A2-Central™

A journal and exchange of Apple II discoveries

HyperStudio 3.0 preview

By Jay Jennings

Roger Wagner Publishing debuted *HyperStudio* in late 1988. Since then it has become the number-one selling piece of Apple IIgs software. Never one to rest on his laurels (whatever those are), Roger Wagner decided *HyperStudio* needed even more features and power. For the last 10 months, the *HyperStudio* programming team has been working on the successor to *HyperStudio 2.1*.

Roger Wagner announced *HyperStudio 3.0* at the 1991 **A2-Central Summer Conference**. There are so many new features that it would be impossible to cover them all here. In fact, with the amount of room available, I'll only be able to dig into a few of the features in depth.

First, here's a quick overview of some of the features and enhancements that are the most important. Buttons can now be edited. If you like 320-mode graphics, you can use them in a *HyperStudio 3.0* stack — and going from 640- to 320-mode pictures and back is seamless. Cards, buttons, and all other objects can be named and referred to by name. *HyperStudio 3.0* has enhanced painting tools, including floating tool and color palettes. A scripting language is included that gives you complete control over the *HyperStudio* environment. And New Button Actions take over where XCMDs left off. All of this means more power for the end-user with greater ease-of-use.

Group Objects. An addition to *HyperStudio 3.0* makes creating identical screens much easier (and the identical screens take less memory). You can specify group cards and group objects. This means that any change made on one card will take effect on all the others in the group. And group objects can be changed on one card and the changes will take effect on all other cards in the group.

As an example, if you create a stack consisting of 10 group cards, you can place a "home" icon button on card one and it will be duplicated throughout the stack. No more copying and pasting buttons from card to card. And if you decide the background needs a little touchup, you only need to make the change to one card – the other cards in the group will be updated automatically.

Since you can choose to make any specific object a group item, you can create objects that are duplicated on each card, yet retain the ability to have unique objects on any card. In other words, you can have your home icon duplicated across multiple cards yet have different buttons (or other objects) on each card.

The biggest change in *HyperStudio 3.0* is the introduction of editable buttons. In the past you had to delete and re-create a button that wasn't doing exactly what you wanted it to do. Since creating a button was very simple, this wasn't a major problem, but it was a great annoyance. Now you double-click on the button with the pointer tool and the dialog box shown on the next page in Figure 1 pops up. You can change the type of button, the button name, all the actions that particular button is in charge of, the foreground and background color, and so on. Anything you could do when creating the button can be done in edit mode.

Instead of the four different button styles the old *HyperStudio* let you choose from, version 3.0 gives you eight styles. And one of those styles, the "expanding lasso", can turn any oddly-shaped object into a button. If you have a map of the United States and want to make the state of Kansas a button, you can place an invisible rectangular button over the top of it. And, since Kansas is mainly rectangular, that works okay. But what if you needed to make a button out of Alaska? You could take the freehand button tool (one of the new ones) and trace around the outline of the state, but unless you're really good at staying on the line (with a mouse, no less) you'll end up with a hit-and-miss button. Instead, choose the "expanding lasso" button type and click in the middle of the state of Alaska. Voila! The button expands to fit the outline of the state. Now when you click anywhere inside the state you'll activate the button. You can even make invisible buttons highlight when clicked so you get some visual feedback when a button is pressed.

The number of things a button will do when clicked has also been increased. Most of those button actions are discussed later in this article.

One of the best "freebies" you receive when buying *HyperStudio* is the digitizer card and microphone. The card won't win any awards for innovation (although I'm glad that it doesn't take up a slot), but it does a very good job of recording voices and sound effects for use in *HyperStudio*, or other programs that utilize digitized sound.

There are two ways to create a digitized sound for use in *HyperStudio*. The first way is by using *SoundShop*, a stand-alone program that comes with the *HyperStudio* package. With *SoundShop* you can digitize the sound and then edit it. You can add an echo, reverse the sound, loop it, and otherwise manipulate it in order to get exactly the sound you're looking for.

The second (and easiest) way to include digitized sound in *HyperStudio* is to add sound to a button. When you choose that option from the Button Actions dialog, you'll get the screen shown on the next page in Figure 2. While using this Tape Deck you can choose one of the sounds that's built into HyperStudio, re-use a sound that's already been installed in your current stack, load a sound from a disk

THE FIRST GRAPHICAL USER INTERFACE COPYRIGHT LAWSUIT.

OH HEY-GREAT STUFF, MERLIN! SWIRLING VORTEX, FLAMING SKULL, HARBINGER TOAD— JUST LIKE THE CALDRON USED BY THOSE THREE WITCHES UP ON THE HILL.
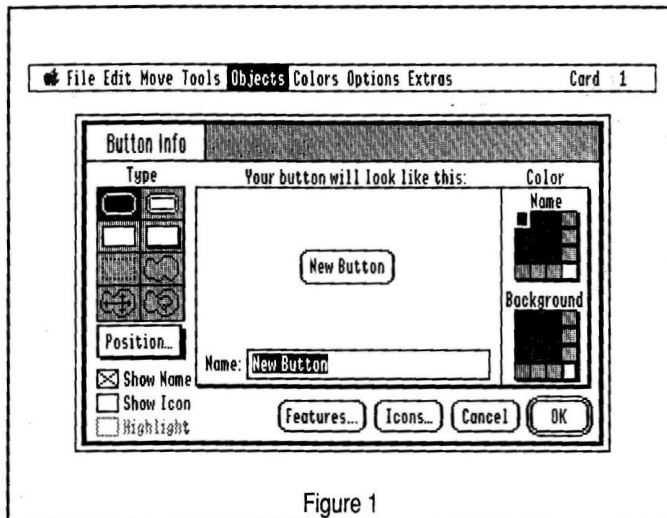
Figure 1

file, or record a sound on the spot. Notice that there are no sound editing features. If you don't like the sound you record, just record it again until it sounds right. If you need more control over the sound, bop into *SoundShop* and do your recording and editing.

Once you've decided on a sound, you need to attach it to your stack. With the older versions of *HyperStudio* you had two options — embed the sound in the stack or make it disk-based. In *HyperStudio 3.0* you have a couple more options.

Your third way to store (and access) the sound is by placing it in the resource fork of the stack. This has some of the benefits of disk- and stack-based sounds. A disk-based sound takes up less memory, but a stack-based sound is faster (quicker to play when activated by a button, not faster in rate). A resource-based sound stays on disk until it's called. It's then read into memory, played, and then it sits there. As long as there's room for it in memory it'll be there waiting for the next time it's called. If memory gets tight, the sound is purged from memory. Then if it's needed again in the future, it's read back in from disk.

You can also choose to compress your sound. This has the advantage of taking up less room on disk and in memory, but it also has the disadvantage of being a little slow in the "play" department. I created a stack with six buttons that played a specific sound using each of the access methods – both with compression and normal access. The methods that used no compression were almost instantaneous – even the disk-based sound had no perceptible lag. That will vary, of course, depending on whether you use a fast hard drive or a slow floppy. The compressed sounds all took about 2 seconds between clicking the button and the time they started playing. In some instances this time lag won't be an issue. But if you want instant aural feedback when you click a button, don't compress the sound.

New Button Actions. Back in the good ol' days we used XCMDs (external commands) if we needed more power than *HyperStudio* gave us. An XCMD could be called by clicking a button. Its function depended on what the creator of the XCMD wanted it to do. An XCMD could change the border color, display a message in a dialog box, or create animation on the screen. Anybody could use an XCMD, but few people did. It was a little more complicated than most "users" wanted. And Roger Wagner thought the word XCMD sounded so technical that it scared people away. So he changed the name.

But *New Button Actions* aren't just XCMDs with a new name. They still increase the power and functionality of *HyperStudio*, but now they're easier than ever to use. Look at Figure 3 for a peek at the New Button Actions screen. The scrolling list at the left shows all the NBAs available to you. If you want some different options, however, click the "In Use" or "Disk Library" buttons at the bottom of the screen. That's right, you can load NBAs from a library file off disk. There's another opportunity for programmers. Create a disk full of New Button Actions and get rich.

When you choose an NBA, a description of how to use it pops up in the text field on the right. If parameters are needed for the NBA, a box will pop up when you click the "Use NBA" button. This parameter box can be as simple as a text edit field, or as elaborate as the one shown in Figure 4, which is the parameter screen for Steve Allen's "Animate" NBA.

Screen transitions are the visual effects that you see when you go from one card to another. They include things like a fast wipe (basically no special effect) and a venetian blind effect. In the old *HyperStudio* we were limited to 12 different transitions. In *HyperStudio 3.0* there's an unlimited number. The program only comes with 29 different kinds, but click a button in the transition dialog box and you can load transitions from library files or other stacks. I expect third-party developers to come out with transition libraries in the very near future.

There's a "Try Me" option in the transition dialog box. Click it and you'll see what the effect looks like. There are also three different speeds to choose from. Try out the different effects and speeds, and when you're satisfied, click okay. These new features make moving from card to card very cool.

Since *HyperStudio 3.0* now accepts 320-mode pictures, you may wonder about mixing the two modes in your stack. The new transitions are seamless when going from 640- to 320-mode. The first time, I saw it I was blown away. The palettes are changed in sixteen different steps while the transition switches from one card to the next. You'll have to give it a shot to really appreciate the effect.

Oh no, not a computer language to learn! Yes, *HyperStudio 3.0* now adds a scripting language. But don't panic, most people won't ever need to enter the script editor in order to make *HyperStudio* do what they want. For those of us who like to leave the world of point-and-click now and again so we can get down and dirty with some verbiage, *SimpleScript* is a welcome sight.

The following script was pulled from a sample stack that created a bar chart on the screen. The data used for the creation of the graph came from a text field called Scores. This example shows you how straight-forward *SimpleScript* is. Even a non-programmer can read it and follow along.

```
Set line color to 15
Fill flag is on
Draw box from 428,49 to 608,142
Get field "Scores" into AllScores
MaxScore = line 1 of AllScores
LRect = 450-16-4
RRect = 480-24-4
Set line color to 4
Current = 2
Repeat until Value = "End!"
    Value = line Current of AllScores
    TRect = 140-Trunc(Value/MaxScore*91)
    Draw box from LRect, TRect to RRect, 140
    LRect = LRect + 30
    RRect = RRect + 30
    Increment Current
End Repeat
```

Learning *SimpleScript* should be very easy for those people **who** already do some programming. It's almost a cross between *Hyper-*
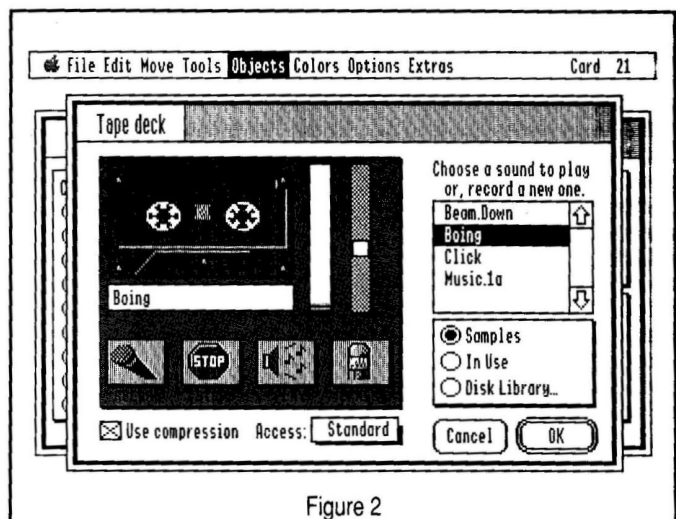

Figure 2

Talk (the scripting language in *HyperCard IIgs*) and Applesoft. For those people starting from scratch, *HyperStudio* comes with a "syntactic" editor. You can create a complete script with almost no typing. When you go into the script editor you'll have all the commands at your fingertips. Just pull down a menu, choose an option, and it writes the correct line into the editor. There are a few times when you'll have to "fill in the blanks", but the scripts almost write themselves.

One of the cool things about the scripting in *HyperStudio* is that *SimpleScript* isn't the end. It's only the beginning. Anybody with a language can place it inside *HyperStudio*. For example, if you had a C compiler, you could wave your coding wand and make it appear inside *HyperStudio*. Then when you went into the script editor you wouldn't write your script in *SimpleScript*, you'd write it in C. Virtually any language can be placed inside *HyperStudio*. Note! That doesn't mean a "user" can do it, it means a compiler writer can do it. If there's a language you'd like to see running inside *HyperStudio*, send a letter to the publisher of the language.

Creating a text item and modifying it used to take multiple trips to the menu bar. Now when you create a text item you're allowed to choose the foreground (text) and background color right away. You can also set the features at creation time. These features allow you to specify whether a text item is locked (text in the item can't be deleted or changed), a group item (explained earlier), hidden (pretty self-explanatory), or is transparent (the text will show through over the background of the card). At creation time you can also choose whether text is to be embedded in the stack or disk-based.

One limitation of disk-based text is that the text field must be specified as read only. I think this is a major limitation that RWP should change. Roger Wagner, on the other hand, thinks it's more intuitive this way. Since disk-based text is pulled from the text file every time you move to the card the text item is on, allowing users to edit the text might be confusing. Changes to the text wouldn't be saved when the user moves off that card. I think that's something the stack designer should take into account. Let me create my stack the way I choose. If I design a bad stack, it's my fault.

One nice addition to *HyperStudio* is the ability to print text from a text item. Clicking inside a text item and then choosing "Print" from the File menu will allow you to print just the text in the item, and not the card. This doesn't work, however, if your text is disk-based. Why? Because disk-based text has to be read-only, so disk-based text items can never be active. Hmmm...

(Note: I let Roger Wagner read this article before going to press and he came up with a couple different ways in which to get around this problem. First, a few lines in the scripting language would be able to pull a disk-based text file into a text field. Second, hitting Open-Apple-Tab will switch to the pointer tool. At that point you could click on the text field in question to activate it, and then print. He also said that there's a possibility that disk-based text may be editable in the release version (for advanced users).)

One of the nicest enhancements to the paint section of *Hyper-Studio* is the tear-off tool menu. Pull down the menu and with the
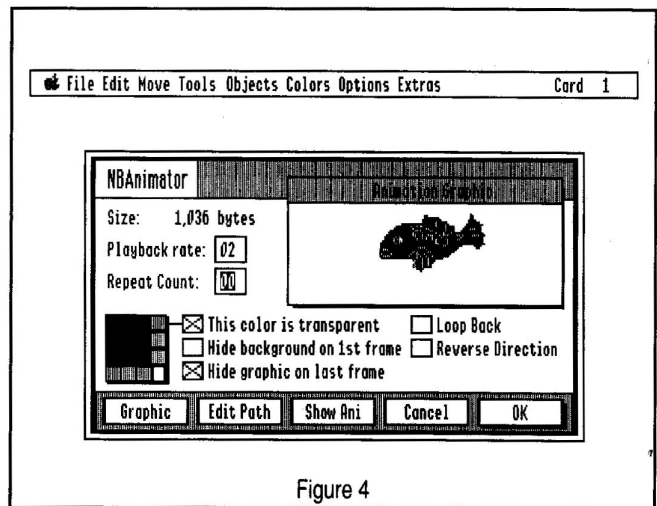

Figure 4

mouse button still pressed, drag the cursor down and off the menu. An outline of the menu will follow along. Drop it wherever you like and a windoid (floating window) shows up with the tools on it. This windoid stays on top of all other windows on the screen. It even hangs around when you move from card to card. Now that you have the tool palette within easy reach, try double-clicking on the following tools:

Selector – selects the entire screen.
Lasso – lassos entire screen of objects on solid background.
Pencil – goes to fat-bits mode.
Paint Brush – brings up brush selection.
Eraser – erases entire screen.
Line Tool – brings up line width selection.
Square, Oval, Region, Poly, RRect – toggles fill mode.
Text Tool – brings up text style dialog box.
Magnifying Glass – goes to fat-bits mode.

These double-click short-cuts make working in the paint environment much nicer.

Other enhancements to the paint tools include being able to use them in 320-mode (although you can't choose 320-mode, they just work that way if you've imported a 320-mode picture), and grabbing a piece of the screen and using it as a brush.

Extras. There's an extra menu at the top of the screen in *Hyper-Studio 3.0* called Extras. This is a menu that can be filled with utilities written by third-party developers. While New Button Actions are created for use by the end user (when the user clicks a button), Extras are mainly valuable to the stack developer. A sample Extra called Box Maker adds a new paint tool to *HyperStudio*. Choose Box Maker from the menu and then use the cursor to create a square on the screen. Release the mouse button and new lines pop into place – new lines that form a 3-dimensional cube with your original square as the base. Moving your mouse around moves the new 3-D box around. When it's the size and shape you like, click the mouse button and it plops into place on the screen. Once you try it out you won't be drawing boxes and buildings freehand anymore.

Other Extras include a utility to edit, load, and save palettes and patterns, a tool to turn a portion of the screen into an icon (for use as a button elsewhere in *HyperStudio*), and lots of other things that programmers around the world are dreaming up even as you read.

If you want to make money in the Apple II world there aren't as many chances as in the good old days. But opportunities still show up — and lots of them have shown up in connection with *HyperStudio*. Creating a commercial quality stack may not be for everybody, but there are a lot of peripheral projects that could line your pockets. If you like hacking around with the graphics screen you might want to think about creating a library of cool screen transitions. Two other areas to think about are New Button Actions and Extras. Packages of those utilities will probably sell quite well. If you do create such a library, check with Roger Wagner Publishing. They might be interested
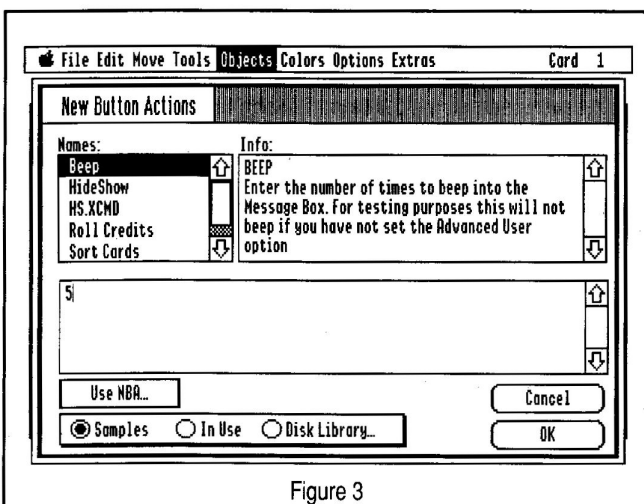

Figure 3

in publishing your work.

If you're a registered user of *HyperStudio 2.x*, you'll automatically receive an upgrade notice in the mail. Upgrades will cost $45 + $5 shipping ($20 + $5 if you purchased *HyperStudio* after July 15, 1991). The retail price is $179.95, which is an increase of $30 from the price of version 2.1. The complete package still includes the digitizer board and microphone. Upgrades consist of new disks and a new manual.(When sending for an upgrade, be sure to include the serial number of your HyperStudio package. California residents add 8.25% sales tax.)

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Mac LC's IIe card improves

By Dennis Doms

We received the new IIe Card Software Version 2.0 update recently. The new software is supposed to improve compatibility with some third-party printers usable on the Macintosh. More importantly, it adds support for using hard disk drives and AppleShare network volumes attached to the host Mac LC. The software comes on two Mac high-density (1.44 megabyte) 3.5 disks; one is a IIe Startup Disk that can be booted to start the Mac LC and the other is a IIe Installation Disk that installs the new IIe Card software.

Version 3.0 of Apple's HD SC Setup utility is included on the disks. To use a hard disk from ProDOS while the IIe card is running, you must use HD SC Setup to create a partition on the Mac's hard drive that can be formatted for ProDOS. (If the disk has already been in use, you'll need to back up the contents before changing the partitioning. Repartitioning the drive will erase all your files.) Version 3.0 of HD SC Setup includes the definition and formatting capability for the ProDOS partition.

You also may need to update the hard disk driver with the setup tool (this is definitely a must with System 7; otherwise the ProDOS partition won't show up on the desktop). One gotcha: Apple's utility does not recognize some third-party drives; it ignores our homebrew Seagate drive, for example.

Once the ProDOS volume is prepared, you can enter the IIe mode by running the IIe Startup application on the Mac. Most of the operation remains the same as described in "The Apple II as Mac Peripheral", *A2-Central*, July 1991 (pp. 7.43-44).

To specifically add the hard disk partition, you need to go to the IIe Card Control Panel (control-open-apple-esc). Select the "Slots" item and make sure you have the SmartPort icon (the one that looks like a set of disk drives) assigned to a slot receptacle (usually slot 5) in the array along the top of the control panel display. Then select the "SmartPort" Control Panel item and pick where you want the SmartPort drives located. We assigned the hard disk partition as slot 5, drive 1, and the (Mac internal) 3.5 floppy as slot 5, drive 2. (Not having a 5.25 attached, we also tried shuffling some other cards into slot 6, but the IIe Card will still have none of it. There's nothing like losing the use of a slot.)

AppleShare support has also been added. To assign the file server to a slot, drop the AppleShare icon into the desired "slot". (We put the server in slot 1 in the virtual Control Panel.)

The AppleShare implementation gives you both server and (network) printer access. To print, you direct output to the assigned slot; for example, an Applesoft "PR#1" command sends printer output to slot 1. The IIe Card will use the printer selected in the Macintosh Chooser (accessible while in the IIe Card's Control Panel) as the current printer.

Apple needs to supply the equivalent of the Apple IIe Workstation Card software for use from the IIe side. The only current way to log onto an AppleShare volume is apparently to boot from the network. Since all our Apple II systems have hard disks, we don't currently have our server configured to boot Apple II systems and we weren't able to complete the login. The server leaves us hanging while telling us our server startup information is incorrectly configured. With the ProDOS partition on the Mac LC hard disk it is also more expedient

not to be forced to boot from the server; the Chooser, Login, and Logoff applications from the Workstation software would allow configuring the local boot disk to allow access to the server.

To make the ProDOS disk volume palatable to the Mac, there's a new "ProDOS File System" extension which goes into the Mac's System Folder. This extension lets the Mac recognize ProDOS volumes (including floppy disks) and transfer files between them and other recognized volumes. It also confuses Apple File Exchange, which now believes ProDOS disks are "Mac" disks, but you can still access text translation options through the "Mac-to-Mac" menu. If the floppy isn't write-protected, a Mac "Desktop" directory file also gets written to it if there is room. The file is type $00 and won't be visible from the Mac Finder, or from the IIgs Finder if your preferences aren't set to display "invisible" files, but you'll see it in ProDOS 8 directory listings.

On the other hand, we saved an AppleWorks 3.0 document to the ProDOS 8 partition and were not able to see it from the Mac Finder even though the ProDOS File System extension was installed and many other AppleWorks files were visible. We finally jumped out to Applesoft to confirm that the file was indeed where we had put it, but it just wasn't visible from the Mac side.

It looks like there are still a few kinks to be worked out, and the IIe Card's video still seems slothful on the Mac LC, but the addition of hard disk and AppleShare support increases the value of the IIe Card tremendously.

Worrying About the Apple II – A Psychic Energy Drain

By Jay Jennings

Apple II lovers have been on an emotional roller coaster for the last few years. One month we hear that Apple has rededicated itself to the machine that begat its existence and the next month a reorganization takes place within the company and all is lost once again. That same scenario has happened over and over.

This spring Apple II developers received a letter from Robert Barnes, the Apple II Business Unit Evangelist. It implied we shouldn't lose hope. It implied that Apple had some cool things in store. And it implied that Apple was committed (once again) to the Apple II. Things looked good. People were cheery. We all waited for KansasFest to see what rabbits Apple would pull out of its magic hat. KansasFest came, and Apple arrived bare-headed.

The main message from Rob Barnes was encouragement to develop 8-bit educational software. Some people took an emotional nose dive. Some people made plans right then to get out of the Apple II arena. And some people ignored what was said. I'll get back to those people in a second. Because those people are the focus of this piece.

You can scan the online services right now and see people talking about the User Group telecast that Apple produced on September 25th. Apple Product Managers and Engineers announced new IIgs System Software, an EtherTalk board, and a SuperDrive card. However, according to the rumor mill, John Sculley was supposed to announce a new Apple II CPU. No such luck. Apple said that no Apple II advertising campaign was scheduled for this Christmas season. It's just one more ride on the Timberwolf (sorry for the local metaphor, the Timberwolf is a giant roller coaster for those of you who live out of town). Another trip to Depression City – until the next batch of rumors hits (you could set your watch to this cycle).

Let's get back to those people who ignore what Apple says. What are they doing? Using their computers, that's what. And they're using their computers whether Apple says yes to a new CPU, or no. It doesn't affect them because their Apple II does what they need it to do.

Some people need more powerful computers (and some people just want them). That's fine. Go get one. But it's time we stop whining about what Apple does or doesn't do with the Apple II line. At this point I don't think the user/consumer voice registers with

Apple Computer, Inc. It's a non-issue with them. Which means the end result will be the same whether we whine about it or not.

My suggestion? If you need a faster machine, go buy a clone. I wouldn't suggest buying a Mac at this point because I don't trust the judgement of Apple Computer. Go buy a clone and forget about the Apple II world. It's just a computer, after all. And if you stop thinking about what morons the executives at Apple are, your ulcer will go away, you won't have those migraine headaches, and life will be much nicer.

If you don't need a faster or more powerful machine, then your course of action is much easier – stop whining about how unfair life is. It's just a computer, after all. Realize that future revisions of the Apple II are a pipe dream and get on with using your computer for whatever it was that you bought it for. Worrying about something that isn't within your power to change is a psychic energy drain. It'll screw up your life, so knock it off.

And if you can't stop thinking about the injustice of it at all? Take your computer, put it back in the box, and give it to someone you don't like. Then rejoin the human race. Get reacquainted with your family. Go on a bicycle tour. Take up bird watching. Life's too much fun to spend it bitching about a corporation and what they do. Live a little.

Dealers vs User Groups

By Jay Jennings

Since most dealers have elected to drop support for the Apple II, user groups are more important than ever. Where else is a person going to learn how to format a disk, or find out how important backups are? Yes, they could read the manuals (what a novel idea!) but since most manuals are written by/for propeller-heads, that doesn't work too well at times. I think it's time for User Groups to come out of the closet, become a little more visible, and take up some of the slack.

Isn't it the responsibility of the dealer to support his customers? To a certain extent, yes. But if a dealer has to spend hours and hours with one customer in order to get them over the initial learning hump, that dealer will never sell enough systems to stay in business. If the dealer can sell a system and then point to a local user group as a source of information, everyone involved wins. The dealer makes more sales and stays in business and the user group has new bodies that could become new members.

A big problem facing user groups right now is that of shrinking or stagnant membership. Normally in a club about 20 percent of the members do 80 percent of the work. In a smaller club this means that just a few individuals are carrying the entire load. True, a smaller club means less work, but it still shouldn't be centered in a little "clique." Finding people who want to help out should be Priority One with user groups. *QuickConnect*, Apple's Newsletter for User Groups, has several ideas in the September/October issue regarding this problem. And if you have any ideas about giving user groups a kick in the pants, let us know. We'll pass them along.

Miscellanea

The *Graphic Exchange Library Disk #1* adds several new translators to *The Graphic Exchange*. The disk works with the recently released version 4.2 of *The Graphic Exchange* and adds the ability to work with file formats for Springboard Publisher's *Works of Art, Print Shop* and *Print Shop GS* borders, *SuperPrint* stationery, backgrounds, posters, and borders, GIF files, PCX (a graphics format common to MS-DOS machines) files, 3200 color graphics, and others. The disk is $29.95 from Roger Wagner Publishing, 1050 Pioneer Way, Suite P, El Cajon, CA 92020, 800-421-6526 or FAX 619-442-0525.

Are you always looking for fonts in all the wrong places? Trying 8 or 10 (or more) different typestyles to see which one looks the best? Make it easy on yourself and get a printout of over 550 fonts. Stuart Goldman put together a listing of most of the public domain fonts available, plus a few non-public domain fonts. If you use a IIgs, or *TimeOut SuperFonts*, or *Publish-It! 3.0*, this may be just what you need in order to stay sane. Goldman is selling the packet for only $6,

which just covers his printing and mailing costs. If you do desktop publishing or just like to experiment with different fonts, this printout could be worth much more than that to you. Write to Stuart Goldman, 257 School Street, Waltham MA 02154. And tell him you read about the font list in *A2-Central.*

AppleWorks is the most widely used program in the English-speaking Apple II world. And with the addition of an *AppleWorks 3.0 to French Conversion* program, the power of AppleWorks is released to the French-speaking public as well. The conversion program, written by Daniel Lurot and published by JEM Software, takes a copy of AppleWorks 3.0 and translates all the text messages to French. It also converts *TimeOut UltraMacros* to French as well. Individual users pay $45 + $5 shipping for the program. A site-license is also available (perfect for French classes in school). Contact JEM Software, (303) 422-4766, or FAX (303) 422-4856.

If you have frequent encounters with Writer's Block and his friends, you might want to try putting a little organization into your creativity. John Hopkins of Husky Blue Software put together a writing system that could help students, businessmen, or professional writers collect their thoughts. *WriteWorks* is a writing automation system that works within AppleWorks. It was developed by a freelance writer with 25 years of professional writing experience. A set of AppleWorks database templates, custom report formats and special macros allow you to create an outline, take notes and coordinate them with the outline, organize research information, create a rough draft from the organized notes, enter references, and "automatically" generate a bibliography. There are also templates for non-fiction goal-setting and fictional plot and character development. The manual walks you through every step of the system and also includes lots of writing tips from the developer. *WriteWorks* works with any version of AppleWorks, but performs best with version 3.0 and *UltraMacros 3.1.*

WriteWorks sells for $39.95 and is available from Husky Blue Software, 715-25 Frenchtown Rd., Bridgeport, Conn. 06606.

A message from the publisher

By Tom Weishaar

Last month Dennis mentioned that we were looking into raising the subscription prices of our publications. We've decided that the increase is going to be $6 per subscription. *A2-Central*, for example, will increase from $28/$54/$78 for 1, 2, and 3 year subscriptions to $34/$60/$84. Since we are increasing the two- and three-year subscriptions by just $6 instead of $12 ($6 x 2 years) and $18 ($6 x 3 years) our long-term subscriptions are an even better value than before.

The price increases will take effect on January 1, 1992. Between now and then you're all welcome to renew at the old prices.

We investigated using 3rd class postage to save money, but it turns out we wouldn't have saved enough to make it worth the trouble it would cause. And a number of you asked us to stick with 1st class anyhow.

The reason we're raising prices is that every year we have fewer subscribers. Those of you who are left have to pay a little bit more to keep our kids in shoes. But it'll be worth it, you watch!

Jay Jennings has his name sprinkled all over this issue. As Dennis mentioned last month, Jay was editor of *8/16-Central* before it died. We had planned to have Jay edit *A2-Central* while Dennis and I worked on some other ventures designed to subsidize our Apple II activities, but *SoftDisk* made Jay an offer he couldn't refuse and he's leaving Kansas City for Shreveport at the end of this month. We're going to miss him around here.

Our bench has a lot of depth, however, so Jay's upcoming exit hasn't thrown us into much of a panic. We have yet another editor-in-waiting. Her name is Ellen Rosenberg. She'll be taking over *A2-Central* from this month onward. Ellen plans to pilot this ship a bit differently than Dennis and I did, in that she's willing to pay for feature-length articles from outside authors. Dennis and I will be around to help and contribute, but Ellen will be in charge. Ellen is an Apple II lover, a former teacher, and less of a gearhead than Dennis and I. You're gonna like her – starting right here next month.

Ask (or tell) Uncle DOS

Off-by-one errors usually don't refer to letters of the alphabet. Here's one more try at the address for B & D Computer Repair in the August and September 1991 issues: B & D Computer Repair, 6115 S. Massasoit Chicago, Ill. 60638.

*We were off by one word in the description of DreamWorld's IIgs paint program ("Kansas-Fest 1991", September 1991). The program's name is **DreamGrafix**, not "DreamPaint".—DJD*

HyperGoof

I saw a couple of mistakes in the October issue of **A2-Central**.

You said I found a problem *HyperMover* has with transferring the order of buttons and fields to a recreated stack (true). But then you said that card objects could be arranged in a stack so they receive messages AFTER background objects and this was the ordering that was not preserved during a *HyperMover* transfer (FALSE).

Here is the situation: Within a card (for example) buttons and fields can be ordered so that, say, button 2 is on top of field 2 which in turn is on top of field 1 which covers button 1. If you try to transfer this stack, *HyperMover* will put all fields in a layer behind all buttons so that the recreated card will have, from top to bottom, button 2, button 1, field 2, field 1. What Apple's Tim Swihart said was that since the card layer is ALWAYS over the background layer, this occurs because the relationship between buttons and fields WITHIN A LAYER cannot be identified from a script, not between card and background.

Now, having said that, I can tell you that Tim was wrong (grin). I have come up with an easy way to derive the ordering and have made patches to HyperMover that allow button/field order to be preserved. I've given the changes necessary to the editor of **Script-Central** (along with a slick stack that performs updates to other stacks).

My second correction (don't you just love this?) is to the part about conflicts between *HyperCard* and the *Write-It* NDA. I was the one that reported this problem also, and it only occurs when using the palettes (tool, pattern, etc) while *Write-It* is open. The only way you can do this is to resize the NDA's window to get at them, so if you don't resize, you won't see the crash. I use *Write-It* all the time while in *Hyper-Card* without a problem; I just have to stop using *HyperCard* while I have the NDA open. I hope this is helpful. If not, just ignore me.

Chris Budewig
Midwest City, Okla.

I'm drawing a blank...

The October 1991 issue of **A2-Central** discussed *UltraMacros* and screen blanking. The description wasn't totally accurate. Here's what really happens:

If it's running on a IIgs, *UltraMacros* just changes the border and text to black, and then restores the original colors after a keypress.

On other Apples, *UltraMacros* only saves Page 1 (the original 40-column screen) to a safe area, replacing each character with a space as it does so. Then it switches into 40-column mode and the screen looks blank. When a key is pressed it switches back into 80 columns and restores the 40-column screen saved earlier. This avoids the hassle of messing with Page 2 text, and is faster to boot.

Randy Brandt
Arvada, Colo.

Thanks for the information, Randy. Little tricks like that can really help when trying to squeeze all the power possible out of a machine.—JIJ

Whiner-Central?

Like Scott Galbraith in your June 1991 issue, I was about to let my subscription lapse because of the moaning, groaning, and excess Apple IIgs attention, but his cheery and constructive note inspired me to try for one more year.

Amongst Apples, I have an Apple IIe, Apple IIc, and an Apple II Plus which resides with my grandson. But I also have a Mac IIsi and a Mac Plus. I teach a computer course which is not computer-specific at an over-55 "Academy" affiliated with our local state university. I use alternately the Apple IIe and Mac Plus to send their computer display via suitable adapters to one of those overhead projection panels. It gives a sense of immediacy to the class demonstrations and discussions; a person in the class may be amused at the big-screen display of keyboard boo-boos by the student at the computer, but two minutes later he is at the keyboard and others may chuckle.

I enjoy doing some programming to aid the discussion; I have found the old *Higher Text* of Ron and Darrel Aldrich (1980) to be beautiful for display, and with a *Zip Chip* the scrolling mode which originally was a bit jittery is now quite smooth and almost spectacular. People think it is hot modern stuff and it all comes out of the back of my Apple IIe! Of course, I also display AppleWorks stuff on the big screen.

My point is, let's exchange some of our fun and successes, and go easy on diatribes. Why not?

W. Henry Linton
Wilmington, Del.

*You're right, and we've talked about that around the office. Apple II people spend entirely too much time moaning and groaning, and not enough time doing. You'll still see some people up on their soapboxes now and again in **A2-Central**, but what we're really interested in hearing about right now is how people are using their machines. That's the kind of information that can help us all.—JIJ*

Mac vs IIgs: Software Wars

I finally broke down and bought a *MacUser* magazine at the grocery store. I am impressed by the product support for the Mac in contrast to that for the IIgs. Still, I can't help but feel that there is a niche for the IIgs price range. I've had my IIgs since 1987 so it has paid for itself. I could start anew. Obviously, aside from profit motive, there must be programs available to the Mac that the IIgs can't do; or is it a matter of difficulty in getting it done? Has the IIgs been fully explored as to mimicing the Mac programs? Can the Mac Classic do much more than the IIgs, or is it just the beginning of one's investment in a much more expensive machine?

Herbert Olnick
Mineral Bluff, GA

There are a lot of programs available for the Mac that could be written for the Apple IIgs. The stock Apple IIgs can handle quite a lot without bogging down. The main reason you won't see a lot of Mac to IIgs ports is financial, not technical. Third-party developers look at the Apple IIgs market, then at the Mac market, and they go where they can make the most money. If you spend thousands of dollars on developing a product you want to be very sure about making that money back - and more. You can charge higher prices for Macintosh software (and they do!) and the Mac users will pay it. But try to market a IIgs program that's more than a couple hundred dollars and you'll run into a stone wall.

It's a smart OS

A couple years ago I wrote to you asking how AppleWorks file names can allow spaces and lowercase although ProDOS cannot. Thank you for the answer that you published. I do appreciate it. It's been fun since then playing with the auxtype and watching it change the case in the filenames in AppleWorks. How, though, does GS/OS play the trick of allowing lowercase? I'm sure that it's not the auxtype in this case.

Barry Austern
Cincinatti, Ohio

One of the cool things about GS/OS is that it's quite generic. With a Macintosh FST (File System Translator) you can use filenames with lowercase letters, spaces, and squiggly marks. If you had an MS-DOS FST you'd see eight letter filenames with a three letter extension. GS/OS doesn't care. It's happy with just about anything. In this case the ProDOS FST does the "trick" in order to get the lowercase filenames. Instead of using the auxtype, the FST uses the bit positions in the MINVERSION and VERSION fields that are in each ProDOS file header. This means that lowercase filenames will only be seen on the IIgs in native mode.—JIJ

Harder than it sounds

How do you get sounds into *HyperCard*? I love your catalog. Three men walk into a bar. The fourth one ducks. (Stolen from the background sound CDA.) When told about your catalog (no pictures, shipping included, etc.), a friend said you were all a bunch of "left brains." With System 7 on the Mac and System 6 on the IIgs, Apple could push the IIgs as a faster computer. If MultiFinder allows you to crash in more than one application at a time, then file sharing in System 7 allows you to crash more than one computer at once.

Dan Demaggio
Detroit, Mich.

Dan, first of all, try some decaf. There are a lot of brands on the market that taste as good

as the real thing. Second, I think I'll just adress the first question in your letter (but thanks for the rest of it).

To get a sound into **HyperCard** you have to start with a digitized sound in the rSoundSample format. That's a resource file with a sound inside. Once you have that, it's a simple matter of copying that resource into your HyperCard stack. You can use the Scripters Tools stack that ships with **HyperCard,** or any of several public domain or shareware utility stacks that are floating around on the online services. Just copy the sound resource from the source stack or program into your stack. Voila!

You may be wondering how to get a digitized sound into an rSoundSample format. Well, that's a little more complicated. Roger Wagner spoiled us all by allowing us to import sounds into **HyperStudio** with no trouble. You even received the digitizer card and microphone when you bought **HyperStudio**. No such luck with **HyperCard.** They left sound creation as an "exercise for the reader." That's good news for third-party developers, however, and one has stepped forward to fill the void.

Mike Nuzzi of Triad Ventures is getting close to releasing a stack-based program called **SoundConvert** (although he says the name is subject to change). This stack will include a digitizer XCMD that will allow you to record sounds using the **Audio Animator, Sonic Blaster, Super Sonic,** and **HyperStudio** digitizer card. Support for **Mac Recorder** and **Future Sound** should come at a later date. Besides digitizing sounds, **SoundConvert** will also convert sounds from one format to another. So if you can wait a few weeks you'll have an easy way in which to get sounds into **Hyper-Card.**

If you can't wait, there's always the hacker method. Apple Ilgs Technical Note #76 describes the format for an rSoundSample (type $8024). It's quite short, so I'm recreating it here.

Offset	Name	Description
0	Format	This must always be zero.
2	Wave Size	Sample size in pages (256 byte chunks).
4	Rel Pitch	High byte is a semitone value; the low byte is a fractional semitone. These values are used to set the pitch.
6	Stereo	Low nibble holds the output channel.
8	Sample Rate	Sampling rate of the sound in hertz (Hz).
10	Sound	Sampled sound data starts here and continues until the end of the resource. 8-bit values.

Using this information you could create an rSoundSample quite easily. Since the **Hyper-Studio** sound file format is well documented you could write a program that reads in a **HyperStudio** sound file, strips the **HyperStudio** header information, and adds the rSoundSample header. Then open the resource fork of your **HyperCard** stack and copy in your new sound.—JIJ

Serial switching

I am considering a communication program for my Ile and Super Serial Card. The card instructions say DIP switches 1-5 and 1-6 must be changed between communications and printing. Can this change be made by proper cabling? My Ile is situated in a position where inside changes cannot easily be made. I'm not worried about the "Terminal/Modem" jumper block since I am sure this change can be made by the use of a null modem.

E. A. Smith
Chadds Ford, Pa.

Looking at the firmware listing in the older Super Serial Card manual, it does appear that several things are done differently in the initialization of values used by the firmware for the two modes. Since some telecomm packages don't use the firmware to access the card (they go straight to the 6551 interface chip), they may work with the card set to Printer mode in combination with a null modem.

We occasionally get requests for exactly how to use one serial card for both a printer and a modem; we've never resorted to this ourselves. If anyone has a step-by-step procedure, we'd be happy to keep it on record (at least, until some accidental mail purge).—DJD

Printer quality and 5.0.x

Last year, using the same hardware but before getting System 5.0.2, I was able to print what I considered to be fine resolution on my ImageWriter II, especially with Courier 12, Times 12, and New York 9. Last fall I changed the system to 5.0.2 then to 5.0.3 using the same font folder that I had used before with 5.0. The resolution of these exact same fonts was suddenly much worse. I phoned asking if there was a noticeable decline in quality when the new printer driver was working with the new system and the fellow I talked to on the phone was not able to help beyond suggesting that I check to see if the fonts were "active". (As we all know, fonts do not have an active/inactive check box.) I wrote a letter and sent it dated January 6, 1991. I never received a reply. I called while in the U.S. this summer and the fellow who answered the phone, though very helpful with other questions, was unable to help me with this problem.

Jack Clay
Leysin American School
Leysin, Switzerland

First, regarding support in general: We do make an effort to respond to all questions. Usually if someone doesn't get back quickly, and the letter hasn't gotten lost before it is answered (which occasionally does happen), and there is a return address (all letters and FAXes need to have a legible address) it usually means I didn't know the answer off the top of my head and have put the letter on an "investigate" stack, and I haven't managed to get enough time clear to check the "investigate" stack. We ask for questions and comments because we hope to get them dealt with, but we don't have the resources to act as on-demand consultants. Look at the fee for a computer consultant versus our subscription fee and you'll know why.

That being said...I have had the printer driver quality questions in the queue for a couple of months, trying to find time to get the equipment together to do some quick tests. I made print samples for 5.0, 5.0.2, and 5.0.4; the first two using the "Better Text" setting in the "Print" dialog (from AppleWorks GS) and the last using the "Best" mode (with Black and White chroma) of the 5.0.4 drivers (I didn't worry about 5.0.3 since the 5.0.4 update followed shortly after it).

The printer driver files for 5.0 and 5.0.2 are identical (verified by a file comparison). The drivers were revised for 5.0.4 to speed them up. We've had others complain about the "lower quality" of the new drivers. Out of the two font examples of yours I tried ("New York" isn't one of the standard Apple fonts, so I can't be sure I've got the same version) I'd have to say I agree that Times 12 looks noticeably worse with only the "Times.12" font installed (Courier looks pretty much the same to me).

*I've checked this versus the **Harmonie** ImageWriter driver and it seems to do a slightly better job, but there are some limitations (Harmonie won't print over AppleTalk, which is how we connect printers at the office).*

Printing gets very complicated from desktop programs. I believe the symptoms you're seeing are part of a change to make sure the printer driver accurately reproduces what's seen on the screen. Basically, to avoid spacing problems, the printer driver has to use a font that is an integral multiple of the screen font size. Ilgs fonts are derived from Mac screen fonts which are designed for 72 dots per inch (dpi) resolution. Such a font may look unnecessarily "blocky" on an ImageWriter (which can print 144 dpi) unless some type of "smoothing" is done to the font. The problem with this "smoothing" is that it can change the size of the characters incrementally; such small changes don't mean much on individual characters but the accrued changes on a line of text can cause problems with the formatting of the text. For example, if the line is just a little bit longer it may extend past the margin. (We occasionally have a related problem with files we take to the typesetter; it can be maddening.)

Apple's new driver appears to use the inherent resolution of the character set when printing; that solves the formatting problems and also should make the driver fast (since it doesn't do any "interpolation"). But 72 dpi characters don't print at the "best" (144 dpi) resolution of the ImageWriter. The solution is to use double-sized fonts; that is, to have "Times.24" installed if you've used Times 12 in your document. If it's present, then the driver is smart enough to use the double-sized font at 144 dpi, giving a smoother (in my opinion) result than even the 5.0.2 driver. (For the ImageWriter LQ, you need triple-sized fonts, since it can print at 216 dpi.)

This works in reverse: to get the best quality, you need to stick to font sizes for which you have double-sized fonts installed. If you use a "size 6" font and no size 12 font is available, the printed results will look ragged. If you don't have a size 6 font available, another size of the same font (if available) will have to be scaled and things will look even worse.

*Identifying and solving the "problem" here are two separate issues. If using **Harmonie**, System 6.0 (when it arrives), or larger font sizes helps in your eyes, those are possible answers. Other than that, I won't have a solution, because it's generally not feasible or advisable for an individual to make changes to the massive Ilgs System Software (this is true also for the Mac and Windows drivers, which also are tightly bound to the operating system).*

If you haven't reported the problems to Apple I'd suggest doing that in the interim;

Apple has to know what their users expect so they can evaluate changes to the system software. But I'd suspect that the new driver actually works better (in terms of accuracy) than the older one and that most solutions will involve careful selection of fonts.

System 6.0 is also expected before the end of the year. We'll try to keep the test results on hand for comparison.—DJD

E-Mail Security

I enjoyed your Electronic Frontier article in the October 1991 issue of **A2-Central**. You've written an excellent summary of the issues; the best I've seen. And, I've read several articles on the subject in the last couple of years. With regard to E-Mail, have you any thoughts about the argument that protection and governmental access should be similar to information sent via the U.S. Postal Service? Information, while in transit, is more or less untouchable and the U.S. Postal Service is not liable for illegal materials or information they handle. Again, a great article.

Can you recommend a publication about MS-DOS machines that provides the same type of information **A2-Central** does for the Apple II world? I have reached the point where I must start to learn and use this equipment. There's just too much MS-DOS at work; I'm the only one of 300-325 people using ProDOS (AppleWorks on a 128K IIe with white keys). I'm going to stick with the Apple II at home, but I really need some good information about PC compatibles.

I realize this may seem like an unusual

request to **A2-Central**, but I've developed a great trust in the information you publish.
Frank Shaw
Amercan Fork, Utah

*Thanks for the compliments. We try to make sure that what we publish is not only interesting, but accurate. As far as an **A2-Central**-like MS-DOS publication, we haven't seen one. Frankly, we've thought about starting one, (in addition to our Apple II publications, not instead of) but we're not sure if there's a market there or not. And if there is, how do we reach it and what do they want? If we can find the answers to these questions, we'll probably give it a shot. **PC Magazine** and the like are good publications, but they're a little heavy when all you need is the straight dope on making your machine do what you want it to.*

*With regards to E-Mail and privacy, yes, it seems like the U.S. Postal Service model should be used. I know that when I send a "real" letter nobody is going to open it except the recipient. I don't have that same confidence with E-Mail right now, although it comes close on national services like **GEnie** and **America Online**. With more and more daily information going electronic, some good laws are going to have to go into effect in the near future, or something's going to break.—JIJ*

Chip Request

It sure would be nice if one of your readers could tell me what the numbers of the three buffer chips are that go in the Street Electronics Business Card. I could buy them at an electronics store.
Mike Saathoff
11155 Saathoff Drive
Cypress, TX 77429

80/40-column switching

I would like to switch the 80-column card from assembly language without unhooking ProDOS, like PRINT CHR$(4); "PR#3", from Applesoft. How is this done in machine language? When I do a JMP $C300, ProDOS is unhooked. When I do it by the input buffer, it disconnects a running Applesoft program.
G. Steinbach
Gerlenhofen, Germany

Switching between 40- and 80-columns in assembly language can be a pain if you want to mess with flipping softswitches. But by using the firmware, it's all nice and neat. When you turn on or reset the Apple II, the 80-column firmware is inactive and you're placed into 40-column mode. Before you can show 80-columns you need to wake up the 80-column card.

```
LDA #0     ;a non-printing character
JSR $C300  ;wake up the firmware
```

This will clear the screen and place you into 80-column mode. In order to switch to 40-columns, just send the firmware a Control-Q character. The following piece of code will switch you to 40 columns, wait for a keypress, and then switch you back to 80-columns.

```
lda #$11   ;a Control-Q character
jsr COut   ;switch to 40 columns
jsr RdKey  ;wait for a keypress
lda #$12   ;a Control-R character
jsr COut   ;switch to 80 columns
```

You can find more information on the video firmware in the Apple IIe Technical Reference

Manual (Chapter 3, Built-in I/O Firmware) or the Apple IIgs Firmware Reference (Chapter 4, Video Firmware).—JIJ

High-density identity

Do you use both regular and high-density 5.25" floppy disks? Come on, confess, I know some of you have those user-hostile PCs sitting next to your Apple IIs. In one hand I have a regular disk and in the other I have a high-density disk. Now quick, which is which? Simple, the regular disks have a dullish dark brown color. The high-density disks are glossy, almost black. Could this have something to do with the fact that high-density disks have a denser coating of magnetic media? Is the same true for 3.5" disks? Will Apple ever make a 25 MHz IIgs? Will Oprah ever do a show in the nude?

Stay tuned and find out the answers to these exciting questions and more, in the next issue of A2-Central.
Bill Materse
San Jose, Calif.

Thanks for the tip on telling the difference between "regular" and high-density disks. In answer to your last two questions, yes. Within a week, we're sure.—JIJ

(Editor's Note: We've printed two silly letters in this issue. We don't want to set a precedent so please write only serious letters from now on. In fact, we won't even open your letter if you weren't wearing a tie while writing it. Thank you.)

(Publisher's Note: The preceeding note was a lie.)

It's the money, honey

I just got Volume 4 Number 2 of the Sierra/Dynamix Newsletter. In it, Ken Williams has an article where he talks about what computers to buy and so on. I'll quote, "Imagine how you would feel if you were one of the unlucky people who purchased a 2GS (sic) from Apple. (...) You now find that: a) your machine is discontinued b) few, if any, new products are coming out for your machine (none from Sierra)."

It looks like Ken and Roberta have forgotten their roots (Mystery House, etc.) and maybe Sierra wasn't selling enough IIgs software. It does seem a bit much to say that the IIgs has been discontinued.
David Mitchell
Burlington, Vt.

*If you've ever read **Hackers** by Steven Levy you know that Ken Williams got into programming the Apple II for the money. It wasn't for love of the machine, it was for a new hot tub. Eleven years later nothing has changed. He's in business to make money and he apparently can't make it in the Apple II world. However, that's no reason to spread a lie that the Apple IIgs has been discontinued. That's the kind of remark that should raise the hackles of the **Apple II Business Unit**. Whether they're more than just a name though, I'm not sure. I haven't seen any action lately to make me think otherwise (oh, sheesh - I was going to stop whining about them, wasn't I?).—JIJ*