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Releasing the power to everyone.

Apple after bugs

Apple wants to get the bugs out of its hardware, development tools, and dealers. Reports of hardware and development tool bugs should include a brief summary of the bug in one or two sentences, a step-by-step description of how to replicate the bug, and the version numbers of the hardware and software used. If the problem is with a development product, provide program listings or program input and output if that would be helpful. If you are able to offer a possible solution to the problem, do so. Send the bug report to:

Apple Technical Support
Apple Computer, Inc.
20525 Mariani Ave, M/S 51-T
Cupertino, CA 95014
Attn: Bug Reporting

Here's Apple's official policy regarding end-user technical assistance:

Apple handles technical support and service through our network of authorized AppleDealers (TM) (sic). To ensure that you receive a quick and thorough response to your technical or service related questions, Apple has provided our dealers with AppleLink (R), an on-line information service that contains databases of technical and service information. If the answer to your inquiry is not found on AppleLink, dealers can forward your request to the Apple Technical Support Engineers by electronic mail or by telephone. You should receive an answer within two to three working days.

If your dealer is unsuccessful in obtaining answers to your questions, Apple's Customer Relations Department wants to know about it. They would like the following—the name, address, and telephone number of the dealer to whom you directed your inquiry, name of the sales or service person with whom you spoke, the configuration of Apple equipment and software you are using, and a brief summary of your inquiry. Send your report to:

Customer Relations
Apple Computer, Inc.
20525 Mariani Ave, M/S 37-S
Cupertino, CA 95014
Attn: Dealer Evaluations

In either case, we'd like to see a carbon copy of your report here at **Open-Apple**.

Claris has released a free update to AppleWorks. It's not an upgrade, mind you, just an update. It's called AppleWorks 2.1. The update allows an automatic 8-megabyte desktop on a IIgs with enough RAM installed, 138 files per subdirectory, intelligent recalculation in the spreadsheet, a IIgs desk-accessory bug fix, a disk-is-full-delete-this-file bug fix, the ability to enter control-@ in printer codes, a page number bug fix, a IIgs printer buffer bug fix, and 64-character pathnames.

Version 2.1 is free to all AppleWorks 2.0 owners, but only until September 30. If you have registered with Claris as an AppleWorks user (registrations with Apple don't count) you should already have received a new disk. If you haven't yet registered, send your original AppleWorks Startup/Program disk to Claris. Send either the 3.5 disk or the 5.25 disk. Claris will send you the new version of the program

on the same size disk. There is no new documentation for version 2.1. Mail your disk to:

AppleWorks Update
Claris Corporation
440 Clyde Ave
Mountain View, CA 94043

According to the National AppleWorks User Group, you need the following updates for AppleWorks-related software:

Applied Engineering—AW 2 Expander version 3.0 or later. Updates free from most Applied Engineering dealers or \$15 plus shipping directly from Applied Engineering.

Beagle Bros—You need version 2.0 of the *TimeOut* utility itself (version number appears when you start AppleWorks). Once you have that, all versions of *SuperFonts*, *QuickSpell*, *Thesaurus*, *PowerPack*, and *DeskTools II* are compatible with AppleWorks 2.1. All other *TimeOut* programs must be version 2.0 or higher. Beagle Bros has started a "Beagle Buddy" program whereby a designated member of your local user group can provide you with the necessary updates. To order updates directly from Beagle Bros, send in your original disks, \$10, and \$2.50 more per disk (\$12.50 for one disk, \$15 for two disks, etc.).

Checkmate Technology—you must have version 5.2 or later of the *MultiRam* software disk to use AppleWorks 2.1. Updates are \$15 from Checkmate Technology.

JEM Software—AppleWorks 2.1 requires versions 2.0 of *PatchMania*, *Late Nite Patches*, and *PathFinder*. Send your original disk and \$5 per disk to JEM for an update.

Pinpoint—Pinpoint says all of its AppleWorks 2.0-compatible products are also compatible with AppleWorks 2.1

Virus news. The author of *CyberAIDS* has issued an update to his program called *Festering Hate*. Files infected with this virus have been uploaded to a number of bulletin boards, but the speed at which they are discovered is remarkable. We have far more reports of virus spot-



"I'D LIKE TO THANK EVERYONE FOR RECOGNIZING MY COMPANY AS THE LEADER IN COPY-PROTECTED SOFTWARE."

tings than we have of disks actually being erased by the virus.

I placed a public domain program called VIRUS.SCANNER on GENie. It's too long to publish here, but it's probably available for downloading most anywhere by now. It scans all the subdirectories on a disk looking for SYS files, then checks the ones it finds for CyberAIDS or Festering Hate infections. If it finds an infected file, it gives you the option to delete it.

There are a number of other programs available for dealing with viruses. Some are general programs that look for unexpected changes on a disk, others, like VIRUS.SCANNER, look specifically for CyberAIDS and Festering Hate. Use the search string 'virus' to get a list of the ones we have available on GENie.



Ask (or tell) Uncle DOS

Pascal, CP/M & Publish It!

In response to "Speaking in tongues" in your August issue (page 4.54), you can't go wrong buying *Apple Pascal 1.3*. The package includes not only a standard (UCSD) Pascal compiler that works especially well with 128K machines, providing a huge work space for programs, variables, and assembly-language procedures and functions, but also a full screen editor, a full-featured 6502 (not 65C02) macro assembler, and complete documentation for the whole system. At \$75, *Apple Pascal 1.3* is a steal.

One special feature of the system is the interface between Pascal and assembly language. An excellent book to use with this system is *Apple Pascal, a Hands-On Approach*, by Luehrmann and Peckham. (However, the book is geared to a one-drive Apple II-Plus—use the boot-up directions in the *Apple Pascal* documentation, not those in the book.)

And in response to "Cheap languages" in the same issue (page 4.55), Paris's recommendations about CP/M are right on target. A good source of CP/M programs is Spite Software, 4004 S.W. Barbur Blvd., Portland, OR 97201 503-228-8223 or 800-257-9111. There are many sources of CP/M public domain software, but much of it is useless stuff. One excellent program, however, is *NSWEEP*, a file-management utility.

The new standard in word processing is the new the CP/M version of *WordStar 4*. It is a quantum improvement over my near five-year-old version of *WordStar 3.3* in terms of flexibility and power. It comes with a spelling checker, has built-in macros, and a simple calculator.

Finally, my own comment—I predict that Timeworks' *Publish It!* will have as big an impact on the 8-bit Apple world as *AppleWorks*.

Keith J. Bernstein
Ramsey, N.J.

Apple Pascal has been quite popular with commercial developers. Bill Basham even wrote his DOS 3.3 speed-up program, **Diversi-DOS**, with the system's assembler. People who

have used UCSD Pascal on other machines find it very friendly. I find the fact that it uses its own operating system rather than ProDOS a significant limitation, however.

Another good source of CP/M software is Central Computer Products, 330 Central Ave, Fillmore, CA 93015 805-524-4189. Ask for their catalog, **CP/M Times**.

The only serious complaint we've heard about **Publish It!** is that it doesn't expand its desktop into standard memory cards. Document size is limited to what you can fit into 128K. Otherwise, it still looks like the Apple II desktop publishing program that others, including IIGs others, have to beat.

IIGs modem cables, cont.

I purchased what I suspect is the same DAK modem as Lee Bonnett (June 1988, page 4.39). To make a long story short, a Super Serial Card to ImageWriter II cable has the right connectors on the ends, but I couldn't get it to work until I added a \$9.95 null modem adapter from Radio Shack. At that point the IIGs and the modem began a happy relationship, which continues at the time of this writing.

Wm. Beasley
North Olmsted, Ohio

Unfortunately, any time a cable has a 25-pin RS-232 connector at one or both ends, it can be either a "modem" cable or a "printer" cable. To keep the enemy confused, "printer" cables are also called "null modem" cables. A "null modem adapter" changes a cable from one type to the other.

In your case, you added a null modem adapter to a null modem (printer) cable and came up with a modem cable. Thankfully, Apple's new cables with Mini-DIN 8 connectors at **both** ends do away with all this garbage—a cable is just a cable.

Fastdata Pro revisited

Just when I thought you were infallible, you goofed. Your May issue indicated that *ProSEL* is as good as *Fastdata Pro*. Now I love *ProSEL* and use it frequently, but *Fastdata Pro* is light-years better as a search program. It even runs circles around *Documax*, which was in Cider's "Editor's Choice" in January, 1987.

Fastdata Pro perfectly combines logical operators, a changeable end-of-record character, and the ability to link files and disks. I find things in my *AppleWorks* and *Profiler* databases much faster than with any other program because *Fastdata* searches for multiple strings simultaneously. It's like parallel processing. Once you see its power you won't want to return to sequential processing. There's nothing else like it.

John C. Dempsey
Houston, Texas

When I bought my IIGs, I kept the old II-Plus

Most of the damage the viruses have done so far has been to the reputation and income of shareware authors whose files have been uploaded after infection. Much of the virus advice on local bulletin boards is to avoid specific programs. This is stupid advice. Any SYS file can be infected. If you obtain SYS files from bulletin boards that check for viruses, as all of the national boards do, you don't need to avoid any specific program.

Apple is aware of the virus attack and has obtained a good deal of information about the source of the virus. As we went to press, Apple's lawyers were deciding whether to pursue the case in civil court or to turn their findings over to the FBI for criminal prosecution.

and dedicated it to *Fastdata Pro*. I am cataloging every last book, record, and scrap of paper I own. They all go into files I call "shoeboxes". Everything is accessible to high-speed retrieval.

Dr. Robert Griswold
Stockton, Calif.

Being mentioned along with *ProSEL* is truly an honor, but I think you missed the main feature of *FASTDATA Pro*. You compare its abilities to those of a word processor's "search" command, but what makes *FASTDATA Pro* special is the ability to use AND/OR/NOT logic in searches. It's more like a database manager than a word processor. Using the OR operator, you can search for many different things simultaneously.

The feature that makes *FASTDATA Pro* truly unique is our *variable delimiter*. We know of no other product, not even those for MS-DOS, that let you change the domain of the search as our product does. For example, if you set the block delimiter to a carriage return, the domain is a paragraph. Change it to a period, and the domain is a sentence. Our manual shows how to define the domain to be a line, paragraph, category, record, chapter, section, or even a whole file. Because of this feature, we can search commercial databases that no other Apple II program will search, for example, BIOSIS BIOMEDICAL databases and LINC Resources SpecialWare for handicapped children.

Most of our customers have both *FASTDATA Pro* and *ProSEL* and swear by each of them.

Jim Hammond
FASTFIND Co.
Rancho Palos Verdes, Calif.

Orange Micro's support

I have an ImageWriter II with a 64K Orange Micro ImageBuffer installed. Recently I attempted to print a large *AppleWorks* database report. The report skipped from page three to page seven leaving out all the data in between. When I disabled the ImageBuffer with DIP switch settings, the report printed just fine, albeit tying up my computer for awhile in the printing process.

The most disturbing aspect of all this is the way Orange Micro has failed to respond to my telephone calls and letters requesting some feedback regarding the problem. Since the buffer's built-in self-test doesn't signal a problem, I'm uncertain if I have a defective buffer or if I've discovered a bug in the design. Orange Micro's customer support is apparently nil. Prospective users of their products should realize that.

Mark Frank
Staten Island, N.Y.

Correcting bad behavior

I have an ill-behaved word processor (*Gutenberg*) that leaves my printer and interface card in an unusual state when I exit from the program. When I subsequently run *AppleWorks*, I cannot print a file properly. Turning the printer off and back on solves some of the problems, but not all of them.

It is also necessary to either turn the computer off and reboot or to do a control-reset, neither of which is very convenient. Can you tell me what control or escape characters to send to my *ImageWriter II* and my *Apple Super Serial Card* to return them to their default settings? Such information should be useful to other readers with software that does not exit cleanly.

Leo C. Curran
Snyder, N.Y.

"Escape c" (lower case "c") will reset the *ImageWriter II* to its defaults. We've added this to our own *AppleWorks* interface card initialization strings—when you have *Apple IIs* and *Macintoshes* sharing an *ImageWriter* on an *AppleTalk* network, the *Macs* leave the *ImageWriter* in a messed up state.

The *Super Serial Card*, unfortunately, is not so easy to deal with. As described here last November (page 3.76), the *Super Serial Card's* reset command is as ill-behaved as a *Macintosh*. The *IIc* and *IIgs* serial ports automatically reset themselves every time they are initialized, but the *Super Serial Card* resets itself only after power on, control-reset (so far, just as you've described) or the "control-I R" command.

But if you add "control-I R" to the *AppleWorks* interface card string, *AppleWorks* will crash every time you try to print something. This is because the *Super Serial Card* "R" command tries to disconnect the printer in an old-fashioned way that just doesn't work with 80-column text screens.

This leaves us with no elegant way to return the *Super Serial Card* to its default settings. You could send the publishers of *Gutenberg* a copy of our page 3.76 with the suggestion that they use the program given there to clean up after themselves on exit (don't forget to pay your photocopy fee, hehe) or you can use brute force by POKing a zero at SLOT*16 + 49290 (\$C08A).

Create yourself a little *Applesoft* program that does this and then runs *AppleWorks* like this:

```
10 SLOT=1
20 IF PEEK ((SLOT*256) + 49169) <> 133 THEN 40
30 POKE (SLOT*16)+49290,0
40 PRINT CHR$(4);"-APLWORKS.SYSTEM"
```

Line 20 makes a simple check to be sure the specified slot holds a *Super Serial Card*. Thanks to subscriber Yvan Koenig for this forceful idea. The first time you use the *Super Serial Card* after running this program, it will reset itself to its default (dipswitch) settings.

Chronic printer problems

I would like to hear some definitive and effective advice on how to gain control over two chronic and minor problems with my *ImageWriter II*, apparently commonly experienced. First, it always dumps an unwanted character at the left margin of the first line after power up. Secondly, it often does a vertical scrunching of lines, most noticeable on the first line of a page, but

also sometimes occurring in the middle of a page.

Robert R. Eddy
Concord, N.H.

We suspect the unwanted character is generated by your computer when you turn it on. Something causes a character to be generated randomly at the interface and sent to the printer, which buffers it until you send the first line. One solution is to turn your computer on first, then the printer. Another solution is to add the *ImageWriter* reset code to your interface card command string, as described in the first paragraph of the answer to the previous letter.

The line scrunching problem doesn't seem to have a definitive solution, but take a look at "Database bug, first line squashed" in our March issue (page 4.16); "And the magic solution is..." in April (page 4.20); and "Magic solution, continued" in May (page 4.31).

Printing downhill

I have been having trouble with *Apple Writer*. It prints downhill when underlining a double-strike or emphasized letter. I found your article of July 1986, page 2.48, advising of an update by Apple for people using third-party interface cards. I called the Apple dealer who sold me my *Ile*, *Apricorn* interface, and *Epson FX* and was given a phone number at Apple to call. The engineer I talked to said this service has not been available since 1986.

Any idea how I can get the update? I still like the simplicity of *Apple Writer* but underlining and letter-quality do get used together at our home. I have had as many as four college students in the family, as well as two girl friends, a neighbor, and numerous other drop-ins make appointments to use this set up. *Apple Writer* is easy for all newcomers to use and keeps questions at a minimum (they like to work after midnight).

Clio McGuen
San Diego, Calif.

The downhill printing you describe sounds like a printer problem, not an *Apple Writer* problem. How long has it been since your old *FX* was cleaned and oiled? (No telling how much after-midnight peanut butter is sticking to the gears.)

To accomplish the *Apple Writer 2.1* upgrade, dealers received a disk called the *Apple Writer 2.1 Revision Utility*. You had to take your original *Apple Writer* disk to the dealer and they would run the revision utility. It would ask for your copy and patch it. You might try calling around—there may be another dealer in your area who hasn't misplaced the disk.

Apple has a nasty habit of just abandoning its copyrighted software. This makes things difficult for its customers—you can't buy an original and you can't make a duplicate. There is, however, a concept in copyright law called "fair use". I suspect that most juries would hold that obtaining an "illegal" upgrade for an abandoned program would, in fact, be "legal" under the fair use clause. So, if you can find someone who has a copy, go for it.

One other possibility is to call back *Apple's* engineer and request that he or she log on to *AppleLink* and search *Apple's* "Technical Info" library for documents that include the word "005-3071-B". That's the "part number" given for *Apple Writer 2.1* on a document called "Apple II Software Distributed by Apple as of

August 1, 1988." This may mean that your dealer can order a replacement disk for you, but I'm not sure. Maybe the engineer will know. Maybe one of our subscribers will.

Printer Tech

I would like to ask your help with an unexpected problem I encountered while developing a super-simple, inexpensive (parts cost under \$10) scanning device for the *Apple II*. I need some kind of mechanical device I can attach my scanner to that will move left to right and from top to bottom over a sheet of paper. Sounds like a printer, right? But how can I get one of my printers (*ImageWriter II* and *Epson FX 800*) to move the printhead, wait till that point is scanned, move to the next point, wait, move, and so on.

The problem is the "intelligence" of the printers. They use their built-in buffers to collect a full line of data. The printhead doesn't start to move until a carriage return is received. Then the printhead rapidly moves across that entire line—too fast for my scanning device to see anything. How, oh how, can I circumvent the printer buffer or can I make the printer dumb again?

Next, let me respond to David Smith's criticisms of *Beagle Bros' SuperFonts* (April, page 4.22). Using *Print Shop* graphics is possible by converting them to normal graphics. On one of the *Beagle MiniPix* disks you will find a program to do this for you. As for the look of the output, in my opinion *SuperFonts* does a terrific job, worth waiting for. Most of the time I use *Times 12* and it looks simply fine—we use the expression *Near Laser Quality* for this kind of printing. Many people won't believe it was done with an *Apple II* and *AppleWorks*. I love *SuperFonts*, for me it's the best of the *TimeOut* series (although *QuickSpell* is used with quite the same pleasure. For guys like me it's trouble enough to put the things you want to say down in reasonable English. Although the sequence of words might be weird still, I know at least they are spelled right. I do hope *Beagle Bros* will come up with dictionaries in other languages, including Dutch, if possible.)

Do you get technical notes on paper from *Apple* or do you dig them out of bulletin boards? I'd sure like to have those notes also.

John Tegelaar
Nieuwkoop, The Netherlands

Both Dennis and I have pondered the printer stepping problem for some time because it sure seems like there should be a way to do it, but we can't figure it out. Does anyone else know?

You can get a subscription to *Apple's Technical Notes* through the *Apple Programmers and Developers Association* (290 SW 43rd St, Renton, WA 98055 206-251-6548). One-year's worth is \$25 plus shipping. *Apple* has also issued licenses to the major online services so that we can post technical notes, too.

UniDisk Tech

Where can I get technical information about the *UniDisk 3.5*? I'm interested in the commands you can send to the controller, information about the 6502 inside the *UniDisk*, and so on.

Thomas Wieland
Pierrefonds, Quebec

The only technical information on the Uni-Disk we've seen has been in Apple's technical notes, mentioned in the last letter. Five Uni-Disk tech notes have been published. The two you'd be most interested in were last revised in July 1985, so order the 1985 tech notes.

Top/bottom margin migraines

No matter what Bottom Margin I specify under printer options, I can't get less than two inches on the first page (only the first) of a multiple-page document when using double-spacing. The only way I can get the type down to within an inch of the bottom edge is to change the Paper Length, but that messes up subsequent pages.

J.A. Butler
Inwood, West Va.

An associate using the AppleWorks word processor wanted a 2-inch margin at the top of the first page of a three-page document, but only a 1-inch top margin on the next two pages. No matter where she tried to insert a new Top Margin command, the pagination was disrupted from that page on.

I thought she was issuing the command too late in the document. Half an hour and many, many sheets of paper later we were no closer to a solution. So I switched to the wonderful Page Preview desk tool from the TimeOut series to save further excessive demands on our arboreal population and discovered the following misfeature.

When you change the Top Margin, the new Top Margin will take effect on the next page. However, the new Top Margin also changes AppleWorks' internal 'number of lines to print on this page' variable and this change takes effect immediately! In our example, if you decrease the top margin from 2 inches to 1 inch, AppleWorks will put an extra inch of text on the page in which the command falls. If your bottom margin is small and the change in your top margin is large, this will actually push the text right onto the next sheet of paper.

If you increase the top margin, on the other hand, the page on which the Top Margin command appears will be printed without enough lines and the bottom margin will appear to be much larger than you've specified.

Once I discovered the problem, the solution was obvious: set the top margin to the smallest value you will use in the document and create additional margin artificially on the pages that need it by inserting blank lines.

Bill Parlin
Schenectady, N.Y.

There's definitely a problem with the AppleWorks Top Margin command. We can't find anything specific wrong with Bottom Margin other than the weird effects Top Margin has on it.

The best place to start a discussion of the Top and Bottom Margin commands is by reviewing the tools. Lots of beginners miss the idea that Top and Bottom Margins can be changed at **any** point within a document. In order to support this feature, there has to be some way for you to tell AppleWorks at exactly what point you want the new margin (or line spacing, or characters per inch, or etc) to start. The "way" is that AppleWorks embeds your command just above the paragraph the cursor was in when you pressed open-apple-<O>ptions (or, for some commands, such as underline and boldface, at the exact cursor location).

It's important for beginning AppleWorks users to learn they can **see** where commands are embedded in a document with the open-apple-<Z>oom command. <Z>oom toggles back and forth between a screen display that shows all the formatting commands embedded in a document and a screen display that shows the document as it will look when it is printed. Many novices have trouble with things like double-spacing because they decide to use it after they finish typing—when the cursor is at the end of the document. Then they print and can't understand why AppleWorks didn't respond to their double-spacing command.

If beginners learn to use <Z>oom to see **where** in their document commands appear, such misunderstandings will be considerably rarer. Another helpful command when working with Top and Bottom margins is open-apple-<K>alculate. This command displays page breaks on the screen.

Both the Top Margin and the Bottom Margin options take effect as soon as AppleWorks encounters them while printing a file. Our tests show flawless operation of the Bottom Margin command, as long as the command appears "high" on a page. If it appears near the bottom, inconsistent results can occur. If you change from a 1 inch to a 3 inch bottom margin when the printhead is 2 inches away from the bottom of the paper, you'll get a 2 inch bottom margin—the change will take effect immediately, but too late for 3 inches of white space.

Likewise, if a Top Margin command appears on a page before any text, it will take effect on that page, if it appears **after** any text, however, it's too late for the actual white space at the top of that page. Yet AppleWorks adjusts the number of lines it intends to print on the current page as soon as it encounters a Top Margin command. As Bill Parlin has pointed out, this makes it impossible to use the Top Margin command in the middle of a page.

Probably the most common kind of document that needs variable top margins is one that has a large top margin on the first page and a smaller top margin on all other pages. If you place the second Top Margin command on the first page, extra lines of text (enough to equal the difference between the large margin and the small margin) will appear on that page.

Even if you use <K>alculate to determine where the page break is and put the new Top Margin command at the top of page 2, AppleWorks will actually encounter it while still printing page 1 and will say, "Hey, wait, he wants more lines on this page," and ruin page 1.

Parlin's trick of padding a page with blank lines works best when, as in this example, the largest top margin is on the first page. Trying to pad top margins on other pages is trickier, because when a page begins with empty lines, those lines are not sent to the printer (they do appear on the screen after <K>alculate but they are not included in the page-break calculation). One solution is to put a "sticky space" (open-apple-space bar) on blank lines you don't want removed. Another is to use the open-apple-<O>ptions SKip lines command.

The best solution, however, is to realize that because of the bug in the Top Margin command, the **only** place you can embed one without foul consequences is at the beginning of a document or immediately after a New Page command. Thus, another solution to Parlin's problem is to <K>alculate the page breaks of the document, move the cursor to the first

"page break" line, and use open-apple-<O>ptions NP (new page). (If the page-break occurs in the middle of a paragraph, first go to the end of the last line on page 1 and hit Return to create a paragraph break, else the New Page command will jump up to the beginning of the paragraph.) While you're at the options screen you can also set the new top margin. This seems to work reliably. (It's also a good way to put in a Header that you don't want on the first page.)

A better solution would be a more effective Top Margin option. AppleWorks needs to somehow remember that it encountered a Top Margin command, but not actually execute it until the next page break.

@LOOKUP <L>ayout

Have you noticed that AppleWorks <L>ayout command in the spreadsheet doesn't work on empty cells if you choose the Row or Column options? The Entry and Block options work just fine on empty cells.

And starting with version 1.3, @LOOKUP doesn't return correct results with column tables, even though the manual says it works with either row or column tables. It also returns ERROR if you enter a value equal to or larger than the last table entry, even though the manual states it will return the value for the largest value in the table if a value larger than the last entry is used. This is how it works in versions 1.2 and 1.1. To get around this, you have to enter a dummy value at the end of the table that's larger than will ever be used.

Vincent D. O'Conner
Babbitt, Minn.

I've noticed many times that <L>ayouts didn't stick to empty cells. Thanks for the tip about choosing <L>ayout, lock—you're right, layouts do stick to empty cells when you use that option. And, anyhow, it's no trick to select a single Row or Column when using Block.

<find> mouse Return

One of the neat patches that came with Beagle Bros' Super MacroWorks allowed you to change the AppleWorks word processor's Return marker from a dull checkerboard to the Mouse-Text broken-arrow Return symbol.

But then when you upgrade to UltraMacros and try to use that program's new <find> macro (solid-apple-return) for moving the cursor to the next carriage return, it doesn't work. It can't find the MouseText Return. Here's a patch Randy Brandt himself sent me to fix UltraMacros so that it can find a MouseText Return:

```
BLOAD ULTRA.SYSTEM,TSYS,A8192
POKE ((PEEK(8197) + 256 * PEEK(8198)) + 8195),77
BSAVE ULTRA.SYSTEM,TSYS,A8192
```

Leh-Wen Yau
Riverside, Calif.

Now if Randy would just tell the rest of us how to get AppleWorks to display the Mouse-Text Return in the first place....

Gap corrective

When you load an ASCII text file into the AppleWorks word processor, AppleWorks adds a "loothy" appearance to all continuous lines (lines without space characters) longer than 61 characters. It does this by inserting a space into the line at the point at which the line is "wrapped". The gap always appears at column

61 because, when creating new files from ASCII text files, the word processor defaults to 60-character lines.

If you reformat the file for wider lines, the gap will become apparent. Now you have to go through the document and delete all the extra space characters at column 61.

Here's a patch. It's not a perfect solution, but it's worth using if you often load ASCII text files into the AppleWorks word processor:

```
POKE 768,65 : REM original value is 61
BSAVE SEG.M1,T$00,A$300,L1,B$197A4
```

This disables the word-wrap feature while text files are loaded. Unfortunately, this patch causes other lines in the file to wrap incorrectly. But this can be solved by simply going to the beginning of the file and issuing a command that causes reformatting (unjustify, left margin, right margin, characters per inch....)

Back in June, at the top of page 4.38, you show an *UltraMacros* macro. As shown it doesn't compile properly. Comments need to be kept inside curly brackets.

Oh, and speaking of viruses, you forgot to mention the built-in ProDOS 16 virus. The FINDER has a nasty habit of putting a FINDER.DATA file in every directory you open using it and a FINDER.ROOT file on every disk. Since I have a IIe but work with IIgs owners, I constantly find myself deleting FINDER.DATA and FINDER.ROOT files.

Mark Munz
Fort Lewis, Wash.

Since I load most of the files I download from GENie into AppleWorks to read them, I've noticed the gap in long lines of "----" many times. I always thought it was GENie that did that, however, not AppleWorks, so I was glad to see your patch.

I didn't mean for you to type in the macro's comments, but your point is well taken.

If you don't like cleaning up Finder droppings, see if you can get your IIgs friends to change Finder's preferences so that it doesn't save FINDER.DATA and FINDER.ROOT files.

Slot 2 contention solved

I have found a patch for AppleWorks 2.0 that solves the problem of not being able to print to slot 2 when a disk drive appears to be in slot 2:

```
BELOAD APLWORKS.SYSTEM,TSYS,A$2000
POKE 11349,76 : REM was 189
POKE 11350,97 : REM was 164
POKE 11351,28 : REM was 15
BSAVE APLWORKS.SYSTEM,TSYS,A$2000
```

Since I have a /ROMdisk (Checkmate Technology Memory Saver) and two 3.5 disks connected to the SmartPort on my IIgs, ProDOS always assigns a disk to slot 2. The patch allows AppleWorks to use my second printer, which also appears in slot 2.

Carmela Anna Vitti
Santhia, Italy

AppleWorks on ROM

I have just put AppleWorks on a ROMdisk. The boot time is fantastic, but the ROMdisk is write-protected. Do you know of a patch for AppleWorks that will allow a write-protected boot disk?

David Ciotti

No, but somewhere out there is someone who does.

A4 paper & AppleWorks

Standard office paper in much of the world is 'A4' (297mm by 210 mm or 11.68 inches by 8.27 inches), which is somewhat longer and a little narrower than international fan-fold. AppleWorks allows only one decimal place for the page length option, PL, accessed by open-apple-<O>ptions. A setting of either 11.6 or 11.7 will eventually lead to problems.

Here's the solution if you have an ImageWriter II.

Set PL to 11.6 at the top of your document or in the spreadsheet/database option settings.

In the printer specifications, set 'Accepts top-of-form' to YES.

Add the following to your interface card code: 'ESCAPE H1684'. Note that there is no space between the H and 1684.

Dr. Philip Ryan
Fitzroy, South Australia

When you set 'Accepts top-of-form' to YES you are telling AppleWorks to use 'form feed' (control-L) to tell the printer to advance to the top of the next page. NO, on the other hand, tells AppleWorks to use multiple linefeeds to get to the top of the next page.

ESCAPE Hnnnn tells the ImageWriter II how long the paper is, in increments of nnnn/144ths of an inch. In combination with form feed, this code allows the ImageWriter to advance A4 paper exactly. Unfortunately, earlier Apple printers do not support the ESCAPE H command.

Cosmetic patches

How do I change the AppleWorks database report column underline character from a dash to an equals sign:

```
COLUMN TITLE      COLUMN TITLE
-----            =====
```

How do I change the spreadsheet 'column too narrow' character from a pound sign to a greater-than sign:

```
#####          >>>>>>>>>>>>
```

Bob Cerchio
Carbondale, Ill.

I like to hide constants, etc., by putting them in an AppleWorks spreadsheet column with a width of one character. This way, when the column is formatted as "fixed" with a specification of one place, I get a column of "#" in reports. But I would really like to replace the "#" character with "|" (vertical bar) to match other column borders.

Michael P. Stupinski

Using Basic.system 1.1 or 1.2 and an unmodified backup copy of AppleWorks 2.0—to change the line under the column title you have to make two changes, one for the screen and one for printouts:

```
POKE 768,61
BSAVE SEG.M1,A$300,L1,T$00,B$C52 (screen)
BSAVE SEG.M1,A$300,L1,T$00,B$2D8F (printout)
```

To change the column-too-narrow character:

```
POKE 768,62 (>) or POKE 768,124 (|)
BSAVE SEG.M1,A$300,L1,T$00,B$DAF9
```

VisiFile to AppleWorks

I was recently trying to convert some VisiFile files to AppleWorks and no one I contacted, including Claris, could help me. Browsing through *Open-Apple*, I came across the letter

from David Story on page 2.59 of my very first issue (September 1986), which explains exactly how to do it. It might be nice to repeat the tip in 1988 so that Claris, at least, might know about it.

Dr. A.K. Solomon
Cambridge, Mass.

The problem is two-fold. First, AppleWorks refuses to deal with DIF files that include 'optional data', as VisiFile-generated DIF files do. Provisions for optional data are an integral part of the DIF file standard—there's no excuse for AppleWorks' refusal to read these files. I talked about this at length in August 1986, page 2.56.

The second problem is that when loading DIF files, AppleWorks should give you an option of 'row or column format'. As written, the AppleWorks data base DIF file reader insists that DIF files be saved in column format.

One way to solve both problems is to load your VisiFile files into Advanced VisiCalc (or any other program that properly handles DIF files) and resave them in the row/column format you need. This will also delete the optional data that AppleWorks turns its nose up at.

Ile to IIgs upgrade

I got the Ile to IIgs upgrade and think it's even better than buying a regular IIgs. However, if you get the Ile to IIgs upgrade and have an 'old' Ile (mine was January 1983 vintage, light gray keys, white key letters), you have to purchase a new case for the upgrade (about \$55). According to the Computerland tech, the IIgs motherboard won't fit in older cases. But lemme tell you, my IIgs looks and feels like a real Apple IIgs should look and feel, not that Chiclet-keyed imposter! Apple even supplies a replacement logo to go where the Ile emblem goes on the case. Plus, in the great fan debate, my old Kensington System Saver fits right on the side like before and is sooooo quiet! So far I love it, especially old games that run three times faster.

Joe Kuhl
Waipahu, Hawaii

My IIgs is an upgraded Ile with an Apple Mousecard in slot 4. Using this setup I was plagued with system crashes when using the mouse to access pull-down menus. After purchasing a keyboard and mouse that connect to the desktop bus, I've had no further problems. It appears there are some differences between the original Mousecard and the ADB mouse.

Nigel Harrison
Singapore

Troubleshooting tour

After owning my IIgs for five months I ran the disk called "Your Apple Tour of the Apple IIgs". When I reached the part where the car crosses over the bridge, the IIgs would crash, display a bouncing apple, and display UNCLAIMED SOUND INTERRUPT \$08FF.

Suspecting the disk was bad I took it to my Apple dealer and ran it on his IIgs. It ran just fine. So I took my computer back to the dealer and after two weeks and \$219.75 they announced it was fixed. The replaced the motherboard, saying I had a bad DOC chip.

Upset at the price, I trotted home, ran the tour disk, and at the same faithful spot encountered the same error. So I hauled the entire system down to the dealer and waited while they checked it out again. After about 45 minutes

they had it working just fine. It turns out the tour disk won't work if the printer buffer in the control panel is turned on.

The store reimbursed me for the price of the motherboard but I'm still out the \$60 labor charge. I'm angry at the amount of time, effort, and money I had to put out to fix a hardware problem that didn't exist. What can we do as end users to determine whether the source of a problem is hardware, software, or system configuration?

G. Shultz
Playa Del Rey, Calif.

I guess the dealer point-of-view is that when you take a computer in for repair there's an immediate minimum charge to cover diagnosis, whether there's anything wrong with the machine or not. So it's important not to take your computer in unless you're sure it's broken. It's hard to ever be absolutely sure (and the newer you are at computers the harder it is), but, in general, real hardware problems are characterized by either a totally unusable machine or crashes that are more random in nature than the tour disk symptoms you experienced. That's a general rule, however, not absolute.

On the other hand, here you were running Apple-supplied software on Apple hardware and you took your machine to an Apple-franchised dealer. I think Apple should pay for the diagnosis.

Repair restraint

I blew some chips on my IIGs motherboard by plugging an old 5.25 drive into a cable adapter backwards. Instead of replacing the chips for a few dollars, Apple's technical procedure calls for a swap of the motherboard at a price of \$167.16 plus labor.

Next I needed a new power supply. I was not told why, but I trust the technician. The price of that swap was \$149.25. I objected because many power supplies are available in the \$50-60 price range. The technical supervisor at my dealer said that Apple insists that franchised dealers use only Apple parts. While shades of gray exist, these regulations suggest restraint of trade.

Herbert M. Olnick
Mineral Bluff, Ga.

I agree. Yet I can also appreciate Apple's position. We've complained about the quality of many of Apple's dealerships for years. Apple seems to have been particularly sensitive to these complaints and has instituted a number of programs to raise the quality of its dealers. The "disposable motherboard" program probably saves us all time and aggravation in the long run, but it does mean that some individuals will have to pay more for service than they would have otherwise.

It would probably take a legion of lawyers to figure out whether it's within Apple's rights to insist that a dealer sell only Apple parts. Meanwhile, if you decide to get a power supply for your IIGs elsewhere, be aware that it carries a higher rating and has a different connector than the II-Plus/IIe power supply.

RAM min & max

In the Control Panel of the IIGs, under RAMdisk, what is meant by the "minimum" and "maximum" sizes?

Eugene Foss
Flora, Ill.

In your June issue (page 4.40) you recommend setting the minimum size of the IIGs RAMdisk at 800K. Can you explain why? I have read so many different opinions as to what the minimum should be I am very confused. Everyone seems to have a different idea and no one really explains the issue.

Patt Ricketts
Redondo Beach, Calif.

The original idea of the minimum and maximum sizes was to allow total flexibility in setting up your system. The minimum reflects how much memory will be actually set aside for your RAMdisk. The maximum reflects how much more memory you'll allow your RAMdisk to use.

At boot-up the RAMdisk asks the Memory Manager for the minimum amount of memory you've specified. If, later on, you save enough files on the RAMdisk that it needs more than that, it will ask for more—up to the maximum amount you have specified.

However, there's no guarantee the RAMdisk will actually get more memory when it asks for it—the Memory Manager may have already allocated all the remaining memory to other programs. This can cause errors.

Consequently, we recommend that you always set the minimum and the maximum to the same number. The number we actually use ourselves most of the time is 0K, not 800K. This turns all of the available memory-expansion-slot memory over to the Memory Manager for allocation. AppleWorks and ProDOS 16 programs will ask the Memory Manager for what they need. Leaving the RAMdisk at 0K also means you'll have one less "disk" connected to the SmartPort. If you keep the number of SmartPort devices at one or two, you'll prevent the disk drive "shell game" that assigns disks to slot 2.

In June we recommended 800K because the question was, "How do I copy a 3.5 disk to /RAM5"? Unless you set the RAMdisk to exactly 800K you'll get a DEVICE SIZE MISMATCH error from most copy programs.

The best RAMdisk size for you really depends on how you use your system. We think you'll do yourself a favor in the long run, though, if you set minimum and maximum to the same number.

Reset unreliable

On my old IIe, open-apple/control/reset always caused a reboot. On my IIGs, it hardly ever does. Is this how it's supposed to be or is there something wrong with my machine?

Sally Ringland
Clarion, Pa.

Reset does a lot more on the IIGs than it did on the IIe. This makes it take longer to get to the part of the routine where it checks to see if you're holding down the open-apple key. If you are, it's supposed to reboot. If you're not, it's just supposed to reset. The problem is you are letting up on the open-apple key too fast.

We recommend the following technique for the "three-finger salute." Press and hold down on control and open-apple with your left hand. With your right hand, press and release the reset button. Continue pressing down on control and open-apple until the reboot sequence begins. This same technique is required when you use a Zip Chip-equipped machine.

IIGs is slot poor

While the IIGs appears to have seven slots just like earlier Apple IIGs, they just aren't there. You need both a 3.5 and 5.25 drive to load commercial software, that pre-empts slots 5 and 6. Slot 4 is tied up with the mouse and slot 3 with the 80-column display. With a modem in 2 and a printer in 1, you're left with just one usable slot, 7. If you have both a hard disk and a memory card, as I do, you're in trouble.

I'm actually rather fortunate; I'm using an internal modem that co-exists with the mouse in slot 4 without having to select "Your Card" in the control panel. This lets me put either the hard disk or the RAM card in slot 2. However, even this isn't without its pitfalls, as some software doesn't expect to see a RAM card there.

A good example is the *Beagle Compiler*. Its APPLEMEM.SYSTEM routine will not see the RAM card at all in slot 2, although it finds it easily in slots 6 or 7. This would seem to dictate putting the RAM card in slot 7 and putting the hard disk interface in slot 2.

However, the hard disk I'm using is a Sider C46; this device has an internal tape drive for backup. No matter in which slot the hard disk interface is located in, the software that accesses the tape drive will not operate correctly if anything that looks like a disk controller is in slot 7.

It seems a shame that using the SmartPort doesn't free up any slots.

Elliot Lifson
Yonkers, N.Y.

The real ProDOS 16 may solve some of these problems, but meanwhile it's very difficult to find a free slot. AppleTalk, if you want to use it, takes up both 2 and 7.

It points out how necessary it is for software authors to make no assumptions at all about what slots are suitable for a specific device. All seven slots should be searched—even on the IIc, which has things in different places in its various versions.

One other possibility you didn't mention is to put either your hard disk or memory card in slot 6 and switch back and forth between using the 5.25 drive or your other device by entering the Control Panel, reassigning the slot, and rebooting. This is a viable alternative only if you don't use your 5.25 drive much, however.

Color killer II

I've used your February tip for killing IIGs RGB color on standard resolution graphics many times. I usually POKE 49246,0 from Applesoft, set the Control Panel to display monochrome, and boot the system with a PR#n; this way the color killer works even on most copy-protected programs. Is there a way to POKE the monochrome setting to avoid having to go into the control panel? If a POKE will work, what would happen if a program set up to do this were run on an IIe? Are there any similar POKEs for IIe composite and RGB systems?

J.D. Holdeman
Cleveland, Ohio

Here's a little Applesoft program that will force IIGs double-high-res monochrome mode (supported on RGB monitors only!) and boot slot 6. The program doesn't actually change the control panel setting—it overrides it. This means that if you leave the Control Panel set to color, then, the next time you enter it, double-high-res mode will be reset to color auto-

atically.

The double-high-res monochrome/color switch is in bit 5 of a "register" or "softswitch" at 49193 (\$C029). When we change bit 5 we want to be very careful not to change any of the other bits in this register. This little program works by reading the register first, changing bit 5 only, then writing the result back:

```
10 REM IIGs RGB Color Killer for HR graphics
20 PRINT CHR$(21) : REM 40 col mode
30 POKE 49246,0 : REM double-res on
40 ADR=49193 : REM "NEWVIDEO" register
50 NV=PEEK(ADR) : D=NV : REM save value in NV
60 FOR N=7 TO 5 STEP -1 : REM check out bit 5
65 : BN=2^N : IF D>BN-1 THEN D=D-BN : B(N)=1
70 NEXT
80 IF B(5)=0 THEN POKE ADR,NV+32 : REM chg to mono
90 PRINT CHR$(4);"PR#6" : PRINT
```

The softswitch at 49193 clicks the cassette output on the II-Plus and IIe and is unused on the IIc, so this routine shouldn't cause any trouble on those machines.

The program doesn't work on an RGB-equipped IIe. Turning on double-high-res monochrome on an RGB-IIe requires a sequence of POKEs you can read about in our May 1985 issue, page 1.36. When you mix this mode with 40-column text, you see half of a double-resolution graphic, just like on the IIGs, but it's the wrong half. You see whatever garbage is in auxiliary memory, not the standard resolution graphic in main memory.

The program never works with composite monitors, whether you're using a IIe or IIGs. Most IIGs sold outside the U.S., and all Laser 128s, include a "color killer" switch you can use to get rid of color smears on composite monitors, however.

Rana results

I see you have at least one other subscriber with Rana drives ("Rana schematics", June 1988, page 4.40). There has to be a good number of us who have been left high and dry with these drives. I have two Elite IIs and one Elite I. Does anyone have any information on how to get full use of these drives, especially with AppleWorks? Mine are presently configured for 143K. I would like to make use of the larger disk capacity of these drives.

Don Blais
Calgary, Alb.

We've never had any Rana drives around here, but we'd be happy to try to link you Rana owners up with each other if you'd all send us a little note that says something like "I own a Rana drive, who else does?" We'll wait until November 1, 1988 and then send you all a sheet of paper with everyone's name on it.

The difference between your Elite I and a standard Apple drive is that it can fit 40 "tracks" on a 5.25 floppy instead of the usual 35. We discussed how to get ProDOS 1.1.1 to use this extra capacity in April 1985, pages 1.31-1.32. There was another letter correcting the original in July 1985, page 1.55.

As I said in my response to the April letter, the "correct" way to go about getting ProDOS to work with your drives is to have ProDOS-compatible ROMs on the disk controller card. Since it doesn't look like Rana will be providing those anytime soon, I'm printing the following letter, which is an updated version of the patches.

To keep the explanation short, I'm leaving it in assembly language terms—if it looks impossibly technical to you, find someone who knows a little assembly language and they can make the patches for you.

ProDOS and big floppy drives

The only reason ProDOS 8 and 16 won't read and write to high-capacity 5.25-floppy drives is that the ProDOS floppy driver checks the block number it's supposed to read or write before doing anything else. If the block number is over 280, the number of blocks on a standard 35-track floppy disk, it refuses to proceed.

Here's the code that does the check. If you BLOAD ProDOS 8 at \$2000, you'll find it in the vicinity of \$5800, but it moves around from version to version:

```
A5 46 LDA $46
A6 47 LDX $47
BE 56 D3 STX SD356
F0 09 BEQ —
CA DEX
D0 04 BNE —
C9 28 CMP #$18
90 02 BCC —
38 SEC
60 RTS
18 CLC
60 RTS
00 BRK
00 BRK
```

To use a 40-track drive, simply change the \$18 in the CMP instruction to \$40. This allows validation of 320-block devices. The changes for 80-track or 160-track disks are more extensive but not more difficult. The checking routine will grow a few bytes longer, but this we can neglect, because the bytes after the original routine are only unused BRKs.

80-track drives have 640 blocks. Insert an extra DEX after the one already there and move the rest of the routine one byte to make it fit. Change the CMP #\$18 to CMP #\$80. Presto, ProDOS allows to write and read 640 blocks.

160-track drives have 1280 blocks. We have to insert four extra DEX commands after the one already there (five total). Move the rest of the routine four bytes to make room. Change the CMP #\$18 to CMP #\$00.

The exact same checking routine is embedded in ProDOS 16. However, you can't load P16 into memory because it's too big. You can load sections of it with a command like BLOAD P16,T\$F9,A\$2000,B\$5000,L\$1000 however. In the version I have the routine starts at B\$5CC5.

Udo Huth
Wittmar, West Germany

In addition to changing the ProDOS floppy driver, you also have to figure out a way to format ProDOS disks for your drive. Can anyone help us out with that?

Eamon Users Group

Eamon is a public domain software package that contains all the tools needed for writing text adventure games. Currently there are over 150 Eamon adventures in the public domain. Of course, many of these adventures are only mediocre, but the best are quite good and a treat to play.

But those who have tried it often agree that actually writing your own Eamon adventure is the most fun that they have ever had with their Apples.

A lot of people tried Eamon several years ago and quit because the system wasn't that good. John Nelson continued to develop and debug the package, and the current version is vastly more powerful than the early ones, with more commands and capabilities. This is reflected in the adventures themselves, as the vast majority of the best ones are in the 100s. Anyone who has never played such Eamon classics as #129, *Return to Moria* or #145 *Buccaneer!* have no conception of the current state of Eamon gaming.

There is an Eamon User's Group that puts out a quarterly newsletter for Eamon enthusiasts. Nelson used to run it, but he bought himself an IBM and is lost to the Apple world now. However, before leaving, John transferred the club to my own enthusiastic hands.

If anyone would like more information on Eamon or on our user's group, they can write to me. Eamon programs run on older Apple IIs—there's not that much new stuff out there for a II-Plus owner anymore. Even Infocom requires 128K now.

Tom Zuchowski
7625 Hawkhaven Dr.
Clemmons, NC 27012

SuperCalc and the IIGs

Is there a patch available for SuperCalc 3A that allows it to print through the IIGs serial port?

K.J. Dawson
Widnes, England

Dennis found the information you seek in a library file uploaded to GENIE by Harry Sugar by searching with the keyword "SuperCalc". The procedure is too long to print here; he sent you a printout and will also send it to anyone else who needs it. Just ask.

Comp.sys.apple

I'd like to encourage any of your readers who have access to mainframe networks (through a university, military installation, or large corporation) to try to get in contact with a Usenet newsgroup called "comp.sys.apple".

Like GENIE, the Usenet network news allows discussion of current topics and distribution of public domain, freeware, and shareware programs. While there are a few thousand sites that are Usenet members, there are only about 200 people who subscribe to comp.sys.apple.

Even if a site doesn't carry Usenet, it's still possible for user to subscribe to a mailing list ("info-apple") that will send all of the articles to their personal mailbox.

If anyone is uncertain about how to access these services, they can talk to their system administrator or send mail to me (fadden@zen.berkeley.edu) after the fall semester begins.

Andy McFadden
Sunnyvale, Calif.

International modems

I am stationed in London with the U.S. Navy and would like to get a modem that will work both here and back in the U.S. with minimal swapping of cords and things. Any suggestions as to which modem would be best?

Fred M. Greatorex
London, UK

Here's what we know so far: what you need is a modem that supports both the U.S. transmission standards (Bell 103, 212, etc.) and also the European transmission standards (CCITT V.22, etc.). There also may be a problem with voltages when you directly connect the phone line to your modem, but this part is still fuzzy to us.

We hesitate to recommend a specific modem, but we know that Epic Technology (5680 Stewart Ave, Fremont, CA 94538, 415-683-0932) supports CCITT on their modems, and may be able to assist you. Meanwhile, we'll see what our subscriber base knows.

RGB fiddles with disk

I recently took the plunge and upgraded from a IIc to a IIgs. The IIc had a UniDisk 3.5 and a IIc external 5.25, which I hoped could be plugged right in. The local Apple store said the 3.5 wouldn't work but the 5.25 would. After looking through past **Open-Apples**, I decided that it should work despite what the dealer said, so I plugged them in.

The UniDisk 3.5 worked fine, but the external 5.25 didn't. After much fiddling, I tracked the problem down to interference from the RGB monitor! My desk has a wooden stand for the drives just below the shelf on which the monitor sits. The 3/4 inch of oak the monitor sits on isn't enough to block interference from the monitor, but a piece of aluminum foil under the monitor does wonders.

Bob Durst
Corvallis, Ore.

Locked to slot 6

I was having a problem that I thought was

related to my Central Point Software 5.25 drive and Universal Disk Controller Card. This combination seemed to have trouble with certain pieces of software that asked for a disk to be withdrawn from the drive and flipped over or replaced with another disk. The software wouldn't recognize the second side of the disk.

I eventually traced the problem to the slot the controller card was in. I had the controller in slot 5, but the software wouldn't work unless the controller was in slot 6, even with a stock Apple disk controller card.

Bernard W. Bopp
Toledo, Ohio

IIgs Applesoft animation

On older Apple II machines I have programmed shape tables using Applesoft. Now with my IIgs I hope to take advantage of the enhanced features. How can I achieve super-high-res animation using the Apple IIgs tools? I have seen many informative books on the Apple IIgs but none seem to give in-depth information about animation. It would be a great help if you could recommend a book on this subject.

Jimmy Asta
Roselle, Ill.

The Great IIgs Graphics Book has yet to be written. Meanwhile, you might want to take a look at **Iconix** (So What Software, 10221 Slater Ave. #103, Fountain Valley, CA 92708). **Iconix** consists of a set of assembly language routines that interface good old Applesoft with the IIgs super-high-res screen. It allows you to put both text and graphics on the screen. Its "shape tables" are called "icons" and can be created with any SHR drawing program. By moving and changing these icons you can create animation fairly easily.

The same company also has a program called **Sonix** that interfaces Applesoft with the sound system inside the IIgs.

Basic.system patch bug

I recently decided it was time to perform several patches to Basic.system mentioned in various issues of **Open-Apple**. Way back on page 1.56 (July 1985) a patch submitted by Sandy Mossberg appears to have a typo. In the line that begins '9E30' the '10' should be '01'.

James W. Patton
Littleton, Colo.

Record length

At what memory location does ProDOS keep the record length of the last text file opened?

Edward Johnson
N Little Rock, Ark.

The record length of a file is stored in the file's directory entry. One way to get the information is to OPEN the directory that the file is in and READ it.

Another way is to use the ProDOS Machine Language Interface GET_INFO call. Addison-Wesley's **ProDOS 8 Technical Reference** explains how to do this.

You can also dig the information out of Basic.system's global page if you do it immediately after OPENing the file. For example:

```
10 REM Get a file's Record Length
20 PRINT CHR$(4);"OPEN TESTFILE"
30 RL = (PEEK(40826)*256) + PEEK(40825)
40 PRINT CHR$(4);"CLOSE"
50 PRINT "Record Length = ";RL
```

New MLI command

In ProDOS 8, version 1.4, I have found a new Machine Language Interface command that I have not seen documented anywhere. This call will allow you to access your own custom code, nestled in the main RAM \$D0 bank 2 in addresses \$D400 to \$DFFF, with only a normal ProDOS MLI call. This 12-page block of RAM is located immediately following the ProDOS enhanced QUIT code.

Make your call to the MLI in the normal way using command number \$42. The parameter list can contain any number of bytes but the list length parameter must be \$01 for the call to be accepted without error. Your routine can find the parameter list by means of a pointer ProDOS sets up at \$40-\$41. You can do almost anything in your routine except access \$D000-\$FFFF ROM, which is turned off when ProDOS is active. To exit, clear the carry and RTS if no error occurred, or put your error code in the accumulator, set the carry, and RTS.

Douglas E. Mitton
Brockville, Ont.

Apple Developer Technical Support tells us that what you've actually uncovered is a new MLI command for AppleTalk. Using it as you've suggested is feasible only if you're willing to forgo AppleTalk compatibility forever.

A lesson about fonts

The fonts that come with **Publish It!**, the ProDOS 16 system disk, and Beagle Bros' **SuperFonts** are all interchangeable—with one small hitch. ProDOS 16 and **SuperFonts** use \$C8 (FON) for the file type of font files, while **Publish It!** uses \$F7. **SuperFonts** can use **Publish It!**'s fonts as is, but **Publish It!** requires you to change the file type to the \$F7 it expects before it will recognize the file as a font.

The folks behind **Publish It!** (Timeworks) aren't happy with the 'quality and aspect ratio' of converted fonts, so they don't tell anyone how easy it is to use other fonts with their software. But most fonts do quite well.

Incidentally, A.P.P.L.E. Co-op offers about 300 public domain ProDOS 16 fonts on four 3.5 disks for \$3 per disk.

William H. Olson
Riverside, Calif.

To add additional fonts to **Publish It!**, you have to use the 'Install Font' and 'De-install Font' options, which appear under the apple menu. File types can be changed with a disk zap utility or with a public domain program Olson has written.

ProDOS 16 fonts are essentially Macintosh fonts with an additional header and a few other minor changes. Converting fonts from one system to the other looks easy, but we don't know of any programs available for distribution that will do it.

A complete definition of ProDOS 16 fonts is in Addison-Wesley's **Apple IIgs Toolbox Reference, Volume 2**, pages 16-41 through 16-54. If you have this book, turn to the figure on page 16-42 and note at the top of the figure that ProDOS 16 font files actually start with a one-byte string length followed by a string of characters that spells the font's name. The rest of the file duplicates the table on page 16-42. The table reflects how the font appears in memory—there the name-string doesn't appear.

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