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Apple II / Macintosh

AN IDG
COMMUNICATIONS
PUBLICATION
May 1992

 **Apple II
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SHAREWARE SOLUTIONS, P. 12

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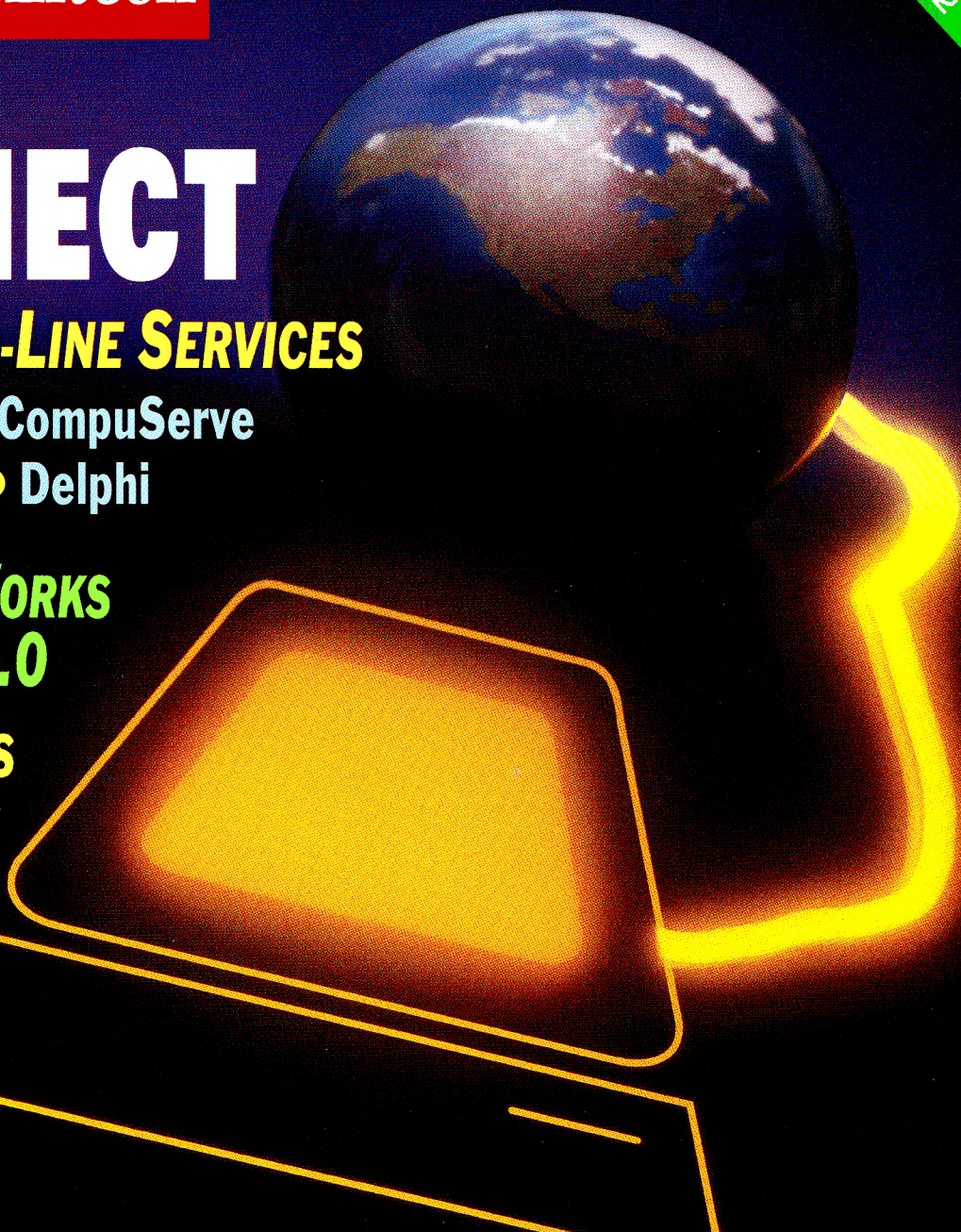
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✓ **HYPERSTUDIO WORKS
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✓ **APPLE UPGRADES
HYPERCARD IIGS**

REVIEWS

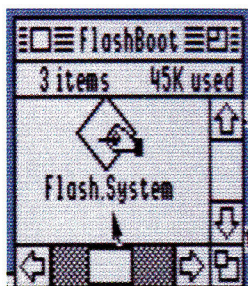
- LogoEnsemble
- MacFrog 1.4
- Signature GS
- LogoWriter
- Hypermedia Tools



What is 3 times faster than a disk drive?

A RAM Disk

Every Apple IIGs has a built-in RAM Disk capability that lets you reserve some of your computer's memory as a super-fast electronic disk drive. Set up your RAM Disk in the morning and you might not have to swap program disks all day! Thousands of users have already discovered the speed and convenience of the RAM Disk. Now you can, too, with FlashBoot.



FlashBoot lets you quickly save and load the contents of your RAM Disk. First, set up your RAM Disk the way you want it using the IIGs Installer and Finder. Then use FlashBoot to save a copy of your RAM Disk to a set of self-booting 3.5" disks. Now loading your RAM Disk is as simple as booting your backup disk—you don't even need FlashBoot to load it! Plus FlashBoot

offers a number of flexible options to boot the RAM Disk and the other drives attached to your computer.

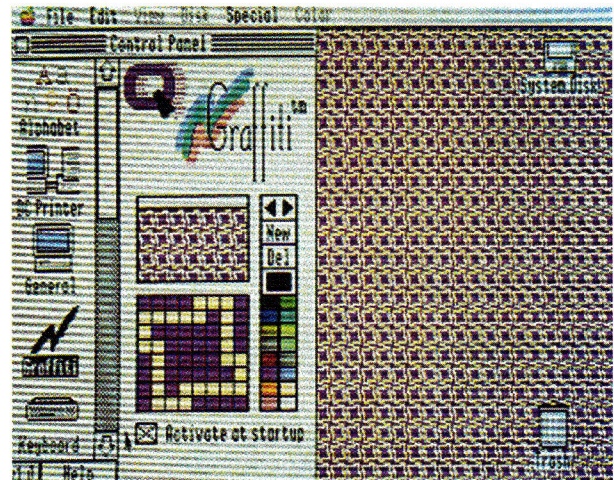
What can you put on the RAM Disk? Anything you want! Using GS/OS and the Finder is no hassle with your IIGs System Disk installed in RAM. Add more fonts, desk accessories, and other enhancements—even Q Labs' *Signature* and Westcode's *Pointless*—to your RAM-based System Disk instead of being limited to a single 800K 3.5" disk. Put your AppleWorks GS System, Program, and Dictionary disk on the RAM Disk for integrated power. Or install HyperStudio, Platinum Paint, and Quickie software for a multimedia workstation. The possibilities are as wide open as your imagination!

FlashBoot is fully compatible with IIGs System 6 and all other hardware and software. Discover the RAM Disk speed and convenience built into your IIGs today with the Q RAM and FlashBoot!

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Spice up your desktop



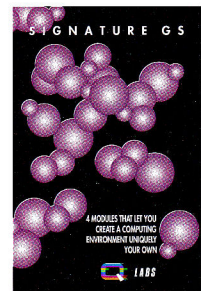
Is your IIGs just plain vanilla? Now you can make it any flavor you want — with *Signature GS*, Q Lab's set of C-Devs that will soup up your Apple IIGs. *Signature GS* lets you create a computing environment that is uniquely your own. With *Signature GS* you get:

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GRAFFITI — There's nothing wrong with the IIGs desktop — except it's boring. *Graffiti* gives you a variety of colorful desktop patterns to choose from — or you can create your own.

SONICS — The "S" in IIGs stands for sound. *Sonics* lets you customize your IIGs sounds, and assign special sounds for specific functions. And these aren't just beeps — they're fun and entertaining. Add sounds to Insert/Eject Disk, Dialog Boxes, etc.

BOOTMASTER — Changing the configuration of all your IIGs's drivers, and system elements can be a pain. But *BOOTMASTER* makes it easy by putting the controls for all your IIGs's drivers, CDAs and NDAs on one master control panel. You turn them on and off at will — and change your selections easily.



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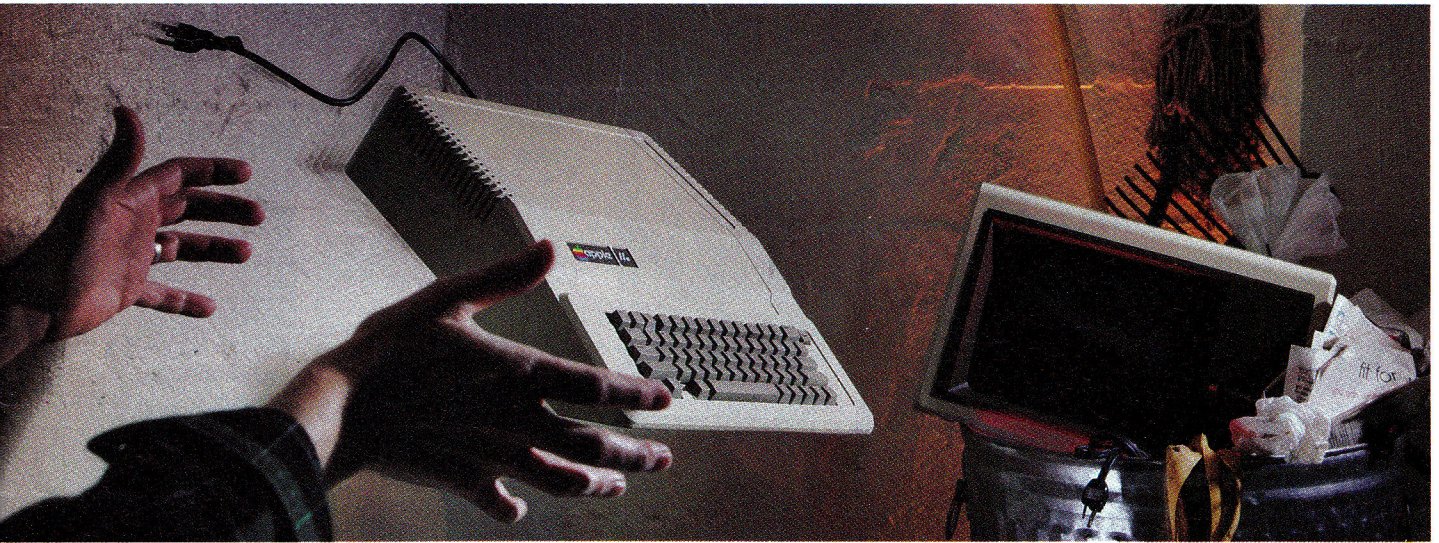
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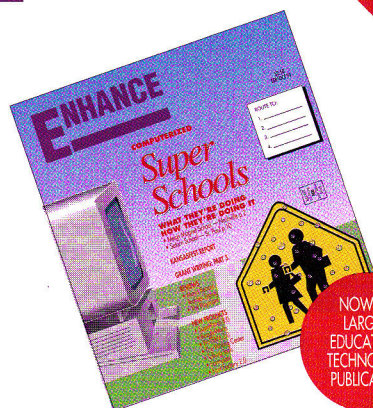


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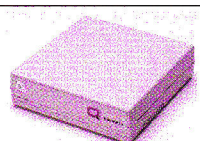
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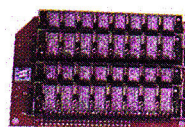
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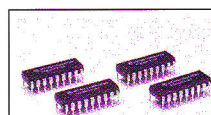
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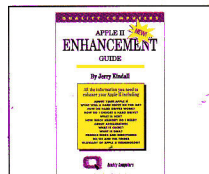
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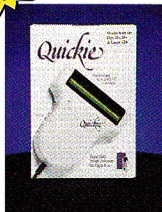


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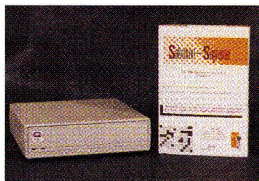


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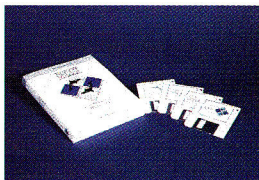


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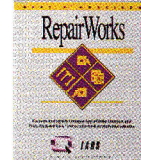
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The Q-RAM GS



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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 convenient RAM disk.

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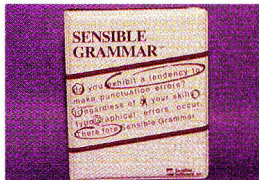
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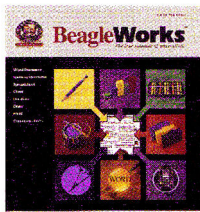
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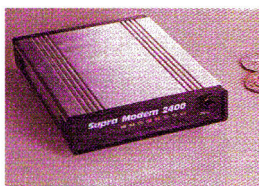
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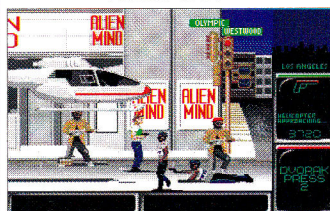
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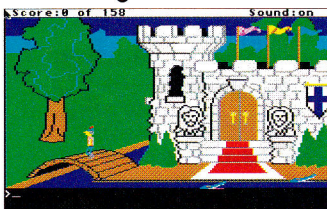
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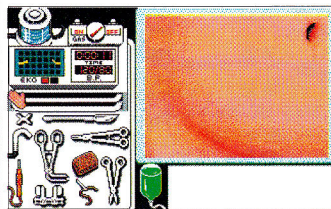
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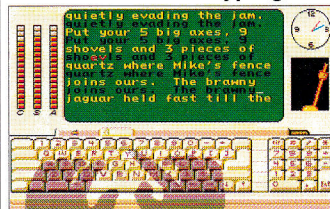
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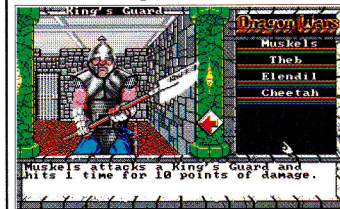
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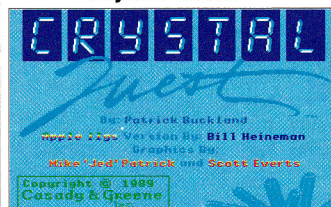
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ARTICLES

- 28 Working the Nets** by Cameron Crotty
 They're like giant, invisible webs. Gossamer wires skid across gulfs of static. The inhabitants have their own incomprehensible dialects. Welcome to the brave new world of electronic networking: *inCider/A+* takes a look at five of the major on-line information services and compares costs, features, and philosophies.
- 34 Tools of the Hypertrade** by Cynthia E. Field, Ph.D.
 If you think you had fun with Lincoln Logs and Tinker Toys once upon a time, just wait 'til you play with HyperCard IIGs 1.1, Apple Computer's multimedia construction set for the electronic age. A generous toolbox and easy-to-use "building supplies" make it simple for anyone — even computer-shy adults — to design colorful custom software for home, classroom, and small-business use. You might say it's all in the wrist: With extra speed, new scripting commands, and video-hardware control, HyperCard's colorful presentations are a snap to create on your GS.

p. 28

COLUMNS

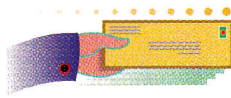
- Bridging the Gap** * Gregg Keizer
 Bargain Hunt10
- AppleWorks in Action** * Ruth Witkin
 Paper Tiger I.....40
- Press Room** * Cynthia E. Field
 Vacation Getaways44
- Learning Curve** * David D. Thornburg
 Homecoming64

p. 34

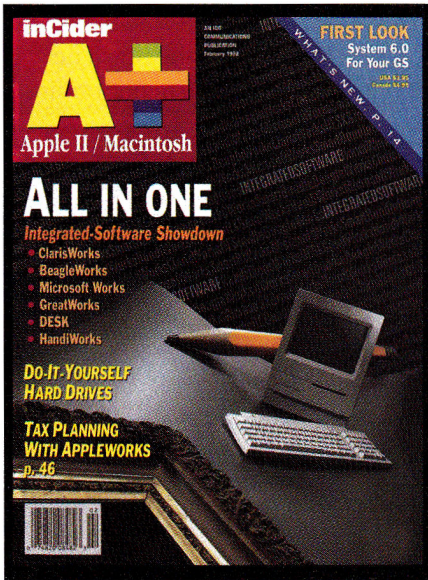
DEPARTMENTS

- Letters**.....8
- What's New**
 News, New-Product Focus,
 Shareware Solutions.....10
- Apple Clinic**
 A Stitch in Time:
 Patchwork Clock,
 Picture This,
 Motherboard Power,
 Monitor
 Resolution.....14
- Reviews**
 HyperStudio 3.0,
 LogoEnsemble,
 MacFrog 1.4,
 Spectre,
 Apple II Report.....22
- Hints**
 Consumer Handbook 2.....57

p. 22



LETTERS



WRITE YOUR OWN

HAVING ROLLED A FEW HARD drives for myself and my friends, I found a few items missing from the article "Roll Your Own Hard Drive" (February 1992, p. 38).

• **You can reduce the cost of parts substantially by shopping electronic-surplus outlets and warehouses.** In fact, it may prove cost effective to shop a few PC-only outlets. There you should find everything you need (except a SCSI card for Apple II owners). For instance, I've found SCSI cables for as low as \$5, external cases that can hold two 5.25-inch half-height drives with power supply and fan for only \$30, and even 105-megabyte SCSI drives for as low as \$250.

• **When assembling the drive, you need to make sure that pin #1 on the SCSI cable matches pin #1 on the SCSI port, and that it connects to pin #1 on the connector to the drive.** Usually, the pins on the SCSI port are numbered in the corners (1, 25, 26, and 50), and the 50-pin connector should have a notch on one side and attach to the drive in only one way.

• **Terminators embedded in the controller card are usually pencil-yellow in color and come in a group of three.** Whether or not you can remove them depends on the drive.

• **If your SCSI utility has trouble locating the drive, check the connections on the ribbon cable, and check to make sure that the SCSI ID jumpers are set.** If you still have trouble, try a shorter or more heavily shielded cable between your drive and your computer.

• **Mac owners should be aware of Ephraim Vishniac's shareware utility SCSI Formatter and Initializer.** It requires a fair bit of technical knowledge to set up and run, but it can be an invaluable tool for dealing with recalcitrant SCSI drives.

Garry Howard's article gives hard-drive users the option of saving money and learning at the same time. Let's hope readers and users will share more of these types of options in future articles.

Michael Estigoy
36 Tahoe Circle
Novato, CA 94947

Electronic-surplus outlets are fine for components, but we can't recommend buying the actual drive mechanism at one. While one of the goals of rolling your own hard drive is to save money, using a cut-rate drive from a questionable manufacturer is asking for trouble.

— eds.

CONTROVERSY!

AFTER READING YOUR FEBRUARY 1992 issue and your sarcastic response to Annette Arnold (Letters, p. 10), I felt compelled to write my own letter.

Madonna is blatantly immoral and a terrible role model for our youth. As a junior-high teacher here in California, I've seen what a horrible influence these so-called "stars" have on the kids in my classes.

Your reply to Annette that "out of hundreds of thousands of people who have seen the cover, there must be dozens who share your view" was uncalled for.

Your reply was signed "eds." and I notice that you have nine editors listed, so you should be able to pass the buck for quite a while on this one. Shame on you for your patronizing insensitivity and congratulations to Annette for standing up for the Christian principles that are disappearing quickly from our society.

Gerald K. Peters
540 South Lemon Street
Anaheim, CA 92805

I WAS EXTREMELY DISAPPOINTED with your response to Annette Arnold's letter complaining about Madonna as your choice for the cover of the November 1991 issue.

Your response was a thinly veiled attempt to ridicule Ms. Arnold's perspective. The sarcasm and contempt you showed for Ms. Arnold were unbecoming to your publication.

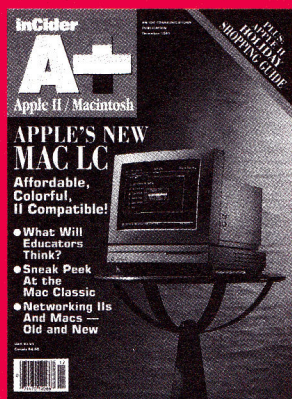
Your comments suggest that among your readership only a few people would consider Madonna immoral or would otherwise be concerned about ethics and values. Even worse, there's a clear implication that you don't think much of those who have faith in God.

How ironic that anti-Christian sentiment is on the march in this country, when such attitudes are almost nonexistent in countries where the church has long been persecuted.

Tom Beasley
1507 Palo Blanco
Beeville, TX 78102

I APPRECIATE THE SENTIMENTS expressed in Annette Arnold's letter, and also the comments of the editor. Publishing her letter and commenting on

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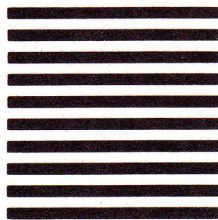
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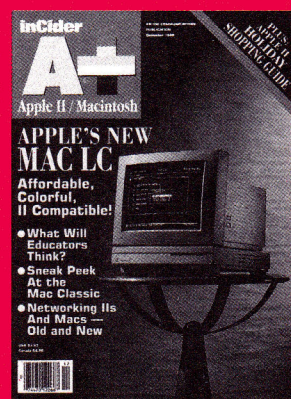
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LETTERS

it say a lot for the integrity of your magazine. As a longtime Apple II user and *inCider/A+* reader, I say, "Keep the faith and God bless America."

Dennis Koehn

Route 1 Box 39

Lahoma, OK 73754

GLAD YOU SET US STRAIGHT ON why Madonna's face was on your November cover. I'm not very sophisticated, so I'm not one of the hundreds of thousands who understood the relationship of Madonna's multimedia marriage of music and video. But neither was I offended, like Annette Arnold and the dozens who share her view. I thought it was another attempt to correct declining reader interest. I looked for a centerfold.

Art Rideout

2235 Gum Tree Lane

Fallbrook, CA 92028

IHAVE NO COMPLAINT ABOUT Annette Arnold expressing her views, intolerant as I consider them to be. But, unless your reply was "tongue in cheek," I feel your reply was disgusting and frightening. The hypersensitivity of some businesspeople to the utterings of the few takes away freedom from others who don't have such a narrow viewpoint. I strongly resent the erosion of my freedom that occurs whenever the views of a few result in intimidation and self-imposed censorship

Morris McNabb

Route #1 Box 83

Queen City, MO 63561

We haven't had this many letters on a single topic since our infamous December 1990 "Mac LC vs. Apple IIGS" issue. We've been called many things over the years, but never God-fearing, Christian-bashing, lily-livered scions of journalistic integrity on the free-speech frontier. Maybe we should change the title of the magazine to "inCider/A+: The Apple II/Macintosh/Ethics/Politics/Morality Magazine. Have Pen — Will Offend." — eds.

HYPER-VAPOR-INFO

IN THE FEBRUARY 1992 ISSUE (Letters, p. 10), members of the AppleShare User Group of Greens Farms, Connecticut, wrote to inquire where they could find HyperMover. Since the source

you cited in September 1991 (p. 18) didn't pan out, you came up with a new source, the Apple Programmers and Developers Association. As a phone call to APDA would have told you, however, that group doesn't sell HyperMover. Care to try again?

Rodney J. Avilla

8456 North Magnolia Avenue

Hilmar, CA 95324

Sure — why not? According to Tim Swihart at Apple Computer's Apple II developer head-

quarters, there are three major routes to take when searching for HyperMover, a utility that converts Mac HyperCard stacks to GS format:

- *First, try a local user group.*
 - *Second, try America Online (800-827-6364) or GENie (800-638-9636). Other on-line services may have the program in their libraries by this time also.*
 - *Finally, if you're really desperate, call Apple's Software Licensing Group at (408) 974-4667 and get your own user-group distribution license.*
- eds.

Now you see 'em, Now you don't.

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

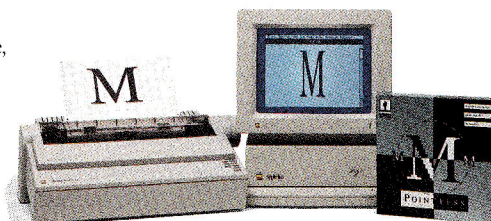
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Simply pull-down the Font menu and your TrueType fonts show up along with your other GS fonts. But unlike regular GS fonts, Pointless will instantly create any point size you need from a single TrueType font.

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

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

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



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

Pointless requires an Apple IIGS with GS/OS 5.0 or later. Network/School Site licenses available. All brand and product names are trademarks of their respective companies, and you know who they are. © 1992 WestCode Software Inc., 15050 Avenue of Science, Suite 112, San Diego, California 92128 (619) 679-9200 • Fax (619) 451-0276.

PBS VIDEODISCS

S

tudents will be able to unravel the mysteries of Columbus and the Age of Exploration in the 15th century with **Chronoscope**, an innovative videodisc series from Optical

Data Corporation (Warren, NJ) and the WGBH Educational Foundation (Boston). WGBH has also introduced its latest **Interactive NOVA** videodisc, created with Scholastic Software (New York, NY).

Exploring 1492, the first videodisc in the Optical Data series, uses video footage from WGBH's seven-hour PBS documentary series Columbus and the Age of Discovery, as well as other PBS programs, such as NOVA, Great Journeys, and Odyssey. The material is organized as a curriculum focused on clashes between cultures during the age of European exploration, and depicting the world of 1492 through information about geography, daily life, trade, and civilization in the Americas, China, West Africa, the Arab world, and Mediterranean Europe.

Each Chronoscope title will include an easy-to-use software tool that will let teachers and students create customized multimedia documents.

Race to Save the Planet is the third title in the WGBH/Scholastic series, following **Animal Pathfinders** and **The Miracle of Life**. Avoiding simplistic answers to complex situations, it makes abstract issues such as water and air pollution, waste disposal, and global warming real.

Each Interactive NOVA videodisc includes a video database and a simple navigation tool. You can choose a prepared exploration of the material, or let students create their own.

Chronoscope: Exploring 1492 will be available in September from Optical Data; call (800) 248-8478 for more information. Race to Save the Planet is ready now, and costs \$495 from Scholastic Software. For more information, call (800) 541-5513.

— P.S.

PLAY BALL

While major-league baseball managers were fine-tuning their clubs in preparation for the summer of 1992, so too was Prodigy's **BASEBALL MANAGER**, a fully computerized fantasy-baseball game introduced last season.

With new formats, more statistics, and streamlined team management, fantasy-baseball fans nationwide get the chance to run a ball club in a real-life fashion.

Officially licensed by the major-league Baseball Players Association, Baseball Manager is open to fans using Mac or MS-DOS computers on the Prodigy on-line service. Baseball Manager is a *Custom Choice* — priced separately from the company's basic service.

The most significant change in the 1992 Baseball Manager is that two versions of the game will be available. For the "full-time" amateur manager, the 162-game season remains intact, with a new championship playoff format this year that will involve the top four finishers in each league. For the fan who has less free time or is just getting started in fantasy baseball, a shorter "lightning league" will offer three 54-game seasons throughout the summer.

Other 1992 enhancements include expanded and more flexible rosters and a new draft format. While most fantasy-sports

games limit you to the role of *general manager* — choosing a team and watching it amass statistics through the season — Baseball Manager puts you in the dugout every day, setting lineups and pitching rotations and making changes based on the performances of actual ballplayers.

A nationwide network makes keeping up cross-country leagues and friendly rivalries easy. Managers can read a daily on-line "sports page" with all the latest results, and can spend as little or as much time as they like preparing for games. You can play with the lineup before every game and make midseason trades to prepare for a pennant race if you like, but if the manager's on vacation or just feeling lazy, Prodigy will play your scheduled games for you.

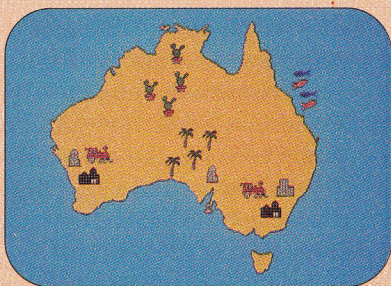
Opening day is three weeks after the start of the actual season, so sign up today. Baseball Manager has no timed charges; Prodigy members pay a flat fee of \$119.95 for a 162-game season. You can join Prodigy for \$49.95 and a \$12.95 monthly fee. (Lightning leagues cost less.) Prodigy has stats for the regular fan, too — scores and summaries inning by inning — plus trivia games and commentary. You can see Prodigy at many Sears outlets, or call 1-800-PRODIGY for more information. — P.S.

"Apple II" indicates an 8-bit product compatible with IIs, IIsx, IIc Pluses, and IIgses unless noted otherwise.

NEW SOFTWARE

MAPS FOR KIDS

KidMaps is a collection of more than 90 popular maps rendered in Mac bit-mapped images that students and teachers are sure to find useful and easy to work with. You can modify the maps by adding place names, graphics, or icons, then print them for



Add text and graphics to KidMaps.

reports and projects, illustrating topics in history, social studies, and geography.

KidMaps files are in PICT format, and can be used with Broderbund's KidPix, as well as with other popular paint programs. The package includes 94 maps: four world maps, four global views, 15 world regions, 23 countries, and the 50 U.S. states.

KidMaps is priced at only \$29, from MicroMaps Software, P.O. Box 757, Lambertville, NJ 08530, (609) 397-1611. For more information, circle number 350 on the Reader Service card.

IT'S A LIVING

Peterson's Career Options software for Apple IIs helps answer the question, "What do you want to be when you grow up?" Labor experts report that many people

change jobs and careers as many as six or seven times in their working lives; you may be able to reduce that likelihood in as little as 30 or 40 minutes.

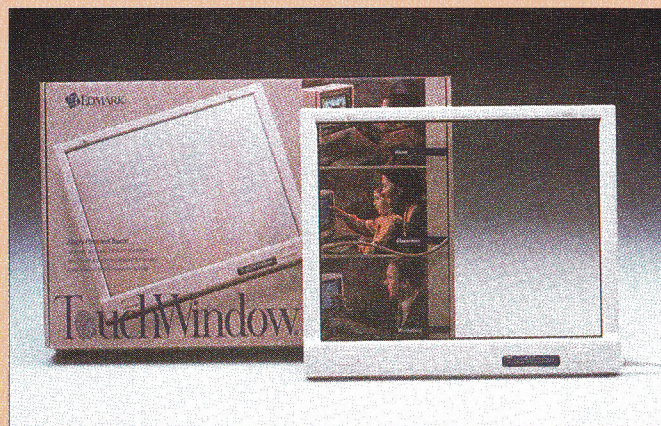
The software guides you through personal-assessment exercises that help spot your interests and abilities, then provides personalized career suggestions, including a list of occupations, related jobs, and training requirements. It helps you plan concrete strategies for achieving career goals.

The comprehensive database contains information on more than 700 occupations. The latest statistics from the U.S. Department of Labor on emerging occupations (expected to grow faster than average) are included. Unique to Peterson's Career Options is a Why Not? option that will explain why a certain occupation isn't among your list of possibilities.

Peterson's Career Options sells for \$295. Guidance counselors can also order Interest Assessment Booklets — self-paced paper-and-pencil exercises to be used with the software — for \$49.99, from Peterson's, 202 Carnegie Center, P.O. Box 2123, Princeton, NJ 08543-2123, (800) 338-3282. For more information, circle number 351 on the Reader Service card.

THINKING CAP

MindLink enhances your individual creativity and and strengthens your problem-solving ability — it's for anyone who can use a few new and better ideas. Based on 30 years of research in the field of creativity, MindLink guides you through a step-by-step problem-solving sequence,



TouchWindow — a natural interface, now available for Macs.

enriched with proven techniques of idea generation.

Based on Mac HyperCard, MindLink uses a variety of word exercises, suggestions, and approaches to help you discover and refine solutions to all kinds of problems. You can develop business plans, deal with personal crises, invent new products, realize career goals; MindLink helps you solve any kind of problem, and because the ideas are all yours, the solutions you create will fit your situation and your abilities.

The package sells for \$299 from MindLink, P.O. Box 247, North Pomfret, VT 05053, (802) 457-2025. For more information, circle number 352 on the Reader Service card.

NEW HARDWARE

KEEP IN TOUCH

The **TouchWindow** touch-sensitive screen — which has been available for the Apple II series with certain programs — now works with any Macintosh and any Mac software.

TouchWindow lets children, teachers, and parents access pull-down menus, make selections, move objects, and draw graphics, all at the touch of a finger. This low-cost (\$335) touch screen plugs into the

mouse port as an Apple Desktop Bus (ADB) device; you can use the mouse and the TouchWindow at the same time. You can also remove the screen from the monitor for use as a graphics tablet for drawing, testing, and touch-pad input. Mouse-emulation drivers translate every touch into a command.

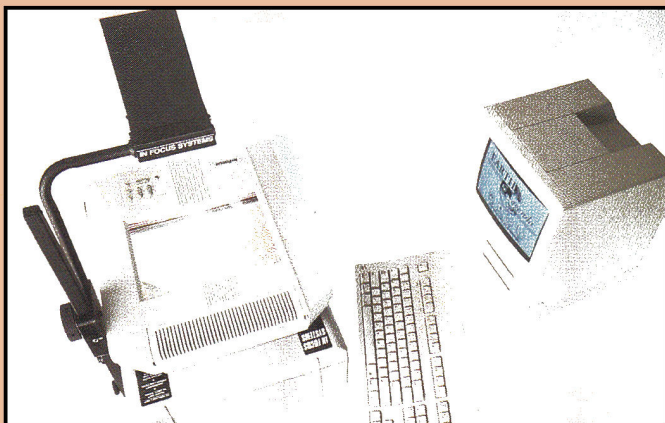
The Macintosh version of TouchWindow doesn't work with the Apple IIgs ADB, because an accompanying special Control Panel device is incompatible. The Apple IIgs works with the Apple II TouchWindow (\$275), which uses the game port. For more information, circle number 353 on the Reader Service card.

OFF THE WALL

InFocus Systems' new **1600GS** is a low-cost black-and-white liquid-crystal display (LCD) projection panel with the highest contrast and fastest mouse speed available currently on a monochrome system. The panel features 16 levels of grey scale, which allows full representation of the 16 colors most commonly used in software today, with a contrast ratio of 25 to 1 and 640-by-480 resolution.

LCD projection panels, which use standard overhead equip-

NEW-PRODUCT FOCUS



InFocus' 1600GS LCD panel lets you project your computer screen.

ment to project computer-generated images from a personal computer onto a wall or screen, are particularly effective in the classroom. The teacher can share a single computer with an entire class while facing his or her audience.

The 1600GS is compatible with most computers found in classrooms today: Apple II, Macintosh, and MS-DOS. With any system, you can use the built-in loop-through to see what's on screen at the same time it's on the wall.

The 1600GS retails for \$1695, but authorized dealers will offer education discounts. For more information, circle number 354 on the Reader Service card.

NEW RESOURCES



EASY BROCHURES

Now you can create professional-looking brochures, fliers, and invitations quickly and easily at your own desktop with new predesigned four-color papers from **PaperDirect**.

PaperDirect's formatted brochures are simple to use. Just type in your text, add graphics or your logo, and run the brochure sheets through your copier or laser printer.

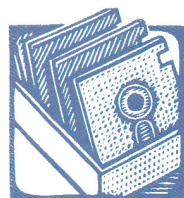
Each brochure package includes a template with easy directions and layout tips. Even a complete beginner, with no experience in graphic design or desktop publishing, can create an attractive brochure in minutes with the right paper.

Brochures are available in a variety of colors and themes — from elegant marbled cover stock to contemporary geometric patterns — suitable for everything from a corporate publication to a party invitation. You can create brochures as self-mailers or order matching number-10 business envelopes.

Business mailings call for **Brochure/Mailers Plus**, a selection of heavyweight, high-quality papers, perforated and scored in a variety of ways, including tear-out Rolodex cards. Prices for Brochure/Mailers Plus start at \$24.95 for 75 pieces; standard brochures can cost as little as \$19.95 for a hundred sheets.

Call PaperDirect (Lyndhurst, NJ) for a free catalogue, or order the sample **PaperKit** for only \$19.95. For more information, call the company at (800) 272-7377, or circle number 355 on the Reader Service card.

SHAREWARE SOLUTIONS * BY JOE KOHN



NEW AGE OF DISCOVERY

Humankind has always admired remarkable discoveries and notable adventurers. This year we pay homage to two great periods of human exploration: 1992 marks the 500th anniversary of Columbus' historic voyage to the new world, and it's also International Space Year (ISY).

During ISY, 29 space agencies and ministries from around the world join forces with ten international organizations and the United Nations to celebrate the spirit of discovery and to work together to promote global cooperation. Hundreds of educational programs and public events, including curricula, contests, exhibits, films, TV series, and interactive teacher workshops are planned to highlight humanity's future in space. In association with ISY, Space Shuttle launches and unmanned missions will be dedicated to learning more about "the final frontier." (For ISY information, write to US-ISKY, 600 Maryland Avenue Southwest, Suite 600, Washington, DC 20024.)

Your Apple II computer can help you participate. With a modem and telecommunications software, you can follow the day-to-day events by accessing NASA's **SpaceLink** bulletin-board system (205-895-0028). SpaceLink maintains nearly 2 gigabytes of on-line space-related information, and allows downloading of Apple II public-domain software and graphics, including a multidisk tutorial about the Hubble Space Telescope. The **National Space Society** also maintains an electronic BBS (412-366-6208), concentrating on space science and technology and development issues, with both news and background information.

On **America Online** (call 800-827-6364 for information), the NSS maintains an area where you can learn about ISY and other aspects of space exploration. On **CompuServe** (800-848-8199), both NASA and *Sky and Telescope* magazine maintain areas on line; a general-interest astronomy forum is also available. On **Genie** (800-638-9636), you'll find the *Space Port* roundtable. These on-line forums provide daily space-related news, NASA and ISY press releases, scientific studies, current mission reports, and detailed press packets for every Space Shuttle mission.

If you don't own a modem, don't fret; some remarkable Apple II software has been created from NASA documents. A 100-page technical paper describing all aspects of each Space Shuttle mission, for example, fits easily on a 5.25-inch disk, and many Apple user groups offer this material for the cost of a floppy. If you're not yet a member of an Apple II user group, contact Apple at 1-800-538-9696 x500 to find out the location of the club nearest you. Many user groups, on-line networks, and space-oriented BBSes also maintain large libraries of scanned photos from the Mercury, Gemini, Apollo, and Space Shuttle eras, plus photo transmissions from Voyager 1 and 2. Digitized sound files let you listen to a launch or to Neil Armstrong's first words from the moon.

Check out freeware HyperStudio stacks, too, available on line or from your local Apple user group. Start with Steven Bogg's **Legends, Facts and Myths of the Heavens**, which describes, in words and in pictures, the stories surrounding the constellations and the lives of the astronomers who studied the skies centuries ago. Joel Helton's four-volume **SpaceTrip** includes more than 50 digitized photos from outer space. Jim Hirsch's **HyperShuttle** describes the 1989 flight of *Atlantis*, sent to deploy the interplanetary probe *Galileo* to Jupiter.

John Graham (2254 Candlewood Drive, Kettering, OH 45419) has created an array of astronomy software for teachers, space enthusiasts, and amateur astronomers. **Tonight's Sky**, a \$10 shareware program in versions for the 128K enhanced IIe/IIC and the GS, is an integrated package designed as a complete star atlas; planetarium, and almanac program. Calculating the positions of the sun, moon, and planets and plotting them on five types of star maps, it lets you assess the lay of the evening sky.

Graham's **Comet Finder**, a freeware program available in IIe/IIC and GS versions, prepares comet ephemerides and plots orbits, showing the relative positions of the sun, earth, and comet in 3D. **Ground Track**, a \$10 shareware package for the Apple IIe, IIC, or GS, uses standard NASA two-line orbital elements to plot the position of a satellite for a specified period of time, superimposed on a double-hi-res map of the Earth. To help predict overflights, Ground Track also shows the extent of the horizon as

viewed from the satellite's mean altitude, and includes an option to display the real-time position of the satellite if your system contains a ProDOS-compatible clock.

Larry Bell (2537 Jefferson Street, Long Beach, CA 90810) has created a dazzling seven-disk shareware program, **AstronomerGS**, priced at \$19. It's as full featured as any commercial solar-system program on the market. Astronomers, teachers, students, or trivia buffs — almost anyone will appreciate these graphs, images, and charts, along with the program's huge database of astronomical facts. AstronomerGS can determine the next solar or lunar eclipse; it can print a moon-phase calendar, or display a graphics representation of the moon's position hour by hour. If you want to find out what time Venus will rise or when Mars will set, AstronomerGS can calculate it with just a few mouse clicks. It's a must-have program.

If you're equipped with an Apple II, participating in ISY, no matter where you live, is easy — and you'll also discover, quite probably, that the sky's no longer the limit.

IF YOU'D LIKE TO SUBMIT YOUR PUBLIC-DOMAIN OR SHAREWARE PROGRAM FOR REVIEW, FORWARD YOUR DISKS TO JOE KOHN, 166 ALPINE STREET, SAN RAFAEL, CA 94901. AS A SPECIAL OFFER TO READERS OF "SHAREWARE SOLUTIONS," JOHN GRAHAM AND LARRY BELL WILL SEND YOU THEIR SOFTWARE BY U.S. MAIL, SHAREWARE FEE PREREGISTERED. SEND JOHN GRAHAM \$7.50 FOR COMET FINDER, OR \$12.50 FOR GROUND TRACK OR TONIGHT'S SKY. (SPECIFY COMPUTER MODEL.) SEND LARRY BELL \$28 FOR ASTRONOMERGS, WHICH INCLUDES A 100-PAGE PRINTED MANUAL. PRICES INCLUDE FIRST-CLASS POSTAGE.

DO YOU WANT TO WRITE DESKTOP PROGRAMS OR COMPUTER GAMES

Assembly is the right language. The Apple IIgs is the right computer. But just as mechanics need wrenches, programmers need utilities. Debug +Plus is a new utility that provides all the Toolbox and ProDOS 16 error handling you will need. Complete your program sooner because your source code will be 33% smaller. By adding one character to a macro call name you create the unique Debug +Plus version which generates a Super-hires screen showing the call name, the error code, the address of the error and it's meaning. Debug +Plus works with the APW, Orca M, Merlin & Merlin 16+ assemblers. Please indicate your assembler type when ordering. With manual (\$30.00).

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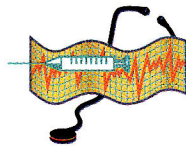
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APPLE CLINIC

A STITCH IN TIME

Those Apple IIs keep right on ticking —
they just need a little help figuring out what year it is.

By CECIL FRETWELL

PATCHWORK CLOCK

WHAT DO YOU DO WHEN YOUR ProDOS clock suddenly resets itself back to 1985? Last month, in answer to Charles Stoffregen's question ("Just in Time," p. 18), we noted that Apple's Developer Technical Support division has come up with a ProDOS patch, distributed on major on-line services and among user groups and Apple II dealerships, that lets pre-GS users with clock cards move out of 1985 and into 1992. We've reprinted it here (see the accompanying **Program listing**) for your convenience.

The program lets you modify the table of year values stored within the Thunder-Clock driver, thereby allowing the driver to calculate the correct value based on month, day, and day of week. The table consists of seven entries, with each entry corresponding to the year in which January 1 falls on the day of the week for that table entry.

Note that because the table holds only seven values, one for each day of the week, at least one year must be duplicated within the table to account for the intervening leap year. You'll have to update the table at least every six years to keep it current.

The utility asks you to enter the current date and day of the week. It uses this information to calculate the entries for the table. Next, it asks you to insert a disk containing the ProDOS file you want to modify, and to specify the location of the disk. Your ProDOS file must be either

version 1.9 or version 2.0. Specify the location as either the volume name of the disk, or as its slot and drive. The utility will write the new table entries to the file. After the file has been updated, the utility asks you to insert another disk and specify its location; continue with every ProDOS program disk you want to update. When you're finished, press the escape key to exit the utility.

Note that although this patch has been tested by Apple DTS, make a backup copy of your ProDOS file before patching anyway, just in case something should go awry.

PICTURE THIS

I'M LOOKING FOR A IIE PAINT program that lets you save and edit color graphics; I also want to be able to use those color graphics with The New Print Shop from Broderbund Software. Based on inquiries, I know The Graphic Exchange from Roger Wagner Publishing won't import graphics into The New Print Shop. Do you have a suggestion?

Jason Hoover
Vancouver, WA

Contact the **Big Red Computer Club** (423 Norfolk Avenue, Norfolk, NE 68701, 402-379-4680) and ask about a new paint program called **PLUS** (\$39.95), which has been updated to handle New Print Shop-format graphics images. Also check into the Club's **New Print Shop Lovers' Utility Set** (\$39.95), which converts NPS format to other Apple II graphics formats. For additional information, see the feature "Print Shop Graphics: A Triple Threat," March 1991, p. 85.

GS MOTHERBOARD POWER

IF YOU LOOK AT THE APPLE IIGs motherboard, there's a connector providing various voltages. What are the specifications for these voltages?

J. Francisco D. Montoya
Manila, Philippines

According to the Apple IIGs Hardware Reference published by Addison-Wesley (1 Jacob Way, Reading, Massachusetts 01867, 617-944-3700, \$24.95), the Apple IIGs power supply operates on regular 120-volt household alternating current. The power supply provides +12 volts, -12 volts, +5 volts, -5 volts, and two ground-return lines. The power-input requirements are 107- to 132-volt alternating current. The power-output specifications are 1 amp at +12 volts, 0.25 amps at -12 volts, 4 amps at +5 volts, and 0.25 amps at -5 volts.

MONITOR RESOLUTION

THE MACINTOSH HAS SEVERAL monitors of varying picture-tube sizes, while the Apple II has only the 13-inch monitor. How does the Apple RGB monitor compare to IBM's VGA? Can you add VGA capability to the Apple IIe?

Eddie Chan
Metairie, LA

The basic resolution for the Apple High-Resolution RGB display on the Macintosh is the same as VGA — 640 by 400 pixels. There's no practical way to increase the resolution of the Apple IIe; double-hi-res is as far as the IIe can go. Thanks to Walt Roshon for consulting on this question.

APPLE CLINIC IS A FORUM FOR ANSWERING YOUR QUESTIONS ABOUT APPLE II AND MACINTOSH HARDWARE AND SOFTWARE. ADDRESS YOUR CORRESPONDENCE TO APPLE CLINIC, INCIDER/A+, 80 ELM STREET, PETERBOROUGH, NH 03458. BECAUSE OF THE VOLUME OF LETTERS, MOST WON'T APPEAR IN PRINT, BUT WE'LL TRY TO RESPOND IF YOU ENCLOSE A SELF-ADDRESSED, STAMPED ENVELOPE.


```

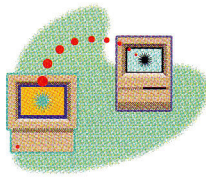
1 REM ProDOS 8 ThunderClock
  Driver Patch Utility
2 REM Written by Greg Branche
3 REM Copyright (c) 1991, Apple
  Computer, Inc.
4 REM All Rights Reserved
100 PRINT CHR$(21): HOME:
  REM turn off 80-col card
110 REM cu0 = cumulative # of
  days in year
120 DIM CU(12)
130 REM fill array with # of days
  in year
140 CU(1) = 0: REM January
150 FOR I = 2 TO 12
160 READ X
170 CU(I) = CU(I - 1) + X
180 NEXT I
190:
200 REM DN$(0) = Names for
  days of week
210 DIM DN$(7)
220 REM fill array with names of
  days of week
230 FOR I = 1 TO 7
240 READ DN$(I)
250 NEXT I
260:
270 REM yt0 is the year table
  values
280 DIM YT(7)
290:
300 REM Save original prefix
310 PRINT CHR$(4)"Prefix"
320 INPUT PFX$
330:
340 DEF FN MOD7(X) = INT ((X
  / 7) - INT (X / 7)) * 7 + .5)
350:
360 REM Display some
  instructions
370 HOME
380 READ A$
390 IF A$ = "" THEN GOSUB
900: GOTO 1000
400 PRINT A$
410 IF PEEK(37) > 21 THEN
  GOSUB 900: HOME
420 GOTO 380
430:
799 REM Finds position of /
  within date string
800 X = 0: REM On exit, contains
  position of /, or 0 if none found
810 FOR I = 1 TO 3
820 IF MID$(DAY$,I,1) = "/"
  THEN X = I: I = 3
830 NEXT I
840 RETURN
850:
899 REM Pause between
  screenfuls of information
900 VTAB 24: HTAB 4: PRINT
  "<RET> to continue, <ESC>
  to exit": GET A$
910 IF A$ = CHR$(27) THEN
  POP: GOTO 5000
920 IF A$ < > CHR$(13) THEN
  PRINT CHR$(7): GOTO 900
930 RETURN
940:
999 REM get the user's input
  and convert
1000 HOME
1010 PRINT "Please enter today's
  date (mm/dd/yy)"
1020 INPUT "-> ": DAY$
1030 GOSUB 800: REM find
  slash separator
1040 IF X < > 0 THEN 1080
1050 PRINT "Invalid date entered.
  Please try again.":
  CHR$(7)
1060 GOTO 1010

1070 REM Convert month value
  to numeric variable
1080 MO = VAL ( MID$ (DAY$,1,X
  - 1))
1090 DAY$ = MID$ (DAY$,X + 1)
1100 IF MO < 1 OR MO > 12
  THEN 1050: REM Range check
  the month value
1110 GOSUB 800: REM Parse
  out the current day
1120 IF X = 0 THEN 1050
1130 REM Convert day string
  into numeric value
1140 DA = VAL ( MID$ (DAY$,1,X
  - 1))
1150 DAY$ = MID$ (DAY$,X + 1)
1160 IF DA < 1 OR DA > 31
  THEN 1050: REM Range check
  the day value
1170 REM Convert year string
  into numeric value
1180 YR = VAL (DAY$)
1190 IF YR < 0 OR YR > 99
  THEN 1050: REM Only allow 0-99
1200 IF YR > 39 THEN YR = YR
  + 1900: REM 40-99 must be
  1940-1999
1210 IF YR < 40 THEN YR = YR
  + 2000: REM 0-39 must be
  2000-2039
1220:
1230 PRINT "Please enter the day
  of the week"
1240 INPUT "(e.g. Wed) ->
  ": DOW$
1250 IF LEN (DOW$) > = 3
  THEN 1270: REM Must be at
  least 3 characters
1260 PRINT "Invalid day of week.
  Please try again.": CHR$(7):
  GOTO 1230
1270 IF LEN (DOW$) > 3 THEN
  DOW$ = LEFT$ (DOW$,3)
1280 REM Shift any lower case
  letters to upper case
1290 B$ = ""
1300 FOR I = 1 TO 3
1310 A$ = MID$ (DOW$,I,1)
1320 IF ASC (A$) > = ASC ("a")
  AND ASC (A$) < = ASC ("z")
  THEN A$ = CHR$ ( ASC (A$) -
  (ASC ("a") - ASC ("A")))
1330 B$ = B$ + A$
1340 NEXT I
1350 DOW$ = B$
1360 REM Now convert day-of-
  week string to numeric value
1370 DOW = 0
1380 FOR I = 1 TO 7
1390 IF DOW$ = DN$(I) THEN
  DOW = I: I = 7
1400 NEXT I
1410 IF DOW = 0 THEN 1260
1420:
1430 REM Calculate the number
  of days so far this year
1440 DYS = DA + CU(MO)
1450 REM Must account for
  extra day in leap year
1460 IF (YR / 4) = INT (YR / 4)
  AND MO > 2 THEN DYS =
  DYS + 1
1470:
1480 REM Now calculate the
  index to use to fill in the table
1490 IDX = DOW - FN
  MOD7(DYS) + 1
1500 IDX = ABS (IDX - 10)
1510 IF IDX > 7 THEN IDX =
  IDX - 7
1520:
1530 REM Now we can fill in the
  year table
1540 FOR I = 1 TO 7

1550 X = YR - 1900
1560 IF X > 100 THEN X =
  X - 100
1570 YT(IDX) = X: REM store the
  year into table
1580 IDX = IDX - 1
1590 IF IDX < 1 THEN IDX = 7
1600 IF (YR / 4) < > INT (YR / 4)
  THEN 1660: REM not a leap year
1610 I = I + 1: REM update index
1620 IF I > 7 THEN 1670: REM if
  entire array done, exit
1630 YT(IDX) = X: REM duplicate
  entry for leap year
1640 IDX = IDX - 1
1650 IF IDX < 1 THEN IDX = 7
1660 YR = YR + 1
1670 NEXT I
1680:
1690 FOR I = 1 TO 7: REM Poke
  table into memory
1700 POKE 767 + I,YT(I)
1710 NEXT I
2000 REM Now that the table is
  set up,
2010 REM we can modify the
  file(s)
2020 VTAB 6: HTAB 1
2030 PRINT "You may now insert
  the disk containing": PRINT
  "the ProDOS file to be modified,
  then": PRINT "enter the loca-
  tion of the disk. You"
2040 PRINT "can enter the loca-
  tion either as the": PRINT "volume
  name of the disk, or by its":
  PRINT "slot and drive location
  (ESC to exit):"
2045 PRINT "-> ":
2050 VTAB 12: HTAB 4: CALL - 958
2060 GET A$
2070 IF A$ = "/" THEN 2100:
  REM input volume name
2080 IF A$ = "S" OR A$ = "s"
  THEN 2200: REM slot/drive input
2085 IF ASC (A$) = 27 THEN
  5000: REM ESC pressed, exit
2090 PRINT CHR$(7): GOTO
2060: REM None of the above, try
  again
2098:
2099 REM Read volume name
  from user
2100 PRINT A$: INPUT "": PTH$
2110 PTH$ = "/" + PTH$: REM
  build full pathname
2120 FOR I = 2 TO LEN (PTH$)
2130 IF MID$(PTH$,I,1) < > "/"
  THEN 2160: REM Ensure only
  volume name is included
2140 PRINT "Please supply only
  the volume name.": CHR$(7)
2150 VTAB 12: HTAB 4:
  CALL - 868: GOTO 2060
2160 NEXT I
2170 VTAB 13: HTAB 1: CALL - 958
2180 PRINT CHR$(4)"Prefix
  "PTH$: REM Set ProDOS prefix
2190 GOTO 2300: REM then go
  modify the ProDOS file
2198:
2199 REM Read volume name
  from disk in specified drive
2200 PRINT "S":
2210 GET A$
2220 SL = VAL (A$)
2230 IF SL < 1 OR SL > 7
  THEN PRINT: PRINT "Slot
  number 1-7 only.": CHR$(7):
  VTAB 12: HTAB 5: GOTO 2210
2240 PRINT SL: ",D":
  CALL - 958
2250 GET A$
2260 DR = VAL (A$)

2270 IF DR < > 1 AND DR < >
  2 THEN PRINT: PRINT "Driver
  number 1 or 2 only.": CHR$(
  7): VTAB 12: HTAB 8:
  GOTO 2250
2280 PRINT DR: CALL - 958
2290 PRINT CHR$(
  4)"Prefix,S",SL",D"OR"
2300 REM Prefix is now set to
  the proper volume
2320 PRINT CHR$(4)"Bload
  ProDOS,tsys,a$310,I$3,
  b$1b": REM Read PB 2.0 version
2330 A$ = ""
2340 FOR I = 1 TO 3
2342 X = PEEK (783 + I)
2344 IF X > 127 THEN X =
  X - 128
2350 A$ = A$ + CHR$(X)
2360 NEXT I
2370 IF VAL (A$) < > 2 THEN
2400: REM it's not version 2.0
2380 ADRS = 3958: REM
  location of table within image
2390 GOTO 2600: REM go write
  the new table
2400 PRINT CHR$(4)"Bload
  ProDOS,tsys,a$310,I$3,b$651"
2410 A$ = ""
2420 FOR I = 1 TO 3
2422 X = PEEK (783 + I)
2424 IF X > 127 THEN X =
  X - 128
2430 A$ = A$ + CHR$(X)
2440 NEXT I
2450 IF VAL (A$) = 1.9 THEN
2500: REM it's version 1.9
2460 PRINT "Only ProDOS
  versions 1.9 and 2.0 may":
  PRINT "be patched by this program."
2470 INPUT "Would you like to try
  again? ": A$
2480 IF LEFT$ (A$,1) = "Y" OR
  LEFT$ (A$,1) = "y" THEN 2050
2490 GOTO 5000
2500 ADRS = 12918: REM
  location of table within 1.9
2598:
2599 REM Write the new table
  out to the file
2600 PRINT CHR$(4)",BSave
  ProDOS,tsys,a$300,I7,b"
  ADRS
2610 GOTO 2050
5000 PRINT CHR$(
  4)"Prefix"PFX$
5010 HOME
5020 PRINT "Quit to (B)ASIC or
  (P)roDOS program"
5030 INPUT "launcher? ": A$
5040 IF LEFT$ (A$,1) = "P" OR
  LEFT$ (A$,1) = "p" THEN
  PRINT CHR$(4)"Bye"
5050 IF LEFT$ (A$,1) = "B" OR
  LEFT$ (A$,1) = "b" THEN
  HOME: END
5060 PRINT CHR$(7):
  GOTO 5020
59999:
60000 REM # of days in
  each month
60010 DATA 31,28,31,30,
  31,30,31,31,30,31,30
60020 REM Names of days
  of week
60030 DATA SUN,MON,TUE,
  WED,THU,FRI,SAT
60040 REM Informational text
  and instructions
60050 DATA "ProDOS Thunder
  Clock driver Patch Program"
60060 DATA "For versions 1.9
  and 2.0 only!"
60410 DATA ""

```

BRIDGING THE GAP

BARGAIN HUNT

Keep your eyes peeled for connectivity deals — sharing files and resources doesn't have to cost a fortune.

By GREGG KEIZER

IF THE STATE OF THE UNION HAS YOU more worried than it has George Bush, you're probably counting dollars and cents. It's no crime in times as tough as these to watch where your money goes. But playing the financial game close to the vest doesn't mean you can't keep bridging the gap. Connecting Apple IIs and Macs and sharing resources and files don't have to cost a mint. If you know where to look, you'll uncover some bargains that will help you manage both machines.

FREE FOR ALL

You can't get a better deal than one marked *Free*. Two freeware programs —

software that doesn't even demand a shareware fee — smooth the Mac-to-Apple II file-transfer road by letting you convert Macintosh files to ProDOS.

A2FX and **HFSList**, available on many bulletin boards and most on-line services, both work on the Apple IIe, IIc, and IIGs; require a measly 64K of RAM; and perform adequately. Of the two, A2FX is slicker and easier to use.

Let's say you've got a Mac in the office, an Apple IIGs in the house, and a burning desire to catch up on your office chores at home. Trouble is, sneakernet's a five-mile walk. And even when you get there, what do you do with the Macintosh disk?

Run A2FX, that's what. Pop a 3.5-inch

800K Macintosh disk into your Apple II's drive and select *Transfer files* from the three-item menu. A2FX looks for and finds the Mac disk, then quickly lists the contents of the disk's root directory. If the files are buried in folders, you can get to them, too — just move the highlight bar and press Return. When you see the files you want to transfer to ProDOS, mark them by pressing the spacebar.

You'll have to specify a ProDOS volume as the destination — floppy, hard disk, and RAM volumes all appear in a list — and pick a ProDOS filetype, too. A2FX makes this step simple, one place where it beats HFSList hands down. Press the arrow key to cycle through the possibilities. (HFSList makes you enter the filetype yourself in hexadecimal, tough if you don't know that 04 means a text file, for instance.)

Most of the files you'll transfer will be ASCII (text) versions of Mac word-processing documents, so choose that ProDOS filetype. In a moment A2FX has grabbed the Mac file, converted it to ProDOS, and moved it to the volume you picked.

Transfer done, quit A2FX and run, say, AppleWorks 3.0. You can load the now-understandable text file directly into the word processor. Amazing, isn't it?

The whole process takes no longer than a couple of minutes for a half-dozen files, and is more or less foolproof. A2FX is still in an unfinished form (as is HFSList), and though its author admitted it may hide a bug or two, it transferred scores of Mac files without incident during our testing.

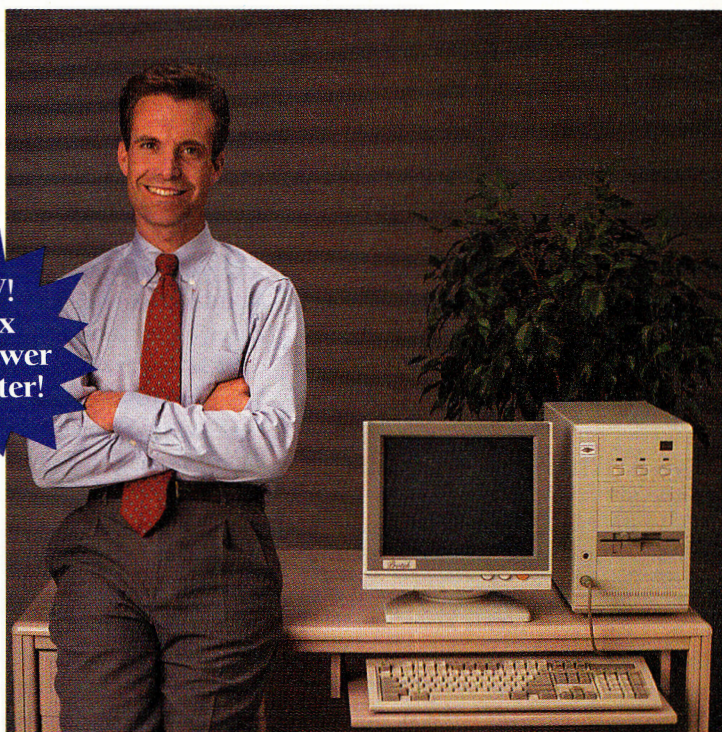
Of course, A2FX and HFSList won't solve all your bridging problems. Neither writes ProDOS files back to the Macintosh disk; the only way to reverse the direction is with a ProDOS disk and **Apple File Exchange** on the Mac. Nor can they translate formatted word-processing files into something an Apple II application can comprehend



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BRIDGING THE GAP

—you're more or less restricted to shifting text files, which means format re-creation on the Apple II end. Still, a free bridge, even a one-way bridge, is better than none.

RETURN OF CRAZ-Z-Z-ZY EDDIE

They keep packing the mailbox, those close-out catalogues filled with electronic toys. You probably see a handful yourself every month. Next time one shows up, don't toss it in the recycling pile — page through it instead and peruse some of the funkiest ads this side of local TV.

One of my favorites is from **Danmark**, a mail-order house in Minnesota selling discontinued merchandise. Although you have to skip past ads touting stereo speakers, countertop convection ovens, and electronic flea collars, you'll also see an amazing amount of computer-related gear for sale. Most of it is PC-oriented — no big surprise in these days of cut-rate DOS clones — but hidden here and there are offers that apply to Apple II and Mac owners, too.

A recent catalogue, for instance, pitched a 2400-baud external Hayes-compatible modem for \$99.99. Put it on your desk, squarely between your Apple II and Mac, buy two connecting cables from your local computer store, and your machines can share the modem. To go on line, plug the appropriate cable into the modem's port — if your Apple II is a GS, you can even share one cable with both computers.

Are those two computers cramping your desktop? Then move one of your monitors up and away with a \$49.99 wall-mount bracket like those you see in hotels and hospital rooms. You can shove the two computers together, even stack a GS atop a flatbed Mac model like the LC or IIsi, top off the pile with one monitor, then mount the other screen on the wall above and behind the system stack. It may look goofy, but it works.

Schools short on computers like to roll them from room to room when needed. Danmark sells a workstation on wheels that's large enough for one Mac and one Apple II. The price? Only \$149.99 for a 40-inch-wide model that features a convenient shelf big enough for two monitors.

If you're worried about power surges, you can protect two computers with a single \$29.99 unit that fits between computer and monitor, and sports five outlets. That's enough to plug in a Mac, a II, and both monitors.

Another bargain you might miss is a \$69.99 pack of 100 3.5-inch disks. These Sony floppies will format as 800K disks on both the Mac and the GS, and should keep you in sneakernet software for years.

If you're not on Danmark's mailing list (you must not subscribe to many magazines), give the company a call and request a copy. Other catalogues to watch for come from **DAK** (it's worth a read for the wacky ad copy alone) and **C.O.M.B.** They all have incognito ingredients to build some bridges between computers.

MAIL ORDER MAKES CENTS

If you're leery of buying discontinued equipment and want name-brand merchandise, your best bet in these recessionary times is to browse the mail-order ads you see in virtually any computer magazine.

You've probably shopped for software by mail and phone, but what about hardware? One of the best ways to connect Macs and IIs, especially since System 7.0 and Personal AppleShare, is with a **LocalTalk** network that lets you transfer files from Mac to GS and back. Apple's own LocalTalk connector kits aren't cheap, though — they list for \$75.

Head to a mail-order house like **Quality Computers** instead. For just \$19.95 each, you can buy Farallon's **PhoneNet** connectors — LocalTalk-compatible boxes that jack into the Mac, GS, or Apple IIe's Workstation Card, then connect to each other with phone cable. Schools and offices will want to buy the PhoneNet connectors in 10-packs, which cost \$189.95 when you shop direct.

Another likely bridging-the-gap candidate is a trackball, a stationary replacement for the mouse. They're perfect for the really crowded desktop, since you don't have to clear a space to roll them around. **Roger Coats** sells the **Kensington Turbo Mouse** for \$115, and CH's **Roller Mouse ADB** for \$85. Both work with Macs and GSes.

WANNA BUY A USED BRIDGE?

The Brooklyn Bridge may not be for sale, but there are some other used bridges you can pick up for a fraction of their original cost.

As Cynthia Field pointed out in her recent feature "Deals, Deals, Deals" (March 1992, p. 27), used computers can be an

offer you can't refuse. It makes sense: If you're at all hesitant about adding a Mac to your Apple II, what better way to test the waters than with an inexpensive used computer? After all, if you end up hating the Mac, you'll be out less money than if you'd bought new.

The **Boston Computer Exchange (BCE)**, one of the biggest used-computer clearinghouses, is the best place to start. Pick up the phone and dial BCE's *Fax Yourself Information*, a self-service voice-mail system that sends information to your fax machine. The number is (617) 542-2345; enter 300 at the prompt and in a couple of minutes you'll get the current *BoCoEx Index*, which lists closing, asking, and bidding prices for a slew of computer systems. You can even ask for the current sale listings — enter 360 for computers without monitors (where you'll find Mac Plus, Classic, and SE systems) and 361 for computers with monitors.

Macintosh Plus computers with a single floppy-disk drive closed at \$450 near press time, but that machine's worthless if you're planning to share files between a Mac and an Apple II with System 7.0 or via AppleShare. A loaded Mac Plus (4 megabytes of RAM and a 20-megabyte external hard-disk drive) looked like a much better deal, with an asking price of \$900. If you're looking for a file server to run AppleShare — perhaps as the brains of a classroom or lab network — peruse the database for a Mac SE/30, a relatively fast computer. BCE listed an SE/30 with a 40-megabyte hard-disk drive at an asking price of \$1600, about what you'd pay for a new (and slower) Mac Classic with the same hardware.

But what if you already have a couple of computers, and can't squeeze any more into the house? No problem. The used market is a good spot to go shopping for some other Apple II-to-Mac bridges, particularly laser printers or modems you can share with two or more computers.

Prices on the BoCoEx fluctuate, just like any commodities exchange, but at press time the closing price (what something actually sold for) for Apple's LaserWriter IINT was \$1775. Not a bad deal — the IINT is an 8-page-per-minute PostScript printer with 35 fonts. You can also connect the IINT to a mixture of IIs, GSes, and Macs with a LocalTalk network, then split the cost of the printer among the computers.

In addition, a 2400-baud Apple modem showed up on the miscellaneous list, with an asking price of only \$75. Bridging bargains abound — you just have to know where to find them.

SALE, SALE, SALE

Used-computer costs are bound to fall even further, though, now that Apple's slashed its suggested list prices.

In early February, Apple cut prices as much as 37 percent on some of its systems. The Mac IIci, for instance, dropped to \$3299 from \$5269; the 4-megabyte Mac Classic fell 9 percent, from \$1649 to \$1499. Some dealers in major metropolitan areas responded quickly by lowering their prices even further, selling Classics with 2 megabytes of RAM for as little as \$899.

At those prices, even a new Mac may be within your budget if you're looking to add another computer to your Apple collection.

HOG HEAVEN

Spend a cool hundred bucks or so (about \$110 when you buy from a mail-order software seller) on **MacLinkPlus Translators 6.0**, a set of Macintosh XTND file translators that recently added several Apple II-specific interpreters, and you'll think you're in Bridging the Gap's version of hog heaven.

When used in conjunction with Apple File Exchange (AFE), MacLinkPlus Translators can turn an AppleWorks or AppleWorks GS word-processing file into a document fit for Microsoft Word, MacWrite, MacWrite II, WordPerfect, WriteNow, or Microsoft Works. It can transform an AppleWorks spreadsheet into something ready for Excel on the Mac. It can even reverse the process by changing selected

Mac files back into AppleWorks format. MacLinkPlus installs an array of XTND translators to AFE when you move them to the same Mac folder as AFE. The next time you run AFE and stick a ProDOS disk in the drive, you won't just have the two standard translators under the *Mac to ProDOS* and *ProDOS to Mac* menus, but dozens.

Run AFE, put a ProDOS disk in the Mac drive, select the appropriate translator from the *ProDOS to Mac* list and the files you want to transform, then click away. One after another, the files turn into versions compatible with the selected application. Formatting — from centered text to spreadsheet formulas — remains intact.

MacLinkPlus Translators really show their stuff when your primary Mac application doesn't feature XTND technology. While MacWrite II may be able to read AppleWorks 3.0 and AppleWorks GS files directly, Microsoft Word, WordPerfect, and WriteNow certainly can't — not without a run through AFE and MacLinkPlus first.

BRIDGE THE BUDGET GAP

Connecting the Apple II and Macintosh worlds can come cheap, if you scout out the specials that lurk around the edges of software and hardware pricing. From free-ware and used computers to mail-order hardware and affordable file translators, connectivity deals abound.

Just keep your eyes peeled, your ears open, and your mind set on bridging the gap, and you'll strike bargains almost everywhere you look. □

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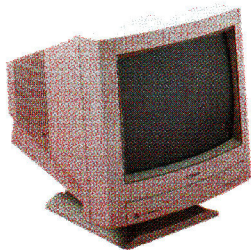
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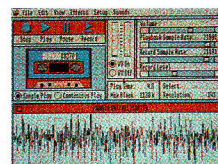
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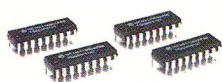
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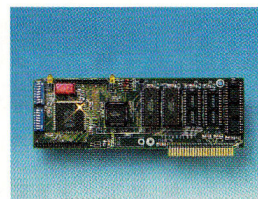
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REVIEWS



POOR GOOD GREAT

HYPERSTUDIO 3.0

Get hooked on hypermedia: The latest version of the premier GS authoring program offers more tools than ever before.

In years past, creating computer software was the exclusive province of those who had studied a computer language such as Assembler or Pascal. Now try to imagine an authoring system for the IIGs that's so easy to use it can be mastered by English teachers, elementary-school students, and computer novices, yet so powerful you can use it to create sophisticated interactive-software programs containing any combination of text, graphics, scanned photographs, animations, digitized sound, and even video images.

HyperStudio is one of several Apple IIGs hypermedia (computer-controlled multimedia) packages that give nonprogrammers the tools and resources they need to design truly innovative software. With a little imagination, you can create nearly anything with HyperStudio, from a professional-quality presentation to an adventure game to a personal database. In some ways, HyperStudio 3.0 is mind-boggling. It provides a programming environment more extensive than most users will ever need, it's easy to learn and fun to use, and — theoretically, at least — it's infinitely expandable.

THE BASICS

A piece of software generated by a hypermedia program is commonly referred to as a *stack*. A stack is made up of a number of different computer screens, called *cards*, that can contain any combination of animated clip art and graphics, special sound effects, and scrollable text windows. As the author, you can link any card or object on a card to any other card, to any

other stack, or (through special commands) to hardware or software outside the stack itself. For instance, you could create an on-screen button that when clicked would play a clip from a videodisc hooked up to your computer. Users (also called *browsers*) work their way through a stack by clicking on navigational buttons.

Until now, writing a stack to take advantage of all these features was nearly as complex as writing in a regular programming language. What places Hyper-

Studio 3.0 in a class by itself is that you design all elements of your stack via pull-down and tear-off menus. Whether you want scrollable text or animated artwork on your card, just click on the appropriate menu item and follow the simple on-screen prompts; HyperStudio will generate the necessary programming code.

There's nothing complicated about designing with HyperStudio, and its ease of use has turned many a third-grade



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- hypermedia authoring system
- 1MB Apple IIGs, 3.5-inch disk drive
- hard-drive installable
- \$179.95
- update \$45 plus \$5 shipping

student into something of a proficient software developer.

HyperStudio 3.0 requires only a single 3.5-inch disk drive and works with the standard GS containing 1 megabyte of random-access memory. HyperStudio is considerate with your machine's RAM, using its own compression routines and memory-saving devices to ensure you never see that dreaded "out of memory" message.

HyperStudio isn't copy-protected and is hard-drive installable. The program comes on six 3.5-inch disks and includes 250 colorful clip-art graphics images, 21 prerecorded sound effects, and a slotless sound digitization card and microphone, letting you add your own voice or incorporate compact-disc-quality music into stacks.

Sample stacks, some of which were created by elementary-school students, contain an array of examples and descriptions of many of HyperStudio's most outstanding features. Other disks contain foreign-language lessons, animation and graphics tutorials, a HyperStudio-based literary "magazine," and a number of high-quality stacks submitted by HyperStudio users. Two manuals — reference and tutorial — provide the program's documentation, totaling nearly 300 pages of detailed material, including hints and tips, suggestions, and a comprehensive step-by-step activity guide covering all aspects of stack design.

HYPER-SUPERLATIVES

HyperStudio is surely the single most important creativity package ever designed for the GS. It's bound to unleash excitement in the classroom, as it lets even small children use the GS as a tool to present information in ways that were simply unimaginable or impossible just a few short years ago. HyperStudio relieves you of the burden of having to learn how to program a computer to get your ideas across. HyperStudio tames the GS, giving you all the tools you need to share ideas, concepts, and information with others.

Features abound in HyperStudio. Among its tools are a built-in word processor and a paint program; HyperStudio can also import text directly from AppleWorks Classic, graphics created with other paint programs, and even GS Finder icons as clip art. The package supports two types of animation: frame-based and moving-object. You can create frame-based animations easily

APPLE II REPORT

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WORTH A SECOND LOOK

CONNECTANY

**William K. Bradford Publishing Co.
310 School Street
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- new math-skills builder
- 128K Apple II
- \$60

Students in grades 6 to 10 pose their own mathematical questions, then find solutions, in this self-paced skills builder from William K. Bradford. The program encourages youngsters to observe the patterns formed as it draws cords connecting points on a circle. Students then determine the number of points and the size of the jumps. The activity continues until a cord ends up on the starting point. The search for new and different patterns motivates kids to become better investigators and makes them more mathematically aware.

CONNECTIONS! BUILDING MATH UNDERSTANDING

**Society for Visual Education
1345 Diversey Parkway
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- new math games
- 128K Apple II
- \$104

This package consists of six game-like activities to help students in grades 5 through 8 become more proficient at math. Youngsters improve their estimation and computational skills as they find solutions to problems that might occur in everyday situations. Problems require them to measure carpets for a room, determine the success of a community recycling program, go on a budget-constrained shopping spree, and more. The program also emphasizes traditional math subjects such as probability, patterns, graphs, algebra, and geometry. Forty-eight reproducible activity sheets review and enhance the mathematical concepts presented.

FIRST AID WITH REDDY

Q Labs

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- new medical-emergency education program for children
- 64K Apple II
- \$29.95

Teach your child how to react in an emergency: This package contains three activities that prepare children as young as 6 for a variety of situations requiring first aid. A friendly, animated character named Reddy teaches kids what to do in case of accidents involving choking, small and large cuts, nosebleeds, animal bites, electric shocks, falls, burns, and poison. In addition, youngsters learn where to get help and how to use 911. First Aid with Reddy is a must for any home or school software library.

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- new multimedia toolkit
- 128K Apple II
- requires LogoWriter
- \$39.95

LogoWriter comes of age with this hypermedia toolkit. This add-on package, which requires LCSI's widely known word processor, lets you create and link LogoWriter pages containing text, graphics, animation, and music. With Hypermedia Tools, LogoWriter programmers can now incorporate full-motion video or still-image sequences from conventional videodiscs into any LogoWriter document. In addition, you can import scanned graphics and images generated by a video-capture board.

MAX'S LIBRARY: BEGINNING TO READ AND UNDERSTAND

**Society for Visual Education
1345 Diversey Parkway
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(800) 621-1900**

Continued on p. 24

REVIEWS

within HyperStudio or import them from PaintWorks Gold; you can create moving-object animations by just highlighting a clip-art graphics image and dragging it with the mouse. Navigation buttons can be any shape, even highly irregular, and with the "expanding button" tool you can make any object on screen, even circles or

objects with odd outlines, into a button.

Although HyperStudio works in 640 super-hi-res mode, you can integrate 320-mode super-hi-res graphics and near-photographic-quality scans fully into stacks. The program handles video images easily if your GS is connected to a laser-disc player; and with Apple's Video Overlay Card you

can use any still image as a button. HyperStudio also supports Edmark's TouchWindow screen overlay, making a GS with HyperStudio an ideal system for informational kiosk displays. Auto-activated buttons let people with disabilities create and browse through HyperStudio stacks with adaptive-hardware input devices.

Continued on p. 50

APPLE II REPORT

Cont. from p. 23

- new reading- and writing-skills builder
- 128K Apple II
- \$144

Max the mouse loves to read; his library consists of three double-sided floppies containing 42 original, richly illustrated *Real*, *Make-Believe*, and *How-To* stories for first- and second-graders. These engaging tales are grouped into four reading levels, each presenting age-appropriate concepts and vocabulary. Reproducible black-line activity sheets and follow-up questions reinforce the concepts introduced. In addition, a fourth disk contains a simple text editor and 12 "story starters" so that children can practice writing.

PUZZLEMAKER

Edmark Corp.
P.O. Box 3903
Bellevue, WA 98009-3903
(800) 426-0856, (206) 746-3900

- new jigsaw games for children
- 64K Apple II
- \$39.95

If your children play with jigsaw puzzles, they'll have fun with Edmark's electronic PuzzleMaker. This program features 12 colorful illustrations of *Animals*, *Places*, and *Buildings*, which you can scramble into puzzles of four, six, or nine pieces. You can also import original hi-res ProDOS pictures (created with a graphics package such as Baudville's 816/Paint) for use as puzzle screens. Children can work with or without a timer; optional hints are always available. PuzzleMaker is a great program to use with Edmark's TouchWindow screen overlay, too.

SIGNATURE GS

Q Labs
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- new control-panel devices
- 2MB Apple IIcs
- \$29.95

Give your Apple IIcs a distinctive personality and have fun in the process with this inexpensive collection of four GS/OS control-panel devices (CDEVs). You get a colorful screen saver (*Phantasm*), a utility that lets you change your GS desktop pattern (*Graffiti*), plus a way to customize your GS sounds so that specific functions have their own special audio quality (*Sonics*). *Bootmaster*, lets you place all drivers, CDAs, and NDAs (classic and new desk accessories) into one master control panel, then turn them on or off as needed.

TALKING CLOZE TECHNIQUE: GREEK MYTHOLOGY

Orange Cherry Software
Box 390
Westchester Avenue
Pound Ridge, NY 10576
(800) 672-6002

- new reading-skills builder
- 768K Apple IIcs
- hard disk recommended
- \$49 home edition

Children learn to read in context with this collection of eight classic tales from Greek mythology, including the stories of Daedalus and Icarus, Jason and Medea, Odysseus, Heracles, Perseus and Medusa, Pandora, and more. Pages of text appear on screen with missing words. Readers fill in the blanks by selecting the best word from a list of three choices. Scoring 75 percent or better earns a golden key. The software features fantastic animated graphics and terrific digitized sounds. A point-and-shoot graphics interface makes this program very easy to use.

TRIANGLE CHAOS

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

- new math-skills builder
- featuring pattern iteration
- 128K Apple II
- \$60

Yes, Virginia, there is a method to all this madness. Let your students (grades 9 through 12) discover how patterns can emerge from random processes with this innovative math-skills builder. The program is based on an activity by Michael Barnsley, called the *Chaos Game*. Like Connectany, described on p. 23, it promotes mathematical investigation by means of "iteration" (repetition). Students produce three-sided figures on screen by plotting points according to a stated rule; the program encourages them to explain why patterns develop. Activities are suitable for algebra, geometry, precalculus, and science classes.

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(800) 232-2224, (203) 335-0906

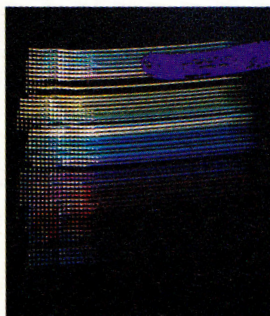
- new children's desktop-publishing software
- 128K Apple II
- \$49.95

The Whole Neighborhood is a simple desktop publisher that introduces children to people and places in a typical urban community. It encourages youngsters to use colorful backgrounds, clip-art characters, picture props, and speech bubbles to create and write about a variety of indoor and outdoor neighborhood scenes. The simple text processor features a choice of fonts and type styles; pages may be printed in any of a number of sizes, ranging from miniature to poster, with several scenes combined on a page. With an optional Echo synthesizer or Cricket speech board, this desktop publisher even speaks the words children write.

— Carol S. Holzberg, Ph.D.

UNITED STATES NATIONAL DEBT -- YEAR TO 1985				
Year	Population	Amounts Given in Current Dollars	National Debt	Per Capita Debt
1985	236,815,000	\$1,825,000,000,000	\$7,633	
1984	226,815,000	1,522,000,000,000	6,684	
1983	220,815,000	1,272,000,000,000	5,801	
1982	212,345,000	1,142,000,000,000	5,381	
1981	208,045,000	1,027,000,000,000	4,937	
1980	222,725,000	967,000,000,000	4,360	
1979	220,855,000	820,000,000,000	3,712	
1978	222,585,000	771,000,000,000	3,466	
1977	220,225,000	690,000,000,000	3,133	

Main Menu				
Add Files				
Superworks Files				
Name	Type of File	Size	Date	Time
INTRO-001	Word Processor	52	Mar-18-91	9:05 PM
MS-001	Word Processor	52	Mar-18-91	9:05 PM
START-001	Word Processor	52	Mar-18-91	9:05 PM
COMPANY	Database	25	Mar-18-91	9:05 PM
STATISTICS	Database	48	Mar-18-91	9:05 PM
MESSAGE	Database	48	Mar-18-91	9:05 PM
HELP-001	Database	52	Mar-18-91	9:05 PM
STATISTICS	Database	48	Mar-18-91	9:05 PM
INTRO-001	Spreadsheet	52	Mar-18-91	9:05 PM
MS-001	Spreadsheet	52	Mar-18-91	9:05 PM
START-001	Spreadsheet	52	Mar-18-91	9:05 PM



MS-DOS APPLEWORKS

*inCider A+ Magazine, A

SuperWorks™

INTEGRATION FOR THE NEXT GENERATION OF PC USERS

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.

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SuperWorks uses only 170K in RAM 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.

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- ONLY INTEGRATED PACKAGE FOR NOTEBOOKS

30 DAY MONEY BACK GUARANTEE

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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."

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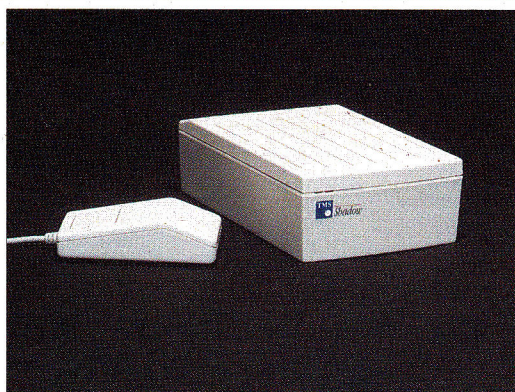
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(partitioned for all equipment)	

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Pro 425	10ms	1319
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Internal prices for Macintosh only!

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Pro 240 LPS	10ms	829
Pro 425	10ms	1399
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Full Two Year Warranty		

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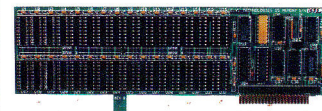
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Memory



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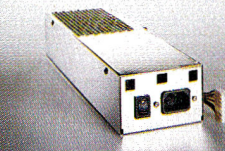
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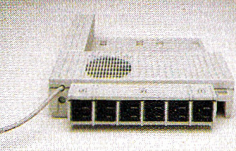
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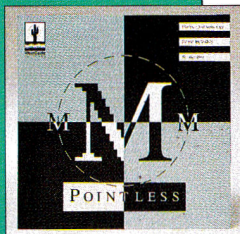


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TECHNOLOGY

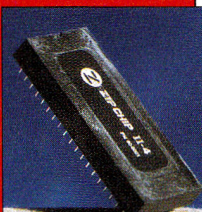
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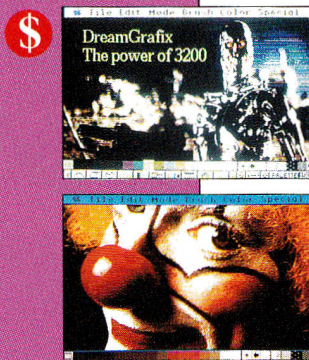


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WORKING THE NETS

Exploring On-Line Options

UserID: 735KE6

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1
1
1
1

... Welcome to The Net.

“**M**e and Nighttime were surfing yesterday when we dropped in on a really hot room. :) This guy was flaming, but he didn't know MNP from baud rate. ROTFL! BTW, you won't believe the Happiware that DeeDee posted! You gotta download it!”

It's like a giant, invisible web. Gossamer wires skid across gulfs of static. The inhabitants have their own incomprehensible dialect.

What image comes to mind when you hear the words *on line* and *telecommunications*? Science-fiction aficionados may conjure up any one of a thousand scenarios, ranging from Orwellian government-dominated electronic societies to dark, cyberpunk visions of virtual-reality databanks.

Movie fans might imagine a Matthew Broderick film festival: *Ferris Buehler's Day Off* meets *Wargames*. Sniffling, precocious teenage hackers dance circles around their computer-illiterate elders — changing report cards and attendance records, leaving practical jokes for the unsuspecting data-entry



Macintosh Classic II



TELECOMMUNICATIONS TELECOMMUNICATIONS TELECOMMUNICATIONS TELECOMMUNICATIONS TELECOMMUNICATIONS TELECOMMUNICATIONS TELECOMMUNICATIONS TELECOMMUNICATIONS TELECOMMUNICATIONS

secretaries, or stealing phone-card numbers and calling Hong Kong just to prove it can be done.

The reality of telecommunications is neither as frightening nor as frivolous as these visions imply. Today going on line is a lot like visiting a large city. If you go looking for ugliness in dark alleys, you're going to find it. If you insist on driving your own car in unfamiliar territory without looking at a map, you're probably going to get very lost and very frustrated. And if you're not careful, you could end up spending a lot more money than you planned originally.

But if you start in well-maintained public areas, use the transportation provided, and learn your way around, the on-line community will soon welcome you as one of its own.

TO EACH HIS OWN

So you've decided that it's time to hook into the nationwide network of modem movers, but trying to put together a

cost/benefit analysis is raking and shaking your brain. Is one service inherently "better" than another? No, of course not. While all on-line services share certain characteristics, each of the major vendors has unique strengths and weaknesses that set it apart from the competition.

Chances are good there's a service that will suit your individual needs. To help you make a meaningful match, let's look at five of the larger on-line networks: **America Online**, **CompuServe**, **GENie**, **Prodigy**, and **Delphi**.

AMERICA ONLINE

If you're looking for a gentle introduction to telecommunications, you might start here. America Online was born in 1988 as AppleLink Personal Edition, an offshoot of AppleLink, Apple's corporate/developer bulletin board and mail service. Operating out of Virginia, America Online is available to Apple II, Macintosh, and IBM PC owners.

Currently, the service focuses most of its efforts on Macintosh users, and it shows — it's one of only two services that require members to use proprietary communications software. For telecommunications beginners, this type of regimentation can be a godsend, letting novices poke around without fear of getting lost. For more advanced on-line surfers, however, fewer options translate into less flexibility.

The Macintosh software is all icon and menu driven. Once you learn your way around, you can navigate by typing in keywords, but that's just about the only shortcut available. Downloading files is strictly a one-at-a-time affair, and while you can browse through bulletin-board posts by date, you can't download the posts and read them off line. You can disconnect and compose your responses off line if you're a fanatic about saving connect charges, but posting them is a clumsy cut-and-paste dance.

Once 8-bit Apple II users get over the inability to use their own "front end," they probably won't mind America Online's custom software, but IIGS users will be continually infuriated by the lure of opening screens rich with color that give way to a mousetext operating environment.

(Mousetext is an extension of the standard ASCII character set that includes some graphics characters such as horizontal and vertical lines, arrows, and checkerboard squares.) America Online currently has no plans for Apple II software updates.

Special-interest areas or "forums" are all organized pretty much the same way: bulletin boards for chatting, software libraries featuring public-domain and shareware collections, and whatever other features might be appropriate. All Apple II forums, for instance, have direct links to a pan-forum chit-chat board called "Let's Discuss."

"AOL," as its members like to call it, is an odd mix of discrete forums existing in a tightly woven overall network. Hopping from place to place is quick and easy, but where other on-line services group all platform-related topics under one area, America Online splits them apart into separate forums, each with its own bulletin board, libraries, and on-line staff.

This separation fosters a tight, well-run atmosphere. The libraries and boards are up to date, and "forum leaders" watch conversation topics, or "threads," carefully. Members who post off-topic messages are directed swiftly to either the proper "folder" within the forum or to another forum altogether. It's interesting that AOL members are often as zealous in this regard as America Online employees.

AOL has odd gaps here and there. For instance, the shopping and reference areas are nowhere near as extensive as other services', but America Online boasts some of the most complete software libraries on the planet. For an extra fee, you can send faxes and printed mail, but there are currently no gateways to larger electronic-mail nets such as Internet or MCIMail.

You can access America Online through direct-dial numbers as well as through both Telenet and BT Tymnet. (These nationwide networks let you connect to a variety of services via a local number. If you're in California and your on-line service is on the East Coast, for example, you avoid long-distance phone charges.) America Online's rates start with a basic membership fee of \$7.95 per month, plus \$4 per hour. Prime-time hours (6:00 a.m. to 6:00 p.m. Monday through Friday) cost

GLOSSARY OF BBSPEAK

Bulletin boards occupy a paradoxical niche in the communications hierarchy. While they consist of typewritten messages, there's an inherent immediacy in reading and responding to a post. In an effort both to save time when typing and to give "body language" to otherwise blunt messages, bulletin-board jockeys have developed a special set of abbreviations to accompany their text.

:D	smile
:D	laugh
:P	sticking out tongue
:	"ugh"
:)	wink
}{	frown
:>	evil grin
—====I}	thrown pie
><><><><><<	applause

IMHO	in my humble opinion
IMNHSO	in my not-so-humble opinion
LOL	laughing out loud
ROTFL	rolling on the floor laughing
BTW	by the way
RSN	real soon

an additional \$4 per hour. These charges cover nearly all services. AOL also gives members two hours of free nonprime-time usage per month.

COMPUSERVE

Think *big*. Think *really big*. Now think *really massively, ungodly large*. Now *double it*. That's how big CompuServe is. After weeks of careful study, we came to the conclusion that if you couldn't find what you were looking for on CompuServe, you weren't looking hard enough. Either that or you couldn't figure out how to work the interface.

CompuServe has been around since the early 1980s, when telecommunications meant a 300-baud modem, 50 people you knew by CB-style "handles," command-line interfaces, tangled BBS paths, and endless games of Adventure. These days, CompuServe Information Service, or "CIS," as it's known to net surfers, is an octopus-like information service with tens of thousands of members, a command-line interface, and tangled BBS paths.

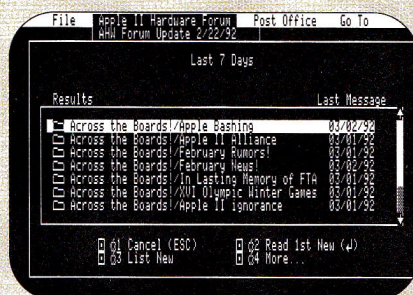
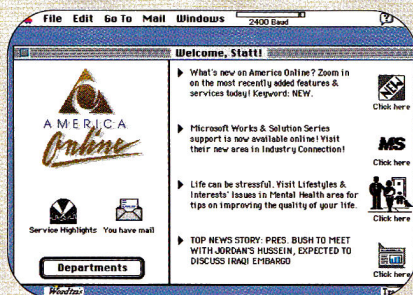
Signing on to CompuServe requires a computer, a modem, a telecommunications package, and an account. That's *any* computer, *any* modem, and *any* telecom package. CIS is available through about seven different nationwide networks. If you can't find a local number to dial in your area, you should seriously consider finding a cave closer to the mainland.

Set an egg timer next to your computer the first few times you sign on, as just skimming through the special-interest groups (SIGs) and services can take hours. Keep a pad and a pen handy also, as you'll want to write down "Go" words — abbreviations or acronyms that take you directly to your favorite places.

If you have an Apple II and you use Point-to-Point (Beagle Bros), Talk Is Cheap (Quality Computers), or ProTerm 3.0 (inSync Software), you'll find packages of macros in the software libraries that will greatly simplify (and cheapen) your on-line excursions. Macro packages such as Ultra Script and Co-Pilot "take over" your telecom program, go directly to the boards you want to visit, download new messages and mail, and then disconnect and let you browse through the day's catch at your

APPLE II/MACINTOSH PROFILE: America Online

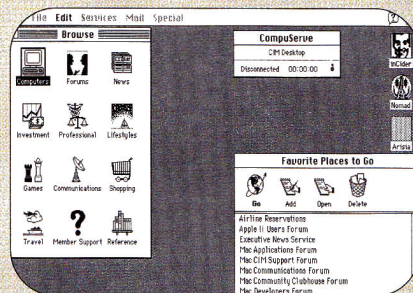
If you're looking for the latest in Macintosh shareware or freeware, you'll probably find it on AOL. The Apple II section lags a little behind, but that's because most of the really hard-core Apple II users already subscribe to either CompuServe or GENie, and haven't found a real need to pick up AOL. Of the ones who have, a high percentage seem to be bitter Apple II users, searching for new 16-bit software and complaining that Apple's treating them and the machine like old laundry. Celebrities: **Apple DTS** (Developer Technical Support), **Roger Wagner**



APPLE II/MACINTOSH PROFILE: CompuServe

Whom are you going to meet on CompuServe? Everybody. The amount of traffic this service gets is simply staggering. Trying to keep up with all the messages in even one forum can be a full-time vocation. Navigation on CompuServe can also be a real chore. If you're using your own telecom package, you know what to expect, but CompuServe isn't fully integrated with CompuServe Information Manager. More often than not, CIM will get you to an area and then drop you into a terminal emulator with a command-line interface. So much for progress.

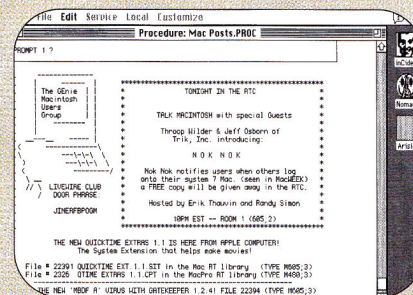
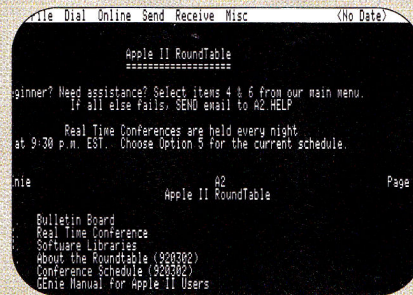
Celebrities: **Tom Weissnar**, **Joe Kohn**



APPLE II/MACINTOSH PROFILE: GENie

Like CompuServe, GENie is a lot looser than America Online about policing topic threads: You might start reading a topic about hard drives and end up in the middle of a discussion about the pros and cons of hitchhiking. If you've been to an Apple II event recently, you'll probably recognize quite a few of the people at the Apple II roundtable. If you don't know these folks yet and have a question about the Apple II, it might be worth your while to drop in. Bring a ton of patience, though — tweaking the command line just right takes quite a bit of practice, particularly for a newcomer.

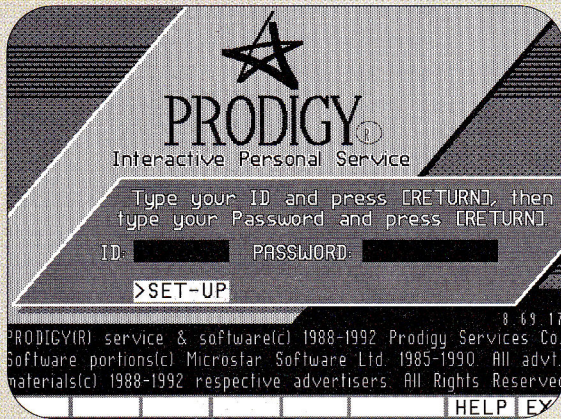
Celebrities: **Resource Central staff**, **Jerry Pournelle**



APPLE II/MACINTOSH PROFILE: Prodigy

What Prodigy lacks in personality it makes up for in variety, in a suburban-mallish sort of way. Every screen is accompanied by a teaser advertisement at the bottom, complete with a button that says Look. For a while it's fun to watch who's risking an advertising budget on this new service, but after some time it's like paging through a creepy Home Shopping Network combined with Good Morning America and USA Today, all directed by George Romero.

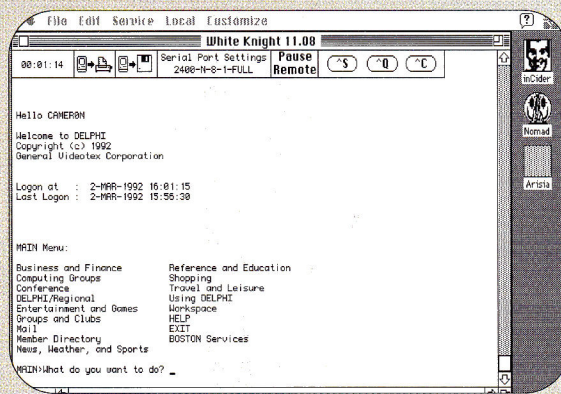
Celebrities: **Levi Strauss, Sears, Rubbermaid**



APPLE II/MACINTOSH PROFILE: Delphi

At first glance, Delphi looks relatively attractive — the service itself doesn't cost too much, the interface is pleasant and quick, and it sports some interesting features that many other services don't offer. While Delphi members have a wide variety of backgrounds, however (Delphi has a relatively large international population), it's not exactly a cast of thousands. Moreover, the network's practice of limiting telephone access times and not including the charges in the main service bill is inexcusable.

Celebrities: **Guatemala, Brazil, Canada**



leisure. When you want to type a response, you can use your favorite word processor, and then hand the results back to the macro package for easy delivery. The benefits of these macro “navigators” go straight to your wallet. If you're going to be spending any serious time on line, get friendly with one of these packages.

On the Macintosh software side, CompuServe offers the CompuServe Information Manager (CIM). CIM is a fairly complete navigation program that offers great flexibility in messaging, mail, and downloading. It's not fast, and the Mac interface doesn't always work quite the way you'd expect it to, but it does work.

CompuServe offers a lot, but you pay dearly for it. Everything costs money.

CompuServe's basic-services monthly charge is \$7.95, which includes up to 60 outgoing three-page electronic-mail messages. Reading all incoming mail (except from Internet) is free. Extended services are available for \$6.30, \$12.80, and \$22.80 per hour for 300-, 2400-, and 9600-baud modems, respectively. Note that the computer forums and software libraries are considered extended services.

GENIE

They say that if you're into the Apple II, there's only one place to hang your modem, and that's GENIE — the General Electric Consumer Information Service. While GENIE doesn't even pretend to claim as many members as CompuServe,

the Apple II “roundtable” is always busy.

Every on-line service has its own organizational method or metaphor, and GENIE would like you to think of it as a large book. Each service and “roundtable” — as GENIE calls its discussion areas — has a page number. This approach makes for accurate jump navigation, but it also means that you can't get a navigational acronym half right and expect the software to dump you somewhere close to where you wanted to be.

To sign on to GENIE, you need your own telecommunications package, whether you're using a Macintosh or an Apple II. If you have an Apple II, a macro program such as Co-Pilot will run interference for you with Point-to-Point or Talk Is Cheap; if you use ProTerm 3.0, you need GEM. If you have a Macintosh, there are macro packages available if you hunt through the libraries, but there's nothing as standard as the Apple II packages listed above.

GENIE subscribes to its own direct-dial network; you can't get to it through your local BT Tymnet number. If you have a 2400-baud modem, logging on becomes an exciting prospect: You have to send three capital *Hes* within three seconds of connecting or GENIE won't talk to you.

The mail and messaging systems are primitive; again, a macro package will help out on the Apple II, but if you're not so inclined, print the help files and take copious notes. If you have a sick sense of humor, you might take ironic pleasure in listening in on GENIE veterans as they debate the proper sequence of commands required to achieve a desired effect.

GENIE's information and shopping services are surprisingly complete. This is especially welcome in view of GENIE's bargain connect fees, although what you don't pay to GENIE you might end up paying to the phone company in long-distance charges. GENIE costs \$4.95 per month for unlimited nonprime-time use and unlimited electronic mail, plus \$6 per hour for extended services such as the computer forums and software libraries.

PRODIGY

You can't help but get the feeling that the folks in the Prodigy marketing department really wanted to use the slogan



"The Online Service for the Rest of Us." Too bad that line's already taken.

Prodigy is available for the Macintosh and IBM PC only — no Apple II access is available and none is being considered. For reluctant computer users, Prodigy is quite possibly the most painless on-line service available. The proprietary connection software is heavily graphics based and unfailingly friendly, or at least as friendly as MS-DOS software ported over to the Mac can be.

If you're a novice and not sure what to do next, clicking on the *Path* button will walk you through the service on a route tailored to your demographic profile. I'm a white male professional from New Hampshire, so naturally I got weather, news, sports, and the stock market in that order. If you don't like what you're visiting, you can alter your path to suit your needs. That's a customization possibility that we'd like to see elsewhere.

Prodigy's message-posting options are vestigial and clunky at best. The service organizes what bulletin boards it has into "clubs," and makes no bones about the fact that it's watching you closely. If you're looking for a place to gossip or enjoy some idle chatter, Prodigy isn't the place, and it doesn't want to be. One sentence in the rules-and-introduction segment says, "If a personal 'chat' service is what you're looking for there are many other on-line services from which to choose."

Don't expect bull-session topics, as you usually find on other bulletin boards. Some people will find this refreshing, others will hear the leash clicking onto the collar. There are also no software libraries where you can download shareware and public-domain games and utilities. None. Zip. Zilch. *Nada*.

If you're looking for home-shopping and information services, though, you might want to consider Prodigy seriously. You can reach an amazing number of stores, primarily ones that already have a catalogue network in place; you can shop JC Penney and Sears on Prodigy, for example. You also can buy magazine subscriptions, real estate, office furniture, flowers, jewelry, and just about anything else you can possibly imagine spending money on.

Prodigy also makes available a wide variety of financial and electronic banking services. In selected areas, you can even do your grocery shopping and have the goods delivered to your home.

Prodigy's only fee is \$12.95 per month, plus 25 cents per electronic-mail message after the first 30. Prodigy has no additional connect charges.

DELPHI

The few. The proud. The committed. Delphi is one of the on-line services run by General Videotex Corporation out of Cambridge, Massachusetts. At press time, GVC was also finishing up a deal with *Byte* magazine to take over management of BIX (*Byte* Information Exchange). As yet, no gateways between the two services exist or are planned.

Hooking together Delphi and BIX is a strategy that GVC might want to think about, because Delphi is currently bringing up the rear of the pack in the on-line-service race. Stalking around the special-interest-group areas was sort of spooky.

Bring your own communications package to Delphi, but be prepared for a pleasant surprise when you log on. Delphi has one of the quickest response times of all the services, and the menus and navigational commands are clear and easy to understand. All you have to do is type in the first few letters of a menu selection and off you go. The service even reminds you gently if you're typing in more letters than necessary.

What this easy path doesn't provide for is quick access to specific parts of the service. For instance, there's no way to jump directly to a particular service or SIG. You can customize your main menu, however — adding frequently used destinations and deleting those you'll

probably have no interest in visiting.

Delphi offers access through BT Tymnet and Telenet, as well as direct-dial numbers. Delphi has two membership plans — the first costs \$5.95 per month and includes one hour of on-line time. Every hour after that costs \$6. The *20/20 Advantage* plan gets you 20 hours for \$20, plus \$1.20 for every extra hour. Be warned: Connecting to Delphi through Tymnet and Telenet from 7:00 a.m. to 7:00 p.m. costs an extra \$9 per hour above and beyond Delphi's fees or long-distance charges.

WRAPUP

Despite the costs and benefits, choosing an on-line service is a personal decision. Even though a particular service may cost more than others, if it's comfortable, chances are you'll spend more time there. Some people subscribe to more than one service, but unless you're looking for specialized features available only from certain companies or you just love to surf as many nets as possible, one service should suffice.

In a nutshell, your choices break down like this: If you're just dabbling, check out the action on America Online, as it's easily the friendliest on-line service around. If you want great heaping gobs of data and don't mind forking over a little extra jack, give CompuServe a call. If you own an Apple II, you should give GENIE a trial run. Finally, if you want to use your Macintosh like an appliance and you have no desire for on-line chit-chatting or downloading software, plug into Prodigy.

BTW, if you're out on the nets and you see the *inCider/A+* moniker, flash us a message — you never know whom you're going to meet on line. :). □

PRODUCT INFORMATION

America Online

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

CompuServe

P.O. Box 20212
Columbus, OH 43220
(800) 848-8199

GENIE

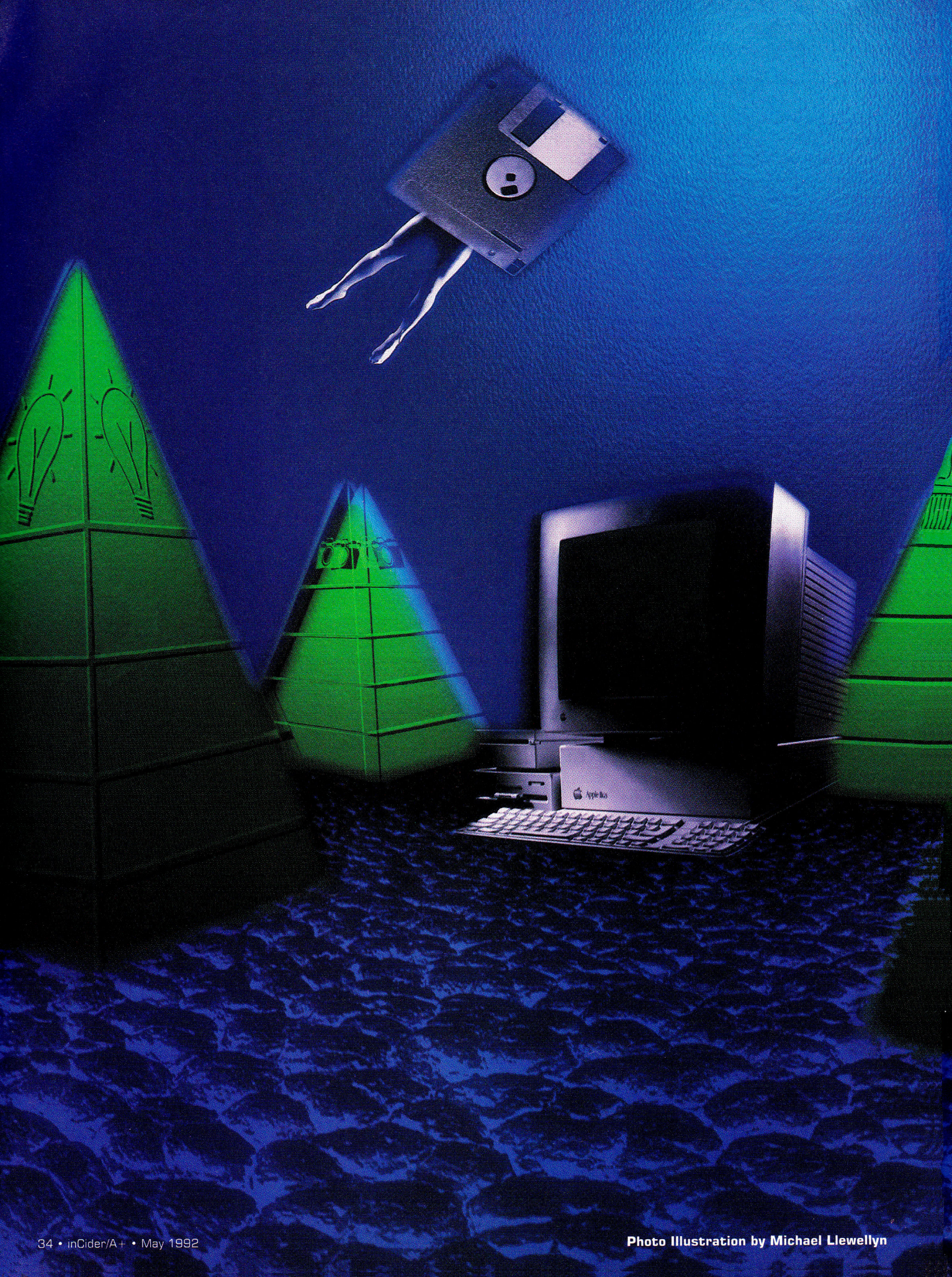
GE Information Services
401 North Washington St.
Rockville, MD 20850
(800) 638-9636

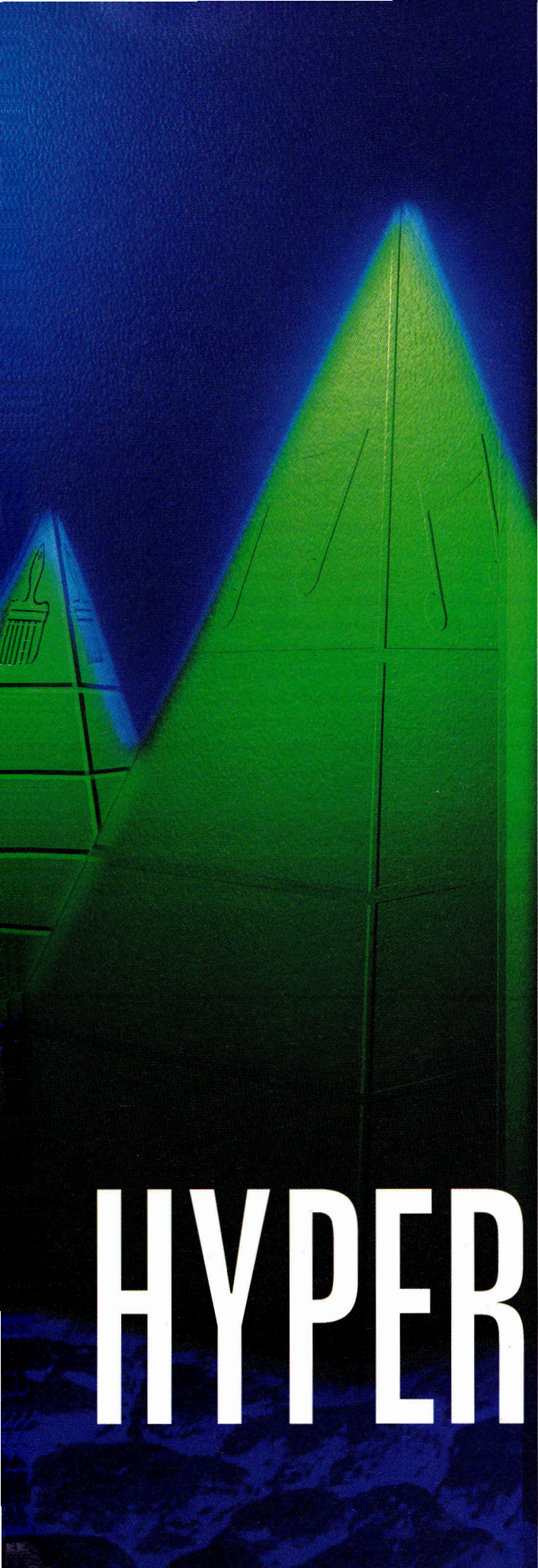
Prodigy

445 Hamilton Ave.
White Plains, NY 10601
(800) PRODIGY

Delphi

1030 Massachusetts Ave.
Cambridge, MA 02138
(800) 544-4005





It's all in the wrist: Colorful multimedia presentations are a snap to create with the newest version of HyperCard IIGs.

Remember Lincoln Logs and Tinker Toys? If you think you had fun with childhood building kits, just wait 'til you play with HyperCard IIGs 1.1, Apple Computer's multimedia construction set for the electronic age.

A generous toolbox and easy-to-use "building supplies" make it simple for *anyone* (even computer-shy adults) to design colorful custom software for home, classroom, and small-business use. Sound too good to be true? Launch HyperCard IIGs' *Story Board*, one of a half-dozen ready-to-run applications that come with the program, and you'll see what we mean. *Story Board*'s sample illustrated fairy tale was created in part by a 4-year-old. Of course, he had help — from a 9-year-old.

Any Mac user worth his or her GUI will turn green with envy when comparing full-color HyperCard IIGs lessons, databases, and stories with colorless Macintosh HyperCard applications. But, good-natured rivalries aside, GS enthusiasts can create multimedia software with the same point-and-click panache. Moreover, HyperCard IIGs' object-oriented layout capabilities help you develop original software in significantly less time than you'd think possible — and all without learning an arcane programming language. You might say that designing software with HyperCard IIGs is "all in the wrist."

TOOLS OF THE HYPER TRADE

By CYNTHIA E. FIELD, Ph.D.

Introduced in 1990, the original HyperCard IIGs 1.0 was surprisingly stable and bug-free for a magnum opus, but *s-l-o-w*. But thanks to the efforts of Darin Acquistapace, the Apple software engineer who rewrote many of the program's routines in assembly language, HyperCard IIGs 1.1 is a noticeably faster and more feature-filled version of this phenomenal authoring environment.

As 1992 dawned, Apple was also finalizing GS/OS System 6.0, the latest Apple IIGs operating system. Among other noteworthy features, the new HyperCard IIGs 1.1/System 6.0 partnership lets you format data disks on the fly, compose self-scripting musical tunes with the mouse, and operate multimedia hardware devices including the Apple Video Overlay Card, CD-ROM drives, and laser-disc players. In addition, HyperCard IIGs now offers colored backgrounds for buttons and fields, and new scripting commands for sophisticated interactive effects. Yet all this extraordinary power notwithstanding, HyperCard IIGs' pull-down menus, dialog boxes, and mouse control make the program both comfortable and familiar.

Now let's take a fresh look at HyperCard IIGs' New Age vocabulary as it applies to the latest version of the program.

CARD TRICKS

Each hypermedia application you create — whether it's an interactive history lesson, a botanical database, or a twist-a-plot story — is called a *stack*. Starting one is as easy as launching HyperCard IIGs, pulling down the *File* menu, and choosing *New Stack*. After naming the stack, specify a destination volume to which you want HyperCard IIGs to save your work periodically (and automatically). For additional security the program offers *Save a Copy* (*File* menu) and *Keep* (*Paint* menu). The latter function lets you quick-save changes to bit-mapped graphics, such as paintings.

Stack parts, or *objects*, such as *cards*, *backgrounds*, *text fields*, and *buttons*, give HyperCard IIGs its modular, object-oriented-programming (OOP) savoir faire. Each object has its own "personality," which you define: To determine an object's attributes, all you have to do is click on check boxes in its *Info* dialog box.

Let's define each element in more detail.

Hypermedia gurus refer to each unit in a stack as a *card*. In HyperCard IIGs each card is the size of a full screen. Using familiar *copy* (Open apple-C) and *paste* (Open apple-V) commands (also available on the pull-down *Edit* menu) you can create as many cards as you need at the outset, or you can insert them later on. Flexibility is a HyperCard IIGs hallmark.

In hypermedia parlance, all cards in a stack can share a common *background* layer. Discrete groups of cards in a single stack can show different backgrounds, however, or each card can have a unique background.

An apt metaphor for the card/background relationship is an ordinary plastic transparency placed on top of a piece of typing paper. Anything you "draw" on the background paper will show through the original transparency — and any other transparencies you might substitute. The transparencies are like hypermedia cards sharing a common background. A common background can lend a consistent look to all cards or to a series of cards in your stack. Common background elements save

TIPS & TECHNIQUES

- **Use HyperCard's floating palettes.** Select any paint tool from the *Tools* menu. Pull down the menu again, but this time continue dragging until the menu "tears off" the menu bar. Tear off the patterns palette in similar fashion from the *Patterns* menu. To tear off the go palette, you have to press the open-apple key before dragging the *Go* menu. Reposition (or close) floating palettes whenever the need arises, for greater stack-building convenience.

- **Experiment with HyperCard's ready-made color palettes.** The *Choose ColorSet* feature's listed in the *Options* menu, which appears on the menu bar whenever you select a paint tool from the tools palette (or menu). The default palette sports bright colors kids love. Other palettes feature pastels and earth tones. Because cards and backgrounds can have different palettes, you can fine-tune colors precisely or swap color sets on a whim.

- **Number the cards in your stack.** That way, users can orient themselves better when they browse through your applications. To display each card's number, create a text field named *Label* on the background. Select *Background Info* from the *Objects* menu. Click on the *Script* button. Type the following script and click on the *OK* button when you're done:

```
on openCard
```

```
  put "Card" && number of this card into background field "Label"
end openCard
```

- **Cover up card numbers where desired.** Use opaque paint and the brush tool to cover up the *Label* field and its contents.

- **Set up as many common elements as you can on the background layer.** Instead of having to copy and paste objects to a

series of cards, you can let the background buttons, text, clip art, and bit-mapped paintings show through. For maximum flexibility, though, consider placing most navigation buttons on the first card you create. Then make as many copies of that card as you need. Your stack will have a consistent "look and feel," but you can selectively delete buttons that don't make sense on a given card.

- **Incorporate interesting visual transitions between cards.** Choose the button tool from the tools palette. Double-click on the *Next* button (or another navigation button) to open its *Button Info* dialog. Click on the *Script* button and type the following lines; click on the *OK* button when you're done:

```
on mouseUp
  visual effect barn door open
  go next card
end mouseUp
```

Select the hand tool. When you click on the button you just fine-tuned, the next screen should open from the center like a two-panel barn door. Other visual effects are described in your HyperCard IIGs manuals.

- **Find hidden buttons.** Press the option and open-apple keys simultaneously. A rectangular frame appears around each button making it easy to find buttons you've disguised.

- **HyperCard IIGs assigns a random ID number to each card you create; get into the habit of using them.** You can avoid a lot of frustration by using ID numbers in scripts such as "go to card ID 4075." To determine the ID, go to

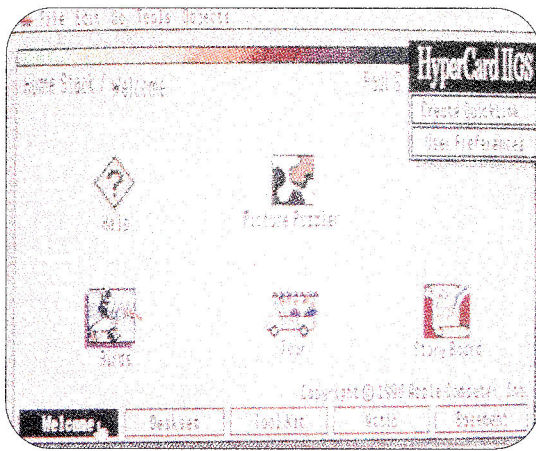


Figure 1. HyperCard IIGS Welcome screen.

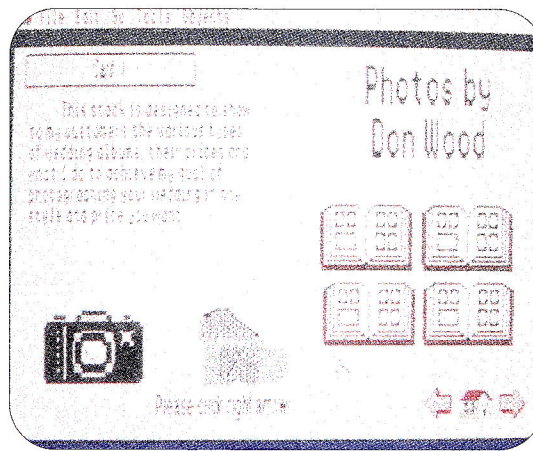


Figure 2. Wedding Stack card, by Don Wood.

development time, too. You can create a *New Background* (*Objects* menu) whenever you like, though.

Keep in mind that any object you place on a card is specific to that card. Imagine drawing a doodle on the first transparency. The image doesn't transfer to the background paper — nor to subsequent transparencies, for that matter.

Creating a *text field* is just as easy as creating a new background: Pull down the *Objects* menu and select *New Field*. Then decide on the details in the *Field Info* dialog box. You can use any GS font in a

field, and you can color a field's text, background, and frame individually by clicking on paint chips in the *Colors* dialog's palette.

A text field can be transparent or opaque and sport a rectangular or shadow-box frame, or no frame at all. Scrolling text fields, which look something like document windows from your favorite GS or Macintosh word processor, accommodate long text passages that might take up too much screen area otherwise.

Hypermedia *buttons* are like switches or "hot spots" that among other things let your readers move from one card to

the next. You can place buttons on cards or backgrounds, or both. (Remember, background buttons show through.) Clicking on a button sets off a predefined event, such as flipping to another card, playing music or sound effects, or perhaps sparking an animated scene.

Visible buttons often sport graphics icons.

Some HyperCard IIGS buttons look just like pushbuttons on home-stereo equipment; others look like the Apple Human Interface "radio" buttons typically used in GS and Macintosh programs. The *Button Ideas* stack provides a wide assortment of ready-to-use buttons, which you can select, copy, and paste into your own stacks. If you want to create your own button icons, the program's *Icon Editor* utility — yet another HyperCard IIGS resource — lets you do so.

Invisible buttons can make stack exploration more interesting for you and your

the card and open its *Card Info* dialog. When you select the *Print Card* function listed in the *File* menu, HyperCard IIGS prints the card's ID number — unless you've given the card a name. Hold off naming cards until a stack's completed.

● **Toot your horn.** Or HyperCard's, to be precise. You can open a card with a short *ta-da-daaa* trumpet voluntary. Go to the *Home Stack* and select *Tool Kit*. When the *Tool Kit* card opens, click on *Scripter's Tools*. Click on the *Sounds* category. Find the *Trumpets* sound and install that in your stack by following the instructions that appear on screen. Return to your stack. (HyperCard's *Go Recent* feature is an excellent way to move among cards in different stacks.) Proceed to the card where you want the sound effect to occur. Pull down the *Objects* menu, select *Card Info*, and click on the *Script* button. Type the following script and click on the OK button when you're done:

```
on openCard
play "trumpets"
end openCard
```

Return to the preceding card and click on a button to open the card to which you just added the trumpet blast.

● **Compose a soundtrack.** Well, not exactly. But HyperCard IIGS 1.1 does include an elementary music-composition application called *Tune Builder*. Click on musical notes (assorted durations are provided) and drag them to appropriate places on the staff. The program plays each note as it's placed and plays the complete tune when the staff is

full. You set the tempo and choose the instrumental sound you want to use. What's really neat is that HyperCard IIGS can automatically convert the tune to a HyperTalk script. All you have to do is go back to the card where you want the tune to play and paste the script that's in the computer's memory to a script for the appropriate object, such as a card or button. You can edit the script manually to accommodate flats and sharps — accidentals that *Tune Builder* doesn't seem to handle.

● **Add RAM to help HyperCard run as efficiently as possible.**

At press time the going rate was about \$40 per megabyte — cheap by historical standards. If your computer has an Apple IIGS Memory Expansion Card and it's filled with chips, you've maxed-out your GS at only 1.25 megabytes. To overcome the limitation, consider purchasing a substitute memory card such as Quality Computers' **Q-RAM GS** card, which incorporates 1-megabyte SIMMs (single in-line memory modules) and comes in 1-, 2-, and 4-megabyte configurations. Donate your old card to a local school or hold onto it for future use.

● **Should you ever decide to switch, upgrade, or cry uncle and buy a Mac, you can reformat your Apple IIGS SCSI hard-disk drive with Macintosh system software.** Moreover, according to William Potts at Quality Computers, you can use the company's Q-RAM GS SIMMs in any Macintosh. And at press time Michelle Tesdahl at Vitesse told us her company was working on a SCSI connector and Macintosh software to let **Quickie** owners use their hand-held scanners with Macs as well as Apple IIGS. Sometimes you can have your cake and eat it, too.

— C.F.

audience. You can hide buttons under clip-art illustrations, under selected areas of a full-screen painting, or under a text field. Buttons associated with important terms in a classroom lesson, for instance, could take the student to a glossary card or to a card offering additional facts, diagrams, or even full-motion video. Thanks to new tools provided by System 6.0 and HyperCard IIGs' *Media Control* stack, designing multimedia lessons is as easy as pressing buttons on your VCR.

Navigation buttons come in a wide assortment of styles, but most look like arrows that point in various directions. Copy and paste a right-arrow button into your stack, for example. When the user clicks on the button, HyperCard IIGs will advance to the next card — that is, the next part of a lesson, the next record in a database, or the next scene in a story.

The *Home* button in HyperCard IIGs is a standard feature of most stacks. The user clicks on the *Home* button (it looks like a tiny house) to leave a stack and return to HyperCard IIGs' *Home Stack* or *Welcome* card (**Figure 1**). Keep in mind that adding a *Home* button to the backgrounds in your stack is a lot less tedious than adding a *Home* button to each and every card. Buttons have awesome power, but they're not tricky to use — especially if you map out your stack before you begin (more tips on stack design below).

CHART YOUR COURSE

After fooling around with HyperCard IIGs for a while, you and your students will be surprised at how easily stack ideas begin to gel. For a jump start, you can use HyperCard IIGs' eclectic mix of sample stacks as templates. These ready-to-customize applications run the gamut from entertainment (*Picture Puzzler*) to hobby/education (*Birds*) to personal productivity (*Calendar* and *Addresses*). Term papers, favorite pastimes, personal interests, areas of expertise, and business interests are good stack starters, too.

For example, when Don Wood, an *inCider/A+* reader and Indiana-based professional photographer, wanted to help his customers choose the best format for their wedding albums, he turned to



Figure 3. Page from EnviroStack, by Cynthia Field.

HyperCard IIGs. Wood created an interactive stack that answers virtually all of a client's questions about camera capabilities, album formats, and photographic services — and even incorporates those famous measures from Wagner's *Lohengrin* (more popularly known as *Here Comes the Bride*). **Figure 2** shows one of the cards in Wood's stack.

Last autumn I designed an environmental-resources application called **EnviroStack**, available in the public domain. **Figure 3** shows the title page, created with HyperCard IIGs' paint tools. Among other features, EnviroStack includes information about "green" books, magazines, organizations, computer networks, and mail-order companies.

At press time I was working on a crime-awareness stack for children and needed only to seek permission to use some Quickie-scanned clip art of McGruff (TM), the National Crime Prevention Council's spokesdog, before putting the finishing touches on **SafetyStack**. The main menu is shown in **Figure 4**.

Other areas of the stack illustrate some of the design elements we're discussing here. For instance, the lesson on home safety begins with a full-screen painting of a house, with invisible buttons on doors and windows. Clicking on the door, for example, brings up a screen with tips such as using deadbolt locks and peep holes. The clip-art dog biscuits shown in **Figure 4** also mask hidden buttons.

You can acquire HyperCard IIGs stacks to use as templates — or as inspiration — from public-domain libraries, user groups, and on-line services (if you have a modem), as well as from commercial enterprises such as **Script-Central**, a disk-based HyperCard IIGs resource.

By all means, explore HyperCard IIGs free-style (that's the beauty of hyper-media), but before you create your own stacks draw a flowchart on paper. Each box in the flow diagram represents one of the cards in your stack-to-be. Draw arrows between boxes to show the links you'll eventually forge with HyperCard IIGs. A flowchart for a simple stack might look like a train of boxcars. A more complex sketch — such as one for Don Wood's Wedding Stack — might resemble the letter Y. The EnviroStack map looks like a three-tined pitchfork, while SafetyStack's plan is tree-like, with a main trunk, six limbs, and several offshoots.

Also, before revving up your hard drive (a program prerequisite), be sure to do your "homework" and gather appropriate resource materials. Even if you haven't purchased (or upgraded) to HyperCard IIGs 1.1 yet, begin collecting GS fonts and clip art now. That way, you'll have lots of stack-building elements at your fingertips. Public-domain libraries are excellent — and inexpensive — sources of both fonts and clip art for your Apple IIGs. From third-party companies, some of the most stack-worthy clip art we've seen includes **ClipArt Plus**, from Triad Venture's **HyperStuff Collection**, and **HyperStudio Clip Art Volumes One and Two** from Roger Wagner Publishing. Each file is a screenful of individual illustrations.

HyperCard IIGs' *Art Ideas* stack also provides hundreds of ready-to-clip illustrations. Incorporating them into your own stacks is easy — just copy an illustration to the GS clipboard and paste it into your design. To import a clip-art file from another source, select any paint tool from the HyperCard IIGs tools palette and then choose *Import Paint* from the *File* menu. Edit the artwork any way you like with HyperCard IIGs' paint tools.

Importing artwork sometimes requires using an independent application or desk accessory to lasso and copy the material — a tedious prospect, particularly if you want to incorporate more than one illustration from a single clip-art file. To avoid that inconvenience, add some spare cards at the end of each stack-in-progress to use as scrapbook pages for importing, selecting, or customizing artwork. Delete your "drawing board" cards before finalizing (and perhaps password protecting) your stack.

Stack size is an individual matter. A small stack created by a child might have fewer than ten cards. More-mature stacks usually consist of a couple dozen cards or more. According to Apple's Acquistapace, stack size is limited only by the disk space available to store the file — not by the memory in your GS. HyperCard IIGs uses *virtual memory management*: The program grabs bits and pieces as needed from the storage disk and squirrels the most frequently used data away in a memory compartment known as a *cache*. As an example, Acquistapace refers to the 150-megabyte stack with "thousands and thousands of cards" he helped create on a network file server.

But within limits, of course, the more RAM (random-access memory) you have in your GS, the faster HyperCard IIGs operates. An accelerator card can speed things up even more, particularly if it has a large cache. HyperCard IIGs requires a minimum of 1.5 megabytes of RAM, but Acquistapace recommends at least 2 megabytes.

SCRIPTWRITING 101

Earlier we said you didn't have to learn any arcane programming language to use HyperCard IIGs. Did we lie? Nah — but if you're hooked on hypermedia and want to explore it to its fullest potential, you might want to bypass the canned ingredients and create your own from scratch. How? Buttons and all the other elements of a stack "know" what to do thanks to *HyperTalk scripts*, which they obey. HyperTalk is the language that's built into HyperCard IIGs — and HyperCard for the Macintosh, as well. Most HyperCard IIGs scripts use English-like syntax; there's nothing especially challenging about a script that includes a line such as *go next*

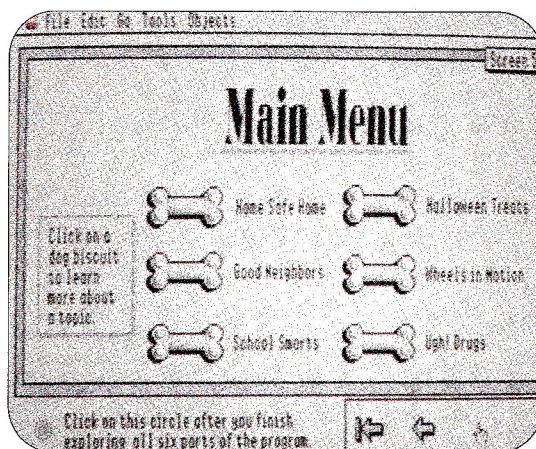


Figure 4. SafetyStack's main menu, by Cynthia Field.

card or *visual effect scroll right* or *play "harp-sichord."* Before you know it, you'll be typing on *mouseUp* like a pro (translation: "when the user clicks the mouse").

Novice HyperTalkers will find the program's accompanying *Scripting* manual an invaluable guide. (*Getting Started* and *Reference* manuals, two quick-reference cards, and abundant on-line help are also at your fingertips.) But hands-on practice is important, too. One of the best ways to learn about scripting — and HyperTalk functions and commands — is to examine some of the ready-made buttons HyperCard IIGs provides. Copy and paste a selection, then choose one and double-click on it with the button tool. Now click on the *Script* button in the *Button Info* dialog and study the language's flow. Note that each script has an I-beam for ease of editing. Adding a visual transition between two cards, for instance, is as easy as typing a four-word line in a button's HyperTalk script.

FORGING THE LINKS

Fortuitously, Apple has released its best II program ever — a software-authoring

environment, no less — at a time when GS users are depending more and more on each other for software. Investing in HyperCard IIGs is a smart move. The program's object-oriented authoring environment provides the cards, backgrounds, buttons, text fields, and graphics you need to build a never-ending array of stacks. Moreover, the HyperTalk language is, by and large, so much like English that it's easier to understand than the lingo most

teenagers use. Thanks to the program's easygoing nature and copious built-in resources, you can begin creating full-color applications that you — and the rest of us — can enjoy right away. It's the perfect way to share information and enhance personal productivity in a creative and entertaining way — and all for the price of a 3.5-inch disk.

Best of all, perhaps, is the bridge you'll build between the worlds of the IIGs and the Mac: **HyperMover**, a utility program available from Apple II user groups or the information services American Online and GENie, dismantles and rebuilds Macintosh HyperCard stacks to HyperCard IIGs specifications (and vice versa). Cross-compatibility means you'll use your HyperCard creations for years to come — and enjoy virtually unending exploration and experimentation. □

CONTRIBUTING EDITOR CYNTHIA E. FIELD IS THE AUTHOR OF PRESS ROOM, *inCider/A+*'s REGULAR COLUMN ON DESKTOP PUBLISHING. WRITE TO HER AT 60 BORDER DRIVE, WAKEFIELD, RI 02879. ENCLOSE A SELF-ADDRESSED, STAMPED ENVELOPE IF YOU'D LIKE A PERSONAL REPLY.

PRODUCT INFORMATION

HyperCard IIGs 1.1
Apple Computer, Inc.
20525 Mariani Ave.
Cupertino, CA 95014
(408) 974-1010
\$99

HyperMover
America Online
8619 Westwood
Center Drive
Vienna, VA 22182
(800) 827-6364
GENie
401 North Washington St.
Rockville, MD 20850
(800) 638-9636

HyperStudio 3.0.
\$179.95
HyperStudio Clip Art
Volume One. \$24.95
HyperStudio Clip Art
Volume Two. \$24.95
Roger Wagner Publishing
1050 Pioneer Way
Suite P
El Cajon, CA 92020
(800) 421-6526
(619) 442-0522
(619) 442-0525 fax
lab-pack, network,
site-license prices
available on request

HyperStuff Collection:
ClipArt Plus. \$39.95
ClipTunes. \$39.95
SoundConvert. \$49.95
Triad Venture, Inc.
P.O. Box 12201
Hauppauge, NY 11788
(516) 732-3771

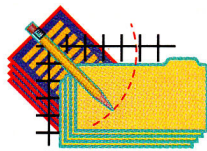
Q Drive.
\$499.95 40MB,
\$699.95 100MB,
\$1105.95 200MB
Q-RAM GS.
\$99.95 1MB,
\$149.95 2MB,
\$249.95 4MB

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St. Clair Shores, MI
48080
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technical support
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P.O. Box 929
13909 Amar Road

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La Puente, CA
91747-0929
(818) 813-1270
\$299

Script-Central
Resource Central
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Overland Park, KS 66207
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(913) 469-6507 fax
\$48/year (6 issues)
\$3 demo disk



APPLEWORKS IN ACTION

PAPER TIGER 1

**When your quarry is an important document,
track it down with an AppleWorks database.**

By RUTH K. WITKIN

SOME PEOPLE ENJOY SCAVENGER hunts at parties, Halloween get-togethers, and other fun events. Me too. Sometimes, though, they're a great big bore — when I'm scavenging around for things such as bank books, birth certificates, or passports, for instance. With nary a clue as to where I left (hid, secured, stashed "safely" away) these valuable documents, I've often spent days in fruitless search. No more! Ever since I developed the database in this month's column, I can lay my hand quickly on just about anything of critical importance. Now, where did I put my glasses?

A DATABASE FROM SCRATCH

Create a new AppleWorks database file named **IMPDOCS** (for *Important Documents*). The *Change Record/Layout* screen appears with the cursor on *Category 1*.

Figure 1 shows the ten active categories and ten spares in this database. The spares hold space for categories you're sure to want in your own database. When you include spares now, there's no need to

insert additional categories later, which would erase any custom screen layouts and report formats you've created in the meantime. All you do is overtype the spare name in this screen with something else, then make your entries in each record. You can get back to the category-name screen from just about anywhere in the database by pressing Open apple-N (OA-N).

Now press OA-Y to erase *Category 1*. Type **DOCUMENT** and press Return. Type **KEPT** and press Return. Referring to **Figure 1**, type the other category names, pressing Return after each one. The *KEPT* category shows the general whereabouts of a document, while *LOCATION* gives the specific place.

I've simplified the database by combining five categories into two, *CONTACT NAME* (first and last name) and *CITY STATE ZIP*, as you probably won't need the five for sorting. If I'm wrong, you can use spares to separate them.

Now check all categories for accuracy. If something's amiss, correct it now. If all is well, press OA-S to store the database on disk. AppleWorks now advises that you're

about to enter *Insert New Records* mode, the logical next step. Press Return (Return is just as good as the spacebar in most AppleWorks situations) and an empty Record 1 appears, awaiting your entries.

This database contains ten records. Before starting to fill them, it's

a good idea to scan the entries for repeats. **Figure 2** shows the entries for Records 2 through 10. Here are the entries for Record 1:

DOCUMENT: BIRTH CERTIFICATE
KEPT: SHORELINE
LOCATION: SAFE DEPOSIT
COMPANY/AGENCY: BUREAU OF RECORDS
PHONE: 212-555-5678
CONTACT NAME:
CONTACT TITLE:
STREET: 23 GOVT PLAZA
CITY STATE ZIP: NY NY 10021
NOTES: COPIES IN DESK FOLDER

Five records have *SHORELINE* (a bank) in the *KEPT* category and *SAFE DEPOSIT* in the *LOCATION* category. To save typing, make those entries standard for those categories: Press OA-V to bring up the *Set Standard Values* screen, and press Return to reach the *KEPT* category. Type **SHORELINE** and press Return to reach the *LOCATION* category. Type **SAFE DEPOSIT** and hit Return again.

Now hit Escape to return to the *Insert New Records* screen. Record 1 shows both standard entries.

Use Up Arrow to move the cursor to the *DOCUMENT* category. Type **BIRTH CERTIFICATE** and hit Return three times to move past the standard entries and reach the *COMPANY/AGENCY* category. Type **BUREAU OF RECORDS** and hit Return again. Now type the rest of the entries shown above for Record 1, pressing Return three times after the phone number (to move past the two empty categories) and once after every other entry.

After you type the *NOTES* entry and press Return, press OA-Down Arrow to skip the spares and go directly to Record 2.

Referring to **Figure 2**, fill Records 2 through 10 as you did Record 1. In Record 2, save typing by duplicating the *COMPANY/AGENCY* entry in Record 1. Simply press OA- (no uppercase) and AppleWorks plunks *BUREAU OF RECORDS* into the category. Do the same in the *PHONE*, *STREET*, and *CITY STATE ZIP* categories. You can also use this technique with

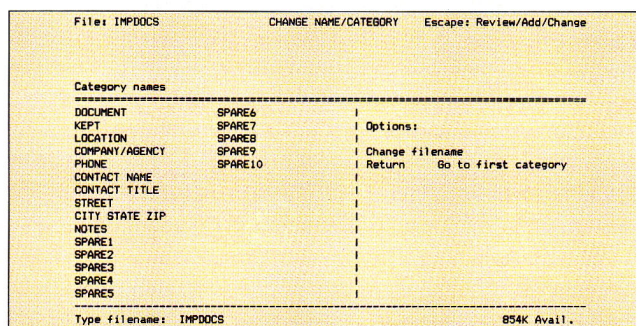


Figure 1. Category screen showing active categories and spares.

CATEGORY	RECORD 2	RECORD 3	RECORD 4
DOCUMENT	MARRIAGE CERT	BANK BOOK	TAX RETURNS
KEPT	SHORELINE	DEN DESK	BACK FILE
LOCATION	SAFE DEPOSIT	CTR DRAWER	THIRD DRAWER
COMPANY/AGENCY	BUREAU OF RECORDS	SHORELINE TRUST	STEIN & STEIN
PHONE	212-555-5678	516-555-7486	516-555-1100
CONTACT NAME		DONNA HERMAN	GEORGE STEIN
CONTACT TITLE		CHIEF TELLER	ACCOUNTANT
STREET	23 GOVT PLAZA	56 SHORE RD	9 MAIN ST
CITY STATE ZIP	NY NY 10021	ABNER NY 11812	REDFORD NY 11749
NOTES	#1230-4560-XYZ	ACCT #123456	
CATEGORY	RECORD 5	RECORD 6	RECORD 7
DOCUMENT	WILLS	PASSPORT	CAR INSURANCE
KEPT	SHORELINE	DEN DESK	DEN FILE
LOCATION	SAFE DEPOSIT	LEFT DRAWER	TOP DRAWER
COMPANY/AGENCY	SMITH & SMITH	US STATE DEPT	KRAFT INS CO
PHONE	212-555-6580	212-555-0300	212-555-1234
CONTACT NAME	CLINTON SMITH		STEVEN ASH
CONTACT TITLE	ATTORNEY		AGENT
STREET	53 HAWTHORNE RD	22 WARING PLAZA	456 MADISON AVE
CITY STATE ZIP	NY NY 11819	NY NY 10021	NY NY 10119
NOTES	COPY IN DEN FILE	RENEW SEPT 1992	SINCE 1972
CATEGORY	RECORD 8	RECORD 9	RECORD 10
DOCUMENT	IRA & KEOGH	CEMETERY DEED	LIFE INSURANCE
KEPT	DEN DESK	SHORELINE	SHORELINE
LOCATION	FILE DRAWER	SAFE DEPOSIT	SAFE DEPOSIT
COMPANY/AGENCY	FRANKLYN FUND	COMMUTER LODGE	SHORELINE
PHONE	212-555-4321	516-555-3916	516-555-3670
CONTACT NAME	CONNIE SERGI	CLIFF RADOWITZ	JOYCE MARTINEZ
CONTACT TITLE	FINANCIAL PLANNER	EX. SECTY	AGENT
STREET	223 WEST ST	78 COUNTRY DR	89 MAPLE GATE
CITY STATE ZIP	NY NY 10021	ABNER NY 11812	ABNER NY 11812
NOTES	REVIEW JULY 92		TERM \$75K

Figure 2. Records 2 through 10 in documents database.

File: IMPDOCS			Page 1	
Report: LOCATE/REPLACE				
DOCUMENT	KEPT	LOCATION	COMPANY/AGENCY	PHONE

BIRTH CERTIFICATE	SHORELINE	SAFE DEPOSIT	BUREAU OF RECORDS	212-555-5678
MARRIAGE CERT	SHORELINE	SAFE DEPOSIT	BUREAU OF RECORDS	212-555-5678
BANK BOOK	DEN DESK	CTR DRAWER	SHORELINE TRUST	516-555-7486
TAX RETURNS	BACK FILE	THIRD DRAWER	STEIN & STEIN	516-555-1100
WILLS	SHORELINE	SAFE DEPOSIT	SMITH & SMITH	212-555-6580
PASSPORT	DEN DESK	LEFT DRAWER	US STATE DEPT	212-555-0300
CAR INSURANCE	DEN FILE	TOP DRAWER	KRAFT INS CO	212-555-1234
IRA & KEOGH	DEN DESK	FILE DRAWER	FRANKLYN FUND	212-555-4321
CEMETERY DEED	SHORELINE	SAFE DEPOSIT	COMMUTER LODGE	516-555-3916
LIFE INSURANCE	SHORELINE	SAFE DEPOSIT	SHORELINE	516-555-3670

Figure 3. List of important documents, where they're kept, and numbers to contact about replacements.

Records 9 and 10. In Record 10, duplicate the *Abner* entry in Record 9 by pressing OA-~ when the cursor is in the *CITY STATE ZIP* category.

When you need a nonstandard entry in a standardized category, press OA-E to switch to the overtype cursor, then overtype the standard item. For example, when you get to Record 3, overtype *SHORELINE* with *DEN DESK* and *SAFE DEPOSIT* with *CTR DRAWER*. Pressing OAY erases any leftover characters.

When you finish, the cursor should be in the *SPARE1* category in Record 10. Press OA-E to toggle back to the insert cursor, if you like. Then press OA-S to store everything on disk.

The database returns in multiple-record layout, which shows all records, each on a separate line. (You can redisplay single-record layout by pressing the toggle OA-Z.) Otherwise, press OA-< to see the first five categories in each record.

You can make the screen more pleasing to the eye by adjusting column widths.

Records 9 and 10. In Record 10, duplicate the *Abner* entry in Record 9 by pressing OA-~ when the cursor is in the *CITY STATE ZIP* category.

When you finish, the cursor should be in the *SPARE1* category in Record 10. Press OA-E to toggle back to the insert cursor, if you like. Then press OA-S to store everything on disk.

- a list of document locations, contact companies, and phone numbers (Figure 3)
- an expanded list of document locations, contact companies, phone numbers, contact names, and contact titles (Figure 4)
- a labels report showing the entries in every record (Figure 5)

REPORT 1

Report 1 contains basic information you need to locate or replace important documents. Press OA-P to access the *Report* menu, and confirm *Create a new "tables"*

Press OA-L to bring up the *Change Record Layout* screen. Each column is now 15 characters wide. Make the *DOCUMENT* column wider by pressing OA-Right Arrow three times. Next, press Tab to move to the *KEPT* category. Make this category narrower by pressing OA-Left Arrow three times. And finally, press Tab twice to move to the *COMPANY/AGENCY* category. Press OA-Right Arrow four times. *LOCATION*, *PHONE*, *CONTACT NAME*, *CONTACT TITLE*, *STREET*, *CITY STATE ZIP*, and the spares remain at the standard width.

Press Escape to leave AppleWorks' *Change Record Layout* screen.

To make record entry easier when you use this database on your own, type 2 and hit Return to tell AppleWorks to move the cursor to the right when you press Return. Ah yes, quite a difference in the way things look. Press OA-S to store the database on disk.

Now we'll create three reports:

- a list of document locations, contact companies, and phone numbers (Figure 3)
- an expanded list of document locations, contact companies, phone numbers, contact names, and contact titles (Figure 4)
- a labels report showing the entries in every record (Figure 5)

format. AppleWorks now lets you choose to create a format from scratch or from the current record layout. The screen you just designed will look good on paper, so type 2 and hit Return. Type **LOCATE/REPLACE** (the name of this report) and hit Return again. You're now in the *Report Format* screen.

Before you do anything else, preview this report: Press OA-P to bring up the *Print the Report* screen. Now type the number (typically 2) that selects *The screen*, and hit Return twice. Looks good enough to print, so press Return to reaccess *Report Format*.

Now turn on your printer. Press OA-P, select the printer, and hit Return. Type today's date (or with a computer clock, type @) and confirm 1 copy. The printer whirs away, and there's the document list looking like Figure 3. Press Escape to return to the *Report* menu.

REPORT 2

Report 2, in Figure 4, contains the same information as Report 1, plus the contact name and contact title. This is the kind of list you can give to a lawyer, a responsible friend or relative, or someone else looking after your affairs.

It doesn't matter whether you create this report format from the current record layout or from the first report. This time, duplicate the first report: Type 4 to choose *Duplicate an existing format* and press the return key twice.

Hold down Right Arrow until the cursor is after the report name, press the spacebar, type **PLUS** (to make the new report name *LOCATE/REPLACE PLUS*), and hit Return again.

In Report 1, you printed the first five categories, the same ones you saw on screen. This time you want to print the

DOCUMENTS AND CONTACTS - BUDDY AND JILL MALTESE - MAY 1992							Page 1
File: IMPDOCS							
Report: LOCATE/REPLACE PLUS							
DOCUMENT	KEPT	LOCATION	COMPANY/AGENCY	PHONE	CONTACT NAME	CONTACT TITLE	
BIRTH CERTIFICATE	SHORELINE	SAFE DEPOSIT	BUREAU OF RECORDS	212-555-5678	-	-	
MARRIAGE CERT	SHORELINE	SAFE DEPOSIT	BUREAU OF RECORDS	212-555-5678	-	-	
BANK BOOK	DEN DESK	CTR DRAWER	SHORELINE TRUST	516-555-7486	DONNA HERMAN	CHIEF TELLER	
TAX RETURNS	BACK FILE	THIRD DRAWER	STEIN & STEIN	516-555-1100	GEORGE STEIN	ACCOUNTANT	
WILLS	SHORELINE	SAFE DEPOSIT	SMITH & SMITH	212-555-6580	CLINTON SMITH	ATTORNEY	
PASSPORT	DEN DESK	LEFT DRAWER	US STATE DEPT	212-555-0300	-	-	
CAR INSURANCE	DEN FILE	TOP DRAWER	KRAFT INS CO	212-555-1234	STEVEN ASH	AGENT	
IRA & KEOGH	DEN DESK	FILE DRAWER	FRANKLYN FUND	212-555-4321	CONNIE SERGI	FINANCIAL PLANNER	
CEMETERY DEED	SHORELINE	SAFE DEPOSIT	COMMUTER LODGE	516-555-3916	CLIFF RADOMITZ	EX. SECTY	
LIFE INSURANCE	SHORELINE	SAFE DEPOSIT	SHORELINE	516-555-3670	JOYCE MARTINEZ	AGENT	

Figure 4. Expanded list of documents and contacts.

File: IMPDOCS Page 1
Report: ALL RECORDS-LABELS

DOCUMENT: BIRTH CERTIFICATE
KEPT: SHORELINE
LOCATION: SAFE DEPOSIT
COMPANY/AGENCY: BUREAU OF RECORDS
PHONE: 212-555-5678
CONTACT NAME: -
CONTACT TITLE: -
STREET: 23 GOVT PLAZA
CITY STATE ZIP: NY NY 10021
NOTES: COPIES IN DESK FOLDER

DOCUMENT: MARRIAGE CERT
KEPT: SHORELINE
LOCATION: SAFE DEPOSIT
COMPANY/AGENCY: BUREAU OF RECORDS
PHONE: 212-555-5678
CONTACT NAME: -
CONTACT TITLE: -
STREET: 23 GOVT PLAZA
CITY STATE ZIP: NY NY 10021
NOTES: #1230-4560-XVZ

DOCUMENT: BANK BOOK
KEPT: DEN DESK
LOCATION: CTR DRAWER
COMPANY/AGENCY: SHORELINE TRUST
PHONE: 516-555-7486
CONTACT NAME: DONNA HERMAN
CONTACT TITLE: CHIEF TELLER
STREET: 56 SHORE RD
CITY STATE ZIP: ABNER NY 11812
NOTES: ACCT #123456

DOCUMENT: TAX RETURNS
KEPT: BACK FILE
LOCATION: THIRD DRAWER
COMPANY/AGENCY: STEIN & STEIN
PHONE: 516-555-1100
CONTACT NAME: GEORGE STEIN
CONTACT TITLE: ACCOUNTANT
STREET: 9 MAIN ST
CITY STATE ZIP: REDFORD NY 11749
NOTES: -

DOCUMENT: WILLS
KEPT: SHORELINE
LOCATION: SAFE DEPOSIT
COMPANY/AGENCY: SMITH & SMITH
PHONE: 212-555-6580
CONTACT NAME: CLINTON SMITH
CONTACT TITLE: ATTORNEY
STREET: 53 HAWTHORNE RD
CITY STATE ZIP: NY NY 11819
NOTES: COPY IN DEN FILE

Figure 5. First page of labels report showing first five records.

first seven categories. You need to widen the last two categories: Press Tab five times to reach the *CONTACT NAME* category. As you did earlier in the *Review/Add/Change* screen, press OA-Right Arrow three times to increase the column width. Press Tab to move to the *CONTACT TITLE* category and again press OA-Right Arrow three times. Press Left Arrow six times to move back to the *DOCUMENT* category.

Now create the report title you see in **Figure 4**: Press OA-N and hit Return. The cursor jumps to the line above the category names. Hold down the spacebar until the cursor is above the *K* in *KEPT*. Then type **DOCUMENTS AND CONTACTS — BUDDY AND JILL MALTESE — May 1992**. (Okay, okay, you can use your own name.) Now hit Return to leave the title line.

Next, create the print settings. Reduce the size of the printed character so that more categories can fit on the page: Press

OA-O to bring up the *Printer Options* screen. Type **CI** (for *Chars per Inch*) and press Return. Type **15** and hit Return again.

Double spacing makes a report easier to read, particularly when you're using small characters: Type **DS** (for *Double Spacing*) and hit Return. Some records lack a contact title or contact name, so toggle the *Print a Dash* when an entry is blank: Type **PD** and hit Return. This completes the print settings, so press Escape.

It's printing time again, so be sure your machine is on. Press OA-P, then hit Return three times to confirm the printer, date, and 1 copy. After the report prints, hit Escape to return to the *Report* menu.

REPORT 3

Figure 5 shows the records in labels format. Here, you can see every entry in a record. **Figure 6** shows the format that produces this report.

Type **3** to *Create a new "labels" format* and hit Return twice, the second time to confirm *From scratch*. Type **ALL RECORDS — LABELS** (the name of this report) and hit Return. AppleWorks produces the original two columns of category names.

You can do without the spare categories: Hold down Right Arrow until the cursor is on the *S* in *SPARE6* and press OA-D to delete it. Press Down Arrow to reach *SPARE7* and press OA-D again. Delete the other spares in this column the same way. (These deletions are temporary; you can reinsert the items at any time with OA-I.)

Now press Return six times to reach *SPARE1* in the left column. Press OA-D nine times to delete all six spares and leave one empty line.

In a labels report, it helps to see the category names along with the entries: Press Up Arrow to reach the *NOTES* category, and press OA-V. A colon and the words *COPIES IN DESK FOLDER*, the Record 1 entry in this category, appear after *NOTES*.

Press Up Arrow to move to the *CITY STATE ZIP* category, and press OA-V again. And again, AppleWorks pops in the entry from the first record. Continue this way, turning on the category name in

the other categories. When you finish, your screen should look like **Figure 6**.

Now create the print settings for this report: Press OA-O. Increase the left margin: Type **LM** and press Return. Type **2** and hit Return again. Now increase the right margin: Type **RM** and press Return. Type **2** and hit Return again. (The right-margin setting shifts the page number to the left, which gives the report better balance.) Now increase the top margin: Type **TM** and press Return. Type **.5** and hit Return again. And finally, have AppleWorks print a dash when an entry is blank: Type **PD** and hit Return. Press Escape to return to the *Report Format* screen.

This report prints on two pages. Be sure the printer is turned on. Press OA-P and hit Return three times. And here come the records, one after the other. When printing stops, press OA-S to save the database and return to the *Review/Add/Change* screen.

WORD TO THE WISE

Before you begin filling records in earnest, scan your input information for oft-repeated entries. Then, in the *Set Standard Values* screen (OA-V), make them standard entries. You can remove standard values in the *Set Standard Values* screen by moving to the category and pressing OAY.

It's a good idea to keep records in logical order, not in the random order in which you enter them. For example, you can alphabetize by document name by placing the cursor on the *DOCUMENT* category, pressing OA-A to start the *Arrange* command, and hitting Return to confirm *From A to Z*.

You can use this database to generate other useful reports, and even merge them with letters created with AppleWorks' word processor. Next time, you'll write a letter to a close family member and include a list of important documents and notes. □

File: IMPDOCS REPORT FORMAT Escape: Report Menu
Report: ALL RECORDS-LABELS
Selection: All records

=====

DOCUMENT: BIRTH CERTIFICATE
KEPT: SHORELINE
LOCATION: SAFE DEPOSIT
COMPANY/AGENCY: BUREAU OF RECORDS
PHONE: 212-555-5678
CONTACT NAME:
CONTACT TITLE:
STREET: 23 GOVT PLAZA
CITY STATE ZIP: NY NY 10021
NOTES: COPIES IN DESK FOLDER

-----Each record will print 11 lines-----

Use options shown on Help Screen 6146 ps

Figure 6. Format for labels report.



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VACATION GETAWAYS

Recapture the fun with a desktop-published travelogue and photo-album inserts.

By CYNTHIA E. FIELD, Ph.D.

IF YOU'RE ANYTHING LIKE ME, you've stashed away shoeboxes full of old vacation photos. Every once in a while you take them out, browse through them, and wonder, "Where was this one taken? Didn't we have kids then? Haven't we always had kids?"

Well, it's time to get those cherished memories organized the Press Room way — or, more accurately, the Arthur J. Howes and Ginny Timmerman way. Moreover, if you plan to capture upcoming summer recreational events with a camcorder, check out the "Take 2" section below. Making VHS videocassette labels with your Macintosh or Apple II is as easy as looking through a viewfinder.

FASTEN YOUR SEAT BELT

Arthur J. Howes recently shared with me a travelogue he designed using the **AppleWorks GS** page-layout module. Howes and his wife, Pat, who live in North Andover, Massachusetts, toured Britain during two weeks last May. **Figure 1** shows a page from Howes' entertaining account. Among the places on their itinerary was Thirsk, where, Howes recounts, James Herriot — author of *All Creatures Great and Small*

and other books — still practices veterinary medicine.

Besides creating a keepsake for themselves, the Howes wanted to send copies of their memoirs to Frances and Mary, their Scottish hostesses. "Since both women have seen their 60th birthdays," says Arthur, "I wanted the printout to be readable without help from grandchildren."

Working for optimum readability, Howes discovered, meant fussing with various ImageWriter II printer drivers, as well as printing options such as *Better Text* and *Better Color*. In the end he designed and

printed his title page in color, but printed (and photocopied) the bulk of the report in black-and-white. Howes selected the ImageWriter II driver supplied with GS/OS 5.0.4 and used the 14-point Palatino font.

Like many Apple II desktop publishers, Howes drafted the text of his 13-page booklet with the **AppleWorks 3.0** word processor. For the title page he selected full-color graphics — a map of the British Isles and two coats of arms — from **HyperStudio** and *inCider/A+* Special Products clip-art collections. Howes customized the illustrations with **Platinum Paint**. With his modem he downloaded digitized images of a castle and a church from America Online, the telecommunications service.

Just about any Apple II desktop-publishing (DTP) program can help you design vacation keepsakes like Howes'. Low-cost Macintosh products, such as **Publish It! Easy** and **The Writing Center**, are equally well suited to newsletter-style projects like this one.

SAY CHEESE

Meanwhile, in Bridgewater, Massachusetts, amateur photographer and Apple IIGS enthusiast Ginny Timmerman organizes souvenir photos of her holiday jaunts with **Publish It! 4** and full-color **Print Shop** graphics.

Timmerman cleverly created a series of templates sized to fit standard photo-album slots. "I use these intros to annotate my vacations," says Timmerman. "I put an intro next to the picture and, voilà: instant documentation."

Figure 2 displays two of Ginny's photography templates. They're surprisingly easy to re-create. Start up **Publish It! 4**. (This project is compatible with some earlier versions, as well.) Press Open apple-4 (OA-4) to choose *Size to Fit* mode. Select the text tool and "rubber-band" a frame (press the mouse button, drag, and

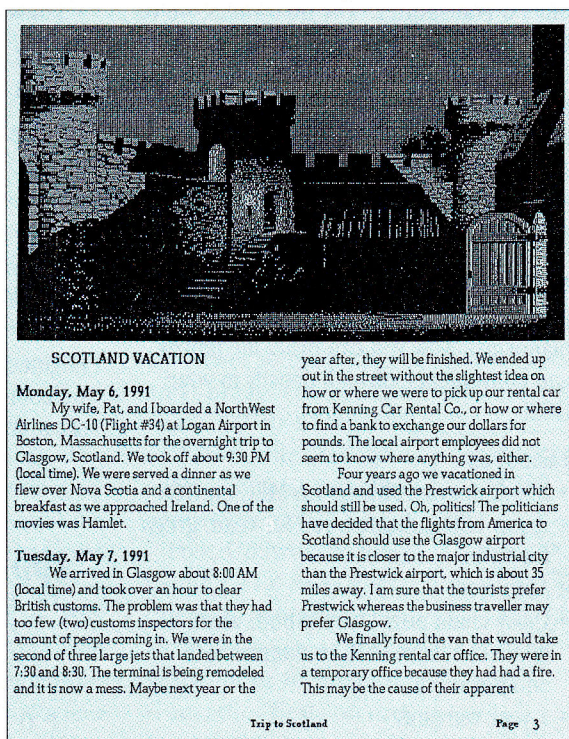


Figure 1. Page from Art Howes' vacation report.

release) that's approximately 3.5 inches wide by 5 inches high.

Thanks to Publish It!'s *Specifications* feature, you don't have to worry about eye-straining precision. Make sure the object you create is selected. (It will have "handles" at its corners.) Press OA-M to view the object's dimensions and its exact location on the page.

If the handles aren't showing, you can select the frame by clicking on it with the pointer. Instead of hitting OA-M (or pulling down the *Objects* menu), Publish It! 4 users can double-click on the object to open its *Show Specifications* dialog box automatically.

When the *Specifications* window opens, you can edit the text frame's values easily to conform to the data listed in **Table 1** for the first object in the *Photo 3.5 X 5* template. Click on the *Frame Border* check box in the *Show Specifications* dialog box. The picture-frame-like border that results will later serve as a built-in guide for separating the panels with scissors or a paper cutter. Close the window to return to the layout page. Then draw, size, and place the second text frame, and so on.

After the template is finished, save the file as **Photo.3.5X5** or any other name you like. Open a new file, name it **Photo.6X4** (or an equally descriptive name), and create two framed text objects that match the specifications provided in **Table 1**. This template is perfect for horizontal photographs.

THE EXTRAS

Dressing up Timmerman's initially plain-looking layouts is where the fun begins. Start by gathering some inspiration from the selection of designs shown in **Figure 3**.

Although she sometimes uses the Westwood and Wilmette fonts that come with the Publish It! program, Timmerman says she tends to choose script fonts, such as Joliet and Shakespeare. For maximum good looks and readability, she usually selects 18- to 36-point sizes. (See "Just Your Type," Press Room, March 1992, p. 48, for a list of sources of public-domain GS fonts that'll expand your DTP repertoire.)

Timmerman likes to experiment with clip art, too. For a murder-mystery weekend that she and her husband, Rick,

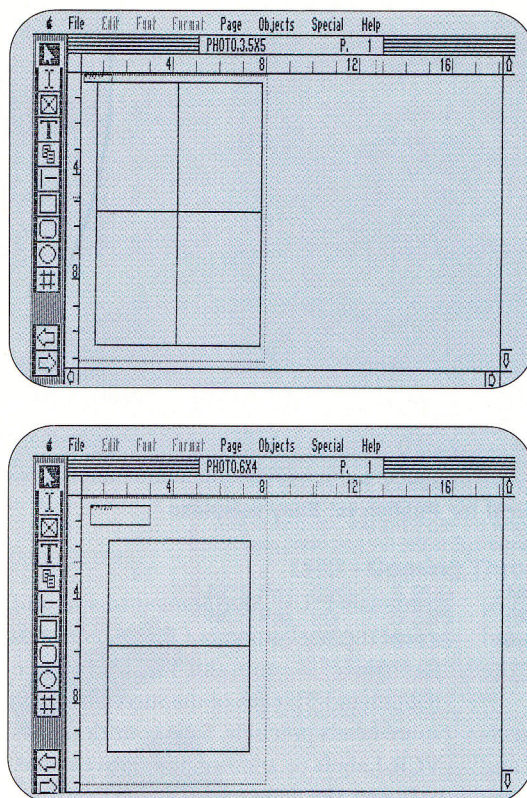


Figure 2. Screen dumps showing two of Ginny Timmerman's photo-album templates.

attended last autumn, she chose the magnifying-glass illustration from Time-works' **People, Places & Things** art-portfolio disk. Incorporating full-color illustrations often means turning to her collection of **Print Shop IIgs** clip art. For example, the "gang" clip art, shown in **Figure 3**, is the *Kids* illustration from The Print Shop IIgs **Special Edition** graphics-library disk.

"I've had a lot of fun doing this, and, although it seems like a lot of work at first, after the templates are established the hardest part is trying to decide which

graphics to use," laughs Timmerman, who notes that she no longer writes descriptions on the backs of photographs as she did "in the old days."

TAKE 2

If the recent boom in camcorder sales is any indication, family videos get top billing in many homes. Whether it's Scott's dance group, Kim's Saturday soccer match, Dad's latest "gig," or Mom's drama-guild performance, getting it all on tape is the '90s equivalent of capturing '50s events on a roll of film with a Kodak Brownie.

But even creative pursuits like videography require a degree of organization. That's why I used Publish It! Easy to design this easy template for VHS video-cassette labels.

The template requires die-cut label stock sold by **Laser Label Technologies** (see the "Product Information" box for details). Each sheet of self-adhesive stock

accommodates six face and six spine labels, as shown in the screen dump in **Figure 4**. You may be able to purchase the stock elsewhere, as well.

Start a new file with Publish It! Easy. Pull down the *File* menu and choose the *Page Setup* option. Now click on the *Tall Adjusted* check box. Pull down the *Options* menu and select *Measuring Units*. Click on the *Centimeters* radio button. (For this project, centimeters afford greater accuracy than inches.)

For best results, begin re-creating the design in *Size to Fit* mode (Command-7),

Object	Left Start	Top Start	Width	Height
Photo 3.5 X 5				
1	0.750	0.400	3.500	5.000
2	4.250	0.400	3.500	5.000
3	0.750	5.400	3.500	5.000
4	4.250	5.400	3.500	5.000
Photo 6 X 4				
1	1.250	1.750	6.000	4.000
2	1.250	5.750	6.000	4.000

Table 1. Specifications (in inches) for Ginny Timmerman's Publish It! 4 templates.

Label	Left Start	Top Start	Width	Height
Face				
1	3.10	1.10	7.65	4.10
2	10.80	1.10	7.65	4.10
3	3.10	9.80	7.65	4.10
4	10.80	9.80	7.65	4.10
5	3.10	18.50	7.65	4.10
6	10.80	18.50	7.65	4.10
Spine				
1	3.40	5.60	14.75	1.90
2	3.40	7.50	14.75	1.90
3	3.40	14.30	14.75	1.90
4	3.40	16.20	14.75	1.90
5	3.40	23.00	14.75	1.90
6	3.40	24.90	14.75	1.90

Table 2. Specifications (in centimeters) for Publish It! Easy template for VHS videocassette labels.

then switch to *Actual Size* (Command-5) when it's time to enter text. These and other viewing options are listed in the *Page* menu.

Draw a box of any size with the text-frame tool. Pull down the *Objects* menu and choose *Specifications* (or press Command-M). Type the values provided in **Table 2** for the first of six face labels.

Make sure the text object is selected. Press Command-C and then Command-V to make an identical copy. (You may not be able to see this second frame, because it's superimposed on the first.)

Now press Command-M and type the specifications for the second face label. Continue this way until all six face labels are drawn and positioned.

Use the text-frame tool to draw the first

spine label. Use *Specifications* to size and orient the label properly. Copy (Command-C), paste (Command-V), and place (Command-M) each of the succeeding five spine labels precisely. Save your design as **VCR.Labels** or another descriptive name.

Insert the I-beam into the first face label — or spine label, if you prefer. Select a font (*Style* menu) for typing the name and important details about the event. Format text vertically and horizontally by choosing, among other options, *Line Spacing* and *Justification* from the *Text* menu.

When you're done, use Publish It! Easy's copy and paste functions to transfer the already fully formatted text from the first label to subsequent ones. That way, you won't have to retype and reformat the same information 11 separate times.

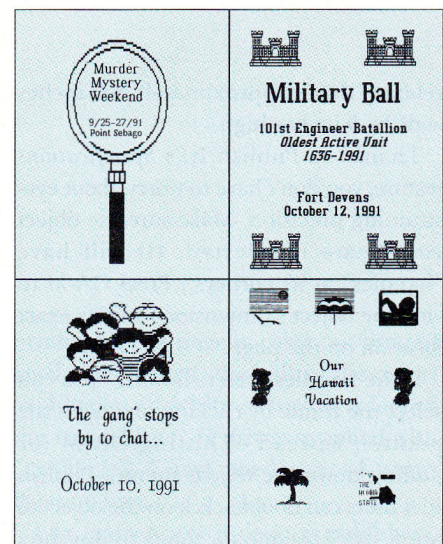


Figure 3. Black-and-white version of Ginny Timmerman's album-insert designs.

For my sample labels (**Figure 5**) I experimented with a variety of fonts, but eventually chose plain old Helvetica and two ornamented fonts from Casady & Greene's **Fluent Laser Fonts Library**: *Flourish Bold* and *Crescendo*. I used 18-point *Flourish Bold* for the *Wakefield Civic Band* name, then preceded and followed the name with a musical-notation character from the 18-point *Crescendo* font. Tried-and-true Helvetica in 12-point size seemed perfect for the name and date of my hypothetical event.

ROLL THE PRESSES

The *Fluent Laser Fonts Library* contains some six-dozen PostScript fonts. Although I have a PostScript laser printer, I can also use the Casady & Greene fonts on

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my non-PostScript ImageWriter II, thanks to **Adobe Type Manager (ATM)**. ATM smooths out the "jaggies" that otherwise diminish the quality of text characters appearing on screen and in dot-matrix printouts. Whether or not you use a PostScript laser printer, Fluent Laser Fonts Library and Adobe Type Manager are worthwhile investments. (For more information on PostScript and Adobe Type Manager, see "Words into Print," April 1992, p. 32.)

When your label design is complete, save it with a distinctive name. To conserve label stock, prepare a test printout on ordinary paper. Insert the sheet of paper into your ImageWriter II. Make sure the left edge of the paper lines up with the single-sheet icon on the back cover of the printer. Press the form-feed button once to advance the paper to the top-of-page mark. Print a sample batch of labels in *Faster* mode.

Place the sample printed sheet behind a blank sheet of labels. Hold the two pages

up to the light to make sure everything lines up right. On printers other than the ImageWriter II, you may have to make minor alignment adjustments.

When everything looks okay, use Publish It! Easy's *Best* mode to print as many sheets of labels as you need. As an alternative, print one master sheet and photocopy additional labels as needed.

UP AND AWAY

People like Art and Ginniy put me to shame; that is, they *used* to. But thanks to their creativity and willingness to share, I'm ready for this year's vacation — *if* I can squeeze into last year's swimsuit. □

CONTRIBUTING EDITOR CYNTHIA E. FIELD IS A FREE-LANCE JOURNALIST SPECIALIZING IN COMPUTER-RELATED TOPICS. SHE'S A FREQUENT CONTRIBUTOR TO *inCider/A+*'s REVIEWS AND FEATURE SECTIONS. WRITE TO HER AT 60 BORDER DRIVE, WAKEFIELD, RI 02879. ENCLOSE AN SASE IF YOU'D LIKE A PERSONAL REPLY.

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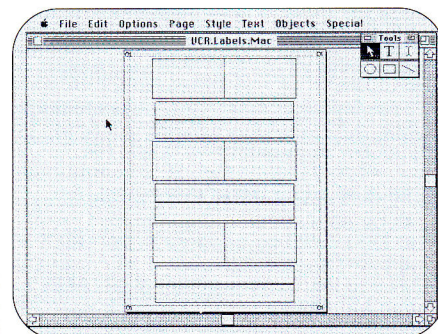


Figure 4. Screen dump showing VHS videocassette-label template created with Publish It! Easy.

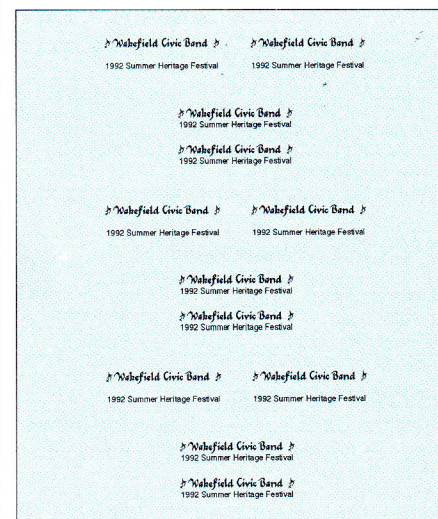


Figure 5. Videocassette labels created with Publish It! Easy.

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Although HyperStudio contains a staggering number of features, two of the more important ones are *New Button Actions* (NBAs) and *SimpleScript*. NBAs provide the ability to add features not already available from HyperStudio. Roger Wagner Publishing has released a freeware Developer Disk, available from user groups and on-line networks, that will let third-party software developers create additional NBAs — buttons that, for example, can play music created with FTA's NoiseTracker program or display animated cartoons created with Broderbund's Fantavision.

SimpleScript is a complete programming language built right into HyperStudio; it lets stack designers create special effects undreamed of in earlier versions of the package. Unlike writing in more-traditional programming languages, you can invoke SimpleScript's commands from a pull-down menu, with HyperStudio itself generating the actual programming code.

With SimpleScript, it's now just as easy to create a pop-up dialog box displaying any message you want as it is to create a multiple-choice quiz with HyperStudio keeping score. You can now also add math functions easily to stacks from SimpleScript, or ask a browser to input his or her name. SimpleScript includes more than 80 commands, and each one adds increased functionality to HyperStudio.

TO THE HYPER-BAT-CAVE!

Now that you've spent days creating the perfect stack, what's next? You don't have to let it sit gathering dust; HyperStudio comes with a run-time module that lets even users who don't own the full HyperStudio package browse through your stacks. For a modest fee, you can purchase a license to distribute the run-time module with your commercial stacks. If you're writing freeware or shareware, there's no charge.

If you've never used HyperStudio or browsed through a stack, or if you're still not convinced that version 3.0 is the most fantastic program ever released for the GS, contact Roger Wagner Publishing for a \$10 ten-disk demo edition. If that doesn't hook you, maybe it's time for you to give up computers.

Joe Kohn
San Rafael, CA



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Integrated applications offer several advantages over conventional stand-alone packages: You get a series of programs framed by a single interface; there's no need to venture beyond the integrated shell; one package provides many productivity options. Plus . . . integrated applications are *in*. Mac fans brandish GreatWorks, ClarisWorks, and BeagleWorks; MS-DOS people wield GeoWorks and promise a kinder, gentler, but more feature-rich Microsoft Works. Now LogoEnsemble salutes Apple IIgs Logo programming enthusiasts with its own version of the genre.

ELECTRONIC BUNDLE

Logo Computer Systems Inc.'s (LCSI) LogoWriter has been putting text and graphics in a geometry-like programming environment for years. LogoExpress adds the power of telecommunications, letting LogoWriter aficionados use a computer like an electronic mailbox and encouraging youngsters to send double-sided LogoWriter pages (complete with text, graphics, and procedures) over phone lines to computer-savvy friends also running the program.

LogoEnsemble, the most recent Logo learning system from the turtle-graphics folks north of the border, combines a word processor with graphics capabilities, provides telecommunications options, and incorporates a database manager with basic spreadsheet functions, adding still more functionality to the Logo programming language. Youngsters can embed Logo graphics in their word-processed documents, while using material from the database module to help create those graphics.

Everything takes place within the familiar LogoWriter environment. Anyone who has worked with the LogoWriter/LogoExpress command structure shouldn't find it difficult to learn new LogoEnsemble commands. Be aware, though, that LogoEnsemble's documentation — four manuals and a *Quick Reference* card — is neither clearly written nor well organized, and you may find yourself putting in a few calls to LCSI's toll-free technical-assistance line.

ROUGH EDGES

LogoEnsemble offers both mouse support and keyboard alternatives, but as with LogoWriter GS, LogoEnsemble's *Contents* page doesn't have a typical GS interface: It lacks a menu bar, pull-down menus, and scroll arrows. For instance, to scroll through a list of files on the *Contents* page, you must click on either the solid line at the bottom of the screen or the topmost title line. Typing *BYE* from the *Command Center* saves the current page and database and quits LogoEnsemble, but there's no way to quit to the GS Finder from the *Contents* page.

LogoEnsemble's word processor lets you type 80 standard-sized or 40 larger characters per line and features bold, italic, and underline type styles. The *Shape Editor* comes with 38 predefined graphics you can stamp on a page. *Shape Editor* tools let you define (or modify) up to 90 LogoEnsemble shapes.

Every new database contains ten blank columns (*fields*) and ten empty rows (*records*); you customize the layout by naming fields, determining column width, and inputting data into cells. You can add more columns and rows if needed. Unlike conventional databases, LogoEnsemble always displays information in *List*



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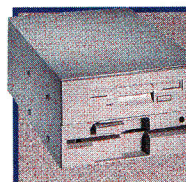
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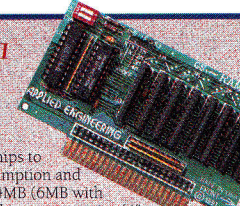
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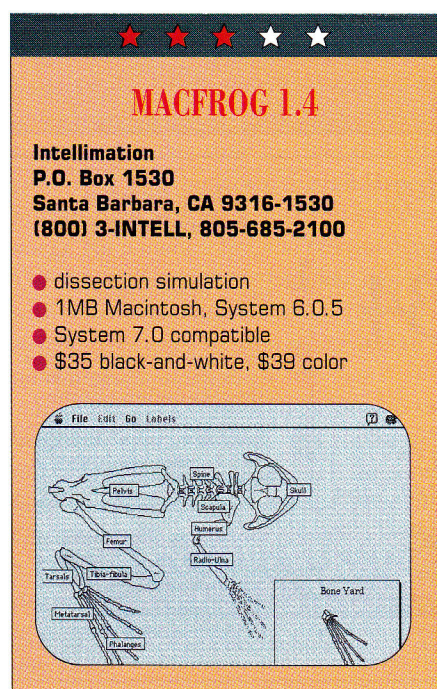
(columnar report) layout; you can't zoom in for a bird's-eye view of a single record. Also, many database commands we've come to view as standard don't work the same way in LogoEnsemble. For instance, pressing the tab key creates a marker within a cell, instead of moving the cursor to the next cell over. Moving around the database requires that you first press the escape key and then use the cursor-control keys.

TURTLE POWER

But LogoEnsemble does give youngsters a chance to become acquainted with basic database functions such as alphabetic and numeric sorts, find, choose, and calculate. It even lets them write procedures that direct the computer to enter answers in appropriate database cells. Kids don't just work with databases, they draw on database information to write reports, illustrate reports with graphics, and transmit the finished product via modem to friends at other computers.

More fleet of foot than Michelangelo, more powerful than Donatello, this software lets youngsters organize, classify, and analyze data in ways not possible with earlier LogoWriter tools — and anything that stimulates kids' creativity and thinking skills that way is worth a second look.

Carol S. Holzberg, Ph.D.
Shutesbury, MA



Ask some typical junior- or senior-high-school students what they think of biology lab and they'll probably pinch their noses. Besides making your science classes less malodorous, MacFrog — an interactive HyperCard-style simulation of frog dissection for the Macintosh — can lessen the scalpel anxiety that even future surgeons may experience when they encounter their first preserved or (gadzooks!) live specimen.

CUTTING UP IN SCHOOL

You can run the program from either a floppy- or a hard-disk drive. The hard drive's faster and provides more room for the *MacFrog Log*, which tracks students' progress on the comprehensive 20-question *Frog Test*.

Although the MacFrog manual says you can't save the data log if you run the program from a floppy disk, I was able to create, save, and recall a hypothetical student log when using the floppy-disk version of the program — despite the appearance of an alert box warning "MacFrog is out of disk space! Changes cannot be saved."

Showing off its Macintosh personality with sound and graphics, MacFrog is something like an electronic lab manual or anatomical atlas. The program plays frog chirps and "ribbits"; an animated amphibian slurps an unwitting fly in the program's opening scene. The black-and-white version of MacFrog is reviewed here; a color version is also available.

The program encompasses the anatomy of the mouth as well as of the digestive, circulatory, female reproductive, and skeletal systems.

In my opinion, MacFrog tends to use the term "system" a little sloppily; most biologists generally consider the mouth to be part of the digestive system, not a system in itself, but MacFrog refers to it as such.

Moreover, MacFrog packages the lungs and kidneys — organs ordinarily categorized in the respiratory and excretory systems, respectively — within the diagram of the circulatory system.

To its credit, the program emphasizes the frog's three-chambered heart (it even "beats" on screen), but doesn't require students to dissect veins or arteries.

MacFrog's illustrations and diagrams are, for the most part, clearly rendered and accurate. The digitized image of the frog's mouth is a little difficult to visualize at first, but line drawings of various systems are easy to see. Bones are particularly well drawn.

The level of interaction in MacFrog's dissection varies from system to system. For the mouth, the student merely clicks on labeled parts to learn more about them. Dissection of the digestive, circulatory, and reproductive systems requires the student to pick up organs from the frog and place them in appropriate places in a "frog parts" window on the left-hand side of the screen.

The cursor changes to a forceps when it's near an organ; you dissect the organ by dragging it with the mouse. Pop-up windows provide clear, concise explanations of each organ and its function.

The skeletal-system module asks the student to drag selected bones (or bone groups) from the *Bone Yard* to their appropriate places on the dimmed frog skeleton on screen. The program labels each bone as it's placed. An activity called *Review Time!* displays a complete skeleton; students drag bone names from the *Quiz Words* window to blank labels on the skeleton.

A FEW QUIRKS

Unfortunately, MacFrog doesn't offer a *Print* option. Some of the screens would make nice handouts for study away from the computer or away from the actual frog. (As an alternative, consider using your Mac's built-in screen-dump capability.)

MacFrog is also sprinkled with inconsistencies. In the dissection of some systems, the student must click on the *Continue* button to proceed, but that action's not required in the module that teaches kids about the mouth. All you have to do is click on another mouth-part label.

In the dissection — really the reconstruction — of the frog's skeletal system, "hand" bones are collectively referred to as "metacarpus," but in *Review Time!* they're called "metacarpals." Depending on usage, either term is correct, but students may become confused by inconsistent terminology that lacks further explanation.

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As an added bonus, you can get Signature GS, the snappy utility that gives your GS desktop that Mac-like look, for only \$19⁹⁵ (reg. 29⁹⁵).

REVIEWS

Lack of attention to small details is apparent even in the main menu, the *Topics* screen. You can choose a system by clicking on its button or by pulling down the *Go* menu, but some system names vary.

In the *Go* menu, the reproductive system's referred to as *Reproductive*, but its button's labeled *Reproduce*. The skeletal system's named *Skeletal* in the *Go* menu, but its button's labeled *Skeleton*.

Surprisingly, I also found a few inconsequential, yet jarring, grammatical errors, though they weren't related to frog anatomy or biology per se.

NAME GAME

A pop-up *Review Quiz* with five multiple-choice questions appears after the student completes each system. Quiz questions don't seem to be randomized in any way.

Reviewing the digestive system, I was a little surprised — disappointed might be a better word — that the second quiz I took didn't offer new, or at least restructured, questions. Teachers know how students tend to "share" quiz answers with their peers, and kids could also learn more if the program were to ask different questions each time.

Although this deficiency won't fluster veteran science teachers, new instructors shouldn't expect much assistance from the sparse MacFrog manual. It's devoid of diagrams or reproducibles.

I also found misleading information, including a notation that you can get *Help* from the *File* menu when, in fact, *Help* is listed under the *Apple* menu. (Although I tested version 1.4 for this review, the manual I received was for version 1.2.)

In what seems a classic case of double-speak, the manual says, "MacFrog 1.2 is basically the same program as its predecessor," but the manual then goes on to describe the version's "significant improvements" and "major upgrades."

ANY WAY YOU SLICE IT

At first blush, many instructors might reject the idea of substituting a simulated dissection for the real thing. Ideally, each group of lab partners should have its own frog to study.

Yet economic realities sometimes force teachers to perform laboratory demonstrations when supplies are limited. Then,

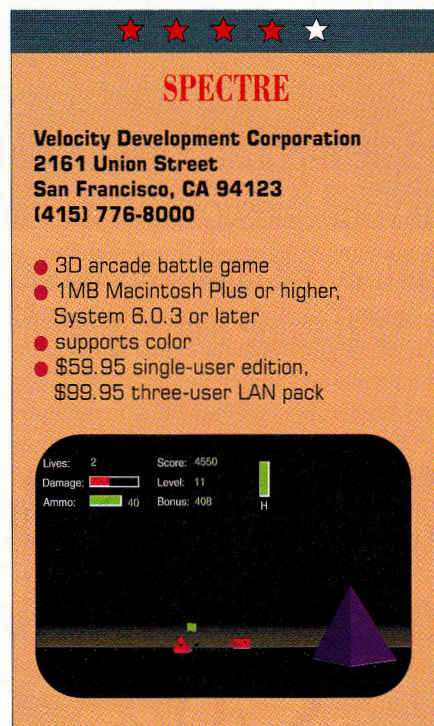
too, some students are so "reluctant" to participate in actual dissection that they become emotionally distraught.

The program is flexible enough that you can rest assured that whatever your preferences or teaching philosophy about dissection, there's probably a place for MacFrog in your lab.

Despite some misgivings about the program, I believe MacFrog can help students recognize four dozen or so anatomical structures, organs, and bones. If I were still teaching, I'd probably use MacFrog as a prelab or postlab exercise.

But I'm not on the front lines anymore — you are. Fortunately, deciding whether MacFrog is right for your classes is easy: Intellimation offers a 100-percent refund within 60 days of purchase if you're not satisfied with the program.

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



If heart-pounding, nonstop, "never take your eyes off the screen for a second" action is what you crave in a computer game, get *Spectre*.

This new arcade shoot-'em-up for the Macintosh is one of the best ever. It's got great action, smooth animation, and one of the best 3D simulations I've seen to date.

And if your reflexes are showing some

signs of age, don't despair. Success in *Spectre* consists of a mix of lightning speed and battle strategy. One can compensate for the other — up to a point.

DON'T DIE

The game itself is simple. You control a vehicle as it moves about a flat playing arena; several flags are scattered randomly around the arena. To advance to the next level, you must collect all the flags by driving over them. The faster you do it, the more bonus points you can get. That's it.

Oh, there's one more thing: computer-controlled enemy vehicles. Stray too close and they start shooting. If you get shot enough times, you're destroyed. To avoid that, you can either run away or use your cannon to shoot back.

Success is rather easy on the early levels. Most people should be able to get to level 9 or thereabouts within a couple of days; after that, the going gets tougher as the number, strength, intelligence, and aggressiveness of enemy vehicles increase. For instance, they'll begin attacking you in groups, or hang around a flag and wait for you to come to them.

But starting at level 10, you have a second weapon at your disposal: grenades, which can destroy several enemies at once, a critical advantage at higher levels. In addition, a radar screen helps you locate the whereabouts of flags and enemies.

A few intrepid players may advance beyond levels in the 20s — but no matter how well you do, you never really win, as there are an infinite number of possible levels. Success is measured by improving on your own previous top score.

You can start a game or just watch a demo at any level from 1 to 50. By watching the higher-level demos, you can gain insight into more advanced strategies. The depressing news is that at these higher levels even the computer loses quickly.

Before each game begins, you must choose the characteristics of your vehicle in terms of speed, shield, and ammo levels. Different combinations lend themselves to different strategies; experiment to see what works best for you.

Now just to show you I'm not completely heartless, here's one general strategy hint: To turn to shoot at nearby enemies, don't just spin in place. Add reverse thrust

as you're turning, and fire while you continue retreating.

CALL A FRIEND

If you have access to a local-area network, an entirely different side of Spectre becomes available: the multiplayer game, distinctly different from single-player mode. On the network, you play against your friends and coworkers rather than the computer. Getting started is easy and requires no special knowledge about networking. Yet for all its simplicity of operation, Spectre is impressively stable. Unexpected disconnections from the network and other hassles should occur only rarely.

Spectre includes three different game options for network play. The best is *Flag Rally*, the object of which is to be the first player to collect six flags. In addition to collecting flags as you would in single-player mode, you also get all of an opponent's flags if you destroy his or her vehicle. When that happens, you're likely to hear language that's more colorful than normal office conversation.

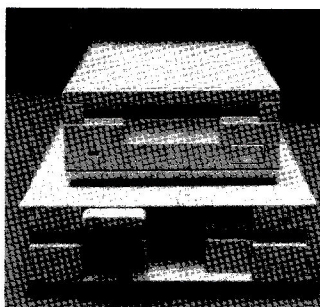
Spectre's network capability is unmatched by that of any other game currently available for the Macintosh. Unfortunately, we suspect that too few users will get to enjoy this experience. Most games are played at home, where no network is available, and most network environments don't encourage game playing.

It's hard to find much to criticize about Spectre. For one thing, though, the graphics images are sparsely defined at best. Although most people would prefer more-realistic detail, perhaps this was a necessary trade-off to achieve the 3D simulation effects.

Second, Spectre doesn't run as well on 68000 machines (such as the Macintosh SE). Movement is rougher, some sounds are omitted, and color isn't available. This can be particularly frustrating in network play, where jerky motion and slower speed place you at a distinct disadvantage to people with fancier hardware.

Enough writing for now. I think I need to play Spectre just a bit more before finishing up this review. I've got this new idea for getting past level 20. I promise to stop in time for dinner. □

Ted Landau
Rochester, MI



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READER SERVICE INDEX

Reader Service

	Page
103 Alltech Electronics Co., Inc.....	49
* Applied Engineering	CV4, 43
64 Arminius Publications	60
87 Bible Research Systems	61
151 Big Red Apple.....	6
45 Caloke Industries, Inc.	60
47 Christella Enterprises	61
21 Co-Du-Co.....	62
8 ComputerWorks.....	62
220 Educational Resources	CV3
* GE Ridge Services.....	61
70 Island Computer Supply.....	62
44 LRO Computer Sales	47
* M.P. Computer Micro Systems	62
248 Memory Plus Distribution.....	55
50 Moonlight Software.....	61
71 Nite Owl Productions.....	61
31 North Coast Computing	62
* NRI Schools	17
* NRI Schools	16, 17
16 OEM Corporation.....	62
59 Perfect Solutions	60

Reader Service

	Page
* Preferred Computing.....	51
269 Public Domain Exchange.....	19
136 Quality Computers.....	CV2, 2, 3, 4, 5, 53, 63
39 Quinsept, Inc.	61
33 Remarkable Technologies.....	25
49 Robert Merrill.....	60
90 Roger Coats.....	20, 21
185 S. A. AuTeur Co., The.....	61
77 Secur Tech Company	13
29 Shreve Systems.....	62
291 Softdisk	1
127 SoftSpoken, Inc.....	60
23 Software of the Month Club.....	60
30 Sound Management.....	62
36 Sun Remarketing	60
* The • Bit • Factory	13
56 TMS Peripherals, Inc.....	26, 27
231 Tulin Technology	59
297 USA Micro.....	48
* Utilico	61
99 Westcode Software.....	9

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5	30	55	80	105	130	155	180	205	230	255	280	305	330	355
6	31	56	81	106	131	156	181	206	231	256	281	306	331	356
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12	37	62	87	112	137	162	187	212	237	262	287	312	337	362
13	38	63	88	113	138	163	188	213	238	263	288	313	338	363
14	39	64	89	114	139	164	189	214	239	264	289	314	339	364
15	40	65	90	115	140	165	190	215	240	265	290	315	340	365
16	41	66	91	116	141	166	191	216	241	266	291	316	341	366
17	42	67	92	117	142	167	192	217	242	267	292	317	342	367
18	43	68	93	118	143	168	193	218	243	268	293	318	343	368
19	44	69	94	119	144	169	194	219	244	269	294	319	344	369
20	45	70	95	120	145	170	195	220	245	270	295	320	345	370
21	46	71	96	121	146	171	196	221	246	271	296	321	346	371
22	47	72	97	122	147	172	197	222	247	272	297	322	347	372
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2	27	52	77	102	127	152	177	202	227	252	277	302	327	352
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5	30	55	80	105	130	155	180	205	230	255	280	305	330	355
6	31	56	81	106	131	156	181	206	231	256	281	306	331	356
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11	36	61	86	111	136	161	186	211	236	261	286	311	336	361
12	37	62	87	112	137	162	187	212	237	262	287	312	337	362
13	38	63	88	113	138	163	188	213	238	263	288	313	338	363
14	39	64	89	114	139	164	189	214	239	264	289	314	339	364
15	40	65	90	115	140	165	190	215	240	265	290	315	340	365
16	41	66	91	116	141	166	191	216	241	266	291	316	341	366
17	42	67	92	117	142	167	192	217	242	267	292	317	342	367
18	43	68	93	118	143	168	193	218	243	268	293	318	343	368
19	44	69	94	119	144	169	194	219	244	269	294	319	344	369
20	45	70	95	120	145	170	195	220	245	270	295	320	345	370
21	46	71	96	121	146	171	196	221	246	271	296	321	346	371
22	47	72	97	122	147	172	197	222	247	272	297	322	347	372
23	48	73	98	123	148	173	198	223	248	273	298	323	348	373
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CONSUMER HANDBOOK 2

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

Edited by THE STAFF OF INCIDER/A+

Welcome to part 2 of our guide to treading the fierce mail-order jungle. When we last left you (Hints, April 1992, p. 56), you had chosen an in-stock item, placed your order by credit card, made a record of all your phone calls, and asked that the product be shipped by traceable second-day delivery. In this episode, we'll tackle installation techniques, technical support, and the issue of taking out your aggressions on uncooperative MOB's (mail-order businesses).

SURPRISE!

One morning, you awaken to a knock from the delivery man bringing your shrink-wrapped SCSI-o-Matic. Upon receipt of your purchase, you should follow these highly complex, technical steps as listed below:

- 1. Rip off the shrink wrap.**
- 2. Open the box.**
- 3. Read the manual.**
- 4. Follow the instructions in the manual.**
If you have problems with installation or operation, you may need to resort to the next step.
- 5. Consult the manual.**

Sound like overkill? There's a reason. Most products on the market have been tested and retested on a variety of systems and with several different hardware configurations. If you're having problems, you're probably doing something wrong.

First, check that your system meets the minimum requirements listed on the product box. Next, check your work for

stupid mistakes, such as not plugging the device in, not turning the switch on, improper software settings, and so on. You'd be surprised at how many problems this step will solve.

If you've gone over all connections carefully, the next step is to try to isolate the problem. Strip your machine down to its basic hardware and software components — make your computer look the way it did when you pulled it out of the box. You can usually leave in any memory you may have installed, and if your new product requires special hardware, leave that attached also. If you have an Apple IIGs and are using GS/OS, or if you have a Macintosh, take all those INITs, CDEVs, and DAs out of your *System* folder and put them somewhere safe.

Now, try your new toy again. Does it work? If so, begin adding your extra hardware and software back until it doesn't work again. Watch your system carefully and be meticulous. Figure out exactly what combination causes it to crash or refuse to operate. Isolate the actions that cause a malfunction.

The ideal you're working toward is a repeatable error you can duplicate at will. If some of these steps seem elaborate or exaggerated, remember that the more legwork and research you can put in before you call the tech-support people, the faster they'll be able to help you.

HANDS OFF THAT TELEPHONE

Now take a piece of paper and write down as much detailed information about your system configuration as you can:

CPU, number of disk drives, drive models and capacities, the system-software version you're running, the kinds of extras you have in your *System* folder.

Then find the version and serial number of your misbehaving new toy. Read through the manual one more time to make sure you haven't missed or misread anything, and find out whether the manufacturer in question needs any special information.

Sit down in front of your computer. If you aren't at least in the same room as your machine, don't bother picking up the telephone — you'll be wasting your time. When you get a technician on the line, give your computer type, memory size, and system version, then tell the technician what product you've bought and the version number. Explain your problem as clearly as possible.

If the technician can't solve your problem and tells you to send the product in for repairs, get an RMA (return-material authorization) number, and use some sort of easily traceable shipping to mail your toy back. Call the company and confirm the arrival of your merchandise, and try to get a time estimate for repairs. Now you just have to wait patiently.

One last note: When you talk to a tech-support representative, you're not addressing the general management of the company; you're speaking (let's hope) to a concerned employee who would very much like to help you with your problem. Don't abuse the tech-support staff or subject them to tirades on the policies of their company. Calling a tech-support line and insulting or berating the person on the other end is a cheap shot. Swallow your pride, your anger, and anything else that will keep you from being calm, cool, collected, and unfailingly polite.

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HINTS

with uncooperative salespersons and technicians. Your new SCSI-o-Matic still doesn't work, or perhaps it never arrived. You're fed up. You're positive that if you talk to one more smarmy sales representative, your carefully maintained facade of coolness will crack, leaving you screaming into the telephone and biting off hunks of countertop. You want blood.

Clamp down on your lust for revenge for just one more telephone call and ask to speak to a customer-service manager. If that person can't help you, ask to speak to his or her manager, and so on.

Get as far up the chain of command as you can, and at all times be polite, reasonable, and clear. Ask for your money back. Don't demand, don't threaten, and don't bully anyone.

The trick is to show them what a perfectly normal human being you are — not some monster demanding the impossible and screaming about lawsuits. The first time you mention court action over the telephone, the jig's up. Be patient and don't give up until you get the company's final offer and you can't contact anyone else.

When you think you've pushed your claim as far as you can up the corporate chain, sit down and think. Try to put yourself in the manufacturer's or distributor's shoes.

Are these people being reasonable? They may not be offering you a complete refund, a new SCSI-o-Matic, and an open invitation to come visit them at the office, but have they done everything you could reasonably expect a *profit-oriented enterprise* to do?

You have three choices: accept the company's offer, opt for personal legal action, or call in outside agencies.

The first alternative has the advantage of being relatively quick and painless, but may not afford you the satisfaction you crave.

To take private legal action, find out about the rules governing small-claims court proceedings in your area. Court action can be messy, expensive, and time-consuming, however. You'll be far happier if you can come to some sort of equitable settlement with the business on your own.

But if those alternatives are unaccept-

able, there's a last resort. For more information on outside agencies, read on.

A LITTLE HELP

Unfortunately, if you're reading this section, you're probably out of luck. Slow repairs or repeated malfunctions may be infuriating, but they usually can't be construed as punishable offenses.

If some mail-order business has been sleazy enough to take your money and not deliver, your first step should be to contact your credit-card company. Depending on what it tells you, you might call the United States Postal Service and inquire about reporting and investigating mail fraud.

If your troubles have more to do with shoddy service than actual fraud, you probably can't take direct action, but you do have some options. Contact the **National Council of Better Business Bureaus** at 1515 Wilson Boulevard, Arlington, VA 22209, (703) 276-0100, and ask about filing a complaint.

There are also consumer-protection agencies at state, county, and sometimes even city levels of government. Some are located in governors' offices, some with state attorneys general, and some in mayors' offices. The number and placement of these agencies vary from state to state, so you may have to do a little research — start at your local library. As a general rule, the first place to go for help is the local office nearest your home.

THE MORAL OF THE STORY

Thousands of people order computer products through the mail every day, and don't give it a second thought. Of those thousands, 99 percent of them never experience any problems. Mail-order businesses aren't out to swindle the unsuspecting public (any more than any other company is). But taking a few seconds with a pen and paper before trouble starts can improve your bargaining position greatly when you're battling the mighty MOBs. □

— **Cameron Crotty**
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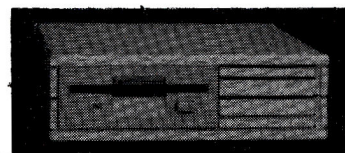
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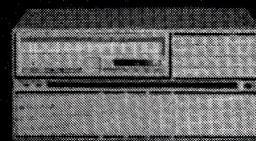
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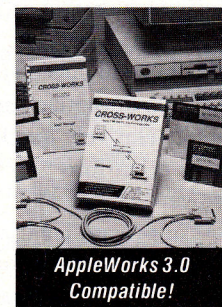
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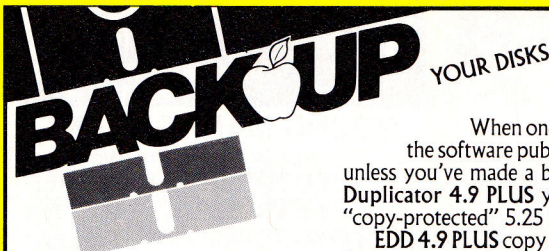
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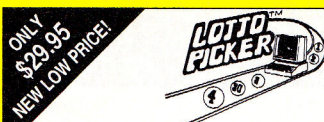
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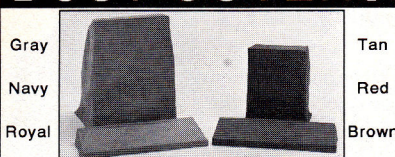
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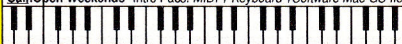
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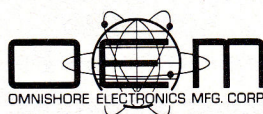
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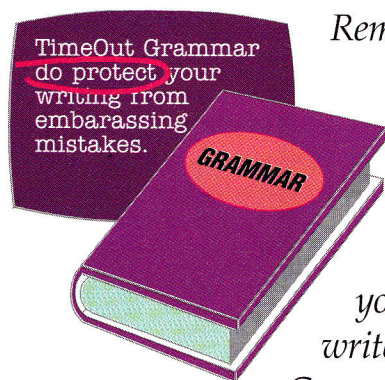
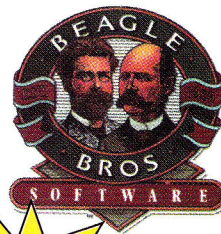
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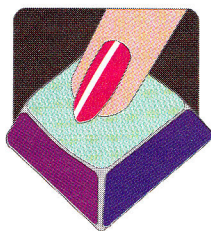
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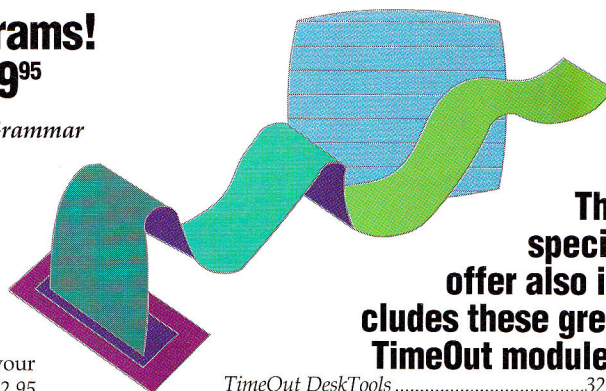
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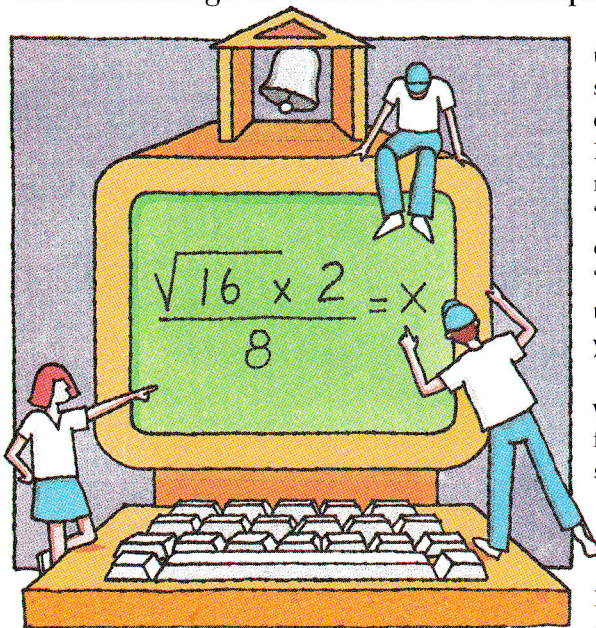
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HOMEcoming

The home computer becomes a classroom without walls, while schools become true community resources.

When I was your age” Thus begins a story we’ve all heard from our parents and, as parents, we ourselves have told. Remember what it’s like — the ten-mile trek, barefoot, through the snow, uphill both ways? Today’s kids have it too easy — or so the litany goes. But if you think riding a bus to school is a big change, imagine what the future will be like. Will our children go to school at all? Perhaps they’ll telecommute.



By DAVID D. THORNBURG, Ph.D.

A family incident brings this to mind. Our son, Harvey, is a student at a southern California college. During his first semester I wrote to him several times, but never received a letter in reply. “Why didn’t you write?” I asked during the Christmas break. “Dad,” he said, “if you want me to write, you have to give me your e-mail address.”

Talk about paradigm shifts. I was operating in the world of fountain pens and green eyeshades, while my son was thinking like a citizen of the late 20th century. We found that we could communicate via Internet, and we’ve chatted almost every day since.

The point is that Harvey and other post-Sputnik children are comfortable with the communication tools of our electronic age, yet during

a period punctuated by rapid global changes, classrooms are caverns isolated from the very reality our children must prepare to face.

Telecomputing might even make the traditional classroom obsolete. Rather than being fragmented into small units, the school could become a resource center where students, teachers, and others would mingle, discuss, and conduct research. Class structure and assignments would be

provided, along with learning tools and information sources, through telecommunications. If each school or district had its own bulletin-board system (BBS), students could access local libraries, teacher “mailboxes,” school announcements, public-domain software, and more, all from home as well as from school.

They’d never lose assignments, could collaborate on research projects without traveling, could join extracurricular discussion groups, and, when ill, could submit homework without hassle. Students would work on their own, freeing teachers for more interaction on a personal basis. When appropriate, lectures would be scheduled, and could appear on community-access cable channels for those unable to attend in person.

The school would bustle with excitement and activity. It would be a place of learning and discovery, not an institution to provide custodial care six hours a day. Telecomputing would also open schools to the community. Local engineers might tutor students in physics and chemistry, journalists might lead discussions on current events, folklorists might tell stories, and so on. Schools would become true community resources, and communities, in turn, would become school resources.

There are obstacles to this scenario, of course. One is a lack of computer equipment in homes. It appears that only one out of four teens has a computer of his or her own, and even fewer have modems. But with prices coming down, as a nation we can easily afford to equip every child with a home-computer system and modem.

The greater obstacle is that as adults we’re so conditioned to physical documents that electronic communication catches us by surprise. What does it mean for teachers to distribute homework assignments by computer? How will schools accommodate all the phone calls streaming in? Faculty will offer many reasons for resisting change, but all those reasons will boil down to one: Change is discomfiting.

Is the school-telecomputing dream unrealistic? I think not. Our children are ready. How about you? □

The Educational Times



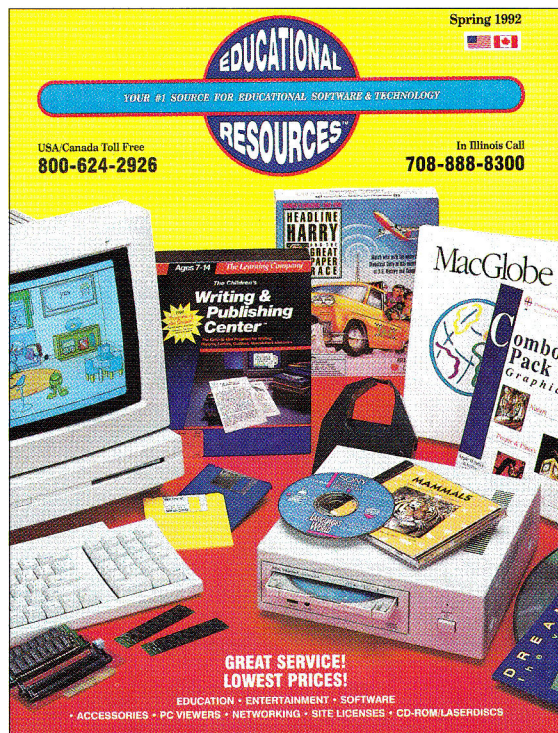
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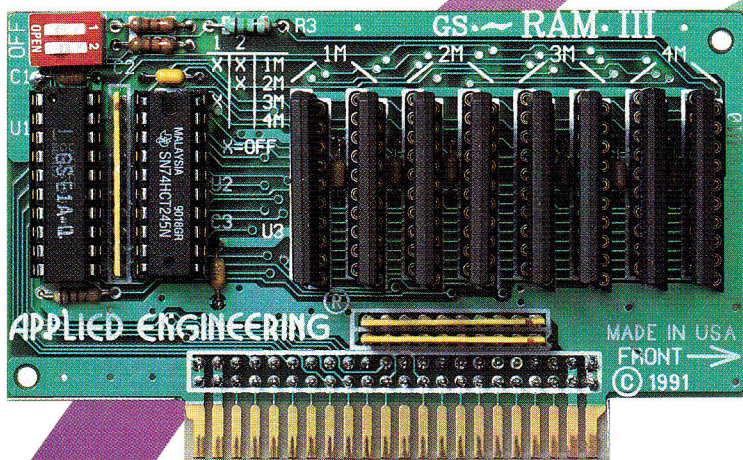
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