you back to the *Button Actions* submenu; click on *OK* to tell the program you've finished creating that button.

UNDERCOVER OPERATIONS

Now create the second button and name it *Show grasshopper*. From the *Button Appearance* submenu, click on *Features*; from the *Item Features* submenu, click on *Hidden* and *OK*. This step is very important — you must hide this button if the stack is going the work properly.

One more crucial step: Now place the button directly on top of the *Show butterfly* button you've already created, so that it covers it.

Next, from the *Button Actions* submenu choose *Scripting language* again. Here's the script for this portion of the project:

— Show grasshopper
Hide Button "show grasshopper"
Hide Graphic "ladybug"
Show Graphic "grasshopper"
Show Button "show butterfly"
End of script

Now save and quit. Note that you won't see this button because you specified it as hidden.



Figure 9. Grasshopper is revealed, with button to cycle back to butterfly.

Finish the card by creating the last of the three buttons; name it **Show ladybug**. Make this a hidden item, too, and be sure to position it squarely on top of the *Show butterfly* button. Its script looks much like the others:

— **Show ladybug**

Hide Button “show ladybug”

Hide Graphic “butterfly”

Show Graphic “ladybug”

Show Button “show grasshopper”

End of script

Now save and quit, and save your completed HyperStudio stack.

OPEN SESAME

Time to admire the results of your handiwork. You open to a plain-looking card — nothing on it but one lonely button that says *Show butterfly*. But click on it and watch what happens — suddenly a butterfly appears, the *Show butterfly* button melts away, and the *Show ladybug* button comes up (Figure 7).

Click on it and the butterfly disappears; in its place is a ladybug, with a button that says *Show grasshopper* (Figure 8). Click on that one and the grasshopper takes the place of the ladybug; the new button says *Show butterfly* again (Figure 9).

By clicking continuously in the same spot you can cycle through your hidden graphics and buttons.

This project is just one small example of the kinds of visual effects you can create with HyperStudio’s hidden-objects function. Let’s hope it’ll get you started on the road to exploring scripting, too.

Thanks to the SimpleScript language and its painless interface, you can feel your way along as you experiment with various scenarios. A nice thing about HyperStudio is that you don’t have to do

any scripting to design neat stacks — but when you do want to go beyond the basics and design something more sophisticated, all the SimpleScript commands you’ll need are right there at your fingertips. □

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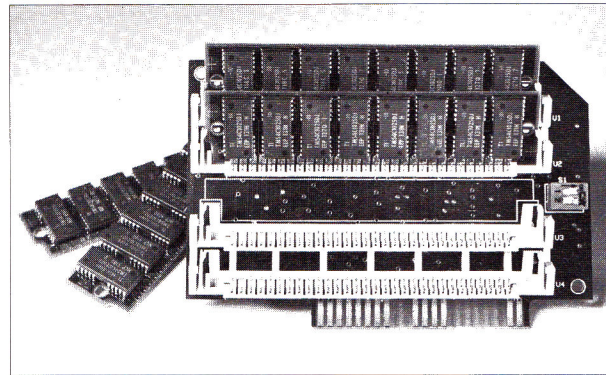
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Please note that HyperStudio scripting is available only in version 3.0 or later, and that some early copies of version 3.0 and 3.1 contained bugs in the hide- and show-graphics functions. If you run into a problem, contact Roger Wagner Publishing about updating to the latest edition of HyperStudio. At press time, the current version was 3.1h.

— D.E.

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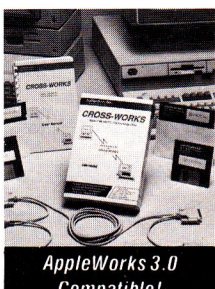
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THE FUN OF COMPUTING

Lots of programming languages grew up in schools, but only BASIC grew up with a bad reputation.

Computers used to be fun. Now they're all business or enrolled in school. I learned just a little about computers in high school: A DEC PDP-11 lurked among the janitor's buckets in the basement, and we had agreed to share computer time with Dartmouth College in Hanover, New Hampshire. John Kemeny of Dartmouth had the crazy idea — crazy for 1964 — that “whether a student will ever use a computing machine or not, his life is likely to be affected by such



By PAUL STATT • SENIOR EDITOR

machines, and he should know something about their capabilities and limitations.” Thirty years is a long time ago: Consider that today the student is just as likely to be a “she,” and she probably doesn't think her Macintosh has any limitations that can't be overcome with a couple of banks of SIMMs, a bigger hard drive, and a math coprocessor. That's progress.

We learned BASIC (*Beginner's All-purpose Symbolic Instruction Code*) probably because it was invented at Dartmouth by the same Dr. Kemeny (with the aid of Thomas Kurtz). It was fun. “BASIC,” Jean-Louis Gassée once remarked when he was at

Apple, “is dangerous to the mind.” He probably wasn't aware that showing students the limitations of computers was a design feature of BASIC. Learning BASIC is now thought to be about as relevant as learning to write an elegant cursive hand, and Drs. Kemeny and Kurtz might easily have gone the way of Dr. Palmer. Students today learn Pascal or C, partly because those languages are safe for the mind, and partly because they have commercial potential; that is, you can write programs in Pascal or C that make money, without limitations.

Kemeny later wrote the language True BASIC — to answer critics who complained

that his language lacked structure. In 1991 he wrote *The Fun of Computing* (which includes a Mac version of True BASIC), a book and a disk containing 90 programs — perhaps to answer those who have moaned that “computers used to be fun.”

There's no mention in Kemeny's book of what has come to be called “recreational programming”: fractals and Mandelbrot sets, chaos theory, cellular automata, artificial life. It's a shame, because the absence of recreational programming is a limitation. Kemeny's experience as a math instructor before he ever saw a computer may be behind the omission. *The Fun of Computing* concentrates on computer programs that do what one might have done in a class called “The Fun of Math” 30 years ago: solve puzzles such as the Knight's Tour, demonstrate probability in card games, do statistics with baseball box scores, or draw Pascal's triangle. Who needs a computer?

But *The Fun of Computing* is a wonderful notion. In the introduction Kemeny laments, “Much has been written about how useful computers are. Not enough has been said about how much fun they are.” Much has been written also about how educational computers are, and Kemeny apparently has read most of it. The average user will see a textbook and still be looking for the fun when Kemeny's had his.

Lots of programming languages grew up in and around schools. BASIC was invented as an educational language for the purpose of teaching kids to write programs, as was LISP at MIT. Its descendant, Logo, is still considered an educational language. Nicklaus Wirth wrote Pascal to teach logical constructive thought. But only BASIC grew up with a bad reputation — maybe that's why I think it's fun.

Today Dartmouth has given up on time sharing and requires that every student have a Mac — good thing Apple lowered its prices. Some students will have some fun with their computers as well. But whether a student ever uses a computer or not, her life is likely to be affected by such machines. I can only hope that some students will learn both the capabilities and the limitations of those machines. □



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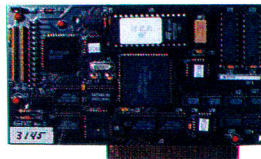
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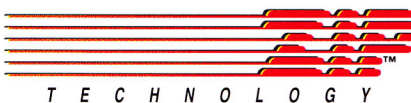
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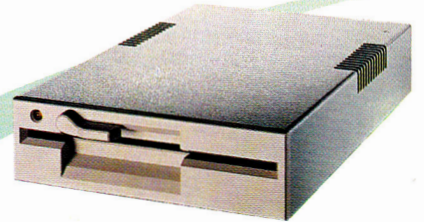
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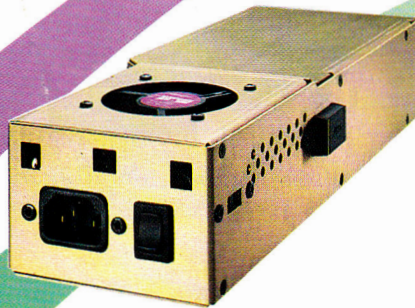
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