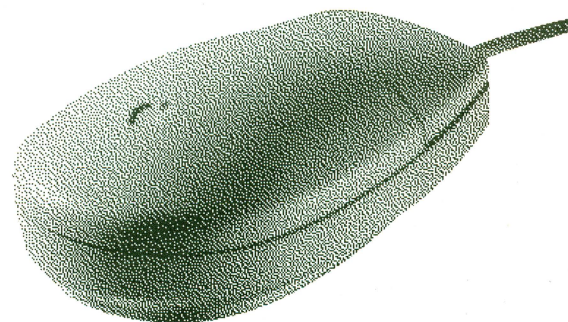




II ALIVE

CELEBRATING THE APPLE II

◆ ◆ ◆ ◆ ◆



Hacking the Hackable Disk II **Part 1**

by Stephen Buggie

Invented by Apple co-founder Steve Wozniak, the classic Disk II has to be the most hackable of all drives. Spacious full-height internal layout, socketed IC chips, and elegantly simple circuitry make it an experimenter's dream.

It's a darn good drive, too! Featuring persistent reliability and gentle diskette handling, Disk II remains a good choice for accessing 5.25" media.

Happily, millions of units were produced. You can find Disk IIs on net market places and at thrift shops, yard sales, and school auctions selling for near give-away prices. The low cost invites adventurous hacking that would have been financially risky and personally intimidating not so many years ago.

AUTO/MANUAL WRITE-PROTECT SWITCH

This issue we'll tackle the challenge of adding flexible control of Disk II's Write-Protect function.

Often, as when doing copying, it is useful to be able to guarantee that a diskette is Write-Protected whether or not

the side is notched. Other times, it is convenient to defeat Write Protection—for example, when you wish to write to a diskette side which is not notched. And, naturally, you also want a setting which permits Normal, notch-controlled, Write-Protect.

Based upon a circuit suggested by David Wilson (Australia), the A/MWP enhancement offers full user control of Write Protect. The switch's three positions are

Protect OFF: Writing is allowed regardless of notching.

Protect ON: Writing is prohibited regardless of notching.

Normal: a diskette side must be notched to permit writing.

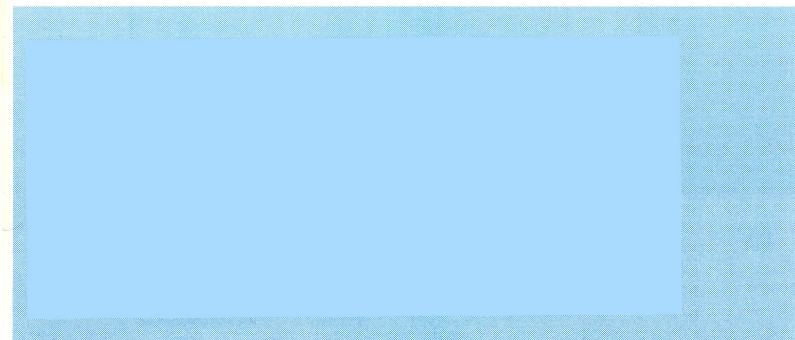
A/MWP STEP-BY-STEP

Unplug the drive from the disk controller and remove the case.

Drill a mounting hole. This can be at a convenient spot in the back or in the plastic front panel. On the front, a good spot is at the lower left, above and to the left of the "in use" LED. Another open spot is at the upper right in the space just above the diskette slot; but, we're saving this place for Part 2's enhancement. (You can't use the lower right, of course, because this would mess up the "Apple" logo!)

Cut three wires (Brown, Black, and White) long enough to run from the mounting point to the Large Connector plugged onto the back, middle of the Disk II circuit board.

Solder the leads to a Single-Pole Triple-Throw mini toggle



The Hackable Disk

Switch: Brown to center, White to one end, Black to other end. Twist the leads or encase them in tubing.

Mount the Switch. Normally, the Switch handle will point in the White lead direction for "Protect OFF" and in the Black lead direction for "Normal". Center is "Protect ON". Route the leads to the area next to the Large Connector. (Make sure no wires will get in the way of an inserted diskette.)

Locate the Brown and Black leads coming from the Notch Detect micro-switch. The leads are the Brown (bottom) and Black (top) pair near the right end of the Large Connector (as viewed from the front of the drive).

Cut the Notch Detect micro-switch leads about 1" away from the Large Connector.

Connect the Black Notch Detect, Black Large Connector, and Black Switch leads (i.e. strip ends, solder, and cover in heat-shrink tubing or tape).

Connect the Brown Notch Detect lead to the White Switch lead.

Connect the Brown Large Connector lead to the Brown Switch lead.

Voila! Now you're ready to replace the cover, plug in the drive, and try out your A/MWP enhanced Disk II.

Boot a diskette which is not write-protected and load a program, say the HELLO program (or STARTUP on a ProDOS diskette). Set the A/MWP to center and try SAVE HELLO. You should get a "WRITE PROTECTED" error.

Place a write-protect tab on the diskette. Set A/MWP to the Left or UP position and try SAVE HELLO again. If the save works, then Left or UP is the "Protect OFF" position and Right or Down is "Normal". If you get a "WRITE PROTECTED" error then it's the other way around.

Now is a good time to mark "Normal" and, if you like, the other positions. You can use dots punched from self-stick labels.

Next issue:

In Part 2 we'll add a front-panel Speed Control and talk about fine-tuning the Disk II. ♦

Here's How

It Works!

When a notched diskette side (or no diskette) is inserted, the Notch Detect micro switch is Closed. Inserting a non-notched diskette side Opens the micro switch to indicate that the diskette is write-protected.

The A/MWP switch lets the DISK II's Write-Protect signal circuitry select between the Notch Detect micro switch ("Normal") and a fixed Closed circuit ("Protect OFF"). In the center position neither is selected and the result is an Open circuit ("Protect ON")

II ALIVE

Summer 1996 • Volume 4 Number 2

A Scantron Quality Computers Publication

Publisher	Scantron Quality Computers
Managing Editor	Steve Giroux
Editor	Jeff Hurlburt
Contributing Editors	Steve Buggie Gareth Jones Robert H. Rankin Mitchell Spector Charles T. Turley
Review Editor	Jeff Hurlburt
Art & Design	Steve Giroux

Our Address: *II Alive*, PO Box 349, St. Clair Shores, MI 48080 USA. (If shipping by UPS or some other carrier requiring a street address, use 20200 Nine Mile Rd., St. Clair Shores, MI 48080 USA.) Also check our Voice Mail, Fax, and Electronic Mail addresses (below) for faster ways of getting in touch.

Our Phone Number: Subscription-related inquiries *only* can be handled by our Sales Department at 1-800-777-3642 or (810) 774-7200. This number is not for editorial or technical inquiries; we prefer to receive those by mail or fax.

Our Fax: We accept correspondence via fax. The fax number is 810-774-2698.

Voice Mail: Letters to the Editor *only* may be left on our Voice Mail system. Dial 1-800-777-3642 (US and Canada; other countries dial +1-313-774-7200). When our phone droid answers, dial 839 on your Touch-Tone phone, or wait for an operator and ask to be transferred to extension 839. All voice mail messages become the property of *II Alive*.

Electronic Mail: We accept electronic correspondence via our BBS at +1-810-774-2652, or via one of the following online services: GENIE (QUALITY), America Online (QualityCom), CompuServe (73477,3364), or the Internet (sales@sqc.com).

Disclaimer: Sorry, but due to the volume of mail we receive, we cannot promise replies to individual letters, faxes, or messages. All letters, faxes, and messages sent to *II Alive* become the property of *II Alive* and may be edited for publication or used for promotional purposes. We cannot return any letters or disks.

Publication Schedule: *II Alive* is published on a quarterly schedule, with issues appearing in Spring, Summer, Fall and Winter. Please allow until the 15th of the cover month for delivery (international subscribers allow slightly longer).

Subscription Information: U.S. subscriptions cost \$19.95 (for a four-issue, one-year subscription). In Canada and Mexico, the annual rate is US \$29.95. Outside North America, subscriptions are US \$39.95 (for surface delivery) and US \$49.95 (for airmail delivery). To subscribe, send check, money order, or credit card number (Visa, MasterCard, Discover, or American Express) to *II Alive*—Subscriptions at the address above. You may also subscribe by credit card by calling our Sales Department at the phone number above.

Damaged and Missing Issues: If you receive a damaged copy of *II Alive*, or do not receive a copy at all, contact Subscriber Services at the address above, or call our Sales Department at the phone number above.

Expiration Dates: Your subscription expiration date is printed on your mailing label. This date indicates the *last* issue you will receive. Renew at least a month before this date to ensure uninterrupted service.

Change of Address: Please mail a copy of your current mailing label, along with your new address, to *II Alive*—Subscriber Services at the address above.

II Alive (ISSN 1085-2050) is published quarterly by Scantron Quality Computers, 20200 Nine Mile Road, St. Clair Shores, MI 48080. POSTMASTER: Send address changes to *II Alive*, P.O. Box 349, St. Clair Shores, MI 48080. Second Class postage paid at St. Clair Shores, MI.

Routine Stuff

by Jeff Hurlburt

INPUT ANYTHING

Applesoft's INPUT command works fine for many applications. But, suppose your program needs to let users input text which includes commas and colons, such as a ProDOS command? INPUT will forget about text after a comma and the command will bomb. What you need is an "Input Anything"!

```
40 REM INPUT ANYTHING SUB
ROUTINE
50 Q$="": CALL 64879
60 FOR J= 512 TO 611: IF
PEEK(J) <> 141 THEN
Q$= Q$ + CHR$(PEEK(J)-128):
NEXTJ
70 RETURN
```

CALL 64879 (\$FD6F) lets you type in the text, including commas. The FOR NEXT loop scans through the input buffer starting at \$200 and adds characters to the Q\$ string until a RETURN is encountered. Setting the loop endpoint at 611 (\$263) allows up to 100 characters to be input.

Input Anything is almost as easy to use as INPUT. For example, after

```
100 PRINT "Command: "; GOSUB 50
```

Q\$ will contain the command you typed in, such as CATALOG,S5,D2. You could execute the command via

```
110 PRINT CHR$(4)Q$
```

The routine has many uses. The next time you need flexible input for DOS/ProDOS commands, a text editor, an adventure, ..., or whatever, give Input Anything a try.

EASY TIMES

Often it is useful to have a reliable time reference. For example, you may

want to display "Seconds Remaining" in a game. Or, you may need a delay that you can set for so many seconds, minutes, hours to interrupt or check some process at an I/O port.

Such tasks are a snap on your IIGS. Machine code for a routine which uses the ReadTimeHex Tool is shown below. It saves Seconds and Minutes at \$32F, \$330 plus Hours (and Years) at \$331, \$332.

```
300: 18      First, set Native
           mode with 16 bit registers
301: FB
302: C2 30
304: 48      Push 4 words of
           'workspace' onto stack
305: 48
306: 48
307: 48
308: A2 03 0D      Put ReadTimeHex
           tool ID in X
30B: 22 00 00 E1   JSR long to dis-
           patcher to do the Read
30F: 68          Pull MinSec result
           word from Stack (Lo byte =
           Seconds)
310: 8D 2F 03      Save MinSec
           result word at $32F
313: 68          Pull YrHour result
           word from Stack (Lo byte =
           Hour)
314: 8D 31 03      Save YrHour
           result word at $331
317: 68          (MoDay) Pull other
           two result words to restore stack
318: 68          (WkdayNull)
319: E2 30      Restore Emulation
           mode with 8-bit registers
31B: 38
31C: FB
31D: 60          Exit back to BASIC
```

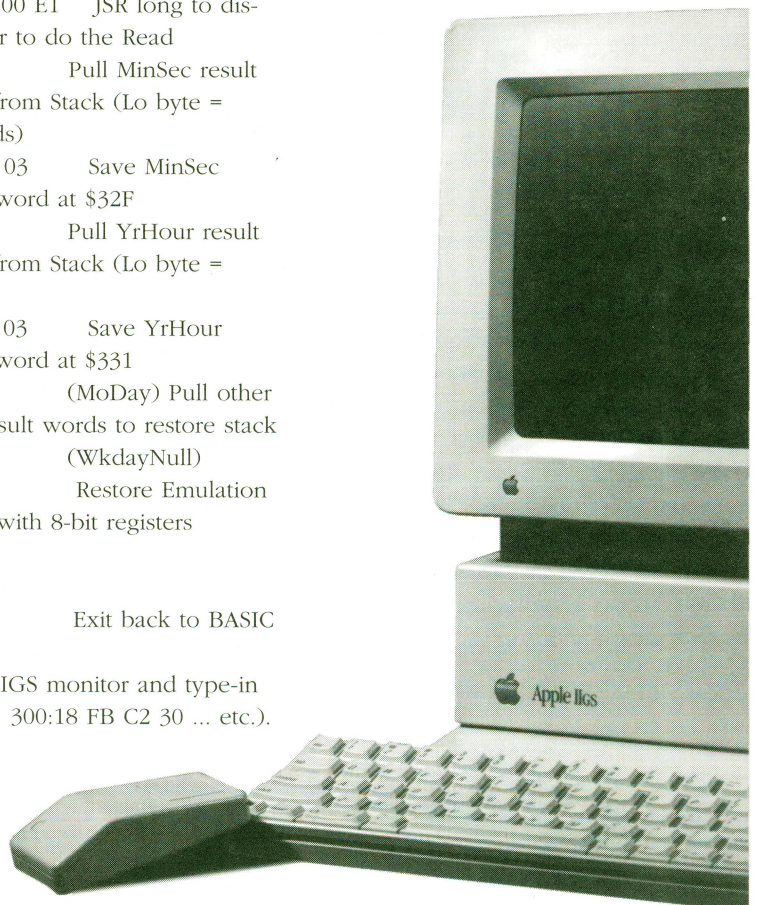
Enter the IIGS monitor and type-in the code (e.g. 300:18 FB C2 30 ... etc.).

Exit back to BASIC and

```
BSAVE READ.TIME.HEX,A$300,L$1E
to save the routine.
```

A bare-bones BASIC program using the routine would be

```
10 PRINT CHR$(4)"BLOAD
   READ.TIME.HEX": GOTO 100
20 REM SUBROUTINE TO READ
   TIME
30 CALL 768
40 SECONDS= PEEK(815): MIN-
   UTES= PEEK(816): HOURS=
   PEEK(817)
50 RETURN
100 GOSUB 30
110 PRINT "TIME IS
   ",HOURS;".";MINUTES;".";SEC-
   ONDS;"."
900 END
```



Info Resources *by Jeff Hurlburt*

As always, the Apple II world is brimming with news, rumors, project ideas, application hints, and other interesting, useful information. One source is your local user group's newsletter. Listed below are several others you may wish to access. You may contact them by mail, phone or many have an internet or email address. (Any prices are in U.S. funds or an equivalent. Checks or bank drafts should be made out to the name of the person, club, etc. shown at the end of each listing.)

APPLE BLOSSOM

'Blossom is a bi-monthly II/IIGS newsletter offering 12 pages of reviews, product news, and in-depth how-to articles. Columns on HyperCard and word processing are regular features. 'Blossom also distributes the famous Chuck Orem "Modem Starter Disk"—a must for modem newbies—on 5.25" or 3.5" media for just \$3.

Cost: \$12/yr in U.S., Canada;
\$18/yr elsewhere

Steve Cavanaugh, 1117 Maple St.,
Wilmington, DE 19805

stevec1021@aol.com

• <http://members.aol.com/newblossom/>

THE APPLEBYTER

The 8-page monthly newsletter of the Applebyters Computer Club is packed with info on the latest II/IIGS wares available on the net. Also included are compact reviews, user tips, vendor lists, news, and rumors.

Cost: \$15/yr in U.S.

Applebyters Computer Club

Nancy Crawford, Editor

P.O. Box 2092

Davenport, IA 52809

• nancy.crawford@slc.davenport.ia.us

APPLEWORKS GAZETTE

AppleWorks Gazette is a bi-monthly on-disk publication devoted to AppleWorks topics. Each 3.5" diskette issue contains a newsletter addressing topics like "How to Modify the AppleWorks Default Macros" plus software and data.

Cost: \$35/yr in North America or
Western Europe

North America:

Howard Katz

1104 Lorlyn, Circle #2D

Batavia, IL 60510

h.katz@genie.com

Western Europe:

Christian Serreau

12, rue de la Censerie

49100 Angers, France

• 100316.14@compuserve.com

BYTE WORKS

Best known for its Orca series of languages, Byte Works is also the exclusive source for APDA wares and documentation and the chief source for official Apple II/IIGS manuals and references. Contact Patti or Mike Westerfield for a current list.

Byte Works

8000 Wagon Mound Dr. NW

Albuquerque, NM 87120

phone: 505-898-8183

• mikew50@aol.com

DARK CASTLE

Published quarterly, Dark Castle is 24-36 pages of II/IIGS news, reviews, hardware projects, and more. The DC disk is available separately or with the magazine. Each 3.5" diskette includes programs, pictures, sounds, and other delights. A HyperStudio stack describing Dark Castle is available on Doede's home page at <http://www.wco.com/~gbmaidsf/db/>

Magazine: \$25/yr Disk: \$23/yr in

Europe; \$25/yr elsewhere

Magazine and Disk: \$33/yr in Europe;

\$40/yr elsewhere

Doede Boomsma

Wolborgenmate 72

7006 DK Doetinchem

The Netherlands

phone: +31-314-365145;

dboomsma@sci.kun.nl



Your Computer
for Apple

EAMON ADVENTURER'S GUILD

Eamon lives! The EAG journal is a quarterly 10-page newsletter filled with adventure reviews, bug fixes, and information about Eamon programming. Though there are now more than 230 Eamon quests, EAG continues to list them all on a regular basis.

EAG does not distribute Eamon materials. These are available via mail from Joe Kohn's Software Solutions II and via modem on Apple BB's. One devotee, Matt Vigor, has created a new Eamon web site which features games and programming wares plus links to other Eamon-related sites. Check it out <http://www.ecnet.net/users/mumbv/pages/eamon/index.shtml>



Cost: \$7/yr in U.S.
Canada; \$12/yr elsewhere

Thomas Zuchowski
7625 Hawkhaven Dr.
Clemmons, NC 27012
phone: 910-766-7490
• 71214,1670@compuserve.com

GENIE LAMP APPLE II

Now beyond issue #50, this monthly on-line 'zine supplies II/IIGS news, reviews, tips, commentary, and whatever else Doug Cuff can fit into each substantial Lamp release. You can read the Lamp on

ete Source e II info

Genie or on one of several Apple II web sites which maintain Genie Lamp issues.

- genielamp@genie.com
- <gopher://gopher.genie.com/11/magazines>

current links: <http://www.ugcs.caltech.edu/~nathan/apl2.resource.html>

GS WORLD VIEW

This new on-line 'zine features continuously updated IIGS news, reviews, rumors, how-to articles, and much more. GSWV is both a classy web magazine and a major II/IIGS user resource site with numerous programs, pictures, sound files, and other materials available for down-

loading. To encourage exploration of 'zine offerings, the publisher, Charles Turley, schedules frequent 'easter egg' hunts with handsome prizes for winners.

- <http://www.wco.com/~3d5d1wsw/gsezine/>

JUICED.GS

A new IIGS magazine, Juiced.GS is a 24-page quarterly emphasizing extensive coverage of II events, commentaries, in-depth reviews, and applications help. Pictures and screen shots round out a thoroughly professional look.

Juiced.GS also markets a quarterly "Collection" of shareware/freeware. The first 2-diskette set includes several programs (e.g. rSounder 3.0, a JPEG viewer, ...), songs, pictures, and much more.

Magazine: \$14/yr in U.S., Canada;
\$20/yr elsewhere
Collection disk: \$7/ea in U.S.,
Canada; \$11/ea elsewhere

Max Jones
2217 Lakeview Dr.
Sullivan, IN 47882
• m.jones145@genie.com

NOTHING BUT APPLES

Nothing But Apples is a sporadic 3-4 times a year Apple II mini-catalog. Each issue includes detailed product descriptions and a closeout product section. Check out their webpage and online catalog of PC, Macintosh and DOS products.

Nothing But Apples
20200 Nine Mile Road
St. Clair Shores, MI 48080
phone:1-800-777-3642
• <http://www.sqc.com>

ON THE NET

When you need quick help with an Apple II problem, have a question about where to obtain wares, or just want to find out what's doing in

Appleland, the place to go is comp.sys.apple2, a UseNet newsgroup.

To download II/IIGS freeware and shareware a good bet is Dan Zimmerman's Caltech site:

- <ftp://apple2.caltech.edu/zocalo/pub/apple2/>

SHAREWARE SOLUTIONS II

SSII is a 20-page bi-monthly newsletter supplying II/IIGS coverage far beyond shareware. This includes news, reviews, commentaries, and how-to articles.

SSII sponsors a Disk of the Month Club featuring late release shareware and other goodies. It is also the major distributor for many old and new Apple II and IIGS products.

Newsletter: \$25/yr in U.S. & Canada;
\$40/yr elsewhere
Disk of the Month: \$35/yr in U.S. &
Canada; \$40/yr elsewhere

Joe Kohn
II 166 Alpine Street
San Rafael CA 94901-1008
• joko@crl.com

SOFTDISK-GS

Approaching issue #80, this monthly on-disk magazine continues to deliver articles and software in a smooth-running, attractive format. Regular features include Lee Golden's editorials, reviews, new fonts, clipart, and MidiSynth music. Often, too, readers will find a handy NDA, System patch, Finder extension, IIGS utility, and/or a nifty new arcade or adventure.

Cost: \$89.95/yr, \$49.95/6mo,
\$29.95/3mo

Softdisk
606 Common St.
Shreveport, LA 71101
phone: 800-584-7638
• softdisk.inc@genie.com

Everything You Need

APPLEWORKS 5.1

* System Requirements: 3.5" drive, 256 K enhanced IIfx (65002 and MouseText)

We've put together two amazing bundles featuring AppleWorks—the best selling integrated software for the Apple II family of computers. Each bundle comes with AppleWorks 5.1 (or version 4.3 for 5.25" disk users) and a collection TimeOut enhancements to make AppleWorks even more powerful!

APPLEWORKS SINGLE-USER BUNDLE

You'll receive AppleWorks 5.1 (for hard drive and 3.5" drives) and single pre-installed copies of...

- TimeOut Grammar for built-in proofreading
- TimeOut SuperFonts for fancy fonts in your documents
- TimeOut DeskTools IV for greater productivity
- TimeOut Thesaurus which gives you a built-in thesaurus
- TimeOut SideSpread to let you print long spreadsheets out sideways on a 9 pin dot matrix printer
- TimeOut ReportWriter which is a flexible report cards attendance records, lesson plans, forms, and more.

AppleWorks pricing

Single-User Bundle	\$169.95
AppleWorks alone	\$129.95
Upgrade from 5.0	\$99.95

APPLEWORKS SITE LICENSE BUNDLE

You get unlimited site licensed of all the programs listed in the single user bundle. That's enough AppleWorks and add-ons for all the computers in your building for one low price.

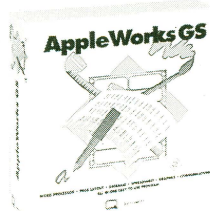
AppleWorks Site License Bundle\$499.95

APPLEWORKS GS

- System Requirements: System 5.0.4or later, hard drive, 2MB of RAM (4MB recommended), 3.5" disk drive

AppleWorks GS delivers six of the most powerful and popular Apple IIGS software applications—word processor, spreadsheet, database, page layout, graphics, and communications—in one easy-to-use program.

Upgrade from any word processor	\$99.95
New Install	\$199.95
10 Pack	\$999.95



SYSTEM 6.0.1 UPGRADE

- System Requirements: Apple IIGS, 1.25MB RAM (2MB w/hard drive), hard drive recommended

System 6.0.1 will revolutionize the world way you use your IIGS. It allows you to add aliases to set up your desktop like a push-button menu selector and there's a Magic System Folder that knows just where to stash your fonts and DAs. Boot ProDos 8 quickly, read IBM files directly into your IIGS and there's

also over 100 bug fixes. Plus you'll get the System 6.0.1 disks, our own System 6 book and a free program to customize the Finder.

VALUE PACKED BUNDLES

Features over 100 clip art images, over 50 clip sounds, over 50 icons, over 30 fonts, and more. You'll also get the Apple II Enhancement Guide, Flashboot & the System 6 Video.

GS/OS System 6.0.1 with QC Bundle	\$79.95
GS/OS System 6.0.1 with QC Manual only	\$29.95
System 6.0.1 & Addendum only	\$19.95
System 6.0.1 Video	\$9.95

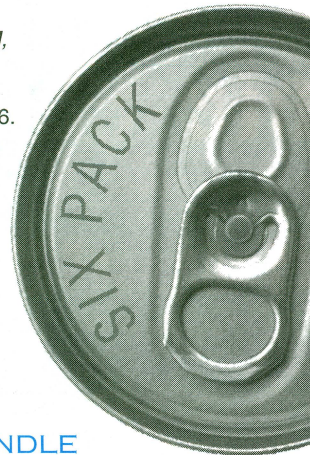
SIX PACK

- System Requirements: Apple IIGS, 2MB RAM, System 6, hard drive

Six Pack, the first collection of System 6 Finder Extensions, lets you add new features to System 6. With Six Pack you can add dozens of functions to your function keys, find out visually how much of your computer's resources are being used at one time and preview the contents of graphics, text, and sound files.

Six Pack V.1.1

Apple IIGS	\$29.95
Six Pack V.1.1 upgrade (disk and addendum)	\$14.95
Six Pack Unlimited Site License	\$149.95



SIX PACK & SIGNATURE GS BUNDLE

Now for a limited time you can purchase both Six Pack and Signature GS for one low price. Save over \$20. Six Pack is the first collection of System 6 Finder Extensions. Signature GS offers you the ability to create a unique computing environment on your II GS. See description below.

Bundle	\$39.95
Unlimited Site License	\$219.95

SIGNATURE GS

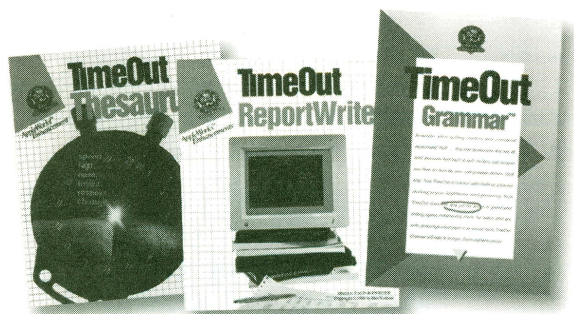
- System Requirements: Apple IIGS, 1.25MB of RAM, hard drive

Signature GS is the program that allows you to create a computing environment that is uniquely your own. Choose from colorful desktop patterns to fun and entertaining sounds. Phantasm offers a solution to screen damage with a variety of fun and attractive screen activities. Graffiti gives you a variety of colorful desktop patterns to choose from or allows you to create your own with the built-in desktop painter. Customize your IIGS with Sonics by assigning fun and entertaining sounds to specific functions. Imagine your IIGS actually "belching" out a floppy disk. Sonics is easy to use so you can add or change sounds on a whim. And with Boot-Master, you can put all your IIGS drivers, CDAs and NDSs on one master control panel.



20200 Nine Mile Rd. • St. Clair Shores, MI 48080 • <http://www.sqc.com>
Fax 810-774-2698 • Email Sales: sales@sqc.com

— for your Apple II!



TIMEOUT GRAMMAR

• *System Requirements: 128K: AppleWorks 3.0 or higher*
 Add built-in grammar checking to your AppleWorks word processing. No matter what you write, TimeOut Grammar will make it stronger, clearer, and more concise.

Consumer.....\$49.95
 Site License\$99.95

TIMEOUT REPORTWRITER

Combine information from several files into a printer-ready report, or with ReportWriter's posting feature, you can create a new database or spreadsheet.

Consumer.....\$48.95
 Site License\$97.95
 ReportWriter 4 for AW 4.0\$19.95

TIMEOUT SUPERFONTS

• *System Requirements: 128K: dot matrix printer*
 Now you can have the option to print out your AppleWorks files with fancy fonts and graphics. Comes with a built-in paint program.

Consumer.....\$42.95
 Site License\$85.95

TIMEOUT GRAPH

Organize your spreadsheet and database into clear, informative graphs, with titles, borders and more.

Consumer.....\$52.95
 Site License\$105.95

TIMEOUT SHRINKIT PLUS

• *System Requirements: AppleWorks 4.0, 128K Enhanced IIe*
 Finally, you can win the battle for disk space! TimeOut ShrinkIt Plus is a file compression utility that works inside of AppleWorks.

Consumer.....\$29.95
 Site License\$59.95

TIMEOUT SIDESPREAD

Print your spreadsheet files sideways— and gain an unbroken vista of your spreadsheet data.

Consumer.....\$32.95
 Site License\$65.95

TIMEOUT THESAURUS

TimeOut Thesaurus is a powerful intelligent thesaurus with more than 5,000 root words containing over 45,000 synonyms!

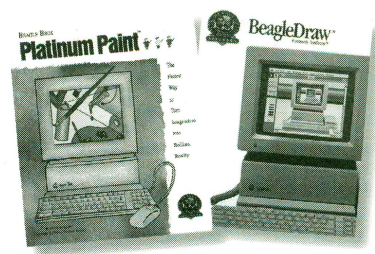
Consumer.....\$32.95
 Site License\$65.95

QC FONT PACKS

• *System Requirements: Pointless™/IIGS, works with GS/OS programs only*

Pointless features ninety-two more TrueType fonts to choose from in a wide variety of styles.

Apple IIGS
 Font Pack 1.....\$19.95
 Font Pack 2.....\$19.95
 Font Pack 3.....\$19.95
 Font Pack Bundle (all three).....\$39.95



BEAGLE DRAW

• *System Req.: 1MB*

Get professional graphics tools with BeagleDraw. Create objects, make them any size, color and shape you like. Objects can be resized, reshaped and more.

Apple IIGS.....\$64.95

PLATINUM PAINT 2.0

• *System Req.: 1.5MB free RAM, 3.5" drive, color monitor and System 6.*

Compose lifelike paintings, make signs or color illustrations, import clip art from many sources, colorized scanned images, and more.

Apple IIGS.....\$59.95

Q-MODEM

It features auto-answer and auto-dial for performing phone tasks, and it has a programmable volume speaker for monitoring call progress. Operates asynchronously at 300, 600, 1200, and 2400 baud.

Q-Modem\$74.95

For orders or inquiries, call

1-800-777-3642



mention code: 2ALSU6

30-day money back guarantee

Test Drives

Edited by Jeff Hurlburt

II ALIVE Ratings

- ★★★★ Excellent
- ★★★ Very Good
- ★★ Good
- ★ Fair
- x Poor

BUGGIE IIe/IIGS EXTERNAL 150 WATT POWER SUPPLY

★ ★ ★ ★

\$27.00 plus \$5.00 shipping in U.S. (\$8.00 to Canada); Specify IIGS or II+/Ile connector from S. Buggie. Requires placement away from small children.

by Robert H. Rivkin

After worrying for the last few months that my IIGS power supply might suddenly fail after nearly 10 years of very heavy use, I noted happily Stephen Buggie's announcement that he was making IBM power supplies available for Apple II at a more than reasonable price. I emailed him immediately with an order for the first two, one for me and one for a friend. They arrived as promised, shipped in a very carefully wrapped and stabilized carton.

Since the Buggie Power Supplies are actually used IBM units, they come in assorted sizes and shapes. Typically, you can expect a black metal cube, roughly 8" square, with an on/off switch, a fan extending a bit out one side, and a 5 ft. heavy duty cord, well wrapped and reinforced with plastic ties.

The cord terminates in a standard moxex connector that slides onto the IIGS motherboard's male connector. II+/Ile users can get the BPS with the

correct connector for their machines; and, Y-connector option for powering a IIGS or II+/Ile is available for an extra \$4. If you need more length, it's an additional \$1/ft..

Buggie's instructions are crystal clear and are accompanied by excellent diagrams. Removing the IIGS power supply and feeding the bps cable through any empty slot—I used the one behind slot 1—takes about 3 minutes from start to finish.

While the power supply's on/off switch is large and easy to activate, I suspect most users will just plug the BPS into a System Saver or power strip. I placed the BPS on the floor out of the way of my feet, and forgot about it from then on.

Fan noise? The BPS fan was barely audible above the dull drone of my System Saver. Other than the fact that there was now a lot more air circulating inside my IIGS, there was no hum, no squeal, no noise problem at all.

I run 5-7 SCSI devices simultaneously on my ROM-03 machine, and almost that much on my ROM-01. The BPS was so unimpressed that it never got warmer than room temperature, even after 10 hours of continuous work.

Another concern was TV-radio interference. I live in the inner city in a townhouse; however, none of my neighbors, when asked, had noticed anything different with respect to their TV and radio reception.

My only criticism is that the BPS will need to be kept far away from small children, who could push a finger through the fan opening or somehow manage to stick a finger into something electrical. Were the price considerably higher, I would expect another enclosure, assuring complete isolation of the power supply.

This product is obviously a labor of love. From its neat soldering joints to its strongly wrapped hefty connector cord to its shipping, Dr. Buggie's power supply is a very nice piece of work. I am well satisfied that I've purchased an excellent product for my Apple IIGS that is a bargain to boot!

GRAPHICWRITER III VERSION 2.0 REVIEW

★ ★ ★

\$68.50 (upgrade: \$28.50) for 2MB IIGS from Seven Hills Software. Requires System 6; 4MB RAM, accelerator, hard disk, and printer recommended.

by Gareth Jones

One of the first desktop publishing programs developed for the Apple IIGS, GraphicWriter evolved through several iterations to GraphicWriter III, version 1.1, and, then, stayed there "forever". Many confirmed users had come to believe 1.1 was 'it'; however, after five years, version 2.0 has arrived!

GraphicWriter allows you to create drawing, painting, and text objects and arrange them on a page. As might be expected, the painting tools are more useful for touching up art than for creating it from scratch. The drawing tools are fine for creating lines, boxes, circles and other simple shapes in your choice of color and line thickness.

GraphicWriter's Text tools are equivalent to a word processor, but, with a number of extra 'bells and whistles'. In addition to the usual font, size, style, and selection commands, you have access to high quality TrueType fonts and a spell-checker with an 80,000 word dictionary. There are also settings for kerning and leading, three

kinds of text wrap, custom tab leaders, "snap-to" guides, and a few more typographic controls not found in the typical word processor.

Why Version 2.0? Though very popular, the old version is laced with numerous idiosyncrasies and beset by unnecessary limitations. Designed to run under System 6, Version 2.0 corrects many such faults making the new GraphicWriter both more powerful and

more user-friendly.

Double-clicking a GraphicWriter document in the Finder will now load the document, as well as launching the program. Font and size selections have finally been split into two menus, and so the program will work properly with the "TypeSet" Control Panel. The watch cursor is now the standard one, so the Twilight II screen saver won't interrupt a print job.

More? Well, Cut, Copy, and Paste operations now use the System Clipboard. This means that you can cut or copy something in another GS/OS program and paste it into GraphicWriter III, or vice versa.

Dialog boxes have been intelligently redesigned, too. Most can now be dragged around the screen to where you want them. My favorite example is the "Jump to Page..." dialog. Now, you

CLIPPING TO THE MAX...

by Gareth Jones

Access to the System Clipboard allows GraphicWriter III 2.0 to simulate several "professional" desktop publishing features that it does not actually have. Drop caps, pull quotes, sideways text, and reverse (white on black) text can be created by preparing material in another program, then pasting it into a GW document. Here are the details:

Drop Caps and Pull Quotes

Go into the Draw or Page Layout module of AppleWorks GS, select the font, size, and style you want, choose the text tool, and type a letter. Now choose the arrow tool and click on the letter. Copy it to the Clipboard. Paste it into your GW document, select it with the arrow tool, and select "Text Wrap" from the Object menu. Move it into place.

The same technique works for creating "Pull Quotes", the blocks of large text employed to draw the reader's attention to an article.

Resizing Pasted Text

When you paste text objects from AppleWorks GS Draw or Page Layout modules into GW documents, they are drawings in the shape of text, not actual text. You can "resize the text letters" by simply resizing the object!

Sideways Text

I've tried a number of ways to get text running vertically on a page, the letters tipped 90 degrees from normal. The one that works is to create the text in a

paint utility that supports the System Clipboard, such as Platinum Paint. The text should be typed in, selected with the marquee tool, doubled in height, rotated right, copied to the Clipboard, then pasted into the GW document. Once there, it may need to be halved in size using the "Object Specs..." dialogue box.

Reverse Text

Create your text in Platinum Paint in the "Outline" style, and make it as large as possible. Use the paint bucket tool to pour black around the letters, so you will have white letters on a black background. Use the marquee tool to select it, copy it, then paste it into a GW document and resize it to taste.

Leaf Cutter

Using the Clipboard extensively involves a lot of to-ing and fro-ing between programs, cutting a single graphic at a time and returning with your prize, like some demented leaf-cutter ant. The drudgery can be relieved by several methods:

Create a GW file of resizable clip art.

Use a program switcher such as The Manager from Seven Hills or Procyon's Switch It to switch between Platinum Paint, etc. and GraphicWriter.

Employ a Scrapbook Desk Accessory to collect items for later transfer to the Clipboard when using GraphicWriter.

Test Drives

can jump to a page just by typing its number and pressing Return—often, this is much faster than clicking the page's name from a scrolled list.

Speaking of dialogs, one of the new menu items is "Object Specs...".

Clicking it allows you to specify the size and location of a selected object by typing its new measurements.

When the object you paste into a GraphicWriter document is a Drawn Object—for instance, a "happy face" created in AppleWorks GS—then it will print at the best resolution your printer can provide. If it is a Platinum Paint, etc. Painted Object, then reducing the size of the pasted graphic by half will double its printed resolution. Going to one-quarter size lets it print at just about the highest quality that a 300-dpi printer can produce!

One new feature will not be apparent for a while. An "Extras" menu will appear on the menu bar only when Extras are installed. So far, none have been written; but, as the for-

GraphicWriter add-ons begin to appear,

the Extras menu could become the most valuable '2.0 enhancement of them all.

GraphicWriter III 2.0 employs the same file translators as version 1.1. It can import Teach, AppleWorks, Apple Writer, Bank Street, and MouseWrite word processing files as well as plain text. It can save text as Teach or Text files.

Graphics can come from Print Shop, Print Shop IIGS, MacPaint and standard Apple II/IIGS files. They are saved as IIGS super-res.

Other translators are on the way. Seven Hills is testing beta versions and EGO Systems is already selling a read-only translator for AppleWorks GS word processing files and a read-and-write translator for Rich Text Format files. RTF compatibility allows exchanging formatted text with Macintosh or Windows programs.

Most of my major complaints with GraphicWriter III 1.1 were fixed in version 2.0. It adds the standard clipboard and provides a way to precisely

place and size objects. Since you can import text as a graphic, it has a partial solution to the problem that you cannot set text wrap around a text object. (See the sidebar for details). Dave Hecker of Seven Hills tells me that my remaining complaint (that the Toolbox can't be hidden) will be addressed in the next revision.

If you own an earlier version of GraphicWriter, then the cost of upgrading to Version 2 is a genuine "steal". If you're using another desktop publisher or just 'making do' with a paint utility, consider how GraphicWriter III 2.0 will simplify production and enhance your results. I might not have said this about version 1.1, but there's no question about '2.0: the newest GraphicWriter is the best desktop publishing package ever released for Apple II!

Ego Systems Announces New GraphicWriter Support Modules!

RTF Translator for GraphicWriter III v1.1 or later (\$24.95) imports and exports Rich Text* from/to Mac and Windows programs. You can send the Real text you create in GraphicWriter III to Mac and PC users; and, they can share their products with you.

AppleWorks GS Translator for GraphicWriter III v1.1 or later (\$14.95) imports Rich Text* from AppleWorks GS. You can then use GraphicWriter III's page-layout tools to give your text those extra-special touches.

*"Rich Text" preserves Font (type face, style, etc.), Text Color, Paragraph justification, and Paragraph indentation information.

Each module comes on 3.5" diskette with printed documentation. Prices include shipping anywhere in the world. To order, send a check or money order for the appropriate amount (in U.S. funds) to:

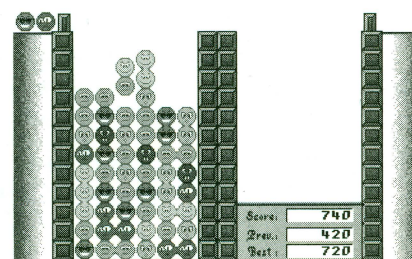
EGO Systems, 7918 Cove Ridge Rd., Hixson, TN 37343-1808
(VISA or MC orders: 800-662-3634)

PuyoPuyo



Freeware for 2MB IIGS by Slixter, Right Triangle Productions
Requires System 6; Stereo Board recommended

by Mitchell Spector



My, how time does fly. Next year will mark the 10th year anniversary of a game that came from the creative mind of a Russian scholar. Tetris, a smash hit, is now a household name to any avid arcade player.

Tetris inspired a whole slew of drop-pieces-from-above challenges. Who can forget such entertaining classics as

Columns GS, BlockOut, Dr. Mario, VIAD or DuelTris? Ready for more? Well, get your fingers limbered up; PuyoPuyo has come to the IIGS!

Something of a cross between Columns and DuelTris, Puyo features ball pairs which you can rotate and move left/right as they drift into a pit. Depending upon Difficulty Level, each ball can be any of 4-6 colors; and, yes, they stick together unless one hits a ball in the pit (whereupon they separate and the other drops).

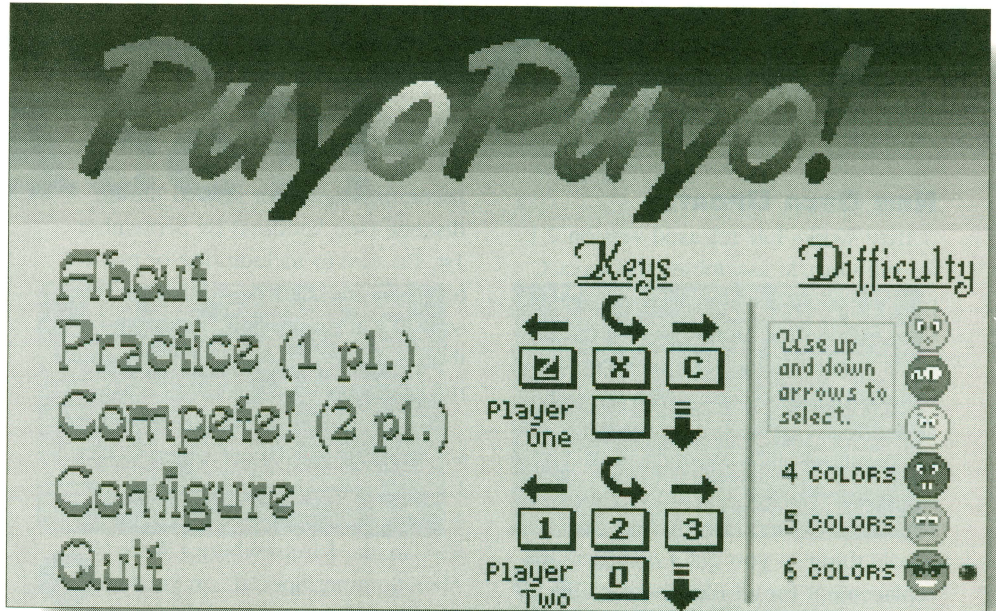
When a group of four or more same-colors balls touch horizontally or vertically they disappear. Any balls above drop down to take up the vacated space and leave more room in the pit.

Actually, the matched balls do not entirely disappear—and, here is where battling a second player makes the game all the more fun, especially if you enjoy causing mischief! Whenever you eliminate balls from your pit, a grey Rock piece will appear and start to drop into the your opponent's pit!

Naturally, Rocks do not match with anything, causing one BIG headache for the opposite player who will have to work around your little "gifts". The more balls in your match, the greater the number of Rocks that appear and start to fall. Creating chain-reaction "combos" — multiple color matches where one set causes another set to disappear by displacement— will create virtual rock slides on the other player's side, not too mention loud screams of protest.

A Rock can be made to vanish if it's adjacent to any ball which is removed in a match; but, this is often little consolation to a player whose pieces have piled high in the meantime. The first player to have pieces reach the top of the pit loses.

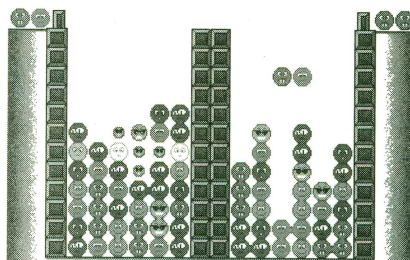
You can play by yourself for a high score; but, the object of the game remains the same: eliminate as many balls as possible and keep the stack from reaching the top. In both ver-



sions, players use simple Keyboard controls. (You can customize the keys and set Difficulty Level on the "Config" screen.) Most people will prefer the "Competition" mode. There's nothing quite like messing up the other player's strategically placed drops!

IIGS Puyo's 128-color opening screens are visually stunning; and, certainly, speed is good and balls do move smoothly. However, I was disappointed by a general lack of detail in the playfield and pieces. Faces on the balls are cute; but there's no 3-D shading to add real 'ballness'. Rate the graphics "fair" to "okay"— nothing eye-popping.

A musical background runs continu-

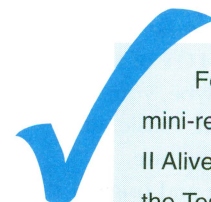


ously as you play. Unfortunately, rather than sequence the theme using such tools as SoundSmith or synthLAB, the author chose to simply record music

from some game console. The short, flat-sounding score can become irritating— VERY irritating if you happen to be losing! (Thankfully, the program permits adjusting music volume.) Puyo's BOINK, THOOP, etc. sound effects are much better.

Though a classic example of underutilizing IIGS capabilities, the game is still a highly enjoyable 'stuff-from-above' challenge; and, after all, it is freeware! You can download Puyo from a number of places including the popular Apple II Caltech* site. Fun and addictive, PuyoPuyo will have you and a friend sitting on the edges of your seats for many hours.

*<ftp://apple2.caltech.edu/zocalo/pub/apple2/new.files/puyopuyo.shk> ♦



For more mini-reviews in II Alive, check out the Test Drive addition called CheckPoints (on the next page).

CheckPoints

Edited by Jeff Hurlburt

NEW ORCA UPDATES

Byte Works has released version 2.1 for the Orca/M assembler and Orca/C plus version 2.2 of Orca/Pascal. A new Orca Subroutine Library source code set is also available. The new versions include bug fixes along with several added features, such as support for the international character set.

Update diskette sets are \$15 each to registered owners and include 'the whole thing'— you get a complete replacement for all files in an earlier version, not just a patch. Of course, owners of pre-2.x versions and new buyers can get a Diskettes + Manual package (Orca/M: \$50/\$70; Orca/C or Pascal: \$60/\$95).

Now is the perfect time to upgrade your II languages. Call Byte Works for any order which includes a new language, language bundle, or upgrade before September 30th, 1996 and ask for the "II Alive Summer Special". You'll get 10% off your Total order!

GOLDEN ORCHARD GOODIES

Golden Orchard II will be the sequel to Golden Orchard, the CD-ROM hit from Jim Maricondo. Targeted, chiefly, for IIGS users, the GO-2 CD will include new programs and utilities, archives of many of the old Apple II America Online software libraries, and contributions of other unique material from users and user groups.

Well, 640MB is a LOT of space— which is where, maybe, you come in. Jim is looking for art, music, utilities, games, ..., in fact, any rare freeware/shareware and original stuff you think other II users would enjoy. Submitting original wares does not waive your ownership, copyright rights, etc. Submissions should be uploaded to <ftp://ftp.hypermall.com/>

incoming/digisoft or sent to Jim on diskette (see Vendors) by September 1st. Be sure to include one or more text 'read.me' files describing the stuff sent. If the submission is accepted, there's a good chance you'll get a nice discount on GO-2!

Speaking of discounts, II Alive subscribers can purchase Golden Orchard I for \$50 plus shipping until September 1, 1996. (Shipping is \$2/US, \$3/Canada, \$5/elsewhere.) Write "II Alive Summer Special" on your checks.

PROSEL-16

So, that new game patch has been listed and the author says "Just use Block Warden to make the changes to block ...". Or, you suspect your hard disk is being slowed by fragmented files and someone comments "Optimizer will get things straightened out". Both Block Warden and Optimizer are utilities included in ProSel-16.

There's lots more, too: Quick-loading Program Selector, Text Editor, Shell command processor, Number Cruncher, Disk Repair/Copy/... (Now you know why everyone else thinks GS 'disk stuff' is so easy!) The ProSel-16 package includes 3.5" diskette and an excellent 140-page manual. It is \$59.95 from Charlie's AppleSeeds.

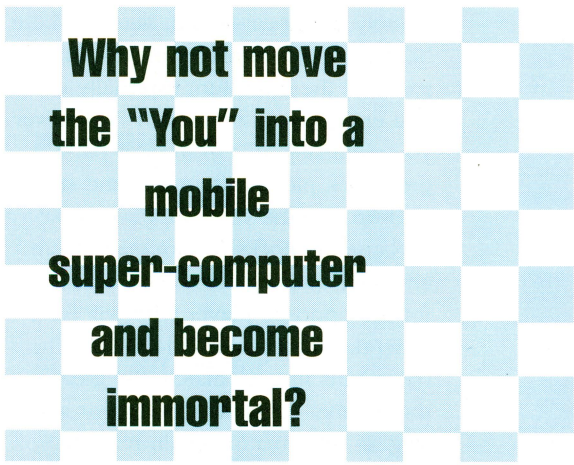
ORACLE OF MAN?

Paul Phillips has an interesting idea: Why not move the You (currently residing in a fragile human body) into a mobile super-computer and become immortal?! The notion, of course, is hardly original— it's been worked into countless sci-fi story lines. What's new is a technology which makes "personality transfers" seem, perhaps, remotely

possible and that Phillips is serious about pursuing this "next step in human evolution".

The author uses most of Oracle's 94 pages to make the case that evolving into a "Technological Life Form" is doable and desirable. Imagine, for example, the fun of uploading to a Lunar Exploration 'walker'. Or, how about REALLY getting into a fantasy adventure! Consider, too, the lessened demands on our planet's eco-system.

Phillips promises two more books to enlarge upon his proposals. Good;

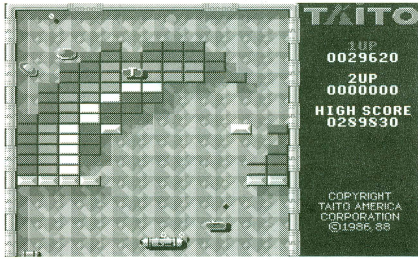


**Why not move
the "You" into a
mobile
super-computer
and become
immortal?**

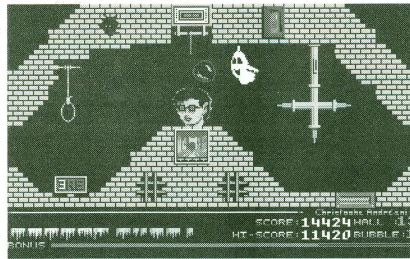
because he neglects a number of issues 'big enough to drive a tank through'. For starters, what happens if there is more to You than the bio-electric patterns transferred to a TLF? How would you know whether a TLF is your friend Bill or just Bill's 'program'? What about duplicates? What about pirating?! ... For a provocative computer-stuff read check out The Oracle of Man (about \$20 from Queensland Network Services). ♦

Correction:
Last issue incorrectly stated the price for Contacts GS from Shareware Solutions II. The correct price for Contacts GS is \$25 (plus s/h \$3 in the U.S.; \$5 elsewhere!).

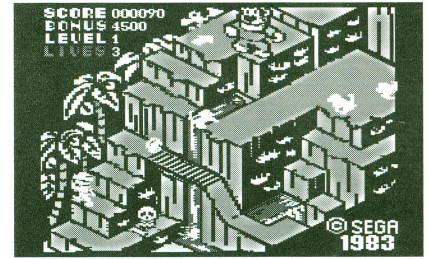
Too Much Fun: Are You an Arcade Ultra-Ace?!



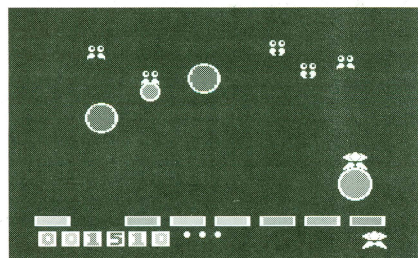
1 A _____



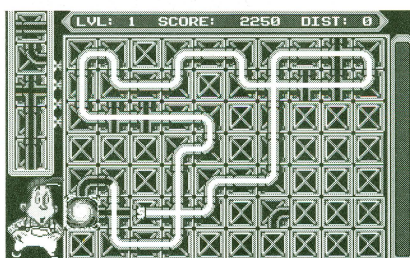
2 B _____



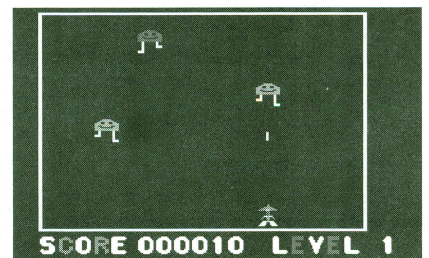
3 C _____



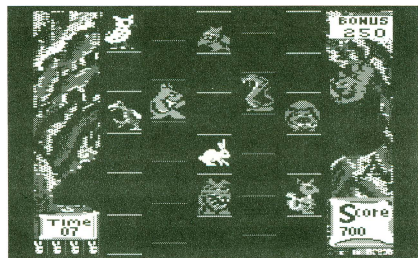
4 L _____



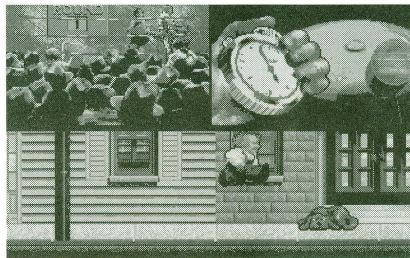
5 P _____



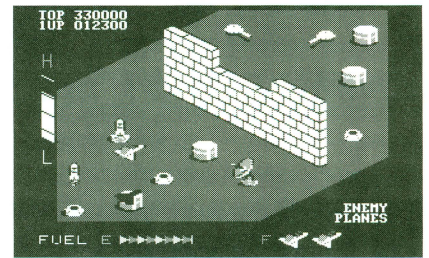
6 S _____



7 S _____



8 T _____



9 Z _____

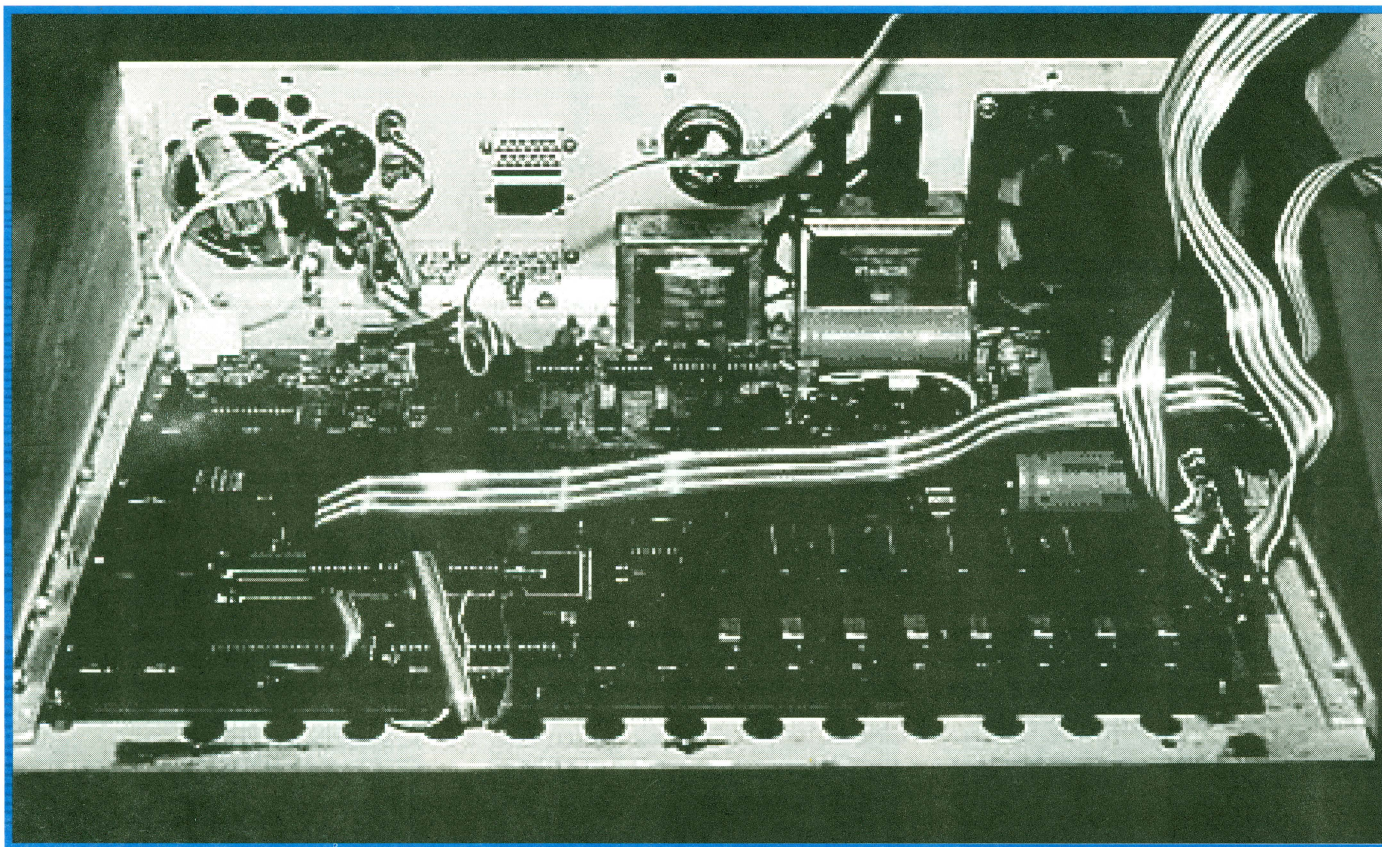
You've heard it before. The ragging, jeering challenge is the same in every arcade parlor around the world: "Hey, dude, ya wanna play for Hi Score?"

Okay! Name the games shown above. The first letter is supplied for each (answers are at the bottom). When you're done check the ratings to see if you've 'got the stuff'!

No. Right	Rating
0-1	Nice Newbie!
2-3	Punk
4-6	Gunner
7-8	Ace
9	Ultra-Ace!

- Answers:
- 1- Arkanoid
 - 2- Bubble Ghost
 - 3- Congo Bongo
 - 4- Lancaster
 - 5- Pipe Dream
 - 6- Sneakers
 - 7- Super Bunny
 - 8- Three Stoges
 - 9- Zaxxon

Looking Back: Woz Tells:



“How I Did It!”

Charles T. Turley, interviewer

The recent flurry of speculations surrounding Apple Inc.'s future seems to have stirred up questions concerning birth of the Apple II. Some writers have reported that coding of the first II ROMs was a fairly simple affair—since, “of course”, Steve Wozniak had access to an assembler and terminal. Similar “obvious” and “easy” comments have surfaced about the decisions to use dynamic RAM and include a BASIC interpreter. I decided to ask Woz for all the facts.

C.T.: You’ve seen the report; how much is accurate?

Woz: The author of the report I received from you is wrong when he says no ROM of large size was assembled by hand. I could never afford an assembler for the 6502 which I bought for \$20.

First, I connected the 6502 to Static RAM and a video terminal of my own design. I then wrote a short “monitor” program to watch the keyboard and display characters, both under interrupt

and polled. We didn’t have 256 byte PROMS, just 256x4 PROMS at that time. I used two of the ones we burned for calculator development at HP. The first hardware bringup had a few frustrating hours but I got it working with polled keyboard that night.

I then wrote a 256 byte “Monitor” program which watched the keyboard for hex data entry (address:data data data) and hex display and program initiation (“Run”). I got very good at typing in hex and very very good at checking data entry carefully, character

Woz tells: "How I did It!"

by character. I still can't read a credit card number without a high expectation of mistake, but I have good habits to this day.

C.T.: Even Commodore's Vic20, which appeared years later, uses easy-to-design-for static memory IC's. What was behind the decision to use dynamic RAM?

Woz: I switched to dynamic RAMs when someone at our club sold some for a couple of bucks each. After all, in 1975 these were the first RAMs cheaper than core memory, the 4K dynamics. I bought some 22 pin AMI ones, there were three vendors.

Virtually none of the other hobby computers around that time used dynamic RAMs, I decided it was because of the hobbyist technician sense of most fans I met, they weren't true engineers. Also, they were familiar with low-cost routes like surplus stores where the favorite RAM was the 2102 static. But for me, designing for the dynamic RAM was a piece of cake and I had fun at that which I excelled, combining MSI chips in clever ways.

Steve Jobs asked what did I think of the Intel dynamic RAMs. I told him I felt they were the best. Although they required more driving circuitry for Row and Column addressing (not just a wire from the CPU for each address line) they were in a smaller package. I had for some time measured the worth of my IC designs in terms of how little board space they took, not how few chips. So these 16-pin Intel chips, plus some row/column multiplexers and timing signals, actually took less board

space than the 22-pin AMI RAMs. And saved some transistor clock drivers as well.

I felt we could never afford any Intel chip, having heard how the 8080 was \$370. But Steve got a rep to give us 16 samples. So the Apple I started with the best possible RAM choice, even before it was certain how things would go with RAMs. When the 16K dynamics appeared in the Intel compatible format we were luckily on the right track.

**"But for me,
designing for
the dynamic RAM
was a
piece of cake"**

Steve Wozniak

C.T.: How did BASIC come to be part of the first Apple computer?

Woz: The book "101 BASIC Games" made me think that the right higher level language for these low cost computers was BASIC, even though I'd never used it. I referred to an HP BASIC manual to develop my syntax diagrams. Hoping to be noted as the first with a 6502 BASIC, I left out floating point. But what I wanted was games, logic simulations, puzzle solving, etc. and integers are fine. Most of

my college programming was numerics done with integer only operations for large accuracy.

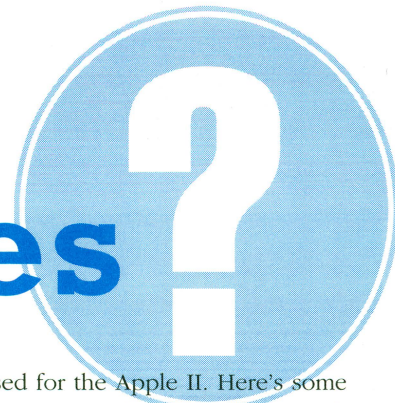
I wrote the entire BASIC by hand with no assembler. I kept thousands of pages of my hand-done work from day one. The final Apple II Rom code was entirely done by hand and is in a notebook. The Apple II was the first product to ship with 2K Roms from Synertek. 4K total of code. I built in a disassembler and wrote a mini-assembler (no symbols, only absolute hex or decimal addresses and constants) which shipped either in the Apple II or in a later Rom addition.

C.T.: What about peripherals like the printer interface, cassette, and disk? I guess these were all coded using an assembler; right?

Woz: By the time the Printer card was done with it's 256 byte ROM I may still have been coding by hand or we might have gotten our first assembler. It's unusual to this day that you plugged in a printer and it attached itself to the op-sys by means of a driver in ROM on the printer card. True plug'n play. Possible to this day but rarely done (I've heard of some Newton exception). The ROM op-sys of the Apple II could direct output and input to any of 7 slots. Mass media was read and write an entire cassette file at once.

The floppy brought a very tight hardware design, coupled very tightly to the lowest level access subroutines which I wrote without an assembler. Randy Wigginton wrote the "Read Write Tractor Sector" routines, a step higher. Randy and I began a full op-sys but we farmed it out to Shepardson associates. Needless to say, none of that was done by hand!

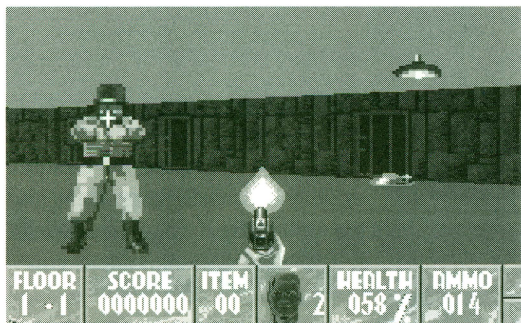
Rumors, Facts & Fables



It's been said that rumors, facts and fables are closely related. Certainly, they are often interwoven. With this in mind, consider the following tidbits of information I've gather from a multitude of reliable and well informed sources.

New Wares by Charles T. Turley

Ron Mercer is wrapping up an update of Prism. The new version will support jpeg color conversions and offer other new options. Ron is also working on Emerald Vision, a 3200-color GS graphics utility. Even the very early beta I saw a couple years back



was more impressive and an lot more user friendly than the best 3200-color painters currently available! (For more info you can reach Ron at Ron@iwcleve.com.)

Geraldine Wright has released a free-ware color graphics editor for the New Print Shop. This is something that New Print Shop users had not previously had, since Broderbund never put out a New Print Shop Companion. You should find the new program on Genie or your favorite ftp site. Also look for a New Print Shop font editor by Cy Roton."

Work continues (and continues, and ...) on Wolfenstein 3D for IIGS. I've played an early version and found it to

be fast with responsive mouse and/or keyboard controls. It had very nice stereo sound, seven game modes, and 30 3-D levels. Really, the smoothly animated action adventure had a nearly-finished look months ago! Still, II Alive reviewer Colin Williamson reports that programmers are polishing the program; so, just maybe, Wolf-3D/gs will soon cease to be vaporware.

Important updates of some great GS wares are nearing (or, by now, ready for) release from Seven Hills Software. Featuring support for the new IIGS TCP/IP bundle, GNO v2.0.6, should deliver markedly improved Apple II access to the Internet. Look for Spectrum and The Manager updates; and, of course, GraphicWriter III 2.0 is now available.

Programming wares? Well, NinjaForce has sent their latest Assembler to popular ftp sites; and, I've recently arranged with the author of LISA 816, to have it reclassified and released as freeware. The same is pending with another, very popular, package. Perhaps most encouraging, Byte Works has released notable updates of its Orca languages.

And, in case you still doubt the value of your Apple II programming skills: Tiger Electronics will market a cartridge-based mini-IIe designed for TV hookup. Intended, chiefly, as a medium for educational wares, the Tiger will also feature some games and other non-edu applications. All of which will create a demand for new IIe programs. (Developers with II entertainment wares to sell can reach Tiger at 847-913-8100.)

It's amazing, when you stop to think about all of this, just how much software is being developed, updated and

released for the Apple II. Here's some of what you can look forward to in the next 8-12 months ...

Expect a QuickTime converter that supports the Second Sight video card in color and a non-SS version in grey scale. Jim Maricondo will send out a Golden Orchard II CD and Brutal Deluxe will produce a CD of its own. There will be a GS port of MPEG, a graphical Web Browser, a GS/OS update (System 6.0.2), release of POVray/gs, and limited IIGS emulators for PC and Mac.

Contact Information: Charles T. Turley and his One World Software Wizards group can be reached at <http://www.wco.com/~3d5d1usw/gsezine>. You can contact Charles directly at [gbmaidsf@wco.com](mailto:gmailto:gbmaidsf@wco.com).

New GS? by Jeff Hurlburt

Rumors of a new Apple II gained currency last fall with the discovery that Apple seems to have come close to developing a "ROM-04" GS in the early '90's. Code named "Mark Twain", the project supposedly produced several— perhaps as many as twenty— prototypes. However, with 4MB RAM max, fewer Slots, and several built-in's, the standard-speed 'Twain turns out to have been, chiefly, an attempt to produce a compact GS, not a better one.

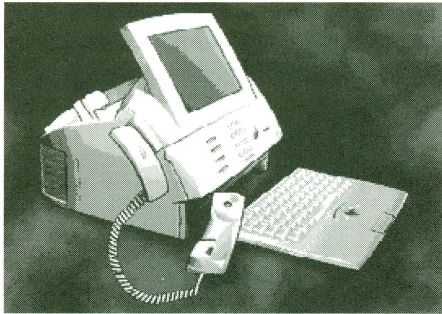
Charles Turley, who supplied most of our 'Twain info, also sent along a picture and specs for something named "Hydra" discovered on Apple's web site. Boasting a 20MHz 65C816 and 40-50MHz 68040, Hydra would place a faster GS and a Mac plus piles of built-ins (even the display) in/on a single box.

If Mark Twain and Hydra were genuine Apple projects, then at least part of the reason for Apple's leadership

Rumors, Facts & Fables

changes becomes clear. Both machines would have been pricey while neither could have delivered notably better performance than today's accelerated GS.

Actually, the best 'evidence' for a



new Apple II is new leadership AND Big Green's need for a major success. It just happens that a super-GS, call it the "GSX", is a good bet for winning back a nice piece of the home computer market.

Based upon recent discussions on comp.sys.apple2, GSX should feature a 33-50MHz 65C832, 16MB (8-15MHz) main RAM expandable to 64MB, 8 GSX Slots, on-board SVGA-class or better Video and 1MB wave-table Sound. To this add 2GB EIDE hard disk, x8 EIDE CD-ROM, and 800k/1.44MB diskette drive. Ideally, GSX should be II/IIGS compatible and offer in-FlashRAM GSX BASIC.

Assuming a sane price (around \$1500) such a machine would, obviously, attract II user backing. More important, the promise of a powerful, integrated, user friendly "new Apple II" could win over many non-II user home computer shoppers. Give Apple Marketing the GSX. An hour after the first TV ads featuring GSX versions of UltraDOOM and NetScape 4.0, Apple sellers would be buried in orders.

Can Big Green turn things around? Yes; and, as in 1986, the Way is clear. It remains to be seen whether Apple has the Wit and the Will. GSX is a major marketing success waiting to happen; but, it won't wait forever! ♦

How I Met Mark Twain

by Charles T. Turley

I first got a hands-on experience with this unique prototype, way back in early 1992, when a fellow II user and friend, George Lee, gave me a call and asked if he could bring a "strange looking Apple IIGS" over for me to have a look at.

He told me he bought it for \$50 at a flea market and that it was very different from his ROM-01 machine. I

asked him how so and he proceeded to describe how it had a built-in 3.5 disk drive mounted above a hard disk near the front left of the case. It also had a smaller power supply mounted just behind the drives. The motherboard appeared to have only five card slots and the one on the far right had a hard white plastic sheath for some sort of card insert, but it was empty.

At this point in the conversation, my curiosity had the best of me and I asked him what did it say on the front case. He replied nothing, that it simply had an Apple logo and an insert slot for diskettes with no name or lettering of any kind. I told him to bring it over!

As soon as we took the top off I realized that this was some sort of experimental IIGS prototype. There were no names or labels to identify it at all. It had a 3.5 disk stuck in the disk drive, which I carefully worked out and removed. The

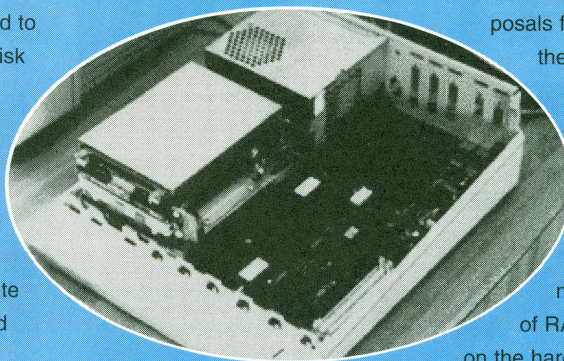
disk had a hand written label noted simply: MT-AVI-12 and nothing else. I took it over to my standard ROM-01 GS and checked out the contents.

The disk contained several super-res pictures, chiefly crude drawings of circuits, and 14 text files: TN.EPT.a thru TN.EPT.n. Throughout these were mentions of proposals for the "Mark Twain", with outlines of the changes it went through from the standard model of the IIGS.

We powered up the computer twice and it showed up on the screen as a ROM-03 when it booted. As I recall, the Control Panel appeared to be the same as my ROM 01 IIGS, but indicated 2MB of RAM. There did not seem to be much on the hard disk.

I studied this "Mark Twain" and its unique motherboard design, modifications, etc. and told George that I was sorry, I couldn't do much with it, with a bad disk drive and all, suggesting that he take it to an authorized Apple dealer for repairs. George took it and left. Months passed and I never saw George or the computer again.

Charles T. Turley can be contacted at the following internet address— <http://www.wco.com/3d5d1wsw/gsezine> or email him at gbmaidsf@wco.com. ♦



Let's Stop Being "At-Risk"!

A Challenge

It is no secret that our public schools are in trouble. To some extent this reflects failed curriculum choices: 'Johnny can't read' because public schools no longer teach phonics. No doubt, too, it reflects a failure to confirm teacher authority in the classroom.

Much of the problem, however, comes down to children "at-risk" for dropping out of the educational process. Some simply walk out of classes, others 'drop out' of learning activities but remain. These children may be noisy and abusive, or so withdrawn as to become invisible. They may be frustrated by a language barrier, or very depressed, or very bright yet failing to achieve.

Not surprisingly, at-risk children often disrupt learning for other students. At-riskness can spread!

Magic Potion?

Remember your latest computer user brilliancy? Like cracking the FireMaster's defenses in Gate, or figuring there just had to be a secret panel behind that tapestry in Wolfenstein 3-D? Even something not as spectacular as that.

Supplying challenges and success experiences, personal computing nonetheless also imposes structure and discipline. In fact, it is an amazing medium for individual growth. Wouldn't it be great if we could bottle computing's enthusiasm, pride in accomplishment, and discipline—to create a kind of 'magic potion' for at-risk students. Of course not! Numerous studies indicate that at-risk students do respond to activities which impose structure, supply success experiences, and enhance self-esteem-as-a-learner.

What about a Magic Tablet?!

Computers have been a classroom fixture for well over a decade. Yet, in choosing to view the computer as merely a high-tech instructional medium, education has failed to grasp the its true potential.

The computer is a growth machine. Yes; it can instruct, challenge, and entertain. It can also become the arena for creative success experiences and the medium for communicating creative products to others.

There is no magic potion. However, costs are now low enough so that each child can be issued a computer—a 'magic tablet' each can be taught to use in the classroom and to program.

We cannot guarantee to remove all children from "at-risk" rosters; but, certainly, we can make a good start. ♦

Danger! Danger!

High Density DOOM?!

As some users have begun to notice, the advice: "Save it and forget it" takes on a new meaning when precious files are backed up via High Density diskette on the standard 800K IIe/IIGS drive. Some HD diskettes on some drives will, literally, "forget it"!

I did some magnetization tests on Double Density and High Density surfaces. The tested DD surface produced more than twice the deflection of the tested HD surface. Clearly, there is a big difference in signal levels required to reliably store data on HD vs. DD.

HD's may work fine on your 800K drives; or, they may just seem to work fine. Either way, there's no question: a drive optimized for DD will not be optimized for HD. If you'd rather not roll the Dice

of Doom on your backups, stick with Double Density diskettes.

Crashing Teach, and Pointless, Too

Sure, Teach 6.0.1 has a few bugs; but, by now, most users know that very large documents will choke the program. The danger is that you may spend a good chunk of time composing a nice Read.Me, etc. note and then have Teach freeze when you select "Choose Font"! The bug also impacts Pointless.

A System routine, Font Manager 6.0.1, can mess up when a document uses a font which is unavailable or a font has not been defined. Nathan Mates and Greg Templeman have developed a patch which appears, finally, to spritz the bug. FixFontMgr601 v2.0-- the "v2.0" is important-- is freeware available for

downloading at numerous sites including Nathan's own (<http://www.ugcs.caltech.edu/~nathan/ap12.resource.html>).

Scrapped Scraps?

Gareth Jones reports a sneaky conflict between GraphicWriter III 2.0 and the popular Scrapbooks Desk Accessory from SoftDisk-GS #50. You may spend an hour collecting juicy paste-ons, start working in GW, and find that there is 'No Way' to select your Scraps into the Clipboard! Happily, Dave Hecker of Seven Hills has come up with a work-around. When you want to change Scraps, just make sure all GW documents are closed. You can reopen them once the Scrapbook has done its work. ♦

Letters

Responses by Bill Carver

Dear II Alive,

I have had a IIGS for many years. It is souped up with a 10mhz Sip Card, two external hard drives and lots of stuff. Unfortunately I could not get a CD-ROM for it, so I gave in after many years and bought a Performa 578—which I've grown to love. I did not pour over the Quality Computer catalog any more than the numerous Iie magazines that I would get in the mail. Most of these magazines went out of business. My interest in my "trusty" IIGS began to fade quickly.

Recently however, two things happened which sparked my interest. One was the arrival of the II Alive magazine and in the same day a disk of stuff for the IIGS from Softdisk GS. Second was my granddaughters emerging interest in computers. She was watching me surf the net and wondered if she could try it. It was then I learned that she had been accessing local BBS's on her Mom's computer, a Packard Bell (gasp-choke). Well she sat down at the Mac and like most kids learned in a flash what had taken me months to learn. I thought then it would be fun if we could both get on-line at the same time, surf the net, and in general have fun together on my computers. I did not think it was possible because I thought the IIGS could not access the internet. It was later that day, I read in II Alive, Mr. Johnson's letter saying "...she could get graphical internet with this machine...". So I have a few questions I hope you can help me with. Is there a program that allows one to connect the IIGS to the internet. If so, what is its name and where can I get it? Do you have an email address for the writer of ANSiTERM? I bought the program years ago and it allows color graphics on BBS's, but has lots of problems. Finally, knowing what I want to do, what programs would you suggest I purchase to allow my granddaughter and I some quality computer time together? Thank You.

John A. Starets
Crescent City, California

John: Yes, you can hook your IIGS up to the internet very easily! All you need is a modem and communications software. You would need to get a "Shell" Account from your local internet provider. You will not be able to receive graphics when surfing the net however, the Apple II is a text machine as far as the internet goes. ProTERM, is an excellent communication program for the IIGS and well capable of accessing the internet.

The author of ANSiTERM, Paul Parkhurst can be reached at PMP@genie.com

Dear II Alive,

I just received your Spring 1996 issue in the mail and it prompted me to write to you.

Your letters in that issue are very interesting because so many of them pit Apple II users against Mac users and vice versa.

Well, I believe that there is room for all Apples to coexist, and I don't believe I have sold out. I am a proud owner and user of an Apple Iie and Iic as well as several varieties of Mac from the "lowly" Mac Plus to the Performa 6300CD.

Am I happy that Apple Computer discontinued its Apple II line some time ago? No, and I don't believe any II owner/user is. But that decision has been made and there is nothing any of us can do about it. The best way to protest is by what we are doing: continuing to use our systems on a daily basis.

There aren't many older computer systems out there anymore that continue to have the sheer numbers and loyalty of the Apple II users I know, because at one time or another I've used them all, from Atari to Commodore an everything in between. And the only ones I've retained are my Apples—both II's and Macs.

B.J. Major
Tacoma, Washington

Thanks for sharing your story with all of our II Alive readers.

Dear II Alive,

The Spring, 1996 issue of II Alive just arrived, and it was a real thrill to read not one, but two, rave reviews of new IIGS software that is available from Shareware Solutions II. Thanks so much for helping to keep the Apple II Alive!

With so few Apple II oriented publications still available, I'm almost hesitant to point out that there were several small inaccuracies in your review of Contacts GS. The name of the company that publishes the software was referred to several times as Software Solution: the actual name is Shareware Solutions II. Also, Contacts GS was referred to as a Spreadsheet when in actuality, it is a Database.

Lastly, the price quoted in the review was inaccurate. Although Shareware Solutions II does believe in publishing high quality IIGS software at low cost, \$10 for such a versatile program as Contacts GS would quickly place Shareware Solution II in the same financial state that Apple Computer Inc. is currently in. The correct price for Contacts GS is \$25, plus \$3 for shipping to anywhere in the world.

Thanks again for two wonderful reviews.

Joe Kohn
Shareware Solutions II
San Rafael, California

Joe: We, at II Alive, are very sorry for the numerous inaccuracies on the Contacts GS review. Thank you for bringing that to the attention of the magazine and our subscribers.

If you have a question, comment or complaint, please send your letter to

II Alive Editor,
P.O. Box 349,
St. Clair Shores, Michigan 48080,
or fax it to 1-810-774-2698,
attention: II Alive Editor

APPLE II PERIPHERALS - UPGRADES - NEW APPLE II PRODUCTS COMING! SCHOOL & UNIVERSITY P.O.s ACCEPTED! - SCHOOL QTY. DISCOUNTS AVAILABLE*

RAM CHIPS

Apple //e or //+ 4164/4116.50¢
Expanding your... Apple IIGs Memory Card, AE GS-RAM, AE RAMWorks, Super Expander & Compatibles
768K Exp. Set (24 41256).....\$24.00
41256.....\$1.25
Expanding Your GS Juice+, S&S AEGS RAM + / II, CV Tech or Chinook 4000 41024 (1 Meg)\$2.50
Bank of 8.....\$20.00
Expanding Your AE GS-RAM Ultra or RAMPak4 GS
44256 (256x4)\$2.50
Bank of 8.....\$20.00
Expanding Your OctoRAM, GS Sauce, Q-RAM GS, Pacemark 4 Meg RAM Card 1 Meg SIMM\$14.00

Motherboards/Service Parts

//e or //c MLB\$49.00
IIGs M/B Exch \$99. ROM3...\$149.00
//e Keyboard.....\$35.00
IIGs Keyboard Exchange.....\$55.00
IIGs Keyboard.....\$69.00
//e, //c, / IIGs Case ...\$10./.....\$15.00

Power Supplies

II+,//e\$35.00
IIGs Exch / No Exch.... \$59 / \$69.00
//c Replacement Ext P/S.....\$25.00
//c External Power Supply ...\$29.00

Modems

2400 External.....\$19.00
Omron 2400/Fax/MNP5 with MiniDin 8 cable. (IIGs/IIc+)..\$39.00
14.4 Ext. v.32bis.....\$69.00
IIGs PMPFax Compatible

PERIPHERAL CARDS

Zip GS 7Mhz / 32K Cache...\$159.00
62256 -20ns ((32K x 8)).....\$9.95
Zip Chip 8 Mhz (//e, //c).....\$139.00
Super Serial Card\$52.00
IW-II 32K Buffer.....\$30.00
20 Pin 5.25" Disk Cont.....\$25.00
19 Pin 5.25" Disk Cont.....\$39.00
//+ 80 Column Card\$15.00
GrafStar II Graphic Parallel ..\$35.00
Graphic Parallel (Grappler)....\$45.00
CMS SCSI Card & Disk.....\$39.00
16K Language Card (II+).....\$15.00
NO SLOT CLOCK.....\$23.00

Cables & Switch Boxes

METAL, GBBS Sysops. HST/v.32bis hardware hndshk cables! (Specify) ...\$14.95
DuoDisk Replacement Cable ..\$19.00
19 Pin Drive Converter.....\$7.95
IIGs,e,c to ImageWriter I/II.....\$7.95
Laser 128 Parallel Cable.....\$7.95
//c Serial -> Parallel Converter \$29.00
Fullnet Connector\$14.95
Switch Boxes.....\$12.95 - \$19.00
ADB Replacement cable.....\$6.95
SCSI Cable, 25-50 or 50-50.....\$9.95

Accessories

16 Pin Joystick II+//e.....\$9.95
9 Pin Joystick, IIGs.....\$12.95
Apple IIGs System 6.0.1 & Manual\$35.00
ADB Mouse Exch \$39.00. Refurb\$49.00
Mouse Pad (Static Free).....\$2.95
//e Enhancement Kit.....\$29.00
IIGs Internal Fan.....\$14.95

Refurbished Printers

ImageWriter I.....\$79.00
ImageWriter I (Wide).....\$69.95
ImageWriter II\$149.00
IW-I/II Ribbons.....6 for...\$12.00
IWII Color Ribbon.....\$5.45

Print Heads

IW-I\$35.00
IW-II\$59.00

PC Transporter

101 Keyboard for PCT\$29.00
PCT IBM Keyboard Cable\$7.00
3.5" 720K Ad-on Drive\$49.00
5.25" Transdrive.....\$69.00
4464 Zip /PCT Mem. Exp.....\$2. ea
8087-2 (M ath Co.).....\$39.00

APPLE CHIPS & ROMS

Call for Chips Not Listed!
//e & //c Related
IOU/MMU 344-0020/0010.....\$9.00
ROM 342-0303 or 0304.....\$9.00
ROM 322-0134 or 0135.....\$7.00
ROM 342-0133 or 0265.....\$7.00
Keyboard ROM 342-0132.....\$7.00
HAL 342-0170\$14.00
KYBD Encoder AY3600PRO ..\$9.00
6502.....\$3.00
65C02.....\$7.00
//c Specific
IOU/MMU 344-0021/0011 ...\$9.00
ROM 344-0272\$7.00
ROM (3.5" Drive) 344-0033...\$19.00
TMG or GLU.....\$14.00
6551.....\$3.00
IWM 344-0041\$24.00
IIGs Related
65C816 (Dip)\$19.00
VGC 344S0046-C (Upgrade).....\$24.00
344-0077-B (ROM 01).....\$39.00
Other IIGs Chips Available
II+ Related
ROM Set (C0-F8)\$29.00
Other II+Chips..\$3.00 to \$7.00Call

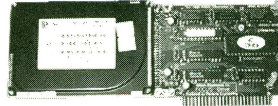
SoundMeister!

"...S is for Sound!"
Bring out the sound in your IIGs!
Alltech Electronics now has the SoundMeister Stereo/Digitizer card. Unleash those hidden sounds in your IIGs today! Includes 2 disks of sounds/music!.....\$69.00
SoundMeister & Speakers.....\$84.95

Bulk Disks

5.25" DSDD Disks 100 for.....\$12.00
3.5" DSDD Disks 50 for.....\$9.50
3.5" DSHD Disks 50 for.....\$9.50
5.25" Disk Sleeves 100 for.....\$3.00

20 Meg Hard Disk \$99.00



Works in the Apple //e or IIGs.
100% Compatible with ProDOS & GS/OS
A n affordable alternative to networking.
20 Meg Internal FOCUS Drive.....\$99.00
120 Meg Internal FOCUS Drive\$159.00
200Meg Internal FOCUS Drive.....\$199.00

FOCUS
Apple //e & IIGs
Internal Hard Disk

Ask for our Mac & IBM Product Lists

Alltech Electronics Co.

2618 Temple Heights Oceanside, CA 92056

9-5:30 PM Mon.-Fri



School & Govt POs All other Inquiries: & Tech Support: 619/724-2404

Fax (School PO's, Quotes, Info.): 619/724-8808

619/724-2404

World Wide Web [Http://www.allelec.com](http://www.allelec.com)



DiscQUEST.... \$79.00

DiscQuest: CD ROM for your IIGs!
Sequential Systems
DiscPassage CD ROM Software
DiscQuest (Incl. Family Doctor).....\$ 79.00
DiscQuest & 2x CD (Refurb).....\$ 129.00
DiscQuest, 2x CD & RAMFast\$ 269.00
Goldstar 2x SCSI CD ROM for Ramfast\$69.00

Hard Disks & Aecessories

CMS SCSI Card w/3-1-90 ROM & Disc.....\$39.00
AEC FOCUS Hard Disk 20 Meg.....\$99.00
Cables & Cases
25/25, 25/50 or 50/50 SCSI Cable\$9.95
SCSI Single Ended 50 pin terminator\$3.95
SCSI Passthrough 50 pin terminator.....\$5.95
SCSI Case & P/S for 3.5" or 5.25" HH...\$39.00

SEQUENTIAL SYSTEMS

Q:Talk LTO (AppleTalk & 32K for IW-ID).....\$69.00
RAM //c with 1024K (//c or //c+).....\$119.00
bit Mouse card \$49.00.....with mouse.....\$65.00
SuperCOMM \$54.00.....SuperCOMM //c.....\$45.00
RAM //c w/1024K Installed.....\$119.00

RAM Cards

Apple //e, //c & IIGs RAM Card Available..Call
Extended 80 Column Card.....\$19.00
Apple IIGs RAM Expansion (4 & 8 Meg. See Above)

Monitors

IIGs Compatible RGB Monitor\$129.00
AppleColor RGB, IIGs (Refurb).....\$169.00
IIGs Compatible RGB Monitor & Cable.....\$129.00
Apple Monitor II, /// (Refurb).....\$49.00/
Apple Monitor //c (Refurb).....\$59.00
Apple Color Composite (Refurb) ..\$159 /\$199.00
//c RGB Monitor (CGA Conversion).....\$129.00
//c RGB Converter Box (Uses CGA).....\$39.00
//c RGB Converter, Video 7, DB15.....\$39.00
Composite Green (Refurb).....\$29.00
Color Composite (Not for 80 Col Txt).....\$69.00



With Allison™
Digitizing software
Instantly 'grab's
from any video
source. Upgrades
available. Call.

VisionPlusEnhanced IIGs \$149.00

Refurbished Apple

Disk Drives

5.25" Generic Full Height (Refurb).....\$39.00
5.25" Generic Full Height w/19 Pin.....\$49.00
5.25" Apple Disk II (Refurb) add \$10.00 for above.
Apple DuoDisk 5.25" Exch.....\$99.00
Apple Disk //c Assy\$45.00
AppleDisk 3.5" (Refurb)\$139.00
Apple UniDisk 3.5" (Refurb, Limited Stk).....\$139.00
AppleDisk 5.25" (Refurb)\$129.00
Apple 3.5" 800K Drive Service Exchange:
UniDisk, AppleDisk(Platinum), Mac\$85.00

CA Residents please add 7.75% Sales Tax • COD Orders, Cash/Certified Funds Only • Minimum Shipping & Handling Charge \$6.50 • Some products are refurbished products and carry a 120 day warranty. • New products are covered by a one year warranty. All Repairs are warranted for 120 days. • Some RAM Chips may be new but pulled, all RAM has a one year warranty. • NO Returns without an RMA number, please call before shipping anything back to us. • A 20% Restocking Fee is applied to all returns due to incompatibility or unneeded product or Products purchased in error. Please be sure what computer you have before placing an order. • Educational P.O.s Accepted, Others on AOC only. • Prices and availability subject to change at any time without any notification whatsoever. *Discounts on certain merchandise only and min. Qty Applies.