

## NuFX eases file transfers

Thanks to Andy Nicholas, a college student at Moravian College in Bethlehem, Pennsylvania, uploading and downloading Apple II files to and from local bulletin board systems and services such as CompuServe and GEnie will soon be easier and faster. As a project for a spring semester independent-study course in computer science, Nicholas developed a new, publicly-documented file format, called NuFX, for archiving files and disk images. In addition, he wrote a program, called *ShrinkIT*, that can create and extract from these NuFX archive files. *ShrinkIT* will be distributed as freeware.

During June, Nicholas and staff members from Apple, CompuServe's Apple II Forums, and GEnie's Apple II RoundTables met at two online conferences and hammered out standards that Apple will soon publish as Apple II Technical Notes and that CompuServe and GEnie will implement in their online libraries. Under the new standards, online files will be smaller, which means they can be transmitted faster. NuFX files can be received with their file type intact, which means they will show up in the Finder with the correct, double-clickable icon. And only one utility program, *ShrinkIT*, will be needed to process all types of the files typically found in online libraries.

The tech notes discussed at the online conferences include two File Type Notes, one for Binary II files (type \$E0, aux type \$8000) and one for NuFX Archival Library files (type \$E0, aux type \$8002). A third tech note, Miscellaneous Note #14, covers guidelines for telecommunications programs.

**Telecommunications and file transfers are complicated** enough to intimidate many users. Let's cut through the intimidation and start at the beginning. By the end it will be clear why NuFX and *ShrinkIT* are about to make life in the Apple II community better.

Telecommunications involves using a device called a modem to hook your computer to the telephone network. Besides a modem, you also need telecommunications software to run on your computer and another computer, also equipped with a modem and also running telecommunications software, to call up. For a complete introduction to all this, see "Crossing telephones with computers," in our March 1988 issue, pages 4.12-4.14.

One of the things you can do once you're connected to the phone system is call up local bulletin board systems or national online services and exchange messages with other people. We covered this in "Twisting talk into data," May 1988, pages 4.25-4.27.

Another of the things you can do once you're connected to the phone system is call up local bulletin board systems or national online services and upload (send) or download (receive) files. The files can be data files such as word processor documents, spreadsheets, graphics, fonts, or digitized sounds or music; or they can be program files.

But the phone system isn't as error-free as the cable that runs between your computer and your disk drive. In fact, noise in the phone line commonly introduces errors (popularly known as "garbage") into data being transferred. Your ears do a very nice job of filtering this noise out when you're talking on the phone and state-of-the-art high-speed modems handle noise well, too. But older, slower, modems have almost no ability to tell noise from data.

Consequently, in the early days of telecommunications, it was very difficult to transfer a file without errors. A CP/M programmer by the

name of Ward Christensen addressed this problem in 1977 by developing a communications protocol called XMODEM.

**Under XMODEM, the sending computer** divides the file to be transferred into 128-byte packets (a byte is a unit of information that holds a number between 0 and 255; in many cases the number in a byte represents a single letter of the alphabet). Then the sending computer adds a two-byte packet number to the front of the packet and calculates a one-byte checksum that it adds to the end of the packet. Then, when the receiving computer signals that it is ready, the sending computer transmits the first packet.

The receiving computer captures the packet and calculates its own checksum. If the checksums match, the packet is accepted and the receiving computer tells the transmitting computer to send the next packet. If the checksums don't match, the receiving computer tells the transmitting computer to resend the packet. This continues, packet by packet, until the entire file has been transmitted.

XMODEM took the personal telecommunications world by storm. Today it's still the most widely-used protocol for avoiding errors while transmitting data. A newer version (XMODEM CRC) uses "cyclic redundancy checking" to create a two-byte checksum that will catch all but the most improbable errors (damaged files could occasionally slip through the fingers of the older one-byte checksum under some conditions).

Faster protocols that use bigger packets and that allow the transfer of several files at once ("batch" transfer), called YMODEM and ZMODEM, are now also widely used. Another protocol, called KERMIT, is often used to transfer files between personal computers and university mainframes. And there are versions of XMODEM that use 1K (1,024



"MISS LAMONT, WILL YOU GET ME TECHNICAL SUPPORT AT STRIPOC INTERACTIVE PLEASE?"

bytes) and 4K packets. Nonetheless, around GEnie we always recommend that people start with standard XMODEM and use it until they are comfortable with downloading. The more advanced protocols often cause unnecessary confusion for novice telecommunicators.

Obviously, the communications software on both your computer and on the remote computer must support XMODEM if you're going to use it to transfer a file. Almost all personal-computer-based bulletin boards and all the national online services support XMODEM, but there are a few university and private computer systems that don't. All the current Apple II communications packages support XMODEM, but there are a few older packages that don't.

To make an XMODEM transfer, you first tell the remote computer what you want to do. When the remote computer says it is ready to begin the transfer, you enter the commands that tell your own communications software what to do. Do not enter the XMODEM commands on your own computer until the remote computer tells you to begin, no matter whether you are uploading (sending a file to the remote computer) or downloading (receiving a file from the remote computer).

Everything that the CP/M operating system (which XMODEM was originally written for) knows about a file is either in the file itself or in the filename. CP/M filenames always include a dot and a three-character suffix that indicates the file's "type"—that is, whether the file is a program file, a text file, a graphic, or whatever. In making an XMODEM transfer under CP/M, the person making the transfer types in the filename and suffix and XMODEM transfers the rest of the file.

Neither Apple DOS 3.3 nor ProDOS are so primitive. In addition to the information in the file and the filename, these operating systems keep information about each file's type and status in the file's directory entry. XMODEM made no provision for transferring this additional information. Consequently, in the early days of Apple telecommunications, successful file transfer took a great deal of expertise. Some types of files, such as AppleWorks spreadsheets, were nearly impossible to distribute by online means.

**The Binary II file format solved this problem** in early 1987. Binary II was hammered out at online conferences similar to those just held for NuFX. The originator of the Binary II format was Gary Little, author of the telecommunications program *Point-to-Point*, among many other things (see "Sending files by carrier bunny," April 1987, page 3.17).

The Binary II format adds a header to the front of a ProDOS file. The header contains a file's original name, type, auxiliary type, creation and modification dates, and all other information normally stored in the file's directory entry. In online libraries, such files have ".BNY" appended to their filenames (pronounced "bunny"). Binary II formatting can be added or removed by a separate utility program before or after transfer. Alternatively, it can be added or removed on-the-fly, as a file is being transferred, by the user's communications software.

Even though automatic Binary II handling is built into most of the Apple II communications programs on the market today, up until now both GEnie and CompuServe have recommended that users turn this feature off when transferring files. Instead, users have been instructed to use a separate program, Floyd Zink's *Binary II Library Utility*, or *BLU*, to create Binary II files before a transfer or to remove Binary II formatting after a transfer. Here's why.

In addition to storing the information in a file's directory entry, the Binary II format also allows several different files to be combined into one Binary II "envelope". This feature was added to ease the transmission of software packages that consist of several related files. The Binary II format even allows some of these files to be subdirectories. But, unfortunately, on-the-fly subdirectory creation is difficult, and some telecommunications packages don't support it. Inevitably, one of the first files a novice will try to download will include an embedded subdirectory, and if automatic Binary II handling is turned on, the transfer will fail and the novice won't be able to figure out why.

Moreover, Zink's *BLU* has the ability to make files smaller as it puts them into the Binary II format. The "squeezed" files inside the Binary II envelope have ".QQ" added to the end of their ProDOS file names.

Binary II files holding one or more of these squeezed files are identified on the online services with the suffix ".BQY" (say "bucky"). Since squeezed files are much shorter than the originals, they can be transferred in less time, which saves users of fee-based online services money. Consequently, right now most of the files you'll find in online libraries are BQY files.

However, if on-the-fly Binary II handling is done to BQY files, duplicate filename problems caused by the appended ".QQ" can occur. And since the ".QQ" files have to be processed with *BLU* anyhow to make them whole again, and since it's easier to select one BQY file than several ".QQ" files for *BLU* to deal with, automatic Binary II handling for BQY files doesn't make sense.

On the other hand, the Apple II world would be a better place if users could turn automatic Binary II handling on and leave it on. For example, files to be sent could be chosen by icon (icons are associated with a file's type and aux type); files that had been received would have the name, type, and aux type they had when the sender transferred them. In order to accomplish this in the sweetest way, however, we need a file format that allows one or many files to be compressed and stored into a single file with a defined type and aux type of its own. Binary II formatting could then be automatically added and removed from this file during transfer.

**This is just one of the features of the NuFX format** developed by Nicholas. Apple's tech note calls NuFX "a robust, full-featured archival standard for the Apple II series. The standard allows for full archiving of ProDOS and GS/OS files while keeping all file attributes with each file, as well as providing necessary archival functions such as multiple compression schemes."

Some of the advanced features of NuFX include the ability to have multiple files in an archive, the ability to add files to or remove files from the archive, the ability to include entire disk images in an archive (this is a convenient way to transfer DOS 3.3 and Pascal files with ProDOS communications software), the ability to include comments with a file, and the ability to indicate the compression or encryption scheme used when a file was added to the archive. In addition, NuFX provides ways to support GS/OS files that contain resource forks and to support filenames longer than 64 characters (GS/OS can create 8,000-character filenames).

Apple has assigned NuFX files a file type of \$E0 and an auxiliary type of \$8002. Each Binary II file that contains a NuFX archive will have ".BXY" appended to its filename in online libraries (say "boxy").

*ShrinkIT* is the utility program Nicholas wrote to create and extract from NuFX archives. *ShrinkIT* runs on the enhanced IIe, IIc, IIgs, and Laser 128. Nicholas has also written a version of *ShrinkIT* for the II-Plus and unenhanced IIes. A GS/OS *ShrinkIT* GS is in the works.

*ShrinkIT* uses a compression scheme called LZW. LZW works by removing redundant characters from the data. It does this by tokenizing large strings of characters. The more times something like the word "THE" appears in a file, the more times LZW will save space by tokenizing. LZW compression is both faster and stronger than the ".QQ" squeeze algorithm used heretofore in the Apple II world.

In addition to handling standard NuFX files, *ShrinkIT* can also extract from ".BXY" files (those who don't yet have a communications program that can remove the Binary II formatting on the fly need this feature). It can also extract from and unsqueeze the components of ".BQY", ".BNY", ".QQ", and ".ACU" files (ACU files are a special format used only on AppleLink Personal Edition). This means it's the only utility program a user needs to process any type of file found online. *ShrinkIT* can even add Binary II formatting to NuFX files—uploaders who don't have a communications program that can do this automatically need this feature (if you write telecom software, however, please check to see whether the file being uploaded is already in Binary II format before adding a second envelope).

The only thing the ProDOS 8 version of *ShrinkIT* can't do is extract GS/OS files that include a "resource fork" from an archive. This is a limit of ProDOS 8, which doesn't know how to deal with such files. The GS/OS version of *ShrinkIT* will be able to add and extract this kind of file from NuFX archives, however.

If you've never downloaded files before, it's time to fire up your modem, figure out how to get your software to do XMODEM transfers, and get yourself a copy of *ShrinkIT*. Nicholas has made the program available to all Apple II users for free, although I understand some college students like to receive boxes of cookies in the mail.

**Apple's tech note calls NuFX "a robust, full-featured archival standard for the Apple II series. The standard allows for full archiving of ProDOS and GS/OS files..."**

# Miscellanea

**Claris expects to start shipping AppleWorks 3.0 in August.** As I wrote last month's newsletter, the ship-date was scheduled to be about a month earlier, but beta-testers kept finding new bugs and the people at Claris decided to go for a more perfect 3.0 than for earlier release. Claris asked us to hold the coupon in last month's catalog till this month, but production was too far along to stop it. Those of you who called Claris immediately after receiving last month's newsletter found the Claris order desk wasn't ready for your calls. But they're ready now.

We've gotten a number of questions about what the difference will be between the Claris upgrade offer and the one in our catalog last month. The only difference is that if you are already a registered Claris user, you won't have to send your disk in to get the \$79 upgrade. This means you can place your order over the phone, if you have a credit card handy, rather than by mail.

**Applied Ingenuity has created a stir** with its full-page ads mocking Applied Engineering's ads for an internal hard disk drive for the II-Plus, IIe, IIgs series. Applied Ingenuity had a similar product available before Applied Engineering. The internal drives from both companies replace the power supply inside the computer with a larger supply that includes the hard disk inside it. Applied Ingenuity's drives are much less expensive and, according to subscribers who have used them, well made. Applied Ingenuity also makes a 1 to 4 megabyte memory expansion card for the IIgs called the GS Juice Plus. At \$299 for a card with 1 meg of memory installed, the card is very competitively priced (14922M Romona Blvd., Baldwin Park, CA 91706 818-

960-1485 800-346-0811).

**Meanwhile, Cirtech** has announced its intention to make a hard drive that fits on a card in a slot and that will include a SCSI port.

**The Boston Computer Society, in conjunction with Apple Computer, Inc., will award 25 Apple II Video Overlay Cards** to winners of a contest on the most creative uses of video overlay. The contest is open to all members of official Apple user groups and Apple computer clubs.


Entries should be in written form and include a descriptive title of the proposed project, an equipment requirements list, and a brief (less than 500 word) project description, focusing on how video overlay will be used. Supplementary materials (e.g. graphic story boards) can be included with the entry, but are not required.

Winners will be required to submit a videotape to the society one month after receiving the Video Overlay Card that shows the work they've done to complete the project. Winners will be asked to sign a release that allows Apple to use their video for promotional purposes.

A society panel will judge the entries based on how well they meet the following criteria:

- 1.) Example shows a *compelling* use of overlay (i.e. results could not be achieved as effectively in software or video alone).
- 2.) Example shows an *innovative* use of overlay (i.e. no duplication of examples shown on the April User Group Connection video on the video overlay card).
- 3.) Example demonstrates some form of positive social contribution (e.g. educational or community service uses).

continued on next page



## Ask (or tell) Uncle DOS

*Grrrr...I hate it when I debug a program but then forget to put the fix in the version we print in the newsletter. In line 30061 of the program in last month's issue, page 5.48, the second number in parentheses should be 1403. Fortunately, the version of the routine that was on last month's disk did not include this mistake.*

*You can also pencil in a correction at the bottom of column 1 on June's page 5.38. Everything after the word "PEEK" in the fifth line of the routine should have parentheses around it, as in PEEK (49164 + (SLOT\*256)).*

### Apple VAR program, cont.

In the June 1989 issue of **A2-Central** there was a question about Apple's Value Added Reseller program (page 5.39). About a year ago I started attempting to get Apple computers at a discount through this program. I have written software, a co-worker developed hardware, and a local business agreed to market an Apple IIgs-driven egg grader, which we call the 621 System. We have sold about a dozen of the units.

I inquired at the local Computer Factory (Lawrenceville, New Jersey) about becoming a VAR. They asked me if I was prepared to spend \$250,000 a year. I said no and was told about

the Dealer-Supported Value Added Reseller program and was given the phone number of Apple's district sales office. Several calls later, I talked to someone at Apple's office who sent me a 16-page Dealer-Supported Value Added Reseller Application and Business Plan.

On August 4, 1988 I sent the application to the District Sales manager. About a month later I called them back and asked about the progress of my application. They said they needed a form letter, available on AppleLink, from my dealer. Two months later, in November, they got the letter.

Meanwhile, the local business that is marketing the 621 System, Modern Poultry Supplies, contacted the Computer Factory and asked about reselling Apple IIgs computers. They were told that under no circumstances was anyone allowed to resell Apple products. A few more phone calls to the district sales office and Computer Factory graciously agreed to sell us IIgs computers at a discount. We've purchased eleven systems from the store, of which four were missing cables and other parts on the packing slips. We're getting a decent discount on the systems, however, so I'm not completely outraged.

In January I called the Computer Factory about once a week and asked about my application. In February I tried twice a week. March saw three calls a week and April was about every day. On May 4, 1989 I received another 16-page application because my first one, which everybody in the Apple district office remembers, was lost. Apple did send me the new application by Federal Express to avoid the unnecessary extra two days postal delay. It also arrived with a postage-paid return envelope and a handwritten note from someone in the office.

In mid-June I had a conversation with an Apple sales representative and learned that my DSVAR application had been rejected. Apple wants Modern Poultry Supplies to apply for the VAR. They should have no problem being approved even though they have no expertise

with computers. Because I don't deal with the end users directly, I don't qualify for VAR status, Apple says. The Apple sales rep said he would send me another 16-page application; it has not yet arrived.

The only constructive criticism that Apple's rep had to offer was for me to convert the software and hardware to run on a Macintosh! I asked him, a senior sales representative, what earthly advantage, other than increased revenue to Apple, the conversion would provide. He could not answer me. I then asked him if Apple was willing to sell me a Macintosh system, with slots, for what I am presently paying for the IIgs system and again he was at a loss for words. Then I asked him who made an analog to digital converter for the Mac, silence. I also told him I needed about 45 channels of digital I/O and asked if he knew where I could lay my hands on a Mac card for that. Silence. So it appears that the only thing he was sure about was the inability to do anything worthwhile with an Apple II.

If Apple's upper management is providing support for the II line, they certainly have not expressed this to all their underlings with much conviction. I felt like I was talking to an Atari salesman about the ability to do work with an Apple II computer. These guys must think that only games run on Apple II computers. He also told me not to expect anything new for the II line.

My attempt to become a Dealer Supported Value Added Reseller with Apple has been my only contact with the company. I can't tell you how educational this experience has been. If it weren't for the Princeton Apple Users Group, **A2-Central**, *Computist*, and the Genie Apple II Round Table, I would never have attempted a project like the MPS 621 system. I would like to thank all the wonderful Apple II users who have made life with Apple Computer bearable.

David Ciotti  
Trenton, N.J.

*I've tried twice to contact the people behind Apple's VAR program on Apple's AppleLink but*

Entries must be postmarked by August 31, 1989 and mailed to:

**Video Overlay Contest**  
**c/o Boston Computer Society**  
**215 Hartman Road**  
**Newton, MA 02159**

The third annual **Applefest San Francisco** will be held September 22-24. As in earlier years, the show will be held at Brooks Hall and Civic Auditorium. For registration and seminar information call 617-860-7100 (800-262-FEST). Advance discount prices range from \$10 for exhibits only up to \$99 for a half-day seminar, all conference sessions, and exhibits.

Back in September 1986 (page 2.58) we mentioned the **Academic Courseware Exchange, managed by Kinko's Photocopy Centers**, as a possible channel for developers to earn royalties on educational software they've developed. Word that the Association of American Publishers has filed suit against Kinko's for unauthorized photocopying and sale of copyrighted material gives us second thoughts. The suit claims that Kinko's copied substantial portions of copyrighted works and sold the copies to students at a profit. The suit states that Kinko's 'has engaged in such...infringing practices repeatedly in the past and is continuing to do so at the present,' according to a newsletter we receive from the Copyright Clearance Center.

**Addison-Wesley has announced a new educational site**

they don't appear to have anyone answering their mail.

As a side note, on June 22 an Apple employee named David Ramsey was fired for leaving a message in CompuServe's Macintosh forum that Apple said contained confidential information. Since Apple's management has repeatedly stated that it intends to continue supporting the Apple II, any Apple employee who knows what he's talking about and who tells you not to expect anything new in the Apple II line is divulging confidential information and will be dismissed as soon as Apple's management finds out about it.

If, as is more likely, the Apple employee is degassing false and malicious rumors about the Apple II, Apple's management should know about that, too. This is the second report we've heard of Apple's own regional sales personnel telling our subscribers that Apple would produce nothing new for the Apple II (the other report came from Washington state). I need names, dates, and witnesses to attempt getting these guys fired, though, folks. **Write it down and send it in.**

## Boards on fire

My IIe recently started smoking. My son, who was using it at the time, was smart enough to turn it off.

The problem turned out to be my Applied Engineering RamWorks III card, which does not have a conductorless border around its edge, as is standard industry practice. Instead, along the top of the card, the copper traces come all the way to the edge of the card.

There's a protective coating on the card, but on my IIe there is a lid stiffener that extends downward in the area of the lid angle. The inside of the lid has a conductive coating on the underside to stop electromagnetic emissions. The lid stiffener and the RamWorks III were in contact with each other. Once the computer table jiggled enough to wear the protective coating off the card, the lid created a high-current short between the power bus and ground. This burned the board and the lid. If left unchecked, it could have potentially started a serious fire.

Users should check all their cards to confirm

that the traces do not come all the way to the edge of the board. If they do, protect them from contact with other parts of your computer!

Tom Vier  
 Reston, Va.

## Files on ice

You can save disk space when archiving your data files by squeezing them with *BLU* before sending them into deep storage. I estimate I have reduced by 40 per cent the storage space required to back up my data files.

Good planning is necessary for a smooth squeeze-and-save operation and to avoid the confusion created by a pile of disks on the table as they are prepared for the deep freeze. A hard disk was a tremendous advantage to my operation.

Quentin Packard  
 Troy, N.Y.

You'll get even smaller archives with the NuFX files *ShrinkIT* creates. But *ShrinkIT's* big advantage for this type of application is it can extract just one file from an archive. With *BLU* you have to unsqueeze all of the files within an archive file to get at any one of them.

## Network notes

We have four, soon to be five, AppleTalk networks in three separate buildings here at the State University of New York, Geneseo. The AppleTalk networks are each bridged to the campus Ethernet with Kinetics FastPath boxes. Two of the networks have their own file servers as well as many printers. The Ethernet is maintained by a DEC VAX8530. We have PacerShare software running on the VAX to create an AppleShare partition. Unfortunately, Pacer is using an early version of AppleShare that doesn't support ProDOS. This means that I can't yet get onto the VAX from an IIgs. An 'incompatible version of software' message is returned. This problem is supposed to be solved this summer with the next release of PacerShare from Pacer. Right now only our Macs can use the VAX as a superdisk. The VAX appears as an icon on the Mac screen. But soon I should have the IIgs doing the same thing. What color should I make the VAX icon?

Back on page 4.62 you complain that

**license policy for its Wordbench word processor** (see October 1988, page 4.66-4.67). The Educator License entitles an individual teacher or lab coordinator to make as many copies of *Wordbench* as necessary for use in one classroom or lab. There is no cost to the license other than buying one original copy of *Wordbench* through normal channels. The license guarantees program updates and revisions free of charge for six months. The license also allows the program and documentation to be used in the educator's home to prepare classroom materials and assignments. To obtain a license, contact Jane Tamlyn at Addison-Wesley's Consumer Software Department, Route 128, Reading MA 01867 617-944-3700 ext 2626.

**A2-Central is finding itself quoted in other company's advertising quite a bit**, which is fine with us as long as the quote isn't made to appear better than it was. For example, Addison-Wesley has, with our permission, reprinted our review of *Wordbench* on the wall of the booth they use at trade shows. But they include the entire review, both good parts and bad. I'm less happy about the reprint permission I gave for Micol Basic's current ad, which starts with a three line head quoting me, but drops the italicized part of the following quote, 'However, if you're a weekend programmer who wants to escape the many limits of Applesoft and take advantage of the full power of the IIgs, I have yet to see a better programming language for you than this one.'

'AppleTalk, if you want to use it, takes up both slots 2 and 7.' You repeated the same complaint on page 5.31. But things aren't quite that bad. We have a couple of IIgs computers hooked to AppleTalk in slot 7, with slot 1 set to 'Your card' and AppleTalk plugged into the printer connector. In slot 1 on each machine we have Apple SCSI cards connected to hard disks. The Startup Slot is set to 1 so that the machines boot off the hard disks. One of the machines has a *Cross-Works* cable (page 4.87) hooked to the modem port for transferring files to the MS-DOS environment (but we have to turn off AppleTalk to get the program to work), the other computer's modem port is connected to a wide-carriage ImageWriter I. I used the control panel to configure the port as a printer port and to make suitable adjustments in baud rate, and so on. I was forced into trying this because I couldn't find a way to put the ImageWriter I on an AppleTalk network.

A member of our physics department has used *TML Pascal* to create an IIgs version of a program widely used by students in our physics labs. The bad news is that it won't run on the network. A *SFGetFile* command from *TML Pascal* locks up the computer when it's on the network.

We've had great success using *AppleWorks GS* as a postprocessor for *AppleWorks classic*. The IIgs FONT subdirectory has been loaded with the 11 fonts resident on the LaserWriter (Avant.Garde, Bookman, Courier, Helvetica, Helvetica.Nar, NewCentury (Schoolbook), Palatino, Symbol, Times, Zapfchancery, and Zapfdingbat) plus the Geneva, Monaco, and Shaston fonts *AppleWorks GS* needs. An *AppleWorks* file created elsewhere can be loaded into *AppleWorks GS*, have its fonts manipulated, and be printed on a LaserWriter over AppleTalk.

*AppleWorks classic* can also print over the network but *Chooser* must be run to download an ImageWriter emulation (IWEM) program before *AppleWorks* is booted. *AppleWorks* must be set to print to an ImageWriter in slot 7. There are only two fonts available this way. You can switch between proportional-1 (Courier) and Proportional-2 (I forget) in *AppleWorks* to get different LaserWriter fonts.

*SuperFonts* will print over the network, too, but it doesn't access the LaserWriter's fonts. You



get a dotty-looking 72 dpi ImageWriter-like bitmap graphic. The same problem exists in *SideSpread* and *Graph*. Beagle Bros knows of the problem but has not worked out a solution yet.

Bruce Ristow  
Rochester, N.Y.

Thanks for letting us know that Apple's SCSI card works in a slot when an AppleTalk cable is plugged into the equivalent "port". We tried to get a standard-slot RAM card and AppleTalk to cohabit this way, but they fought over an area of memory called the "screenholes" and the RAM card lost.

## Hewlett-Packard Inkjet

Where in the world is an affordable letter-quality printer for the IIgs? Can a Hewlett-Packard inkjet printer be made to work with graphics-based text? This is my sorest point about the entire Apple II line.

Rob Gallagher  
Los Angeles, Calif.

Years ago I started my computer experience with a Commodore 64. At that time I acquired a Star Gemini 15X as my first printer. Later, I upgraded to a IIc and used the Gemini for a couple of additional years until my need for letter quality arose. I currently am a marketing manager and do all my own customer correspondence and quotations from my IIc.. I purchased an ImageWriter II and felt that the print quality and feed mechanism (many misfeeds and wrinkled pages) left a lot to be desired. I recently sold the ImageWriter II to someone who thought it was the greatest thing since sliced bread.

I replaced the ImageWriter with a Hewlett-Packard DeskJet Plus inkjet printer. The quality is exceptional as you can see from this letter. Hooking it up was easy. It has built in serial and Centronics parallel ports. To use the serial interface with my IIc all I needed was an Apple IIc to ImageWriter I or Scribe printer cable (\$7). I configured AppleWorks 2.0 using the custom printer option and within 15 minutes I was up and running.

HP also makes an Epson FX emulation cartridge (Model 22707F) for this printer, which I plan to purchase. With that cartridge I should be able to do graphics as well as text. I plan on purchasing *PublishIt!* and doing newsletters at 300 dpi resolution.

The real bonus was that I purchased the DeskJet for \$650 mail order, which made it a far less expensive alternative than the ImageWriter LQ with a cut sheet feeder.

Ken Mirabella  
Brea, Calif.

Your letter really does look as if it was printed in text mode on a LaserWriter, but you'll be disappointed if you expect to get 300 dpi graphics out of the Epson emulation cartridge. If it works at all, you'll be limited to the maximum resolution of the Epson, not the DeskJet, which is about half that. But go for it! We all want to hear about your results. (Do you know someone with a IIgs? We'd also like to hear how it works with the GS/OS Epson driver.)

## Watch those controls, cont.

I was recently demonstrating IIgs control panel slot changes to a new Apple owner and inadvertently changed slot 1 of my computer to "Your card". The version of AppleWorks that I

use would only partially load. The problem drove me crazy for about a week; suffice it to say that I cleaned drives, removed and reseated the memory card, fasted, prayed, swore, and was considering human sacrifice when I finally reviewed just exactly what I had been doing before the problem occurred. Upon checking the control panel, of course, a little key press cleared my problem.

Bill Hatcher  
FPO New York

## Icon directory

What publication, if any, illustrates desk top icons along with their full significance?

Charles Palmer  
Pasadena, Calif.

The new GS/OS utilities manual on the *Finder* shows the major icons. Since icons can be user-defined, however, no reference could be complete. The best way to figure out an icon's significance is to use an icon editor to determine what files it is associated with. There are several freeware and shareware icon editors available. Check out your user group library or our ICON library on GENie, or send \$15 to DAL Systems (address in next letter) and ask for a copy of DICED. You'll also find a copy on our May disk.

## More on panel straighteners

DAVEY is a shareware "command shell" for ProDOS by David Lyons (\$25, DAL Systems, P.O. Box 875, Cupertino, CA 95015). It includes a command to change the IIgs control panel settings. Settings can be saved to files and loaded back in later. This may be useful to teachers who have to constantly reset the control panel.

Dan DeMaggio  
Detroit, Mich.

Here's another way to solve the problem of students having fun by messing up control panel settings ("Control Panel straightener," February 1989, page 5.7). The following Apple-soft program disables access to classic desk accessories, including the control panel. It will remain in effect through control-reset, but not through the three-finger open-apple/control/reset, so it should be on all startup disks.

```
10 DATA 169,24,143,72,0,225,169,107,143,73,0,225,96
20 FOR I=768 to 780 : READ D : POKE I,D : NEXT
30 CALL 768
```

At location \$E1/0048 in your IIgs (ROM 01) there is a jump table to the classic desk accessory interrupt handler. The program above makes the open-apple/control/escape combination inoperative. It is the same in theory as putting a RETURN statement in the first line of a subroutine called by a GOSUB.

Using similar routines it's possible to make open-apple/control/escape do anything from crash the machine to having it play a loud siren. Like any protection scheme, this one has a weakness. If the operator presses control-C while the startup disk is booting, the startup program will be loaded, but not run, which will leave classic desk accessories accessible.

David Bonnell  
Ann Arbor, Mich.

DAVEY is a complete command-line environment for manipulating ProDOS files, including wildcards, exec files, hierarchical catalog listings, text and AppleWorks word processor file viewing, and lots more.

And don't miss Lorne Walton's shareware program, *BACK-REST*, mentioned in "A straighter straightener," March, page 5.13 and included on our April disk. It's a 16-bit application that also allows you to save and restore control panel settings.

(We've had a report that a few students have figured out they can change the year on the clock in such a way that AppleWorks chokes at its initial date-entry prompt, particularly on versions containing the "don't pass go" patch that skips this screen. Programs that reset the control panel probably don't reset the clock.)

## Double precision Applesoft

Is there a way to implement double precision in Applesoft comparable to the one that's available in some other languages?

E.J. Martin, Jr.  
St Louis, Mo.

Bob Sander-Cederlof of S-C Software published an 18-digit, binary-coded-decimal arithmetic package for Applesoft in his newsletter, *Apple Assembly Line*, between May 1984 and February 1985. He also wrote a 21-digit arithmetic package that doesn't use binary coded decimal and consequently has the same rounding errors as Applesoft. On the positive side, it uses about one-third the memory of the 18-digit package. *Apple Assembly Line* has ceased publication, but you can still get either package from S-C Software, P.O. Box 280300, Dallas, Texas 75228 for \$50.

In addition, hardware floating point cards are now available from Applied Engineering (*FastMath*, \$179, includes Applesoft support) and Innovative Systems (*Floating Point Engine*, \$229, 7892 Covington Ave, Glen Burnie, MD 21061 301-987-8688, SANE and AppleWorks support; Glen Breton has written Applesoft interface routines for this card.)

## A2-Central ADB index

Is an AppleWorks data base index to your newsletter available?

Benjamin Homenick  
Westbury, N.Y.

We don't produce such an index ourselves, however, the *Kula Index* from Kula Software (2118 Kula St, Honolulu, HI 96817 808-595-8131) uses an AppleWorks data base to index articles and reviews from all major Apple II publications, even us. Disks are \$6.95 each and are available in annual editions from 1985 through 1988. Kula also offers an index for 1984 and prior years and a complete index to *Softalk*, for those of you old enough to remember it, for \$6.95.

For \$8, Kula will send you a complete index covering all prior years available for any single magazine.

## 3-up AppleWorks labels

How do you print labels three across with the AppleWorks data base?

M. Nelson  
Darien, Conn.

The new AppleWorks 3.0 has that capability built in. With older versions there's no easy way, but as with most things AppleWorks, there is a way.

First create a one-label wide format, containing 10 or fewer categories, and print it to disk. You'll have to type a complete pathname when you chose this option, such as /MY.DISK/TEMP.

Next go back to the main AppleWorks menu and choose Add a file to the desktop; then Make a file for the data base; then From a text (ASCII) file. When asked how many categories per record, specify exactly three times the number you used in the one-label wide format. If you used 5 categories, specify 15. If you used 10, specify 30.

Now enter the entire pathname of the file, as before. You'll end up with a new database where every record contains three names and addresses. Now create a labels-format report that will print three labels across the page. Use the open-apple-Z(oom) feature while designing the report so that you can see the actual names and addresses.

## space \$ = trouble

I've discovered a significant but difficult-to-spot difference between AppleWorks 2.1 and earlier versions. The difference might never appear for many people but in my case it could have had disastrous and embarrassing effects.

I use a large data base to pay bills for the law office I work for, to keep track of the checking account balance and of client costs and a host of other bookkeeping chores. When I print checks using the data base, I start smaller amounts with space characters to have the checks print out more evenly. Since checks are written for amounts as little as under \$10 or as much as over \$10,000, starting the smaller amounts with a space or two has been a simple and convenient way to line up the payment amount with the space provided on the checks. I've been doing it that way for years with versions 2.0 and earlier. All entries include a dollar sign, so one entry might be \$1,000.00 and the next might be ^^\$10.00, where the carets represent spaces.

But I've just discovered that AppleWorks 2.1

doesn't recognize numbers that begin with a space, then have a dollar sign, then a number. It doesn't add such numbers into column totals or use them in calculated fields. I nearly overdrew the office's checking account because of this difference!

Char Roberts  
Lafayette, Calif.

*That's interesting. The beta version of AppleWorks 3.0 we're using at the moment works just like 2.1. However, did you notice that if you start an entry with a dollar sign, then enter spaces, then the number, that AppleWorks will treat it correctly?*

## Sorting birthdays

I have an AppleWorks data base with about 180 names in it. I decided it would be nice to sort by birthdays so I could send out cards. AppleWorks was glad to sort birthdates, including the year, but not birthdays. Eventually I solved the problem by shifting the data to a spreadsheet, sorting alphabetically, and then moving the months in blocks to restore chronological order. Was there an easier way?

J Eric Schonblom  
Chattanooga, Tenn.

*We don't know of an easier way, but after reading your letter I'm sure a lot of people setting up personal data bases like this for the first time will put birth-day-and-month in a different category from birth year. If you organize the data in two categories to begin with, with the word "date" in the birth-day-and-month category's name, you'll be able to sort the file chronologically into the list you want. AppleWorks has no problem with dates that don't include a year (and puts dates that don't include a year before ones that do during a sort).*

## ADB.READER and OOP\$

Once again your newsletter has helped me out of a minor jam and I thought I'd pass along a modification that helped me use one of your published programs more effectively.

One of my AppleWorks data base files stopped working a few months back. It loaded to a certain point then froze AppleWorks completely. I suspected that the file had been corrupted somehow. Your ADB.READER program from the March 1987 issue helped me determine that a single byte had been transformed from a \$32 (a legal character) to a \$12 (a control character that AppleWorks couldn't digest). When I fixed the errant character (using the Copy II Plus sector editor) the file worked fine.

ADB.READER is far more robust than AppleWorks—it doesn't choke on illegal characters. To use the program as a diagnostic device I added lines 1048 and 5163 and modified line 5162 as follows:

```
1048 OOP$=CHR$(7) + CHR$(127)
```

```
5162 C$="" : FOR I=PNTR TO PNTR + CBYTE-1 :
```

```
IF PEEK(I) < 32 OR PEEK(I) > 126
```

```
THEN C$=C$+OOP$ : NEXT
```

```
5163 C$=C$ + CHR$(PEEK(I)) : NEXT
```

Line 1048 initializes the variable, OOP\$, for an auditory and visual marker that will be displayed wherever the program encounters an illegal character. In this case, the BELL and 'blot' are printed, since I used the program in real time on the monitor. Line 5162 inserts OOP\$ into C\$ when an illegal character is encountered. Line 5163 builds C\$ when no illegal characters are found.

Thanks for the article and the program—they gave me a tangible context for understanding what AppleWorks does with the data. Whatever

## AppleWorks patches

*We surrender! We can no longer handle requests for AppleWorks patches. The volume of mail we get on this subject is sinking our ability to answer other types of questions.*

*If there's a patch you want for AppleWorks 2.0, 2.1, or 3.0, we suggest you contact:*

**John Link**  
3382 Sandra Drive  
Kalamazoo, MI 49004

*Link is the author of SuperPatch, a program that adds (and removes) AppleWorks patches for you. Link has just released SuperPatch 5.0, which he'll send you for \$20 (please specify whether you want the program on a 5.25 or a 3.5 disk). SuperPatch 5.0 can make 187 different patches to AppleWorks 2.0 or 2.1. Link will soon be at work on SuperPatch 6.0, which will patch AppleWorks 3.0 as well as the 2.x versions. Its price will be \$10 to SuperPatch 5.0 owners or \$30 to new buyers (thus, there's no reason to wait for it).*

*If you want a patch for AppleWorks 1.x or a patch to make*

*AppleWorks running on a II-Plus do something, we don't know where to send you. If anyone has a collection of these types of patches, please let us know.*

*Another excellent source of AppleWorks 2.x patches is:*

**JEM Software**  
P.O. Box 20920  
El Cajon, CA 92021

*JEM has three disks available—PathFinder, Late Nite Patches, and PatchMania. Each disk sells for \$20. For complete information on what these programs do, please see our December 1988 issue, page 4.84.*

*Here is a list of what's in John Link's SuperPatch 5.0*

1. No spacebar on bootup.
2. No return after date.
3. Overstrike instead of insert cursor on bootup.
4. Enter control-@ into printer codes.
5. Substitute any mousetext character for insert cursor.
6. Substitute any mousetext character for overstrike cursor.
7. Eliminate expansion card preloading.
8. Change error tone to beep.
9. Alter blink rate for insert cursor.
10. Alter blink rate for overstrike cursor.
11. Continually display desktop space.

12. Mousetext checkmarks instead of arrows for menu item selection.
13. Eliminate return after selecting menu number.
14. Limit desktop expansion into slinky type ram cards.
15. Disable all error tones.
16. Leave slot 3 devices connected and recognized.
17. Replace error tone with 11gs SysBeep (gs only).
18. Print current time in upper right corner (gs only).
19. Print up to 255 copies.
20. Don't disable underline at end of line.
21. Don't disable boldface at end of line.
22. Don't disable superscript at end of line.
23. Don't disable subscript at end of line.
24. Allow up to 116 files in a subdirectory.
25. Change <cr> character to bent-arrow in WP.
26. Retain previous cursor location when WP is loaded.
27. Prevent extraneous <cr> insertion when printing to a TXT file.
28. Mousetext checkmarks instead of arrows in menus.
29. Double underline column titles in DB.
30. Change overflow in SS from "#" to ">" or ".".
31. Blank cells instead of "NA" in SS.
32. Change "Carefully" to "Carelessly" on file save screen.

33. Don't mark as changed a file that has been merely printed.

34. Customize "Add files" menu.

35. Customize "You made changes" menu.

36. Insert current date in DB reports automatically.

37. Insert current date in SS reports automatically.

38. Eliminate query when adding new records to DB.

39. Reverse all No/Yes queries to Yes/No.

*The other 148 patches in SuperPatch 5.0 won't fit here, but they all relate to printers. Patches are included to enhance the operation of the ImageWriter, the Epson FX, and the Star Gemini 10/15x. The included patches do such things as replace boldface, underline, or super/subscripts with italics, foreign language character sets, or color. ImageWriter-only patches also allow printing MouseText, half-high characters, and downloaded fonts.*

*Unidirectional printing and additional characters-per-inch are also added.*

August 1989

happened to the article on writing to a data base file? Anything on spreadsheets?

Douglas Sietsema  
Culver City, Calif.

The *ADB.WRITER* you're looking for was part of the article on making *AppleWorks* relational (June 1987). We haven't done anything with *AppleWorks* spreadsheet formats, but the information is available in a number of places, including *Apple's* file format tech notes that are part of our March disk.

## AppleWorks snapshots, cont.

Here's an *UltraMacros* trick that saves snapshots of the *AppleWorks* screen, as requested by one of your subscribers in March (page 5.15).

```
start
1:<all
f=peek %C54
n=n+1 oa-q esc>1<rtm>3<rtm>1<rtm>
Screen.<print n : rtn
oa-o>LM<rtm>0<rtm>RM<rtm>0<rtm
e=peek %C54
L=0
begin
ifnot L=24 then
L=L+1
sa-2
$1=screen 1,L,80
oa-q print e : rtn
print $1 : rtn
rpt>!
2:<all>
<oa-q : print f : rtn>!
```

Bring up the screen you want a snapshot of and press sa-1. A new word processing file will be added to your desktop that contains a copy of the screen. It can then be printed or saved to disk.

If you want to capture a menu screen rather than an application screen, you have to take an additional step. Press oa-X and record a new macro 2 over the one shown above. Use the keystrokes needed to reach the screen you want to take a snapshot of, always starting with oa-Q (for example, "oa-Q escape" if you want a snapshot of the main menu).

The macro creates word processor files named Screen.1, Screen.2, and so on. Be sure you have enough space on the desktop for another file.

Note that *AppleWorks* word processing files have a maximum line length of 78 characters. As a full screen holds 80 characters, lines will wrap around in the screen-dump documents when you view them. But if you set your printer options generously enough, the screens will print correctly on your printer.

Christian Piard, Editor  
Pom's  
Versailles, France

Also, it works best in the word processor when zoom is off. The little fuzzy boxes that indicate returns in the word processor are actually "deletes". And guess what, when you print a line with a delete in it, it actually deletes the character to its left.

## Carets, sticks, and control

How do you enter a printer code in *AppleWorks* that requires the use of a caret (shift-6)? My printer, a NEC PC-8023A, requires ^R to put it into enlarged letters mode and ^T to clear enlarged letters. I have not found a way to enter

these codes into *AppleWorks* since the entry of the caret ends my effort before I can even get started.

Fred Nelson  
Colorado Springs, Colo.

*AppleWorks 3.0* allows this, but Dennis checked our manual of printer codes and discovered that what you really need to enter are Control-R and Control-T. The caret is used in some documentation, apparently including your printer's manual, to indicate control characters.

For future reference, you might find our *ASCII Control Code Rosetta Stone* (November 1985, page 1.85) helpful.

## Print head control

On page 4.59 of your September 1988 newsletter, John Tegelaar asks how to defeat the intelligence of his printer and get it to move its printhead one space and stop (for each position across a page).

There are a number of commands that cause the printer to print the contents of its buffer. Return is one, linefeed is another, and backspace is a third. Thus, if you send 'x, x, backspace' repeatedly, the printhead will step across the page. Unfortunately, the sequence 'space, space, backspace' won't work as the printer knows that spaces are special and do not need to be printed. The solution is to send something that looks like a space but isn't. For example, my Panasonic KX-1091 look-a-like will do the job if you send italic spaces (chr\$(32+128)), provided you use an interface that sends all eight bits. Another possibility would be to download a user-defined character set with a space in an unusual place and use that.

David E. A. Wilson  
Wollongong, NSW

*Nice trick, but a couple fast tests show it doesn't work with an ImageWriter.*

## Kyan lives!

I read with interest the letter "In search of an 8-bit Pascal" in your March newsletter (page 5.13). *Kyan Software* is *not* out of business. I have started a Pascal class for some of the members of our computer club and some are using *Kyan Pascal*. I contacted the company just a couple of weeks ago regarding their current prices and received a prompt reply. While it's true that they don't advertise anymore that I'm aware of, you can contact them by mail or talk to their answering machine at:

Kyan Software, Inc.  
1850 Union St., #183  
San Francisco, CA 94123  
415-626-2080

The advantage of *Kyan Pascal* is that it is ProDOS-based. You can also easily incorporate assembly language routines into programs, which extends *Kyan's* usefulness. *Kyan Pascal Plus* adds on their KIX operating shell for ProDOS, which may appeal to those familiar with UNIX. Yes, *Orca Pascal* or *TML Pascal* are better for the IIgs, but *Kyan Pascal* will work on any *Apple II*.

James W. Patton  
Littleton, Colo.

We've been able to confirm that *Kyan Pascal* is still available. Support for the product is minimal, but it does give schools a ProDOS 8 Pascal.

## Invoices & Statements

Could you recommend a business software program to be used with an *Apple IIe* that would produce invoices and monthly statements for a small business? If possible, I'd like the program to be flexible enough to be used with a pre-printed form.

David R. Flannery  
Carlisle, Mass.

If you want flexibility, the best route would be to look into either **DB Master**, from Stone Edge Technologies (P.O. Box 3200, Maple Glen, PA 19002 215-641-1825), or **TimeOut ReportWriter** from Beagle Bros (requires *AppleWorks*; 6215 Ferris Square, Suite 100, San Diego, CA 92121 619-452-5500). Both allow you to create an "invoice file" and import data from that file into a "statement file" that you can print in any format you like.

If you want something that doesn't require as much up-front design on your part, *Manzanita Software* has two complete accounting packages. Each includes an account receivable module that does what you want. **The Business Accountant** is a DOS 3.3 accounting system that works with 5.25 disks and costs \$395; **BusinessWorks** is a ProDOS system that requires 3.5 disks or a hard disk and costs \$495. These prices are for a complete accounting system—you can get the accounts receivable module alone, for either system, at a lower price (One Sierra Gate Plaza, Suite 200-A, Roseville, CA 95678 916-781-3880).

## Don't quit yet

In the course of writing an Applesoft program selector I came across the following problem. Whenever my program would attempt to launch *Print Shop GS*, my program would call the QUIT routine instead, returning me to the *Finder*. I have the program stored in a subdirectory on my hard disk and I put the keyed master disk in slot 5, drive 1.

Baffled, I attempted to launch the program in immediate mode by typing:

```
-/DONS.DATA/PS.GS/PS.SYSTEM
```

This generated a call to QUIT, too. I kept plugging away and finally solved the problem by rewriting my program so that it set the PREFIX to /DONS.DATA/PS.GS, and then ran PS.SYS-TEM. This worked, but why?

Donald Lipman  
Newburgh, N.Y.

Many software packages look for their program and configuration files in the PREFIXED subdirectory and QUIT if they don't find them. It wasn't Applesoft quitting on you, it was **Print Shop** itself.

## IIgs programmer's bootstrap

If you were just starting out with a IIgs and wanted to write commercial-quality programs, where would you start your education?

Allen Stiles  
Ferndale, Mich.

First, realize that there's a long learning curve involved. There are some good places to start, however—Roger Wagner's **Apple IIgs Machine Language for Beginners**, Ron Lichty and David Eyes' **Programming the IIgs in Assembly Language**, and *Apple's* own **Programmer's Introduction to the Apple IIgs**.

The **Programmer's Introduction** takes a rather involved application called **Hodge-**

**podge** and examines it in sections, explaining pertinent points about most of the commonly used IIGs Toolbox functions as it goes. Complete source code is provided in (TML) Pascal, APW C, and the APW assembler in separate appendices and on disk; most of the examples in the book use Pascal. The advantage of this book is that the example program uses a wide variety of the toolbox functionality (windowing, menus, printing, file access, etc.) The disadvantage is that the program, though not as complicated as a commercial program, is large enough that someone new to desktop programming may not be able to easily grasp the interactions of the component parts.

**Programming the Apple IIGs in Assembly Language** takes the user through the development of a desktop-based program by starting with a small text-based program and gradually expanding it into a full-blown desktop application. The resulting program is not as intricate as **Hodgepodge**, but you get to see the development in digestible stages. The book uses assembly language exclusively, however.

**Apple IIGs Machine Language for Beginners** starts with simple examples of assembly language routines, working primarily from the Applesoft (Basic.system) environment, up through simple examples of tool calls. The book then shifts to the "full native" environment for a few desktop examples. It's a gentler introduction to assembly language, but has less information on desktop programming.

To advance to commercial quality programs you'll need the complete set of Apple IIGs tech-

anical manuals and you'll have to buy a development language that you like. Other manuals may help, but Apple's own manuals are the basic resource. You may also find some generic books on programming algorithms helpful.

## Worldwide points of light

Apple France has recently installed a new team of people who are concerned about the satisfaction of our Apple II customers. But, unfortunately, customers get bad impressions very quickly and it's not easy to reverse the situation.

We localized GS/OS 4.0 by November 1989 and are awaiting version 5.0, which we intend to translate as quickly as possible. We wrote and are distributing free of charge **Le Guide de l'Apple II**, which lists all of the Apple II hardware and software actually available in France as of January 1989. We are doing everything possible to recover first place in the hearts of our customers, even if it's not an easy task.

Emile A. R. Schwarz  
Apple II Product Manager Coordinator  
Apple Computer France

In your April 1989 issue, many readers from European countries complained about the non-existing support from Apple for the Apple II community. I am an official Apple dealer and have been serving Apple II customers all over Europe for the last three years. I specialize in Apple IIs, including the II-Plus, IIe, IIc, and IIGs. I might not be known to many of your readers, as my advertising budget is small (I'd rather keep prices low). I do all sorts of ROM and software upgrades, battery exchange without motherboard swap, and so on. I'd appreciate it if you could publish my address in **A2-Central**.

Urs Brunner  
musicomp  
Computer + Zubehör  
Bottmingerstrasse 1  
CH-41-2 Binningen, Switzerland  
phone 061 / 47 05 06

I was very interested to read all the letters complaining about lack of Apple support for the Apple II around the world. I recommend anyone in an EEC country get in touch with either or both of the two companies below. They offer a good selection of software and hardware for the Apple II series, they run a mail order service, and will send you a catalog if you write and request one (Pandasoft's catalog is in German, MGA's is in English):

Pandasoft	MGA Microsystems
Uhlandstrasse 195	Pear Tree
D-1000 Berlin 12	Appledore, Kent TN26 2AR
West Berlin	England

Another problem is the bad habit several American companies have of ignoring Europe. In all fairness, however, I must mention that there are a few notable exceptions to this habit of ignoring Europe. Your own publication, for a start. I was also amazed that *Computist* actually sent me the free starter disk they offered new subscribers. And Applied Engineering sent me the free catalog I requested.

June Baker  
Wiesbaden, West Germany

I am writing in reply to the letter from T.C. Dawbarn in your May issue (page 5.32). You can get the GS/OS upgrade free in Australia by taking two blank 3.5 inch disks to your dealer and copying the system disks. The price Dawbarn

quoted is for the GS/OS disks and manuals.

You can also get a free copy of the disk from any Apple user group. One group, the Australian GS Users Association, mailed out a copy of GS/OS to each member just two days after its release at Applefest last fall. In Queensland, the Apple-Q Inc Users Group has the GS/OS disks available free for members.

Apple Australia seemed to be heading the same way as elsewhere, however, things have changed in the last six months. Frank Revill has been appointed the marketing manager for the Apple II range in Australia. Since then he has visited users groups all around Australia. At the beginning of April we had the inaugural Apple User Group Convention in Sydney. Members from user groups from all around this nation attended the convention. This will become an annual event, where groups get together to discuss ways to improve their services to members. Apple Australia sees the user groups as giving the after sales support that the dealers are unable to provide.

The addresses of the mentioned user groups are:

Australian GS Users Assn	Apple-Q, Inc.
P.O. Box 210	P.O. Box 721
Wentworthville, NSW 2145	South Brisbane, QLD 4101

Dale Rodgie  
Bundall, QLD

A couple of months ago you suggested that people write to the top people at Apple to complain about service but added that you didn't believe they would have the time to take messages about the Apple II seriously. That is not my experience. The *only* time I have gotten service on my IIGs was after having written one of the chief honchos at Apple. Writing Jean-Louis Gasse got me a version 1.0 ROM and writing Del Yocam got my 3.5 drive upgraded. In neither case did they answer me themselves but the action was prompt and thorough.

Bill Robbins  
Osaka, Japan

At your suggestion I wrote Del Yocam, head of Apple Pacific, concerning the lack of response from Cupertino. I also saw that you printed a portion of my letter to you in your April issue. The combination of the two appears to have brought results.

I am happy to report that a Mr. Woo, from Apple Computer International Ltd., Hong Kong, called me on April 19th saying that 150 of the buffer modules for Apple's IIc flat screen display, which Cupertino reported in September 1988 as out of production, were found in Singapore. Hong Kong shipped the module to me on May 9th. On May 29th the connecting cable was sent, coming from Campbell, Calif.

This is a happy ending to my saga of replacing my missing display module. I hope for an equally happy ending to the situation in this country. Today two factions of the Peoples Liberation Army are preparing for battle with tanks on the bridge right outside my apartment (hope their aim is good).

Thanks again for your assistance. My flat screen display is now up and running with my Apple IIc, ready for travel should I be on the next plane leaving China.

Stuart C. Keen, Jr.  
Beijing, China

# A2-Central™

© Copyright 1989 by  
A2-Central

Most rights reserved. All programs published in **A2-Central** are public domain and may be copied and distributed without charge. Apple user groups and significant others may obtain permission to reprint articles from time to time by specific written request.

Written, edited, and published by:

Tom Weishaar

with help from:

Dennis Doms	Sally Dwyer	Dean Esmay
Joyce Hammond	Steve Kelly	
Tom Vanderpool	Jean Weishaar	

**A2-Central**—titled *Open-Apple* through January, 1989—has been published monthly since January 1985. World-wide prices (in U.S. dollars; airmail delivery included at no additional charge): \$28 for 1 year; \$54 for 2 years; \$78 for 3 years. All back issues are currently available for \$2 each; bound, indexed editions of our first four volumes are \$14.95 each. Volumes end with the January issue; an index for the prior volume is included with the February issue.

The full text of each issue of **A2-Central** is available on 3.5 disks, along with a selection of the best new public domain and shareware files and programs, for \$84 a year (newsletter and disk combined). Single disks are \$10. Please send all correspondence to:

**A2-Central**  
P.O. Box 11250  
Overland Park, Kansas 66207 U.S.A.

**A2-Central** is sold in an unprotected format for your convenience. You are encouraged to make back-up archival copies or easy-to-read enlarged copies for your own use without charge. You may also copy **A2-Central** for distribution to others. The distribution fee is 15 cents per page per copy distributed.

**WARRANTY AND LIMITATION OF LIABILITY.** I warrant that most of the information in **A2-Central** is useful and correct, although drivel and mistakes are included from time to time, usually unintentionally. Unsatisfied subscribers may cancel their subscription at any time and receive a full refund of their last subscription payment. The unfiled portion of any paid subscription will be refunded even to satisfied subscribers upon request. MY LIABILITY FOR ERRORS AND OMISSIONS IS LIMITED TO THIS PUBLICATION'S PURCHASE PRICE. In no case shall I or my contributors be liable for any incidental or consequential damages, nor for ANY damages in excess of the fees paid by a subscriber.

ISSN 0885-4017

Enie mail: A2-CENTRAL  
Voice: 913-469-6502  
Fax: 913-469-6507

Printed in the U.S.A.