

CELEBRATING THE APPLE II

# II ALIVE

CELEBRATING THE APPLE II



Quality Computers™

# Inside this issue:

CHECK OUT DELPHI AND GENIE,

ON-LINE SUPPORT CENTERS

FOR THE APPLE II.

Dear II Alive Subscriber,

Two major on-line services still offer significant levels of support for Apple II users. Don't get left behind during the on-line craze. Read these articles and find what you need on-line!

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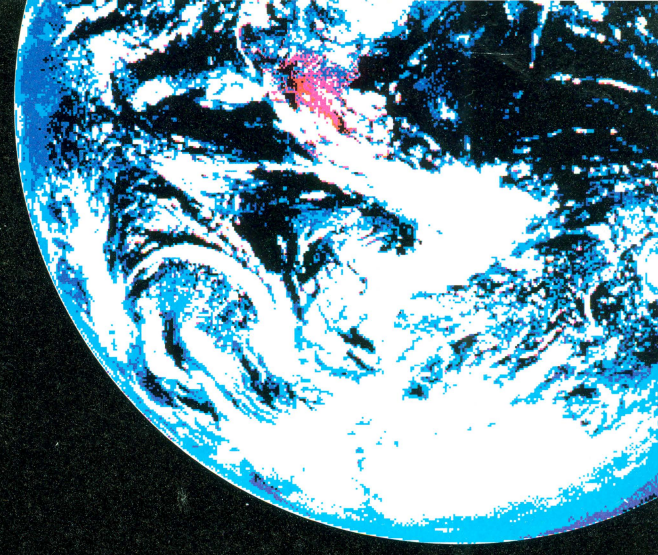
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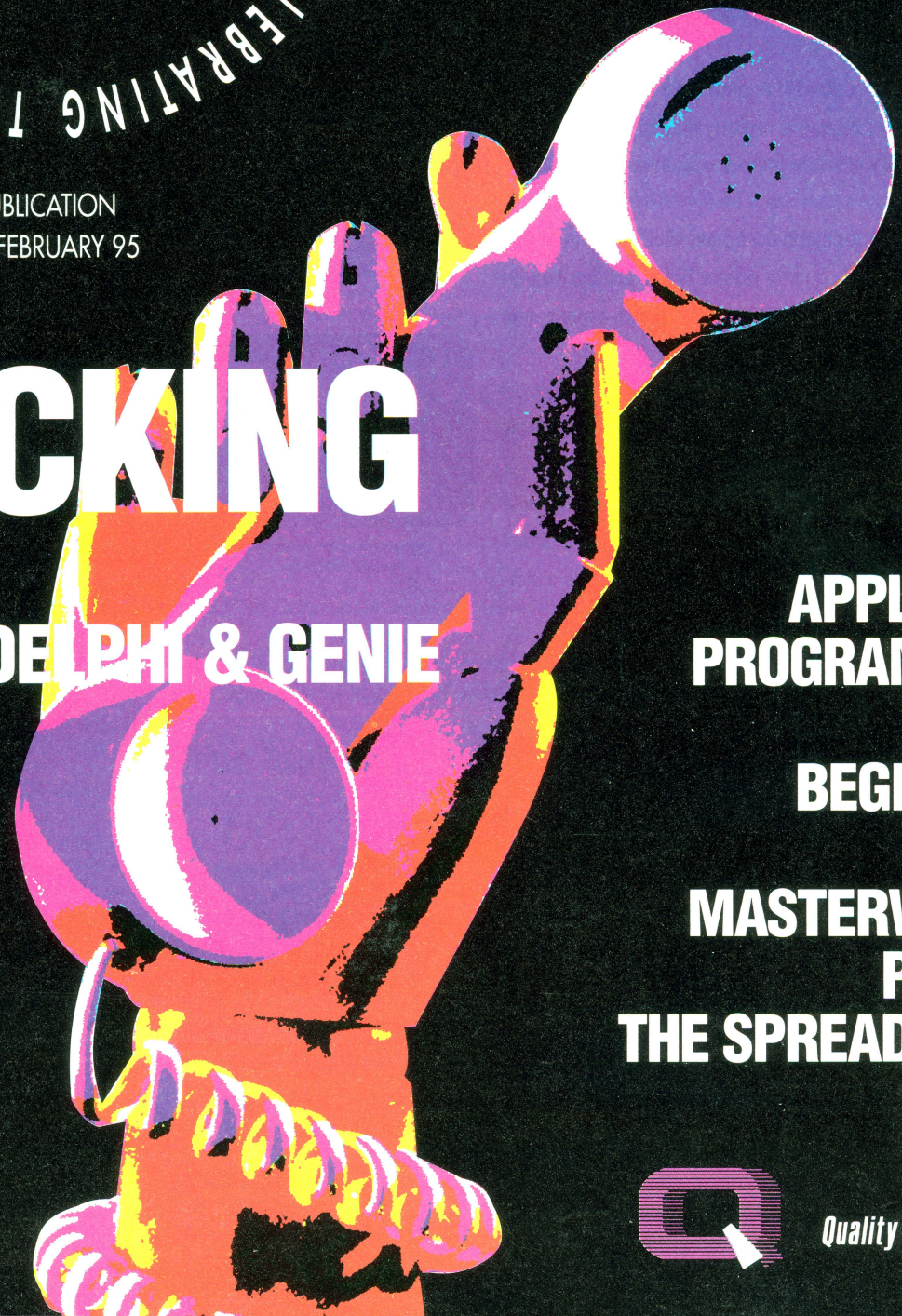
# II ALIVE

CELEBRATING THE APPLE II



A QUALITY COMPUTERS PUBLICATION  
VOL. 2 NO. 6 - JANUARY/FEBRUARY 95  
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# CHECKING OUT DELPHI & GENIE



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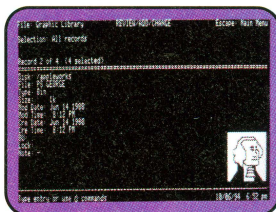
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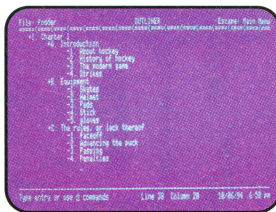
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## Minimum Requirements:

- Requires 3.5" drive, 256K enhanced IIe (65C02 and Mouse Text)

## Includes:

- AfterWork screen saver engine with sample modules
- Patcher for customizing AppleWorks

## Macros

- Includes macro recording
- Adds new dot commands

## Desktop

- Built-in printer buffer
- Pop-up alarms can be set for any date or time
- Last nine loaded files are remembered for instant reloading
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- Choose MouseText or normal display
- Select one-touch menus, default file list order, etc.
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## Word Processor

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## Data Base

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- Find & Replace text
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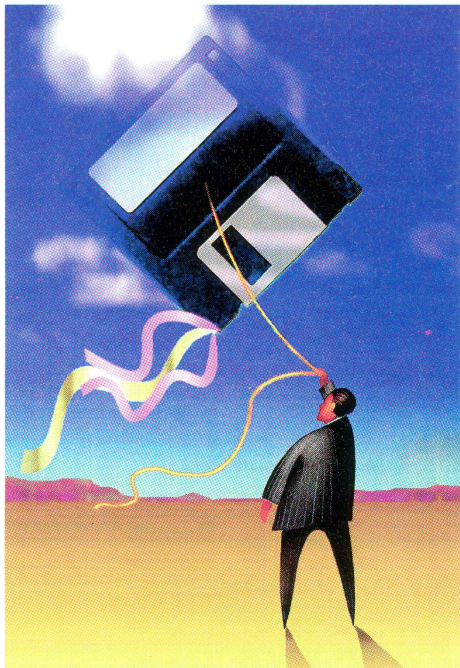
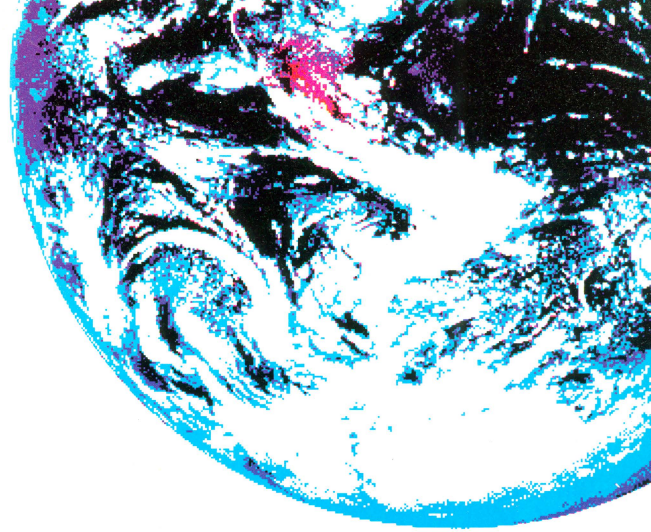
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## features



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### Checking Out Delphi & GENie .....6

**BY TIM KELLERS & CHARLIE HARTLEY** America Online has dumped Apple II support, and CompuServe has simply allowed it to wane. Of the major online services, only Delphi and GENie offer a significant level of support for your Apple II. Explore these services with us and discover what you're looking for.

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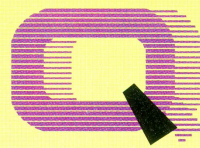
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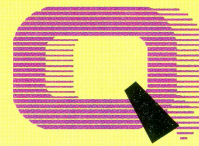
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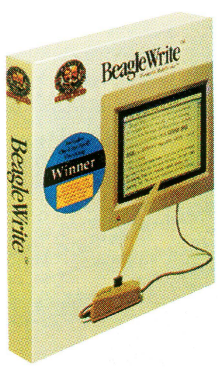
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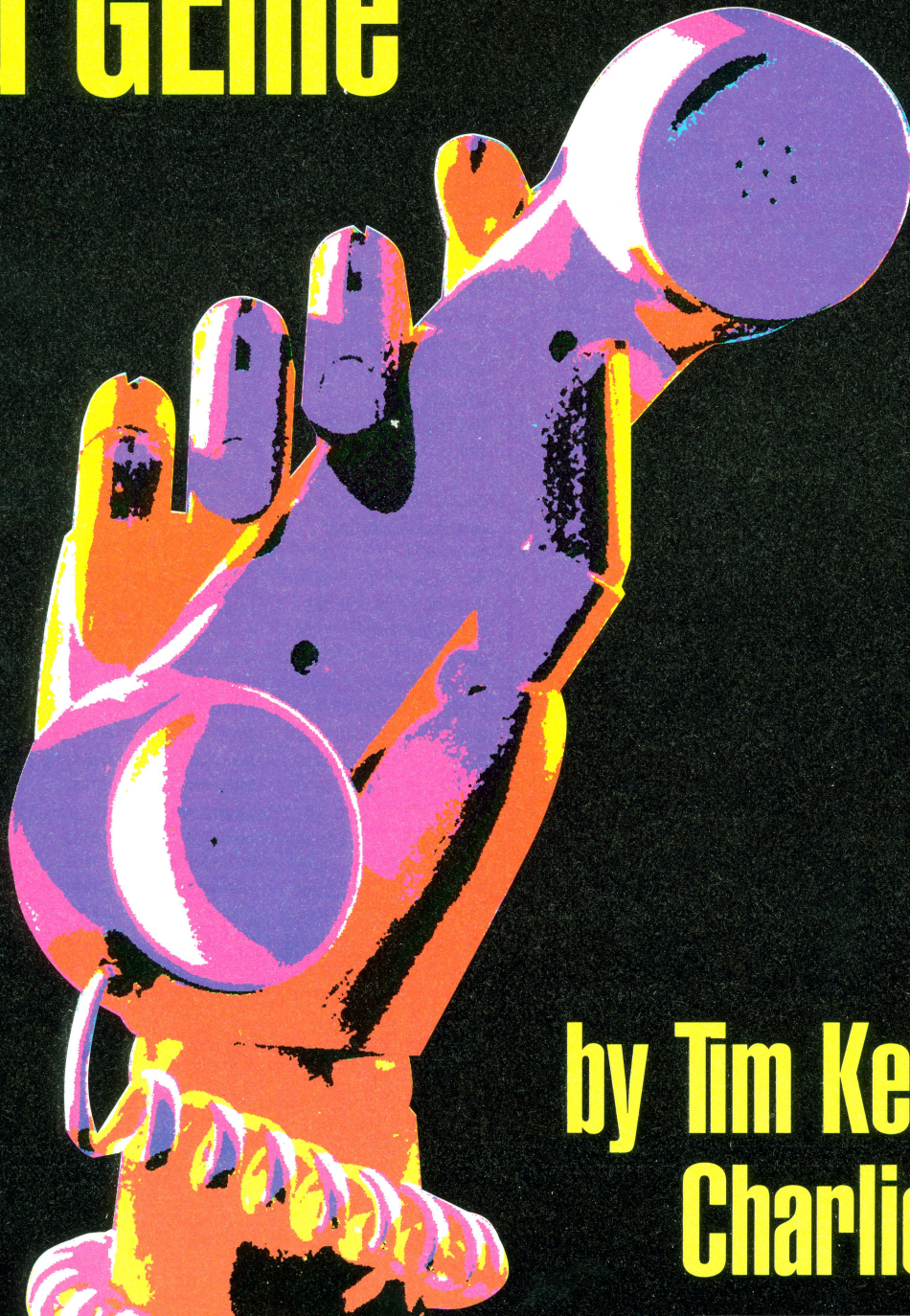
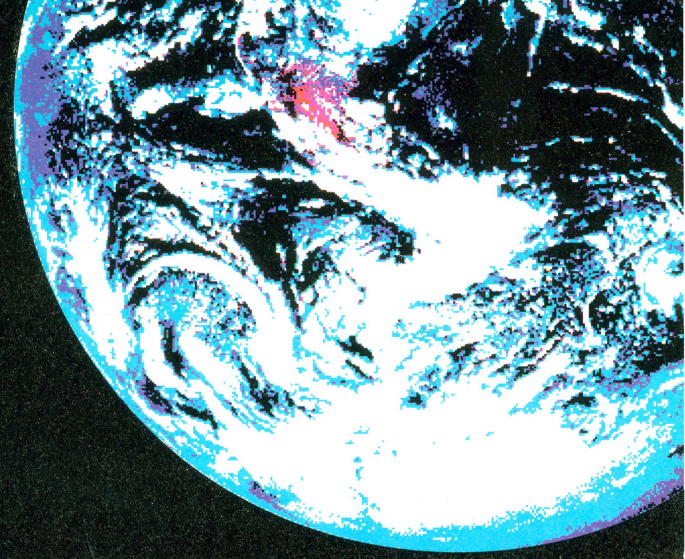
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SCHOOL P.O.s



# Checking Out Delphi and GEnie



by **Tim Kellers and  
Charlie Hartley**

**W**here do you turn when you need help with your Apple II? Increasingly, the answer is becoming "online." A few companies, including Quality Computers, continue to support the Apple II line. And yet, finding the answers to why that piece of hardware or software doesn't work, or where to get the repairs that you need, or even what new software and hardware is currently available for your computer, is increasingly a challenge.

The answers to these and many more questions are often as close as a call to your favorite online service. Here you will find the vendors who support your computer, as well as many knowledgeable individuals who are willing to help you. Here you will learn about efforts to produce new products. For example, did you know that there are at least two programmers who are working on fax software for the Apple IIGs? Topics like these are discussed regularly in bulletin boards and conferences online.

Online services also have libraries of free-ware, shareware, and public domain programs, as well as demonstration versions of some commercial software, available to be downloaded (that is, copied through the modem to your computer). In fact, much of this software is frequently available only online.

In addition to all of this, online services have other features, such as electronic mail (e-mail) and premium services in entertainment, research, business, travel, and much more.

As if this isn't enough, joining an online service gives you a chance to meet people from all parts of the world, and all walks of life, who have one thing in common with you: a serious addiction to the Apple II line of computers!

To be perfectly honest about it, it's fun to be online. It's fun to exchange messages in the bulletin boards; it's *fun* to chat with friends in conferences; and it's fun finding nifty pieces of software available nowhere else.

In the rest of this article we will discuss two of the commercial online services, Delphi and GENie, and point out some of the advantages of each one. These two services offer the best Apple II support available online, and both deserve in-depth examination.

## Delphi

When General Videotex Corporation first established Delphi as an online service, it was this worldwide connectivity that defined the form that the new service would become. The notion of an online service supported by Special Interest Groups (SIGs) hooked into a worldwide network of information service first brought Delphi into play at the forefront of online communication services, and brought them to the telecommunications "center of the Earth."

Delphi is part of News Corporation, one of the largest news companies in the world. In November of 1992, Delphi began offering full Internet access to its clients. This access has made Delphi into the largest and most successful of the commercial services offering true forum participation and complete Internet capability. While the trend in commercial online services continues to be platform and

software-specific, Delphi offers both a text based user interface and online navigators (for Mac and Windows users only, unfortunately) and remains dedicated to supporting any and all clients who manage to log on with their own software on whatever operating system or computer they might use.

Delphi offers continuing Apple II support. Along with the myriad of other Special Interest Groups (SIGs) available on the service, the Apple II User's Group is a thriving community. In January of 1990, Mike Edwards (Delphi e-mail: All) took over the Apple II section on Delphi and has since built it into a gathering place for Apple II aficionados across America. Together with his assistant Sysops Eric Kloepfel (Delphi e-mail: Lurch) and Jeffery Mintz (Delphi e-mail: JeffWm), the Apple II User's Group on Delphi has ably supported the Apple II community for years.

The Apple II Forum on Delphi is a threaded message base, in which users can post questions and/or comments in specific topics of discussion. These messages can be read in numerical sequence or in threaded order using the "Follow" command, which groups related messages, making it easy to respond to individual posts without wading through the entire catalog of new messages.

There are fifteen topics in the Forum for Apple II users, covering subjects ranging from telecommunications to music to game software to graphics, from IIGs Desktop programs to programming—there's even a section called the "Hacker's Corner" which contains software "tweaks" and enhancements. The Internet topic is for discussion on how best to use the Apple II to access the staggering resources of the Internet system, and points directly to the massive archive of Apple II and platform-independent information available through Delphi.

The Apple II Database is a library of uploaded files available for download. The library supports Xmodem, Ymodem, Zmodem and ASCII text file transfer protocols. While the library is not as large as the libraries found on GENie, the direct user connection to the Internet allows quick and easy access to Internet sites through FTP (file transfer protocol), so virtually any file that is available to download for the Apple II can be downloaded from Delphi. Uploads to the library may be in .shk (shrinkit) format, .bxy format (shrinkit with a binary II wrapper), or plain ascii text.

From within the Apple II User's Group, anybody can access the most powerful feature of Delphi, the Internet service. At any menu prompt, you can send e-mail simply by typing the word "send." Delphi immediately provides a "To:" prompt, and mail can be addressed to any internal Delphi user or external Internet site. The message can be either typed in online or transmitted from a file or editor. Hitting Control-Z on the first blank line at the end of the message sends the note to its addressee. In addition to this ability to send mail from any prompt within Delphi, the mail system notifies you instantly whenever any new messages are received in your mailbox.

## Delphi Access and Rates

Membership on Delphi has two different pricing structures for the user. The basic plan costs \$10.00 a month and includes 4 hours of usage per month. Additional hours are billed at \$4.00 per hour. The "Advantage 20/20" plan consists of a one-time charge of \$19.00—waived if established in the first month's membership—and a monthly billing of \$20.00 for 20 hours of usage. Additional hours are billed at \$1.80 per hour. New accounts on Delphi can be established by calling Customer Service at 1-800-695-4005 or 1-617-491-3393. Their hours of operation are Monday through Friday 8:00 a.m. until 11:00 p.m., and weekends: 12 noon until 8:00 p.m. (all times are Eastern Time). Delphi can be accessed by either direct dial, Sprint or Tymnet, and can be TelNeted to using "delphi.com" as the address. The standard settings for connecting to DELPHI are: No Parity, 8 Data Bits, 1 Stop Bit, and Full Duplex. Your Local Echo and Autolinefeeds should be off. XON/XOFF or Handshaking should be enabled.

### FOR DIRECT DIAL:

- 1 Dial (617) 492-9600. (Cambridge, MA)
- 2 When you have carrier, press Return at least twice.
- 3 At "Username:" enter your member-name and press Return.
- 4 At "Password:" enter your password and press Return.

### TO SIGN ON USING SPRINTNET:

- 1 Dial your local SprintNet number.
- 2 Once connected, press @, then uppercase D, and Return. (At 300 or 1200bps, press Return, then D, and Return.)
- 3 When TERMINAL= appears, press Return.
- 4 When @ appears, type C DELPHI and press Return.
- 5 At "Username:" enter your member-name and press Return.
- 6 At "Password:" enter your password and press Return.

### TO SIGN ON USING TYMNET:

- 1 Dial your local Tymnet number.
- 2 At 2400 bps, wait 5 seconds, and type the letter O without a Return. At 1200 bps, you don't need to wait, but you'll see a string of x's.
- 3 When "Please log in:" appears, type DELPHI and press Return.
- 4 At "Username:" enter your member-name and press Return.
- 5 At "Password:" enter your password and press Return.



## GEIE Rates and Access

### HOW TO SIGN UP FOR GENIE

If you're not a GENIE subscriber already, follow these simple instructions to sign up. (These instructions apply to U.S. and Canada only; to subscribe from other countries, please see the section entitled "International Access" below).

- 1 Set your communications software for half duplex (local echo), at 300, 1200 or 2400 baud.
- 2 Dial toll free: 1-800-638-8369 (in Canada, call 1-800-387-8330). Immediately upon connection, type HHH. (Note: Every time you sign onto GENIE, you need to enter HHH upon connection.)
- 3 When you see the U#= prompt, enter JOINGENIE, then press Return.
- 4 At the offer code prompt, enter DHG528 and press Return.
- 5 Have a major credit card ready. In the U.S., you may also use your checking account number. (There is a small monthly fee for all checking accounts.) In Canada, VISA and MasterCard only.

### GENIE RATES

GENIE's monthly subscription fee is \$8.95 in the U.S. or \$10.95 in Canada. This includes up to 4 hours of standard connect time (evenings, weekends, and GENIE holidays). Additional hours of standard connect time are \$3.00 in the U.S. or \$4.00 in Canada. There is a Prime Time surcharge of \$9.50/hour U.S. or \$12.00/hour in Canada.

If you logon at 9600 baud, there is an additional surcharge of \$6.00/hour U.S. or \$8.00/hour in Canada.

GENIE has an 800 service available in the U.S. which costs \$6.00/hour. If you do not live near a local node, this may save you long distance costs. Incidentally, the 800 service surcharge is waived if you logon at 9600 baud.

For additional information, call GENIE Client Services at 1-800-638-9636. They're open Monday through Friday, 9 a.m. to midnight. On Saturday, Sunday and most GENIE holidays, the hours are noon to 8 p.m. All times are Eastern. If you're calling from outside the United States or Canada, phone 1-301-251-6475.

### INTERNATIONAL ACCESS

GENIE is available in many nations around the globe. Send internet mail to [feedback@genie.geis.com](mailto:feedback@genie.geis.com) for information on whether GENIE is available in your country and for sign-up instructions. Rates and connection methods vary by country.

From within the Apple User's are access to the Usenet (a close sister to the Internet) is also just a menu selection away. A gateway to the entire Usenet system is provided, along with helpful menu selections that lead directly to the comp.sys.apple2 newsgroup hierarchy, Apple II FAQs (Frequently Asked Question lists), and a hierarchy-based Apple II FAQ archive, [rtfm.mit.edu](http://rtfm.mit.edu). Another menu selection is the Apple II FTP sites, offering an easy link to public Apple II archive sites on the Internet. Files can be downloaded from remote hosts without using all the sometimes difficult and obscure commands that characterize the Internet.

And, of course, using an Apple II computer to access Delphi by no means limits you to the Apple II User's Group. The full Internet menu can be accessed from any menu prompt by simply typing "Go Internet." E-mail support in the Internet section is basically the same as it is from the Apple II User's Group and every other section on Delphi. There's a Forum for posting and receiving questions and comments on Internet, and a database of files that contain information on using the Internet. Practically anything a user would want from the Internet can be accessed from Delphi. There is a full FTP menu, Telnet, Internet Relay Chat (IRC), and the hypertext-based World Wide Web—a neat bit of software which links menu selections to remote locations around the world by highlighted keyword. If you want information about a user on a remote system, you can choose the "Finger" command from a menu. If your concerns are how the information is being routed or how much time it may take to receive or deliver important text, the "Ping" and "TraceRoute" utilities are right there on the menu, together with plenty of documentation to help explain the function of all the utilities.

Searching the Internet for specific information can often be a difficult task. With so many interconnected host computers, it is a daunting task to decipher which system has the information you need to access. On Delphi, a powerful Internet search utility, Gopher, is menu based and easy to use. Using the "Veronica" option, its possible to search "all titles in gopher-space," which is to say that by entering a search "string" at a prompt, you can receive a list of which host computers contain the information that you need—from all the host computers in the world!

Though most of the major online services have either implemented or announced a level of Internet access beyond a simple mail gateway, Delphi already has the highest level of access possible with a text-based system.

With a large selection of forums, the best internet access available on any online service, and an active Apple II User Group, Delphi is a very attractive service for Apple II users.

### GENIE

GENIE is owned by General Electric and runs on the computers and network of General Electric Information Services Company (GEIS), one of the world's largest mainframe networks. It can be reached with a local call

from more than 500 cities in the United States through GEIS numbers, through SprintNet numbers, and even through an 800 number (SprintNet and 800 calls incur a surcharge).

Like Delphi and other national online services, GENIE offers you a package of services including news, weather, sports, airline schedules, an online encyclopedia, movie reviews, shopping services, stock quotations and other financial information, online games, a chat area, and of course electronic mail (e-mail).

GENIE also has Internet support. Though it does not offer anywhere near the level of Internet access that Delphi offers, it does feature support for Internet e-mail, and some other limited Internet support is available. By the time you read this, GENIE plans to offer full Internet support—details were not available at press time, but we expect GENIE's Internet support to be on the level of Delphi's.

Where other online services are divided into Forums or SIGs, GENIE is divided into RoundTables. There are RoundTables devoted to a variety of subjects including, for example, law, medicine, genealogy, religion, and of course computers such as the Apple II. Inside each RoundTable is a public bulletin board where users can leave messages, a library where users can upload and download programs and articles, and a group of conference rooms where users can gather simultaneously to talk or to meet and ask questions of a guest speaker.

GENIE has two RoundTables devoted to the Apple II. The main one is the Apple II RoundTable (A2). The other one is the Apple II Programmers and Developers RoundTable (A2Pro). Both areas are managed by Syndicomm, Inc., a company devoted to Apple II support. You can get to these RoundTables from any GENIE menu by just typing "A2" or "A2Pro."

GENIE's bulletin boards are based on the archival, linear-threaded model. That is, messages are posted to a topic, not an individual. Each bulletin board on GENIE is organized by category, and each category is split into a number of topics. Messages are never deleted by the GENIE software; each message is available to all readers until either the original sender or the board systems operator (sysop) deletes it. Periodically, in the Apple II RoundTables, older messages in a topic are archived to the library, so that they are available as a historical record. Then the sysop will delete them from the topic to make room for more.

There are two strategies for using the bulletin boards in GENIE's RoundTables. One is for people who are looking for a particular piece of information. The other is for people looking for a good conversation.

Those looking for conversations come to their favorite RoundTables frequently. GENIE's software keeps track of what messages they've already read, so the conversationalist enters a command to read just the new messages. There are commands for ignoring categories and topics that don't interest you. The software displays new messages topic by topic. At the end of each topic, you get a chance to reply to the messages you have read in that topic. The

more you use the bulletin board, the more likely you are to become a conversationalist there.

On the other hand, people just looking for a particular bit of information do best by using a command that does a string search of all the existing topic headers. If a suitable topic exists, then the searcher can read the messages in that topic. If the searcher finds what he is looking for, then the search is successful. If not, then he can leave a message in the topic, asking a question. Usually, someone will have posted an answer to his question by the time he returns to the bulletin board. If there is no suitable topic, the searcher can start one of his own.

There are more than 40 categories in the A2 RoundTable bulletin board. A good way to see what is available is to enter the bulletin board and enter the command INDEX. Be sure to have your capture buffer on first. GENie will give you a complete index of the bulletin board including categories and topics.

The real time Conference (RTC) rooms are staffed with knowledgeable people who are serious about helping you get answers to your questions, as well as having interesting conversations. To get to the RTC, select item #2 from the A2 menu or enter m645;2 from any numbered menu in GENie. Once there you will be shown how many rooms are available and how many people are in each room. Select a room by number, and say "Hi" when you enter. From there on, it's just like have a discussion around the kitchen table.

The A2 software libraries contain Apple system software, as well as many public domain and shareware programs and files. Most files have been contributed by other Apple II users. GENie's Apple II software libraries are probably the largest available anywhere in the world; they are certainly the largest of any of the commercial on-line services. Thousands upon thousands of files are available there, of virtually any type you can imagine, whether it's of very broad interest (word processors, games) or very specific interest (Print Shop graphics, clip sounds).

As with other parts of GENie, the worst part of the library software is that it presents so many options, it's a little bewildering at first when you try to figure out what to do. But a little time spent playing with it will get you through. You can quickly search through the libraries with a multitude of options, whether it's searching on key words that describe files, or generating lists of new files (files added since the last time you checked), setting to specific sub-libraries which are of specific interest (say, the IIGS Music sub-library), or just plain browsing through files one at a time in sequential order.

GENie offers downloading with XMODEM, XMODEM 1K blocks, YMODEM, or ZMODEM. Unfortunately, for uploading, GENie only offers Xmodem, which can be annoying for those who like to contribute their own files to the library, as it's the slowest protocol of the bunch.

The A2Pro RoundTable includes the same features, but focuses on programming and developing software for the Apple II. The bulletin board, for example, includes categories

for discussing programming in 6502 or 65816 assembly language, as well as in C, Pascal, and of course BASIC and other programming languages. There are also categories for dealing with system software, such as ProDOS 8 and GS/OS.

You'll also find categories on tools and utilities for programmers, algorithms, design, data structures and file formats, hardware and peripherals, the Apple IIGS Tool Box, communications and networking, hypermedia programming, development environments and shells, and DAs, inits, control panels, and modules.

**While all online services**

**have many features in**

**common, both GENie**

**and Delphi offer more to**

**the Apple II community**

**than any other source.**

**While Delphi offers inex-**

**pensive connect fees**

**and better Internet**

**access, GENie has a**

**much greater volume of**

**Apple II-specific traffic.**

A2Pro is also the home of A2 University, which provides a variety of programming courses for no extra charge, and numerous Apple II companies provide programming information and support for their development tools. The library includes not only an assortment of source code files, but also Apple II Technical Notes and the complete run of both Apple Assembly Line and 8/16-Central magazines, along with HyperCard IIGS.

The A2 RoundTable provides not one or two but three automated navigators for the Apple II, allowing users to read and reply to e-mail and bulletin board messages while offline to save connect time and, thus, money. (These programs download new mail and messages at the maximum speed GENie can transmit them, without pausing to let you read the messages as you normally would. Later, your replies are also transmitted at maximum speed.) GEM works with AppleWorks and popular telecommunications programs and runs on the IIe, IIc, and IIGS; Co-Pilot is a IIGS Desktop program that also works with popular telecommunications programs; and TCExpress works entirely within AppleWorks for owners of TimeOut Telecomm.

## Conclusions

While all online services have many features in common, both GENie and Delphi offer more to the Apple II community than any other source. While Delphi offers inexpensive connect fees and better Internet access, GENie has a much greater volume of Apple II-specific traffic. While the Apple II support on Delphi is quite good, GENie's is better, with much more depth and a greater number of experts available on-line to answer questions.

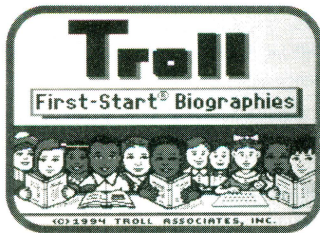
GENie is a larger and more complicated system than Delphi. Programs like GEM and CoPilot do make it easier to use, and greatly offset the higher connect fees for those who use them. On the other hand, Delphi is faster and not quite so daunting and confusing as GENie can be, especially if you're on-line manually (Delphi doesn't offer off-line navigators like GEM and CoPilot, so you have to do everything yourself).

Which service is best depends largely on your needs and interests. If you need full Internet service and you are comfortable with an easy-to-use command-line interface, and good, basic Apple II support is what you're after, then Delphi may be the service for you. If you want the best possible Apple II support, or would prefer to work with an automated navigator like CoPilot on your IIGS, and most especially if you are interested in programming your Apple II, then GENie is the better choice.

However, in these times of diminishing commercial support for our Apple II computers, rather than select one over the other, the best choice would probably be to use both. Both services offer great things to Apple II users, and both should be encouraged to continue to do so. The best part is that both services offer the first few hours at a discount (GENie gives you four hours for its \$8.95 monthly charge, and Delphi has a 20-hours-for-\$20 option) so using both may be more affordable than you think.

However you go about it, we urge you to get online. Either way you go, you can be assured that the Apple II is well supported online, and by all appearances will be for some time to come. Clearly, for some online services, the old "Apple II Forever" slogan still means something! ■

# What's New From Troll?



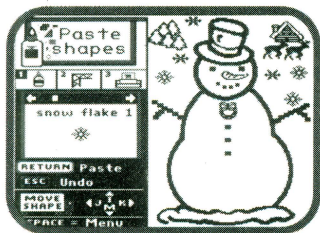
## Troll First-Start Biographies

Grades 1-3

Introduce youngsters to biographies by teaming up on-line activities with paperbacks about the early lives of famous people such as Amelia Earhart, Harriet Tubman, and Martin Luther King. Children read the books first, then visit the Troll Biography Museum, where they review story events and do comprehension activities. Teacher options allow printing of biography facts, activity sheets and story circles. Comes with 10 paperbacks

5.25" disk .....\$39.95

3.5" disk .....\$39.95

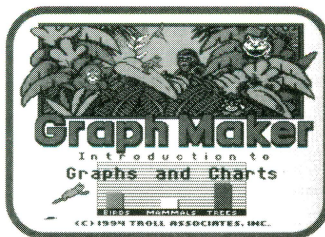


## Troll Printmaker: Holiday Fun

Teachers and students alike can decorate the classroom using this exciting program for holiday graphics. Choose graphic images from dozens of detailed seasonal and holiday pictures—then printing them out! Or be creative by selecting a large picture outline and filling it with geometric shapes or smaller pictures, then surround your creation with your choice of decorative borders.

5.25" disk .....\$29.95

3.5" disk .....\$29.95



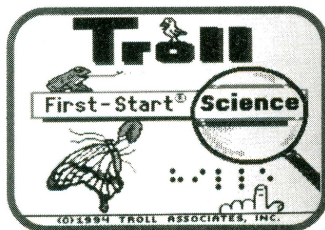
## Graph Maker: Introduction to Graphs and Charts

Grades 3-5

In Graph Maker, students learn how to use the information found in charts and graphs, as well as how to make their own charts and graphs. An interactive tutorial not only involves students but also keeps track of and graphs their responses. In a special practical application section, students can build line, bar, and circle graphs using information from the program's ecological database, or using data they collect themselves. All charts and graphs can be printed using many popular printers.

5.25" disk .....\$29.95

3.5" disk .....\$29.95



## Shop Right!

Grades: 1-4

Here's a wonderful simulation-style program that helps youngsters learn how to be smart shoppers. Students browse and make purchases in different settings while practicing important skills such as calculating totals, figuring change, comparison shopping, and using cents-off coupons.

5.25" disk .....\$29.95

3.5" disk .....\$29.95

Available from Quality Computers  
**1-800-777-3642**

# II ALIVE

January/February  
Volume 2 Number 6

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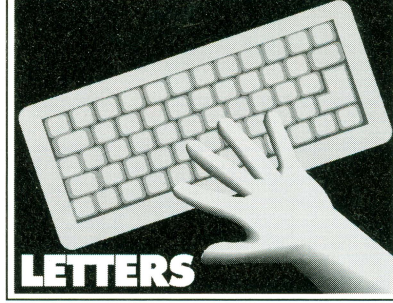
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Dear II Alive,

George Clark, whose letter you answered in the Mr. Tech column in the Sep-Oct issue, may be interested to know that I compiled a file called "Applesoft Concordance" a few years ago containing all the programming details I could discover about nearly all useful and non-useful entry points in the Applesoft BASIC interpreter ROM, based on Bredon's disassembly and my own research.

Applesoft Concordance, an AppleWorks data base file, is still available in GENIE's A2Pro library as file 1425. The file is large and requires a memory expansion card to load into AppleWorks, but file 1426 has the Concordance split into smaller files which will fit on an unexpanded AppleWorks 3.0 desktop.

Steve Weyhrich  
via GENIE

Dear II Alive,

I currently use an ImageWriter II with Pointless on my IIGs. The print is pretty good, but I was thinking about an inkjet printer to produce a quality newsletter with graphics. I learned that there's a problem using the HP Deskjet 560C on the IIGs in color modes. A technician from a third party told me that Apple will not release the information to allow software developers to correct the color problem. An Apple representative on their help line told me that I needed to upgrade my computer! I felt like choking the guy.

My first question is, will the Deskjet 560C provide high-quality print (better than my ImageWriter) with AppleWorks GS? And second, do you know of a printer driver that will produce high-quality color graphics? I don't want graphics with jagged edges. And I will not abandon my IIGs!

Bob Fraker  
Bethel Park, PA

*Bob: The Hewlett-Packard Deskjet line has excellent resolution (300 DPI—more than four times the number of dots per square inch than your ImageWriter II in Best quality mode). Furthermore, since the HP uses ink jet technology, the print is black until you run out of ink (the color doesn't fade as the ink cartridge gets older, as ribbons do in your ImageWriter II). Vitesse's Harmonie and Seven Hills' Inde-*

*pendence are driver packages which will allow you to use Deskjet printers with the IIGs. It does look much, much better than your ImageWriter II!*

*Unfortunately, color remains a problem, even if you get a color Deskjet, because of the driver problems you noted. Since Apple is unlikely to release the information, my advice is to get the black-and-white version of the Deskjet, a model such as the 520 or 540. Printing newsletters in color is pointless, since you lose the color the minute you copy them. And the low resolution of IIGs "paint" graphics means that no matter what printer you get, you're probably still going to get jagged edges. (The exception is if you create all your graphics with an object-oriented draw program instead of a paint program.)—Editor*

Dear II Alive,

I recently took a Microcomputer Applications for Business class at the City College of San Francisco as a requirement for my business major. The class was an introduction to MS-DOS and the three main computer applications: word processing, databases, and spreadsheets—using the popular PC applications WordPerfect, dBase 3+, and Lotus 1-2-3.

I've been an Apple II user for the past eleven years, I was worried that I would not do very well in class, since I don't have a PC at home and had absolutely no experience with MS-DOS. Even though I have AppleWorks, I only used the word processor with any frequency. My database use was limited to maintaining a list of the programs I own for my Apple IIe, and when I tried to use the spreadsheet I found it a little confusing and so rarely used it.

What's the point? Even though I learned a lot about MS-DOS, WordPerfect, dBASE, and Lotus 1-2-3, and was getting an A in the class, being forced to use an MS-DOS computer all semester made me realize just how much simpler and more fun it is to use my Apple II, despite the fact that it's "outdated technology."

I was, however, able to take some of the things I learned about Lotus 1-2-3 and apply them to the AppleWorks spreadsheet. Now the AppleWorks spreadsheet is doing statistics for my fantasy basketball team and for the two youth basketball teams I coach. The spreadsheet now ranks up with the word processor as

one of my favorite AppleWorks modules.

I don't hate PCs, I just feel that the people who have written off the Apple II have made a mistake. My Apple IIe is going to be around for many more years just because of its ease of use! Thanks for your Apple II support.

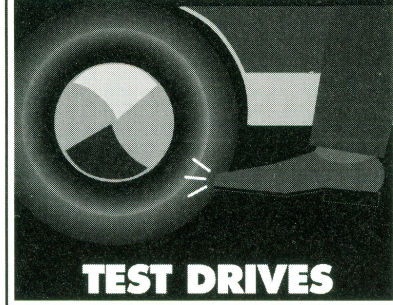
Donald Lee  
San Francisco, CA

*Donald: You've discovered a great truth about computers: once you understand the basic concepts, you can use virtually any computer. I bet you didn't have any trouble with WordPerfect (since you'd used the AppleWorks word processor) either! You will find that everything you know about your Apple II will help you when you get out into the business world (which is dominated by the PCs), and that many things you learn about PCs will come in handy at home on your Apple II.*

*Here's a particularly intriguing example: when I was in college, I had to take two quarters of IBM mainframe assembly language. I'd been doing assembly language on the Apple II for some time, and found it a snap (in fact, in some ways, programming the mainframe was actually easier!)—but the real kicker is that an assembler I'd been using on the Apple II, ORCA/M, was based on the IBM mainframe assembler! I didn't even have to learn a new syntax!—Editor*

## Update

Our reply in the September/October issue to a question regarding using the ImageWriter II with Windows was correct as far as it went, but Bill Carver of Quality Computers Tech Support indicates that the ImageWriter II is, at heart, a C Itoh 8510 printer (the only added feature being the MouseText character set) and should thus work using the C Itoh driver in Windows. ■



# Quick Click Calc, Ultima GS, Super Menu Pack, Gate

## II ALIVE RATINGS

- ★★★★ Excellent
- ★★★ Very Good
- ★★ Good
- ★ Fair
- ☆ Poor

### QUICK CLICK CALC V1.1

★★★

Byte Works, Inc.

Apple IIGs with 1.125 MB RAM,  
1 3.5" drive, System 6

\$60.00

There's long been a noticeable shortage in new, quality, productivity software for the Apple IIGs. In particular, if you wanted a spreadsheet for the IIGs, you bought AppleWorks GS, because that was your only choice. But Byte Works, noted for its line of programming languages and development software, has released the first in what will hopefully be a long and successful line of productivity software. Quick Click Calc is an easy-to-use spreadsheet with all the standard features, plus a few noteworthy goodies.

Quick Click Calc runs on any Apple IIGs with 1.125 megabytes or more of RAM and at least one 3.5" floppy drive. It also requires System 6.0.1, which is not included with Quick Click Calc (though if you don't have it, Byte Works will sell it to you).

It's easy to get started with Quick Click Calc. When you unwrap it, you'll find a small manual and a single 3.5" disk. You can run Quick Click Calc from the floppy, or you can install it to a hard drive. To install it on a hard drive, just copy all the files from the floppy disk to a folder using Finder; the process is

described in the manual.

Quick Click Calc will look very familiar if you've used a spreadsheet program before, because, let's be honest, on the surface all spreadsheets look more or less alike. Quick Click Calc is no exception; it's very comfortable and familiar. But under that comfortable exterior lie some very exciting and powerful features.

The most exciting of these features is publish and subscribe, a capability that has been available on the Macintosh for years. Publish and subscribe allows you to create multiple documents that share information. Doing so is as simple as opening the spreadsheet that contains the data to be shared, selecting the text, and selecting the Create Publisher option. To have the data automatically inserted into another spreadsheet (or several spreadsheets), just open the spreadsheet you want the data inserted into, tell it where to put the data, and choose the Subscribe To Edition option.

In Figure 1, you see two spreadsheets (cleverly named "Sample1" and "Sample2"). Notice in Sample2 the range of cells highlighted in yellow. These cells have been published to an edition named Sample.Edition. Notice also the range of cells in Sample1 that are highlighted in green. These cells contain the data from the edition Sample.Edition; notice that these cells contain the same values as those published from Sample2. When we change the data in Sample2 and save the file, the next time we open Sample1, the values in Sample1 are automatically updated. Something else worth noting is the use of borders to create dividing lines between the column titles and the column data. Borders can be of varying thickness and can be placed on any or all sides of a cell or range of cells—much tidier than the old-fashioned technique of using dashes or equal signs to draw borders.

This automatic sharing of data between

4	Month	Net
5	January	\$5,478,145.00
6	February	\$754,895.00
7	March	\$145,789.00
8	April	\$34,512.00
9	May	(\$478,952.00)
10	June	(\$6,245.00)
11	July	\$21,789.00

5	Monthly Expense	Other	Net
5	\$8,214,975.11	\$5,478,145.00	\$2,443,055.00
6	\$6,547,587.98	\$754,895.00	\$1,086,753.00
7	\$7,541,256.47	\$145,789.00	\$489,642.00
8	\$6,578,119.63	\$34,512.00	\$3,211,388.00
9	\$8,474,587.22	(\$478,952.00)	\$1,795,819.00

Figure 1

spreadsheets is extremely useful. For instance, I've made a few small investments, and keep spreadsheets tracking the progress of each one. Before Quick Click Calc, to get a total of how much my investments were worth, I had to open each spreadsheet and tally up the numbers. Now all I have to do is have each investment spreadsheet publish its total value, and create another spreadsheet that subscribes to the totals from each of those spreadsheets, sums them all up, and displays the total value of my investments. Not only is it quick and easy, but it's automatically updated every time I open the file.

Another feature of Quick Click Calc that is new to Apple II users is the cell note — the ability to attach a short comment to a specific cell, which can be called up whenever you need to read it. The cell note is maintained separately from the cell itself; if you want to read the note attached to a cell, you select the Cell Note option, and you can read and edit the note attached to the currently selected cell. The only indication that a cell has an attached note is a small red mark in the corner of the cell, and that mark can be shut off if you don't want to see it (which is useful when you're printing your spreadsheet and don't want small dots in your cells).

Quick Click Calc supports the standard data types, including numbers, labels, and dates. Mathematical functions can work with dates. For instance, entering the date "January 13, 1972" into a cell C1, then entering "=C1+3" in cell D5 results in D5 containing "January 16, 1972." A wide variety of date formats are provided; however, the common European standard of placing the year first is not supported in the current version of Quick Click Calc. Byte Works plans to implement it in the future.

The standard variety of functions are provided, including the trigonometric functions for computing cosines, arc cosines, tangents, arc tangents, and the like. Also provided are functions for converting between degrees and radians, adding and multiplying a range of cells together, producing random numbers, rounding, and computing standard deviation and variance functions for statistical calculations. Financial functions include the normal functions for computing future value, internal rate of return, interest rates, and so forth.

There are also functions for manipulating strings, presenting alert dialog boxes, and manipulating dates (returning the day of the week for a date, for instance). The normal Boolean functions are provided, such as AND, IF, NOT, OR, ISNUMBER, ISEMPTY, and ISERROR. You can also use functions that look up

values in tables, count the number of values in a range of cells, or return the maximum or minimum value in a list. There are, quite simply, too many functions to list them all here. Suffice it to say that all the standard spreadsheet functions, and many more, are available.

For users that need to keep their spreadsheets private, Quick Click Calc provides encryption. Just check the "Encrypt the File" option in the Save As dialog box, and you'll be asked to enter a password (twice, to be sure you didn't mistype it) which will be used as a key to encrypt the file. Once encrypted, it would take real determination (or a great deal of computing power) for anyone to crack the code and read your data. This feature is useful for users that share their system with other people, but if you're worried that the CIA is poking around your IIGs, Quick Click Calc's encryption probably won't stymie them for long. Quick Click Calc also has very good graphing abilities. You

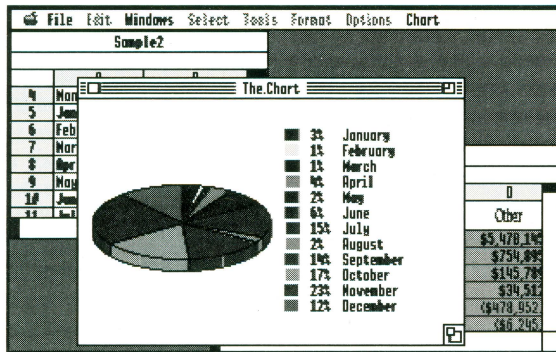


Figure 2

can create several types each of pie charts, line charts, and bar graphs, including three-dimensional graphs and best-fit line charts. Figure 2 shows a tilted 3D pie chart of the Net column from Sample1. Graphs can be saved to disk in Apple Preferred Format, so they can be loaded into paint programs for editing, or into word processors or page layout programs for incorporation into documents.

The graphing abilities, while powerful, can be difficult to use. I was unable to figure out how to create a line graph of the net income, showing the change from month-to-month. This brings to mind the manual, which is really little more than a quick reference guide, and is lacking in the substance necessary to help beginning users find their way around the program. Although the manual could use some fleshing-out—especially for people that have never used a spreadsheet before—most people are familiar enough with the spreadsheet concept that the Quick Click Calc manual will serve just fine. Online help, however, would be a welcome addition.

Also, importing from other spreadsheet programs can be a challenge. Quick Click Calc can only import AppleWorks 3.0 and ASCII text format spreadsheet files. This means that to import AppleWorks GS files into Quick Click Calc, you must export the AppleWorks GS spreadsheet to ASCII text from within AppleWorks GS, then import it into Quick Click Calc. Unfortunately, there is no real solution to this problem, since Claris never documented the format of AppleWorks GS spreadsheet files. (Reportedly, this is because AppleWorks GS merely saves the "memory heap" where the spreadsheet resides and uses no specific for-

mat.) AppleWorks 4.0 spreadsheets cannot currently be imported, but Byte Works has stated that this will change in the future.

Quick Click Calc shows a great deal of potential, and provides many features that AppleWorks GS does not, including publish and subscribe, the ability to change the height, color, and font used in cells, and a wider selection of data types. Teachers will find that the ability to perform mathematics using letter grades makes Quick Click Calc a very useful tool, and anyone currently using AppleWorks GS' spreadsheet will most likely find Quick Click Calc easier to use, smoother to handle, and more feature-laden. Unlike AppleWorks GS, Quick Click Calc makes it possible to produce spreadsheets that not only function well, but actually look good when printed on paper.

Quick Click Calc's flaws are fairly minor, and Byte Works is working to repair them—version 1.2 of Quick Click Calc should be available well before you read this, and Byte Works seems to be committed to fixing all the problems in Quick Click Calc and to making the program even more useful and more convenient than it already is. It is a valuable tool, and anyone who uses an Apple IIGs and uses spreadsheets should seriously consider buying Quick Click Calc.

**ULTIMA GS**  
★★  
Vitesse, Inc.  
Apple IIGs, 1 MB RAM, 1 3.5" drive,  
System 6  
\$39.95

Reviewed by Colin Williamson

Ultima was one of the most popular Apple II games of all time. Released in 1981 by Richard Garriott (Lord British) and written in BASIC, Ultima impressed all who saw it with its fantasy role-playing and science fiction themes, a huge gaming world, and twisting labyrinths filled with blood-thirsty monsters.

Now, over thirteen years since its original release, Ultima is back in the limelight as a new game, for GS/OS, with IIGs graphics and sound. In 1992, programmer Bill Heineman (author of Out of this World) decompiled the code from a late-80's IIe re-release, added some new pics, effects, and music, and wound up with a marketable product. Except for one minor problem: someone else owns the Ultima copyright and trademarks. Heineman finally reached Richard Garriott—who, reportedly, has a IIGs at his office!—and got permission to distribute Ultima GS. Vitesse snatched up the license, and the rest is gaming history.

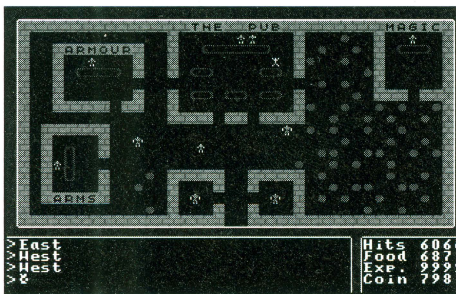
So how does the IIGs incarnation stack up to the first Ultima? In the original you began by adjusting Strength, Dexterity, and other attributes of your character. The game was played from a top-view perspective that displayed your character figure and immediate surround-



ings. Fights occurred when an Orc, Evil Archer, or other opponent got close enough to trade blows, and winning yielded Gold and Experience points. If you managed to survive the numerous dungeon mini-quests and build your powers, you could operate a Time Machine and face-off against Mondain in The Final Battle. All in all, standard zap-the-Evil-Wizard swords-and-sorcery role-playing fare.

Ultima GS preserves virtually all of the game play features of the original, even the weird place names and (alas) keyboard-only controls. A new View Map function that shows the current continent or dungeon level does represent a major advance. So do game sound effects and music. The digitized yells, growls, clashes, etc. are well-done, and a superb MIDI synth soundtrack by Tony Gonzalez is stirring and brilliant.

Graphics are crisper and more colorful, too. Unfortunately, those of you expecting visual splendor comparable to Questron II/GS or the TimeLords demo will have to look elsewhere. Your character isn't even animated! Continent (countryside) graphics are still pretty bland and



dungeons employ white lines on black just like the original. However, you do get well-drawn dungeon monsters in color.

Other improvements include quick game Save and Restore, attractive super-res text, and hard disk compatibility. One change, a rougher Space Ace arcade component, has to rate as a toss-up. Yes, most players should, eventually, be able to knock out the requisite 20 Evil Space Ships and become Space Aces. Some players may actually look forward to the key-diddling dexterity challenge. Even so, the arcade is too difficult considering that it's part of a role-play adventure and that it is not optional.

Overall, there is not much question that Ultima GS is smoother running, prettier, and much better sounding than the original. If you're new to map/maze adventuring and looking for a medium-difficulty introduction, the new Ultima is a good bet. If you played through the original, you'll want to try an old favorite in its IIGS form. Sure, I expected more, especially by

way of graphics, a mouse interface, and other '90's enhancements. Maybe next time. Like, have you heard about Ultima VII GS?!

**SUPER MENU PACK**

★★

Seven Hills Software

Apple IIGs, 1 MB RAM,  
System 6, hard drive recommended

\$29.95

**Reviewed by Jon McCreight**

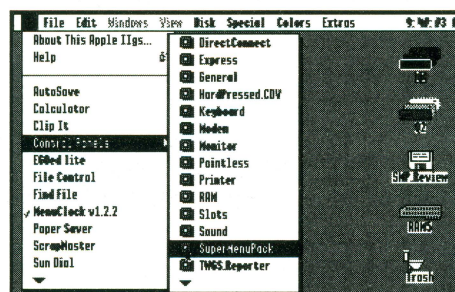
o, Super Menu Pack is not today's all-you-can-eat special at the Seven Hills cafeteria. SMP is software that adds a hierarchic Control Panels menu and other handy features to programs that use Apple's IIGs Desktop.

A "hierarchic" Control Panels menu means that when you pull down the Apple Menu and select "Control Panels", a submenu appears next to the Apple Menu listing all the active control panels. Dragging over and highlighting any control panel on the submenu pops that control panel open instantly. As you can imagine, this can save you loads of time—no need to open the Control Panels DA before opening the desired Control Panel!

A neat feature of this submenu is that at the bottom of the list of active control panels is the selection "Inactive CDEVs" (CDEV is the pre-System 6 name for a Control Panel). Highlighting this item produces a sub-submenu that lists all the inactive control panels in your CDevs folder. Selecting an inactive control panel activates it immediately—no need to go back to the Finder and reboot.

The second major SMP feature is a magic window that displays all the characters in the currently-selected font. The magic is that when you highlight any character in the font, SMP displays the keystrokes necessary to duplicate that character. Click on any character and it will appear in your document; or you can click a string of characters into an editable line at the bottom of the window, then drop the whole line into your document. This is great for anybody who uses international characters or picture fonts like Cairo.

Depending upon the software you're running, SMP can also display each font's name in its own typeface when you pull down the Font menu. This "Pretty Fonts Menu" functions well if you use bitmapped fonts, but if you use TrueType fonts you're in for some nasty surprises.



After booting a program, opening the first document takes nearly forever—a two-page letter took almost two minutes to open! My Font menu with 28 TrueType and 8 bitmapped fonts took almost a minute to scroll down from Antique Bold to Zapf Dingbats the first time I opened it. With bitmapped versions of my TrueType fonts added to the Fonts folder, the letter opened in fifteen seconds and the Font menu in twelve seconds. Oddly, while SMP's Pretty Fonts Menu works fine with some wares, like Appleworks GS, it does not function with others, like Platinum Paint.

SMP's booklet fails to mention one additional goodie included on the diskette, Sys.Icons. (It is documented via a text file in the SCRIPTS folder.) Sys.Icons supplies a set of small system icons that liven up your menus when you're selecting files or disks from pop-up windows or working with dialog boxes. SMP's Installer doesn't give you a choice about adding SYS.ICONs; so, if you're skinny on RAM and/or disk space, just delete the 18K file from your SYSTEM/SYSTEM.SETUP folder after the installation is done.

Since most functions can be turned on and off independently, you can customize SMP to fit your needs. For example, a user who accesses control panels frequently can enjoy the convenience of the hierarchic menu without activating any of the Font display features. Or View Font and Pretty Fonts Menu could be the features you like best. Maybe you'll decide your IIGs needs the whole works! To find out for sure, give Super Menu Pack a try.

**GATE**

★★★

Seven Hills Software  
(Distributed by Big Red Computer Club)

Apple IIGs, 1.125 MB RAM,  
joystick and stereo card recommended

\$30.00

**Reviewed by Larry L. Melton**

Just a moment of carelessness and you become one more warrior imprisoned in the stinking dungeons of Firemaster Darg's castle. Meanwhile Darg is spreading terror through the once prosperous land of Divesia. Hopeless? Not quite: a badly wounded cellmate lingers just long enough to give you a key! Now, you must find Darg and defeat him in a duel to the death. Sound simple? Sure. Simple as a getting your head hacked off with a sword.

Gate is an action adventure boasting stereo sound and superb top-down view graphics which are colorful, bright, and razor-sharp. The playing field takes up most of the screen, while to the right are indicators of weapons and armor status plus counts of Keys, Lightning Bolts, and Amulets in your inventory. A bar across the bottom shows Health. Take too

*(Continued on page 25)*

# SPECIAL!

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# BOTTOM LINE



"Simple, quick, and reliable!"

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BottomLine is the easiest-to-use home financial program ever made. In under 10 minutes, you will be up and running managing all of your financial accounts. Features include Record Keeping, Reconciliation, Budgeting, Recurring Transactions, Check Writing and a full range of custom reports.

BottomLine features pull down menus for mouse or keyboard support. A handy, full feature calculator and notepad are also included.

Finding transactions has never been easier. The program lets you search by check number, payee, dollar amount, and text. Tax related transactions can easily be flagged allowing easier reporting at the end of the year.

Up to 800 transactions per month and an entire year can be contained on just one diskette. BottomLine even lets you export your financial information to an AppleWorks® Spreadsheet. This feature is compatible with any AppleWorks® program including the new AppleWorks 4.0. *Suggested retail price: \$64.95*

Requirements: Enhanced IIC or later; 128K or greater; 5.25" or 3.5" drive; Printer Optional (Compatible with most popular printers); Mouse Optional.

Note: BottomLine is currently not hard disk installable.

QC's price: **\$34<sup>95</sup>**



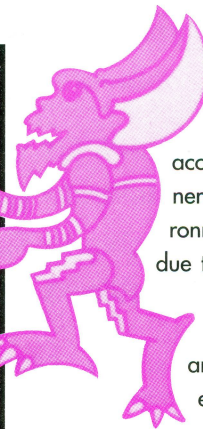
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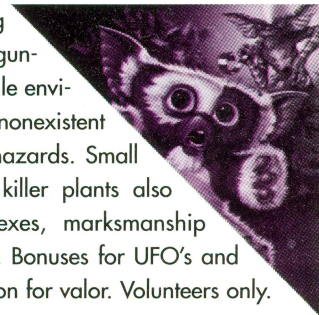


**APPLE II  
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3 FOR \$19.95**

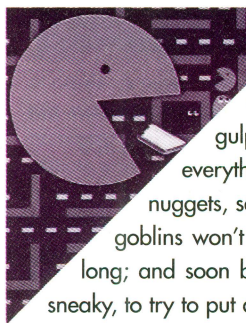


**GREMLINS**

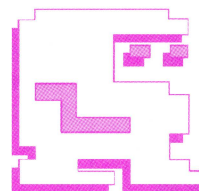
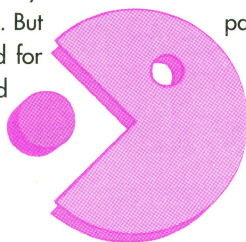
Applications being accepted for replacement gunners in high-risk job. Hostile environment. Road conditions nonexistent due to meteor and crater hazards. Small native population of killer plants also reported. Quick reflexes, marksmanship and diving skills a must. Bonuses for UFO's and enemy tanks. Recognition for valor. Volunteers only.



**PAC-MAN**

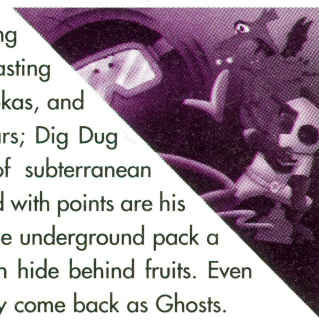


The refinements of dot chomping lead to high scores as hungry Pac-Man avoids ambush by voracious goblins. When Pac-Man gulps an energy dot he can turn the tables and eat everything in sight. . . that includes yummy bonus nuggets, sending scores into the thousands. But goblins won't allow themselves to be gobbled for long; and soon become their old selves, fast and sneaky, to try to put an end to Pac-Man's three lives.

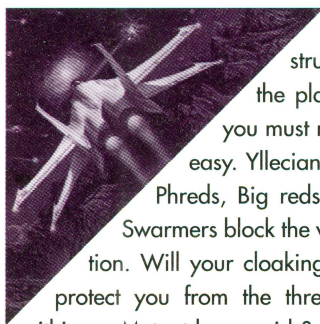


**DIG DUG**

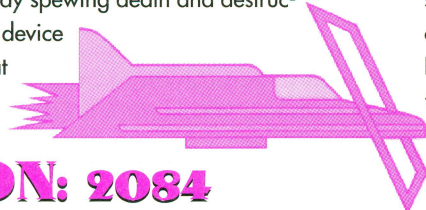
Dodging and blasting Pookas, and dropping rocks on fire-breathing Fygars; Dig Dug burrows his way through a maze of subterranean paths. Ripe fruits and veggies, loaded with points are his passion. But the evil denizens of the underground pack a potentially lethal wallop, and can hide behind fruits. Even when Dig Dug kills them they may come back as Ghosts.



**STARGATE**

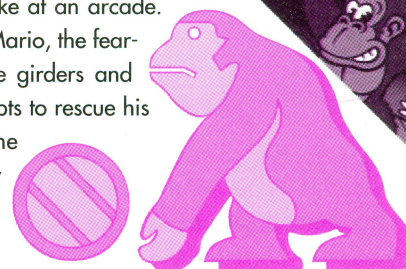


The entire universe is your enemy as you struggle to rescue humanoids stranded on the planet surface. To take them into a Warp you must reach the Stargate. But getting there isn't easy. Yllecian space guppies, Dynamos, Space hums, Phreds, Big reds, Munchies, landers, Baiters, Pods and Swarmers block the way spewing death and destruction. Will your cloaking device protect you from the threat within. . . Mutant humanoids?

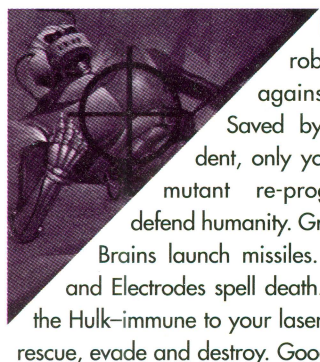


**DONKEY KONG**

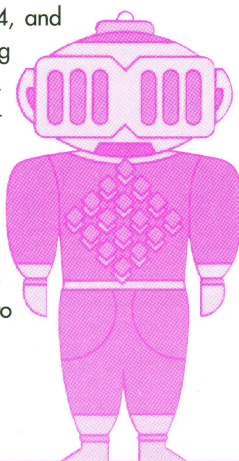
You can feel an excitement tingle up and down your spine when you play Donkey Kong at home, just like at an arcade. Your joystick guides Mario, the fearless carpenter, up the girders and elevators as he attempts to rescue his sweetheart from the clutches of Donkey Kong. All the thrills of the arcade game.



**ROBOTRON: 2084**

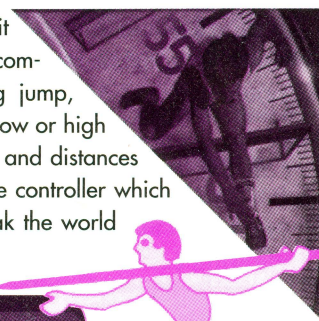


It's the year 2084, and robots are turning against their masters. Saved by a genetic accident, only you can resist their mutant re-programming and defend humanity. Grunts close in. The Brains launch missiles. Tanks, Sheroids and Electrodes spell death. And then there's the Hulk-immune to your laser. Your mission is to rescue, evade and destroy. Good Luck.



**TRACK & FIELD**

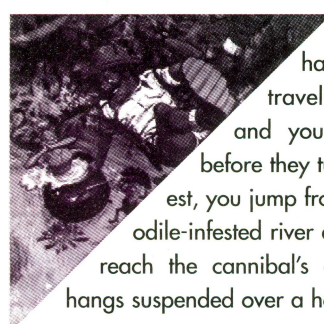
You've worked long and hard to make it this far. Now it's time for head-to-head competition in the 100 meter dash, long jump, javelin, 110 meter hurdles, hammer throw or high jump. You're out to beat the best times and distances on record. Included is a special arcade controller which gives you everything you need to break the world record in athletic competition.



**COMPLETE WITH ARCADE CONTROLLER**



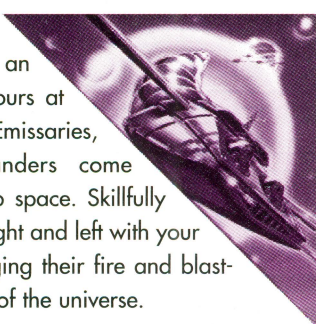
## JUNGLE HUNT



Savage cannibals have kidnapped your traveling companion, and you must rescue her before they turn her into stew! In the deep jungle forest, you jump from rope to rope. Then you brave a crocodile-infested river and a landslide of huge boulders. You reach the cannibal's campsite just in time—your sweetie hangs suspended over a hot cauldron of boiling goo!



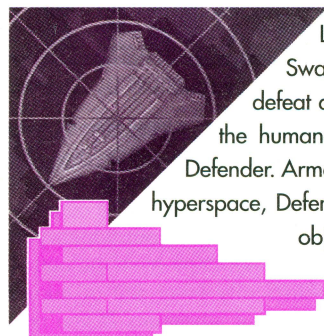
## GALAXIAN



You feel that spine-tingling exhilaration every time you play GALAXIAN in an arcade. Now the same sensation is yours at home. Wave after wave of Drones, Emissaries, Hornets and Commanders come winging in from deep space. Skillfully you slide your ship right and left with your joystick, dodging their fire and blasting them out of the universe.

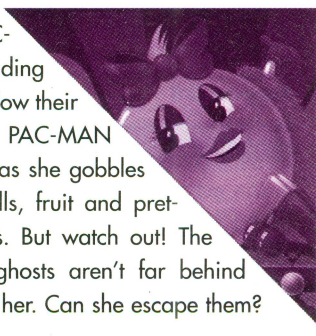


## DEFENDER

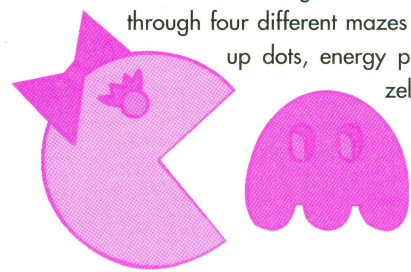


Landers, Bombers, Baiters, Pods, and Swarmers. The alien attack has come, and defeat at the hands of crazed invaders threatens the humanoids. Their only hope is the spaceship, Defender. Armed with smart bombs and able to shift into hyperspace, Defender evens the score only to become the object of another foul attack: kidnapped humanoids transformed into killer mutants.

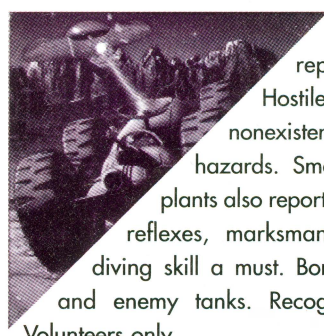
## MS. PAC-MAN



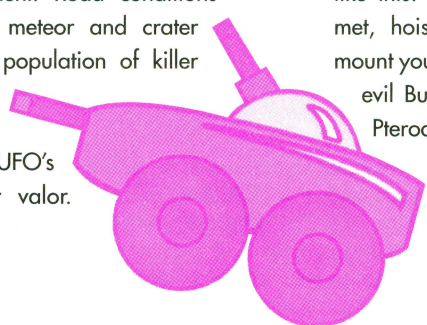
It was the love match of the century, PAC-MAN, star of the arcade, and his leading lady the unforgettable MS.PAC-MAN. Now their romance continues. You guide MS. PAC-MAN through four different mazes as she gobbles up dots, energy pills, fruit and pretzels. But watch out! The ghosts aren't far behind her. Can she escape them?



## MOON PATROL



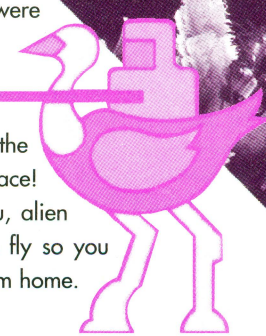
Applications being accepted for replacement gunners in high-risk job. Hostile environment. Road conditions nonexistent due to meteor and crater hazards. Small native population of killer plants also reported. Quick reflexes, marksmanship and diving skill a must. Bonuses for UFO's and enemy tanks. Recognition for valor. Volunteers only.



## JOUST



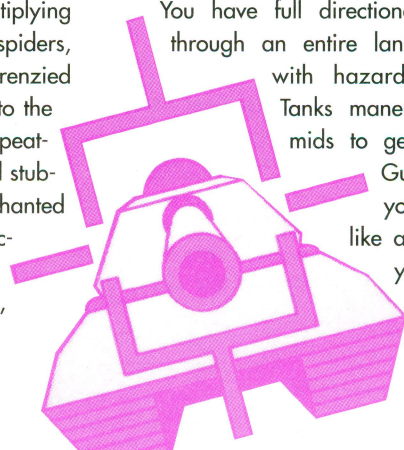
In days of olde, when knights were bolde—they never saw anything like this! You don your helmet, hoist your lance and mount your ostrich to do battle with the evil Buzzard Riders in deep space! Pterodactyls to the right of you, alien eggs to the left—learn to fly so you won't die so very far from home.



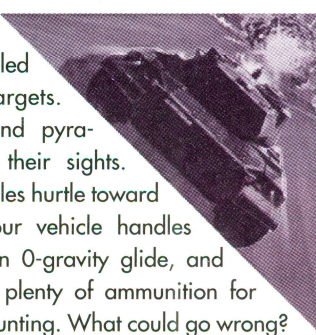
## CENTIPEDE



An insidious invasion of multiplying insects (centipedes, jumping spiders, poisonous scorpions, and frenzied fleas) pose different perils to the mushroom patch. You must repeatedly blast enraged creepers and stubborn obstacles or lose your enchanted fungus. Remember to listen for distinctive sounds of the attacking bugs; and watch out for blasted centipede segments, each one grows a new head.



## BATTLEZONE



You have full directional control through an entire landscape filled with hazards and targets. Tanks maneuver around pyramids to get you in their sights. Guided missiles hurtle toward you. But your vehicle handles like a dream on 0-gravity glide, and you've got plenty of ammunition for saucer hunting. What could go wrong?



by Ellen Rosenberg

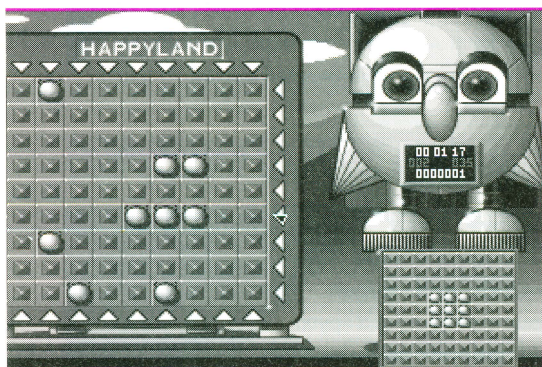
► This month, the Shareware Spy presents three new disks that have at least one thing in common. You gotta use your head and exercise your mind even if you're body is a computer potato. These offerings should appeal to parents, teachers, and students alike.

### Cogito GS

by Brutal Deluxe, freeware  
Apple IIGs, Shareware Spy 11a

It's got sound, it's got music, so what if it doesn't have color? Brutal Deluxe is at it again, bringing Apple IIGs owners a freeware version of another popular, commercial Mac/PC game. Cogito is challenging, it's addicting, and it stretches the mind in directions seldom traveled these days.

Picture a grid made of rows and columns. Each row and each column is flanked by a control arrow allowing it to be moved square-by-square, up, down, left or right. In the lower right hand corner of the screen is a small version of the grid which contains a simple (at the earlier levels, that is) pattern made of what seem to be marbles. The pattern in the larger grid becomes scrambled and your job is to match the pattern by manipulating the rows and columns in order that the marbles assume



their original position. Sounds hard to learn? It's not. Sound easy to play? It's not!

Cogito is the kind of game that strengthens creative thinking and problem solving skills. Aside from the fact that the game lacks color, it's commercial quality and thoroughly enjoyable. Cogito contains 120 levels of increasing difficulty and unlike the commercial versions requires no password to access each level.

### USA States & Capitals

by Peter A. Stricker, \$10.00 shareware  
Apple IIGs, Shareware Spy disk 11b

HyperStudio is an easy-to-use yet powerful multimedia application which allows one to make their own "stacks" on just about any topic imaginable. Incorporating graphics, sound, and text is as easy as clicking the mouse button. Peter Stricker used HyperStudio (contact Roger Wagner Publishing, 1050 Pioneer Way Suite P, El Cajon, CA 92020, 800-421-6526 or 619-442-0522) to create a very well done shareware stack on the US states and their capitals. The stack includes five separate (yet integrated) activities, four of which are designed to teach/reinforce the concepts in a quiz fashion, the fifth gives factual information about individual states; such as population, date settled, admittance to the union, and largest city.

The stack requires HyperStudio, or the runtime version, which I've included on Shareware Spy disk 11b. The runtime version of HyperStudio allows you to look but not touch, individual stacks. In other words, you can view any stack with it but can't change it or create your own. It's a nice introduction to HyperStudio for those who haven't seen it before.

### Facts Test Maker

by Daryl Morgan, \$6.00 shareware  
All Apple II's, Shareware Spy disk 11c

You're a teacher with limited resources. You're a parent whose child needs practice with his/her math facts. Or maybe you're a precocious kid with an insatiable thirst for drill, drill, drill. (Maybe you'll grow up to be a dentist.) What you need is Facts Test Maker.

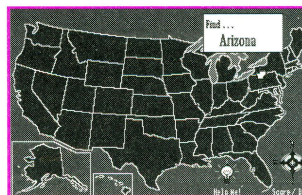
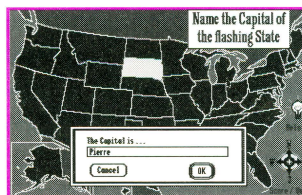
This small program will print tests of 100 basic math facts. The test may include addition, subtraction, multiplication, division, or

any combination of operations. The user may specify groups of problems to be included, a title for the test, and a printed answer key. Detailed instructions are included on the disk, along with some tips, tricks and enhancements from the author. A handy homework helper!

### InternaMaze2

by Dennis G. Ward, Applesoft conversion by Bill Fortenberry, slightly modified by Charles Hartley, public domain

Maze games are mind boggling and this one is no exception. It's enduring enough to have hung around for nearly a decade! The computer randomly draws a maze from which you must find your way out. You have the option of selecting a difficulty level and of taking tools with you on your adventure. If you're a novice traveler, you may find a compass, map, or footprints helpful. Lowercase letters and arrow keys help you navigate your way out.



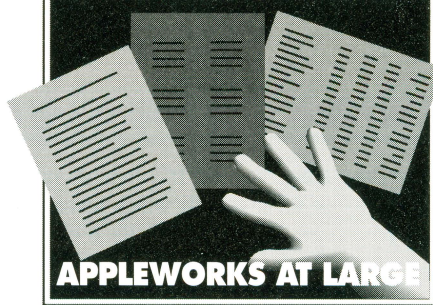
## THE SHAREWARE SPY LIBRARY

Programs mentioned in Shareware Spy are available from most online services and user groups. As a convenience to those without access to a local user group or a modem, we also offer the programs on disk. Send check or money order (in US funds) for \$5 per disk to: Shareware Spy, P.O. Box 866511, Plano, TX 75086-6511. (If you live outside North America, include an additional \$5 per order for airmail shipping.) Make checks payable to "Shareware Spy." Allow 2-4 weeks for delivery.

**Important Note:** When you buy a Shareware Spy disk, you are paying for the blank disk, postage, and labor involved in compiling the disk, not the software itself. You are still legally and morally obligated to pay the shareware fee for any shareware programs you decide to keep. (Remember, public-domain and freeware programs can be freely copied and distributed, but shareware must be paid for if you use it past the trial period.)

Programs do not include necessary System Software (ProDOS & Basic.System or IIGs System 5.04 or later, unless otherwise specified.)

(Continued on page 24)



# MasterWorks Part 4: The Spreadsheet

by Beverly Cadieux

*Beverly Cadieux writes the AppleWorks-related newsletter, TEXAS II. This series of articles is based on issues of TEXAS II which ran from July 1993 through early 1994, and adds new material based on what we've learned since AppleWorks 4 was released.*

Like AppleWorks 3.0, the Appleworks 4 Spreadsheet still handles worksheets 127 columns wide and 9,999 rows deep. While configuring printers, spelling options, and other Standard Settings, you now have the option to set the spreadsheet to use 999 rows instead of 9,999. It's unlikely you will have many jobs that require 1,000 rows or more, and running the spreadsheet at 999 rows makes a significant difference in the time it takes to access the spreadsheet segment and perform certain operations, such as inserting columns. For most users, it is a good idea to set the spreadsheet to 999 rows. The 999-row setting is one of the few Standard Settings which require you to reboot before the change takes effect.

Spreadsheet files from earlier versions of AppleWorks automatically load into Appleworks 4. A cell that was formatted D-2 (Dollars, two decimal places) under AppleWorks 3.0 is converted to M-2 (Money, two decimal places) in Appleworks 4. The "D" format is now used for Date cells. The Appleworks 4 Spreadsheet uses Julian dates, or numbers which represent dates. Julian dates start at 0 for Jan 1, 1904, and range up to 65535 for June 5, 2083. Julian dates automatically handle leap years, and allow arithmetic operations on dates. While the value of a cell containing a Julian date may actually be 32963, the spreadsheet cell can display it in a variety of formats:

4/01/94	4/01/1994	1 Apr 1994	1 April 1994
1/04/94	Apr 1 1994	April 1 1994	

You do not have to know the Julian number of a particular day to enter it in the spreadsheet. To enter today's date, simply press @ in the cell and press Return (not right or left arrow) to confirm it. To convert another date to Julian format, use a formula with the @Date function. For example, @Date (2083,6,5) returns the Julian value of June 5, 2083. You must

use the @Date function, @Date(YYYY,MM,DD), and specify the century in the year. Simply entering the date as '4/1/94 will not give you a Julian number. Julian dates may be arranged with OA-A, added, and subtracted. To make a row of dates 14 days apart, start with a formula in cell A1, @Date (1994,1,1). Then calculate future dates with +A1+14. Copy the formula across with relative references, and you have a list of dates two weeks apart.

Formula (A6):				
@DATE(1994,1,1)	+A6+14	+B6+14	+C6+14	+D6+14
Result (Layout: D5):				
1/01/94	1/15/94	1/29/94	2/12/94	2/26/94

When copying dates to the clipboard, they must be formatted for dates under OA-L (Change cell layout). If they are formatted globally (OA-V, Standard Values), or if they are not formatted at all, the result will copy over the word processor or data base as a Julian number. If the cell is formatted as a date with OA-L, the exact date will be copied: 4/01/94. When copying dates from the clipboard back into the spreadsheet, they are always copied relatively; there is no way to copy formulas from the clipboard in a fixed manner similar to the "No change" option available within a spreadsheet. Therefore, you must be careful when copying date formulas which contain cell references. It is probably better to copy "Values only" when copying from the clipboard if a date formula is involved.

A final note about spreadsheet date formats: Date-formatted spreadsheets from AppleWorks 4 do not do well in AppleWorks 3.0. While the newer file will load and appear to function (dates will appear in their Julian number form), placing the cursor on what was formerly a date-formatted cell will cause problems. While all other AppleWorks 4 spreadsheets will load and work in AppleWorks 3, it's best to avoid those which contain Julian dates.

## OTHER VALUE FORMATS

The current Standard Values are shown on screen every time OA-V is pressed. This current settings list used to be located at the bottom of the spreadsheet's help screen. Not many people were even aware of that, so in its new position on the OA-V screen, it should be much more helpful.

# APPLEWORKS AT LARGE

```
File: Test.SS          REVIEW/ADD/CHANGE          Escape: Main Menu
=====A=====B=====C=====D=====E=====F=====G=====H=====
21|
22|
23|
24|
25|
26|          |-----|
27|          | Current settings |
28|          | Value format is  Appropriate |
29|          | Label format is   Left justify  |
30|          | Protection is    On              |
31|          | Frequency is    Automatic      |
32|          | Order is      Columns        |
33|          | File status is New           |
34|          |-----|
35|
```

```
A36: (Width: 9)
Standards? Value format Label format Column width Protection Recalculate
```

Standard Values may be configured to display values as Fixed, Money, Commas, Percent, Date, Scientific Notation (exponential), Appropriate (as entered), or Standard (OA-V) values. Labels may be right or left justified, or centered. There is a difference between formatting globally with OA-V (formats the entire spreadsheet) and formatting locally with OA-L (formats columns, rows, or a block). Setting global values with OA-V automatically formats future entries in spreadsheet cells. For example, a "1" entered in a spreadsheet already formatted for Money and 2 decimal places automatically appears as \$1.00.

Fixed	Money	Commas	Percent	Date	Exp	Appropriate	Standard
1000	\$1,000	1,000	100000%	9/27/1906	1e+3	1000	1000
2000	\$2,000	2,000	200000%	6/23/1909	2e+3	2000	2000
3000	\$3,000	3,000	300000%	3/19/1912	3e+3	3000	3000
4000	\$4,000	4,000	400000%	12/14/1914	4e+3	4000	4000
5000	\$5,000	5,000	500000%	9/09/1917	5e+3	5000	5000

Formatting locally (OA-L) to set up columns, rows or a block, overrides the global setting. Using OA-L in column or row layouts does not format future entries, but only resets existing ones. New entries take on either the global layout, or standard layout, if no global values have been set. The AppleWorks 4 manual points out a neat trick: if you format a Block (OA-L, Block) instead of a column or row, future entries will include the cell layout (money, commas, or whatever you set). This works well, with one exception, which occurs when a formula has a result that is a value label (a "value label" is a label which is the result of a function such as @If, @Lookup, or @Choose).

If a formula such as @IF(A1=1,100,""), returns the negative result, "", or blank, the local cell formatting is lost, even if it is block formatted. Alternatively, changing the formula to @IF(A1=1,100,@NA) holds the local formatting, but doesn't look as good. If you want a cell to display as a blank while it waits for a valid entry, it's probably best to use global (OA-V) formatting instead of OA-L.

## BEWARE THE BLOCK MOVE

New AppleWorks 4 OA-F Find and OA-R Replace options let you search for numbers and formulas, as well as coordinates and text.

```
Find? Repeat last Coordinates Text Number Formula
```

Here's a practical use for the "Find a Formula" command: we know from AppleWorks 3.0 that AppleWorks' Block Move command (OA-M, Block) may not give an accurate result when the spreadsheet is recalculated.

If a formula references a cell, then the referenced cell is moved, all cells which pointed to the moved cell still point to the original location. Specifically, if there is a formula in cell B1 that says, "+A1+1," and cell A1 is block-moved to cell C1, the formula in B1 still references the old cell, A1. Perhaps a future version of AppleWorks will include an automatic scan for references when cells are moved. For now, it is a good idea after block-moving to do a search for other cells which point to the original location. This can be done with the new and improved OA-F command: Find Formulas that contain "A1." Then, you can change all the cells containing A1 to reference the new cell, C1, instead. A TimeOut accessory from TEXAS II, TimeOut Smart Move, handles block moves, then scans the spreadsheet and changes formula references automatically.

The new OA-F Find commands can search in any direction, ahead, back, up, or down. Ahead and Down search forward, but not back; Back and Up search everything backward, in both directions, but not forward. In no case is the current cell searched for text or a formula. While all the bases are covered (except for the cell you are in), simply pressing Return on "Ahead by Row" will find almost anything fairly quickly. As long as the cursor is in cell A1, it isn't necessary to spend time puzzling over this menu. Just press Return:

```
Find Number? Ahead by row Back by row Down by column Up by column
```

You can also press the open-Apple key to limit the search to the current row or column only. For example, OA-D or OA-Rtn on "Down by column" in the menu above would search "Down" the current column until the last row containing data is reached, and then stop. Plain "D" or Return on "Down by column" would wrap back up, and continue to search down and around the rest of the spreadsheet in column order.

The only real problem that the "Ahead by row" menu presents (other than an extra keypress) is for those who have previously used macros to find spreadsheet text: macros which said "<OA-F>T" must now be changed to say "<OA-F>TA," to handle "Ahead by row." The OA-F command now also repeats itself, similar to the way it does in the word processor ("Find next occurrence?"). In AppleWorks 3, when a spreadsheet target was found, the Find ended right there; to find again, you pressed OA-F again. AppleWorks 4 now goes into the next find, saying "Find? Repeat last..." This is probably a great convenience for spreadsheet finders, but macro programmers who used <OA-F> must now insert an <ESC>.

## QUICK TIPS

For a quick way to copy cells, use the new ditto command, which now works in the spreadsheet, the same as it does in the data base. OA-' to ditto the cell above even copies formulas with relative references. Thus you can increment a date or other formula instantly down the page with a series of OA-' commands.

When copying formulas within in a spreadsheet, you do not have to select "No change" or "Relative" for every formula you copy. Pressing OA-N or OA-Rtn on "No change" copies them all with No change to the original cell references. OA-R or OA-Rtn on "Relative" makes all formulas in the spreadsheet section you copy have relative references.

## NEW FUNCTIONS

New functions, in addition to @Date, are @Find, @Mid, @Len, @Lower, @Upper, @Join, @Text, @Val, and @Alert.

@Find(starting position,find what,in what) searches a string in a cell for a match. The cell to be searched can be a label or a value label. @Find returns 0 (false) if the item searched is not found; if the item is found, the result is true (non-zero), and the position in the string where it was found is returned.

```
B1: @If(A1=1,"Yes","No")
```

# APPLEWORKS AT LARGE

C1: @Find(1,"Yes",B1)Returns 1 if Yes, 0 if No.  
 D1: @Find(1,"s",B1)Returns 3 if Yes, 0 if No.

A string can be extracted from a cell using the @MID(starting position,length,"string") function. The new function @Len("string") returns the length of the string.

@MID(1,3,"January")Returns "Jan"  
 @LEN("January")Returns 7

@Lower and @Upper return the case indicated: @Lower("JAN") becomes jan, and @Upper(@Mid(1,1,"jan")) becomes J. Two strings (not numbers) can be joined with the @JOIN function:

@JOIN(@UPPER(@MID(1,1,"jan")),@MID(2,2,"jan")) Returns "Jan"

@Text converts a number to a label, and @Val converts a label to a number, thus allowing it to be operated upon:

@Text(A10) Returns "12345" if A10 is a number, 12345.  
 @Val(A10) Returns the number 12345 if A10 is text, "12345."

The most interesting new function is the Alert box. It announces (loud and clear!) if a certain result is found.

@IF(A10>100,@ALERT("Budget is exceeded!"),0) gives this result:

```
File: Test SS          REVIEW/ADD/CHANGE      Escape: Main Me
=====A=====B=====C=====D=====E=====F=====
 7|
 8|
 9|
10|      $101.00
11|
12|
13| _____|
14| |           | Budget is exceeded! |
15| |_____   |
16|
17|
18|
19|
20|
21|
22|
```

A10: (Width:12, Value)  
 Press Space Bar to continue 154K Avail.

When starting to enter a formula in a cell with a number, decimal, or sign such as +, -, (, or @, pressing OA-F pops up a scrolling list of all the formula functions. The function you select is automatically entered without any typing. The arguments for each function are displayed for your reference, both in the function list and in the data entry screen.

```
File: Home Budget.SS    REVIEW/ADD/CHANGE      Escape: Restore former ent
=====A=====B=====C=====D=====E=====F=====G=====
 1|INCOME                | IF(logical value,true,false)
 2|      Cash Brought Forward| INT(value)
 3|                        | IRR(cashflow range,guess value)
 4|Employment Income :    | ISBLANK(reference)
 5|      Gross Income 1     | ISERROR(reference)
 6|      Gross Income 2     | ISNA(reference)
 7|      Other              | JOIN(string,string [,...])
 8|                        | LEN(string)
```

```
 9|Investment Income      | LN(value)
10|      Interest          | LOG(value)
11|      Miscellaneous Cash I| LOOKUP(value,range)
12|                        | LOWER(string)
13|Other Income           | MAX(list or range)
14|=====                | MID(start,length,string)
15|                        | MIN(list or range)
16|EXPENSES               | MOD(value,divisor)
17|Investments            | NA
18|      CO Savings Plan    | NOT(value)
```

A1: (Width:10, Label)  
 Value: +  
 Use arrows to select, then press Return 48K Avail.

Finally, a new "3D" feature allows you to actually make calculations in, and import results from, another spreadsheet:

@Avg("Last Year":A1...A99) posts the result directly from the spreadsheet named LAST YEAR into this year's spreadsheet. The colon following the file name to be imported from is a new operator for AppleWorks 4 which indicates file linking.

## PRINTING AND OTHER OPTIONS

On printing the spreadsheet, either the title, defined by OA-T, or the header, containing the spreadsheet name and date, or both, may be printed on every page. Printing to the clipboard for the word processor can either replace the clipboard data, or append to it. An option on the spreadsheet Printer Options menu (OA-O) lets you have the spreadsheet automatically recalculate every time you print, and set the number of times it will recalculate. The spreadsheet will recalculate the "NT" (Number of Times) you set, whether it is before printing, on OA-K, or on automatic recalculation. Most of the time, this will be set to 1. If your spreadsheet has forward references, which occur when a formula references another cell which has not yet been calculated, set it to 2 or more.

Under Appleworks 4, a recalculated file is marked as changed. Under AppleWorks 3.0, the file status was not changed by recalculating; thus you could be fooled into not saving a file that had just been updated by OA-K. To test this, set recalculation to manual, make a change, and save a file without recalculating. The file status will be Saved. Then press OA-K to recalculate. Under Appleworks 4, the status will become Changed. Under AppleWorks 3.0, it would have stayed saved.

This concludes our look at the new features of AppleWorks 4. We hope that we've encouraged those who have not yet upgraded to AppleWorks 4 to do so, and those already have AppleWorks 4 to do further exploration. AppleWorks 4 is both practical and challenging; the Apple II not only still does the job, it does it better than ever! ■

## TEXAS II SUBSCRIPTION INFORMATION:

### TEXAS II, TEXAS II on Disk

6 issues, \$15.00

6 issues + 3 disks, \$39.00

### Kingwood Micro Software

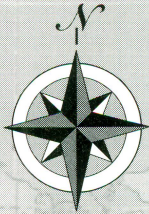
2018 Oak Dew

San Antonio, TX 78232-5471

1-210-490-6373

# computer clubs

To get more information about the Apple User Group nearest you,



## ALASKA

Anchorage Apple Users Group  
P.O. Box 110753  
Anchorage, AK 99511-0753  
Contact: Timothy Odell 373-7459

Apple Mousse User Group  
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Fairbanks, AK 99708  
Contact: Jesse Alencio (907) 456-1333  
\$15 per year

## ARIZONA

Apple-Res  
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Scottsdale, AZ 85260  
\$25 per year

Arizona Apple User Group  
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Tucson Apple Core  
P.O. Box 43176  
Tucson, AZ 85733-3176  
Contact: Clay Evitts (602) 296-5491 days  
\$20 per year  
BBS: (602) 882-2945

## ARKANSAS

Apple Tree of the Ozarks  
HC 62 Box 540  
Flippen, AR 76234  
\$20 per year, \$15 initiation

## CALIFORNIA

Apple Corp. of San Diego  
P.O. Box 87964  
San Diego, CA 92138-7964  
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Appleholics Anonymous Apple II User Group  
3875 Telegraph Rd. Suite A202  
Ventura, CA 93003  
Contact: Tony Pizza (805) 482-3453  
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AppleJacks of Inland Empire  
Contact: Larry (909) 864-2309  
BBS: (909) 369-6637

Apple Sac  
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Sacramento, CA 95825  
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Fresno Apple II Computer Users Group  
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Fresno, CA 93755

Gravenstein Apple IIGS Users Group  
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Petaluma, CA 94953-0964  
\$25 per year per family  
BBS: (707) 794-9333

Newton's Fruit Users Group  
14639 Cashew St.  
Hesperia, CA 92345-2702  
BBS: (619) 956-2631

Orange Apple Computer Club  
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El Toro, CA 92630  
(714) 770-1865  
\$25 per year

Original Apple Corps  
P.O. Box 90065  
Los Angeles, CA 90009  
Contact: Fred Duffy (310) 450-3336  
BBS: (310) 454-4660

Peninsula Apple User Group  
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Contact: Roger Lakner 367-8657

P.I.E. (Programming & Interfacing Enthusiasts, Inc.)  
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Santa Clara, CA 95055  
Contact: Dean Nichols (408) 241-8848  
\$20 per year  
BBS: (408) 733-4670

Stockton Apple Users Group  
6333 Pacific Ave., Suite 186  
Stockton, CA 95207

South Bay Apple Computer Club of Torrance  
Contact: Jack Kells (310) 534-0752  
BBS: (310) 538-1913

Tri-City Apple User Group  
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Pasadena, CA 91109  
(213) 258-0281  
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BBS: (818) 288-5640

Tri Valley Apple II User Group (TVAIUG)  
P.O. Box 2096  
Dublin, CA 94568  
Contact: Jerry Carleton (510) 828-0959

Valley Apple Computer Club  
12978 Crowley St.  
Arleta, CA 91331  
Contact: William Trent (818) 988-1752  
\$24  
BBS: (818) 504-9750

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Lakewood, CO 80228-0668  
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Hamden, CT 06517

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Greens Farms, CT 06436  
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\$20 per year family membership

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East Hartford, CT 06138-0027  
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SMALL User Group  
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Plainville, CT 06062-2608  
Contact: Linda Frechette (203) 747-2036

Thames River Apple Users Group (TRAUG)  
Contact: Judson Day (203) 445-6600  
BBS: Merlin (203) 848-1151 &  
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## DELAWARE

Delaware Valley  
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\$20

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Apple Computer Enjoyment Society (A.C.E.S.)  
P.O. Box 291557  
Fort Lauderdale, FL 33329-1557  
1-800-924-4709 & (305) 584-5923  
\$30 1st year, \$25 renewal

AppleJax Computer Club  
2628 Emily Lane  
Jacksonville, FL 32216  
Contact: Barb Sanders (904) 724-6292  
BBS: (904) 721-1166  
\$15 per year

Apple Tree of Central Florida  
2810 Nela Ave.  
Orlando, FL 32809  
\$35 annually  
BBS: 366-0156

South Broward Chapter (A.C.E.S.)  
see above  
BBS: (407) 483-8426

West Palm Beach Chapter (A.C.E.S.)  
see above  
BBS: (407) 483-8426

Spring Hill Apple Computer Enthusiasts (SPACE)  
7100 Picotee Court  
New Port Richey, FL 34653  
Contact: (813) 846-8877  
\$20

SunCoast Apple Club  
3300 Duncan Ave.  
Sarasota, FL 34239  
Contact: Shirley Cook (813) 922-1351  
\$20 per year, \$10 for students

SunCoast Apple Tree  
P.O. Box 7488  
Clearwater, FL 34618  
\$25 per year  
BBS: (813) 347-5104

SWACKS Apple Computer Club  
384 Lancaster Ave.  
Port Charlotte, FL 33952  
\$20 per year, \$12 for Newsletter only

## GEORGIA

Computer User Group (Any Type)  
110 Peachtree Rd.  
Rockmart, GA 30153  
(404) 684-5909  
\$15 per year

## HAWAII

Hawaii Macintosh & Apple Users' Society  
P.O. Box 29554  
Honolulu, HI 96820-1954  
Contact: Eugene Villaluz (808) 735-3750  
\$24 per year

## IDAHO

Apple Boise User Group (ABUG)  
934 River Park Lane  
Boise, ID 83706  
Contact: George Nummy (208) 344-9506  
\$12 per year

## ILLINOIS

Apple Tree Computer Club  
P.O. Box 823  
Homewood, IL 60430-0823  
(815) 469-1961  
\$28 family, \$14 auxiliary per year  
BBS: (708) 481-2211

Aurora Area Apple Corps  
P.O. Box 2901  
Aurora, IL 60507-2901  
Contact: Howard Katz (708) 879-5818  
\$20

DAUG (Dupage Apple Users Group)  
P.O. Box 294  
Downers Grove, IL 60515

Lincolnwood Apple Users Group  
2926 Leanne Court  
Northbrook, IL 60062  
(708) 490-8812

Northern Illinois Computer Society (NICS)  
P.O. Box 547  
Arlington Heights, IL 60006  
New \$30, Renewal \$24, includes entire family

Northshore Apple Users Group  
5331 Carol  
Skokie, IL 60077  
Contact: Babette Simon (708) 967-7483  
Family \$20 per year

## INDIANA

Apple Pickers  
P.O. Box 20136  
Indianapolis, IN 46220  
Contact: Vincent Roth (317) 357-6207 after 5  
New \$25, \$30 per family per year, Renewal \$20  
BBS: (317) 897-1989

Apple Users Group of Michiana  
P.O. Box 11398  
South Bend, IN 46634-1398  
\$15 per year

Fort Wayne Apple Computer Users' Group  
P.O. Box 10004  
FL Wayne, IN 46850-0004  
\$15 per year

Northwest Indiana Apple Users Group  
7526 Independence St.  
Merrillville, IN 46410  
Contact: Nate Gagliardi 762-6818  
\$14 per year

## IOWA

Applebyter Computer Club  
P.O. Box 2092  
Davenport, IA 52809  
BBS: 788-0314

Green Apple User Group  
P.O. Box 171  
Waterloo, IA 50701  
Contact: Virgil Berg (319) 232-1842  
\$15 per year

Metro Apple Computer Hobbyists  
P.O. Box 176  
Crescent, IA 51526-0176  
\$20 per year

Roland Story Apple User's Group  
P.O. Box 407  
Roland, IA 50236-0407  
Contact: Dave Graham (515) 388-4700  
\$10 per year

## KANSAS

Apple Bits Users Group (ABUG)  
P.O. Box 368  
Shawnee Mission, KS 66201  
(816) 523-1007  
\$30 first year, \$25 renewal

Apple Tree User Group, Inc.  
306 West 5th Street  
Larned, KS 67550  
Contact: Shane Blanchett  
\$15 Initiation Fee, \$20 Individual, \$25 Family

Parsons Apple Users Group  
P.O. Box 1081  
Parsons, KS 67357  
Contact: Randall Swearingin (316) 421-6953  
Family \$12 per yr, Full-time students \$6 per yr  
BBS: (316) 421-2027

Plane Apple User's Group  
P.O. Box 47396  
Wichita, KS 67201  
Contact: Duston James (316) 685-2174;  
Steve Specht (316) 265-5539  
\$24 per year  
OMEGA PRO (316) 721-7735

Topeka Area Apple Group  
5419 SW 28th St.  
Topeka, KS 66614-1713  
Contact: Ron Hurd (913) 272-5033  
\$15 family

## KENTUCKY

Louisville Computer Society  
P.O. Box 9021  
Louisville, KY 40209-9021  
\$26

## LOUISIANA

Crescent City Apple Core  
2334 New York Street  
New Orleans, LA 70122-5657  
Contact: Dr. James H. Abbot (504) 283-3819

## MAINE

Northwoods IIGS User Group  
P.O. Box 550  
Milford, ME 04461-0550  
\$15 per year

Southern Maine Apple Users Group  
12 Leighton Rd.  
Yarmouth, ME 04096  
\$15 per year

## MARYLAND

Maryland Apple Corp.  
Contact: Dave Smythe (410) 882-9234  
Washington Apple PI, Ltd.  
7910 Woodmont Ave., Suite 910  
Bethesda, MD 20814  
(301) 654-8060

## MASSACHUSETTS

Cape Cod Apple Users Group  
P.O. Box 48  
South Dennis, MA 02660  
Contact: Ron Church (508) 540-2517  
\$20 per year

New England Apple Tree  
26 Monument Street  
Medford, MA 02155  
\$24 per year

## MICHIGAN

Apple P.I.E.  
P.O. Box 5055  
Warren, MI 48090-5055  
\$25 per year

Apples for the Teachers  
161 Cass Ave.  
Mt. Clemens, MI 48043  
Contact: Jim Wenzloff (313) 469-7206

Flint Apple Club  
P.O. Box 460  
Flint, MI 48501  
\$20 per year  
BBS: (313) 230-7754

Grand Rapids Apple II Users Group  
P.O. Box 1811  
Grand Rapids, MI 49501

Lansing Users Group  
P.O. Box 27144  
Lansing, MI 48909-7144  
\$18

Michigan Apple Computer User Group  
P.O. Box 567  
Warren, MI 48090-0567  
\$25 to start, \$20 renewal per year

Midland Apple Club  
1710 West St. Andrews  
Midland, MI 48640

## MINNESOTA

Lake Superior Apple Users Group  
Duluth, MN  
Contact: Don Jacobson (218) 723-4349

Minnesota Apple Computer Users Group  
P.O. Box 796  
Hopkins, MN 55343  
Contact: Rand Sibet (612) 566-8571  
\$25 per year, \$15 student

## MISSOURI

American Public Domain Club  
5821 Kerth Rd.  
St. Louis, MO 63128  
\$12

Apple Squires of the Ozarks  
P.O. Box 3986  
Springfield, MO 65808-3986  
Contact: Doug Kahler 833-4362  
\$15 initiation fee; \$20 individual

Monsanto Apple Users Group  
2 Perm Road  
St. Louis, MO 63146-5407  
Contact: John B. Wilson (314) 694-2447  
Genie E-Mail Address: JBWILSON  
\$10 per year—Monthly Newsletter

## NEBRASKA

Apple-Link  
P.O. Box 22246  
Lincoln, NE 68542  
\$10 per year

## NEVADA

Southern Nevada Apple Family User Group  
P.O. Box 12715  
Las Vegas, NV 89112-1715  
Contact: George Lewis (702) 364-9093  
BBS: Apples Only (702) 646-7007

## NEW JERSEY

Bergen Apple Special Interest Club (B.A.S.I.C.)  
The BASIC FACTS; 8-11 Creek Ct.  
Fair Lawn, NJ 07410  
Contact: Philip Smalen 791-3355  
\$15 per year  
SSA-BBS: 472-8312

North Jersey Mac Apple User Group  
P.O. Box 215 (WOB)  
West Orange, NJ 07052-0215  
Contact: Pete Crosta (201) 667-6369  
\$25 per year

Ocean/Monmouth Apple Users Group  
55 Meadowbrook Road  
Brick, NJ 08723-7848  
Contact: Bill Scratchley (908) 920-3833  
\$15 per year

Princeton Apple II Users Group  
100 Sixth Ave.  
Trenton, NJ 08619-3223  
\$12 per year

South Jersey Apple User's Group  
P.O. Box 4273  
Cherry Hill, NJ 08003-4273  
Contact: Jack Bullion 767-4913  
\$20 single/family, \$10 student  
SJAUG APPLELINE 424-1382

## NEW MEXICO

Applesque Computer Club  
P.O. Box 35508  
Albuquerque, NM 87176-5508

## NEW YORK

BAUG (Big Apple Users Group)  
P.O. Box 1822  
Old Chelsea Station  
New York, NY 10113-0945  
(212) 603-9007

CRAB-Apple (County of Rockland Apple Branch)  
P.O. Box 268  
W. Nyack, NY 10994-0268  
\$10 per year,  
free 1/2 year membership for new members

GAB'er (Guilderland Apple Byters)  
28 Hay Path  
Watervliet, NY 12189  
Contact: John Buckley (518) 371-3624  
\$10 per year, \$5 initiation fee  
BBS: Pro Vanilla (518) 462-5953

Mixed Burnt Hills Apple Group  
171 Birch Lane  
Scotia, NY 12302  
\$8 per year  
BBS: Plain Vanilla 462-5953

Putnam Valley  
Educators Apple Users Group  
142 Peekskill Hollow Rd.  
Putnam Valley, NY 10579  
Contact: Frank Reale (914) 528-8101

SACC Apple Computer Club  
147 Deforest Rd.  
Dix Hills, NY 11746  
Contact: Gregory Dib (516) 499-7681  
\$10 per year

## NORTH CAROLINA

Carolina Apple Core  
P.O. Box 31424  
Raleigh, NC 27622  
\$18 per year  
CAC 783-9010; NIEHS 541-0041

Charlotte Apple Computer Club  
P.O. Box 221913  
Charlotte, NC 28222  
BBS: 563-6233

Eamon Adventurer's Guild  
7625 Hawkhaven Dr.  
Clemmons, NC 27012  
Contact: Tom Zuchowski (919) 766-7490  
\$7 per year  
T.ZUCHOWSKI on GENIE

Triad Apple Core  
c/o GTCC Small Business ASST. Center  
2007 Yancyville St., Suite 220  
Greensboro, NC 27405

## OHIO

Apple-Dayton, Inc.  
P.O. Box 3240  
Dayton, OH 45401-3240  
\$25 per year

Apple GS Columbus  
P.O. Box 27072  
Columbus, OH 43227-0072  
Contact: John Ledford (614) 855-0937  
BBS: (614) 475-9791

AppleSiders of Cincinnati  
P.O. Box 14277  
Cincinnati, OH 45250-0277  
Contact: Ralph Kitts (513) 829-1161  
\$25 per year  
BBS: (606) 572-5375 or (606) 572-5685

COACH (Central Ohio Apple Computer Hobbyists)  
P.O. Box 09028  
Bexley, OH 43209  
Contact: Mike Goodrich (614) 866-4860  
BBS: (614) 262-4946

NEO Apple Corps  
1935 Mattingly Rd.  
Hinckley, OH 44233

## OREGON

Appleuegene  
907 River Road #289  
Eugene, OR 97404  
Contact: Larry Badlen 895-2605  
\$15 per year

Portland Apple II User Group  
P.O. Box 1608  
Beaverton, OR 97075-1608  
\$20 1st year; \$15 thereafter

Willamette Apple Connection  
P.O. Box 18435  
Salem, OR 97305  
Contact: Neal Layton (503) 370-9527  
\$15 per year  
WAC BBS (503) 363-0861

## PENNSYLVANIA

Apple Butler Users Group  
P.O. Box 39 Meridian Station  
Butler, PA 16001-0039  
\$20 Single, \$25 family

Columbia Apple Pi  
c/o L.A. Winski, M.D.  
P.O. Box 710  
Millville, PA 17846  
\$6 per year

Delaware Valley Apple Branch  
132 Eaton Dr.  
Wayne, PA 19087  
Contact: Curt Wilson (215) 473-6199  
\$15 annually

Erie Apple Crunchers, Inc.  
P.O. Box 1575  
Erie, PA 16507  
\$5 Initiation fee; \$25 per year  
E.A.C. Express (814) 838-8510

Hershey Apple Core  
P.O. Box 634  
Hershey, PA 17033  
HAC Hotline: (717) 531-1300  
The Library BBS: (717) 566-1699

Keystone Apple Core  
1789 Braggstown Road  
East Berlin, PA 17316  
\$10 annually

Philadelphia Area Computer Society SIG  
P.O. Box 312  
LaSalle University  
Philadelphia, PA 19141  
Contact: Martin Friedman (215) 353-2753  
AOL: Meesh1 BBS: (215) 842-9600  
\$30 per year

## RHODE ISLAND

Rhode Island Apple Group  
P.O. Box 4726  
Rumford, RI 02916-4726  
\$10 initiation; \$20 annual dues

## SOUTH CAROLINA

CSRA Apple Users Group  
1342 Moultrie Drive  
Aiken, SC 29803  
\$15 year

Greenville Apple Users Group  
P.O. Box 4937  
Greenville, SC 29608  
Contact: Doug Durkee (803) 244-7396  
\$20 per year

## TENNESSEE

AppleCore of Memphis  
P.O. Box 241002  
Memphis, TN 38124-1002  
\$20 per year

Music City Apple Core  
1085 Woodcock Hollow Road  
Kingston Springs, TN 37082  
Contact: Gerald Dooley 952-2367; George  
Emge 833-1508; Everett Hertenstein 262-4778

## TEXAS

Apple Valley Computer Club  
Tony Rodriguez, Pres. 5900 N. 28th Lane  
McAllen, TX 78504  
Contact: Tony Rodriguez 682-9625  
\$10 per year

Coastal Bend Users Group (CBUG)  
P.O. Box 8391  
Corpus Christi, TX 78468-8391  
\$12 per year per household  
STIX (512) 992-4855

San Antonio Appleseed  
P.O. Box 290028  
San Antonio, TX 78280-1428  
New Membership \$15, Renewal \$10

Tarrant Apple Group (TAG)  
912 West Broadway Ave.  
Fort Worth, TX 76104  
Contact: Bob Baggott (817) 332-3341  
\$15 per year

## VIRGINIA

Northern Virginia Apple Users Group  
P.O. Box 8211  
Falls Church, VA 22041  
PRO-NOVA BBS: (703) 671-0416

TideWater AppleWorms  
P.O. Box 68097  
Virginia Beach, VA 23455  
Contact: Wayne Sheffield (804) 340-6799

## WASHINGTON

TechAlliance CO-OP  
P.O. Box 3308  
Kent, WA 98032-0206  
(206) 870-1556  
BBS: (Seattle) (206) 281-8298  
BBS: (206) 277-6070  
\$30 per year (King & Pierce Counties); \$25 per  
year (Remainder of U.S.); \$35 per year (Foreign)

## WEST VIRGINIA

Apple Users Group of Charleston  
2105 Weberwood Drive  
South Charleston, WV 25303  
Contact: John Howell 343-6422, or  
Chas. Szasz 965-6965  
\$10 per year

Club Apple User Group  
125 North Pinch Rd.  
Elkview, WV 25071  
\$10

## WISCONSIN

Milwaukee Apple Users Symposium  
9818 W. Sheridan Ave.  
Milwaukee, WI 53225  
Contact: Helmut Wittbecker

Racine Area Users Group  
P.O. Box 085152  
Racine, WI 53408  
\$10/Family per year

Wisconsin Apple Users Club, Inc.  
P.O. Box 20998  
Milwaukee, WI 53220-0998  
Contact: Bruce Kostab (414) 771-6086

## AUSTRALIA

Apple Users Society of Melbourne (A.U.S.O.M.)  
P.O. Box 1071 Narre Warren MDA  
Narre Warren, VIC 3805  
Ph: (613) 796-7553

Tasmanian Apple User Group  
P.O. Box 188  
N. Hubart, Tasmania 7002 AUSTRALIA  
10021 485200

## CANADA

Apple SAUCE  
Box 480 RPO, University  
Saskatoon, Sask., Canada S7N 4J8  
Contact: Brock Chalson (306) 374-0095  
\$20 per year  
BBS: SAUCE (306) 955-8828

Apples Victoria Users Group  
9184 Cresswell Rd.  
RR 2, Sidney, B.C. V8L 3S1  
(604) 656-2845 6-9PM  
\$24 per year, \$30 family

Apples B.C. Computing Society  
P.O. Box 80569  
Burnaby, B.C. V5H 3X9  
\$35 per year, \$30 renewal

Calgary Apple Corps Computer Club  
Box 8, Station T  
Calgary, Alberta, Canada T2H 2G7  
C Renzo Costa (403) 251-0525  
\$30 per year for individuals or families

Kelowna Apple Users Group  
1622 West Kelowna Rd.  
Kelowna, B.C., Canada V1Z 3B7  
Contact: Robert Ashton  
(604) 769-3140 6 to 9 pm  
\$2 per month

London Apple Corps  
1555 Glenora Dr., Suite 103  
London, Ontario, Canada N5X 1V7

Winnipeg Apple Users' Group  
P.O. Box 1798  
Winnipeg, MB R3C 3R1  
Contact: Don Soutter 256-0095  
\$20 indiv, \$25 family; \$5 initiation fee  
Applebox BBS: 224-0683

## ENGLAND

Cambridge Apple User Group  
22 High Street  
Cambridge CB4 1NG  
England (U.K.)  
Contact: Ian Archibald

The British IIGS Club  
41 High Street  
Great Shelford  
Cambridge CB2 5EH  
England (U.K.)  
Contact: Peter Stark (Produces bimonthly 'members' dir)

## FRANCE

GS Club  
6, impasse La Croix-Pommier,  
94120 Fontenay-sous-Bois.  
Téléphone: (1) 48.77.11.32  
AppleLink: GS.CLUB

## GERMANY

Kaiserslautern Apple Users Group  
PSC 1 Box 8851  
APO AE 09012

Rarnstein Apple Club  
PSC 2 Box 18  
APO AE 09012

Rhein-Neckar Apple Users Group (RNAUG)  
P.O. Box 525,  
APO New York, NY 09063  
\$10 per year

## ITALY

Apple II Survivor Club Italy  
Vis Dal Fabbro 4  
37122 Verona Italy  
Contact: Manuel Tortula

## SOUTH AFRICA

South African Apple II Users Group  
P.O. Box 1219  
Fandfontein  
1760, South Africa  
FAX: (+2711) 490-5316 G. Wildman



# MarketPlace

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## Shareware Spy

(Continued from page 18)

### NOVEMBER/DECEMBER 1994

11A 3.5 GS Cogito GS  
11B 3.5 GS USA States & Capitals (HyperStudio stack with runtime)  
11C 3.5 Presidents, Internamaze2, Math Facts Test (8-bit programs)

### SEPTEMBER/OCTOBER 1994

### MAY/JUNE 1994

8A 3.5 GS The Tinies  
8B 3.5 GS Baseball Trivia, Another Trivia, Change-A-File  
8C 5.25 Another Trivia, File-A-Change  
8D 5.25 Trax

### MARCH/APRIL 1994

7A 3.5 GS Hangman, Plumb Crazy, Yahtzee, Code Matcher, WriteAway!  
7B 3.5 GS DocVu, Ensoniq Peeker, FinderTalk, SynthInIt, Eye, Ear, MakinCopies, Mailman, No.2, Music Files (Color My World, Beethoven, William Tell, Best of my love, Smoke on Water), rsounds (Yumm, do dat again, I'll be back, yeah)  
7C 3.5 GS Print Shop GS graphics (cub scouts, school, logos, pixels, states, scouts, scout ranks, sports, characters, misc)  
7D 3.5 Brickout, Fenced In, Super Tic Tac Toe, Mastermind, New Print Shop  
7E 5.25 Brickout, Fenced In, Super Tic Tac Toe, Mastermind, New Print Shop

### JANUARY/FEBRUARY 1994

6A 3.5 GS All Except Front, Cleaner Cleaner Up, Columnist, DeskTracker, DOS 3.3 Launcher, FinderSounder, FinderView, FolderJump, IR, IRnda, Double Solitaire  
6B 3.5 GS MODZap, NoiseTracker, OverSampler, PowerPlay, Universal Sound Edit (USE)  
6C 5.25 Columnist, DOS 3.3 Launcher  
6D 3.5 Columnist, DOS 3.3 Launcher

### NOVEMBER/DECEMBER 1993

5A 3.5 GS Plunder, One-Arm Battle  
5B 3.5 GS Milestones 2000

### SEPTEMBER/OCTOBER 1993

4A 3.5 GS FixFontMgr, JumboDesk, Winflate, Mac Sound Grabber  
4B 3.5 Sound Editor  
4C 5.25 Sound Editor

### JULY/AUGUST 1993

3A 3.5 GS ProBoot, SANE Fix, Quadronome, ShadowWrite, SoniqTracker  
3B 3.5 GS Bulla (FTA)  
3C 3.5 GS Bille Art (Brutal Deluxe)

### MAY/JUNE 1993

2A 3.5 GS DuelTris, Spy Hunter GS, FloorTiles, Ant Wars  
2B 3.5 SoftDAC, Magic File Cabinet  
2C 5.25 SoftDAC, Magic File Cabinet

### MARCH/APRIL 1993

1A 3.5 GS Keyboard Extender, BRAM Checker, Scrapbook NDA, X-10 GS, GUIMaster, rSounder  
1B 3.5 AppleWriter II  
1C 5.25 AppleWriter II  
1D 5.25 Electric Duet  
1E 5.25 GraFORTH

## Test Drives

(Continued from page 14)

many hits and the bar disappears and you're a goner. Fortunately, loading a Saved Game is a fairly speedy process.

Your first objective is to make it through the seven levels of Darg's sprawling, monster-infested castle. The good news is that you will find magic potions to increase your powers, healing foods, monster-wiper Lightning Bolts, keys, gold, AND shops selling goodies like improved armor. The bad news is that the place—a maze of passageways, hidden rooms, and teleporters—is knee-deep in guards and monsters!

Along the way, you will pick up clues that help locate important items and overcome obstacles. Clues come as visible parchments and hidden messages you must Search to find. (Hint: Parchments are readable just once. Be sure to have a notepad ready when you get one.)

Only after fighting your way through the castle can you enter the spacious countryside. Here you find more monsters, clues, useful items, and shops—just as in Darg's castle. However, now the quest is to obtain the Amulets required to enter the Firemaster's headquarters. Suddenly, your sojourn in the castle seems not so difficult after all!

Gate is not a game for the neophyte or the easily discouraged. The documentation offers only the most basic explanation of controls and

game objectives. Furthermore, clues that you discover don't always make sense or seem very important until you are further along in the quest. Last but not least, the game is a fairly stiff arcade challenge.

Unfortunately, Gate is not GS/OS compatible. The game cannot be loaded onto a hard drive, nor can it be launched from the Finder. It is a self-booting game that uses a custom operating system. Startup is devilishly slow; however, the use of Applied Engineering's Transwarp is supported, and it speeds up play about 40 percent.

I must confess, in order to successfully complete the game, I did employ an "enhanced" character. Using Block Warden, a shareware program, I was able to edit those sectors that allowed me extra gold. Furthermore, I could read the messages and clues which I did not write down. While purists may frown at this "cheating", I soothed my conscience by only enhancing that which was necessary to get me through the castle. (50,000 Gold is enough to purchase Healing Potions, Keys, etc. at the various shops.)

If you are looking for challenging, long-play, action adventuring fun, then Gate is for you. I originally thought I couldn't win, but persistence (and some extra Gold) paid off. Hunting down and defeating Firemaster Darg is a rough assignment; but the sense of pride you'll have upon winning is well worth the effort. ■

## VENDOR INFORMATION

### BALLOONS SOFTWARE

5201 Chevy Chase Pkwy. NW  
Washington DC 20015  
(202) 244-2223

### BIG RED COMPUTER

423 Norfolk Ave.  
Norfolk, NE 68701  
(402) 379-4680

### BYTE WORKS, INC.

4700 Irving Blvd. NW  
Albuquerque, NM 87114  
(505) 898-8183

### SEVEN HILLS SOFTWARE

2310 Oxford Road  
Tallahassee, Fla. 32304-3930  
(904) 575-0566

### VITESSE

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# APPLESOFT PROGRAMMING

*for*

# BEGINNERS

☛ This article is a “crash course” in beginning to program with Applesoft BASIC. Much of it is abridged from the author’s A2 University course, “An Introduction to Applesoft BASIC”. The course is available in the Apple II Programmers’ (A2Pro) Round-Table on GENie, with more detail and programming examples. Send e-mail to [a2pro.help@genie.geis.com](mailto:a2pro.help@genie.geis.com) for more information about the A2Pro RoundTable on GENie. See page [Ed: Insert the page # of GENie’s ad this month]

BASIC, which stands for “Beginners’ All-purpose Symbolic Instruction Code,” is just that—basic. It’s easy enough to be learned quickly, yet powerful enough to do difficult tasks or run complex programs. Applesoft BASIC has been the language built into all Apple II systems sold since the early ’80s. In this two-part article, we will get you started on writing your own programs in Applesoft BASIC, even if you’ve never written a computer program before.

This course assumes you are working under ProDOS, and that you have started up Applesoft BASIC by either opening BASIC.SYSTEM from Finder (on a IIgs), or that you’ve started up a ProDOS system disk and exited to Applesoft Basic.

## **IN THE BEGINNING: IMMEDIATE COMMAND MODE**

When you enter Applesoft BASIC (by running the program “BASIC.SYSTEM” on your startup disk), you’re greeted with a copyright notice, a right square bracket, and a flashing cursor. The bracket is Applesoft’s “prompt,” its way of telling you, “OK, I’m ready to do what you tell me to do.” The presence of a prompt means that you’re in what’s known as “Immediate Command Mode.”

At this prompt, you can enter any valid command, and it will execute immediately (hence the name). This is good for doing short things in BASIC; however, true programming requires deferred command mode, as discussed later.

At a BASIC prompt, enter the following line:

```
PRINT "Hello, Nurse!!!"
```

... and press Return. (You should always hit

PART ONE



*By J. Nathaniel Sloan*

Return any time you finish telling Applesoft to do something). Applesoft will echo:

```
Hello, Nurse!!!
```

Pat yourself on the back. You're now a programmer! Neat, huh?

You can also use PRINT to have your computer do math for you. For example:

```
PRINT 2+2
```

```
... will come back with:
```

```
4
```

You can also have Applesoft just print a number for you, e.g.:

```
PRINT 10  
10
```

## PRECEDENCE

You can tell Applesoft to PRINT the answers to even very long math problems. But there's a hitch. Stop and think about the next command before you type it in; what do you think the answer will be?

```
PRINT 2+5*8-12/4
```

Did you say 11? Applesoft says 39. Why? Well, it follows something known in the world of mathematics as the "Standard Order of Operations." It can be remembered through various memory aids, such as "Please Excuse My Dear Aunt Sally." Here it is:

### Parentheses

Exponents (expressed by "^", so 22 is expressed as "2^2")

Multiplication (expressed by the "\*" symbol, so 2 X 2 is "2 \* 2")

Division (expressed by the "/" symbol, so 2 divided by 2 is "2/2")

### Addition

### Subtraction

Everything is done in left-to-right order beyond that. So, anything in parentheses is done first. Then, any exponents are calculated. Then multiplications, then divisions, then additions, then subtractions. From there, everything is done in left-to-right order. Parentheses, Exponents, Multiplication, Division, Addition, Subtraction, in left-to-right order. Please Excuse My Dear Aunt Sally.

## VARIABLES AND RESERVED WORDS

Now try this (you learn Applesoft by DOING, not just by reading, so whenever you see examples like this, type them in!):

```
PRINT "Abraham Lincoln was a friend of mine."  
PRINT 1860  
PRINT "Abraham Lincoln was a friend of mine."  
PRINT 1861  
PRINT "Abraham Lincoln was a friend of mine."
```

You'll notice something about the preceding lines; 1860 and 1861 aren't enclosed in quotes. However, if you typed them in, you probably noticed that the computer faithfully echoed the correct answer. So why are the quotes present on the other lines? Well, try typing this:

```
PRINT "Abraham Lincoln was a friend of mine."
```

Your Apple II will respond with:

```
0  
[beep!]?SYNTAX ERROR
```

This introduces two important Applesoft concepts; variables and reserved words. A variable is like a pigeonhole where a value is stored. It is referred to by a label, which can be any length (though only the first two characters are significant—APPLE, APPLESauce, and APPEARANCES all look the same to Applesoft).

"Syntax" is a computer-ese word for "format"; Applesoft didn't understand the format of your last request. The reason that it didn't understand is simple; Applesoft doesn't really "see" spaces when it interprets a command, but it always looks for words it recognizes. If it doesn't recognize a word, it assumes it's a variable. So, here's what your PRINT statement looked like to Applesoft:

```
PRINT ABRAHAMLINCOLNWASAFRI END OFMINE.
```

You'll notice that "END" is set apart from the rest of the statement. This is because "END" is a reserved word in Applesoft; it's the word that tells the interpreter that you want to end the program. So, the interpreter looked at your last statement, and said "Ah, hah! The budding programmer at the keyboard wants me to show him the value of ABRAHAMLINCOLNWASAFRI. Since only the first two letters of a variable name are important, I'll just look up AB. Ah, it has no value, because the programmer never gave it one. I know what to do; I'll display a zero!"

Then the interpreter then ran into a snag. "Wait a second. I'm still in the middle of a PRINT command, and now all of a sudden, I'm supposed to end? Something's not right here," and replies with the error message. "What you typed doesn't make sense. Error!" (In other words, "SYNTAX ERROR.")

So, if you want to print text, you need to set it apart so that Applesoft will know it's not supposed to be a variable or a reserved word. You do that with quotation marks. "Abraham Lincoln was a friend of mine."

## PUTTING STUFF IN VARIABLES

Okay, so if we tell Applesoft to print a variable, and no one has told it what the variable is, it just assumes it's a 0. But variables wouldn't be of much use if they always displayed zero. Thus, Applesoft provides a mechanism to set the value of a variable with a simple little command: LET.

```
LET A = 1
```

```
LET X = 4  
PULL = 5  
PUSH = PULL - 4  
Y = X - 6  
Y = Y - 1
```

```
PRINT A  
PRINT X  
PRINT PULL  
PRINT PUSH  
PRINT Y
```

Applesoft should respond with the following:

```
1  
4  
1  
1  
-3
```

Looking over Applesoft's responses, you'll note that printing PULL didn't give the same answer that you gave it. . . ah, hah! The old "two-character" rule strikes again. When you typed "PUSH = PULL - 4", Applesoft read it as "PU = PU - 4", and so it overwrote the old value with the new one. Always be careful when using variables like this!!

Also, how come commands like PULL = 5 worked without the "LET" statement? Well, it's because LET is a very common command. So common, in fact, that you can leave it out entirely, and the interpreter is smart enough to figure out what you actually wanted to do, and act accordingly.

Variables are an important part of Applesoft, and we'll be using them extensively throughout the rest of this article, as well as the conclusion of this lesson (which will appear in the March/April 1995 issue).

## REAL PROGRAMMING—DEFERRED COMMAND MODE

So far, everything we've done has used the immediate command mode. While immediate commands are very useful, they're also quite limited, because you cannot write real programs with them. A true program is a series of commands run in sequence.

Deferred command is, as you've probably guessed, the antithesis of immediate command mode. While immediate commands are executed immediately, deferred commands are not executed right away. Instead, they're stored in a list, so that they can all be executed in sequence at a later date. When you're ready for them to be executed, you type RUN, and every command in the list is executed.

The syntax of a deferred command differs from that of an immediate command in only one aspect, and that is seen plainly in the following example, using the "Hello, Nurse!!!" example from above:

Immediate command mode:

```
PRINT "Hello, Nurse!!!"  
HELLO NURSE!!!
```

Deferred command mode:

```
100 PRINT "Hello, Nurse!!!"  
RUN
```

HELLO NURSE!!!

As is easily seen in the example, deferred commands have an additional element: a line number. This number tells the computer the sequence in which to execute the commands. Command lines can be numbered in order from 0 to 63999.

It is important to remember that commands are executed *in order of the line number*, and not necessarily in the order in which they are typed. For example, the following sequence of commands, when executed...

```
500 PRINT "Love, Wakko, Yakko, and Dot."
400 PRINT "Hello,"
450 PRINT "Nurse!!"
475 PRINT
RUN
```

... will produce the following:

```
Hello,
Nurse!!
```

```
Love, Wakko, Yakko, and Dot.
```

Notice how it's line 400, then 450, then 475, then 500 that are executed. What order you enter the lines in does not matter; lines are executed in numerical order, period.

Also note the blank line between "Nurse!!" and "Love, Wakko, Yakko, and Dot". This is the result of line 475, which reads simply PRINT. If you type PRINT by itself in immediate command mode, nothing seems to happen. Nothing appears on the screen, and you get another prompt. However, what's actually happening is that a blank line is being printed. It's much more obvious in deferred command mode, as I'm sure you can see.

By the way, to delete a line from your program, just type the number of the line you wish to delete with no commands after it. To change a line, simply type a new line using the same line number; the new will replace the old. (It's possible to edit a line without retyping the whole thing—but that's beyond the scope of this article. The best way is to buy a program editor like Beagle Bros' Program Writer, although the Apple does have a crude built-in line editor.)

Special Note: When writing programs, it's a not a good idea to number your programs 0, 1, 2, 3, 4, etc. Instead, leave 5, 10, or even more line numbers between each line you use. That way, if, at a later time, the program must be edited by adding another line in the middle somewhere, you can just use a line number halfway between two existing numbers.

## VICS: VERY IMPORTANT COMMANDS

While there are no unimportant commands, several commands are used more often than others. Commands you'll probably use most often include PRINT, LET, RUN, NEW, HOME, LIST, DEL, and END. We've already covered PRINT and LET, so let's take a quick look at the others:

**NEW:** NEW prepares Applesoft to accept a new

program for entry. It clears all variables by resetting them to 0, and clears any program lines in memory, allowing you to start with a clean slate. Use this to wipe out the last rudiments of a previous program whenever you'd like to work on another.

**HOME:** HOME clears the screen and positions the cursor in the upper left-hand corner of the screen. Many programmers use it as the first line of any program, to clear away any garbage which may be on the screen, and anytime thereafter where they feel a clear screen improves program display.

HOME can be used from immediate or deferred command mode. Use it in either mode whenever the screen gets cluttered and you'd like to start anew.

HOME only clears the screen, not the program that's listed on the screen. If you type in a program, then type HOME, your program is still safe inside the computer's memory despite the fact that all your typing vanishes from the screen—and it will remain there until you type NEW (or turn off the computer, or load a different program).

## LIST:

```
LIST
LIST 100
LIST -100
LIST 100-
LIST 100-200
LIST 100,
LIST ,100
LIST 100,200
```

As you can see, LIST has many different forms. All of them have one thing in common, however, and that is that they cause Applesoft to put a list of program lines on the screen.

LIST, all by itself, displays a listing for the entire program. LIST xx, where xx is a single line number (such as 100 in the example), displays that line if it exists. LIST -xx and LIST ,xx list all of the program lines up to and including xx. LIST xx- and LIST xx, list all of the lines beginning with xx and continuing to the end of the program. And, finally, LIST xx-yy and LIST xx,yy list all of the lines between xx and yy, inclusive.

So why would you use all those different LIST modes? Well, as a program gets more complex, it becomes harder and harder (and takes longer and longer) to find a specific statement as the entire screen goes by. Limiting the amount of lines displayed (by using the special forms of LIST) can cut this job down considerably.

Hint: Holding down the control key and pressing S (referred to as pressing Control-S) suspends the listing (and just about anything else Applesoft may be doing; it's an all-purpose command) until you press another key, including another Control-S. Experienced programmers often hold down the control key as they display a program listing, pressing S whenever they want to suspend or resume the display.

LIST can be used from either immediate mode or within a program (in deferred command mode); however, it is at its most useful

in immediate command mode, so you can see the program you're working on right away.

## RUN:

```
RUN 135
RUN My.First.Prog
```

RUN executes the program in memory, as you've already seen. But, when given a line number, RUN begins execution at the specified line number. If it's followed instead by a program name, that program is loaded from disk and executed. (Running a program from disk replaces the program in memory with the new program; if you haven't saved your existing program before running a new one, it will be erased without warning.)

Note: The special modes indicated in the LIST command (such as LIST 100-200) are not available with RUN. It is not possible to tell RUN to execute only a certain segment of a program.

**DEL:** OK, so you've got the command to delete one line down pat—just type the line number—but let's say you've got a program with 1000 lines, and you realize that 200 of them are obsolete. You can easily delete all of them.

"Please tell me that I don't have to type 10, then 20, then 30, then 40, ad nauseum, to delete them all!" you plead. "There must be an easier way!"

You're right; there is. It's called the DEL statement, and it (of all things) deletes program lines, in whatever range you specify. The "syntax" is DEL X,Y, where X is the lowest line number you want deleted, and Y is the highest. So if you wanted to delete all lines from line 10 to line 2,000, you'd just type:

```
DEL 10,2000
```

... and be on your merry way. Charter members of the club of redundancy club may use the command:

```
DEL 10,10
```

to delete one program line.

Note that while LIST lets you use dashes or commas to specify a range of lines, LIST makes you use commas.

**END:** END is a very simple command. Putting it on a line means that the program will stop executing as soon as it reaches the command. END just means the program is finished. When the interpreter sees END, it stops everything and puts you back in immediate command mode. This will prove especially useful when we start talking about subroutines later; without an END statement, the Applesoft interpreter will merrily run your subroutines after execution of the main program has finished, leading to much havoc and ?RETURN WITHOUT GOSUB errors. ■

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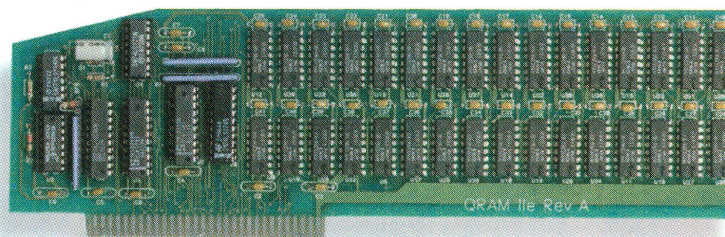
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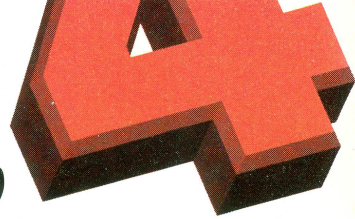
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