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Apple II/Macintosh

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May 1993

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NEW II ESSENTIAL SOFTWARE FOR YOUR APPLE

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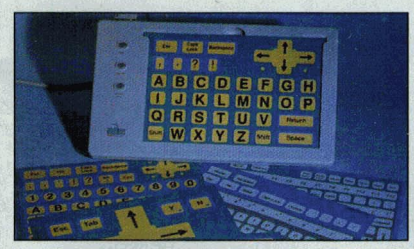
REVIEWS



- INTELLIKEYS
- TUTOR-TECH 2.7 VS. MEDIA MAGIC! 1.1
- THE LOST TRIBE
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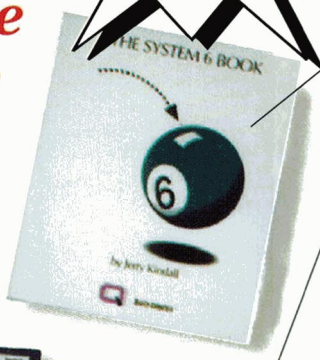

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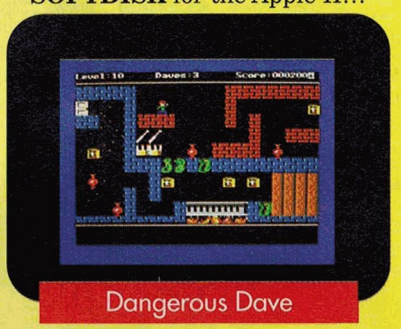

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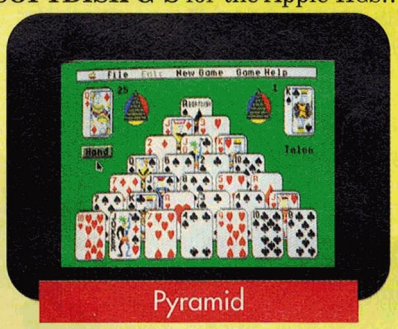

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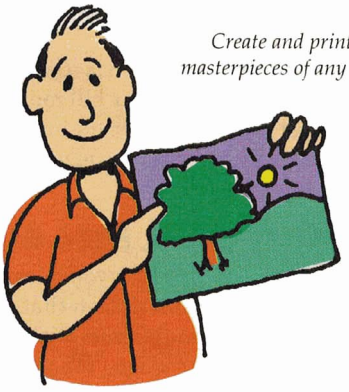

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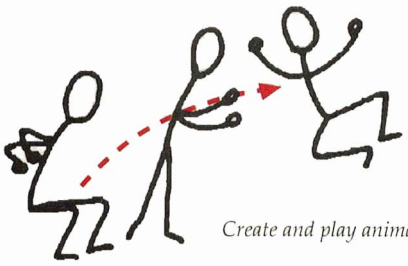

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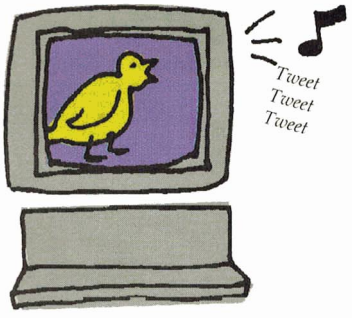

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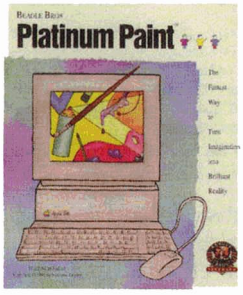

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MAY

1993 Vol. 11 No. 5

FEATURE

II Essentials: Software

by Cynthia E. Field, Ph.D. 36

Without software, even the best-equipped computer is likely to become a yard-sale reject. In this second installment in a continuing series on Apple basics, we'll discover the system software and applications you'll need to make that hardware hum.

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What's New

Ahoy, Mateys! • Have Mouse, Will Travel • New-Product Focus 10

Apple Clinic

"Word and Image": In a GIF-Fy • You Oughta Be in Pictures • ¡Ole! • A Big Plus 14

Reviews: Apple II

Tutor-Tech Hypermedia Toolkit 2.7 vs. Media Magic! 1.1 20

Does your Apple II software collection leave you yearning for more? Don't despair — hypermedia adventures glimmer on the summer horizon. Tutor-Tech and Media Magic! let teachers, students, and hobbyists of all stripes express their creativity as they produce entertaining and educational presentations. Fire up your imagination and get ready to dazzle your audience.

Plus: The Lost Tribe * Ultra 4

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COLUMNS

Grapevine • *Joe Kohn* 18

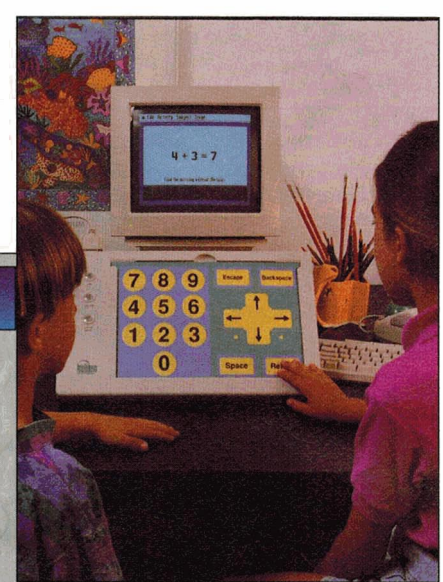
On-line hints, tips, argument, chat, and gossip.

The Apple II Report • *Carol S. Holzberg, Ph.D.* 24

Hot off the press: quick reviews of recently released software.

Shareware Solutions • *Joe Kohn* 48

"White Nights": Tetris is so popular among all age groups that it has spawned a slew of freeware and shareware imitators — clones that look and play like the original, as well as spinoffs and variations with similar goals but different types of falling objects. Just a few dollars buys you hours of addictive fun.



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A + MAC

News & New Products

"HyperStudio Mac Débuts": Roger Wagner Publishing's top-notch authoring system sports full-color graphics, a point-and-click interface, easy scripting, and built-in sound and QuickTime video support.

Plus: "Kids in the Library": CARL Systems' Kid's Catalog program makes searching the stacks easy and fun. 28

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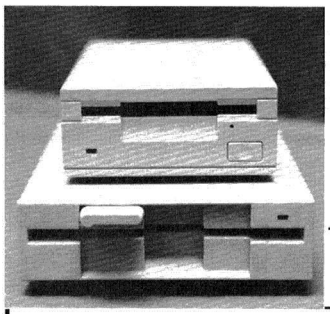
Cover Photo • Larry Dunn



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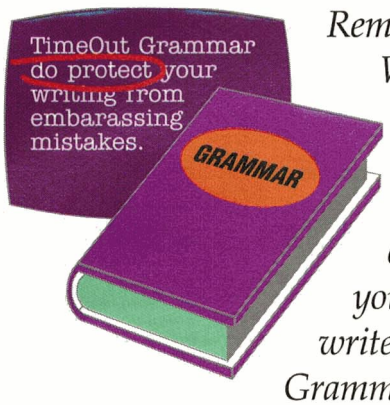

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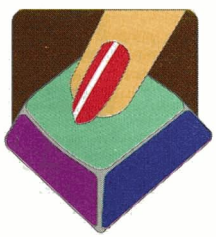

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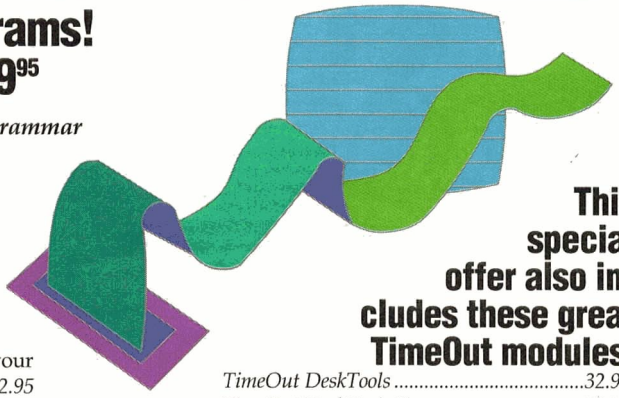

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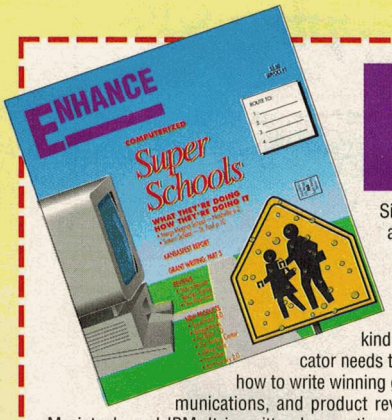

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SuperWriter 924	64.95

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Q-Modem 2400, Cable, and Point-to-Point	139.95
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SupraFAXModem v.32 BIS 14,400 bd. (Mac)	379.95
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Quickie 3.0 (IIe, IIGS)	199.95
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Koala Drawing Pad	99.95
OPCODE	
MIDI Translator	49.95
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Echo II	109.95

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APPLIED ENGINEERING	
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System Saver GS	29.95
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Dust Cover	9.95
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Cables	from14.95
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3.5" Diskettes (10)	7.95
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Panasonic 1180/1090	2.95
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No Slot Clock	39.95
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Talking Speller GS	39.95
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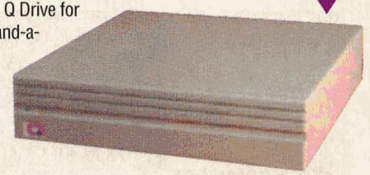
—Gail Braddock

Quality Computers™

POWER FOR PERFORMANCE

Memory Solutions for Apple IIe, IIGS

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.

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!**

Q DRIVE

42 Meg.	$329.95
85 Meg.	399.95
127 Meg.	499.95
170 Meg.	549.95
44 Meg. Removable	499.95
Apple II H.S. SCSI Card	109.95

Q-RAM GS

The Q-RAM GS is an economical way to add up to 4 MEG of memory to your Apple IIgs. It's fully compatible with all Apple IIgs hardware and software— including the IIgs 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.

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

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.

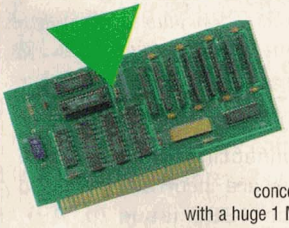
Of course, since you're dealing with Quality Computers, you get an unconditional 30-day money-back guarantee and a five-year warranty. And the price is the best news of all—a 2 MEG Q-RAM GS costs about the same or even less than other IIgs memory cards in a 1 MEG configuration!

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 GS

1 Meg.	$99.95
2 Meg.	139.95
4 Meg.	219.95
Q-RAM II *(4 meg. surface mounted)*	199.95

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. treasuer trove of RAM, you can create huge documents, and not encounter a single "Out of Memory" message.

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

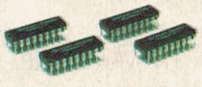
ASK ABOUT QUANTITY DISCOUNTS ON Q-RAM CARDS

Q-RAM IIe

1 Meg.	$99.95

RAM Chips

256K (8)	$19.95
256K x 4 (2)	19.95
1 Meg. (8)	49.95



SIMMs

1 Meg.	$49.95
2 Meg.	99.95
4 Meg.	179.95

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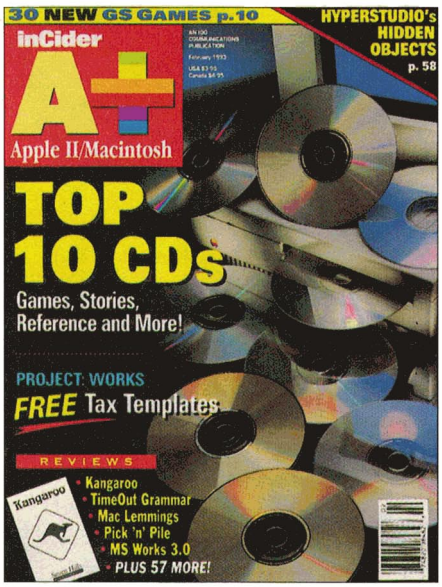
LETTERS



DESKTOP VS. WINDOWS

WHEN I READ THE LETTER "GS vs. Windows" in your February 1993 issue (p. 8), I had to smile. I was truly happy that some people still believe that the Apple IIGS can outperform a 386- or 486-based PC compatible.

I bought a GS four years ago because I believed it was the best computer around, and I've upgraded it since then with RAM and so on. Today I'm beginning to have doubts, though: I've used a 386/33 machine with Windows — it's as neat as the GS' Finder, but much faster.

My whole 386/33 PC system cost less than $3000 with 4 megabytes of RAM, a 200-megabyte hard-disk drive, and an SVGA card and monitor. PC compatibles have the support of IBM and leading software companies, such as Microsoft, which don't produce Apple II software.

Is there really any hope left for the Apple II, especially the GS? Is it time we realize that it's all over for the Apple II but for shareware and a few companies?

Richard Kuk
Millburn, NJ

I agree wholeheartedly with Richard Custer's letter in your February 1993 issue. I've been working with, supporting, and programming both Apple and PC computers extensively since 1977; in my experience, there hasn't been one day ever that one or more PCs in my work area haven't "locked up" because of some software or hardware conflict.

The PC is attractive mainly because of price. In my estimation, though, people who have to use them become less productive. The learning curve and ongoing maintenance costs are horrendous. PC windows might as well be painted shut.

Thomas Klose
Hopatcong, NJ

IIC EDUCATION SOFTWARE

I HAVE AN APPLE IIC. A FRIEND OF mine has a subscription to your magazine and told me there are still some companies that make educational software for the II. Who are they? I want to purchase some programs for my kids.

Robert L. Fix
Detroit, MI

You'll be pleased to know that the Apple II is still a major contender in the home education and school markets. Start your quest by gathering product and company information from this magazine and from your local Apple II computer club. (Call Apple's **User Group Connection**, *800-538-9696 x500, for the location of the one nearest you.) And, if you can get your hands on one, grab a recent* **Apple II Software** *newsletter from Apple Computer (20525 Mariani Ave., Cupertino, CA 95014, 800-795-1000 x500). — eds.*

KEEP IT SIMPLE

YESTERDAY MY NEW COMPUTER came — a **Performa 600CD** — so I'm not interested in the Apple II anymore. Mostly, my kids will use the new system for education, along with letter writing and games.

Unlike other computer magazines, you seem oriented toward the beginner, and that's going to be me for some time. Although frequent definition of computer jargon may be off-putting to the experienced reader, I suggest that you define terms even more often.

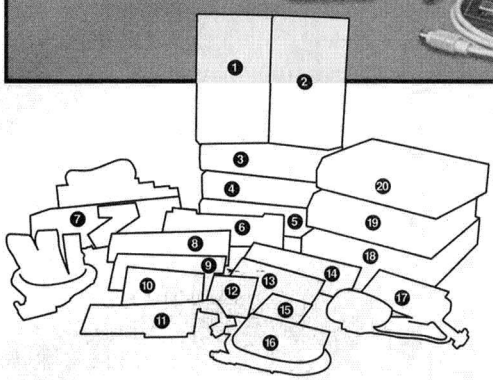
For instance, when I was shopping for my Performa, I noticed that Office Depot bundles **GreatWorks** with the computer, whereas Circuit City includes **ClarisWorks**. So I reread your December 1991 issue, in which you reviewed GreatWorks (p. 38). In the article you mention that GreatWorks has a "copy-ruler command." Huh? Is that something that sets the rules for copying? And what's a "text style"? Overall I've found your magazine quite helpful. Just don't forget that beginners like myself need things spelled out.

Mark Berch
Silver Spring, MD

We won't forget, Mark. But don't expect much Mac coverage in inCider/A+ *— we're mostly an Apple II-oriented publication. Beginning in mid-May, though, keep an eye on newsstands for* **MacComputing**, *our new Mac-only magazine for computerists like you. — eds.*

UPDATE

Fees for connecting to the on-line service **GEnie** are incorrect as listed in our March 1993 issue (p. 49). According to Tim Tobin, Apple II software librarian for GEnie, there is no membership fee; connect charges are $12.50 per hour prime time (8 a.m. to 6 p.m. Monday through Friday, except holidays), $6 per hour non-prime time.



Pictured above is a few of Sequential Systems products for Apple II computers.

1. Q:talk lto™
2. MEG-80Z™
3. bitMOUSE™
4. RAM-GS™
5. MegaBUFF™
6. Ram-//c™
7. Apple Q-System™
8. MegaBUFF™
9. Ram-GS™
10. Meg-80Z™
11. SuperCOMM™
12. Ram-80™
13. Q-Print //™
14. Q-Talk lto™
15. Q-Print™
16. SuperCOMM lc™
17. bitMOUSE™
18. Chinook Hard Drive™
19. Q-System GS™
20. Q-System PC™

Since 1984, Sequential Systems has been a leading manufacturer of quality peripheral devices for Apple II computers and today, 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 ingenious enhancements in networking, multimedia, telecommunications, and more. Products to help keep you computing with Apple II into the 21st Century!

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.

SEQUENTIAL SYSTEMS

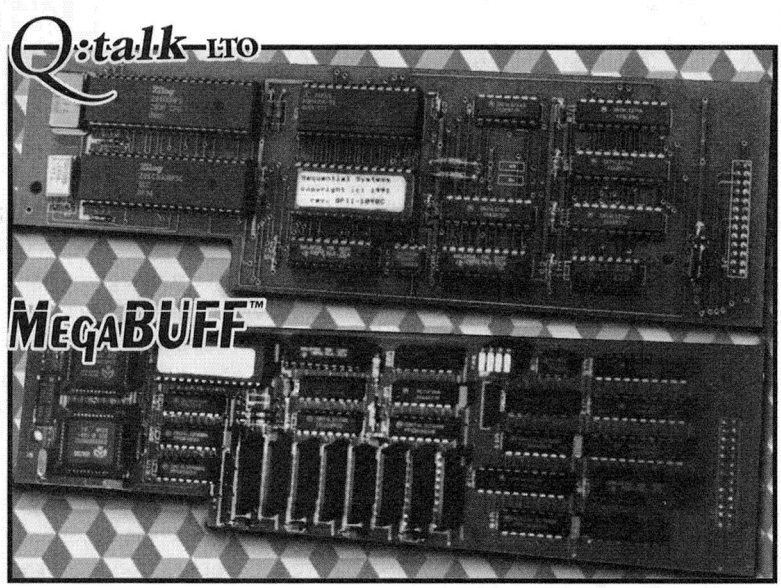
Products of the Month:

Q: Talk lto – A fully compatible LocalTalk* Option Card for ImageWriter printers.

- Full compatiblity with AppleTalk Phase 2.
- Works with any ImageWriter II.

MegaBUFF – A High-Performance, Network Compatible, Print Buffer for ImageWriter //!

- 1-MegaByte capacity; suitable for IIGS & MAC.
- Serial Communications to 57,600 bps
- High Speed Printer Driver for MAC
- AppleTalk Network compatible.
- Makes One Printer Look Like Four!



2 year

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

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

USA

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

SEQUENTIAL SYSTEMS

We're Serious About Apple II!

Circle 52 on Reader Service Card.

WHAT'S NEW

BY CYNTHIA E. FIELD, PH.D. • CONSULTING EDITOR

HAVE MOUSE, WILL TRAVEL

Carmen Sandiego, the famous software heroine, has her own TV show, so it seems only fair that the most popular hypermedia authoring system for the Apple IIGS have at least its own conference, right? The first annual **HyperStudio Festival** will take place July 8 to 10 at the Hanalei Hotel, San Diego, California. Roger Wagner Publishing, creators of HyperStudio and the convention's sponsor, says the HyperStudio Festival will bring together students, teachers, family users, and other hypermedia enthusiasts to share what the company (modestly) calls "the ultimate computer-user experience."

The Festival will include day-long, hands-on workshops on Thursday, with separate sessions for beginning and advanced users. Hourly conferences on Friday and Saturday will show you how to get the most out of multimedia, including how to implement hardware, such as laserdisc players, MIDI devices, scanners, and video cameras and digitizers.

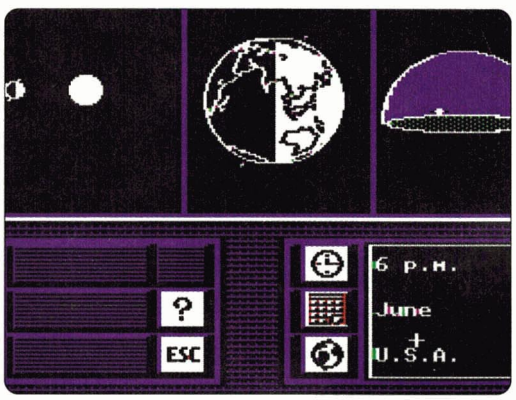
Family activities include visits to Sea World, the San Diego Zoo, and Balboa Park. A Friday-night beach party (complete with hot dogs, volleyball, and a bonfire) is in the works, as well. "Using HyperStudio is both empowering and fun, and we're working to make this one of the most enjoyable and practical conferences you'll ever attend," enthuses Roger Wagner, company president.

According to Pam Wagner, company spokesperson, the Hanalei Hotel is offering a special room rate ($65 plus tax, single or double occupancy) for conference attendees and their families. Admission is $95 for the preconference workshops; the cost of Friday and Saturday sessions is $150 ($125 if you register before April 30). For details, contact Roger Wagner Publishing, 1050 Pioneer Way, Suite P, El Cajon, CA 92020, (619) 442-0522, fax (619) 442-0525.

AHOY, MATEYS!

The immediacy of television drew each of us into the tragedy of the *Exxon Valdez* and Persian Gulf oil spills. What child or adult doesn't remember the inexpressible sadness felt as scores of oil-soaked sea birds struggled to survive and legions of dead fish wafted ashore? But catastrophic as it may be, the aftermath of an environmental crisis may carry with it at least one indirect benefit: a revitalized commitment to preserve and protect our natural surroundings.

Now thanks to two award-winning multimedia series from Wings for Learning/Sunburst Communications, you can nurture ecological sensitivity among fourth- to eighth-grade students — and help them boost their language-arts, math, science, and social-studies skills, as well. **The Voyage of the *Mimi*** and **The Second Voyage of the *Mimi*** were created by the Bank Street College of Education with funding provided by the U.S. Department of Education and the National Science Foundation. Both series combine videotapes or, videodiscs and print materials with Apple II software. Each complete videotape package is priced at $1399; the videodisc packages are $1695 apiece.



Mimi's Sun Lab module lets kids explore and record Earth's constantly changing light patterns.

The Voyage of the *Mimi* presents the story of a 72-foot ketch and her crew as they take to the open sea to study whales. Using Apple II software, children learn about ecosystems, sea mammals, maps, and navigation.

In The Second Voyage of the *Mimi*, the crew embarks on a journey to explore the ancient Mayan civilization in Mexico. Software titles include **Maya Math**, **Sun Lab**, and **Scuba Science**, in which students perform real-time experiments, testing environmental variables such as pressure, light, sound, and temperature with special probes attached to the Apple IIe or IIGS.

A wealth of extension materials — including **Exploring Tidepools** and **A Field Trip to the Rainforest** (two Apple II computer programs), the videodisc ***Whales***, a videotape titled ***You Can't Grow Home Again***, and ***The Tropical Rainforests Nature Book*** — supplement your students' Mimi explorations.

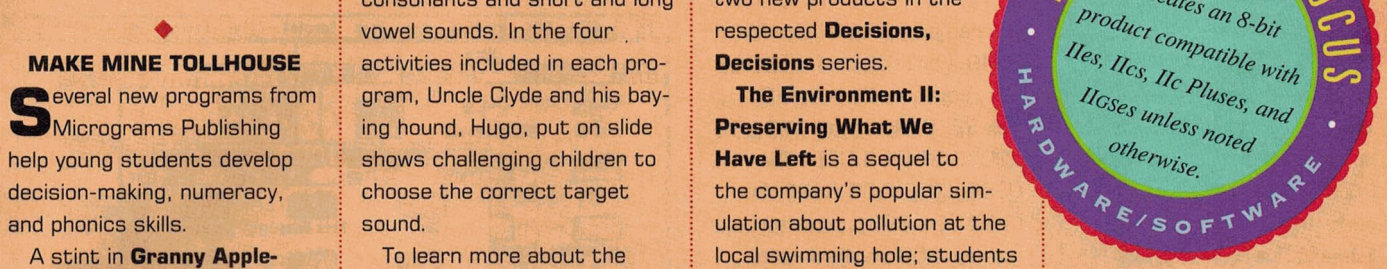
At press time Wings for Learning/Sunburst Communications announced its "***Mimi* Voyage to the Future Contest.**" To enter, students imagine the ship of their dreams, then create an illustration and write 250 words describing the vessel.

Winners will receive a *Mimi* T-shirt and an autographed picture of Captain Granville, the *Mimi*'s skipper. The contest deadline is June 30, 1993.

Meanwhile, teachers interested in learning more about the two *Mimi* series can borrow videotapes on 45-day loan. Each video provides an overview of the *Mimi* adventure and peeks into classrooms where teachers are using the *Mimi* curriculum.

To request free copies of ***The* Mimi *Experience Newsletter*** and the spring 1993 *Mimi* catalogue, for pricing information on accompanying guides and wall charts, or to learn more about these exciting programs, contact Wings for Learning/Sunburst Communications, 1600 Green Hills Road, Scotts Valley, CA 95067-0002, (800) 321-7511, (408) 438-5502, fax (408) 438-4214.

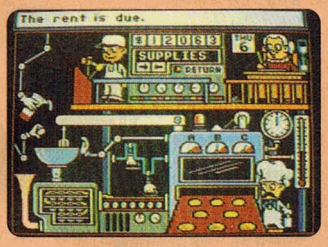
NEW SOFTWARE



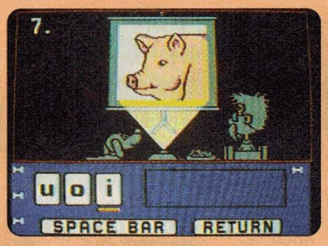
MAKE MINE TOLLHOUSE

Several new programs from Micrograms Publishing help young students develop decision-making, numeracy, and phonics skills.

A stint in **Granny Applebee's Cookie Factory**, for example, isn't exactly a piece of cake. Children in grades 3 to 6 discover that managing a cookie factory means choosing ingredients, measuring them, baking cookies, repairing equipment, prioritizing order shipments, and paying bills. The bottom line? For $44.95 kids get a taste of the real world.



Granny Applebee gives kids a taste of real economics.



Hugo Hound introduces little ones to phonics.

Younger children (grades 1 to 3) practice the four basic arithmetic functions of addition, subtraction, multiplication, and division with Elmo, Roxie, Spike, and "Sticks" McCoy, those rhythmic reptiles featured in **Dancing Dinos** ($34.95).

Uncle Clyde's Consonant Slides ($49.95) and **Hugo Hound's Vowel Sounds** ($34.95) are phonics programs designed to help preschoolers and first-graders identify beginning and ending consonants and short and long vowel sounds. In the four activities included in each program, Uncle Clyde and his baying hound, Hugo, put on slide shows challenging children to choose the correct target sound.

To learn more about the programs or to acquire free 30-day preview versions, contact Micrograms Publishing, 1404 North Main Street, Rockford, IL 61103, (800) 338-4726, (815) 965-2464, fax (815) 965-8456. Circle number 350 on the Reader Service card for more information.

ALL THE NEWS THAT FITS

Tom Snyder Productions' free spring/summer 1993 catalogue features three new 64K Apple II products for students in grades 4 through 12.

Most kids already have a nose for news (not always the right kind), but programs in the **Super Scoops** series can transform youngsters into investigative reporters as they toil in a simulated newsroom in pursuit of two front-page stories: one about a blood transfusion gone awry, another about a serious local pollution problem.

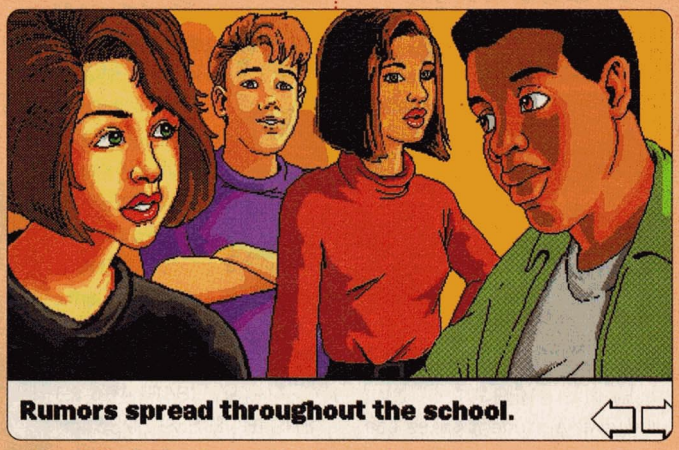
In each Super Scoops simulation, students track 20 sources and select from 40 potential interviews before writing news articles based on the information they've gathered. A built-in clock simulates the pressure of working against a tight deadline. (Hey, kids, take it from us — this is really fun.) **Scoop I: The Case of the Bad Blood** and **Scoop II: Who's Mucking up the Environment?** are priced at $45 each.

TSP has also released two new products in the respected **Decisions, Decisions** series.

The Environment II: Preserving What We Have Left is a sequel to the company's popular simulation about pollution at the local swimming hole; students debate the merits of devoting a large tract of wilderness to public enjoyment or using the land for resource development.

AIDS: Relationships and Responsibility stimulates discussion about sexually transmitted diseases, risky behavior, teenage pregnancy, and discrimination.

The Environment II and AIDS are priced at $149.95 each. For more information, contact Tom Snyder Productions, 80 Coolidge Hill Road, Watertown, MA 02172-2817, (800) 342-0236, (617) 926-6000, fax (617) 926-6222, or circle number 353 on the Reader Service card.



Decisions, Decisions: AIDS gets kids thinking and talking about the consequences of risky sexual behavior.

ANT ALERT

You'll probably want to cancel your summer picnic plans after playing Karl Bunker's new shareware diversion **Ant Wars**. At first blush, this $10 Apple IIGS board game might remind you of checkers, but instead of red and black markers you play with ants.

The game pits your red ants against the computer's black ones; the object is to kill all the black ants by walling them off with red ants on two sides.

Ant Wars features four levels of difficulty and a "berserker ant" function in which random red ants single-handedly (single-leggedly?) cannibalize black ants. Problem is, berserker ants also kill their own kind. Ant Wars is available through the usual shareware channels (America Online, GEnie, and public-domain software libraries). You can also order the game directly from Karl Bunker, 59 Parkman Street, Brookline, MA 02146. For more information, circle number 354 on the Reader Service card.

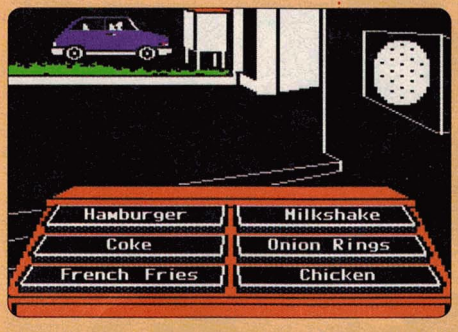
◆ APPLE II ■ APPLE IIGS

◆

REAL-WORLD CONCERNS

Edmark Corporation has served students with special needs for more than 20 years. That tradition continues with the release of **Edmark Functional Word Series Software**. These four units — **Signs Around You**, **Fast Food/Restaurant Work**, **Grocery Words**, and **Job/Work Words** — use a sight-word approach to teach vocabulary for independent living.

Each unit contains 100 words and phrases targeted to adolescents and adults with developmental disabilities or students for whom English is a second language. Computer activities feature hi-res graphics and human-quality voice. The software's Call Your Teacher function activates whenever a student takes too long to answer a question or responds incorrectly a specified number of times.



Fast Food/Restaurant Work teaches vocabulary for independent living.

Each unit includes ten disks, a Teacher's Guide, reproducible record-keeping forms, and 300 student worksheets. The software requires 128K, a color monitor, one 5.25- or 3.5-inch disk drive, and an Echo speech synthesizer. It supports keyboard, TouchWindow, and single-switch devices. Each unit in the series costs $179; you can purchase all four for $649. For additional information, contact Edmark, P.O. Box 3218, Redmond, WA 98073-3218, (800) 426-0856, (206) 566-8400, fax (206) 861-8998, or circle number 359 on the Reader Service card.

◆ ■

NEW PD CATALOG

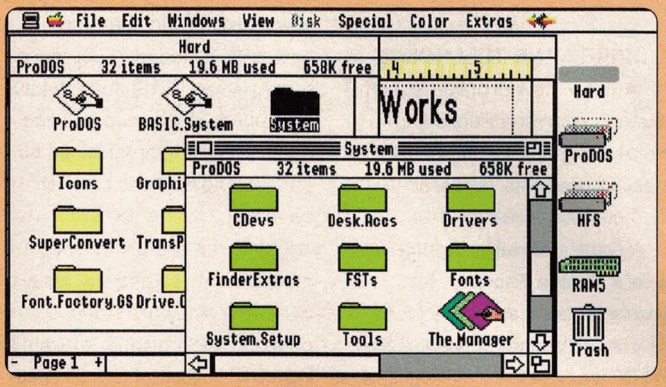
The National AppleWorks Users Group has announced its **1993 Public Domain Catalog**, with 80 pages describing more than 200 disks (50 of them new), according to NAUG president Dr. Warren Williams. Among them you'll find utilities, fonts, graphics, and AppleWorks templates for home, school, and business. The 1993 NAUG Public Domain Catalog costs $5, but you'll receive a $2 rebate with your first order. For more information, contact the National AppleWorks Users Group, Box 87453, Canton, MI 48187, (313) 454-1115, fax (313) 454-1965, BBS (615) 359-8238, or circle number 355 on the Reader Service card.

■

STACK ATTACK

Apple IIGS hypermedia authors can draw inspiration from three new stacks offered by the HyperStudio Network. Jim Hirsch's **HyperSounds Volumes 3 and 4** include dozens of HyperStudio-ready sound effects and musical clips. David Pollock's **Periodic Elements** helps students master the basics of physical science and chemistry. This computerized version of the periodic table includes historical information about each element as well as its symbol, number, and mass.

Each stack disk costs $15 for HyperStudio Network members; $20 for non-members. For more information, contact the HyperStudio Network, Box 103, Blawenburg, NJ 08504, (609) 466-3196, fax (609) 466-1085, or circle number 358 on the Reader Service card.



The Manager offers MultiFinder-style convenience, with multiple open applications.

■

GS MULTITASKER

If you're a GS user suffering the pangs of Mac or Windows envy, Seven Hills Software may have a cure: **The Manager**, which the company calls "the first and only true MultiFinder for your Apple IIGS."

The product of a two-year collaboration between Seven Hills and BrainStorm Software, The Manager lets you keep multiple applications open on the desktop simultaneously. It's uncanny to work in a Teach window, say, and be able to see the Finder in the background. As you move from one program to another, the active application's menu bar comes to the fore and displaces that of the program you just used. (Look for a review of The Manager and Switch-It!, Sequential Systems' GS application switcher, in an upcoming issue.)

The Manager carries a suggested retail price of $69.95 and requires an Apple IIGS with a minimum of 2 megabytes of RAM (4 megabytes recommended). A hard drive isn't required, but power users will want one for maximum efficiency. To increase your GS productivity, contact Seven Hills Software, 2310 Oxford Road, Tallahassee, FL 32304-3930, (904) 575-0566, or on line at SevenHills (America Online and GEnie) or 75300,1743 (CompuServe). Circle number 351 on the Reader Service card for more information.

◆

MACRO ECONOMICS

Kingwood Micro Software recently released **Texas II on Disk: Volume 3**, a disk-based publication featuring news, reviews, special offers from AppleWorks developers, and TimeOut accessories, macros, and fonts.

NEW PRODUCT FOCUS

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

HARDWARE/SOFTWARE

One look at the Volume 3 directory (and its several subdirectories) will convince even the most frugal AppleWorks user that this resource is well worth a personal perusal. Among other offerings, Volume 3 includes an updated version of TimeOut Mousetext, 1993 calendars, macros including Terminator 4 (for quitting AppleWorks without saving any files), a quiz-writing module, a special font for 5.25-inch disk labels, and a database listing nearly 1200 type $C8 ("GS") fonts arranged in categories such as Old English, Western, and Pictures, Icons, and Dingbats. (The fonts themselves are available from the company separately.)

Texas II on Disk: Volume 3 costs $8.50. AppleWorks 3.0 and Ultra 4.1 are recommended. You can order the disk from Kingwood Micro Software, 2018 Oak Dew, San Antonio, TX 78232, (210) 490-6373. For more information, circle number 356 on the Reader Service card.

■

GLOBAL PERSPECTIVE

Bruce Jones Design is now offering **Apple IIGS Clip-Art Maps**, a collection of more than 300 color and black-and-white maps in super-hi-res format.

This GS product combines in one package three of the company's popular Macintosh clip-art collections: **World Maps**, **USA State-by-State**, and **World Hot Spots**, with maps of every state, the U.S., and all major regions of the world, including Africa, Asia, Australia, Central America, Europe, the Middle East, South America, and Southeast Asia.

Apple IIGS Clip-Art Maps works with any super-hi-res graphics program, including HyperStudio, The Print Shop IIGS, and a variety of GS paint programs. At a suggested retail price of $49.95, the collection comes on five 3.5-inch disks and includes a map directory.

For more information, contact Bruce Jones Design, 31 St. James Avenue, Suite 1060B, Boston, MA 02116, (800) 843-3873, (617) 350-6160, fax (617) 350-8764, or circle number 357 on the Reader Service card.

◆ ■

TRADE-IN, TRADE-UP

One company widely known for its support of special needs students is **Laureate Learning Systems**. Company president Mary Sweig Wilson, Ph.D., recently announced a unique program that lets you send back any Laureate software you no longer use and receive new software in exchange.

Through the company's **Trade-In Policy** you receive a 50-percent credit for any Apple II program you return; you can apply the credit toward any new program. The Trade-In Policy means you can more easily afford programs that meet your current needs.

The company's **Trade-Up Special** lets you return any Apple IIe program and receive a new Apple IIGS, Macintosh, or IBM PC version of the same program for a nominal fee. Not sure which program you'd like? Call the company to arrange a free 30-day preview.

At press time Laureate Learning Systems had also announced four new Apple IIGS products: **Negation** ($150), **Plurals** ($150), and **Prepositions** ($150) in the company's **Early Emerging Rules** series, and **Twenty Categories** ($200), a program focusing on more than 300 nouns, with three activities that help students test their categorization prowess. (Shipping charges are $5 per order plus $2.50 per item.)

All four programs should be available by the time you read this. For more information, contact the company at 110 East Spring Street, Winooski, VT 05404-1837, (800) 562-6801, (802) 655-4755, or circle number 360 on the Reader Service card.

Twenty Categories: focusing on classification skills.

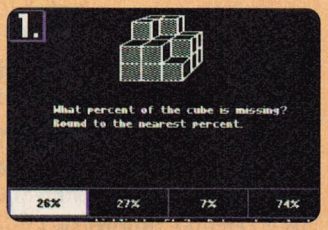
◆

GO FIGURE

Five new arithmetic programs in the **Problem Solving** series from William K. Bradford Publishing are designed to help students in grades 3 to 8 master practical computation skills.

Questions focus on real-world math problems involving whole numbers, addition and subtraction of fractions, multiplication and division of fractions, decimals, and ratio and percentage.

Each program presents 100 problems, many with vivid graphics. An optional calculator is available on screen.

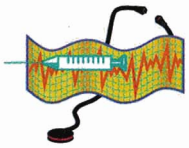


William K. Bradford's Problem Solving series includes a new program devoted to developing kids' ratio- and percentage-calculation skills.

Help for teachers is also included: You can track student progress through a built-in management system.

Each of the five titles, which require 128K and one 5.25- or 3.5-inch disk drive, is available at a school price of $60. Bundles, lab packs, network versions, and district licenses are also available. Schools qualify for a free 30-day preview.

To learn more about the Problem Solving series, contact William K. Bradford Publishing Company, 310 School Street, Acton, MA 01720, (800) 421-2009, (508) 263-6996, fax (508) 263-9375, or circle number 361 on the Reader Service card.



APPLE CLINIC

WORD AND IMAGE

The accent's on graphics this month as Apple IIs capture the moment on screen and in print.

BY CYNTHIA E. FIELD, PH.D.

IN A GIF-FY

I HAVE LOADS OF GRAPHICS THAT I created on my Apple IIGS. Is there any way I can use these illustrations with a Macintosh? We have Mac LCs at school. I have no problem transferring word-processing data to the Mac via Apple File Exchange. But try as I might, I can't seem to get any of my Mac programs to recognize graphics files from the GS.

Bill Edwards
Sembach Middle School
Germany

There are a number of ways to get your graphics from the Apple IIGS to the Mac or PC (or to move in the reverse direction), but perhaps the easiest, cleanest, and most-versatile way is to use GIF (graphics-interchange format), a universal "graphics language" that all three computers understand. Some years ago, CompuServe — most widely known as an on-line information service — created GIF so that personal-computer users of all persuasions could share clip art and other types of illustrations. And, as an added benefit, GIF files are compressed: Redundant series of pixels, which often comprise a picture — an all-blue sky, for instance — are expressed compactly in a GIF file, which thereby takes up much less room on disk and much less time to send over a modem than the original version.

Programs that recognize GIF files are available for virtually all personal computers, including Apple IIGSes, Macs, and PCs. Arguably the best programs for GIF file conversion are **SuperConvert** for the GS, by Jason Harper (available from Seven Hills Software), and a $40 shareware title for the Macintosh, **GIFConverter**, by Kevin A. Mitchell. I downloaded GIFConverter from America Online, but it's also available elsewhere. Like most shareware authors, Mitchell lets you try the program (for 15 days, in this case) before you pay the registration fee. If you do a lot of work with multiplatform graphics, the small investment will pay for itself in no time.

Forging links between any two machines, however, not only requires GIF converters for each, but also a way to exchange files. Fortunately, **IIGS System 6** includes software modules known as FSTs (file-system translators), which recognize Mac disks automatically. (If you aren't using System 6, you should be.) Your Mac's system disks include the program **Apple File Exchange**, which lets you transfer both ProDOS and MS-DOS (IBM PC and compatible) files to your Macintosh.

In a nutshell, the process of translating and transporting a picture from the GS to the Mac goes like this:

1. On your GS, use SuperConvert to load your Apple II picture (whether hi-res, double hi-res, or super hi-res, created on a IIe/c or a GS) and convert it to a GIF file.

2. Save the resulting GIF file directly on a Mac floppy disk if you're using GS System 6 and have the HFS (hierarchical file structure) FST installed in your IIGS system. Go on to step 3.

2a. If you don't have System 6 on your GS, save the SuperConvert GIF file on a ProDOS disk. Then use your Mac's Apple File Exchange program to transfer the GIF file from the ProDOS disk to a Mac floppy- or hard-disk-based file.

3. Use GIFConverter on the Macintosh to decode the GIF file into the Mac graphics format you prefer. (Note that some Mac graphics programs contain a GIF file converter as a Load As option on the File menu, so you may not need GIFConverter.)

To go from the Apple IIGS to the PC, the process is similar:

1. As in steps 1 and 2 above, use SuperConvert to translate and store the original Apple II picture as a GIF file on a Mac disk directly, or on a ProDOS disk; it doesn't matter which disk format you use in this process.

2. On your Mac, use Apple File Exchange to transfer the GIF file from the Mac or ProDOS disk to an MS-DOS (PC-based) floppy disk.

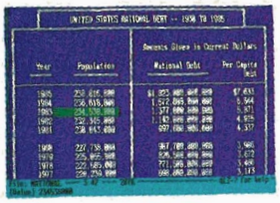
3. On your PC, use **Hijaak** or a similar converter to decode the GIF file into the PC graphics format you prefer.

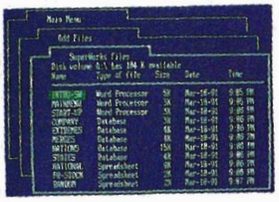
GRAPHICS RESOURCES

GIFConverter 2.x
Kevin A. Mitchell
P.O. Box 803066
Chicago, IL 60680-3066
$40 plus $5 shipping in U.S.,
$10 shipping outside U.S.
includes latest version, print documentation, shareware registration fee
shareware version available on CompuServe, GEnie, America Online

Hijaak
Inset Systems Inc.
71 Commerce Drive
Brookfield, CT 06804-3405
(203) 740-2400
(203) 775-5634 fax
$249

SuperConvert 3.01
Seven Hills Software Corp.
2310 Oxford Road
Tallahassee, FL 32304-3930
(904) 575-0566
(904) 575-2015 fax
SEVENHILLS (GEnie, America Online)
75300,1743 (CompuServe)
$39.95





MS-DOS APPLEWORKS*

*inCider A+ Magazine, August, 1991

SuperWorks™

INTEGRATION FOR THE NEXT GENERATION OF PC USERS

NEW VERSION 2.0
NOW WITH SPELL CHECKER, EMS SUPPORT, GRAPHICS, PCX DISPLAY, AUDIO SUPPORT AND MUCH MORE.

Remarkable Technologies announces a breakthrough product which now delivers AppleWorks power on an IBM PC or compatible. SuperWorks lets AppleWorks users step up to a PC with AppleWorks files, utilizing an AppleWorks work-alike integrated package.

New features provide full & complete integration of all capabilities including; spreadsheet (3-D capability), database (the easiest to use and one of the most powerful anywhere), word processing with spell checker, improved communications package, new and improved graphics, new SWAT macros, the best in the industry and much more.

SuperWorks uses only 180K on diskette and it's the only integrated package developed for the notebook.

As a special introductory offer to inCider readers, SuperWorks is now available at the special low price of $199.00. SuperWorks has a regular retail price of ~~$400.00~~.

- ENTIRE PROGRAM USES ONLY 180K ON DISKETTE
- ONLY INTEGRATED PACKAGE FOR NOTEBOOKS

30 DAY MONEY BACK GUARANTEE

WHAT ARE THE EXPERTS SAYING?

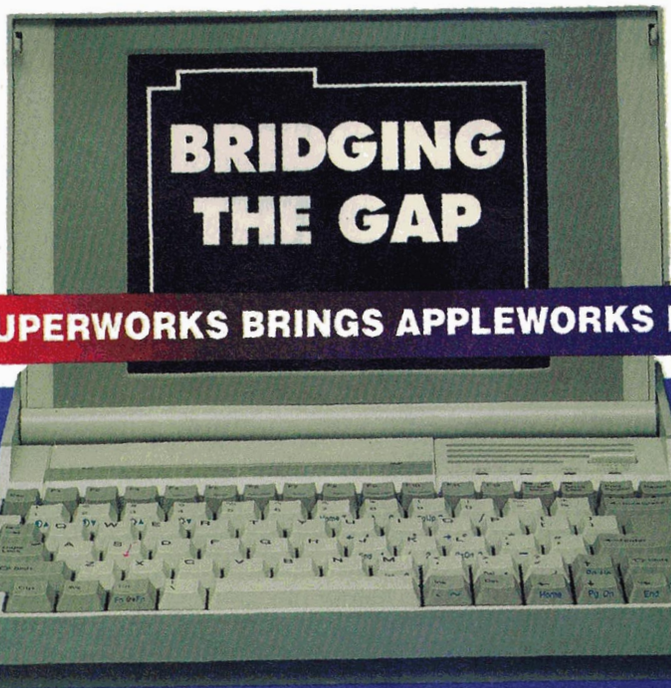
"MS-DOS APPLEWORKS" "inCider/A+ 8/91"

What do you say to an "MS-DOS clone" of Appleworks 3.0? Remarkable Technologies' SUPERWORKS ($199), has caused more than one double-take around here. SUPERWORKS functions like Appleworks on any IBM PC except that it's faster. If you use Appleworks and can train your fingers to find their way around an MS-DOS keyboard, you can use SUPERWORKS. It even incorporates some features for which Appleworks users pay extra.

★★★★ inCider Magazine, November 1991

Miami Herald/Craig Crossman 8/12/91

"Known as SUPERWORKS, this Appleworks clone does almost everything Appleworks does and more. If you know how to use Appleworks, you can use SUPERWORKS without picking up a manual. SUPERWORKS brings the functionality of Appleworks to the MS-DOS world while leaving behind many of its limitations."



SUPERWORKS BRINGS APPLEWORKS FUNCTIONALITY TO THE PC IBM®

Special introductory offer

☐ Please send me SuperWorks for only $199.00 (plus $5.00 S&H).

Indicate Disc Size: ☐ 5¼" Size ☐ 3½" Size

☐ ☐ ☐ EXP. DATE ____/____

CARD NUMBER _____

SIGNATURE _____

NAME _____

COMPANY _____

ADDRESS _____

CITY _____

STATE _____ ZIP _____

Mail to: Remarkable Technologies, 245 Pegasus Ave., Dept.IM593, Northvale, New Jersey 07647-9971

Circle 33 on Reader Service Card.

REMARKABLE TECHNOLOGIES, 245 PEGASUS AVENUE, NORTHVALE, NJ 07647 • TO ORDER CALL TOLL-FREE: 800-782-1955

FOR TECHNICAL INFORMATION: 201-767-5522 • FAX: 201-767-7227

CALL FOR NETWORK AND SITE LICENSING

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YOU OUGHTA BE IN PICTURES

I WENT TO A COMPUTER SHOW A few weeks ago and was amazed to see a PC product that lets you use a video camera to freeze a human facial image on the monitor. Among other things, you can change hair color and style and then record the image on VHS tape. Can any Apple IIGS product do the same thing?

Mel D. Acklin
Leesville, LA

You bet. In fact, Mel, there are several ways to accomplish similar results. The easiest is to invest in one of Digital Vision's reasonably priced **ComputerEyes** digitizers. A digitizer is a circuit board that converts a video image — from a camcorder, videocassette tape, or still-video camera — into a digital picture you can display on the computer screen. You can save images on disk and edit them with Apple II or IIGS paint programs. Among other things, you can incorporate edited images into desktop publications or videotaped presentations, such as school yearbooks. A black-and-white version of ComputerEyes is available for the Apple IIe and IIGS. The company's color digitizer works only with the GS. ComputerEyes versions for the Apple II are classified as slow-scan digitizers. (By contrast, Digital Vision offers both less-expensive slow-scan and the more-expensive frame-grabber digitizers for Macintosh computers.)

How does it work? First, attach your camcorder to the Apple II with a standard video-camera cable. Next, focus the camcorder on your subject. Slow scanning requires that the subject remain still for about six seconds. Likewise, if you want to convert videotape images to graphics files, you need a good-quality pause function on your VCR. As you may know, the quality of the video image tends to deteriorate when you use the pause button on some less-expensive VCRs.

For best results, use still-video cameras, including those made by Canon, Kodak, and Sony. Because it's essentially a frame grabber, a still-video camera is a nice match for a slow-scan digitizer. Still-video cameras typically cost more than $1000, though.

If you have neither a camcorder nor a still-video camera, you can use a scanner to convert flat artwork, such as drawings or photographic prints, to computer graphics. **ThunderScan**, **LightningScan GS**, and **Quickie** are three popular scanners for the Apple II.

ThunderScan requires an ImageWriter printer. You replace the printer-ribbon cartridge (temporarily) with the ThunderScan unit. Then you roll a photo (or other piece of artwork) into the printer. As the scanner moves back and forth across the advancing photograph, ThunderScan software converts the photographic image one pass at a time to a graphics image, which "develops" on the computer screen.

By contrast, LightningScan and Quickie are hand-held scanners, which you drag across a drawing or photo on a table or desktop. It scans the image and replicates it on the computer screen. Scanning software is included in each package. Quickie supports the Apple IIe or IIGS; LightningScan is a GS-only product. You can use a paint program to do touch-ups, rid artwork of defects, or further embellish an image any way you'd like.

Whether you use a digitizer, a scanner — or neither — it costs no more than a few dollars to record on videotape anything that appears on your Apple II screen. Players who score big-time in a computer game can tape a picture of the awards ceremony. Artists of all ages can videotape electronic galleries to show off their graphics creations. Teachers can design video presentations to enrich lesson plans — or to use as demonstration videos on parents' night. The possibilities are as unlimited as your own imagination.

It's easy and inexpensive to attach a videocassette recorder to your Apple II because the computer's video output is already NTSC (National Television Standards Committee) compatible. This built-in capability saves Apple II users hundreds of dollars compared with what Macintosh or PC users must spend to convert RGB or VGA signals to NTSC.

Use a male/male RCA-type cable to connect the composite-video port on your Apple II to the video in port on the VCR. If you use a monochrome or composite-color monitor, you'll need an inexpensive Y-adapter so that you can attach your monitor and VCR simultaneously to the Apple II. Now turn on the VCR, insert a blank tape, start your computer, and launch your graphics program, game, or other software. When the display you want to capture appears on screen, press the VCR's record button. Time the presentation and press the VCR's stop button when you're done. That's all there is to it. The nice thing about videotapes is that you can share your creations with anyone who has a VCR — he or she doesn't need a computer. (For more about video options, see "Big Picture Show," November 1992, p. 34.)

FOCUS ON VIDEO PRODUCTS

ComputerEyes
Digital Vision, Inc.
270 Bridge St.
Dedham, MA 02026
(800) 346-0090
(617) 329-5400
(617) 329-6286 fax
$129.95 b/w (IIe/GS)
$249.95 color (GS only)

LightningScan GS, $295
ThunderScan, $219
requires ImageWriter printer
Thunderware
21 Orinda Way
Orinda, CA 94563
(800) 628-0693 orders only
(510) 254-6581
(510) 254-3047 24-hour fax

Quickie
Vitesse, Inc.
P.O. Box 929
13909 Amar Road
Suite 2A
La Puente, CA 91747-0929
(800) 777-7344
(818) 813-1270
(818) 813-1273 fax
$299
Apple II/IIGS

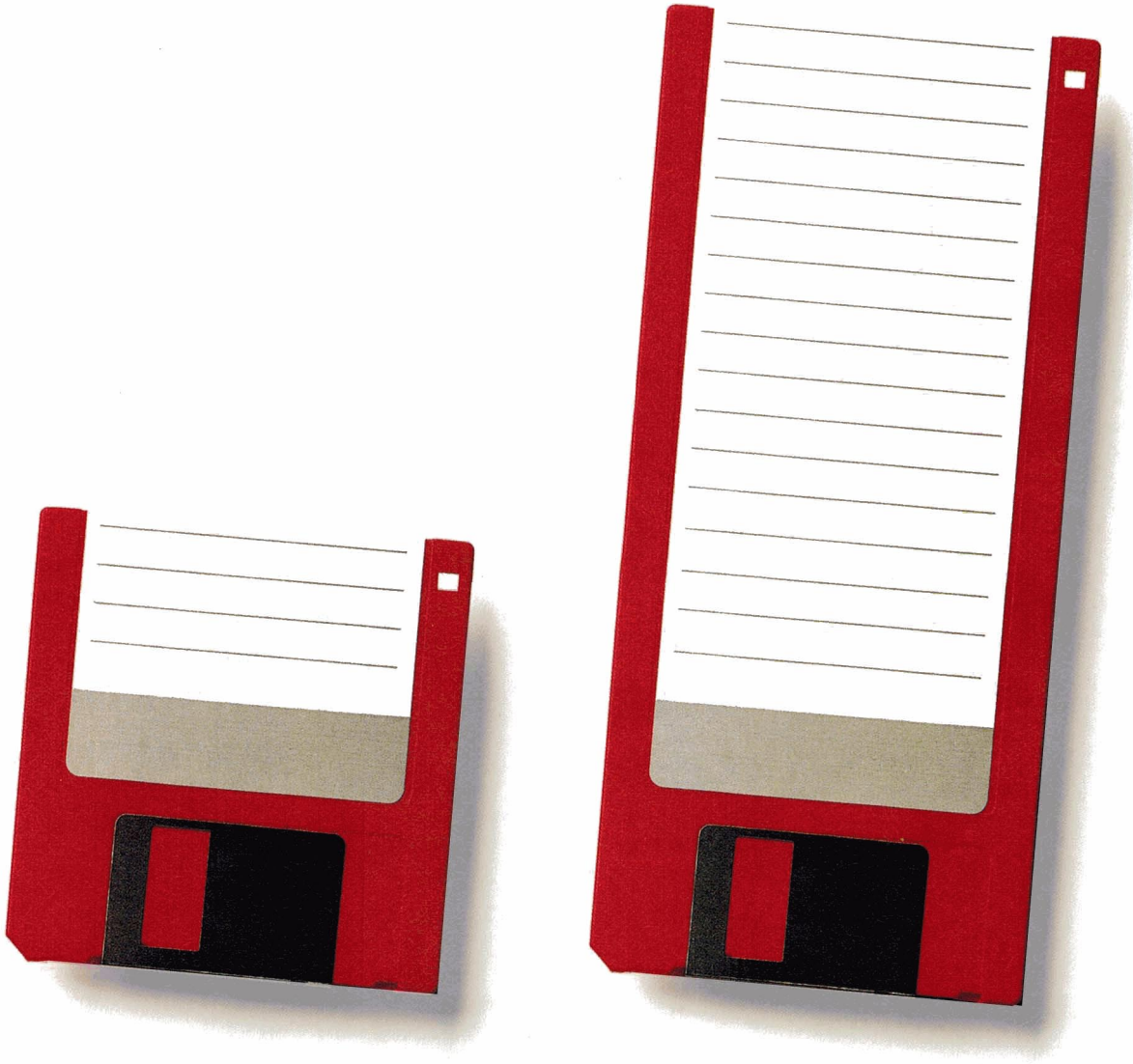
¡OLÉ!

MY KNOWLEDGE OF RECENT Apple II developments has fallen behind during my four-year stay in Argentina and Chile. I create vocabulary tests and need to generate Spanish-language characters. Is there a way to get these characters on the IIe, IIc, or IIGS? Or will I have to go to the Macintosh

Wendell Hall
Wallsburg, UT

Noh. Non. Nein. No way! Depending on the software you prefer, the Apple II can generate the characters you needl. If you already use AppleWorks 3.0, consider **EuroWorks**, an enhancement that adds foreign-language capability to the AppleWorks word-processor module. EuroWorks

Stretch your disk space.



We all know that creating disk space isn't quite this easy.

That's why WestCode Software is introducing HardPressed,™ the ultimate in disk compression software for the Apple IIgs. It virtually doubles the space on any type of disk, including hard disks, 3.5" diskettes, and RAM disks, without doubling your investment in hardware.

HardPressed is a totally transparent, fully automatic solution to your storage problems. It provides true on-the-fly compression and decompression of files. Just specify which files, folders or disks you'd like to keep compressed and from then on HardPressed handles everything automatically as you save or open your documents and applications. And, because it's completely integrated into the GS/OS file system, HardPressed is much faster and easier to use than any other disk compression product.

All this for only $69.95. And, if you've already purchased another disk compression product, you can still trade up to the unbeatable performance of HardPressed for only $19.95. To find out more about HardPressed, just give us a call. 1-800-448-4250.

WestCode SOFTWARE

WestCode Software, Inc., 15050 Avenue of Science, Suite 112, San Diego, CA 92128 (619) 487-9200 • Fax (619) 487-9255 • (800) 448-4250. HardPressed requires an Apple IIgs with a minimum of 1.25 MB RAM and GS/OS System 6. All brand and product names are trademarks of their respective companies, and you know who they are. © 1993 WestCode Software, Inc.

Circle 99 on Reader Service Card.

GRAPEVINE

UPDATE ON HANDSHAKE OPTIONS

✔ Morgan Davis, developer of the BBS program **ProLine**, points out that the information in "Ground Control to Major Tom" in the February 1993 edition of Grapevine (p. 20) is only partially correct. In that column, we said that GS owners of **Hayes**-compatible external modems must set all handshake options to no via the Control Panel. Davis says that information applies only to 1200- and 2400-baud modems. For higher-speed 9600- and 14.4K-baud modems, Apple Computer recommends using a **special high-speed modem cable** that provides true hardware handshaking, carrier-detect, and DTR (data-terminal ready) features. It's currently available from **Morgan Davis Group** (10079 Nuerto Lane, Rancho San Diego, CA 91977-7132, 619-670-0563, $14.95 plus $3 shipping) or **InTrec Software** (3035 East Topaz Circle, Phoenix, AZ 85028-4423, 602-992-5515, $15 plus $3 shipping).

CROSSING THE GOLDEN GATE

✔ If you're going to San Francisco for Apple Expo West in late April, make sure you call the **Guideboard BBS** at (415) 864-3858 (300-/1200-/2400-baud service) for some tourist information you probably won't find in any guidebook. Operated for the past six years by San Francisco cab driver Richard Schwartz, the Guideboard is filled with recommendations of great and inexpensive restaurants and nightspots that cater to San Francisco natives. Whether you're interested in dim sum or Dungeness crab, jazz clubs or blues saloons, don't leave home before consulting the Guideboard.

ACCESSORIZE

✔ If you still start your GS from 3.5-inch floppies and don't have quite enough disk space to add desk accessories, you can always free up some additional room by deleting an unnecessary file from your **System.Setup** folder. On a backup copy of your System.Disk, open the System/System.Setup folder. If you own a ROM 01 GS, you can safely delete the **TS3** file to get an extra 41K of storage. If you have a ROM 3 GS, you can erase the **TS2** file to gain another 37K.

KEY TRICKS

✔ Hold down the **option** key while selecting About AppleWorks GS from the Apple pull-down menu in that program, and you'll discover some useful information about your system.

✔ In a number of desktop-based GS/OS applications, including AppleWorks GS, the Finder, HyperStudio, and Platinum Paint, holding down three keys simultaneously — **Open apple**, **Control**, and **2** — brings up a screen listing the names of the people who created the program.

✔ The engineers who built the GS left their mark on the machine: a hidden Easter egg. To activate a screen showing the names of the designers involved in the GS project, start your computer without any disks in the drives; when you see the error message Check startup device and an apple sliding back and forth across the screen, hold down the **open-apple**, **option**, **control**, and **N** keys simultaneously.

✔ While using the Finder with the Apple IIGS' System 6.0, you can close all the open windows by holding down the **open-apple**, **option**, and **W** keys simultaneously.

✔ If you suspect a hardware problem with your IIe, IIc, or GS, try invoking the system's built-in self test before panicking. First, remove any disks from your drives. With the power on, hold down four keys simultaneously: **Open apple**, **Option**, **Control**, and **Reset**. Then lift your finger off the reset key. The computer will run a set of diagnostics for about a minute. If your system passes the self-test, it will inform you. If any cryptic messages appear, though, it's time to bring your computer in for repair.

— 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 (COMPUSERVE), J.KOHN (GENIE), OR 76702.565@COMPUSERVE.COM OR JOKO@AOL.COM (INTERNET).

supports French, German, Italian, Portuguese, and Spanish.

Tutor-Tech, another Apple II-family program, supports the entire Mac international character set. To generate an ë, for example, press Option-u and type e. Option-u creates the umlaut above the e. Tutor-Tech isn't a word processor per se; rather it's an authoring system that lets teachers create interactive lessons. Moreover, Tutor-Tech can track students' progress via a built-in score-keeping feature.

On the GS, you can create foreign-language characters if you use an authentic 16-bit GS program, such as AppleWorks GS, and the Geneva font or another typeface that includes the extended characters you need. Pull down the Apple menu, and choose the General control panel. Make sure that translation is set to Standard (not None). Use the option key (or shift-option combination) followed by the appro-

SAY Sí Sí

AppleWorks 3.0, $249
AppleWorks GS, $299
Claris Corporation
5201 Patrick Henry Drive
P.O. Box 58168
Santa Clara, CA 95052-8168
(800) 325-2747 nearest dealer
(408) 727-8227 customer relations

EuroWorks 3.0
S.A. AuTeur Co.
P.O. Box 7459
Beaverton, OR 97007
(503) 645-2306
$42 French, Spanish, German, Italian, Portuguese package
$27 each French or Spanish only
requires AppleWorks 3.0

GraphicWriter III 1.1
Seven Hills Software Corp.
2310 Oxford Rd.
Tallahassee, FL 32304-3930
(904) 575-0566
(904) 575-2015 fax
SEVENHILLS (GEnie, America Online)
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$9.95

Tutor-Tech Hypermedia Toolkit 2.7
Techware Corp.
P.O. Box 151085
Altamonte Springs, FL 32715-1085
(800) 34-REACH
(407) 695-9000
$195

priate QWERTY key to generate the accents and any other characters you want.

How do you know which keys to press? GS System 6 offers additional resources, including **Special Aids: Video Keyboard**. This replica of the GS keyboard pops up on screen when you select Video Keyboard from the Apple menu. Although AppleWorks GS doesn't support Video Keyboard (or other Special Aids), programs such as **GraphicWriter III** do. GraphicWriter III is perhaps more widely known as a page-layout program than as a word processor, but don't let that keep you from using it to design handouts and worksheets.

The second way to remember the key combinations you need to press to generate extended characters is to keep the keystrokes literally at your fingertips. I use transparent, self-adhesive labels called **KeyCappers** on my Mac and GS keyboards. A glance at the keyboard reminds me of the keys I need to press to generate all kinds of accents and symbols. KeyCappers labels are designed to fit the Mac's keys, but a little trimming with a razor blade will fit them to the GS' keys, as well.

A BIG PLUS

MANY PEOPLE DON'T KNOW that you can run AppleWorks 3.0 on an Apple II Plus. You can, thanks to Plus-Works, which reconfigures the AppleWorks startup disk and substitutes escape-key commands for the left and right cursor keys and open-apple commands. Will you tell the rest of the Apple II world about this program?

Joseph A. Homsher
Cerritos, CA

Listen up, world — it's easier than you think to modernize a 48K Apple II Plus to run the latest version of Claris' popular integrated word-processor/database/spreadsheet program. In addition to **AppleWorks 3.0** and **Plus-Works 3.1**, you need only three extras to bring that so-called "obsolete" system up to snuff:

• **Shift-key modification.** The Plus-Works manual explains how to perform this do-it-yourself quick fix. In a nutshell, you connect a piece of wire from the shift-key pin of the Apple II Plus keyboard to the button-2 pin of the computer's game-paddle I/O (input/output) port. It's even easier than it sounds and requires only inexpensive lead clips, which you can purchase at your local Radio Shack store. A shift-key modification lets you generate both upper- and lowercase characters on the Apple II Plus.

• **An 80-column card**. With an 80-column card you can display twice as many characters on one line as you could otherwise in native 40-column mode.

• **Additional RAM (random-access memory).** With the appropriate add-in memory board you can increase the Apple II Plus' RAM to 128K or even 1 megabyte. According to Plus-Works' developer, Richard Hajdu, a 128K memory card installed in an Apple II Plus provides an AppleWorks 3.0 desktop nearly twice the size of the one you get on a 128K Apple IIe or IIc.

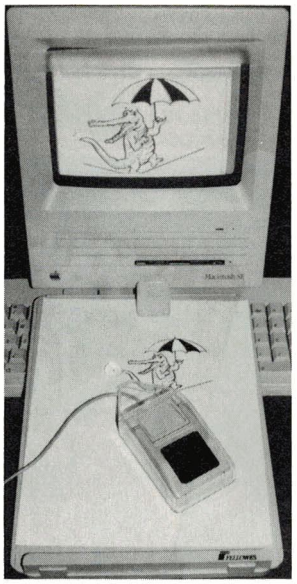
Perhaps the only down side to Plus-Works is its incompatibility with TimeOut products and other AppleWorks enhancements, but that drawback doesn't seem to have hampered the "thousands" of registered Plus-Works users. Hajdu says that Memory Plus can set you up with the software/hardware package you need to get up and running with AppleWorks 3.0.

UPDATING THE II PLUS

AppleWorks 3.0
Claris Corporation
5201 Patrick Henry Drive
P.O. Box 58168
Santa Clara, CA 95052-8168
(800) 325-2747 nearest dealer
(408) 727-8227 customer relations
$249

Plus-Works 3.1
Memory Plus Distributors
7902 East Pierce St.
Scottsdale, AZ 85257
(602) 820-8819
(602) 968-3916
(602) 968-3211 fax
$49

APPLE CLINIC IS A FORUM FOR ANSWERING YOUR QUESTIONS ABOUT APPLE II AND MAC HARDWARE AND SOFTWARE. WRITE TO APPLE CLINIC, 80 ELM STREET, PETERBOROUGH, NH 03458, AND ENCLOSE AN SASE. BECAUSE OF THE VOLUME OF LETTERS, HOWEVER, WE'RE UNABLE TO RESPOND TO ALL QUESTIONS INDIVIDUALLY.



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TUTOR-TECH 2.7 VS. MEDIA MAGIC! 1.1

Does your Apple II software collection leave you yearning for more? Don't despair — hypermedia adventures glimmer on the summer horizon. Techware's Tutor-Tech Hypermedia Toolkit (version 2.7) and Toucan's Media Magic! (version 1.1) let teachers, students, and hobbyists of all stripes express their creativity as they produce entertaining and educational presentations. So fire up your imagination and get ready to dazzle your audience as we explore two authoring systems designed specifically for 128K Apple IIs.

I ran these hypermedia products on an Apple IIGS and on a Mac LC II with Apple IIe Card installed. Although I also tested 5.25-inch versions of both programs, 3.5-inch versions proved easier to use because they eliminated bothersome disk swapping. If a 3.5-inch drive isn't available, you'll need two 5.25-inch drives.

In either case, however, you and your audience can enjoy the software you create (called *stacks* or *shows*, depending on the program) on an Apple II with just one disk drive. If you're lucky enough to have an Echo synthesizer, you can add speech to your creations, too).

DEEP IN THE STACKS

Widely known in its initial versions as the first authoring system for the Apple II, Tutor-Tech Hypermedia Toolkit, like fine wine, improves with age. The latest edition adds an array of features well worth the upgrade price. Educators, especially, will like the ease with which Tutor-Tech lets you create stacks tailored to your classroom needs.

The standard Tutor-Tech package includes three 5.25-inch disks — the program or *Teacher Disk* for creating stacks, a samples disk with ready-to-use artwork and demonstration stacks, and a *Student Disk* — plus a spiral-bound manual and an upgrade/utility disk. A gradebook program for tracking student progress is available separately ($95). You can make one backup copy of the program, samples, and grader disks on a single 3.5-inch floppy, or you can order Techware's dual-format package ($15 additional), which includes both 3.5- and 5.25-inch disks.

★ ★ ★ ★ ★

TUTOR-TECH HYPERMEDIA TOOLKIT 2.7

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

- hypermedia authoring system
- 128K Apple IIe/IIc/IIc Plus/IIGS/Laser 128
- $195, $35 upgrade from v2.5
- $19 upgrade from v2.6 serial #39999 and below
- free upgrade from v2.6 serial #40000 and above
- **The Stack Exchange** catalogue free
- product support on America Online

★ ★ ★ ★ ★

MEDIA MAGIC! 1.1

Toucan/Queue
338 Commerce Drive
Fairfield, CT 06430
(800) 232-2224
(203) 335-0906
(203) 336-2481 fax

- presentation software
- 128K Apple IIe/IIc/IIc Plus/IIGS
- $99.95

Photography • Larry Dunn

The mouse is a "must" for designing stacks; a joystick is an awkward alternative at best. Students can run your creations from the keyboard alone, however. For special-needs or very young users, you can develop stacks that require only the spacebar and return key.

When you boot the *Teacher Disk*, a set of design tools, a menu bar, and a blank work area, or *page*, appear on screen. The manual assumes no prior computing knowledge. You don't even have to know how to use a mouse or pull-down menus — the first chapter of the manual covers all these Mac-style features.

Beginners should work through the tutorial before embarking on their own stack-building explorations, though: It provides an excellent visual tour of the hypermedia design process and teaches you how to use the program's text and drawing tools and how to use buttons to link pages.

Among Tutor-Tech 2.7's features is a new music-writing module. Accompanying melodies can spice up a stack, but teachers who get migraines in noisy classrooms will be happy to know they can add a command to turn off the sound.

My favorite new feature is *referenced pages*. No longer must you copy and paste screens you want to repeat within a stack — just type a code on the new page to cross-reference it to a previously created one. This convenience saves a lot of computer memory and development time. The codes are easy to learn, too. To test-drive Tutor-Tech, for example, I created an informational stack about contemporary female mystery writers; thanks to referenced pages, other users can expand the stack easily.

The Tutor-Tech 2.7 update also supports external commands, which, among other things, let you change directories, launch other Apple II applications, control a videodisc player, or open related stacks. A new preview mode lets you browse through your stacks and see exactly what your students will be looking at.

On the down side, Tutor-Tech's fonts show no improvement; the smallest typeface is hard to read on the GS screen. Importing graphics is tricky, too. You can bring in high-resolution images directly, but you'll have to convert Print Shop and New Print Shop graphics. The manual could use an addendum describing the program's support for assorted Apple II graphics formats.

SHOWTIME

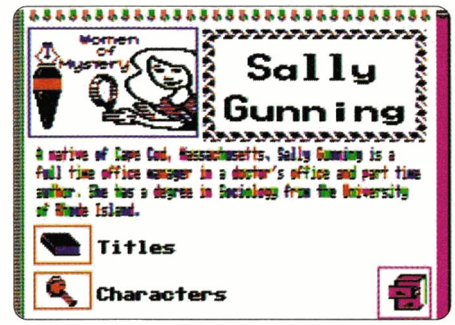
Captivating backgrounds, clip art, sound effects, and ready-to-use songs make Media Magic! an appealing new Apple II hypermedia product. Geared toward educators, this "Best Show and Tell Tool Ever" includes three modules — *The Show Maker*, *The Art Studio*, and *The Melody Studio* — that let you create or modify music and graphics as you design your presentations. You can also import clip art and sounds from Toucan's *Creative Writing Series* and illustrations from other popular programs.

Media Magic! makes you feel like a movie director. Special effects provide attractive transitions between pages; you add script commands, text, buttons, and clip art via pop-up dialog boxes. Because I'm musically impaired, I especially enjoyed using the program's prewritten songs and sound effects in a show I designed for parents' night at a local elementary school.

In addition, I created screens describing the school's history in *The Art Studio* module, where I could control the appearance of text best. (Hypermedia programs rarely include full-featured word processors.) I discovered that I could combine font sizes on a page, something that isn't possible using background text screens alone.

Media Magic! comes on three 5.25-inch floppies (or a single 3.5-inch disk). You must store your chosen backgrounds, fonts, sounds, and clip art on the show disk, which doesn't leave much room for a large presentation. You can save only ten screens on a 5.25-inch disk, but you can link shows stored on separate disks.

Media Magic! sports special effects plus predesigned graphics and music.



Easy-to-use referenced pages make Tutor-Tech stacks a snap to expand.

Although the documentation is well written, it's organized strangely. For instance, the tutorial demonstrating most of the software's features is the fourth section of the guide. It suggests that users read the reference section first, a premise that might well intimidate novices.

DIFFERENT STROKES

Both Tutor-Tech stacks and Media Magic! shows support speech if your Apple II has an Echo synthesizer. The quality differs, however.

In Tutor-Tech, you select the words you want to use from the 720-word dictionary supplied with the Echo unit. (Street Electronics also offers a larger dictionary with some 4000 words.) The system speaks the words in the order in which you import them into your stack; the synthesizer's female voice is clear and of high quality.

By contrast, in Media Magic! you type the words to be spoken on the background text screen or in a message box, then add a *speak* text command to the script. If the system mispronounces any words (and it did several in the presentation I created), you must edit them by typing phonetic spellings in an exceptions box. The resulting speech is robotic-sounding and sometimes difficult to understand. You can adjust pitch and rate, but success is a matter of trial and error. On the plus side, you can designate words to be highlighted as the system speaks them to help young readers with visual tracking.

In short, if you plan to present a lot of information and you're satisfied with simple graphics — or if you want to write music — Tutor-Tech is the program for you. The software's ability to access

VCRs, videodisc players, the TouchWindow screen, and the Muppet Learning Keys alternative keyboard is a definite plus for stack developers, as well. On the other hand, if special effects, predesigned backgrounds, and ready-made clip art appeal to you, Media Magic! is the program of choice.

In his inaugural address last January, President Clinton observed, "Technology is almost magical." What are you waiting for? It's time to conjure up some creative presentations. Tutor-Tech and Media Magic! prove that you can still work wonders in only 128K.

Midge Frazel
Computer Resource Consultant
Bridgewater, MA

★ ★ ★ ★ ★

THE LOST TRIBE

Lawrence Productions, Inc.
1800 South 35th St.
Galesburg, MI 49053-9687
(800) 421-4157
(616) 665-7075
(616) 665-7060 fax

- social-studies strategy game
- 1MB Apple IIGS
- requires GS/OS 5.0.4 or later
- $49.95

For centuries, your tribe dwelt in the valley below Belchfire Mountain, an active volcano. One day an eruption destroys your village; the chief and most of the tribe's ablest hunters are killed. As the smartest, strongest survivor, you must lead a band of 23 clan members on a search for the tribe's ancestral homeland, somewhere to the east.

It's a race against time: Winter's coming fast and you have to find a new place to settle before snowfall makes travel impossible.

To guide you, the tribe's forebears prepared a *Sacred Mapskin*, which dominates the center of your GS screen. It's divided into hexagonal terrain cells that include forest, plains, mountains, river valleys, lakes, hills, and deserted villages.

Grampf, the tribal clerk, maintains the *Survival Rock* and the *Status Rock* — icons that appear on the left-hand side of the screen and provide a pictorial progress report. When you hunt, your performance is illustrated by stick-figure animations reminiscent of cave-wall paintings.

POLI SCI 101

The game includes six scenarios of increasing difficulty. In the most challenging games, the *Mapskin* shows largely unexplored territory, the environment is more dangerous, and food is harder to find.

All scenarios — except the easiest one — include at least three randomly selected destinations, which change each time you start a new game.

Each day you must decide whether to gather roots and berries, travel, rest, feast, practice spear throwing, send out scouts, or create magical carvings to boost your confidence and enhance your prestige. In addition, random events challenge you to make decisions by clicking to select a multiple-choice option.

Scanned color photos feature various members of the program's development team, costumed as cavemen and women; these characters act out a whole range of conflicts and crises. (After a few games, the same events recur, however — a design compromise that was probably necessary to keep program size fairly reasonable.)

If you make good decisions, the tribe will be happy and your leadership rating will increase. If you make enough bad decisions, though, your rating drops to zero, prompting the tribe to select another leader and banish you, ending the game. Politics hasn't changed much in 10,000 years.

THE SERIOUS SIDE

By clicking on the book icon located on the right-hand side of the screen, you can view the *Prehistoric Guide to Survival*, an on-line reference that includes personality profiles of your companions, notes on land forms and animals you encounter, descriptions of tools and utensils, and discussions of values, customs, and rituals shared by ancient and modern tribal people.

I found the *Guide* awkward because the screen displays only a few lines at a time and you can't print the text. Some topics — "lost continents" and "vortex energy" to name two — could be classified as New Age fluff. Moreover, chapters on the extinction of dinosaurs and "Creationism vs. Evolution" seem inappropriate given the scope of the program.

An 18-page manual includes a list of additional recommended reading and amusing line drawings of tribe members, but no screen shots. The documentation covers MS-DOS and Macintosh versions of the program; a separate two-page supplement and four-page *Read.Me* file on disk provide GS-specific information.

The package includes three non-copy-protected 800K floppies. The designers apparently worked hard to ensure that the program would run on a system with only one or two 3.5-inch drives. Some disk swapping is required, but most program files are located on one disk.

You can install the game on a hard-disk drive by copying files from all three disks into a single folder requiring some 2.1 megabytes of hard-disk space in all. (To enjoy the game's music you must have *Tool035* in your *System.Tools* folder.) The Lost Tribe requires at least 1 megabyte of RAM. If your GS has more than that, the program uses it effectively.

YABBA-DABBA

Intended for players aged 8 and older, The Lost Tribe can help you learn about the lives of our distant ancestors and hone map-reading, group-dynamics, problem-solving, and conflict-resolution skills.

The program's designers seem to have successfully reconstructed the culture and beliefs of prehistoric people. The software combines an imaginative approach with solid archaeological and anthropological source material. Serious academics may object to the program's humor, but it should appeal to an audience who grew up on a steady diet of *Flintstones* cartoons (and vitamins).

If you liked the novel *Clan of the Cave Bear* or the film *Quest for Fire*, you'll love The Lost Tribe. The program is equally

suited to individual exploration, small-group interaction, or full-class participation. As long as publishers keep coming up with new educational software like The Lost Tribe for the Apple IIGS, it's premature to write off this remarkable computer as a lost cause.

Mike Markowitz
Pepperdine University
Long Beach, CA

★ ★ ★ ★ ½

ULTRA 4

JEM Software
7578 Lamar Court
Arvada, CO 80003
(303) 422-4856

- AppleWorks enhancement and macro language
- 192K enhanced Apple IIe/IIc/IIc Plus/IIGS
- requires: AppleWorks 3.0, TimeOut UltraMacros 3.0 or 3.1
- $60

Live long and prosper" — that's the story of AppleWorks Classic, Bob Lissner's integrated word processor/database/spreadsheet program for the Apple II. Beagle Bros' TimeOut series of add-ons (now distributed by Quality Computers) catapulted the original AppleWorks into a second generation. Then through the collaboration of Claris Corporation and Beagle Bros, "AppleWorks: The Third Generation" (version 3.0) was conceived, with enhancements such as spell checking and support for subdirectories.

But the AppleWorks story isn't over yet. Ultra 4 takes AppleWorks users — even novices — to new worlds of creative utility "where no one has gone before."

IMPROVING ON A CLASSIC

Among all TimeOut products, perhaps none breathes more life into AppleWorks than Randy Brandt's UltraMacros — an easy-to-use programming language that boosts AppleWorks to new heights of power.

Though some people still fear the word "programming" because it implies numbered lines and cryptic references, users who are comfortable with plug-and-play applications still often wish their programs could do a little more, especially to minimize repetitive tasks. UltraMacros lessens the need for repeated keystrokes and automates countless other tasks, as well.

And the UltraMacros language is intuitive, letting you create short programs (macros) by recording a series of keystrokes. You can then save them and play them back with a single keypress. In essence, you create customized functions without ever leaving AppleWorks. Straight out of the box, UltraMacros offers increased speed, new features, and enhanced capabilities within the AppleWorks environment.

Among hundreds of other possible operations, macros cansave/print/remove all documents on the desktop automatically, locate a "lost" file on a hard drive, eliminate duplicate records in a database, provide word wrap in a spreadsheet, and even create pull-down or pop-up menus.

With Ultra 4, a new UltraMacros is born. This major upgrade to UltraMacros 3.1 is soundly based on the original software, and you can use most earlier macros with little modification. The program disk includes a *Converter* module that translates UltraMacros 3.0 or 3.1 macros to Ultra 4 syntax. Some conversions require hands-on tinkering, but the program's accompanying documentation explains the process.

Ultra 4 includes an installer program and an *AppleWorks 3.0 Bug Patcher* (version 1.6). The installation process is easy, whether you use a hard-disk drive or 3.5-inch floppies — just follow directions diligently. (Pay particular attention to the *Notes* file.) Although you can use Ultra 4 on a 5.25-inch floppy system, the degree of disk swapping required may make the job impractical.

Once installed, Ultra 4 becomes a seamless part of the AppleWorks program. You'll hardly know the macro enhancement is there — until you press the solid-apple (option) key, which activates most of Ultra 4's commands. The program installs a small set of macros automatically for immediate use, but Ultra 4 reveals its greatest power when you learn to write your own macros or to customize macros written by others.

POWER TO THE PEOPLE

A printed 60-page manual describes clearly, though briefly, all but the newest Ultra 4 commands, and the program disk includes more than a dozen sample files illustrating every command's syntax and use. In all, Ultra 4 adds more than 100 impressive new functions — from changing the beep sound on the fly, to capturing the contents of an entire database record with a single command, to calculating big numbers to a precision of two decimal places.

The program also enhances several existing UltraMacros commands, including clearing selected portions of the screen and using the *Find* function with the display turned off. Ultra 4 also lets you adjust the cursor's blinking speed and use a mouse in AppleWorks. Power users will appreciate Ultra 4's 100 text-string variables and 260 numeric variables. The software also supports custom labels, task-file caching, and desktop-memory commands.

Moreover, Ultra 4 supports an expandable library of INITs. These small programs modify AppleWorks automatically at startup, including date-and-time display, enhanced Open apple-H (screen dump) printing, screen blanking, and powerful debugging for fine-tuning your macros. The program also offers a special TimeOut application, *Macros-to-Menus*, which converts any macro task file to a TimeOut application that will then appear on the TimeOut menu.

Whatever your line of work, whatever your productivity needs, if you use AppleWorks regularly, you can benefit from UltraMacros. And once you've tried Ultra 4, you'll never be content with plain-vanilla AppleWorks again. Randy Brandt's latest creation not only enhances AppleWorks' functionality, but opens a gateway to nearly unlimited expansion of this powerful program. ❑

Will Nelken
Author, UltraAWsome Macros SE, ULTRA-AppleWorks, and Ultra — to the Max!
San Rafael, CA

Editors' note: At press time, inCider/A+ *learned that Randy Brandt has created an updated version of the software,* ***Ultra 4.2****, and that he has sold exclusive distribution rights for the program to Quality Computers, 20200 East Nine Mile Road, Box 665, St. Clair Shores, MI 48080, (313) 774-7200 (price undetermined at press time).*

THE APPLE II REPORT

MUST BUY!
FORGET IT
WORTH A SECOND LOOK

ASSESS A & B

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(800) 435-3942,
(617) 259-8752

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When students greet you with blank stares, perhaps they're missing the point of the lesson. Call on Assess for help — it's a series of diagnostic oral-reading tests for the early elementary grades. It measures reading strengths and weaknesses by analyzing student performance; teachers can print reports for individual tests, class standings, or the results of all tests administered to a single student over time. The package includes several sets of questions to facilitate retesting. Assess simplifies skill diagnostics because the computer handles the details — word lists, scoring, interpretation of results, and report printing. Teachers will find it a valuable (albeit expensive) supplementary evaluation tool.

COLLEGE COST EXPLORER 1993

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(800) 323-7155 orders
(212) 713-8165 customer service

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It's never too soon to start saving for your child's college education. College Cost Explorer makes the job a bit easier. The 1992-93 edition provides information on tuition and fees, room and board, books and supplies, transportation, and personal expenses at 2800 accredited two-year and four-year academic institutions. You enter personal financial data on electronic worksheets to calculate costs; the program projects the expected family contribution. An interactive tutorial advises you on financial aid (availability, application requirements, deadlines). This is an invaluable resource for anyone interested in determining college costs and how to meet them.

ESL DEMONS SETS A, B, C

Merit Audio Visual
132 West 21st St.
New York, NY 10011
(800) 753-6488,
(212) 675-8567

- new language skills builder
- 512K Apple II
- requires 5.25" disk drive
- $99.95 each

ESL Demons helps students of English as a second language develop their reading skills. Students examine sentences for errors of grammar, usage, and spelling; they earn a star for each inappropriate word or phrase they find. A round consists of 12 sentences, each containing an error students must correct. The program provides explanations for all errors, even when youngsters tag them correctly. Set A is designed for students who have mastered only some English conversational skills. Set B is for experienced beginners moving on to second-level work. Set C targets low-intermediate students. All sets ship on two disks with 12 ESL Demons (topics) per disk. The program tracks performance for up to 42 students. There are no animated graphics, sound effects, or games — just the slow, methodical delivery of text-based sentences. Activities may not be interesting enough to hold kids' attention.

GRANVILLE

Gessler Publishing Co.
55 West 13th St.
5th Floor
New York, NY 10011
(212) 627-0099

- new French-language program
- 64K Apple II
- requires color monitor
- hardcopy diary with accents requires Epson printer
- $39.95

Nothing is quite as intimidating as going on vacation to a place where you can't speak the local language. How do you find out where to stay or what to see? Granville prepares youngsters for a vacation in France as it sends players on a five-day, all-expenses-paid simulated holiday. Visitors receive free hotel accommodations, breakfast, and spending money. They must plan their own entertainment and sight-seeing activities (visiting museums, local shops, discotheques, and so on), while attending to basic needs like hunger and thirst. The program presents instructions initially in English, but shifts quickly to French. Accompanying documentation contains instructions, lesson plans, and sample worksheets in English. Granville suffers from seemingly endless disk swapping, but it's a wonderful electronic supplement for any intermediate-level French class, stimulating discussion while reinforcing basic vocabulary. Bonnes vacances!

READING SKILLS FOR DAILY LIVING SETS 1, 2, 3

Merit Audio Visual
132 West 21st St.
New York, NY 10011
(800) 753-6488,
(212) 675-8567

- new reading-skills builder
- 512K Apple II
- requires 5.25" drive
- $199 per set

With this electronic primer, upper-level high-school students can practice essential reading skills. The software consists of high-interest text passages focusing on everyday situations such as money management, community life, health care, and shopping. It strengthens students' abilities to recognize central thoughts, recall facts, place events in sequence, make inferences, and draw conclusions. Each activity offers two levels of difficulty. All sets in the series follow the same format: Students read an on-screen paragraph, then answer questions in their own words. Lessons provide immediate feedback; readers score higher if they don't ask for on-line hints. Record-management options let teachers track student performance and assess reading ability. This program is easy to use, but may lack sufficient "inspirational" qualities to motivate extended self-directed learning.

— Carol S. Holzberg, Ph.D., Contributing Editor

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GS-RAM+	0K/$138	6MB/$348	
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CV-Technologies

CV-RAM	4MB/$208	5MB/$250	6MB/$290	8MB/$348

Sequential Systems

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SOFTWARE

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ProTerm 3.0 .....$ 78.00

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GS/OS System 6.0 .....$ 39.00
HyperCard GS.....$ 69.00

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Æ Vulcan Gold 40.....$569
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Æ SuperDrive $218
1.44/800K for A2 & Mac
Apple SuperDrive I/F.....$138
Allows you to operate SuperDrives on your A2 or GS

Sequential Systems

RAM GS (4 megs/GS) $128
Meg 80Z (1meg/80cols./IIe) .$ 58

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Monitor Radiation News

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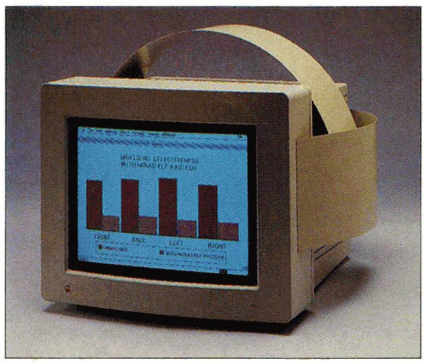


New Product Blocks ELF Magnetic Radiation

NoRad Corporation is now shipping ELF ProTech, the first externally mounted Extremely Low Frequency (ELF) magnetic field radiation suppressor for video display terminals (VDTs). Independently tested on popular monitors, ELF ProTech reduces ELF magnetic fields to well below the latest Swedish standards (SWEDAC, MPR II).

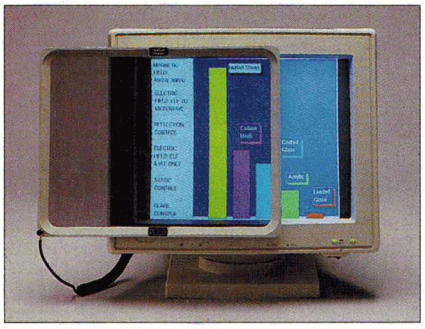
NoRad's proprietary technology (patent pending) safely absorbs ELF magnetic radiation by up to 70% *all around the display*—front, back, sides and top. And, the higher the field strength, the greater the reduction.

For the first time, you can upgrade your current monitor with external shielding rather than buy a new, low magnetic radiation monitor. Installed in minutes without special tools, ELF ProTech preserves image quality and *safeguards warranties and computer performance.*

ELF ProTech's universal design fits all monitors, and is color-matched to today's displays.

New Shield Delivers Brighter Image

The NoRad Shield, the industry-standard radiation and glare shield, is now even better. Advancements in manufacturing give NoRad Shield users High Light



Transmission (HLT), *which increases image brightness by a full 50%.*

Already the highest resolution shield available, NoRad has increased the Shield's resolution even more —to 260 lines per inch. This means a clearer image from your monitor.

Independent Tests Support NoRad Product Line

An independent, government-certified laboratory has tested the NoRad Shield and ELF ProTech to verify performance and shielding effectiveness.

Using U.S. Military Standard 285, the NoRad Shield was tested against the leading technologies which claim radiation protection. Only the NoRad Shield blocked 99.99% of virtually all electric field radiation—*not only ELF and VLF, but all the way up into the microwave range,* and greater than 50% of the total magnetic radiation above 30 KHz - *the broadest protection available.*

ELF ProTech was tested according to the most stringent Swedish standards (SWEDAC, MPR II) for its ability to suppress ELF magnetic radiation from popular, high-emission monitors. ELF ProTech brought magnetic fields at *all* of the required 48 test points below the 2.5 milliGauss benchmark, and a dramatic 37 of the 48 points were *below 2.0 milliGauss.*

Now — NoRad Radiation Protection in a Glass Filter

Finally, superior VDT radiation protection in a high-quality glass shield. NoRad's new **UltraGlass** blocks 99.99% of virtually all electric field radiation (more than any other glass filter) *and* eliminates glare to give a sharp, clear image.

Unlike regular glare filters, UltraGlass goes beyond blocking 99% of just ELF and VLF electric field radiation—it blocks thousands of times more.

With UltraGlass, you get NoRad radiation protection combined with the optical clarity of glass.

Call now to find out how you can limit your exposure to VDT radiation.

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NoRad

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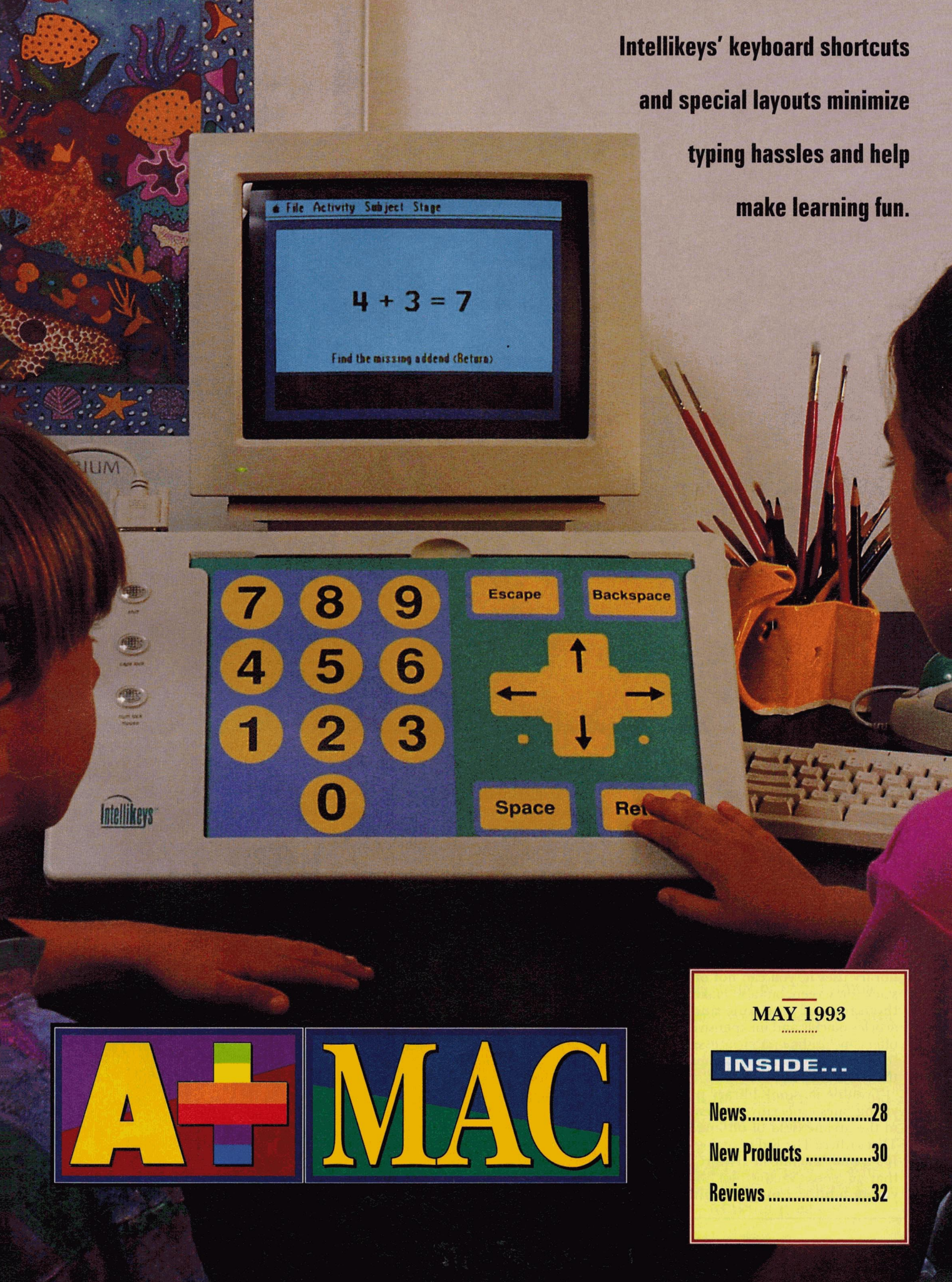
Carson, CA 90746
(310) 605-0808 FAX: (310) 605-5051

Circle 34 on Reader Service Card.



Intellikeys' keyboard shortcuts and special layouts minimize typing hassles and help make learning fun.

A+ MAC

MAY 1993

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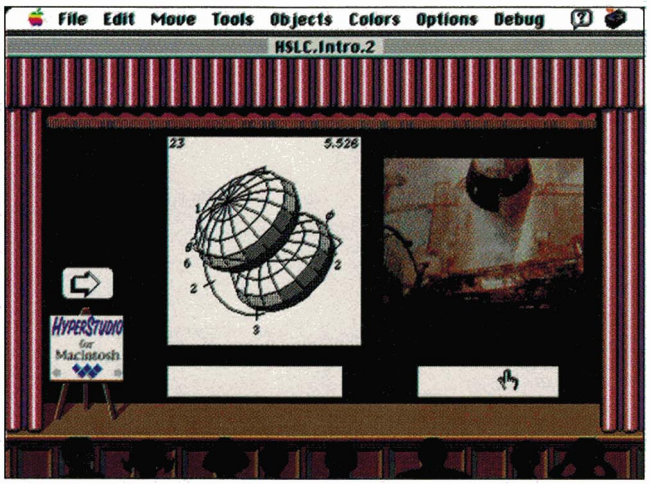
HYPERSTUDIO MAC DEBUTS



Color graphics, sound and QuickTime support, easy scripting — HyperStudio Mac has it all.

Mac owners who have used — or tried to use — Apple's HyperCard authoring system to create multimedia presentations have long had a couple of gripes about the program. First, HyperCard runs only in black-and-white; second, you have to learn a pretty complex programming language if you want to write a "stack." But Apple II owners who use HyperStudio, a similar product for the GS from Roger Wagner Publishing, don't have those complaints. HyperStudio has always supported color graphics, and creating a HyperStudio stack is literally as easy as using one, thanks to the power of mice and menus (although you can use a scripting language if you like).

The 25,000 teachers, doctors, fire fighters, and Indian chiefs — but mostly teachers — creating dynamic multimedia with HyperStudio have had but one objection: When they (or their schools) bought Macintoshes, they had to put HyperStudio away.

But now Roger Wagner has released **HyperStudio Mac**, complete with all the features you'd expect from the program: full-color graphics, built-in sound support, easy scripting. Unlike HyperCard, which Apple now considers a "professional software-development tool," HyperStudio is designed so that anybody can use it. Even preschoolers can create HyperStudio stacks, thanks to its simple point-and-click technique.

Teachers with a supply of Apple IIGSes will be glad to hear that HyperStudio Mac also imports GS stacks effortlessly. (It doesn't support HyperCard stacks.) HyperStudio Mac offers QuickTime video support, plays laser discs and CD-ROMs, and includes a full-color paint program, too.

HyperStudio Mac retails for $179.95, from Roger Wagner Publishing, 1050 Pioneer Way, El Cajon, CA 92020, (619) 442-0522. HyperStudio enthusiasts of all persuasions should note that the company is sponsoring its first annual **HyperStudio Festival**, scheduled for July 8 to 10 in San Diego. See "Have Mouse, Will Travel," p. 10 in this issue, for details.

— P.S.

KIDS IN THE LIBRARY

If a doubting voice whispers occasionally in your mind's ear, "This 'information revolution' is a lot of marketing hype," make a pilgrimage to a library. If your local athenaeum or bookmobile uses the CARL System, and especially CARL's new **Kid's Catalog**, one look should restore your faith that times are indeed changing.

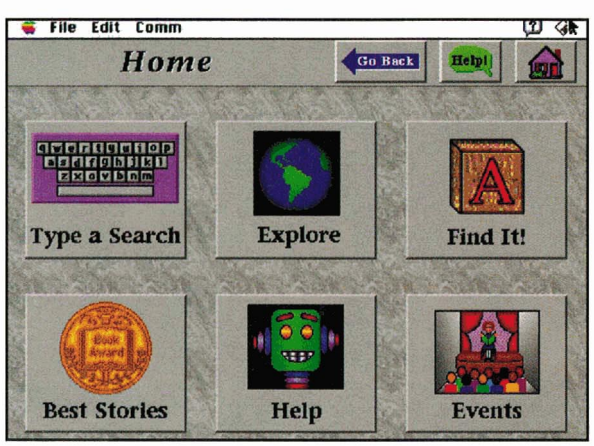
CARL is a complete computer-based library-management system. If your library uses it, you can not only search stacks on screen, but also make copies of thousands of magazine and journal articles quickly and inexpensively. CARL offers an "on-line public-access catalog," so library patrons, not librarians, can find the books they need.

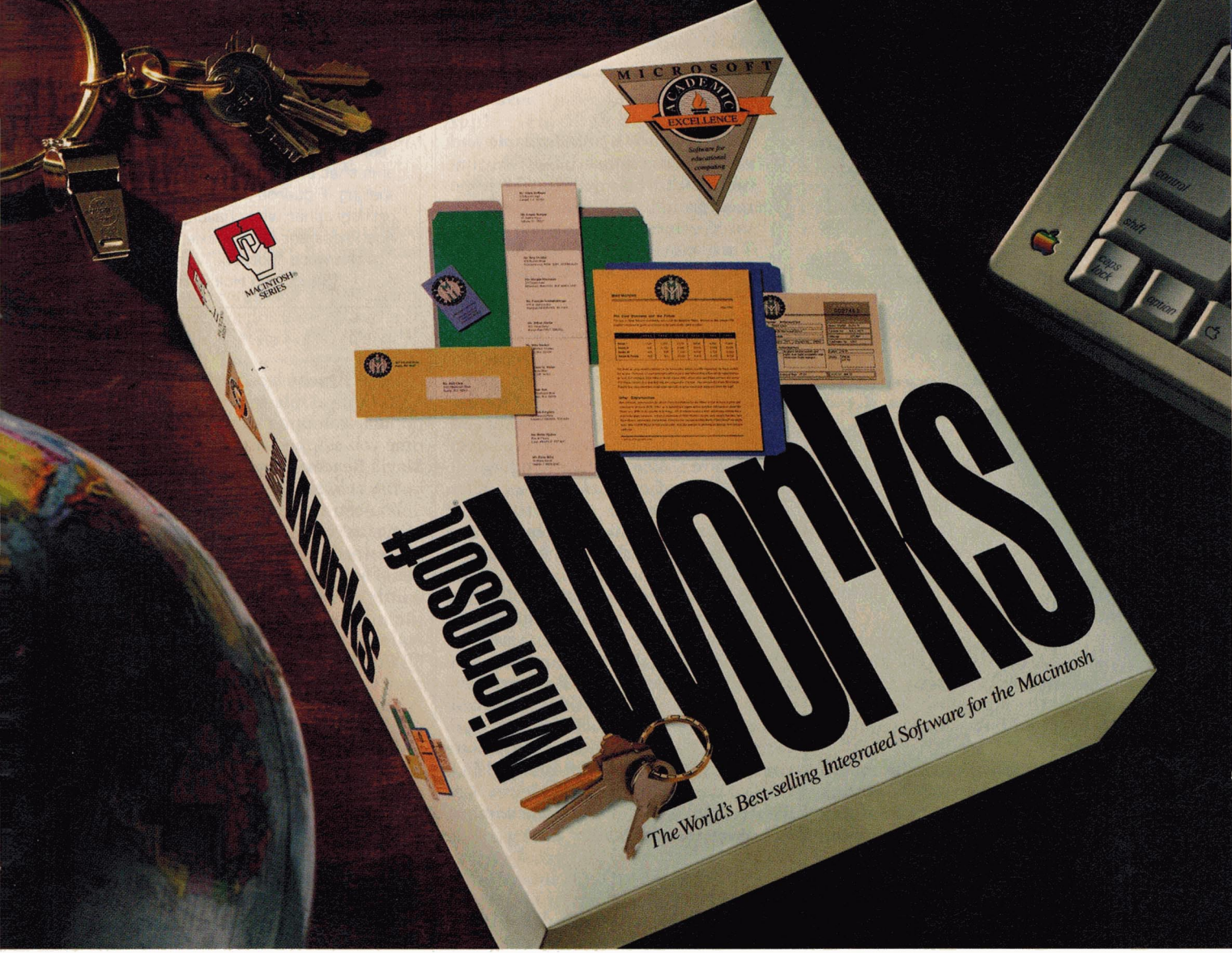
Trouble is, some library patrons — young ones especially — aren't experts in the arcane field of on-line searches. That's where The Kid's Catalog comes in. It's a new Macintosh HyperCard stack that anybody, including children and young adults, can use to find books quickly. Colorful graphics make searching stacks interesting. It's easy to use, but not condescending; Paula Busey, one of the Denver Public Library staff members who created The Kid's Catalog, says of its searching interface, "When you design for children, you're designing for the most-human quality in all people: innocent curiosity."

The Kid's Catalog was developed with the help of Apple's Library of Tomorrow program. Steve Cisler, senior scientist at the Apple Library Group, says, "The ALOT program has sponsored other efforts at making a catalog appealing to children, and some have been used effectively in a few schools and public libraries. But none of the others has received such favorable attention from librarians, companies, and people interested in applications other than a kids' catalog."

The Kid's Catalog is currently available only for libraries using the CARL System to maintain their collections. Kid's Catalogs for other computerized library systems are coming soon. For details and price information, contact CARL Systems, 777 Grant, Suite 304, Denver, CO 80203, (303) 861-5319.

— P.S.





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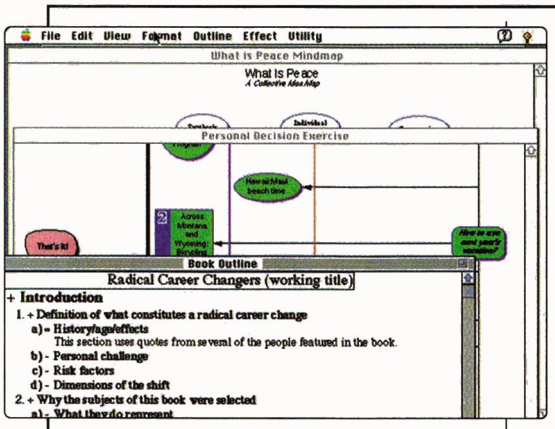


DESPERATELY SEEKING INSPIRATION

Inspiration is what you need when you just can't imagine what to write. No mere word processor's going to supply it, but then again, **Inspiration 4.0** is no mere word processor. It can precipitate the brainstorm you need.

Inspiration 4.0 is an idea-development tool suitable for either individual or group use. It's more than just a way to create diagrams on the Macintosh screen; it's more than an outliner: Inspiration 4.0 offers both.

The diagramming environment is where you'll turn when you're feeling creative. Based on proven visual thinking techniques such as mind mapping and clustering, Inspiration can reveal thought patterns and themes you never imagined — and diagrams are also a great way to present complex information to a classroom or other group.

Inspiration's outliner can help you develop and structure your ideas and get them down on paper. Outlines work interactively with Inspiration's diagrams to keep new ideas flowing in an organized manner.

Inspiration 4.0, priced at $295, can create idea maps, flow charts, tree charts, outlines, proposals, and final copies. It's a complete method of idea development.

For more information, contact Inspiration Software, 2920 Southwest Dolph Court, Suite 3, Portland, OR 97219, (503) 245-9011, or circle number 370 on the Reader Service card.

■ Before playing his series of games last year with Boris Spassky in Yugoslavia, (former) American world champion **Bobby Fischer** suggested that "the rules of chess will have to be changed in the near future, because computers are getting too good at the game."
(New York Times, 9/29/92)

MAKE IT COUNT

CountDown is an affordable and exciting Macintosh CD-ROM that helps children aged 5 to 12 hone their mathematical skills. It combines three games, using colorful QuickTime movies and other materials from Apple's acclaimed **Visual Almanac** laser disc.

CountDown doesn't merely computerize traditional lessons — it helps children actually use mathematical concepts. In the game *Guestimation*, for example, familiar objects such as a bowl of noodles and a pyramid of marbles appear on screen; the software challanges kids to figure out the number of objects they see. The computer encourages good estimation strategies, such as looking at objects from another angle and taking some apart, and rewards successful guesses.

Nimbles and *Leftovers*, the other two CountDown games, are also colorful and fast-paced. All three games use a variety of graphics, skill levels, and team options to keep interest high. Best of all, CountDown works on any color Mac with a CD-ROM player, even on a 12-inch monitor, and costs only $29.95. For more information, contact The Voyager Company, 1351 Pacific Coast Highway, Santa Monica, CA 90401, (310) 451-1383, or circle number 371 on the Reader Service card.

IN SEARCH OF . . .

DaisyQuest takes children on a fantasty adventure in search of Daisy, a delightful dragon. As preschoolers hunt for Daisy, they learn essential auditory skills that help them prepare for reading.

Oberon the magical wizard presents an interactive tutorial, speaking in a high-quality digitized voice, and guides little ones through each listening adventure as they solve problems and earn rewards. Kids learn to recognize rhymes and beginning, middle, and ending word sounds. (The experts call that "phonological awareness.")

Preschoolers only need to listen and learn; no keyboard skills are required — just the ability to use a mouse. DaisyQuest supports both color and black-and-white Macs (Mac Plus or higher), and carries a suggested retail price of $69.95. For more information, contact Great Wave Software, 5353 Scotts Valley Drive, Scotts Valley, CA 95066, (408) 438-1990, or circle number 372 on the Reader Service card.

■ Spectrum HoloByte has named **William Figueroa** national spokesperson for **Wordtris**, the popular game that encourages fast, accurate spelling. Figueroa is the 12-year-old orthographer who challenged then-Vice President Dan Quayle's spelling of the word "potatoe" last year. (Spectrum HoloByte)

JUST YOUR TYPE

Mavis Beacon has taught an estimated 1 million people how to type with her popular computer program. If it's high time you stopped hunting-and-pecking, **Mavis Beacon Teaches Typing 2.0** may be the answer.

You can drill or play exciting arcade games as you learn to use a keyboard for all its worth. Version 2.0 includes a number of additional features to make the job a little easier. All activities are in color; the software now teaches "ten-key" typing for numerical entry as well as the QWERTY keyboard; and a new grocery-store game reinforces those valuable skills.

The most recent version of the program now supports all Apple printers, including StyleWriters, ImageWriters, and LaserWriters, in addition to a number of other models. A new section illustrates the way good posture at the keyboard and proper typing position can help prevent injuries.

Mavis Beacon 2.0 costs $49.95, from The Software Toolworks, 60 Leveroni Court, Novato, CA 94949, (415) 883-3000. For more information, circle number 374 on the Reader Service card.

BEHIND THE 8-BALL

Amtex announces **8-Ball Deluxe**, the company's second exciting pinball simulation (**Tristan** was the first) and the initial title in a projected series of pinball classics.

Following 8-Ball Deluxe will be **Fun House** and **Royal Deluxe**, licensed from

Williams and Gottlieb, along with two additional original games.

8-Ball Deluxe has a country-and-western theme and, like Tristan, sports great graphics (256-color or gray-scale), realistic sounds, and true-to-life ball movements. You've got your fingers on three flippers as you go for the 8-Ball and then the Deluxe.

8-Ball Deluxe retails for $59.95, from Amtex Software Corporation, 212 Albert Street, Belleville, ON K8N 3N7, Canada, (613) 967-7900. For more information, circle number 373 on the Reader Service card.

PINOCCHIO

The Adventures of Pinocchio is a 270-page talking storybook with more than an hour of narration on Mac CD-ROM. It's divided into 20 chapters, with full-color illustrations on every page and questions at the end of each chapter. Several of the book's "living pages" offer interactive graphics and sound that breathe life into Carlo Callodi's classic story of the puppet who wanted to be a real boy. Enthralled by the magical images and reading along on screen, children will ask for The Adventures of Pinocchio again and again.

Pinocchio is a timeless tale of self-discovery, animated by a cast of marvelous characters in this 20th-century adaptation, the latest title in Orange Cherry's **Talking Storybook** series. It carries a suggested price of $69. For more information, contact Orange Cherry/New Media Schoolhouse, 69 Westchester Avenue, Pound Ridge, NY 10576, (914) 764-4104, (800) 672-6002, or circle number 375 on the Reader Service card.

SPEEDY CD

You don't have to use a CD-ROM drive long before figuring out that its greatest drawback is lack of speed: All the data, sound, and graphics are there, but they sure take a long time getting into your Mac. Now from FWB comes **The CD-ROM Toolkit**, software that can increase Mac CD-ROM drive speeds by as much as 1800 percent.

For maximum performance, you allocate a large block of RAM or part of your hard drive for CD work. The Toolkit operates invisibly; by keeping frequently used information on the hard disk or in memory, it lets you search large CDs almost instantaneously.

The package includes custom software for a number of drive brands, including Toshiba, Sony, Chinon, Pioneer, Apple, NEC, and Philips. In addition, the Toolkit's hearty driver software turns almost any CD-ROM into a Kodak Photo CD player. It also provides for reading Apple HFS, High Sierra, ISO 9660, ProDOS, and MS-DOS floppy disks. An improved audio compact-disc desk accessory sports advanced features such as fast-forward, shuffle, and programmable playback.

At $79, the CD-ROM Toolkit is an investment in performance. For more information, contact FWB, 2040 Polk Street, Suite 215, San Francisco, CA 94109, (415) 474-8055, or circle number 377 on the Reader Service card.

SUPREME SEQUEL

The sequel to Spectre — the game that brought virtual reality to every Macintosh — has made its début. In **Spectre Supreme** you'll contend with the likes of slicers, pools of intelligent acid, enemies who can hide in plain sight, and assorted other hunters and killers. But you're lucky: You've got smart missiles, proximity mines, grenades, scattershot, and spinners on your side. If all else fails, jump through a transporter gate, or experience the ultimate in tranquility — negative cyberspace. Play with your pals on any Mac network; Spectre Supreme includes several new on-line games, with intriguing names such as *Cyber Soccer*.

Ask about the CD-ROM version of Spectre Supreme, which enhances the visual field with QuickTime videos. A round-trip ticket to cyberspace costs only $69.95 ($119.95 for the local-area pack), from Velocity Development, 4 Embarcadero Center, Suite 31, San Francisco, CA 94111, (415) 274-8888. For more information, circle number 378 on the Reader Service card.

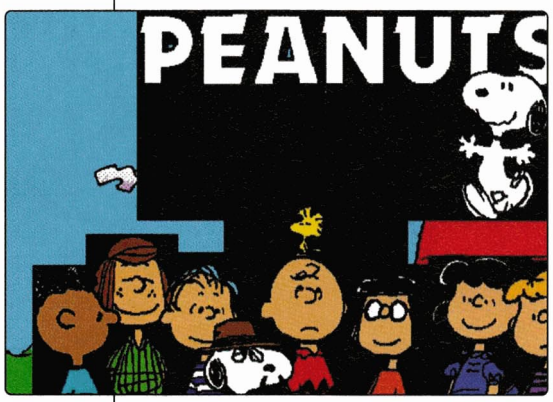
I, ROBOT

Just before his death last year, science and science-fiction author Isaac Asimov approved a definitive collection of all his robot stories and essays. Byron Preiss is now publishing **The Ultimate Robot CD-ROM**, complete with every piece Asimov ever wrote about mechanical people. Asimov is credited as the creative mind behind many of today's actual robots.

And because The Ultimate Robot is a CD-ROM, you'll find much more than just text. In addition to extensive annotations to Asimov's fiction and nonfiction writings and a complete bibliography, the disc includes audio and video recordings of Asimov talking about robots, as well as movie clips of some of the silver screen's most-famous robots and a selection of today's working models.

An amazing robot-construction system, with which you can build your own machine, features the work of Ralph McQuarrie, the artist who designed the robots in the movie *Star Wars* and illustrated Asimov's books *Robot Dreams* and *Robot Visions*.

For more information, contact Byron Preiss Multimedia, 24 West 25th Street, New York, NY 10010, (212) 645-9870, or circle number 379 on the Reader Service card. Price was undetermined at press time.



GOOD GRIEF!

Charlie Brown and the gang are teaching 3- to 10-year-old kids math, geography, reading, and computer skills with **Peanuts**, a new multimedia learning game from ImageSmith.

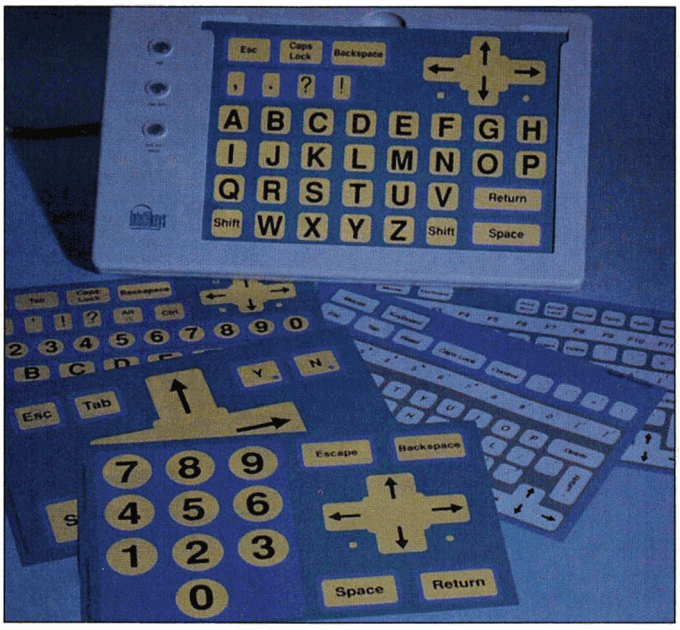
Peanuts is fun for the whole family, blending play with education and nurturing the child's natural desire to learn. It's the first title in ImageSmith's **Yearn 2 Learn** series of educational programs, which will feature a number of other popular cartoon characters.

A unique feature of Yearn 2 Learn software is its wide range of appeal, resulting from its ability to adapt to each player's performance. Each title will continue to attract a child as he or she grows and will also appeal to a number of kids in one family. That makes Yearn 2 Learn software a great family value.

Peanuts costs $64.95, from ImageSmith, 1313 Sepulveda Boulevard, Torrance, CA 90501, (310) 325-1429. For more information, circle number 380 on the Reader Service card.

■ New York state police will stop using the term **"hacker"** to refer to computer criminals, according to senior investigator Ron Stevens. The move shows respect for the original computer developers who coined the term, which the media chose later to associate with illegal activities. (Newsbytes, 10/21/92)

INTELLIKEYS



Custom overlays give you adaptable, easy access to your computer.

At first glance IntelliTools' new Intellikeys keyboard looks like a rectangular graphics tablet — it's gray plastic, with a flat, featureless surface, except for three lights on the left-hand side. "This is a keyboard?" was my first reaction — but in fact that's exactly what it is, and more. The Intellikeys keyboard is one of the most deceptive pieces of complex engineering I've encountered in ten years of reviewing hardware and software — and also one of the easiest to set up and use.

★ ★ ★ ★

INTELLIKEYS

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Suite 205
Richmond, CA 94804
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(510) 528-0670
(510) 528-2275 fax
IntelliTools (AppleLink)

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$395 keyboard, one cable
$450 keyboard, four cables
$479.95 keyboard, Apple IIe card, cable
$69.95 **Overlay Maker** software for keyboard programming
$39.95 **IntelliTalk** talking word processor

PLUG 'N' PLAY

The Intellikeys package includes the keyboard, two manuals, several plastic overlays, some sticky plastic labels, and four cables. The same keyboard works with any of four computer types (Macintosh, Apple IIGS, Apple IIe, and various MS-DOS PCs), depending on which cable you connect. With one of the four cables, the unit plugs directly into your computer's keyboard socket. (Make sure your computer is unplugged from its power source when you make these connections.)

You can also continue to use your original keyboard: Simply plug its cable end into the appropriate Intellikeys socket. Your system will respond to input from either keyboard the same way. And you don't need any special software for Intellikeys unless you use a custom-designed overlay (more on that below).

The Intellikeys surface sits atop a touch-sensitive grid of 24 by 24 cells and comes with 32K of battery-backed memory. What makes this device special are its overlays — transparent plastic mats that cover the keyboard and serve as maps of the layout of individual keys. The package contains seven prepared templates: A *Setup* overlay guides you through the keyboard's internal software; two QWERTY overlays (one for Apple and one for MS-DOS computers) simulate the standard typewriter keyboard; one *Elementary* overlay shows keys arranged in alphabetic order; and three other *Elementary* overlays contain key patterns for popular kids' software. In addition, a blank sheet lets you set up custom keyboard patterns, which requires IntelliTools' **Overlay Maker** software. Each of the overlays has a bar code on the back. When you put a new overlay down on the keyboard's surface, the unit reads the overlay's bar code and configures itself automatically to match the overlay's key layout.

The Intellikeys keyboard is set up so that you can press modifier keys such as Shift and Control sequentially, instead of simultaneously as you would on a regular keyboard. The "latched" key modifies the next key you press, just as though you had typed the second key while holding down the modifier. A top indicator light tells you whether the shift key is latched; a middle light indicates whether Caps Lock is on; a bottom light indicates whether the Intellikeys keyboard is functioning as a mouse. (On an IBM it acts as a Num Lock light).

VARIATIONS ON A THEME

You can use the Intellikeys keyboard in a variety of ways. As an adjunct keyboard, it can serve as a mouse substitute, as a yes-or-no switch, or as a touch sensitive numeric keypad. As a substitute keyboard, it's particularly appropriate in situations offering limited response choices — for computers acting as inventory terminals, laser-disc controllers (in a museum, for example), or cash registers. And because the keyboard and the overlays are flat, Intellikeys is also better suited than the standard unit to dusty or grimy workplaces — a factory floor or a schoolroom, for instance.

Intellikeys really shines as an input device for children. You'll find a number of kids' programs on the market, of course, yet those little hands can't use a regular keyboard easily. And many of those titles require only a limited number of keys, such as the cursors, *Y* for yes and *N* for no, or even just Return, so an Intellikeys overlay lets kids run a program without hunting through the confusion of a regular keyboard.

For programs that require a full keyboard, the alphabetical overlay puts keys

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in the same order in which kids are learning their letters in school. The Intellikeys manual also tells you which overlay to use with various programs from children's-software manufacturers, such as The Learning Company, Hartley Courseware, Queue, Broderbund, and Great Wave.

IntelliTools (originally Unicorn Engineering) began as a company providing computer access to disabled people, and it's keeping that tradition alive today. The Intellikeys unit, while not designed strictly for people with disabilities, is adaptive; a separate manual provided with the keyboard addresses the additional ways in which people with limited fine- or gross-motor skills can use it. The latching feature, for example, is important for people who can't press two keys at the same time. Another feature includes the ability to delay or end key repeats, so that a slow typist doesn't see the same letters over and over stretching their way across the page. You can slow or speed the response time (the time it takes the keyboard to sense you've pressed a key) and the lift-off time (whether you have to remove your finger from a key before pressing the next one), as well, and you can choose whether a sound will accompany each key press.

Despite all this versatility, most Intellikeys users will find the Overlay Maker software a must, even though it's priced separately. On the Mac, this program lets you design a custom overlay, print it, and program the keyboard to match. Once the new overlay form is in place, with the blank template on top, you activate it by clicking on its icon. The keyboard will stay programmed according the new layout until you reset the keyboard or load a new custom overlay, or the battery loses power. You can also create multiple overlay files, each with its own unique name.

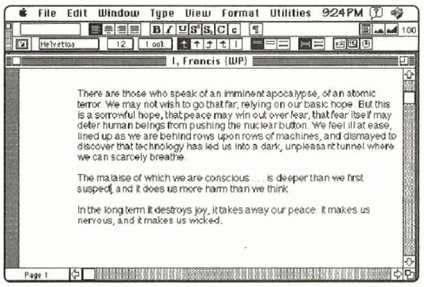
EQUAL ACCESS

The folks at IntelliTools are widely known in the adaptive-education community. The Intellikeys keyboard is a sturdy, well-designed piece of equipment, suitable for kids, people with disabilities, and the average user alike. It's not for everyone, of course, but as an adjunct keyboard in special situations, it's unique.

The optional keyboard-programming software makes this a truly versatile tool, but the product's audience may be reluctant to pay more for it. Including Overlay Maker as part of the package would undoubtedly boost sales and help get Intellikeys into the hands of the people who need it most. Equal access with minimum hassle is a goal worth fighting for — and Intellikeys can mean the difference between a pleasurable learning experience and an exercise in frustration.

Lanny Hertzberg
Elk Grove, CA

WORDPERFECT WORKS 1.2



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WordPerfect Works 1.2 is the renamed and expanded version of BeagleWorks 1.0.1, a well-received integrated-software package that WordPerfect Corporation bought from Beagle Bros late last year. Kudos to the folks at WordPerfect for knowing a good thing when they see one — not to mention getting it out the door to the consumer in less than six months.

On the other hand, WordPerfect may have achieved that foreshortened time to market by cutting the testing cycle, and the resulting package isn't without bugs. For one thing, I lost some of my document in progress — this review, in fact. The A+ Publishing lab crashed the program repeatedly, and at least one other user has reported running into similar problems in the spreadsheet module.

One bug results in an "unimplemented trap" error. Another one, possibly related, seems to arise when the Mac nears full memory. WordPerfect Works warns you of the difficulty, prompting you to close windows and save documents; but to no avail: As you scramble to do as you're told, the system either hangs or terminates with errors.

WordPerfect tech support suggested reinstalling the program and turning off several extensions. But the Mac on which I was running WordPerfect Works (a 4-megabyte Classic), as well as those in the A+ Publishing lab (4-megabyte LC IIIs), have stripped-down, no-extras *System* folders. Reinstallation didn't solve the problem; neither did installing another copy. These are essentially housekeeping problems and are particularly unfortunate because WordPerfect Works is otherwise a solid package.

UNITED IT STANDS

WordPerfect Works combines a word processor, database manager, spreadsheet, draw, paint, and telecommunications programs in one easy-to-use package that's both "user friendly" and easy on the pocketbook. The program comes on four disks, with a full-featured manual and a 121-page tutorial. It installs with a minimum of fuss and disk swapping.

WordPerfect Works' real strength lies not in any one module, but in the aggregate power of the package as a whole. Navigating among modules is simple, and more than one can be active at a time.

The tool bar, as well as a number of basic menu items, are common to all six modules. One of the consequences of this arrangement is that the thesaurus (but not, unfortunately, the spelling checker) is available from the *Edit* menu while you're on line in the communications module — useful when you need just the right (or withering) word and don't want to take the time (at up to $15 an hour) to look it up the hard way.

The tool bar gives you quick access to type formats such as boldface, italic, and underlining, as well as some less-common formats, including superiors, inferiors, all-caps, and lowercase. The lower half of the tool bar accesses fonts (font names are listed in the appropriate typeface) and the commands specific to different modules. WordPerfect Works is completely System 7 savvy, supporting features such as publish-and-subscribe — an underused function that lets you link documents and share data — and the ubiquitous *Balloon Help*.

Among the package's few shortcomings is its limited selection of filters for importing and exporting other file formats. Licensed XTND translators import WordPerfect 5.1 for the Mac and LetterPerfect documents, and the software also includes translators for AppleWorks, MacWrite 5.0 and II, Microsoft Works 2.0, and WordPerfect 2.1. But to access documents created in other formats, you must resave them as ASCII (text) files; to export to another Mac application, your choices are saving your document as text (and losing the format-

ting) or the somewhat antiquated copy-and-paste method. In the market WordPerfect is targeting, this probably won't be an insurmountable problem; in larger offices and businesses, though, it's potentially crippling.

WORKING THE WORKS

WordPerfect Works opens to a module-choice window, with the word-processor icon highlighted as the default. With a few minor reservations, it's a top-notch program. The most impressive tool-bar feature is column choice: By simply running down a menu to the number you want, you can reflow your text into as many as 16 balanced columns. The word processor offers automatic text flow around objects, too. You can set margins in a dialog box (like PageMaker's), as well as with the more-familiar ruler. You can switch from uppercase to lowercase via buttons on the tool bar.

The spreadsheet module includes built-in charting and 64 standard functions. It also lets you conveniently edit within a cell instead of a special data bar. Both the spreadsheet and the database support graphics elements, such as logos and icons. Maximum spreadsheet size is 16,384 rows by 256 columns; maximum database size is 16,384 records of up to 256 fields each per file. Database record layouts are easy to set up, and you can move fields with the hand tool. You can also use database files in conjunction with the word processor for mail merge.

The draw and paint modules are more-or-less standard, supporting 256 colors as well as custom patterns. Scaling, sizing, rotation, and fat-bits editing are also available. The paint program contains a good array of tools, including a paint bucket, a spray can, a dropper, and standard selection tools, all of which are available on the tool bar.You can create special effects with customized paintbrushes, as well.

You won't find many bells and whistles in the telecommunications module, but it works, and it's not unnecessarily Byzantine — the real bottom line in telecom software. In our tests, it took a while to set up a simple script to log onto CompuServe, but that was a matter of memory (mine), not software. The process is simple: You type your identification number and password in the *Script* window, where you see a menu of commands.

One thing's perhaps not so simple. The *Wait For* command is critical; it tells your computer to look for a "user ID," for example, before sending your ID number or name. Sometimes the telecom module will wait for a "user ID" from the on-line host computer in vain. It's also case-sensitive. I've been a heavy on-line user for some time and have always used scripts; I have no idea what words the host computer uses to greet me, much less whether they're upper- or lowercase. To set up my WordPerfect script, I had to go into the script I normally use and take notes.

In addition, the telecom module also disconnects you remarkably quickly. In short, whether you're an on-line tyro or a long-time citizen of cyberspace, my advice is to remember the Boy Scout manual, as well as the WordPerfect manual: Be prepared

DANG THOSE BUGS

WordPerfect Works is specially targeted at education, home, and small-business users of Mac computers, and WordPerfect Corporation offers various licensing and upgrade options, including special prices and student workbooks for schools. Even with the shortage of translators, this product would be an excellent choice for anyone in those markets from both a hands-on (computer) and a hands-on (wallet) standpoint — but *don't buy it* until WordPerfect cleans up those dang bugs. ❑

Louise Kohl
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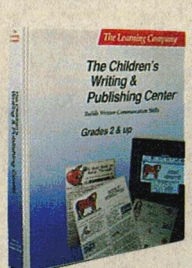

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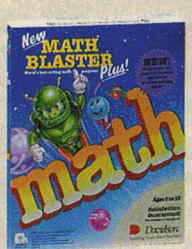

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IIESSENTIALS: SOFTWARE

By CYNTHIA E. FIELD, PH.D. • CONSULTING EDITOR

In this second installment in a continuing series on Apple basics, we'll discover the system software and applications you'll need to do right by your II.

Assembling a library of basic software is the first order of business when you purchase or inherit your first Apple II, or when you're planning to bundle your system to sell on the secondary market, to give to a relative, or to donate to a worthy cause. There are certain products everyone needs: system software and utilities. But, beyond that, choosing the right programs is like combing through castoffs at a spring yard sale — with the vast array of Apple II uses and users out there, one person's trash is often someone else's treasure.

Last month we described the hardware components you need to make your Apple II functional (April 1993, p. 50). Without software, though, even the best-equipped computer is likely to become a yard-sale reject. Let's talk about the software you need to make that hardware hum.

BARE BONES

Although your Apple II needs no more than a monitor, a power cord, and an electrical outlet (110 VAC) to run (see "Custom Fit" p.42), to be a truly practical tool it requires something called *system software*, which makes the hardware work with all those peripherals attached to it, such as disk drives (where you load and save programs and data files) and a printer (for creating hardcopy documents).

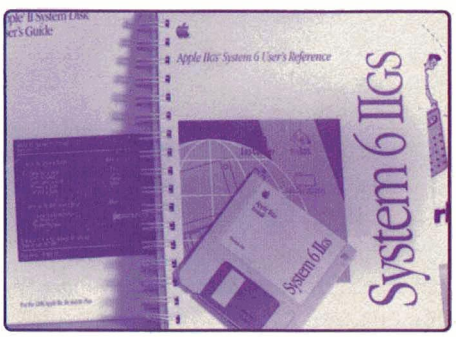
Most applications for the Apple II already contain a modicum of system software on their program disks. Insert the disk into a drive, turn on your machine, and within seconds you're playing an educational game or building the mother of all spreadsheets. So you don't absolutely need any separate "boot" disks to start up or manage your Apple II's resources. AppleWorks, for example, lets you format disks, load and save files, and print documents.

But to have a complete Apple II system, you should keep system disks handy or install the system software on your hard-disk drive. Known originally as *DOS* (*disk-operating system*), Apple II system software has since evolved into a collection of utilities that do much more than simply format disks and load, save, and copy files.

For a 48K Apple II Plus, the standard operating system is **Apple DOS 3.3**. But nearly every program today is based on a later system known as **ProDOS** (*Professional DOS*), which works with Apple IIs containing 64K or more.

For IIGS system software, we no longer use the term *DOS*, because it's so much more than a disk-operating system — it's more of an environment in which your programs run. For the IIGS the current system software is **System 6**, which runs best with 2 megabytes of memory. (To learn more about System 6 installation and features, **The System 6 Video** and Jerry Kindall's ***The System 6 Book***, available from Quality Computers, can help.) The alternative is **System 5.0.4**, which runs nicely on a 1-megabyte system.

System software is available from any Apple II user group. Call Apple Computer's toll-free **User Group Connection** (800-538-9696) to locate the one nearest you. System software is also available from the **National AppleWorks Users Group**, **The Apple Catalog**, and various on-line services, such as **GEnie**, **America Online**, and **CompuServe**. You communicate with an on-line service through a device called a *modem* — it's a special plug-in board or external box that hooks your system up to the telephone lines.



Start with basic Apple II productivity and system software, then build a library that reflects your personality and working style.

In general, system software is a fundamental set of utilities that let you manage your disks and other peripherals. Each system-software release from Apple — whether DOS 3.3, ProDOS, or System 6 — differs in terms of the way you use its set of utilities and the commands you need to know to manage your Apple II's resources. Let's take a look at each system separately.

WORKING WITHIN THE SYSTEM: DOS 3.3

A *disk catalog* is a directory listing the files present on a particular disk. Start up your Apple II with the **DOS 3.3 System Master**. Remove the system disk when you see the prompt. Replace the system disk with any DOS 3.3-based disk you want to catalog. Type CATALOG and press the return key to see a list of the files on disk.

Formatting a disk erases it and prepares the disk for storing files. Some applications can format the disks you need, but not all programs include this option. To format a disk with the DOS 3.3 operating system, start up the DOS 3.3 System Master. Remove the System Master disk and insert a blank data disk. Type *INIT HELLO* and press the return key to format the disk. DOS 3.3 doesn't warn you when you're about to erase a disk's contents, so be careful. (To paraphrase a cautious carpenter, check twice, INIT once.) Once you've formatted it with DOS 3.3, you can also use the new disk to start up your Apple II.

The DOS 3.3 System Master also lets you duplicate (back up) your program and data disks. Start up the DOS 3.3 System Master, type *RUN COPYA*, then press the return key. Instructions appearing on screen walk you through the process of inserting original and duplicate disks.

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SYSTEM UTILITIES: PRODOS

ProDOS utilities are easier to use than the ones provided on the DOS 3.3 System Master. When you start up the Apple II **ProDOS System Disk**, one of the first features you notice is the *Main Menu*, which looks like a tabbed index card with selections that include *System Utilities*, *FastCopy* (a quick disk duplicating program), *Exit to BASIC* (for BASIC programming), and *Quit to another program*.

When you choose *System Utilities*, another screen appears sporting an array of *volume* (a currently vogue synonym for *disk*) capabilities, including *Catalog a Disk*, *Format a Disk*, and *Verify a Disk*. *Verify* determines a disk's reliability and alerts you to *bad sectors* (data

compartments). Other functions provided by ProDOS system utilities include copying files, renaming them, and locking/unlocking them. Because ProDOS supports a *hierarchical* (tree-like) file structure, you can create *folders* in which to place files. Each folder is called a *subdirectory*. If you were to compare a disk with a textbook, the disk directory would be the book's table of contents, subdirectories would be sections of the book, and disk files would be the book's chapters. Disk sectors (or *blocks*) would be the book's pages; data would be the individual characters on each page.

Note that if you use an Apple IIc or IIc Plus, the version of ProDOS system utilities you should use includes options for configuring the computer's *serial ports*, which let you attach printers and modems to the machine. Because the speeds of those components vary, you must configure the ports as required by the particular peripheral model you choose. For example, the ImageWriter II printer runs at 9600 baud, the IIc printer port's default speed. But if you use, say, a daisy-wheel printer running at 2400 baud, some applications require you to reset the serial port with system utilities before launching the program you plan to use.

SMOOTH OPERATOR: GS SYSTEM 6.0

System 6, the newest system software for the GS, isn't just a set of disk utilities — it's a graphical user-interface environment. It sports a "desktop" metaphor similar to the Mac's, in which you use a mouse to drag, drop, and otherwise manipulate *icons* — small screen pictures that represent your system resources and files. System 6 runs only on the Apple IIGS, and, even then, it runs best on computers with at least 1 megabyte — and preferably 2 megabytes — of RAM. (Apple IIGS owners can also use system utilities and programs created under DOS 3.3 or ProDOS — just insert the disk in the boot drive and start up the machine.)

Because System 6 is graphics-based, you can perform basic disk operations without learning a single command or flipping through tabbed index-card menus. When you load System 6 into your GS — either from a 3.5-inch system disk or from an installed version on your hard-disk drive — a Mac-style "desktop" appears. To see a volume's contents, just double-click the mouse button while pointing to the disk's icon. A window opens to show the disk's contents. To view the contents of a subdirectory, double-click on its folder icon.

Formatting a disk with System 6 couldn't be easier. When you insert a blank disk into the Apple IIGS, System 6 asks you automatically whether you want to format it. If the disk is already used but you want to reformat it, click on its icon with the mouse, pull down the *Disk* menu, and choose *Initialize*. You can also verify a disk by selecting that option from the *Disk* menu.

To copy a disk under System 6, just select the disk's icon and drag it to its destination, which may be another disk or your hard drive. You can copy files in similar fashion: Select the item you want to duplicate, and drag its icon to a destination disk or subdirectory folder. You can use the *shift-click* function to select multiple files: Click on the first file, then press and hold the shift key while you click on the second file, the third, and so on. Drag the group to its destination.

A few programs — most of them from the bad ol' days — are *copy protected*, which means you can't make hassle-free duplicates. A commercial utility such as **Copy II Plus** may help you "crack" the protection scheme and create a backup for peace of mind. Just remember that copyright laws apply even to outdated programs, and a disk-copy utility isn't a license to steal.

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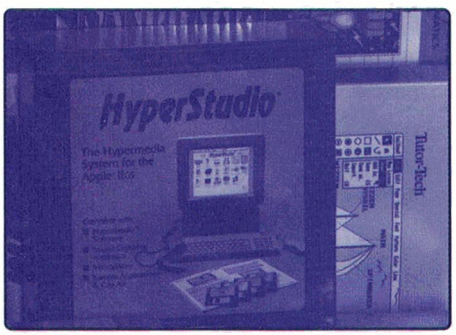
Although most Apple II users work exclusively with floppy disks, a growing number of GS enthusiasts are discovering the speed and convenience of hard-disk drives. System 6 includes **Archiver**, a utility that makes a complete (or partial) backup of your hard disk onto floppies. Making archival copies and then storing them in a safe place are good habits to develop.

THERE'S MORE . . .

When it comes to managing disk volumes, programs, and files, you can purchase a number of sophisticated commercial products, including utilities that double the capacity of your hard disk and others that scan disks for viruses — lines of code that can damage your data when inserted into a program.

A latter-day version of Murphy's Law — *files expand to take up all available hard-disk space* — seems to apply more to PCs running Windows 3.1 programs than to Apple IIs. Most Apple II programs are efficiently written and command little storage area. For most users, a 40-megabyte hard drive offers room to spare as long as you restrain yourself from trying to stockpile every commercial, shareware, and public-domain program you can get your hands on. Software addiction is an expensive habit made all the more costly when it compels you to buy ever bigger hard drives just to store the stuff. Still, if you do find that your software library is squeezed, try a data-file-compression utility such as **AutoArk**.



Let your creativity shine with Apple II desktop-publishing and hypermedia programs.

At last count, we tallied only four viruses that can infect Apple IIs, compared with the hundreds that stop PCs dead in their tracks. It's rare, but if you do suspect your system's been hit, try curing it with a program such as **Virus MD** or **Apple.Rx**. For essential Apple II housekeeping chores, though, system software is probably all you need.

THE WORKS

No list of software essentials would be complete without mention of Claris' classic program AppleWorks. **AppleWorks 3.0**, for Apple IIs with 128K or more, is an "integrated" productivity-software package containing three interconnected programs in one — a word processor (with spell checker), a fast database manager, and a spreadsheet designer that boasts enough mathematical and financial functions to keep most people calculating into the next century. Despite the power, both adults and children find AppleWorks 3.0 easy to use.

What's more, a host of companies offer AppleWorks add-ons. (See "Apples Working for You" for a sampling of sources of AppleWorks enhancement products.) Several commercial and public-domain sources offer *templates*, for instance. Most of these turnkey word-processing layouts, database setups, and "smart" worksheets are easy to use, yet surprisingly sophisticated. You can also turbo-charge AppleWorks with enhancements offered under the TimeOut banner. **TimeOut SuperFonts**, for example, prints documents with attractive typefaces and artwork; **TimeOut SideSpread** rotates and prints large spreadsheets on ordinary 8.5-by-11-inch paper. Templates and TimeOut products may not be essential to a bare-bones Apple II library, but they underscore the lasting value of investing in AppleWorks 3.0.

Claris' **AppleWorks GS 1.1**, a special graphical version of the program for the IIGS, includes word-processing, database, and spreadsheet applications as well as painting/drawing, page-layout, and telecommunications modules. If you're looking for a Macintosh-style integrated program, AppleWorks GS is the one to buy. It's particularly appealing to GS purists who want to enhance their documents with smooth TrueType fonts. Because **Pointless**, WestCode's TrueType font utility, breathes new life into 9-pin dot-matrix printers such as the ImageWriter II, many Apple IIGS users consider the program a must buy.

Capable as they are, AppleWorks 3.0 and AppleWorks GS aren't the be-all-and-end-all of Apple II computing — sometimes you need specialized programs to get the job done. For example, if you'd like to use your Apple II to create desktop publications such as club newsletters, business brochures, or school flyers, **Publish It! 4** is the program of choice. Or, if you're a teacher, an electronic gradebook can make your life a lot easier. Programs such as **Amazing Window**, **Report Card II**, and **The Apple Grader 4.0** can manage class rosters, calculate student grades, and track attendance; with just a few keystrokes, gradebook programs generate neatly printed reports, too.

THAT'S ENTERTAINMENT

Planning to mix kids and computers? Be sure to include children's software in your Apple II software budget. Targeting "must have" products in this

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category is a daunting task because there are literally hundreds of worthwhile choices. Let's just say that if you can afford only one program, consider **The Playroom** or **The Treehouse**, two discovery-learning titles for preschoolers and young students. On the GS, try **McGee**, **McGee at the Fun Fair**, or **Katie's Farm**. If your Apple II has only 48K or 64K, **Stickybear ABC** or another program featuring computing's most popular bear family should elicit some smiles.

Older kids enjoy arcade-action games like **Number Munchers**, a math program that reminds us old-timers of Pac Man. A newer can't-miss program for children is **Where in America's Past Is Carmen Sandiego?**, a geographic and historical fact-finding tour disguised as a detective game. (Come to think of it, just about any game in the Carmen Sandiego series will be popular with kids.) One of the most-recent Apple II offerings — this one for the GS — turns out to also be one of the best we've ever seen: **The Lost Tribe** is an amusing yet challenging prehistoric simulation. (Oh, yeah, it's educational, too.)

But the essential Apple II library should also include at least one great game that offers not a glimmer of redeeming social value. Players of all ages seem to enjoy **Tetris**, the falling-blocks game that in its various incarnations has distracted millions of Apple II, Macintosh, and PC users alike. On the GS-specific side, games such as **Gate!**, **Out of This World**, **Shanghai II: Dragon's Eye**, and **Space Fox** show off the GS' extraordinary graphics and sound capabilities.

No Apple II library is complete without a selection of entertainment and education products.

CUSTOM FIT

There's one more software essential we haven't touched on yet — a challenge for the do-it-yourselfers among you. Even without external software, your Apple II isn't exactly a brain-dead doorstop, you know. Unlike most other computers, Apple IIs have an easy-to-learn programming language etched into their meager, but permanent, software memory, known as *ROM* (*read-only memory*). The language is well named, and so are most of its commands. When you program in **Applesoft BASIC** (*Beginner's All-purpose Symbolic Instruction Code*), the *PRINT* command, for example, displays words on the

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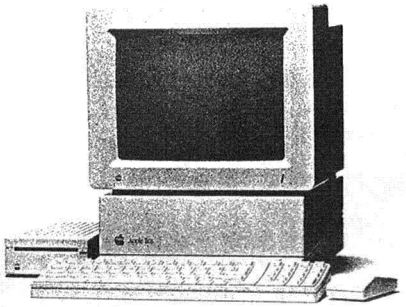

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computer screen, *RUN* executes programs, and *GR* lets you draw pictures in the language's low-resolution graphics mode.

You can take the first step in writing a BASIC program merely by turning on your Apple II, without a disk in any drive. When the computer starts, press the control and reset keys simultaneously, hold them down for just a moment, and then release them. This action brings up the Applesoft prompt, which looks like the right half of a pair of square brackets ( ]).

Learning how to program in BASIC is easy. But BASIC's also fun — as well as accessible — and it's an application that's perfectly suited to older machines such as the Apple II Plus (which at press time was selling for less than $50). To get started, get a copy of Apple Computer's ***A Touch of Applesoft BASIC*** or another training manual. Apple's guide came packaged with new Apple IIs; if you've lost your copy or didn't receive one with the used system you purchased, you can order it (and other Apple Computer manuals) from **The Apple Catalog**. **Addison-Wesley Publishing Company** and **Resource Central** also sell reference books about Apple II computing in general and programming in particular. (See "Hit the Books" for more information.)

If you start with the basics — system software, AppleWorks 3.0 or AppleWorks GS, a game or two, Applesoft if you like to experiment — you can take your time building an Apple II software library that reflects your personality and working style. Whether your main objective is increased productivity, supplemental learning, or good clean fun, you'll find dozens of potential candidates among the new products we write about each month in *inCider/A+*. Take a walk down memory lane, and you'll discover hundreds, if not thousands, more.

Don't ship those Apple IIs to the landfill just yet — at least not while savvy shoppers are eager to scoop them up and talented programmers are hard at work creating new programs for us to enjoy. ❑

CYNTHIA E. FIELD IS THE AUTHOR OF *INCIDER/A+*'S WHAT'S NEW AND APPLE CLINIC SECTIONS. WRITE TO HER C/O A+ PUBLISHING, 80 ELM STREET, PETERBOROUGH, NH 03458. ENCLOSE A SELF-ADDRESSED, STAMPED ENVELOPE IF YOU'D LIKE A PERSONAL REPLY

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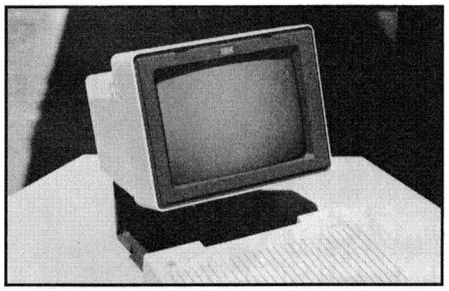

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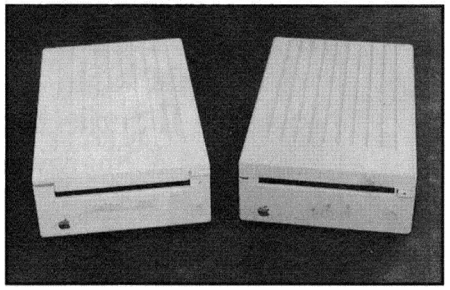

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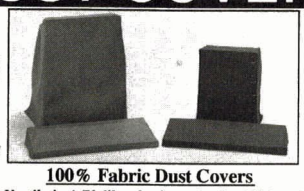

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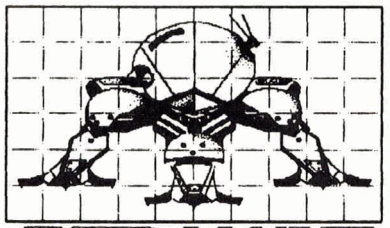

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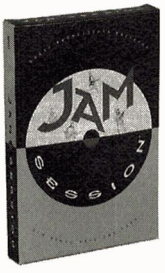

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Nearly five years ago, Alexey Pajitnov, a research mathematician working at the (former) U.S.S.R.'s Academy of Sciences in Moscow, stunned the computer world with the introduction of his innovative new game Tetris (marketed in the U.S. by Spectrum HoloByte). Requiring quick strategic thinking and good hand/eye coordination, Tetris is a fast-action arcade title — a cross between a mind-teasing kinetic puzzle and a computerized version of Rubik's Cube. As multi-colored blocks of different shapes fall from the top of the screen, you try to manipulate and rotate them to form solid rows across the bottom. As each row is formed, it disappears, and you score points. If you can't keep building solid rows, the blocks pile up; when they reach the top of the screen, the game is over.

Tetris is so popular among all age groups that it has spawned a slew of imitators — clone games that look and play like the original version, as well as spinoffs and variations with similar goals but different types of falling objects. Among the on-line community's collection of freeware and shareware games, you'll find at least two excellent Tetris-style games for the Apple IIe/IIc and at least eight for the GS.

Tetris 2, from Jokersoft (freeware), works on IIe, IIc, and IIGS systems. It looks and operates just like the original commercial version, but offers several enhancements, including animated VU meters, the Beverly Hills Cop theme song, and a background soundtrack. It sports more levels than the original game, plus advanced-level options. It lets you preview the next block that's going to fall and even change the background graphic behind the play field. You can use keyboard or joystick to play.

Other versions that remain true to Tetris' original concept are available as new desk accessories for the GS, including Bryan Clair's freeware **Quadomino**, and Nathan Mates' shareware **MultiTris** (no specified fee). Because they're NDAs, you can play them from within any GS/OS-based application that displays the Apple pull-down menu, such as the Finder, AppleWorks GS, and HyperStudio. (They appear in a window superimposed on the application in use.) Both Quadomino and MultiTris use keyboard commands to move and rotate blocks. Both games include nine levels; on each succeeding level, the blocks drop faster. MultiTris offers more options, including a high-score module and a block-shape editor. But whichever game you prefer, you'll find new challenges and lots of fun at every turn.

One common variation of the Tetris format, usually called **Columns**, sports falling objects composed of three differently colored or patterned segments, which you can move left or right and through whose sequence you can cycle. The goal is to try to line up three or more adjacent sequences of the same color or pattern horizontally, vertically, or diagonally. Matched segments disappear and you score points. When the game removes three matched segments, other matches often occur.

Columns IIe, by Michael Foegelle, is an exciting $20 shareware version for the IIe, IIc, and IIGS. This game's falling objects contain three three-dimensional gems of different colors and patterns, plus a magic gem that appears randomly once you get to higher levels. When the magic stone lands on another gem in the column, it removes all of that type from the stack, letting the remaining gems fall down in their place. Columns IIe is a keyboard game; when you pay your shareware fee, the author will mail you a new version that allows joystick play.

Columns GS, by Kenrick Mock and James Brookes, is an innovative $10 shareware version of the game for the GS. It sports a beautiful soundtrack and a whimsical "boss key" that brings up an AppleWorks Classic-style menu screen and lets you toggle several options (including music and sound effects) on and off. Some blocks are bonus objects that remove any block they hit; others are "evil" and only bonus blocks can remove them. Block shapes are stored on disk as a standard super-hi-res graphic; you can edit it with any GS paint program. Columns GS is keyboard controlled, but you can also remap the keyboard so that any key you choose will move or cycle the blocks.

Beyond Columns, a GS freeware game from the now-defunct French programming team Free Tools Association, lets you change the shape of the falling blocks to any of five options, including letters. The top ten scores are displayed on screen at all times, and an on-line help system shows which keyboard commands control which options. As scores climb, the color of the play field changes. Although short on customization options, the game loads quickly and doesn't take up much disk space.

Another remarkable variation is **Vocabulary in All Directions** (VIAD), a $10 shareware offering that combines Tetris- and Scrabble-style strategies. Created for the GS by Kenrick Mock, James Brookes, and Jake Buchholz, VIAD is an exercise in physical dexterity and problem-solving skills. Each falling block contains a letter of the alphabet; the goal is to create words of three or more horizontal or vertical letters. Complete with stunning animation and beautiful music, VIAD requires a GS with at least 1.25 megabytes of RAM and System 6.0.

Saving the best for last, the latest innovation in Tetris-style gaming is two-person play. **DuoTris** by Richard Wifall, with help from Ian Schmidt, Tim Meekins, Dave Huang, and James Brookes, and **DuelTris** by Steven Chiang, with help from Dave Seah and James Brookes, are competing head to head in this category. (Both games also include one-player mode.) DuoTris is freeware and is one module of the three-part animation-and-music demo **GS<>IRC**; DuelTris is a $15 shareware title. Upon payment of the fee, you'll receive a newer version that lets you save preferences and high scores.

DuoTris and DuelTris are based on the same premise. The goal is twofold: create solid rows from the falling blocks and outlast your opponent. Two separate Tetris-type play fields are displayed on screen; the tricky part is that as each opponent creates solid rows, the game transfers them to the other side. The person whose side fills up with blocks first loses. DuelTris is the more sophisticated of the two, with more options. DuelTris lets you go up against the computer; DuoTris allows only human players. DuelTris displays a number of special pieces in addition to the standard shapes; one reverses your opponent's keyboard controls, while an assortment of bombs, guns, and anvils may remove some or all of the blocks they hit.

Tetris-style games are nothing if not challenging — and just a few dollars will buy you hours of addictive fun. Say da to glasnost — warm up your keyboard, plug in your joystick, and get ready for some long "white nights."

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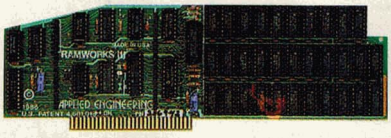

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- Fits in the main memory slot.
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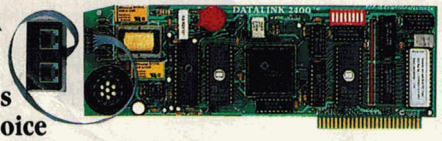

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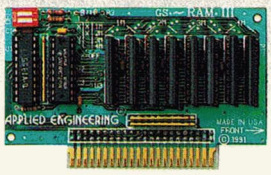

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- Compatible with all standard IIGS hardware and software.
- Expandable to 6MB with 2MB GS Piggyback.
- Uses new 1MBx4 Chips and accepts 3MB as valid configuration.
- Low power design for cooler operation.
- Compact, efficient design leaves plenty of room for slot 7 cards.
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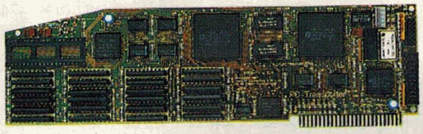

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- Runs IBM PC, XT, or IBM clone software.
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- Turns Apple II devices into IBM devices.

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