Apple announces faster SCSI

On March 15, Apple Computer announced the *Apple High-Speed SCSI Card* for the Apple IIgs and enhanced Apple IIe computers.

While retaining compatibility with the older Apple II SCSI interface, the new SCSI interface supports DMA (direct memory access) transfers, raising the maximum data throughput to one megabyte per second on the IIgs and 511 kilobytes per second on the Apple IIe. The interface has been enhanced to provide ANSI-standard compliance and will support other SCSI devices (hard disks, tape drives, CD-ROM drives, scanners, and so on) with the appropriate software.

DMA allows data to be transferred to and from a computer's memory without the intervention of the computer's processor, eliminating any "bottleneck" the processor introduces to the transfer. Apple claims the new interface can transfer data at a maximum rate up to ten times faster than the previous SCSI interface.

The card provides on-board termination, so a single additional terminator will be required on the SCSI device at the end of the device chain. The interface's SCSI ID number is selected by a bank of switches on the card, rather than by a jumper as on the earlier card.

The interface is neither a networking card nor a caching card. It uses 32K of ROM and 8K of RAM for access as a SmartPort interface. The GS/OS SCSI.Driver and SCSI.Manager do not use the RAM or ROM.

Software included with the card comes on a 3.5 disk for the IIgs and IIe and a 5.25 disk for the Apple IIe. Software includes utilities and device drivers for hard disks and CD-ROM drives. The utilities include formatting, partitioning, and verification functions, as well as new backup utilities that can deal with the GS/OS "extended" file storage type. The suggested retail price is identical with Apple's older SCSI interface card, $129.—DJD

Developer group, Apple meet

On February 26, members of the board of directors of the Apple II Developers Association met in a day-long session with the Apple managers who are determining the future of the Apple II. The meeting was held in Cupertino and included, in the developer group, Barney Stone of Stone Edge Technologies, Mark Simonsen of Beagle Bros, Roger Wagner of Roger Wagner Publishing, Ron Lewin of Micol Systems, Bob Carroll and Bob Hardeman of Applied Engineering, Paul Boule and Dan Muse of *InCider*, and me, Tom Weishaar of *A2-Central*.

Representing Apple were David Hancock, Senior Vice-President of Marketing, Apple USA; Mike Homer, Director of Product Marketing, Apple USA; Nancy Stark, Manager, Apple II and Peripheral Marketing, Apple USA; Jane Lee, Manager, Apple II Product Marketing, Apple USA; Sue Talley, Manager, Education Market Development, Apple USA; Sandra Bateman, K-12 Education Public Relations Manager; Kirk Loevner, Director, Developer Group; David Szetela, Manager, Developer Services; Moria Cullen, Manager, Developer Programs; Scott Schnell, Manager, Evangelism; Jonathan Fader, Manager, Education and Multi-Media Evangelism; Rajiv Mehta, Manager, Apple II Product Marketing, Worldwide Product Marketing, and others.

For those of you who aren't counting, more than twenty people attended at least part of the meeting. There are more than that many views of what happened, if you count the rumors I've already heard.

My view of what happened is that Apple's people demonstrated they need continuing Apple II sales to meet the growth goals they have set for themselves. And they understand that to achieve those sales they will have to do a better job of communicating their Apple II commitment to their customers. They are planning how they will accomplish this right now and they asked for our reaction to some proposals.

The first big step they've taken is one I've recommended for a long time—they've hired an Apple II champion. She's Jane Lee, a long-time Apple marketer and fan of the Apple II. Lee's job is to ensure that the Apple II gets appropriate visibility in Apple's marketing campaigns and to ensure that Apple's marketing communications position the Apple II as the computer of choice when the Apple II is the appropriate product for a market or customer.

Apple believes that there continues to be significant business opportunities for 3rd-party developers interested in the massive Apple II customer base. Apple intends to continue to develop products for that customer base as long as it can do so profitably. It is a profitable business for Apple right now and Apple badly needs those profits right now.

However, Apple seems convinced for now that at some time in the future it will no longer be able to produce Apple II equipment at a price that the market will bear. In Apple's view, competitive machines, using newer manufacturing and computer technology, will entice customers with more features and lower costs. Apple intends to continue its support of Apple II customers for years after that happens, however, and it hasn't happened yet.

Apple divides its potential customers into two groups—education and business. Apple recognizes a "consumer market" only as home-education and home-office subsets of education and business. The developers clearly would like to see Apple position the Apple II more strongly in homes and businesses. Apple clearly feels the Apple II has
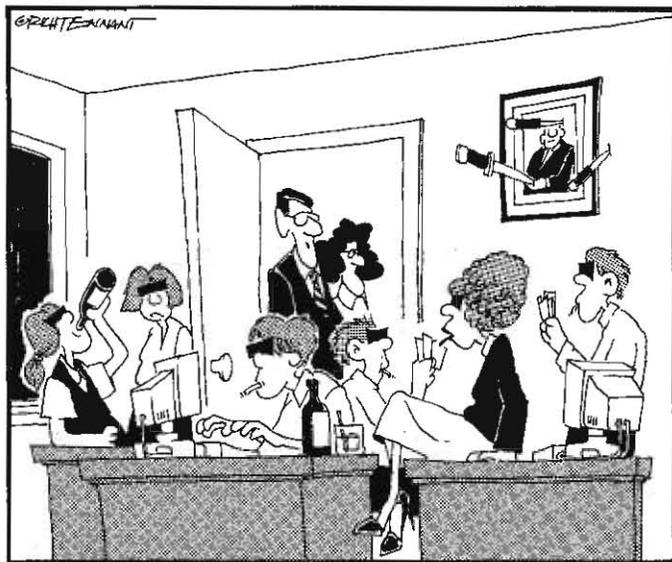
"BETTER CALL THE SUPERINTENDENT AND TELL HIM ONE OF OUR NETWORKS HAS GONE BAD."

a very high acceptance in education and a relatively weak acceptance elsewhere and wants to position it accordingly.

I found no evidence that Apple deliberately weakens the Apple II to make the Macintosh appear stronger. Apple's people seemed to me to be forthright and reasonable people who have a good understanding of the Apple II's position in the marketplace and of the emotional attachment many Apple II customers have to its products. More than anything else, they seemed to want to make the Apple II experience a happy and satisfying one for their customers. *Over and over, Apple's managers emphasized that they must demonstrate and provide a long-term commitment to their Apple II customers.*

I left the meeting feeling that I, as an Apple II journalist and developer, would be able to continue making a living in the Apple II market for many years to come.—TW

Miscellanea

Apple Computer announced implementation of a one-year limited warranty for all Apple hardware products sold in the United States on and after January 1, 1990. According to Apple's March 8 press release, this warranty allows U.S. customers to obtain "warranty service from any authorized Apple reseller in more than 80 countries worldwide". This supplants the previous 90-day U.S. warranty which allowed for service only from U.S. resellers.

For warranty repairs, customers in the U.S. can take the system and proof of purchase to any authorized Apple service provider for service at no charge. Outside the U.S., the customer must pay the service provider for repairs and then file a claim for reimbursement for Apple U.S.A.

AppleCare, Apple's extended service plan for out-of-warranty products, is available at a special promotional price (6 months free when six months of *AppleCare* are purchased) to customers who purchased hardware products in the U.S. before January 1, 1990. *AppleCare* is available only through authorized Apple resellers in the U.S., however.

This announcement will probably soothe many U.S. customers. International customers and U.S. customers overseas who are currently unable to find or purchase Apple product upgrades for older systems purchased prior to 1990 or who must wait for reimbursement after a repair may not be so easily placated, however.

AppleCD SC CD-ROM drive users who are having intermittent problems with the drives can turn to an Apple service program to fix the problem. The failures were caused by the accumulation of airborn particles on the optical lens. The fan that drew air into the drive for cooling could bring in enough dust and other particulates to accumulate on the lens and attenuate the laser beam to the point of causing read failures. Drives manufactured on or after December 1989 no longer have the cooling fan, eliminating its side effects. Those who purchased earlier versions of the drive are eligible to have the drive repaired through their authorized Apple dealer; Apple will reimburse those who paid for a drive repair associated with the problem if they supply the completed repair order (with dealer name, date of repair, parts used, and cost), proof of purchase, and proof of repair payment, to:

```
Apple Computer, Inc.
P.O. Box 78901
New Augusta, Ind. 46278
Attention: AppleCD SC Repair Extension Program.
```

Customers with questions should contact Apple Customer Relations at (408) 252-APPL.

The symptoms of the drive problem are indicated by failures to read or identify the presence of a disk, such as failure of the disc to "mount" onto the Finder Desktop or the unexpected ejection of a CD-ROM disc. The serial number (located on the back panel) of the affected drive will start with "F7", "F8", or "F9".

Apple has lowered the price of the *AppleCD SC* CD-ROM drive significantly, from $1199 to $899. When we reviewed the unit (February 1990), our major concern was the price/utility ratio; Apple has now improved that somewhat.

Visible commitment to Apple IIe and IIgs applications of the drive, and to available software for use with those systems, would balance the other end of the equation. Apple's press release does give credi-

ble "equal time" to the Apple II in the product description, though it neglects to mention the significance of the price reduction in anything but Macintosh terms.

Apple has also lowered *LaserWriter* prices. The price of the *LaserWriter NT* has been dropped to $4499 from $4999 (a $500 reduction) and the price of the *LaserWriter NTX* has been lowered to $5999 from $6999 (a $1000 reduction).

Apple's new outline font format will be called *TrueType*. "Outline fonts" are drawn using mathematical equations rather than reproduced from a scaled bitmap representation.

Apple has been promoting the advantages of outline font technology with respect to the Macintosh System Software 7.0 since the Worldwide Developer's Conference last May. There has been no word of possible implications for a IIgs System Software release.

Jean Louis-Gassée's resignation was confirmed by an Apple press release on March 2. Apple's new Chief Operating Officer, Michael Spindler, now oversees the company's worldwide product marketing and manufacturing functions. Engineering, networking, communication, and advanced technology functions now report directly to John Sculley.

Cirtech has sent us an evaluation unit of its CID-20 hard-disk-on-a-card for the Apple II series. The CID-20 uses a 2.5 inch, low-power, hard-disk mechanism with 28 millisecond (average) access time. It connects to your Apple II-Plus, IIe, or IIgs via a revised version of the Cirtech SCSI card (now with GS/OS driver support) to create a single-card hard-disk peripheral. Just plug the drive into an available slot, copy any necessary or desired files on it, and off you go.

The drive mechanism is still a little too thick to fit within the confines of a single slot width; that means it will usually block access to using a peripheral card in one of the adjacent slots. The side on which a slot is blocked can be changed by disconnecting the drive from the interface card (this requires only a screwdriver) and repositioning the drive to overhang the slot on the other side of the card. The drive draws a burst of power on startup as the drive "spins up" (within the capabilities of the Apple II power supply, however). This falls to a modest demand within a few moments. We tried the drive in a IIgs and a IIe for several hours with no problems and with some amazement at how small and fast it is. (We should mention that the IIe did not contain any infamous power-hungry cards other than 512K of expansion RAM on an auxiliary slot card.)

Since the drive mounts onto a Cirtech SCSI card, the assembly includes a SCSI connector you can use to attach additional SCSI drives to your computer. These will appear to your computer as ProDOS block devices or SmartPort devices. Normally the devices you can attach will be confined to ProDOS volumes with non-removable media, however, Cirtech plans a SCSI to parallel printer box that could save a slot. Apple is creating drivers for devices such as scanners and CD-ROM drives that work with its SCSI controller. These drivers will not work with Cirtech's card.

For the II-Plus and unenhanced IIe, a jumper can configure the interface to appear as a (non-SmartPort) ProDOS block device that can be booted automatically on powerup. (The II-Plus and unenhanced IIe ROMs don't normally recognize peripheral cards other than a Disk II interface or "clone" as startup devices.)

Cirtech provides the necessary software for partitioning large drives into multiple ProDOS volumes and software to allow partitioning the first ProDOS volume into sections for DOS 3.3, Pascal 1.3, and CP/M (MicroSoft or Cirtech).

The most attractive feature of the drive is that you can pick up your entire workdisk, slip it into your pocket (well, a large, antistatic pocket) and carry it to another computer as easily as you would any other peripheral card; this is an advantage even over other internal hard disks. It's also very fast, it's quiet, it takes up no room on your desk, and it includes a SCSI interface card. The least attractive feature is likely to be the price; the 2.5 inch drive mechanism is brand new and still expensive. It will push the retail price for the drive near the top end of the Apple II hard-drive price range (well, not as high as Apple's own drives, but no one counts those). Look for a $695 price on the 20-megabyte CID-20 and an $895 price on the 40-megabyte CID-40. Availability on the CID-40 is expected in 4 to 6 weeks, with the CID-20 available between now and our next catalog.—DJD

Ask (or tell) Uncle DOS

Corrections and amplifications

We managed to drop a "5" from the street address for Virtual Realities ("Miscellanea", March 1990, page 6.10), but Virtual says not to worry, the mail is being forwarded. They have a new address in any case: Virtual Realities, 1650 Spruce Street, Suite 209, Riverside, Calif. 92507, 714-788-0176.

Last month a reader supplied an address for a **PaintWorks Gold** upgrade. We've received calls from readers who have a version 1.5 that have had trouble applying the patch in the February 1990 issue (page 6.7b), apparently this is the updated **PaintWorks Gold** and it does not require the patch (so you can quit trying). The new version's "PaintWorks.Gold" file is small, and most of the **PaintWorks Gold** program is in the large file named "PROGRAM".

If you have trouble using any large file after copying it to a mass storage device attached to an Apple SCSI Card (and using the System Software 5.0.2 SCSI.Driver and SCSI.Manager), suspect that the file may have been munged by the file copy operation. We've received comments further delineating that the problem appears to occur occasionally with a file over 256K in size when it is written to a device using the 5.0.2 SCSI driver. Rather than use the System 4.0 driver to complete the installation as a reader suggested last month, Claris has released a technical brief with a more reasonable method which involves disabling the SCSI.Driver for the purpose of completing the installation. To do this, first boot your hard disk, use the Finder to open the "Icon Info" box for the SCSI.Driver icon (in the SYSTEM/DRIVERS folder of the boot disk) and click the "Inactive" checkbox. Then shut down and restart the system from the hard disk. This will cause GS/OS to use the generated driver for the boot device (hard disk), which is at least (unlike the 4.0 SCSI.Driver) version-consistent with 5.0.2. Complete your file copy or installation and then re-enable the SCSI driver and re-boot. Apple is aware of the problem and we assume it is reasonable to anticipate a fix to be forthcoming.

To our answer on connecting a galvanometer to an Apple II ("More input, please", January 1990, page 5.93) we should now add that the premiere edition of **8/16** contains an article entitled "Galvanic Skin Response" starting on page 10.—DJD

IIe: the past and future

I have a current need for information on the status of Apple IIe technology. Could anyone at **A2-Central** help me?
1. Any current plans to discontinue the IIe?

2. How is the IIe selling these days? Does it represent a substantial part of Apple's gross income?
3. Any stats on how far education is committed to Apple II's in general and Apple IIe's specifically?

D. M. Buller
Cedar Falls, Iowa

Here is the state of the IIe: Apple plans to continue selling the Apple IIe (and the Apple IIgs) to schools for many more years.

The IIe's sales through retail stores are near zero, however, about a third of Apple's sales to schools are IIe's. This is a considerable number of machines. They can't get that revenue any other way and they need it badly.

Over 60% of the computers in schools today are Apple. Apple intends to keep customers happy, and educators are expected to continue to use the IIe where it is appropriate for years to come.—TW

II versus II

A2-Central and the remaining Apple II line magazines have been struggling to meet the needs of both II and IIgs users. Nibble tried to combine II and Mac articles in the same issue for a while, but finally realized that it didn't work, and split the two.

When are you writers/editors going to stop pretending that the II and the IIgs are brothers? At best they are cousins. Apple has placed you in the uncomfortable position of splitting your once mostly united readers into two distinct sections, and I don't think you can continue to try and please all of them with a combined publication for a lot longer. My fear is that you won't be able to survive as two smaller circulation publications, and neither the true II nor new II will be served.

Toby W. Acheson
Lewiston, Maine

I'd like to quote a paragraph from a letter that I recently received from an Eamon Adventure Guild member and IIe owner:

```
Would you please include an updated list of
public domain sources for Eamon adventures
when the disks are returned. I have just about
quit reading what remains of Apple II maga-
zines.
```

Personally, I quit reading Apple II publications back in 1985-86 when "They" went 80% IIgs (or IIe-specific) and 100% ProDOS. And now the IIe owners are bailing out too, it would seem.

Friends, there are hundreds of thousands of IIe's out there in daily use, and if they can't find anything to do with their IIe's many of them will move on to other computers besides the IIgs. I originally got so deeply into Eamon because it offered me a hobby that didn't require throwing out $6,000 worth of hardware and software and starting over from scratch.

So what's my point? Many if not most IIgs power users are techno-junkies who live for the new and exciting, and a **lot** of these people will bail out if Apple ever does drop the II line to simple maintenance. Sometimes I get the impression around here that if we all think pure thoughts and tell Apple, Inc. what we think, why then they will see the light and the IIgs will regain the glory that the II-IIe line once had in the personal computer world.

Well, maybe Apple will come around, and maybe they won't. In my humble opinion the

IIgs world is driven entirely too much by the techno-junkie outlook and devotes more time than it should to getting up to snuff with the newest and the niftiest. And if Apple should pull the plug? The people who live by this mind-set will be devastated!

So what's my solution? Well, I don't really have any (wait, don't hit me yet!). But I think that Apple users and **A2-Central** would benefit greatly if there was a greater push to develop and support IIgs and IIe activities that could continue to grow and flourish and be **fun** even if Apple development stopped cold tomorrow.

And just imagine if word got around that **A2-Central** was a central touchpoint for such activities.

As a II-Plus owner it wouldn't affect me one whit if Apple pulled the plug on the IIgs; from my standpoint they pulled the plug on me years ago, and I am probably having more fun with my II-Plus now than I did when it was new. Most Eamon people are of a similar mind, and there are darned few IIgs people among our ranks. But we are having **fun** and my renewal rate for membership in the Eamon Adventure Guild runs about 85%. I think the IIgs crowd could learn a lesson here.

My Apple computing world does **not** revolve around the antics of Apple, Inc., and there is no need for yours to, either.

As a parting note: a friend of mine, being concerned about being left behind, retired his II-Plus and bought a PC-XT clone in 1983. To this day he doesn't use that clone for anything that he couldn't have done just as well with Plusworks, and finds the 8086 to be more than adequate for his needs. If he had had the benefit of a II-Plus support group he would still be among us today.

Tom Zuchowski
Clemmons, N.C.

We've been watching the situation on coverage of the IIgs versus other systems since complaints started to rise a few months ago, and though we agree the IIgs makes up a significant amount of coverage, we can't agree that the bias is as strongly pro-IIgs as some readers seem to feel. Here are our conclusions.

The letters we receive mentioning disparities in the amount of coverage align themselves as IIgs owners wanting no IIe (8-bit) coverage, and IIe/IIc owners wanting no IIgs (16-bit) coverage. On reviewing complaints in these letters, it seems that an article or letter that doesn't pertain exactly to their interests is often automatically categorized as one for the "other system"; we received several letters about "IIgs only" content after the "Applesoft database" article (**A2-Central**, November 1989), and that program will run on a II-Plus!

Believing the Apple II series may indeed be unique in this regard, we picked up a few Mac and MS-DOS journals. The Mac magazines cover little applicable to machines prior to the Mac Plus; there are some significant differences between the types of applications that are available for the Mac SE and Mac II series, and there will likely be another type of split when the Macintosh System Software 7.0 is released (due to its system requirements). MS-DOS journals are strongly admonishing commitment to 80386 machines and are orienting their editorial content accordingly; their world is also split between the changing hardware

and the differing requirements of the MS-DOS and OS/2 operating systems. Regardless of platform, technology moves forward, and those who don't move with it will eventually be left behind.

In covering the Apple II, we similarly believe we have to present the current and future technology while keeping a perspective on the heritage of the machines. The IIgs does share a significant amount of its character with the previous models, and it is the most compatible upgrade path for those who may eventually outgrow the 8-bit systems.

Denial of the older systems excludes many products that we still use. Tom Weishaar, for example, does use a IIgs, but he runs 8-bit software almost exclusively. His reason for using the IIgs is the availability of Roger Wagner Publishing's **SoftSwitch** program to allow several 8-bit programs in the IIgs's memory at one time. Normally he has the IIgs set up to act like three 128K IIe machines: one with **Talk is Cheap**, one with AppleWorks, and one to run miscellaneous ProDOS 8 programs. He is only a few keystrokes away from each environment. And it has been a lot more reliable than our occasional attempts to use similar applications under **MultiFinder** on our Mac.

Denial of the IIgs excludes coverage of the features that will be needed to carry the Apple II line into the future. We believe the IIgs's success is important to all current Apple II owners due to a "coattail effect". As long as there is a current Apple II product on the market, the chances of continuing support from third parties for Apple II customers are much greater. Apple II-Plus or IIe owners who perceive the success or failure of the IIgs as no more significant to them than the Mac are doing themselves potential harm. The IIgs is the forward direction; not everyone needs to move forward at the same pace, though.

We do believe that all owners of Apple II systems should attempt to move to the minimum system configuration for their current CPU that is most likely to be supported (64K II Plus, 128K enhanced IIe, one megabyte IIgs).

On all systems, you should also always use the latest version of the system software that is available. This means ProDOS 8 for the II-Plus, IIe, and IIc, and GS/OS (which includes ProDOS 8) for the IIgs. If using the latest system software requires upgrading your system, plan for the upgrade. DOS 3.3 and other older operating systems can be executed when you need to use them, but continuing to look backward at this stage is suicide. In 1984 when **ProDOS Inside and Out** was written, an appendix made several points against immediately converting to ProDOS. This situation has had several years to reverse itself as products have appeared that negate many of those arguments. If you have not changed, make the break **now.**

When it comes time to revise your hardware, it is also a good time to evaluate whether the cost of upgrading your current system might exceed its value. The classic example is trying to modify a II-Plus to run AppleWorks; if you already have an 80-column card, lower case, and a memory expansion then adding AppleWorks and **PlusWorks** may be reasonable. If you have to buy all of the items, you may find that retiring your II-Plus in favor of a (new or used) 128K IIe, IIc, Laser 128, or even a IIgs (planning only to run 8-bit software initially) may be more profitable in the long

run. Not only will you be able to use Apple-Works, but also other software expecting the newer systems.

As part of that evaluation you should consider that older systems do not see as much product development as newer ones, and that most problems (and, where possible, solutions) involving older systems have already been documented. This necessarily means that the II-Plus, which has not even been manufactured since 1983, will receive much less coverage
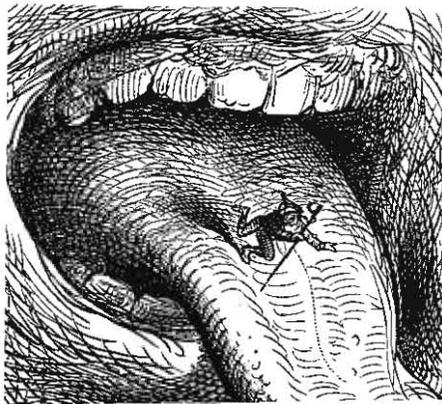
age than the later systems, and the IIgs will receive the most. We will continue to cover new products for all of these systems when appropriate, as for AppleWorks and the anticipated **Publish-It! 3.0**. But the chances of **A2-Central** covering older products such as DOS 3.3 **in detail** are low, although we do still try to answer such questions by mail when we can. And we're certainly willing to sell you our back issues, where many questions about older systems have already been answered.

We believe both the IIe and IIgs will have a long future. The IIgs has a capacity for more complicated (and, potentially, more powerful) programs to be written for it, but these are not the programs everyone desires to run. For those who prefer programs that run in the 8-bit environment for reasons of speed (the text display will always be faster than graphics), simplicity (why change if the program does what you want?), and so on, the IIe and IIc models will be viable for years to come.

We also agree with the philosophy that users should perceive that what Apple (or **A2-Central**) does of themselves has only a limited effect. We try to use this to our advantage, and publish many letters in the hope that an answer will spring from the Apple II users who have found solutions without waiting for someone else's agenda; much of our "power" lies in the expertise of our subscribers. Let us be clear: **We want those II-Plus and IIe tips, too!**—DJD

No waste of space

How do I set HIMEM in BASIC/ProDOS so it does not waste 1024 bytes all of the time?

Donald Burritt
Riverside, Calif.

The 1024 byte "system" buffer is needed as workspace for operations other than just a file buffer; it can't be freed as long as you are using BASIC.System as your interface to ProDOS disks. If you really need to find more space for your BASIC program, you might consider segmenting it (using CHAIN or overlays) or using an alternative environment such as **MicroDot** (see April 1989, p. 5.21) or the **Beagle Compiler**.—DJD

Laser *UDC* connections

Here is some advice related to the combination of Laser *Universal Disk Controllers* with AMR 3.5 drives. The two connection jumpers J1 and J2 are marked on the board; users need to keep track of this and also mark these at the connectors on the backs of their Apples. If you accidentally plug into J2, leaving J1 open as I did, you will experience (a) an inability to eject disks manually, (b) a very sluggish AppleWorks, and (c) slow file transfer rates; e.g. booting AppleWorks in 53 seconds and AppleWorks and UltraMacros in 75 seconds.

I had initially ruled out the "J2" possibility since remote ejects could always be made by using the "FASTCOPY" program, concluding that the drive had a bad switch.

I tried the other connector before packing the drive up. The improvement in performance was unbelievable. The Laser manual did not appear that explicit, although no configurations appeared on page 4 with J1 unused.

Perhaps others will benefit from this experience.

John L. Callahan
Winchester, Md.

UniDisk 3.5 and the *UDC*

I have a *UniDisk* 3.5 and Apple's *UniDisk* 3.5 controller card. Can you recommend any 5.25 disk drives that will daisy-chain to this configuration. How about another 5.25 drive and controller combination that will allow me to daisy-chain the *UniDisk* 3.5?

Wally Wong
Fullerton, Calif.

The **UniDisk 3.5** controller won't recognize any Apple-compatible 5.25 drive that we know of. The only current controller we know of that will recognize both is the **Multi-Kache**, a comparatively expensive solution.

We seem to remember that some older versions of the **Universal Disk Controller** would allow you to connect 5.25 drives and a **UniDisk 3.5**, but the newer versions of the cards that we have do not recognize the **UniDisk 3.5** and the manual claims compatibility only with the **Apple 3.5** ("IIgs platinum") type drives.
—DJD

PostScript print-to-disk

Continuing the saga of how to spool a PostScript file to disk: you do not need to fiddle with AppleTalk, or the Control Panel, or anything even remotely clever. Simply rename the "LaserWriter" driver file to "LaserSpooler" (or anything else really) and it will appear in your Chooser menu. Use as normal; that is, hold down open-apple-F while you click on the "Print" button.

For those readers without a phobia about the world of the IBM PC compatibles or Apple's "other platform": there is a vicious circle in the world of computing; software is only written for popular computers, computers only become popular if they have lots of software.

I recently contacted Nantucket Corporation, the extremely clever producers of my favorite development language Clipper. They are currently working on a Macintosh version, and I wrote to ask if they could do a IIgs one while they were at it. They replied that "our market research indicates that most IIgs users don't require a powerful application development environment" ... "however we will continue to

look into this area". If you would like a full blown development language that exploits the IIgs's Apple Human Interface, would be cross compatible with a Mac Clipper and a PC Clipper then blow the dust off your printer, launch your word processor and start writing to Nantucket. Stress the value of an industry standard language in schools/universities, the commercial benefits to Nantucket and anything else you can think of. The circle can be broken!

> Larry Heimendinger
> Nantucket Corporation
> 12555 W. Jefferson Blvd.
> Suite 300
> Los Angeles, Calif. 90066

In lieu of "Clipper-GS", I use *TML Pascal II*. It's OK; not brilliant but OK. However, it is hard to use the Apple Human Interface. If any other *TML Pascal II* users out there would like to swap ideas, hints, tips, techniques, and bugs please write to me. When I get enough letters I'll send out a list of our names/addresses and the major hints/tips, etc. Please enclose a reply-paid envelope for me to mail your list back. (If you can't do that, enclose $2.)

> Phil Tyler
> 13 Premier Street
> Old Trafford
> Manchester, M16 9WB
> England

AppleWorks defaults

In the November 1986 issue of **Open-Apple**, page 75, you printed a set of patches by Alan Bird to modify the page defaults for Apple-Works. Since these patches only function with AppleWorks 1.3, is there an update to this patch?

> James B. Wight
> Murrieta, Calif.

Actually, we later discovered that those patches affected the displayed page margins (and so on) on the screen, but they did not appear to actually work for the printout.

*Beagle Bros' **AW 3.0 Companion** (see January 1990, p. 5.90) contains a patch option to modify the page defaults. Early versions of the patch program reportedly had problems with the patch, but this was fixed in version 1.2. An update for owners of the earlier versions is available from Beagle Buddies and has also been uploaded to the major electronic services.—DJD*

ProSel, GS/OS, and OS/2

Your write-up in the March issue, regarding the use of *ProSel-16* for backing up GS/OS hard drives, has convinced me I need it.

GS/OS on a *Vulcan* with a *TransWarp GS* is truly a pleasure to use. At the office, I laugh when watching an 80386 machine boot OS/2 from a hard drive in more time than GS/OS originally took from a floppy!

> Clay Ruth
> Schererville, Ind.

Too protected

I recently wrote Brøderbund Software, Inc., about a problem I am having with *The Ancient Art of War at Sea* on my IIgs which has a *Ram-Keeper*, a *GSRam*, a *GSRam+*, and a *TransWarp GS* installed. In the reply that I received, Hilary Jo Nation states that Brøderbund "...software is not compatible with the AE equipment. It may have to do with our copy protection scheme."

And she suggests that I "...remove the alternate equipment, and it will run fine." In addition Brøderbund offered a 20% discount on a further purchase of Brøderbund software. (Of course, it is highly unlikely that I would be tempted to purchase any more software that may not work on my system.) Perhaps other potential buyers of Brøderbund software will want to forestall their purchases until they are assured by the company that this problem has been fixed. It is too bad that a copy protection scheme, which is abhorrent in the first place, is the cause of a technical glitch that causes Brøderbund software to crash. Perhaps Brøderbund should reconsider its copy protection policy. I am sure if enough people let Brøderbund know of their concern something will get done.

After the discussion about Hewlett-Packard printers in several recent issues of **A2-Central**, I wrote letters to the people suggested by Daniel Slaven. I would like you to know that I received a very nice reply from Lee Bailey at Hewlett-Packard. At least they are listening and responding. Let's keep those cards and letters coming, folks.

> Jack Clay
> Leysin, Switzerland

Desktop programming help

Could you recommend a good text on Apple Desktop programming which includes the following topics—fast window drawing techniques, custom controls, text editing?

What is your opinion on the book *The Macintosh Revealed; Vol 2, Programming with the ToolBox*, by Stephen Cherticoff? I have purchased almost all the programming books listed in your catalog from various sources. Yet I feel the techniques presented are still primitive or inefficient.

> P. M. Lim
> Singapore

We have not reviewed that specific book. Although we have found Mac books helpful in explaining concepts of the Desktop environment, they are less helpful when the programming considerations start becoming very tightly bound to the specific system the program is for.

*The IIgs system software is still evolving rapidly, and the lead time on a book is several months to a year (or more). Although the Addison-Wesley technical manuals on the IIgs form the core of a IIgs programming library, at this time the sources for the most current manuals is Apple Computer's APDA program. Manuals available only through APDA at this time are the **GS/OS Reference** (Volumes 1 and 2) and the third volume of the **Apple IIgs Toolbox Reference**, which contains information on the newer toolsets.*

*APDA also sells **IIgs Demo Sampler Source Code** disks which contain more current programming examples from Apple's Developer Technical Support staff; these include specialized tricks showing how to make the IIgs Toolbox perform at its best. Also available are the **Apple II Technical Notes** which are used to update and expound upon information from the core manuals.*

Very up-to-the-minute information can be found in the Apple II programming sections of electronic services such as America Online, CompuServe, GEnie, and so on, if access is available in your area. You can exchange questions and techniques with other programmers,

and source code examples are available in their software libraries.

*It is impossible to stay current with the IIgs (or Mac) programming environment without having access to the current manuals and technical notes which makes membership in APDA mandatory if you wish to be on top of new developments. Though the volume of new information for the less complicated 8-bit environment of the IIe and IIc is not expanding as rapidly, even this information is updated regularly and requires attention to the new manuals and tech notes for these systems. For example, APDA is currently the only source of the newest **Apple IIc Technical Reference**, which contains information on the IIc Plus.*

You can obtain a membership form from:

> APDA
> Apple Computer, Inc.
> 20525 Mariani Avenue
> MS: 33G
> Cupertino, Calif. 95014-6299

Membership is $20 per year in the U.S., $25 for Canada and Mexico, and $35 in all other countries (payable in U.S. dollars).—DJD

Megaboard in Europe

D. J. Rotenberg told us about the manufacturer of the *Megaboard*, Prisma Datensysteme ("*Megaboard* found", December 1989, pp. 5.86-7). This company is not supporting the *Megaboard* anymore; they sold the rights to:

> ICT GmbH
> Aschaffenburger Str. 133
> 8758 Goldbach
> WEST GERMANY

quite a while ago.

I recommend for anyone having problems with the *Megaboard* outside the U.S.A. to contact ICT.

> Stuart Hollywood
> Berlin, West Germany

Smarter booting

I thought you might like to let your readers with hard disks know about a useful public domain program that I have written and uploaded to GEnie. It allows the hard disk user to turn on his computer and all peripherals (including the hard disk) at the same time. For example, consider this system: a IIgs with a hard disk in slot 7 and the boot slot from the Control Panel set to 7. If both the hard disk and the IIgs are powered up at the same time, you will get the "Check startup device" message, since the hard disk will not yet be up to speed. You then have to press control-open-apple-reset after the hard disk is ready. That is inconvenient; I didn't care for it on my IIc which is why I wrote *SmartBoot*. Using this program, you make some device that is immediately ready when the computer is powered up (such as a 5.25 or 3.5 disk drive) the "primary" boot disk. On booting to that disk, *SmartBoot* is loaded into memory instead of ProDOS. *SmartBoot* waits until it has determined that the "secondary" boot disk (in this case, the hard disk) is ready; it then transfers control to that device and performs a normal boot. This will work with either ProDOS 8 or GS/OS, and works with all Apple II series except the II-Plus and original IIe (*SmartBoot* uses opcodes not available on the original 6502 processor).

The program will also boot to any device on a SmartPort chain, not just the first one. This would be useful if a hard disk on a SmartPort chain (as on a IIc) was necessary to be put in a position other than the first in the chain.

If it is not possible for *A2-Central* readers to download this from GEnie, I would be willing to send it to them. All I ask is either a disk (5.25 or 3.5) and return postage, $5.00 if you want a new disk. I will also notify you if I update the program. And if a version that works on a II-Plus or original IIe is really needed, that could be done also.

Steven Weyhrich
2715 N. 112th Street
Omaha, Neb. 68164

ROM disks

I have a IIgs with a one-half megabyte Cirtech *ROM-512* disk card attached to the memory expansion card. On it I have placed AppleWorks (with speller), *AppleWriter*, ProDOS and BASIC.System, DOS 3.3 (*Pronto-DOS* version), *Copy II-Plus*, and a half dozen other programs that are selected from a menu that is automatically booted. I do not have to boot from a drive or wait for the hard drive to come up to speed. The drives can be accessed after booting from the ROM disk. All programs load instantaneously with AppleWorks taking a maximum time of two seconds. By using the three finger reset I can reboot the menu to switch between DOS 3.3 and ProDOS programs that I have on the ROM disk.

To set up a one-half meg card you format 512K of RAM, place all the programs you want onto that RAM disk and make sure they run. Then place a driver program (furnished by the manufacturer) at the beginning of the RAM and transfer sequential segments of the RAM onto disks as binary files. This can be done from the monitor or with a short BASIC program. Finally, burn these 64K segments into 512K EPROMS, insert them into the card, and you're ready to go.

What surprises me is that so little has been said or promoted about ROM cards. I realize that static RAM cards are available and one would need an EPROM burner to use a ROM card, but the cost of EPROMs are about half that of static RAMs and one does not have to worry about batteries. Perhaps the problem is that some assembly is required?

D. Herrmann
Beloit, Wisc.

The major disadvantages to the EPROM cards are limited size, and the necessity to burn new EPROMs whenever a change is required. In addition, some programs (like AppleWorks) have to be modified to operate from a ROM disk since they expect to be able to write to the boot device.

*We agree that there are applications for such devices. We sold so few of the Cirtech versions that we no longer list them in our catalog, though they are still available (the card attaches to the Cirtech **GS-2** or **GS-8** RAM expansion).*

*For older Apple II's, a slot-based EPROM device is the **quikLoader** ($179.50) from Southern California Research Group, Post Office Box 593, Moorpark, Calif. 93020, 805-529-2082. The **quikLoader**'s maximum capacity is 512K (using 27512 EPROMS) and it can be used in Apple II, II-Plus, and IIe systems. They also manufacture an inexpensive*

EPROM burner, the **PROmGRAMER**, for $149.50.—DJD

Faster AppleWorks search

In Bill Long's letter (October 1989, page 5.69), he speaks of the long AppleWorks time to search 2400+ records using five criteria. I wonder if the following approach will speed things up for him and others:

1. Rename the up-to-date file temporarily to Temp.

2. Search on the opposite of the first two criteria. By this I mean that if you want records of males who own Buicks, plus three other criteria, select records where "sex is not male OR car owned does not include Buick".

3. Then delete those records (from your Temp file only, of course). Use open-apple-1, then open-apple-9, then Return, while still in the records selected in 2.

4. Now re-select records with the remaining three criteria. Your database is less than half its previous size, so selection is faster yet.

5. When you are done printing the list, saving it under a new name, or whatever, you can remove it from the desktop and load the original file from disk and do the next task.

I've used this on a 2000 name list and it works fine. It is one of the unsung merits of a database that is memory-based, not disk-based!

W. Henry Linton, Jr.
Wilmington, Del.

Can you help us find...?

Is there any way I can change the video display of AppleWorks? My eyes are poor and it would be less eye strain if I could enlarge the text displayed on the screen while writing or editing in AppleWorks. Playing with the 40 and 80 character switch on my Laser has no effect. Is there some software package which can change the text size?

Russ McClain
APO New York, N. Y.

I work in a school with a diverse ethnic population. We are currently looking for a program that can translate text between English and Polish or Spanish. We also would like to be able to print Polish characters on our ImageWriter II printer. Do you know of any products which might serve our purposes?

Carole Dale
Wilmette, Ill.

I have an eight year old 20 megabyte Seagate drive built by Mountain Computer. I have used it since 1981 on successive II's but they never implemented the ProDOS version of their software. It runs under DOS 3.3, CP/M and Pascal. Have you or any of your readers any suggestions where I can find someone to help me implement ProDOS on this drive? I am willing to pay a fee for this service if someone is interested.

Michael D. Merren
San Antonio, Texas

Do you or any of your readers out there know what happened to the Pinpoint Publishing program, *Micro Cookbook*? I'm looking for a ProDOS-based recipe program which can be put on a hard drive. Any ideas?

David Ziebarth
Rockford, Mich.

*We don't know; we hope someone does. We'd also be interested in the status of **ProFiler** and **Let's Talk**, which were sold indepen-*

dently before being marketed by Pinpoint.

*Often, when a company discontinues selling packages it has acquired from other sources, usually (but not always) the rights to the package revert to the original owner or copyright holder, who may then sell the package directly (as for HyperDyne Software, which owns **Command.Com**) or sell it to another company to distribute (as for Gary Little's **Point-to-Point** package, now sold through Beagle Bros). We are always interested to know where Apple II products have gone, though often the information doesn't reach us. If you know of such products, please let them know about us; we hope they'll send us literature; what doesn't get used in the newsletter may very well be used when we answer the mail.*

*Occasionally, products are just discontinued, as eventually occurred with **VisiCalc**, never to be seen again. In that case, the best attack is to search for a currently supported product with similar capabilities.—DJD*

Page breaks broken?

I have been experiencing a very unnerving problem when using both *MultiScribe GS* and *AppleWorks GS* and hope you can help me solve it. When printing documents two pages or longer the printer consistently prints on the page break. I have tried readjusting the platen prior to the onset of printing but this results in smearing the first line of text and little or no bottom margin. Any help would be appreciated.

Matt Zimmer
Vero Beach, Fla.

If the printed page seems to be "overlapping" to the next page, it might be paper alignment (as you suspect) or the length of the printed page.

Check the length of the text printed for one page. If it exceeds the length of one page of your paper (11 inches for a standard U. S. letter; your mileage may vary), check the setting for the paper length in your program's printer settings and in any form definition that you are using.

Some programs (such as AppleWorks 3.0) have a "standard settings" option for installing a printer as well as individual "printer setting" options in the various modules that allow you to change the length of the page being printed. You have to check both of these to make sure that the page length defined for your printed document is the same as the length of the page you are printing on if you want the printed output to fit correctly.

*For IIgs desktop applications such as **AppleWorks GS** and **MultiScribe GS**, the "Page Setup" options are normally accessed as an item on the "File" menu. There are options here allowing you to select standard page sizes for "US Letter" (8 by 11) or "US Legal" (8 by 14) formats as well as international "A4" and "B5" page sizes. If you choose a different printer, you should always check "Page Setup" after your selection to make sure you have the proper assignments for the current printer.*

*The other place to check is within the program or program module you are using to print. In **AppleWorks GS**'s word processor, we have noticed the lack of an option to set top and bottom margins, which would (if left unmodified) cause the full length of a page to*

be used for printing. If you don't have the top of the paper aligned exactly at the top of a new page, then you'll overlap the page break when you print more than a page of text.

You can simulate a top or bottom margin in **AppleWorks GS** by defining a "Header" or "Footer" (respectively) with the desired number of blank lines, up to the limit that the "header" or "footer" can sustain for the font in use. If you already have the print head positioned to the line where you want printing to start at the top of your first page, defining a sufficiently large footer should cause enough blank space to be printed at the bottom of each page to avoid printing on the perforations.—DJD

Epson *LX* help

I have used an Epson *LX-80* for several years with my enhanced Apple IIe and AppleWorks (various versions). One feature I need for superscripts is a backspace. I installed the Epson *LX-80* as a Custom Printer and defined subscript as control-H. This allowed me to print the following:

James S[0]. Sibley

That is, the superscript begins above the period instead of after it.

This works fine, but when I installed the *LX-80* as a Custom Printer I lost the bi-directional printing capability. I called Epson and Apple and several Apple dealers in the Dallas/Ft. Worth area asking for an initialization string that would correct the problem. Nobody could help me!

In AppleWorks 3.0 the printer commands are shown for all the printers and what is there for the Epson *LX-80*? "Escape p0 Control-R". I have added that to my custom *LX-80* setup and it works great. Why couldn't Epson, Apple, or some other folks have told me that years ago?

James Sibley
Midlothian, Texas

Transtar codes

I need the printer codes for a *Transtar 120* to enhance it. The ROM of the *120* seems to have acquired a problem where it prints out small 11 or parallel lines for an "e" which sort of botches up the printing.

I'd appreciate it if you could chase down the *Transtar* printer codes or tell me where to keep looking. It's a parallel printer; I have an old Microtek card in slot 1.

I'd also like to find a club for grandmothers trying to get literate; computing with training wheels, you might say. I don't ken bits and bytes too well yet.

Ann MacKay
Salisbury, Md.

We came up empty on the **Transtar** *here; possibly a reader knows of the manufacturer or a current source for parts and manuals. From your description, it sounds as if there may be a hardware problem somewhere in the system; if the printer has a self-test mode (this may require a manual to find out), it may help to execute it to see if the problem is in the printer itself or if characters are being "transliterated" on their way to the printer from the computer.—DJD*

24-pin driver found

I'm considering buying a Panasonic *KX-P1124* to replace my aging *FX-85*. Do you have any idea about how compatible 24-wire printers are with Apple software? I don't expect too

many problems with character-based programs like AppleWorks 3.0, but would it be reasonable to expect that graphics-based programs like *AppleWorks GS*, *Beagle Write*, *Publish-It!*, etc. need a driver specific to the *1124*?

Rick Pedley
Kingston, Ont.

Graphics-based printing will require a special driver to use the full resolution of the 24-pin printer. The IIgs programs should all use the same driver, if installed; unfortunately, we know of no GS/OS driver for the Panasonic.

In the 8-bit world, **Publish-It!** *versions 2.0.2 and later now include a higher density driver for the Epson* **LQ** *series that should also work with printers that emulate those Epson models. One reader has called to advise that he is using the Panasonic* **KX-1124** *with the driver.—DJD*

VIP Professional

For a couple of years I have been using *VIP Professional*, a *Lotus 1-2-3* look-alike for the IIgs with an Apple Human Interface added. But the folks at ISD Marketing that sell the program fell into the trap of producing a complex program before Apple produced an operating system. So *VIP Pro* will not work with System Disk 5.0.2 (or 4.0). It must be cold booted from ProDOS 8. I was concerned that the product would be dropped, as so many have in recent months. But recent phone calls to the company have produced a bit of a surprise: they are working on a new version, due in about one year(!), that will be compatible with GS/OS and, I believe, will be updated to the current *Lotus* version level. The IIgs does not have a power spreadsheet except for *VIP Pro. Lotus 1-2-3* has 97% of the IBM spreadsheet market. To have a compatible product available for the Apple is a big advantage, especially for those people who have to interface to the IBM world.

For more information, contact ISD Marketing, 2651 John Street, Unit #3, Markham, Ontario, Canada L3R-2W5, (416) 479-1991.

Ken Lessing
Fresno, Ohio

Fractal source

Anyone looking for some interesting programming exercises involving graphics should get a copy of *Chaos, Fractals, and Dynamics* by Robert Devaney, published by Addison-Wesley. High school algebra and trigonometry are the only mathematics you need understand to follow the book. "Computer experiments in mathematics" is the book's subtitle. Programming exercises are blocked out for you to execute in BASIC, Pascal, C, or whatever you are using. Just make sure that you can write to the graphics screen in color.

Bruce Ristow
Rochester, N.Y.

Disk labels

I would like to thank you for your excellent publication, which I have been reading since it started. I would also like to add my thanks to you for your continual pressuring of Apple about the value of the II series computers. I use my IIe and IIgs at work as a molecular biologist. I use *AppleWorks GS* for writing grants and manuscripts using the *LaserWriter* for final output. It isn't perfect but it is at least as fast as *WordPerfect* on the Mac SE.

My system uses the *TransWarp GS* and Sys-

tem 5.0.2. I use *ORCA/Pascal* for a series of programs written for general use in phylogenetic analysis of DNA sequences.

Another instance of excellent scientific programming on the II series is a DNA analysis package distributed free by Christian Marck from France. This uses very fast overlays of Applesoft code using binary files and, when appropriate, machine language for fast calculations. For instance, it will print a matrix comparison to the *ImageWriter II* (using the superior resolution of the printer rather than the screen) of a 1000 by 1000 matrix in less than 15 minutes. By comparison a program ported from an IBM to the Mac SE/30 was going to take overnight to do the same thing with less resolution on the screen.

My second point is in reply to the letter by Don Goldblatt on page 6.7a (February issue). I have published a program which will write AppleWorks database files for ProDOS, CP/M, Pascal, and DOS 3.3 format 5.25 disks and for ProDOS, Pascal, *UniDOS* (DOS 3.3), and *Appli-card* CP/M format 3.5 disks. For ProDOS it reads all directories. Not only that, it will print labels for both of the formats. For the 3.5 disk labels it puts the name of the disk and a disk ID on the spine so that you can find the disk in a box without taking all of the disks out!

You might also want to give some publicity to *GS+*, a new bimonthly magazine specifically for the IIgs which is published by EGO Systems, P.O. Box 15366, Chatanooga, Tenn. 37415-0366. It is only $15 per year or $36 with the disk. There is much excellent source code on the disk to help IIgs programmers.

John A. Hunt, Ph.D.
Honolulu, Hi.

Permanent Portable IIc

To Peter Schaper's question from Australia. What you are looking for is already available, with a little imagination! Here goes:

SCREEN: Two are available, Apple's LCD Screen, and one by *C-Vue*. Although Apple does not market their screen currently, you can still find them used at user group garage sales, computer flea markets, and occasionally in the newspaper Classified. The *C-Vue* is available from Roger Coats at: 4684 Firestone Street, San Diego, Calif. 92117 Telephone: 619-274-1253

A tip with the Apple screen: although rather dim, remove the plastic glare filter from the screen, and replace with a sheet of clear Plexiglas, and the improvement is about 400% in "viewability". Nothing like that is needed with the *C-Vue.* "

POWER: Here you have several options. The easiest is the *Prairie Portable Power* by Linco, Inc. at $119. Again, Roger Coats was my source (more on them later) and is sole distributor. This includes a 110 volt recharger. The *Prairie Power Pack* includes a nice leatherette carrying case.

Since the power supply is 12 volts DC, a regular small battery such as sold by radio control model stores (I use Tower Hobby P. O. Box 778, Champagne, Ill. 61824 (telephone 800-637-6050 for assistance) for $29.95, can be used, at a lot less cost. For a charger, a cheap battery charger from the same source at $8.89 (or a local car parts supplier such as Pep Boys) will

serve nicely at about 1/3 the cost. But no carrying case comes with that arrangement!

But you must periodically have access to 110 volt AC line with this arrangement (so far.) Here, a marine supply discount house can help. They have available several sizes of solar cells varying in price between $100. and $400. The smaller one will do nicely. These solar cells are used for recharging marine battery on sailboats for extended cruising. I purchased mine from E & B Marine Discount Supply, 8807 Annapolis Road, Lanham, Md. 20706 (telephone: 301+577-0660) at $98.99 for a 5 Watt unit. You also need a diode to prevent back current, and a kit for this is $9.95.

This arrangement works fine with the original Apple IIc. But what to do if you have to buy a new Apple IIc Plus? Two things: Advertise that you will exchange EVEN a NEW IIc+ for an older, original IIc (in good condition, of course!). You should get many takers for that offer! Also, locally in Washington, DC, a new Apple IIc Plus can be had for $490, which makes it the best computer buy around, in my opinion. And it runs at 4 MHz (By the way, my original IIc has an 8 MHz Zip chip from Macmanco, Inc. 2905 Davidson Road, Flint MI 48506 Telephone 312+232-0241 at $149.)

Incidentally, this will also power an Apple Unidisk 3.5 as a part of the setup. No problem at all.

The second choice is if you have a new Apple IIc Plus, and don't want to give up the internal 3.5 drive, or the regular monitor. Back we go again to the auto parts store, or the Marine Sup-

ply store. What you need is an Inverter. Marine stores sell them for Sailboats so you can watch TV, run your electric razor, etc. Generally costing about $25 to $150, they will do the job quite nicely, thank you. Although the cheaper ones produce 110 volts AC in a "square sine" wave, they will run well on the Apple IIc. If you are concerned, you can buy a more expensive unit which will give you a nice curved sine wave, or you can purchase a transformer to "smooth" the current. But not really needed.

PRINTER: Eastman Kodak, Inc. makes a battery powered portable Ink Jet printer called the *Diconix*. It is available in both a serial and parallel model for $299. (Roger Coats again!.) I bought the parallel model, and use the Apri-Corn serial to parallel ($49) converter. This printer uses 5 "C" size rechargeable nicad batteries, and will print about 50 full pages single spaced. To print 100 pages, just carry a second set of batteries!

ROGER COATS, Inc. This is the most pleasant group of people I have ever dealt with. Roger, Matt or Steve are the ones I have mostly talked with. We had a burglary last November, with $15,000 worth of Apple II equipment and accessories stolen. I replaced it all through Roger. And their pricing is very "aggressive". Very good!

So picture this: It is a bright, sunny afternoon (could have been cloudy and the solar cell will still work!) in an abandoned quarry in the suburbs of Washington D.C. Sitting at a card table (with an umbrella over his head to keep the bright sun from the screen) is a young 59-year old kid wearing a leather vest, jeans, and a hat with a bright red plume, with an Apple IIc in front of him, busily entering timing results for the Quicky-200 race contestants in his Apple-Works 3.0 spreadsheet. Printing them rapidly on his printer with *TimeOut SideSpread*, within 30 seconds of the end of each heat, contestants and judges have a printed copy of the cumulative times and scores of all entrants and their relative positions within the group!

Well, I dearly love my Permanently Portable Apple IIc, with 1 MEG of RAM, and an 8 MHz Zipper, and AppleWorks 3.0!

Leon H. Raesly, LCSW
College Park, Md.

Lee is a member of the Washington Apple Pi, Ltd. (7910 Woodmont Avenue, Suite 910, Bethesda, Md. 20814), an Apple II users group of over 10 years standing. WAP publishes a very comprehensive newsletter, complete with regular Apple II, Mac, and even Apple III articles.—DJD

How fast?

Just when you (MS-DOS users) thought it was safe...

The Apple is slow, the Apple is outdated, the Apple is old, inadequate technology. Viva La MS-DOS! Oh, yeah!

The February 1990 issue of *PC Magazine* has a very interesting article on low-end desktop publishing programs for the MS-DOS world. Seven programs ranging in price from $129 to $299 were examined. The testing was done with a fixed format four page newsletter. That is to say, the same newsletter design was used to test each program.

The test hardware was an 8 MHz IBM AT (80286 machine) with the usual 640K of main memory, 1 megabyte of EMS memory, a 30 meg hard drive, VGA monitor, and interface. The

printer was an *HP LaserJet Plus* with 2 megabytes of memory.

Speeds were measured for five activities: opening the test file, save the test file, turning Page 1 to Page 2, turning Page 1 to Page 4, and printing the document. The file size of the complete document was also compared.

We took the liberty of doing our own benchmarks using *Publish-It!* for the Apple II. (Not only is it the best Apple II DTP program, it was one of the MS-DOS programs tested.) The Apple hardware used was a stock Apple IIgs with one megabyte of memory, the RGB monitor, and one 3.5" disk drive: the file size was 24K (third smallest), opening the file took 9 seconds (fastest), saving the file took 15 seconds (fifth), turing page 1 to page 2 was 5 seconds (second), turning page 1 to 4 was 18 seconds (sixth), and printing took 23 minutes (seventh).

Note the difference between the various DOS programs and then look at how fast the "obsolete" Apple IIgs computer is. Doing the same tests with a SCSI hard drive equipped IIgs was even better. The load time dropped to several seconds, the print time fell substantially. The page turning didn't change because the program loads to RAM and doesn't access the disk when changing pages. Because of the excessive emphasis placed on hardware numbers in the DOS world, we deliberately used a minimal Apple hardware configuration for the tests here.

The Apple print test was done with an *ImageWriter II* using the *Publish-It!* double strike print choice. *Publish-It!* will print to Apple *PostScript* laser printers but one was not available at the time for test purposes.

The article is very informative. It is amazing to read the evaluations of the different programs. Most were rated as poor for handling day to day DTP tasks and only one program managed a fair to good rating for most tasks. Considering the hardware necessary to merely run the programs, it is interesting to observe how DOS users are shortchanged in terms of performance and ease of use. When viewed in the light of the attitude common among computer users and buyers that MS-DOS is the "right" way to do things, it is a study in contradiction. The reviewers made repeated mention of font difficulties, the lack of uniform laser printer support, the lack of WYSIWYG consistency and the extreme variations in the graphics processing capabilities of the programs.

The MS-DOS world must be congratulated for doing a magnificent job of convincing computer users that hard to use, complex computer programs are the "best". That straightforward, no nonsense systems like the Apple IIe and the IIgs are past their time and only fools and zealots would be caught dead with one.

Vern L. Mastel
Bismarck, N.D.

We couldn't reproduce the complete table here, so we just reported the Apple II times and rankings (out of the eight programs listed). Benchmarks are very tricky creatures, but we were intrigued by the results, especially considering the Apple II tests were done on a floppy-based system.—DJD