GS+™

January
February
1993

Volume 4
Number 3

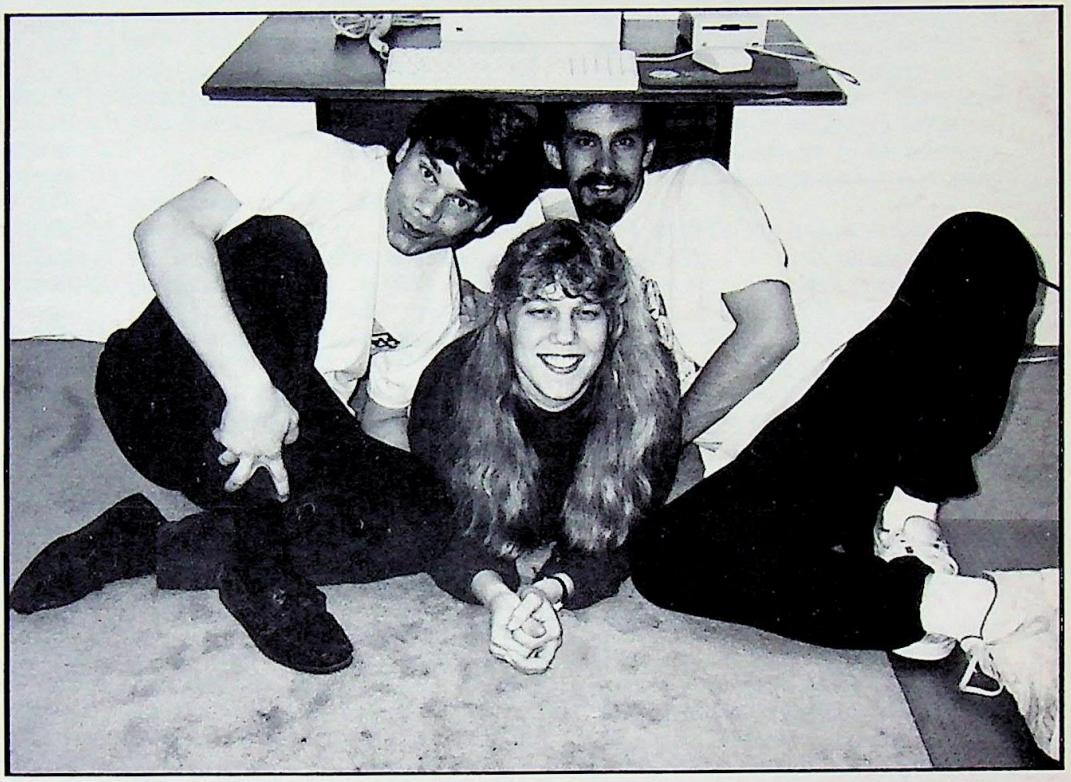
The *First* Apple IIGS® Magazine + Disk Publication!

In This Issue

Understanding the Desktop

&

The World at Your Fingertips



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Quest for the Hoard

Writer's Block

By Steven W. Disbrow

If you haven't heard by now, Apple has stopped manufacturing the Apple IIGS. (This is actually old news, but I didn't want to print anything until I could get confirmation from Apple. I got it a few days after we mailed out the last issue.) They are still producing the Apple IIe, so I guess the old "Apple II Forever" slogan still has a few months left in it.

Over the past three years, we've heard lots of rumors about the demise of the IIGS, and every single one of them has inspired a flurry of phone calls and e-mail asking for confirmation and my opinion on the occurrence. Amazingly, almost no one has called or written to me for either a confirmation or an opinion. So, I'm going to give them to you for free.

The confirmation I got straight from Apple Computer, Inc. It's definite and final. No more Apple IIGS computers are being produced. (However, if I am wrong about this, I won't mind looking like an idiot.) Of course, Apple is still working on System Software updates and the EtherNet card. And they do still support Apple II developers with a very good developers program. So things really aren't any worse than they were last week.

As for my opinion . . . two words pretty much sum it up: "Who cares?"

You see, if I *really* cared about what Apple's Marketing people did, I would be in the Window's business. Fortunately, I don't think I'm going to have to go into the Window's market, because, apparently, none of you give a [darn] about what Apple does either. This observation is based on prowling the various online services for reactions, and my experiences while speaking at an out-of-town user group meeting. At the start of the meeting's question and answer session, I turned things around and asked *them* a few questions:

"Is the Apple II dead?"

"No!"

"Should I stop developing for the IIGS? Am I wasting my time?"

"No!"

"Are you going to sell your IIGS? Are other IIGS developers wasting their time?"

"No already! Now shut up and let *us* ask some questions!"

Well, maybe that's not exactly how it went, but you get the general idea. The feeling I got from the meeting was that people were glad that they could finally quit guessing when "the end" would come, and just get on with using their computers. (Giving credit where it's due, I think this attitude is due in large part to the excellent editorial that Jay Jennings wrote in the November 1991 issue of *A2-Central*. That and the fact that most of us are numb from all the previous rumors.)

What Next?

So, given that the installed base is no longer going to be growing, what's next for IIGS developers in general and *GS+* Magazine in particular?

Well, I can't speak for other developers, but I think that their recent announcements speak for themselves. For example, Seven Hills is actively developing Macintosh products. Whenever possible, they are concurrently developing IIGS versions of the same products. (Or is that Mac versions of new IIGS products?) Also, Roger Wagner Publishing has announced a Macintosh version of HyperStudio. However, they are still actively updating and supporting the IIGS version. In other words, it looks like everybody is going to be branching out while trying not to cut their roots.

What Will We Do?

We will be branching out also. But, we won't be working on any other platforms. (And, just to be clear here, I'm not criticizing companies that do. God knows I've thought about it.) Instead, we'll be exploring stand-alone IIGS software, *GS+* merchandising, *GS+* reprints and anything else that might keep bread on the table while keeping us doing what we love the most, working with the IIGS. You might even see some of our software published by other companies. And we are *still* interested in doing a IIGS-specific CD-ROM, if we can ever justify the cost.

For example, we've been discussing the possibility of taking some of our more popular programs, like EGOed and Replicator, and publishing them as stand-alone software. You would get a printed manual, a registration card, and a nice box to put stuff in. However, I'm really not sure what all of you will think of this idea, after all, we've been updating these programs as part of *GS+* Magazine for a long time now. Suddenly dropping them from the magazine might not be too popular.

On the positive side though, we would be able to sell these tried-and-true products through large mail-order firms, which would help us spread the word about *GS+* Magazine to even more people. Even better, it would force us to come up with more *completely new* software for the magazine.

As for reprints, I'm sorry to say that we've gotten a very poor reaction to our call for help deciding which issue's to reprint. So, I've decided not to pursue traditional reprints at this time. However, I have decided to give another reprint idea a try: HyperStudio-based reprints. Basically, this will just be the text and screen shots of a particular magazine put together in a very nice HyperStudio stack. This will take a bit longer to do, but it should be more fun to do than a traditional reprint. Look for the first of these "HyperReprints" to be available in the next two months. (When we have the first one ready, we'll post messages on America Online, Delphi and GEnie.) If these sell well, we might even do a CD-ROM compilation—but don't hold me to that.

On the merchandising front, we'll keep pushing our *GS+* T-Shirts, and try to come up with some other silly stuff to trade you for your disposable income. (Can you tell I'm not a big fan of this stuff? Although, I must admit that our T-Shirts *are* light and comfy, and spring *is* just around the corner. Gosh, don't you owe yourself a new spring outfit?)

Of course, our number one priority will be to get *GS+* Magazine into the hands of as many new readers as possible. We're buying up mailing lists left and right, and, if past experience is any indication, we should be get a lot of new subscribers as a result.

What We Won't Do

Well, since very few of you responded to my video idea (see "Letters" in *GS+* V4.N2), I don't think we'll be doing any instructional videos any time soon. (The few folks that did respond were very enthusiastic, but three people do not a market make.) This is a pity, I was really excited about that particular idea.

Beyond that, what we won't do is up to you. Let us know what you think of these ideas, and if you have a better idea, let us hear it! *GS+*

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GS+ Magazine

January-February 1993
Volume 4, Number 3

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On The Cover

No, no, you idiots! It's under*standing* the desktop! (Bob, Nory, and Diz misunderstand what the feature article is about. As you can tell by Joe's absence, he is the only one who really understands!)

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GS+ Magazine is an independent publication, not affiliated in any way with Apple Computer, Inc.

Opinions expressed in this publication are those of the individual authors and do not necessarily represent those of *GS+* Magazine or EGO Systems.

Subscription rates - Magazine only:
1/2 year (3 issues) - $8
1 year (6 issues) - $15

Subscription rates - Magazine w/Disk:
1/2 year (3 issues) - $20
1 year (6 issues) - $36

Tennessee residents add 7.75% sales tax.
Add $1.50 per issue if you want First-Class delivery.
Canadian and Mexican orders add $1.50 per issue.
Other foreign orders add $1.50 per issue for surface delivery or $5 per issue for Air Mail.

Send orders, ads, inquiries, and address changes to:
GS+ Magazine
P.O. Box 15366
Chattanooga, TN 37415-0366

Or phone Monday-Friday 9 am-6 pm Eastern Time:
(800) 662-3634 (orders only)
(615) 843-3988 (tech support)
(615) 843-3986 (fax)

If you have a submission for *GS+* Magazine, send it to:
GS+ Submissions
P.O. Box 15366
Chattanooga, TN 37415-0366

GS+ Magazine can also be contacted on these online services:
America Online: send mail to GSPlusDiz
or visit our online area by using the keyword GSMAG.
Delphi: GSPlusDiz
GEnie: JWankerl
InterNet: gsplusdiz@aol.com

GS+ Magazine is published bimonthly by:
EGO Systems
7918 Cove Ridge Road
Hixson, TN 37343-1808
(DO *NOT* SEND MAIL TO THIS ADDRESS—USE FOR UPS AND OVERNIGHT DELIVERIES ONLY!)

GS+ Magazine is produced on the Apple IIGS using the following products:
EGOed - Text Editing
GraphicWriter III - Interior Page Layouts
AppleWorks GS - Cover Layouts
Platinum Paint - Screen Shots
Proof pages are printed on an Apple LaserWriter IINT.
We use a Macintosh LC as a file server because we have to.

Letters

Dear *GS+*:
As a fellow member of the publishing business I know what it is like doing what you guys do-it's often a thankless job! So, I'm writing to say "Thanks!"

You guys do a *great* job with *GS+*, your style is witty and entertaining, yet at the same time educating. I know and you know the IIGS is a fun machine to program, now if just everyone else knew that . . . .

Just for the record, I like "Open From Desktop" and have a suggestion on improving it: I'd like to see little icons next to the names in the list indicating what kind of item the name is . . . .

Anyway, keep up the good work!

Bryan Pietrzak
Softdisk Publishing
via America Online

No, no, thank you *for your work on Softdisk G-S! As for Open From Desktop, great idea! Check out the update in this issue to see just how great it turned out!*

Diz

Steve,
I just wanted to drop you a quick note to tell you how pleased I am with your magazine . . .

. . . I had heard [online] that the magazine was too technical for those that weren't tech oriented and not technical enough for those that were. (I realize what a silly statement that really is.) I also was told by a few that the majority of programs were updates . . . . Well I'm pleased as heck with the updates of EGOed! Keep them coming! And how about an update to Transfusion? And what about an update to . . . you get my point.

Jeffrey Mintz
via Delphi

Thanks for the letter Jeff! It's really frustrating to get run down for either being too basic or too technical. We try really hard to keep the magazine both suitable for beginners and technical enough for advanced users. But, the feedback we got on the last issue seems to indicate that we are on the right track. (If you want basic stuff, check out "Understanding the Desktop" and "The World at Your Fingertips" in this issue. And if you want technical, just check out all that source code and technical documentation on your GS+ *Disk!)*

I'm also glad to hear you like our updates policy. Coming up with new programs every two months is even more difficult than keeping a good technical balance! Still, we feel that if we can come up with at least two new programs an issue, we're doing pretty well. And we always try to make the updates as useful as possible (just check out this issue's EGOed update for proof of that).

As for a Transfusion update . . . we're working on it! There are a few technical obstacles that have to be worked out before it can be released though.

Diz

GS+:
. . . I was disappointed in Robert's review [of Out of This World in *GS+* V4.N2] because he called the author for tips. To me, that would take away a lot from the challenge and fun. . . . After solving the game, I put System 6 and OOTW on a 2400K RAM disk with the full size graphics. Yes, it was a little slow, but I could definitely live with the pace. . . . I was not disappointed with the ending as it is up to player to determine where the alien friend was taking the professor. I think it was to a very lovely place better than this Earth. . . .

Edward F. Welch
Houston, TX

When people ask me what I do here at GS+ *Magazine, I like to tell them that I sit around and play video games all day. Unfortunately, Diz refuses to pay me for that, so I must handle other responsibilities too. In order to write a* complete *review, I did call up Bill Heineman, and he was nice enough to help me out. I thought it was more important to finish the game in my allotted review time so I could give it a thorough review. Even though I am "a little slow," my machine has an accelerator which still couldn't make up for the game's speed—so I must disagree with you on that point. As far as the ending goes, its your money, so it* is *up to each player to decide if he or she likes the ending.*

Robert

Dear Joe:
Regarding your article "Understanding Accelerators" in the November-December (V4.N2) *GS+* Magazine. I specifically refer to the next to last paragraph wherein you state "with the TransWarp GS you can upgrade the cache RAM to 32K, but you're pretty much stuck with the processor speed of 7 MHz." Please be advised that my IIGS is running at 12.5 MHz with the TransWarp GS and 32K of cache. This is with the Vulcan Power Supply operating at 5.0 volts.

The secret to this increased speed is a redesigned 65C816 CPU chip available from Western Design Center for $95.00 (or $71.25 for NAUG members) plus shipping, and a part number SE1108 CMOS 4-DIP 50.00 MHz Crystal Oscillator at $3.60 plus shipping and handling. This crystal is available from Digi-Key Corporation.

Mr. John Link of Kalamazoo, MI is an AppleWorks consultant and the developer of SuperPatch and LockOut. He is also the author of the articles in NAUG's AppleWorks Forum which describe the above mentioned modification to the TransWarp GS and the ZipGS. John is running his IIGS at 13.75 MHz with a 55 MHz crystal and the power supply adjusted to produce 5.5 volts.

I have 55 and 60 MHz crystals on back order from Digi-Key.

I thought perhaps you would like to have this information.

Sincerely,
Jack L. Oxley
Dallas, TX

I realize that more speed can be obtained from the TransWarp GS by using "hardware hacks," but I neglected to mention this since the article was targeted at a beginning *user. I have received quite a few letters telling me of cards that have been souped up to blazing fast speeds. In my article, I wanted to stick to factory supported upgrades for the cards and not go into detail on exactly how to push your accelerator to the limit, although the fact that accelerators can be customized to run at faster speeds than those mentioned in the packaging probably deserved mentioning.*

Joe

Dear Diz:
[Regarding Replicator . . .] We have a IIGS-specific club in Britain, and we send

out disks every 2 months. . . . My job is to duplicate the disks and send them out.

If you don't know, duplicating nearly 500 disks is a very boring occupation. To add a little interest, I have tried other programs like Photonix (which is faster [than Replicator]), ProSel and a whole lot of other stuff. OK, I admit it, you are right, Replicator is best by a wide margin!

A feature I particularly like, is the ability to pick out disks with hard errors. That warning screen flash has saved me from sending out disks with bad blocks on about 20 occasions so far.

Replicator's ability to spot disks that are already formatted is an admirable safety characteristic. It is also a very bad feature indeed, let me explain why. I can buy Macintosh pre-formatted disks at $20.00 [extra per 100 disks.] From my point of view that would be a price well worth paying, because the duplication process is cut down to simply writing to the disk. That cuts the time by about 40%. The only problem is that I need to stay alert and poke the mouse to force Replicator to write to a pre-formatted disk. It would be really nice if I could disable that safety feature. How about adding that feature to your wish list?

Peter Davis
Kent, U.K.

We did! Being able to automatically write onto a pre-formatted disk has been part of Replicator since the first version. (The latest version of Replicator was published in our last issue.) Just select the Preferences item from Replicator's Edit menu and turn off the "Prompt on formatted target disks" preference.

Anyway, I'm glad that your club is finding Replicator so useful! Believe me, I know what you are talking about when you say that duplicating disks is a "boring occupation." We do almost 2,000 for every subscription mailing, which is where we got the experience that helped us make Replicator such a cool disk copying program. (I've yet to see anything *on* any *computer that can touch it!)*

Diz

Dear *GS+*:
Joe made a comment in the "The Basic IIGS" article in *GS+* V4.N2 that may mislead some less-experienced users contemplating a hard drive.

. . . Joe states that "Generally speaking, a good SCSI drive and a RamFAST will outperform an internal hard drive." That and the balance of the paragraph would seem to convey the thought that *all* "internal" hard disks in the IIGS world are *not* SCSI drives

Since when?

Seems like an "apples and oranges" situation to me. While it's true that Applied Ingenuity has slow-rolled into the tarmac and that the majority of the internal HDs they vended were not SCSI drives, I'm pretty sure that they did offer a SCSI drive option for a while. Also, aren't Econ's Pegasus drives *all* SCSI drives?

. . . Don't mean to pick at nits (the issue was *great*, as usual), but it doesn't do the novice user any good—and may inhibit choice of an excellent option—to imply that if one desires a SCSI drive, one must avoid an internally-mounted drive. Likewise, it's misleading to generalize that an external SCSI drive will outperform any internally-mounted drive.

John Pothier
via America Online

You are right John, Applied Ingenuity did offer a SCSI option for the InnerDrive for a while (but they priced it pretty high), and the Pegasus drives from ECON are SCSI drives. Our apologies for the oversight.

On a completely different subject, I want to thank Steven R. McQueen of Simplexity Software for sending in the following response to my review of the Desktop Enhancer. I said pretty much the same things in an editorial a few issues back, but, unfortunately, I guess it bears repeating.

Diz

Hi! I just read your review of Desktop Enhancer (*GS+* V4.N2), and it looks like somebody was fairly well pleased with the program. This is actually closer to the kind of experience I have had with customers than any other review published to date.

I would like to say one thing, though. (There's always *one* thing, isn't there?) It is actually directed more to the readers to whom you referred [in your review] than to *GS+* Magazine.

You mentioned that several readers have complained to you about problems with the Desktop Enhancer. This is a great shock to me, because other than a busy weekend with Joe Kohn and your own comments about the Standard File Dialog problem, I have received *no* calls (count them—zero, zip, nada, none!) reporting *any* problems with the Desktop Enhancer.

I can't believe that anyone who paid for a copy of the Desktop Enhancer would just write it off if they found a problem. Simplexity Software provides several ways (America Online, GEnie, telephone, and U.S. Mail) to report problems and have them *fixed*! Why, then, are your readers complaining to you, but not asking us for the support to which they are entitled?

The Desktop Enhancer is an incredibly complex program which must operate correctly with thousands of applications, in three very different operating systems (System 6, System 5.0.4, and ProDOS 8), regardless of which of 39 possible states of operation the Apple IIGS is running in. I can practically guarantee that someone, somewhere is going to find a condition where it will not work correctly. That is the reason for Simplexity Software's customer support. If you *do* find a problem, we *want* to fix it.

Do not report Desktop Enhancer problems to your brother-in-law, your next-door neighbor, or your Apple Dealer. None of these people have the resources, expertise, or information required to help you. While they may enjoy speculating about how the problem occurred or whether or not "anybody tested this thing," they will certainly not be able to offer any real solutions.

Do report *all* problems with the Desktop Enhancer to Simplexity Software, as directed in your User Guide. One way or another, we will make that problem go away! You paid for a program which will not interfere with your applications, and we are determined that you shall have just that!

Finally, please remember that we can only fix bugs that we know about. *Please* report any bugs you find so we can fix them and send you an update! Our only unhappy customers are the ones who *don't* ask us for help.

Sincerely,
Steven R. McQueen
Simplexity Software
via America Online

Send *your* letters to:

GS+ Letters
P. O. Box 15366
Chattanooga, TN 37415-0366

The World at Your Fingertips

An Apple IIGS Primer for Telecommunications Hardware

By Mike Edwards &
Charles W. Snyder Jr.

Introduction

Three years ago, if you purchased an Apple IIGS computer, you could have survived with 1.25MB of memory, the 3.5- and 5.25-inch disk drives, and a printer. Today's IIGS cannot achieve its full potential without at least 2MB of memory (4MB is ideal), a hard drive, and a *modem*. The additional memory is required for "power programs" such as Graphic Writer III, AppleWorks GS, and HyperCard IIGS. A hard drive is a must for those who need speed, easy access, and storage space.

Although modems have been around for a while, they have only recently fallen into the "must have" category for IIGS owners. With the decline in new commercial software, the IIGS user has no choice but to turn to freeware and shareware programs. A modem makes freeware and shareware instantly accessible, simply by subscribing to an online service.

So, what's an "online service," you ask? To define this concept, let's break this term into 2 parts. The term, "online" merely means that your computer is connected to a modem, which is connected to your telephone line, and is communicating with another computer or computers that are connected the same way. An "online service" is usually a mainframe computer, which you can access by dialing its telephone number through your computer and modem, that provides information, and usually charges you a usage fee. Major online services available to IIGS users are America Online, CompuServe, Delphi, and GEnie. Services such as these will permit subscribers to *download* files from their system. There are many other benefits to the online subscriber such as sending and receiving electronic mail (*e-mail*), participating in live online *conferences*, exploring encyclopedias, and searching through databases. You will also want to check out any Bulletin Board Systems *(BBSes)* in your area which cater to your interests. The only way you can have access to these benefits is through a modem. In this article, everything you wanted to know about modems will be discussed. Obtaining the right modem to go with your IIGS can be a complicated process for the non-electronic oriented consumer, and there are factors that are of particular importance when attempting to choose the right modem for your IIGS. In this article, we'll sort through this mystery and try to simplify the process for you.

(Before proceeding any further, it might be a good idea to call your attention to the "Glossary" department in this issue. Definitions for terms that are *italicized* in this article can be found in the "Glossary" department.)

Modem Basics

The first consideration before you can go online is the purchase of a modem. The term "modem" is actually a contraction of the words "*mo*dulate" and "*dem*odulate", which simply means that a modem changes the electronic pulses into tones enabling a computer to send (modulate) and receive (demodulate) information through the telephone lines. Modems have come a long way from the slow, early 110 *baud rate*. These early modems required that you attach acoustic couplers (rubber caps) to your phone handset to send and receive the audio signal. A modern 14,400 *bps* (bits per second) modem is 130 times as fast as a 110 baud rate modem, and with data compression turned on, it could theoretically be 520 times as fast. Users now have access to these 14,400 bps modems which have finally reached an affordable price range. For instance, one mail-order company is now selling an external Zoom Telephonics V.32bis 14,400 bps modem for $227.00. Now, let's look at some background information and try to explain some of the terms that you will encounter in your pursuit of the "perfect" modem.

Before the breakup of AT&T, Bell Labs set the standards for all modem communications. This worked fine in the United States, but the rest of the world was using standards set by the Comité Consultatif Internationale de Télégraphie et Téléphonie, or CCITT for short.

Before the breakup of AT&T, Bell Labs set the standards for all modem communications. This worked fine in the United States, but the rest of the world was using standards set by the Comité Consultatif Internationale de Télégraphie et Téléphonie, or *CCITT* for short. CCITT is an international committee which sets the worldwide standards for telecommunications. For example the U.S. standard for 1,200 bps is called BELL 212A and the CCITT standard is called V.22. As you might guess these are not compatible. So, if you were to transmit a file to someone outside the U.S. in the "old days," the modems would probably not understand each other. After the breakup of AT&T, the modem manufacturers adopted the CCITT standards in order to provide universally recognized standards so that modems of different brands would be able to communicate with each other.

Today there are some CCITT standards which are more important than others such as V.22bis, V.32, V.32bis, V.42, and V.42bis. Let's take a quick look at these. By the way, "bis" is a word you will see a lot in these standards, and all it means is "second" or "revision of the original" in French. V.22bis is the international standard for 2,400 bps. In the past, the term "baud rate" was often used in describing modem speed, but with the modulation systems in use on modern high-speed modems, "baud rate" is not correct terminology. Actually, the baud rate of a 9,600 bps modem is around 2,400. Next is V.32, the CCITT standard for *full duplex* 9,600 bps communications. When V.32 first appeared it was very expensive for manufacturers to produce a modem to meet its standards. Several modem manufacturers developed their own 9,600 standard, most notably U.S. Robotics with its High Speed Telecommunications (*HST*) standard. U.S. Robotics, because of special pricing for operators of BBSes, was able to make HST a "defacto" standard. But as prices of the chips that are needed to produce these modems have come down, manufacturers were able to produce low cost V.32 modems and V.32 has become the universal standard. (Modems that support both the HST and CCITT standards are called *Dual Standard modems*.) If you are considering purchasing a used modem, make sure that it is not using a manufacturer's proprietary *protocol*. If that is the case, it may only be able to communicate with a modem of the same brand at its higher speeds. The latest standard, V.32bis offers 14,400 bps full duplex transmission. This is not only a 50% increase in speed over a V.32 modem, but also contains an important feature called auto-renegotiation. This means while both V.32 and V.32bis modems monitor the quality of the phone line and detect excessive errors due to poor line quality, both modems will drop to a slower, error free speed. With the V.32 modem, once the bps is lowered, it will stay at that speed until you log off. A V.32bis modem, however, continues to

monitor the quality of the line and if line quality improves, it will automatically increase the speed of the modem accordingly.

Two standards that are often misunderstood are V.42 and V.42bis. These deal only with error correction and data compression respectively. Bear in mind that in order to have V.42bis, you must have V.42 implemented but the reverse is not true. A V.42 modem will first try to make a connection using its own error correction protocol, called LAP M (Link Access Procedure for Modems). If that should fail it will try to connect using *MNP* 4, a protocol developed by Microcom, a leading modem manufacturer. Microcom developed a series of proprietary protocols, MNP 1-10, for error correction and data compression. MNP 1-4 were later incorporated into the CCITT standards for V.42. The LAP M protocol is more efficient than MNP 4, and will give you a higher efficiency in data throughput. The incorporation of MNP 1-3 is usually of no consequence since you will rarely find them implemented these days. Either V.42bis or MNP 4 will give you efficiency in data throughput which is greater than 100%. V.42bis deals only with data compression. The V.42bis protocol allows for a data compression of 4 to 1, which means, theoretically, that if you are connected at 14,400 bps, your throughput would be 57,600 bps. This would take a perfect phone line with a serial port and computer that could handle such a high throughput. Needless to say, on the IIGS, the actual throughput is probably going to be much lower. The V.42bis standard has one important feature for the IIGS user, in that it will recognize a *compressed file*. If you have your modem's data compression turned on, it will check the first *packet* of data to see whether or not any compression took place. If none took place (as it would with a compressed file), data compression will turn itself off. On the other hand, MNP 5, which has been incorporated into most V.42bis modems, cannot recognize a compressed file. It spends its time trying to further compress a compressed file, actually increasing the transmission time. For this reason, if you have a modem with only MNP 5, make sure that it is turned off when you download a compressed file. If your modem supports both V.42bis and MNP 5, you can usually tell the modem that if it can't make a V.42bis connection, don't connect using MNP 5. All of the Apple II online services compress their files with ShrinkIt by Andy Nicholas, the standard compression utility for the Apple II, but none of them as yet support either V.42bis or MNP 5; therefore, no problem exists at this time. Where you may encounter problems is in downloading files from BBSes which support MNP 5 and have compressed files in their libraries.

Now that we have defined most of the terminology, let's look at some other important aspects in purchasing a modem. Make sure that the modem is 100% compatible with the Hayes AT command set. All this means is that it uses the same commands as the Hayes modem. This is important since all IIGS *communications software* will support Hayes compatible modems. You will find with few exceptions, all modems manufactured today are Hayes compatible. Be sure to check the modem's warranty, as it can range anywhere from one year to a lifetime, with the most common being about five years. This also reflects the amount of confidence a manufacturer has in his product. Go to your public library and check the PC magazines for evaluations of modems. These product tests will easily show that all modems are not created equal, as you will find data transfer rates with up to a 20% variance between different brand modems. Two important areas to look at when reviewing product tests of modems are the data transfer rate, i.e. characters per second (*cps*), and *noise suppression*. If you buy a modem that tests high in both areas, it should give you years of dependable service. Contrary to what your local computer salesman may tell you, any external Hayes compatible modem will work with your Apple IIGS.

One aspect of modems we have not touched upon are internal modems. (See Figure 1.) At the present time, Applied Engineering is the only company that produces an internal modem for the IIGS. An internal modem is nothing but a modem on an expansion card that fits into one of the internal slots on your IIGS. Some advantages of an internal modem are:

1) It takes up no additional desk space.
2) There are fewer compatibility problems since the modem was built specifically for your IIGS.

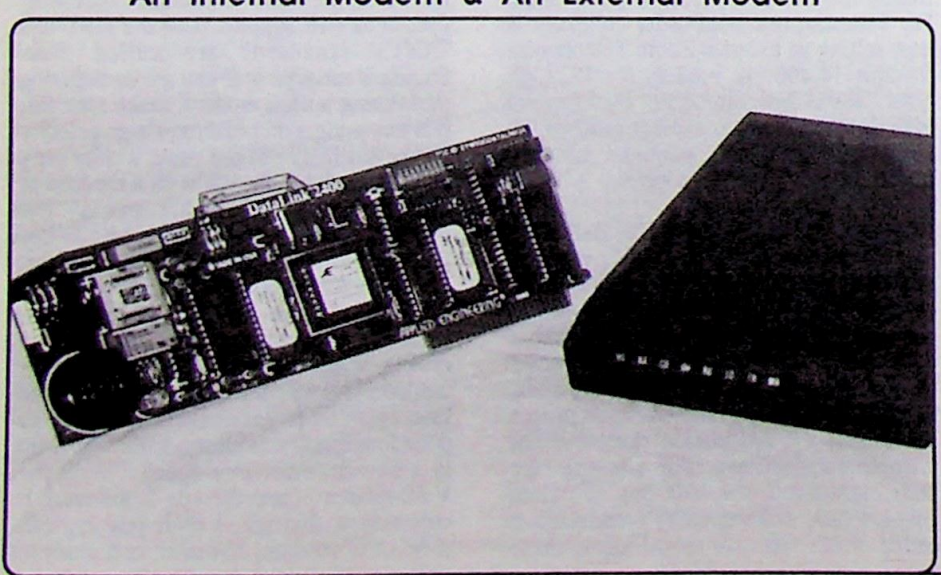
Some disadvantages of an internal modem are:

1) It takes up a slot in your IIGS.
2) It produces heat.
3) It draws power from the computer's power supply.
4) There are no "idiot" lights to indicate the operating status of the modem (on external modems, there are usually nine of these lights, one of which, for instance, will tell you if you are actually receiving data, a rather useful indicator).
5) An internal modem is not transferable to another computer platform. This also means that all those internal modems for PCs and Macs that you see advertised so cheaply cannot be used with a IIGS!

Cable Basics

The logical progression of obtaining the necessary items to complete a *telecommunications package* for your IIGS is to obtain your modem, followed by your communications program, and, finally, a modem cable (presuming, of course, that you already have your IIGS, and a working telephone outlet). The

Figure 1
An Internal Modem & An External Modem



reason that you purchase your modem cable after your communications program is that the cable you use will be dictated by your communications program. The reason for discussing your cable now is that you should be aware that there are differences between cables and what these differences are as you attempt to complete your telecommunications package. By the way, a modem cable is necessary only if you are purchasing an external modem. If you buy an external modem package (modem, communications software, and cable) from a IIGS vendor, rest assured that it will come with the proper modem cable.

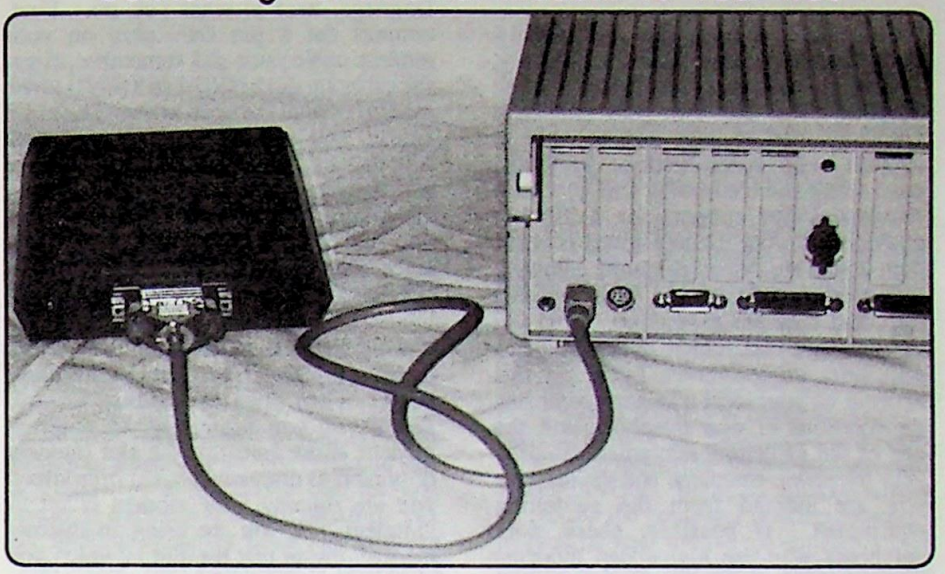
Your modem cable is the linking device between your modem and your computer, hence, one end is plugged into the modem port of your IIGS and the other end is plugged into your modem. Now, let's get one thing out of the way before going any further. Do not let a computer salesman sell you a printer cable to connect your modem to your IIGS! It won't work, period! Granted, a printer cable looks just like a modem cable, but the internal wiring is completely different. There are three types of modem cables that will work, depending on the configuration of your telecommunications package and let's look at each one of them. The first two are cables made for the Macintosh and the third one is a IIGS-specific cable.

First is the "software handshaking" cable. This cable allows the communications program to control the data flow between the IIGS and the modem. If you purchase a 2,400 bps modem, this type of cable will work fine. It may work with a higher speed modem, but you'll have to check with the manufacturer of the communications program you are considering to see if it will work.

With the advent of high-speed modems, software handshaking was found to be too slow, so the data flow control was then built into the modems. This led to the second type of cable, called a "hardware handshaking" cable, which allows the modem to control the data flow. A 9,600 bps or higher modem, may utilize either a hardware or software handshaking cable because your communications program and not your modem, dictates which cable it will support. If your communications program supports both hardware and software handshaking at 9,600 bps or above, you should purchase a hardware handshaking cable as it will result in faster data throughput.

The last cable we will discuss, we'll call the "ProTERM" cable, for the lack of a better name. This is a cable that was

Figure 2
Connecting An External Modem To Your IIGS



designed to work on the IIGS with the ProTERM communication program. It is a hardware handshaking cable with internal wiring a little different than the standard Macintosh hardware handshaking cable. Again, because of the differences in each of the cables, make sure that your communication software will support the cable you purchase. You may order a ProTERM cable directly from InSync Software, Inc., publisher of the ProTERM Telecommunications software.

In most instances, external modems do not come packaged from the manufacturer with a cable; however, some mail-order houses will bundle a cable with modems that they sell. If you are dealing with a non Apple II vendor, remember to specify a Macintosh cable for either software or hardware handshaking, as the IIGS and Macintosh cables are the same.

Other Purchasing Decisions

Where you purchase your modem is a decision you will need to make based on your own priorities, as well as your wallet. Basically, the higher the speed, the higher the price. With people wanting to upgrade to faster modems nowadays, there may be an opportunity to purchase a used modem. Be aware, however, of the usual potential pitfalls of buying used electronic equipment. You may elect to purchase a modem from your local dealer. Fortunately, since the IIGS is compatible with all Hayes compatible external modems, IIGS owners are not plagued with the problem that exists with other components of our computers, i.e., that we can't find software or hardware for the IIGS anymore in local stores. Purchasing a modem locally will mean that you will get support for your equipment, provided, of course, that you buy from a reputable dealer. The other way to go is, of course, by mail order, with which IIGS owners should be quite familiar. Some mail-order sources that specialize in Apple products have specific modems that they recommend for the IIGS. Reputable mail-order companies will stand behind their product and will provide service, if needed.

While we are still discussing purchasing decisions, we should mention that if you want to get some first-hand opinions on which equipment works best for IIGS users, don't overlook your local Apple user group. There are undoubtedly some folks there who have opinions about their own setups, and their opinions could be quite valuable to you.

Installation

Modems are fairly easy to install, especially if you have a friend who has done this before, and you can "con" that person into installing yours! Seriously, read your manual carefully, and if there are installation instructions for the Mac in your manual, you can usually follow those instructions. If your telephone service includes call-waiting, you will need to disable it whenever you go online, the reason being that the short beep you get when you have an incoming call will disconnect the modem. Most telephone companies permit deactivation of call-waiting simply by prefixing the number you are calling with a "*70" (for touch-tone telephones) or "1170" (for touch-tone and rotary telephones). If you find these codes do not work on your telephone line, check with your local telephone company

to see which codes you need to use to disable call-waiting.

Let's cover some of the basics of hooking your modem to your IIGS. Obviously, you will need a telephone outlet. Not so obvious is the fact that your telephone company may or may not be able to support a high-speed modem. Presently, most telephone companies will guarantee residential line support for 2,400 bps modems. If your modem speed is faster than 2,400 bps, your telephone company may recommend getting a data-dedicated line, and they are expensive. You will usually find that higher speed modems will work on residential lines, but this depends on your local telephone company, the condition of your telephone line, the age of the switching equipment used by your telephone company, and the distance you are located from the switching equipment. If possible, check with neighbors who use high-speed modems and see if they are encountering any difficulties. If they are, and you have already purchased a 14,400 bps modem, fear not! If you cannot connect at 14,400 bps, you can always connect at a lower speed with your high-speed modem.

Now that you have removed your modem from its original factory carton, and you have concluded that the installation instructions have been written in a foreign language, here is what you do. First, connect the 8 pin DIN plug on your modem cable (you did remember to get the cable we discussed, didn't you?) to the modem port on the back of your IIGS. Of course, plug the other end (the end with 25 pins) into your modem. (See Figure 2.) You can use either the modem port or the printer port on your IIGS. Most of you will want to use the modem port, since you probably already have your printer plugged into the printer port.

The next step is to configure your IIGS for your modem. Open the Control Panel NDA. Then open the "Slots" Control Panel. If you are using an external modem, make sure that the slot (modem or printer, as discussed above) from which you are running your modem is set to "Modem." If you are using an internal modem, insure that the slot in which you place your card (slot 2 is recommended) is set to "Your Card." Most communications programs do not require any changes to the settings of your modem port since they bypass it completely. There are exceptions (like the America Online software), so be sure to carefully read the manual that comes with your communications program.

Conclusion

Now you are almost ready to connect to the outside world. We say "almost ready," because you will need to purchase your communications program in order to do all of the things that were discussed at the beginning of this article. Pros, cons and testing of different communications programs that will work with the Apple IIGS, need to be covered in another in-depth article, but, to sum it up briefly, there are five commercial communications programs on the market now that will work with your IIGS. Two, AnsiTERM, by Paul Parkhurst [see review in *GS+* V3.N4] and the communications module of AppleWorks GS, are IIGS-specific. The others: ProTERM, by InSync Software, Inc., Point-to-Point by Quality Computers, and Talk is Cheap by Don Eldon are not IIGS-specific. (Another IIGS-specific program, Spectrum, is due to be released soon.) If you have the March/April 1991 *GS+* Disk, you already have a terminal program called Transfusion. This is an NDA that you can use with an external modem. There are also many freeware and shareware communications programs that will work on the IIGS. If there is enough interest, we will compare all of the communications programs for the IIGS. Let us know what you think! *GS+*

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```
if x > y then WriteLn; else
                                    ^illegalsymbol
```

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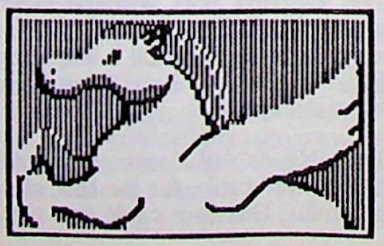


Understanding the Desktop

By Steven W. Disbrow

Sometimes it's easy to forget that not everyone out there has been using computers for the last ten years. Another thing that's easy to forget is that a large percentage of IIGS owners have come to the IIGS by way of earlier Apple II models and are mystified by all of this talk of "the desktop," "icons," "windows," and all of the other things that more experienced IIGS owners take for granted. So, I thought I should take some time to explain the basics of the Apple Desktop Metaphor and why it is important. (Note that this article will be a gross over-simplification of the Apple Desktop Metaphor. Also, most of the examples in this article will be based on the Finder, since it contains almost everything you can expect to encounter in the Apple Desktop Metaphor. If you want all of the "whys" and "wherefores" of this subject, I strongly suggest that you pick up a copy of Apple's *Human Interface Guidelines* book. It's a bit on the technical side, but it tells you more than you could ever want to know about why desktop software works the way it does.)

Under the Desktop

Before the introduction of the Lisa computer (the predecessor to the the Macintosh and the IIGS), nobody really cared about the way people worked with computer programs. The only real concern was what a program could do for you and whether or not you had the stamina to figure out how to make it do it. With the introduction of the Lisa, though, words like "user interface" and "user friendly" began making their way into the vocabulary of computer nerds and (horrors!) everyday people. Slowly there was a subtle shift in the way people looked at software. The concern was no longer what a program could do for you, but what *you* could do with a program. In other words, the focus was shifting from the hardware and software to the people that actually used the computers.

The Apple Desktop Metaphor is one of the first commercially successful attempts to bring this "user-oriented" approach to mainstream computing. While the philosophy behind this approach could (and does) fill a book, for our discussion, only two points are really relevant: the user should be able to relate what he sees on the screen to the real world, and the way the user interacts with software should be consistent.

Keep It Real

The first of these points is fairly obvious just from the name "Apple *Desktop* Metaphor." A desktop is something that everyone is familiar with from the real world (at least everyone with enough money to buy a computer). You write letters on your desktop, put files on your desktop, etc. At school and at work, most of us do most of our business on a desktop. So, wouldn't it be great if you could do those same things on your computer screen?

Of course, not everything in the realm of computing can be easily or logically transferred to a desktop setting. For example, when was the last time you saw a window or a file server (or, for that matter, a trash can) on your desktop? So, the desktop metaphor takes just as much "real world" stuff as it needs to establish a familiar setting, and then it tries like crazy to bring computing specific concepts into this setting by putting a friendly face on them.

Icons

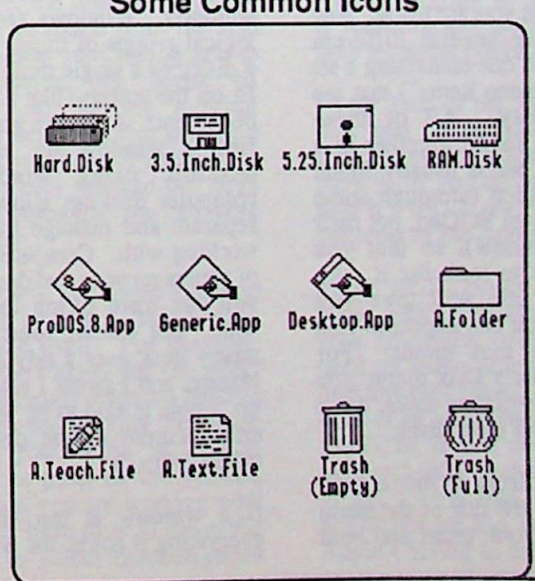
One of the main ways this is accomplished is through the extensive use of small pictorial representations of objects. These pictures are called "icons." For example, in the real world you get rid of something by throwing it in the trash. In the IIGS Finder, you get rid of files that you don't want by dragging them "into" the Trash Can icon at the bottom of the screen. Other icons that you see in the Finder represent the other objects that you work with while using your computer. See Figure 1 for some examples of typical icons and what they represent.

Whoops! I've just used a term, "dragging," that you may not be familiar with. Unfortunately, before I can define "dragging," I have to define some other terms, like "mouse," and "clicking."

You are probably already familiar with the term "mouse." The mouse is the pointing device that attaches to one end or the other of your IIGS keyboard. I'm told that it's called a mouse because the cord looks like it might be a mouse's tail. (And I always thought it was because the mouse itself looks like a badly cut piece of cheese.) On the bottom of the mouse is a ball. When you move the mouse on your real world desktop, the ball rotates and a pointer on the computer desktop moves in relation to your mouse movements. This pointer is what you use to manipulate the items that you find on your computer desktop.

As for "clicking"; on top of the mouse, you will find a button. When you press this button, it makes a clicking noise. Hence the phrase, "clicking the mouse." Of course, you can click the mouse all day and still not get anything done. For your mouse clicks to be meaningful, your mouse pointer has to be on top of something, like maybe an icon. (And you were wondering what all this had to do with icons . . . .) Clicking the mouse on something will usually result in that thing becoming selected. In the case of an icon, you can tell that it is selected because its colors will invert (i.e. everything black will become white and all other colors will become black).

Figure 1
Some Common Icons



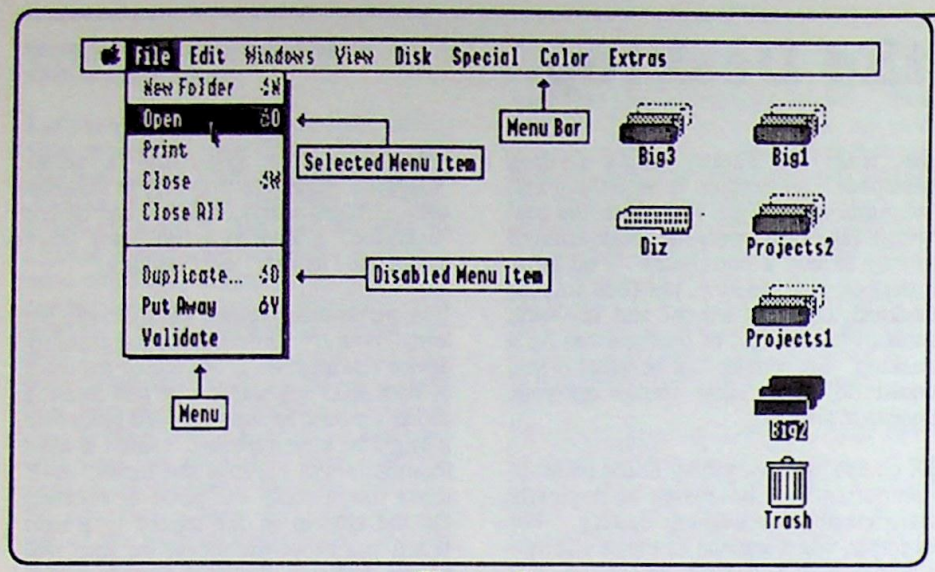


Figure 2
Anatomy of a Menu Bar

Which brings us to "dragging." If you click the mouse on top of something, like an icon, and then *hold the mouse button down* as you move the mouse around your desktop, you are said to be "dragging the mouse." This concept is key to using almost all aspects of the Apple Desktop Metaphor. (If these concepts confuse you, check out the tutorial on the "Your Tour of the Apple IIGS" disk that came with your computer. This tutorial will give you practical experience with many of the concepts discussed here.)

Menus

Keeping with the "real world" aspect of the Apple Desktop metaphor, menus are something that you might actually find on your real desktop, especially if you order out for lunch a lot. Unlike restaurant menus, though, the menus on your IIGS don't have prices in them and they let you pick from the different options available to you in the program you are using. Any program might have several different menus available, each one containing a set of options (called "menu items") that are related in some way. All of these different menus are found together in a *menu bar*. A menu bar is usually found at the top of the screen (although some programs, like our own EGOed, put their menu bars in a window), so that you always know where to look for it. An individual menu's title will give you some idea of what you can expect to find when you look in that menu. For example, in the Finder's Disk menu, you will find options to initialize disks, erase disks, verify disks, and eject disks.

To choose an item from a menu, you move the mouse over the title of the menu you want to choose from, press and hold the mouse button, and then drag the mouse down the menu until the item you want to select is highlighted. Then, you simply let go of the mouse button. The item you have selected will flash, and the option you have selected will be performed. At some point, though, you will find that you can't select some of the items in a menu, because they are dimmed out (also known as "disabled"). Don't worry, that's just the IIGS's way of letting you know that you can't pick that option right now. (An example of selecting something from a menu is shown in Figure 2.)

Windows

Getting back to the "real world" aspects of the desktop, one thing that isn't hard to simulate on a computer screen is the fact that your desktop will get messy. One way the desktop metaphor tries to get around this is through the use of *windows*. Windows are used to display logical groups of things (like the files on a disk), or a single thing that is too big to fit on the screen (like a word processing document). Although you probably won't find a window on your real world desktop, using windows on your computer desktop allows you to easily separate and manage the items you are working with. Compare this to the piles of papers on your real desk and the trouble you can have trying to find what you want. (Of course, some people prefer a messy desk over a tidy one. Even more bizarre, and I swear I am not making this up, Apple is said to be working on a new enhancement to the desktop metaphor called "piles.")

If a window is too small to display everything it holds, the window will have one or two *scroll bars* at the right-hand side or on the bottom of the window. You can use these scroll bars to see more of what the window has to show you. A good way to think of a window with scroll bars is like a microscope. The window is like the lens, it can't move to the left or right, but you can move what's under the lens so that you can see it. The scroll bars allow you to move what's "under" the window so that you can see it in the window. (An example of a window with scroll bars is shown in Figure 3.)

A quick example: in Figure 1, you can see what the icon for a hard disk looks like. In Figure 2, I've clicked on one of my hard drive icons once (to select it), and gone to the file menu and selected the Open item. In Figure 3, the Open item has done its thing, and a window has been opened which displays all of the folders and files on my hard disk.

As I said before, a window is used to display a logical grouping of things. So, what if you have more than one logical group of things that you want to display at once? (Like, maybe, the contents of several disks.) Chances are you will end up with more than one window on your desktop! Which brings us right back to the mouse.

If you have more than one window on your desktop, you select the one you want to work with simply by clicking on it with the mouse. The window you select will then be brought in front of all the other windows on the desktop so that you can work with it.

Controls

The final "real world" element of the desktop that we will talk about are *controls*. In the real world, you use buttons, dials, knobs, and all sorts of other fingertip tools to control the things that you work with. While you may not find a large number of knobs or buttons on your real desktop, your computer desktop will probably be filled to overflowing with them. For example, suppose you want to choose between two mutually exclusive settings in a program. To do this, you will probably be presented with a couple of *radio buttons*. They are called radio buttons because, when you select one, the other one is de-selected, just like the buttons on an old car radio.

In addition to radio buttons, the IIGS desktop can become populated with thermometers, dials, regular buttons, and a couple of other controls that don't necessarily exist in the real world: lists, size boxes, zoom boxes, and the

previously mentioned scroll bar. As you might be able to guess by now, the purpose of having all these different kinds of controls is to give you a way to interact with the computer, while keeping the experience firmly rooted in your past use of your old car radio, your thermostat, and whatever knobs you might have come across in your day-to-day life. (Figure 4 shows a window that is loaded down with all kinds of neat controls.)

Keep It Consistent

The second principle we will talk about, consistency, is, in my opinion, far more important than the attempt to relate things to the real world. For example, is it more important to you that the things you see on your desktop are presented in a square window (as opposed to a hexagonal window), or that pressing Command-S will *always* save your work? Of course, consistency is probably irrelevant if the interface is so alien that you never get past the hexagonal windows.

Be that as it may, consistency is important, and the success of the Apple Desktop Metaphor is very much due to the fact that Apple has consistently pounded developers over the head with the importance of staying true to the desktop concept and remaining consistent with other software products.

What do I mean by "consistent with other software products"? Well, consider the earlier example of pressing Command-S to save a file. No matter what program you are working with, be it on the IIGS or the Macintosh, if it follows Apple's guidelines, you can rest assured that the simple act of holding down the Command key (the key with the propeller and apple symbols on it) and pressing the "S" key will save your work. In addition, pressing Command-P will print your document (if the software you are using supports printing), Command-X will cut your current selection to the clipboard, Command-V will paste the contents of the clipboard into your document, and pressing Command-O will let you open a new document. (If you don't understand what the "clipboard" is or why you would want to cut and paste to and from it, don't worry about it just now. The point I'm trying to make is that once you learn these things in one program, you can apply them to just about *any* program that you use from then on!)

Of course, consistency doesn't just apply to keystrokes. Consistency is also a big part of making the "real world" aspects of the metaphor work as well. Windows for example, almost always look the same. The same can be said for menus, and the various controls that you will encounter. Even icons, which wouldn't be worth anything if they all looked the same, can add to the consistency of the IIGS. For example, the icons that you see when you look at AppleWorks GS documents in the Finder are the same icons that you will see when you open a file from inside AppleWorks GS.

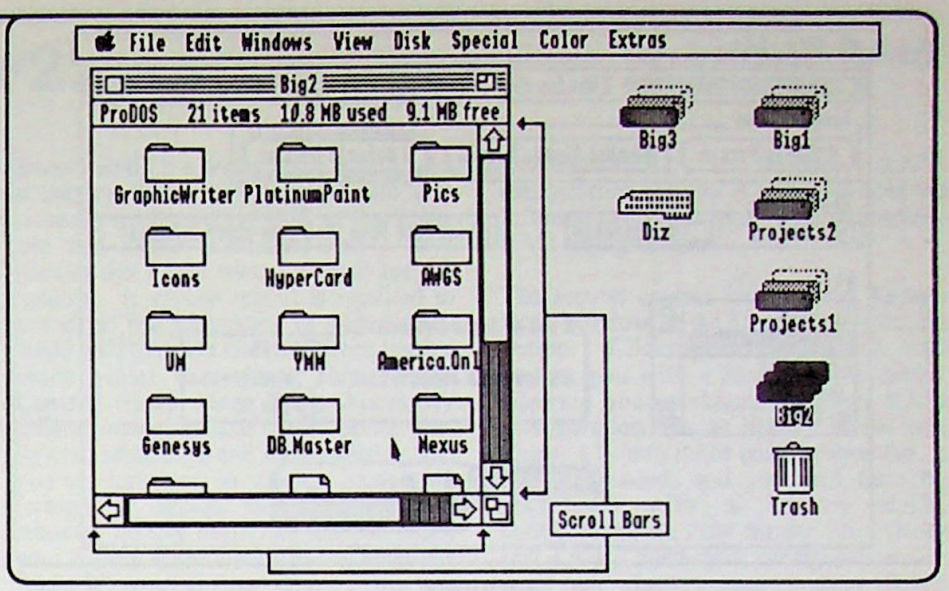


Figure 3
A Window With Scroll Bars

You will also find consistency in the way you work with various objects on your computer desktop. For example, when you click on a window, it *always* comes to the front so you can work with it.

Trouble In Paradise

If it sounds like I really love the desktop metaphor, I do. But, like everything else, there are some problems with it.

Like I said before, the desktop metaphor can only borrow so much from the real world before it has to start asking you to make some rather big leaps of imagination. Like having moving windows on your desktop. This is quite a leap from the real world, but it's necessary to allow you to easily manage the large amounts of information that you can work with on a computer.

Another place where the Apple Desktop Metaphor suffers is that it isn't always followed by Apple itself! For example, when you are in the Finder, you can select multiple, discontiguous, icons by holding down the shift key and clicking the mouse on each icon you want to select. However, in other parts of the system, most notably when you are working with a list control, you have to hold down the Command key to select discontiguous items in the list. (The shift key does have a function in list controls, but not the one you expect.) Fortunately, lapses like this are rare.

In the End

The Apple Desktop Metaphor is one of the best environments I've ever used on a computer. However, it can take some getting used to if you are new to the IIGS. However, the time it takes to learn how to use the IIGS desktop is time well spent. Not only will you be able to take advantage of all of the great IIGS-specific applications that have been written, you'll be well on your way to knowing how to use just about any other computer you sit down at.

I hope that this look at the Apple Desktop Metaphor has helped some of you that were struggling to get used to the IIGS. If you have any questions on this subject, here are some places to look for answers:

"Your Tour of the Apple IIGS." This is a disk that comes with the IIGS. If you bought your computer used, you may not have it. If you do have it, boot it up and give it a try. It teaches many of the basic concepts of the Apple Desktop Metaphor.

Apple IIGS Owner's Reference. This book, which you should have gotten with your computer, contains everything you need to know about working with IIGS desktop programs. If your copy of this book is an older copy (before the ROM 03 IIGS), or if you bought your computer used and didn't get a copy, you may want to get a new one. Unfortunately, that might not be too easy. I contacted the Apple Catalog to see if they had any, and

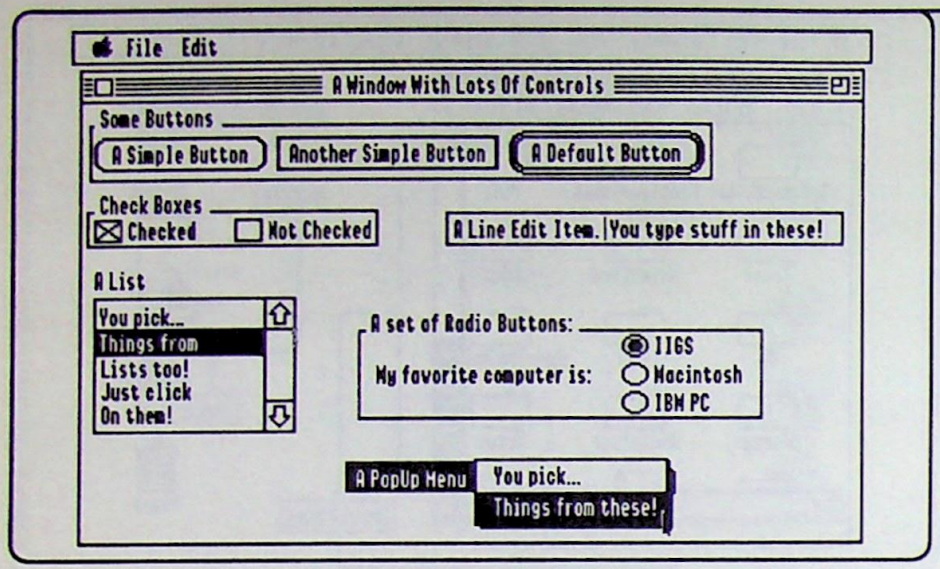


Figure 4
Some Different Types of Controls

was told that they didn't. I was also told that the best way to get one would be to go to your local Apple dealer, and order a copy through them.

Apple IIGS System 6 User's Reference. While not needed for basic understanding of the IIGS, this book is still a great way to learn about the IIGS and a "must have" if you want to get the most out of System 6. It can only be ordered as part of the System 6 IIGS package, which is available through the Apple Catalog and various Apple II mail-order vendors. (See "How to Get System 6" in this issue for the name of one of these vendors.)

You should also check with your local user group (call the Apple User Group Connection at (800) 538-9696 extension 500 for the name of the nearest user group) for help. And, of course, you can always write or call us here at *GS+* Magazine! *GS+*

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Battery Brain v2.0

By Josef W. Wankerl

It's been a long time (over two years!) since we last published an update to Battery Brain. When System 6 came out, I really wanted to give Battery Brain (along with a couple of other old programs still on the burner here) a face-lift. After many months spent complaining about how I just wanted the program to magically be done but I didn't want to do it, Battery Brain v2.0 is finally available! The only new feature in Battery Brain v2.0 is the ability to write out conflicting battery RAM configurations at boot time, but all the old features have been enhanced and implemented in new "System 6" ways.

And for those of you who weren't with us two years ago (and for those whose memory is as bad as mine), some explanation is probably in order . . . .

What's a Battery Brain?

When the IIGS was introduced almost seven years ago, having it remember configuration information in an area of battery-backed RAM was a new concept for Apple II computing. Since then, Apple has shoved more and more information into the battery RAM area, and it has become quite a chore to reset everything after a battery goes dead. In an effort to make this loathsome task easier, we proudly present, Battery Brain!

Battery Brain is a control panel that allows you to save to disk, and later restore, your battery RAM configuration to *battery RAM configuration files*. Aside from being useful as insurance against a dead battery, battery RAM configuration files are also useful if you have a room full of inquisitive students or a IIGS full of expansion cards that require your system to be set up in a particular fashion. For example, I have my computer set up on an AppleTalk network, have my sound volume at a reasonable level, and I have an external modem hooked to port 2. Whenever I want to use synthLAB to listen to, or create, some beautiful music, I have to turn off AppleTalk (because the MIDI Synth tools don't run very well with all those AppleTalk interrupts going on), I have to turn my volume off so all I hear is the music coming from my stereo speakers and not the raspy internal IIGS speaker, and I have to switch slot 2 to the "Your Card" setting so my Audio Animator can communicate its MIDI messages to synthLAB. A system reboot is then required to make all the changes take effect. Whenever I'm done with synthLAB, I have to change everything back and reboot again. With all these changes taking place, Battery Brain is a dream come true. I have a battery RAM configuration file that correctly configures my IIGS so that I may use my Audio Animator, and I have another that I load when I want to use my modem. A system reboot is required to put all of the parameters in each battery RAM configuration file into effect, but it's much easier than going through the Control Panel New Desk Accessory (NDA), changing each of its options one-by-one, rebooting, and then realizing that you've forgotten to change something (which, of course, means *yet another* reboot)! Battery Brain also lets you check your battery RAM configuration against a "default" setup at boot time. If the two configurations differ, you can set your configuration to the default setup.

Installing Battery Brain

To install the Battery Brain control panel, refer to "How to Use Your *GS+* Disk" elsewhere in this issue. Battery Brain v2.0 requires System 6 or later.

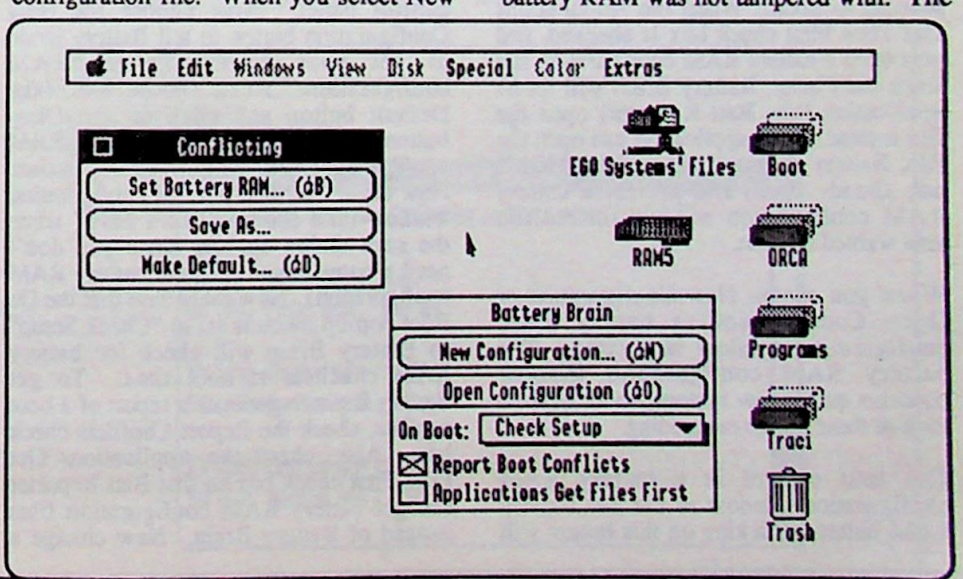
How Do I Use It?

Once you've installed Battery Brain, open the Control Panels New Desk Accessory and choose Battery Brain from the list of control panels displayed, then click on the Open button. The main Battery Brain window will then appear. The window is filled with a myriad of controls, so let's start from the top and work down.

The first control in the main Battery Brain window is the New Configuration button. Clicking on this button will create a new battery RAM configuration window. A battery RAM configuration window is used to hold information for a battery RAM configuration file. When you select New Configuration, a battery RAM configuration window is created to hold the information about your current battery RAM configuration.

The second control in the main Battery Brain window is the Open Configuration button. Clicking on this button will present you with a Standard File dialog allowing you to choose a battery RAM configuration file to open. When you choose a battery RAM configuration file, it will be loaded, and you will then be presented with a battery RAM configuration window for the file. (Note that simply opening a configuration file does *not* change your battery RAM configuration. For that, see the discussion of the "Set Battery RAM" button below.)

The third control in the main Battery Brain window is the On Boot pop-up menu. This menu allows you to tell Battery Brain what to do when you boot your IIGS. There are three things that Battery Brain can do on boot. The first thing that Battery Brain can do on boot is check your current battery RAM configuration against your default setup. When the On Boot pop-up menu is set to the "Check Setup" value, Battery Brain will compare the two configurations at boot time, and if they differ, Battery Brain will display a text dialog asking you if you want to use the default setup or keep your current setup. The second, and simplest, thing Battery Brain can do on boot is . . . nothing. When the On Boot pop-up menu is set to the "Do Not Check Setup" value, Battery Brain will not do anything on boot. You will also see a red "X" over the Battery Brain icon letting you know that your battery RAM was not tampered with. The



last thing that Battery Brain can do on boot is to unconditionally replace your current battery RAM configuration with the default setup. When the On Boot pop-up menu is set to the "Set To Default" value, Battery Brain will always replace your current battery RAM configuration with the default setup. (Special Note: If you hold down the option key as the Battery Brain icon appears during the boot process, Battery Brain will pretend that the On Boot pop-up menu is set to "Do Not Check Setup," and Battery Brain will not do anything to your battery RAM configuration on boot.)

The fourth control in the main Battery Brain window is the Report Boot Conflicts check box. This option only makes sense when the On Boot pop-up menu is set to the "Check Setup" value. When the Report Boot Conflicts check box is checked and Battery Brain finds a conflict between the current battery RAM configuration and the default setup, the conflicting configuration will be remembered. The next time a desktop application gains control, Battery Brain will notify you that the conflicting configuration was remembered, and then it will present you with a battery RAM configuration window associated with the conflicting configuration. You can then save the configuration to disk and analyze it with Batt Reporter. (See "Batt Reporter" in this issue for more information.)

The last control in the main Battery Brain window is the Applications Get Files First check box. This check box controls what happens when battery RAM configuration files are opened from the Finder. When the Applications Get Files First check box is not checked, and you open a battery RAM configuration file from the Finder, Battery Brain will open itself (if it's not already open) and present a battery RAM configuration window for the file you wanted to open. When the Applications Get Files First check box is checked, and you open a battery RAM configuration file from the Finder, Battery Brain will let an application (like Batt Reporter) open the file instead. If no application can open the file, Battery Brain will open itself (if it's not already open) and present a battery RAM configuration window for the file you wanted to open.

When you choose New Configuration or Open Configuration, a battery RAM configuration window is created. The battery RAM configuration window contains quite a few buttons, so let's take a look at these before proceeding.

The first control in a battery RAM configuration window is the Set Battery RAM button. Clicking on this button will tell Battery Brain that you want to set your current battery RAM configuration to the battery RAM configuration information contained in this battery RAM configuration window. You will be told that you are about to change your current setup, and you have the option to cancel.

The second control in the battery RAM configuration window is the Save As button. Clicking on this button will allow you to save the battery RAM configuration information allocated to the battery RAM configuration window out to a battery RAM configuration file.

The last control in the battery RAM configuration window is the Make Default button. Clicking this button tells Battery Brain to make the battery RAM configuration information in the current window your "default" setup. You will be given a warning that you are about to change your default setup, and you have the option to cancel. More information about what default setups are and why they are useful is provided later. When you make a default setup, it is saved out as a battery RAM configuration file. Depending on the ROM version of your IIGS, the default setup will be named either **DefaultSetup.01** (for a ROM 01 IIGS) or **DefaultSetup.03** (for a ROM 03 IIGS) and will be located in your ***:System:CDevs** folder. (Having a separate file for each ROM version allows you to have one system disk with a default configuration for either kind of IIGS.)

An Example

All this information may look good and well on paper, but I always like a good example to give me an idea of how to actually use a product. So, here's an example of how to use Battery Brain. First, install Battery Brain on your boot disk, reboot, and open the Battery Brain control panel. Now choose the New Configuration button to tell Battery Brain to get your current battery RAM configuration. Next, choose the Make Default button and click on the Okay button to make your current battery RAM configuration the default configuration. Now close the battery RAM configuration window (and choose "Don't Save" when the save dialog appears since you don't need a copy of your current battery RAM configuration). Now make sure that the On Boot pop-up menu is set to "Check Setup" so Battery Brain will check for battery RAM conflicts at boot time. To get Battery Brain to generate a report of a boot conflict, check the Report Conflicts check box. Also, check the Applications Get Files First check box so that Batt Reporter can get battery RAM configuration files instead of Battery Brain. Now change a battery RAM parameter—an easy one to see is the border color. Next, reboot your IIGS. When Battery Brain takes control at boot time, you will be presented with a dialog telling you that the current battery RAM configuration doesn't match your default setup (since you changed the border color after you made your default setup) and it will ask you whether or not you want to switch in your default setup. Press the return key to tell Battery Brain to reset the default setup. You should then see your border color change back.

If you boot into the Finder (or any desktop application), you will be presented with a dialog telling you that a conflict was found at boot time. When you click on the Continue button, the Battery Brain control panel will open, along with a battery RAM configuration window containing the conflicting battery RAM information. Choose the Save As button and save the conflicting battery RAM information. Battery Brain has done all it can now, so you can close it. If you're in the Finder, open the saved battery RAM configuration file. If you've previously launched Batt Reporter, then Batt Reporter should launch and the conflicting battery RAM configuration file should automatically open. If you haven't launched Batt Reporter before, then Battery Brain will come up again and open the conflicting configuration. Since the next part of the example assumes that you're in Batt Reporter, find the Batt Reporter application and launch it, then use Batt Reporter's Open menu item to open the conflicting battery RAM file.

Now that you're in Batt Reporter and you have the conflicting battery RAM file open, let's compare it against your current battery RAM configuration (which is now also your default configuration since you told Battery Brain to copy your default setup to your current battery RAM). To do this, first open your current battery RAM configuration by choosing the Open Current menu item. Now, choose the conflicting battery RAM configuration from the Compare menu and the two configurations will be compared. If you did everything right, you'll end up with a report saying that the border color information was different.

Memories

Battery Brain has evolved quite a bit from its humble beginnings. When used in conjunction with Batt Reporter, you can learn a lot about your battery RAM. There is a lot of technical information relating to Battery Brain, and it can be found on your *GS+* Disk. If you have any problems, please be sure to send in a problem form so that I can fix them. *GS+*

Batt Reporter

By Josef W. Wankerl

"Uh oh, Batt Man, it looks like our battery RAM configuration is different than our default setup," Batt Man's ever-watchful sidekick noticed. "You're right," replied Batt Man, "it looks like the work of a malicious student changing a parameter." Unable to pinpoint the exact cause of the discrepancy, Batt Man's counterpart asked, "How can we be sure?" "Why, use your **Batt Reporter**, of course!"

Batt Reporter is an application that allows you to generate reports of battery RAM configuration files (or of your current battery RAM configuration) and compare them. Comparisons can even occur between ROM 01 and ROM 03 configuration files. By itself, Batt Reporter is a rather simple-minded utility with no apparent use other than "gee-whiz" amusement. But, when used in conjunction with Battery Brain v2.0, Batt Reporter's use becomes clear. You can instantly pinpoint discrepancies between your current battery RAM setup and your normal default setup. Battery Brain only tells you that your current setup is different than the default setup—Batt Reporter tells you exactly what the differences are in case you're curious. And, best of all, it tells you in plain English.

Installing Batt Reporter

To use Batt Reporter, use the Installer on your backup *GS+* Disk to install it on one of your own disks. If you need more help, refer to "How to Use Your *GS+* Disk" elsewhere in this issue. (You can also run Batt Reporter directly from your backup *GS+* Disk if you want.) After you have it installed, simply double-click on the **BattReporter** icon to launch it.

Using Batt Reporter

Batt Reporter has two functions: to provide you with a report of a battery RAM configuration, and to compare two battery RAM configurations. To start with the easy case, let's just generate a battery RAM configuration report. A good battery RAM configuration to generate a report for is your current battery RAM configuration. To generate a report of your current battery RAM configuration, choose the Open Current menu item from the File menu. A battery RAM window, entitled "Current Battery RAM" will then open. To generate a report, simply click on the Generate Report button in the window. A progress window will then appear, and after a while (yes, it *does* takes a long time to generate the report—this is why it wasn't automatically generated) you will have a new window on your desktop that displays your current battery RAM settings.

OK, that was easy enough, but let's say that you've saved a battery RAM configuration file using Battery Brain and you want to see what the settings are for that file. All you have to do is select the Open menu item from the File menu and then choose the battery RAM configuration file from the Standard File dialog. A battery RAM window representing that battery RAM configuration file will then open. To generate a report for that file, simply click on the Generate Report button in its battery RAM window.

Why not just generate the report automatically? Well, the main reason is that it takes a long time to generate a report. It would be quite frustrating to have to sit through the generation of two reports if all you wanted was a comparison of two battery RAM configurations. Speaking of which . . . .

Comparing

Now that you know how to generate reports of battery RAM configurations, let's learn how to compare two battery RAM configurations together. In order to compare two battery RAM configurations together, you must have two battery RAM configurations open, although you don't have to have a report generated for the open configurations. Once you have two configurations open, all you have to do is to pick a battery RAM configuration from the Compare menu. When you choose a battery RAM configuration from the Compare menu, the battery RAM configuration of the front window is compared against the battery RAM configuration you chose from the Compare menu. A progress window will then appear, and after a while you will have a new window on your desktop that displays the result of the comparison.

Color Coding

In order to make it easier for you to see the difference between battery RAM report windows and comparison windows, the window colors are different for each type. The window color for the battery RAM windows will depend on the version of the battery RAM. ROM 01 windows will be colored blue and ROM 03 windows will be colored green. All comparison report windows will be colored purple.

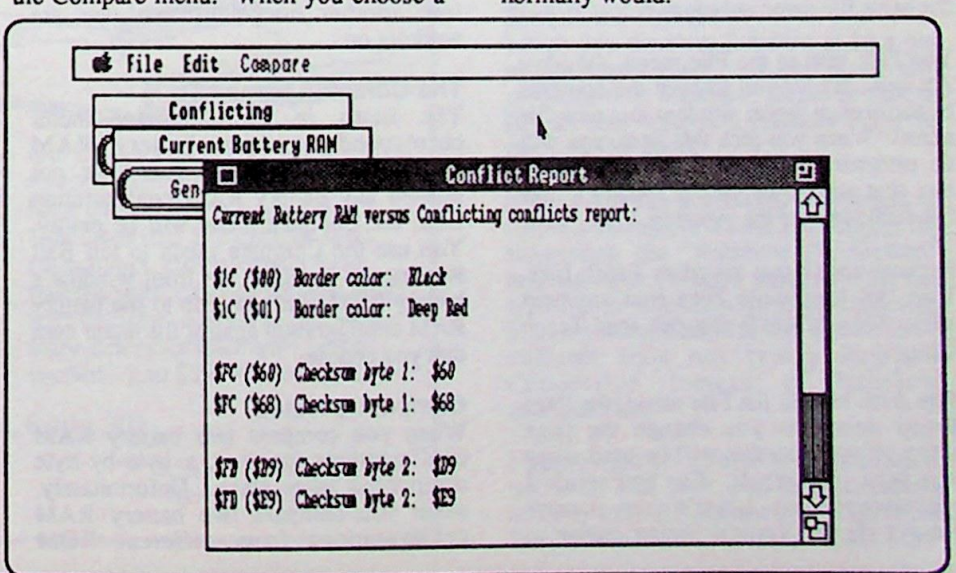
The Menu Bar

The Batt Reporter menu bar is a fairly typical menu bar, so let's go over each menu, one at a time.

The Apple Menu

The first item in the Apple menu is the About Batt Reporter item. Selecting this item presents you with a window telling you the version of Batt Reporter, as well as some information about how much memory you have available. To get rid of this window, click the mouse in its close box or select the Close item from the File menu.

Below the About Batt Reporter item will be a list of your installed new desk accessories. To use one, simply pick it from the menu and then use it as you normally would.



The File Menu

The first item in the File menu is the Open menu item. Choosing this item will present you with a Standard File dialog that will allow you to select a battery RAM configuration file to open. After you have opened a battery RAM configuration file, then you may generate a report of it or compare it to another configuration.

The second item in the File menu, the Open Current item, opens a window containing your current battery RAM configuration. If you want to generate a report of your current battery RAM configuration, or if you want to compare your current configuration to another configuration, you first need to open it with this menu item.

The third item in the File menu is the Close item. It allows you to close the topmost window. If the window is a report window that has not yet been saved, or if you have made any changes to the report, you will be asked if you want to save the report before closing it. If you answer "Save," you will be presented with a Standard File dialog box that will allow you to save the report under a new name (as described under the Save As item below). If you answer "Don't Save," the report window will be closed and any changes will be lost. If you answer "Cancel," the operation will be cancelled and the report window will not be closed.

The fourth item, the Save item, allows you to save the contents of the current report window. If the report has not already been saved, you will be presented with a Standard File dialog box that will allow you to save the report under a new name, just as if you had selected the Save As item (described below). If the report has already been saved, it will be saved to the same file name as before.

The fifth item in the File menu, the Save As item, allows you to save the contents of the current report window to a new file name. When you pick this item, you will be presented with a Standard File dialog box that will allow you to specify a new file name to save the report in.

Reports are always saved as Teach files. You can load these files into any text editor (like EGOed) that can read Teach files.

The sixth item in the File menu, the Page Setup item, lets you change the page setup information that will be used when you print your report. For best result, I recommend that LaserWriter owners always set the Vertical Sizing option to Condensed and that ImageWriter owners set the Height option to Vertical Condense. If you don't, your reports will look "stretched out" vertically. (Note that this bit of advice can be applied to all IIGS desktop programs, not just Batt Reporter!)

The seventh item in the File menu, the Print item, allows you to print your reports to your currently selected printer. If you select the Print item and you have not yet specified a page setup, the page setup dialog will appear, just as if you had selected the Page Setup menu item. After you have specified a page setup, you will be presented with the print dialog that will allow you to specify the number of copies you want to print and the pages you want printed.

The last item in the File menu, the Quit item, lets you quit from Batt Reporter and return to the previous application. If you have any open report windows that have not been saved, or if you have made any changes to the reports, you will be asked if you want to save them.

The Edit Menu

Generally speaking, the Edit menu is not used by Batt Reporter unless the front window is a report window. If the front window is a report window, you can select text in the report window using the mouse and then use the Cut, Copy, Paste, and Clear items in the edit menu just as you would for in any other application. For more information on how these editing commands work, refer to your IIGS owners manual.

The last menu item in the Edit menu, the Select All item, allows you to select all the text in a report window. This is useful if you want to copy all the text out of a report window and then later paste it into another document that you are working on.

The Compare Menu

The items in the Compare menu correspond to open battery RAM configuration files. If you have not opened any battery RAM configuration files, the Compare menu will be empty. You use the Compare menu to tell Batt Reporter to compare the front window's battery RAM configuration to the battery RAM configuration against the menu item that you choose.

Comparing Notes

When you compare two battery RAM configurations together, a byte-by-byte comparison takes place. Unfortunately, when you compare two battery RAM configurations from different ROM versions, an exact comparison doesn't always make sense. As an example, let's say you compare a ROM 01 battery RAM configuration to a ROM 03 configuration. The battery RAM parameters are not in the same places, and so a translation needs to take place. Sometimes the translations don't exactly match. The mouse speed parameter instantly comes to mind. For a ROM 01, the only possible settings for the mouse speed are "slow" and "fast." However, for a ROM 03, the possible settings are "slowest," "slow," "medium," "fast," and "fastest." In numeric values, "slow" from ROM 01 matches "slowest" from ROM 03, and "fast" from ROM 01 matches "slow" from ROM 03.

Are You Sure?

When I was writing Batt Reporter, I asked Apple for help in documenting the exact position of each parameter in the battery RAM area. Unfortunately, Apple said that they could not help me with this, so basically I had to do an extraordinary amount of cross referencing, guess work, and testing. As a result, I'm not exactly positive that Batt Reporter will report every battery RAM parameter correctly. If you find a discrepancy between your system and what Batt Reporter reports, please let me know! It would also help if you were to send in a battery RAM configuration file, a Batt Reporter report, and a description of the faulty report.

End of Report

That's all there is to Batt Reporter. You thought there'd be more? Well, from a programming standpoint, there is, and it can be found on your *GS+* Disk. If you have any problems with Batt Reporter, please be sure to fill out and send in a Problem Form so that I can fix them.

"Ahhh, there's the problem, Batt Man! The 'malicious' student only changed the screen colors .... Maybe next time, and after 18 hours of detention, he'll be more careful since I use my trusty Batt Reporter!" *GS+*

Rainbow

By Josef W. Wankerl

I've always been a bit annoyed that the Finder will save icon placement on the desktop and window positions (in those *infernal* **Finder.Data** files—which I call "Finder droppings"), but it refuses to remember the color for my devices and the trash can. To put an end to this (and a whole lot more!), I give you . . . Rainbow.

Installing Rainbow

To install the Rainbow Finder extension, refer to "How to Use Your *GS+* Disk" elsewhere in this issue. Rainbow can only be used with System 6, although it will not hurt anything to install it on previous system disks.

At First Glance

OK, now that you already know that Rainbow will remember the colors of your devices and the trash can icon, you might as well try it, right? Let's color the trash can orange. First, select the trash can by clicking on it, then choose the orange color from the Finder's Color menu. Your trash can will then turn a pretty shade of orange. Now launch an application to quit the Finder, then quit to come back into the Finder. During the Finder's startup sequence, you'll notice that the trash can will be selected and then change back to the nice orange color that you selected before. Pretty neat, huh? Well, wait, there's more!

Rainbow Connection

Has this ever happened to you: you're in the Finder with your ***:System** window open, you're going to copy a file from a folder called **System** from another disk, and you become confused as to which window is which? Well, lament no more!

In addition to simply remembering the color of device and trash can icons, Rainbow will set the window title bar color to the same color as the volume icon it belongs to! To try it out, open the trash can. Notice how the title of the trash window is orange? Try something else now: color your boot drive icon green. If you're like me and you use the standard icons that come with System 6, the color of the boot drive icon won't change color since the icon is defined as a "color" icon. However, the Finder still thinks that the icon is green, it just doesn't draw it that way. Now open your boot drive. See that the title of the window is green? Now get information on your boot drive. The title of the information window will be green too!

It's Not Easy Being Green

Let's say that you don't particularly like your boot drive icon being green. Why not change it to something more appealing . . . say red? Just select your boot drive icon and choose the red color from the Finder's Color menu. Rainbow will then update all your open windows that belong to your boot drive to appear with the red color. Now how much will you pay? Don't answer yet! Just wait to see what else you get as a free bonus gift!

Modifier Mania

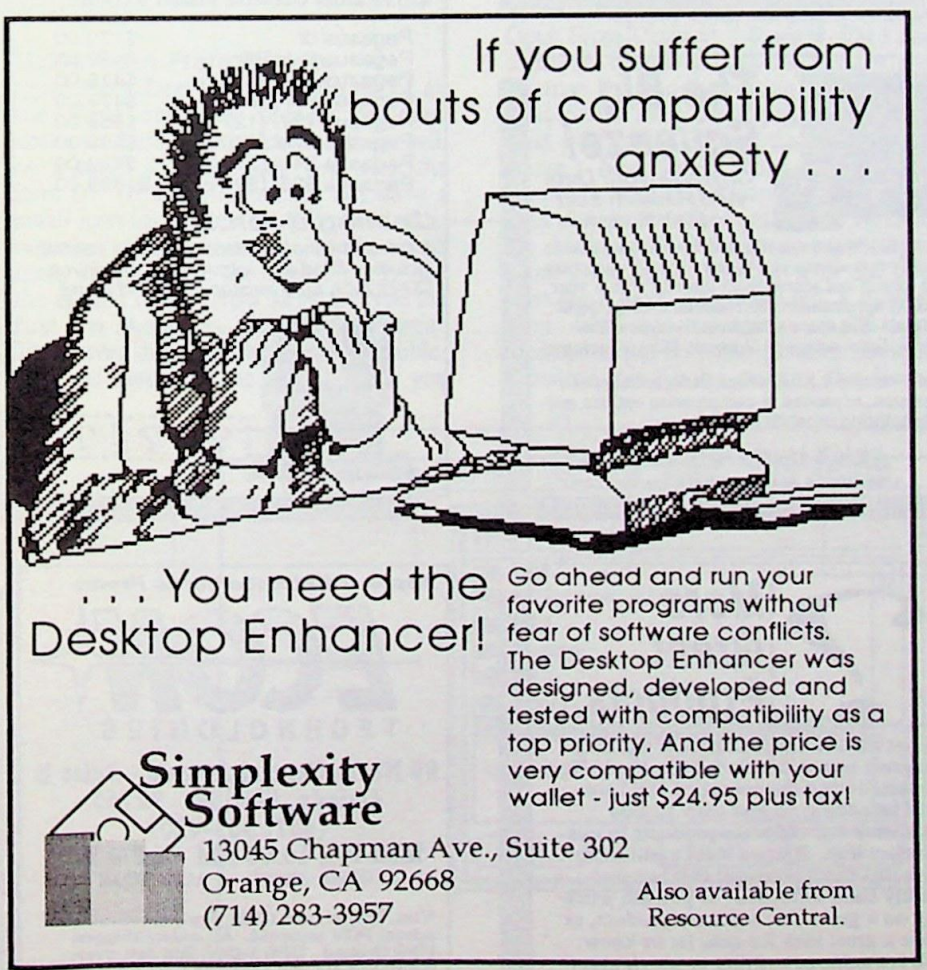
When Rainbow is installed, you can instantly close all the windows relating to a particular volume. All you have to do is have a directory window for the volume in the front (not an information window) and select the Close menu item from the Finder's File menu while holding down the shift key. You can also press Command-shift-W to close all the windows relating to a particular volume. You cannot, however, hold the shift key down and click in the close box of a directory window. This is because the Finder doesn't notify Finder extensions of this situation like it does when the actual menu item is selected.

End of the Rainbow

I hope you discover Rainbow to be a pot of gold as I have. If you have any problems with Rainbow, please be sure to fill out and send in a Problem Form so that I can fix them.

(P.S. I'd like to thank Matt Deatherage of Apple's Developer Technical Support for suggesting the "Rainbow Connection" heading name. When I applied for the file type for the Rainbow configuration file, Matt wrote me back and said that he had a difficult time not typing Rainbow Connection instead of Rainbow configuration.

I had to fight off strange urges in order to not write him back and request that we actually call the Rainbow configuration file the "Rainbow Connection" file.) *GS+*



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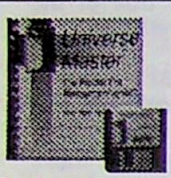

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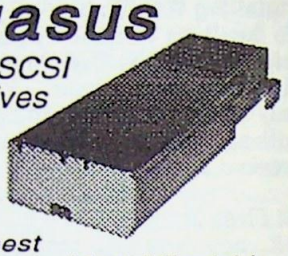

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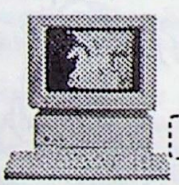

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Open From Desktop v1.0.1

By Josef W. Wankerl

Although it's not much of a change, we had the disk space available this time (amazingly) to put out an update to Open From Desktop. Version 1.0.1 now displays icons in the list control along with the desktop item names—a fairly simple addition.

Some Installation Required

To install Open From Desktop, use the Installer program on your backup *GS+* Disk. If you need help using the Installer, see the "How to Use Your *GS+* Disk" article in this issue. Open From Desktop will then appear in the Finder's Extras menu the next time you run the Finder. Note that installing Open From Desktop will also install a new icon file on your boot disk. These icons might override some custom icons that you have installed in your system. If this is the case, you can use any standard icon editor, like DIcED or IconEd, to remove the conflicting icons from the **OFD.Icons** file. (If you wish, you can simply remove the **OFD.Icons** file, Open From Desktop will still function without it, but it won't be as pretty.)

Using Open From Desktop

Open From Desktop presents a list of all the items currently present on your desktop. Beside each item in the list will be a small icon showing you what the item is. (If the Finder does not have a small icon for an item, it will show up as a generic document icon.) To choose an item, simply click the mouse on it, use the up and down arrow keys, or type the first few characters of the item's name. Then press the return key (or just double-click the mouse on the item). When you do this, any Finder icons that you had previously selected are deselected, the icon (on the desktop) for the item you chose from the list is selected, and then the Finder's Open menu item is selected for you, which opens the item you specified. While this sounds like a simple utility, it can be extremely handy if your desktop is cluttered with windows, and you want to open something on the desktop that is buried under all of those windows—like maybe the Trash can.

After using Open From Desktop, you may notice that the Extras menu will remain highlighted. A problem in Finder v6.0 causes the Extras menu to remain highlighted after you open a desktop item—this is not Open From Desktop's fault.

That's all there is to using Open From Desktop. If you want to know more about how drawing the small icons in Open From Desktop works, read on . . . .

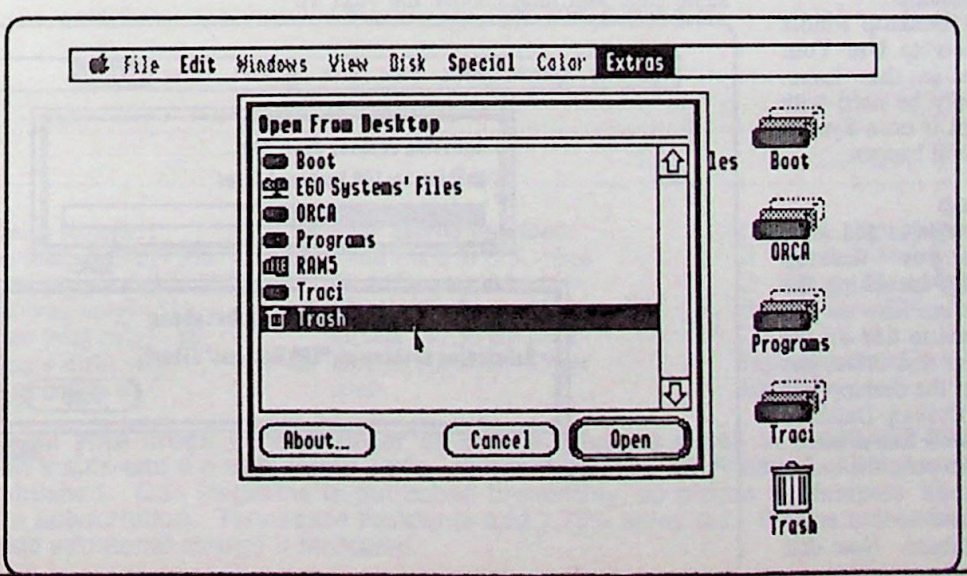
Custom Icons

When I was working on version 1.0 of Open From Desktop, I thought that I had coded the routine to draw the icons wrong because I was only getting the "generic document" icon displayed in the list. That was until I realized that Finder v6.0 doesn't *have* small icon for devices! However, earlier versions of the Finder have always contained small icon versions for devices. So in order to make Open From Desktop look pretty with the new change, I have also included a custom icon file that contains small icon representations for some common devices. I created this file by swiping the device icons from the old System Software v5.0.4 Finder icons file and modifying them so they looked like the System 6 icons.

Programming Considerations

Open From Desktop was written entirely in ORCA/C, with a little help from both the OS Library and the Miscellaneous Library. The only real change from version 1.0 to 1.0.1 is the drawing of the icons in the list. In order to do that, however, quite a few internal changes were needed. First off, to find the icon structures the Finder has associated with the desktop icons, I had to switch to using an extended `stringList` instead of the normal `stringList`. Using the extended `stringList` structure presented some awkward coding until I switched over to using the Miscellaneous Library code to easily traverse `stringList` structures. In order to get the icons to show up in the list control, a custom list member drawing procedure was required. The custom procedure finds the icon to draw by using the procedure outlined on page 406 of the *Programmer's Reference for System 6.0*. The normal list drawing procedure for System 6 checks the length of the string, and if it exceeds the visible member rectangle, it calls `CharExtra` to compress the spacing between characters. My list drawing procedure doesn't do this—it just blindly draws the string after drawing the small icon.

As usual, if you find a problem with this program, fill out the problem form supplied on your *GS+* Disk and let us know about it. *GS+*



Rebuild Desktop v1.1

By Josef W. Wankerl

The Desktop Database

One of the keenest new features in the System 6 Finder is the `rBundle` resource structure which ties applications to their data files. What this means is that you no longer have to edit your icon files to point to their application. (Your old icons will still work fine, though.) The Finder figures out where the application is automatically and keeps the information in a desktop database, even if you move the application!

How does the Finder do this? Well, in Finder v6.0 there is a *desktop database* file for each disk. This is an invisible file which is called, oddly enough, "**Desktop,**" and it is kept in the disk's **Icons** folder. This file contains copies of the `rBundles` for the applications on that disk. However, an application's `rBundle` isn't normally added to a disk's **Desktop** file unless you actually launch the application with the Finder. So, while all of your applications may *have* `rBundles`, the Finder won't know about them until you launch each application! *Rebuild Desktop* is a Finder Extension that will let you rebuild or add items to your **Desktop** file without forcing you to tediously launch every application that has an `rBundle`.

So the situation arises: What if I don't want to rebuild my entire desktop database, but instead, I just want to add a new `rBundle` resource from an application without launching it? Rebuild Desktop v1.1 will let you select an individual application (or select a folder with applications in it) and add its `rBundle` to the desktop database.

Installing Rebuild Desktop

To install the Rebuild Desktop Finder Extension, refer to "How to Use Your *GS+* Disk" elsewhere in this issue. Rebuild Desktop can only be used with System 6, but if you put it on a System 5.0.4 disk, nothing bad will happen.

Using Rebuild Desktop

Now, let's say that you want to add some `rBundles` (icons) to your desktop database without actually launching the program the icons reside in. How do you do it? Well, if you want to add all the `rBundles` on a particular disk drive, just select the drive's icon on the desktop and then choose the Rebuild Desktop Database menu item from the Finder's Extras menu. Rebuild Desktop will then scan the entire volume for applications containing `rBundle` resources and completely rebuild your desktop database. Note that the database is being completely rebuilt—if you had `rBundles` in your old desktop database for applications that do not exist anymore, they will be removed. You can stop the rebuild process at any time by clicking on the Stop button in Rebuild Desktop's progress window.

If you don't want to add all the `rBundles` on a volume, but instead just want to add `rBundles` for a specific application, just select the application and then choose the Add To Desktop Database menu item from the Finder's Extras menu. Rebuild Desktop will then add the `rBundle` to your desktop database. Note that the database is being updated, not rebuilt—any `rBundles` in your old desktop database will not be removed.

If you don't want to add all the `rBundles` on a volume, but instead you want to add `rBundles` for some applications in a folder, just select the folder that contains the applications and then choose the Add To Desktop Database menu item from the Finder's Extras menu. Rebuild Desktop will then traverse the selected folder and add the `rBundles` from the applications in the selected folder to your desktop database. Note that the database is being updated, not rebuilt—any `rBundles` in your old desktop database will not be removed. You can stop the rebuild process at any time by clicking on the Stop button in the progress window Rebuild Desktop displays during the updating process.

If you want, you can select multiple applications and multiple folders at the same time and then choose the Add To Desktop Database menu item. Rebuild Desktop will add the `rBundles` for the individual applications and add the `rBundles` for the applications inside the selected folders. If you choose a device to rebuild and you also choose folders and applications to add, then the device rebuild takes precedence.

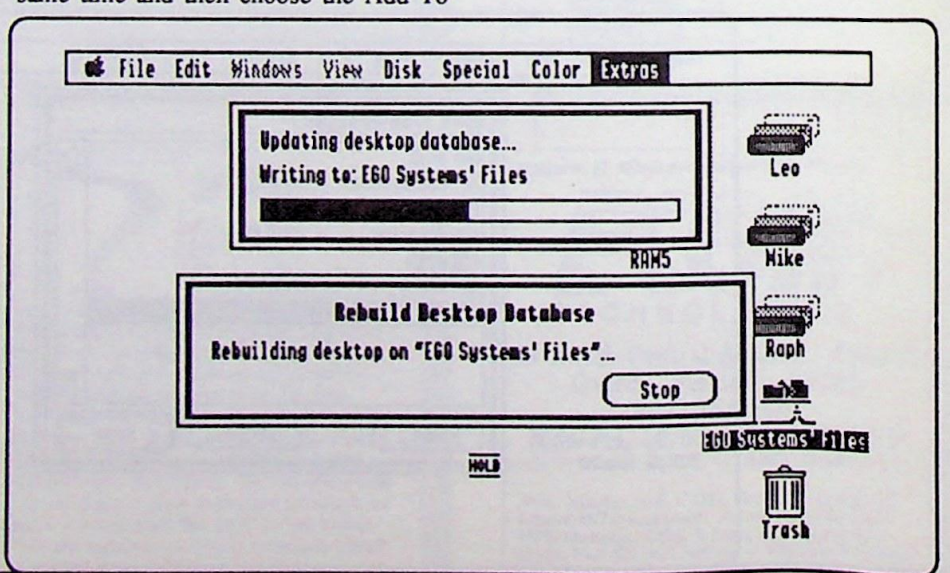
To get any of the desktop database changes to show up, you will have to restart the Finder (i.e. launch a program then quit back to the Finder, or reboot).

Programmatic Changes

There haven't been all that many major changes to Rebuild Desktop from last time. The most noticeable change, however, is the use of resources instead of hard-coded data. Also, a bug was fixed: Rebuild Desktop was passing decimal 8001 instead of hexadecimal $8001 to `OpenResourceFile` (whoops). Other than that, the only thing added is the ability to add individual `rBundles` instead of completely rebuilding the desktop database. All this requires is checking to see what kind of icon is selected. If it isn't a device icon, we just add the icon to the desktop database instead of rebuilding the entire database.

Imagine That!

Since more and more applications are appearing with `rBundles`, Rebuild Desktop is becoming a handy utility! Having the ability to quickly rebuild and add items to your desktop database should become very valuable to you. As usual, if you find a problem with this program, fill out the problem form supplied on your *GS+* Disk and let us know about it. ***GS+***



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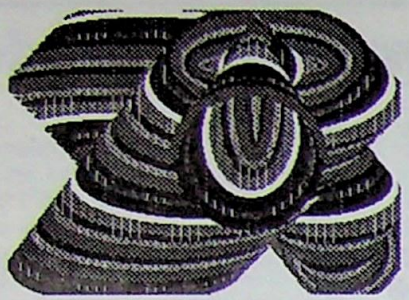
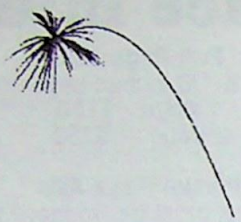
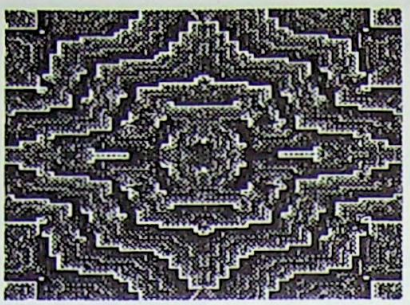
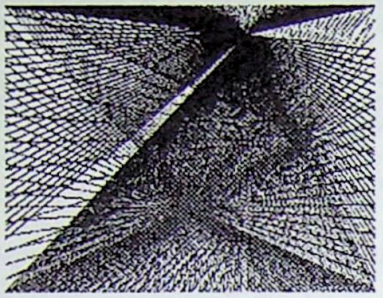
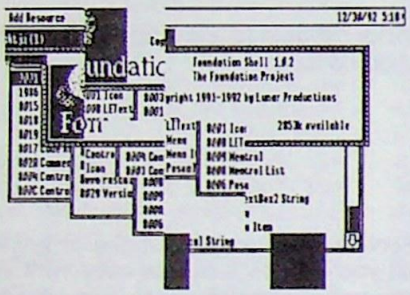


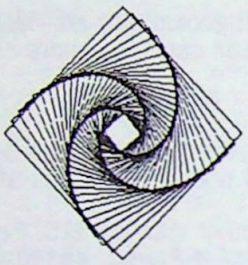


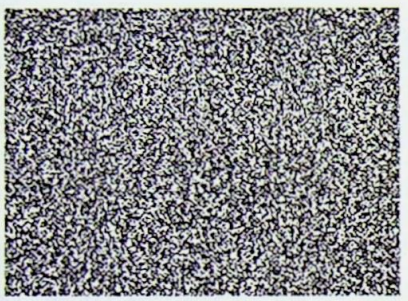


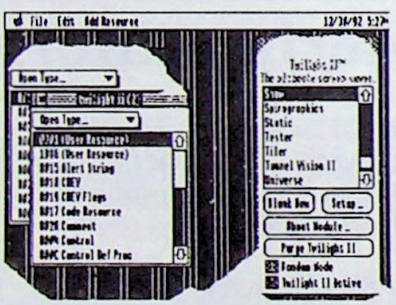


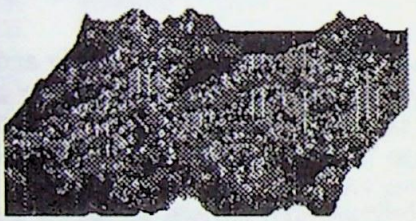
Space Aliens Steal Thirty Six Mac Portable Computers To Use As Ammunition











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Rumors, Wishes & Blatant Lies

By Prof. G. S. Gumby

Beam Me Up!

If you are like most IIGS users, you probably scan through an occasional Macintosh products catalog to see what you can scavenge from the MacUniverse. If so, you've probably seen the collections of sound bites from Star Trek, and Star Wars. Looking at these collections, you've probably thought, "Those are just sound files. I bet it would be easy to convert them to the IIGS." And you would be right! In fact, it's so easy, that one of our readers has almost convinced the company that produces these products, Sound Source Unlimited, to sell these packages for the IIGS!

Avatar Update

Remember the Avatar project? You know, the IBM PC/IIGS/whatever hybrid computer that "Burger" Bill Heineman and friends are working on. Yeah, that Avatar. Well, work is progressing at a steady pace. In fact, they are just about to start beta testing some of the tools that will give it IIGS compatibility. They are also working on their third prototype circuit board. The first prototype tended to pick up F.M. radio and the second one was just too darn expensive. If things stay on schedule, look for the Avatar to hit the streets when it's finished. (Sorry, but they threatened to kill me if I gave any dates.)

FAX Anyone?

Remember the IIGS FAX modem boom that was going to occur a few years ago? Nobody else does either. However, a source tells me that you'll soon be able to buy a send *and receive* FAX modem for the IIGS! This particular source is one of my most reliable, being the same source that told me about the ROM 04, AppleWorks GS v2.0 and dBASE IIGS. (Which shows you how bad my *unreliable* sources are!)

You Don't Know Zip

Remember those old Zip hard drives? Sure you do, I told you about them last issue. Well, it seems the original manufacturer has found a new distributor, but the deal isn't quite firmed up yet, so I can't tell you any more than that you should start seeing new ads for these drives soon.

And speaking of Zip, word has it that they were just about to go bankrupt, then recovered. The latest rumor is that they are down to less than five people in the office. However, they are still selling Zip Chips (after finding a new supplier to create the required custom chips) and ZipGS cards. Word has it that the company can probably survive at this level for quite some time, but that they probably won't be producing any new products for a while.

Superman™ Is *Still* Dead

Unless you've been under a rock, you probably know that Superman was killed recently. What you probably don't know is *how* he died. Contrary to what you may have seen in the comics, Superman was not beaten to death by a cheap Hulk rip-off, he was actually killed by one of Roger Wagner's Green Kryptonite™ neck ties.

The Wish List

Boy! The rumor mill sure has been slow lately. I might even have to make up some blatant lies for this issue! (I haven't had to do that for a *long* time!) Nah. I'll just walk around the office and get some IIGS wishes:

Joe: I wish you would leave me alone and let me finish Transfusion v2.0. I also wish we would stop putting that little "v" in front of all of our version numbers.

Bob: I wish the boss would let me do something other than process mail and wash his car. I always wanted to be . . . a programmer! Oh, and a IIGS-specific database program might be nice.

Me: I wish more of you would send in rumors. Then I wouldn't be forced to write stuff like . . . .

Ask Mr. 8-ball

If there's one question I hear time and again its, "You swine, how did you get that information?" Well, now it can be told! I use a very special source for almost all of my rumors. Of course, he (or she) prefers to keep his identity secret. (And I can keep a secret! Just ask my many friends in the industry.) So, I'll just call him (or her) "8-ball." Here's a transcript of a recent rumor gathering session:

Gumby: Is it true that Apple's Newton is being held up because Nabisco has threatened legal action unless they change the name?

8-ball: Yes.

Gumby: Why is WestCode's Hardpressed disk compression package so late? Is it due to the fact that ECON has been selling AutoArk for such a low price that they have pretty much captured the market and publishing Hardpressed would be a financial drain on the company?

8-ball: It is certain.

Gumby: Speaking of late packages, what's the deal with the Spectrum telecommunications package from Seven Hills? Isn't it due to be released in the next few weeks?

8-ball: Better not tell you now.

Gumby: I hear that plans are already under way for the next KansasFest. I've also heard that there may *not* be an Apple Central EXPO to go along with it. What's the outlook for this years Apple Central EXPO?

8-ball: Outlook not so good. [Editor's note: The EXPO and KansasFest are not related in any way, other than that the EXPO usually happens in the same building, the day after KansasFest ends. The demise of the EXPO would have no affect on KansasFest.]

Gumby: Is it true that our publisher is thinking of starting a IIGS-specific mail order business, but that he want's to leak word of it somehow so that he can gauge public reaction before sinking tons of money into it?

8-ball: Outlook good.

Gumby: Will Applied Engineering ever do another IIGS product?

8-ball: Signs point to yes.

Gumby: Ah, but will anyone care anymore?

8-ball: My sources say no.

So there you have it! A "behind the scenes" look at what goes into making up this column. It's hard work, but that's what it takes to create the most popular column in *GS+* Magazine!

If you would like to help lighten the load (and get yourself a snazzy *GS+* T-Shirt in the bargain), send your T-Shirt size rumors, wishes and blatant lies to me at:

GS+ Rumors
P. O. Box 15366
Chattanooga, TN 37415-0366 *GS+*

How to Use Your GS+ Disk

The first thing you need to do is **make a backup copy of your *GS+* Disk with the Finder!!!** Next, put the original in a safe place. If you are having a problem making a backup copy, give us a call at (615) 843-3988. If your disk is damaged, let us know, and we'll get a new one to you as soon as possible.

Installing The Software

To install the software on this issue's *GS+* Disk, start up your computer using System Software v5.0.4 or later. (Note that most of the programs on this issue's disk *require* System 6! For more information, refer to the article for each individual program.) Next, place your *backup* copy of the *GS+* Disk in a drive. (You *did* make a backup didn't you?) Now run the Installer program that is on your backup *GS+* Disk. (From the Finder, just double-click on the Installer icon.) *It is* extremely *important that you use the Installer that is on your backup GS+ Disk! Do* not *use any other copy of the Installer!*

When the Installer window appears, select the item you want to install from the list on the left-hand side of the window, and the disk you want to install it on from the list on the right-hand side of the window. Then click on the Install button. For more information on using the Installer, refer to your IIGS owner's manual.

Before you attempt to use your backup *GS+* Disk, please take a few minutes to read the **a.Read.Me** file for any last minute corrections or information. If you do not already have EGOed installed in your system, you can use the Teach application supplied with System Software v6.0 to read this file.

Installing EGOed

The following is a detailed example of how to install EGOed. The other programs are installed in a similar manner.

- Start up your IIGS with System Software v6.0 or later—the version of EGOed that is on this *GS+* Disk *requires* System 6! (Your *GS+* Disk is *not* a startup disk, so don't try starting your computer with it.)

- Insert your backup copy of the *GS+* Disk into a drive and run the Installer program that is on your backup *GS+* Disk. It is *very, very* important that you run the Installer that is on your backup *GS+* Disk and *not* some other copy of the Installer.

- When the Installer finishes loading, click on the Disk button on the right-hand side of the Installer window until your startup disk appears. (If you only have one 3.5-inch disk drive, you will have to remove the backup *GS+* Disk from the drive and replace it with your startup disk. You should also refer to the "Making Room" section below for hints on how to free up room on your boot disk.)

- On the left-hand side of the Installer window, you will see a list of the items on the backup *GS+* Disk. One of the items in this list should be "EGOed." (If EGOed is *not* in this list, quit the Installer and begin again. Be sure that you are running the copy of the Installer that is on your backup *GS+* Disk!) Once you see the EGOed item, click the mouse on it so that it becomes highlighted.

- Click the mouse on the Install button in the middle of the Installer window. The Installer will then install EGOed on your startup disk. If you only have one 3.5-inch disk drive, you may have to switch disks several times. Just insert each disk as the Installer asks for it.

- When the Installer has finished, click on the Quit button in the middle of the Installer window. This should cause your IIGS to restart.

- When your IIGS finishes restarting, pull down the Apple menu and select EGOed (note that you have to be in a desktop program like the Finder to have access to the Apple menu).

- When EGOed finishes loading, notice that EGOed has its own menu bar. Select Open from the *EGOed* File menu and then insert your backup *GS+* Disk into a drive. You should see a list of the files and folders on the *GS+* Disk.

- Open the **Documentation** folder on your backup *GS+* Disk and then open the file **EGOed.Docs**. This file contains complete documentation on how to use EGOed. *Please take a few minutes to read this documentation.*

Making Room

If you do not have a hard drive, you will probably have to remove some files from your startup disk to make room for the New Desk Accessories, Control Panel Devices, and other system files that come on the *GS+* Disk.

Towards that end, we have prepared the following list of "expendable" files that you can "safely" remove from your System Software v5.0.4, or System Software v6.0 startup disk to free up some space. (We've put quotes around "expendable" and "safely" because almost *all* of the files in the IIGS System Software have some sort of use! The files listed here are the ones that are the "least" useful for a specified hardware setup.)

Be sure that you *never* delete *any* files from your original System Software boot disk! Always work on a backup copy!

System Software v5.0.4

The standard System Software v5.0.4 **:System.Disk:** has 12K available on it. The following items can be deleted from the root directory of the disk:

Tutorial (11K)
AppleTalk (0K)

After this, things get a bit tricky. Other files that you can safely delete depend on your *hardware setup*. If you have a ROM 01 IIGS, you may delete the file:

***:System:System.Setup:TS3** (15K)

If you have a ROM 03 IIGS, you may delete the file:

***:System:System.Setup:TS2** (41K)

If you do *not* have a modem, you may delete the following files:

***:System:CDevs:Modem** (6K)
***:System:Drivers:Modem** (3K)

If you do *not* have a printer, you may delete:

***:System:CDevs:Printer** (6K)
***:System:Drivers:Printer** (3K)
***:System:Drivers:Printer.Setup** (1K)
***:System:Drivers:ImageWriter** (26K)

If you have a printer other than the ImageWriter (that is not ImageWriter compatible), you can delete the file:

***:System:Drivers:ImageWriter**

If you do *not* have a 5.25-inch drive, you may delete the following 7K file:

***:System:Drivers:AppleDisk5.25**

Removing some or all of these files should give you ample room (up to 90K on a ROM 01 IIGS and up to 116K on a ROM 03 IIGS) on your startup disk to install any of the System Software v5.0.4 compatible utilities on your *GS+* Disk.

System Software v6.0

If you use the System 6 **:Install** disk to

create a minimal, 800K, System 6 boot disk, that disk will have 26K of free space on it when the installation is finished.

It must be noted that *all* of the files on this disk are *very* important and the files that you can *safely* remove depend, for the most part, on your hardware setup. So, please read these instructions carefully before removing *any* files.

The first two files you can delete depend on what you will be doing with your IIGS. If you will not be running AppleSoft BASIC programs, you can remove the file **BASIC.System** (11K) from the root directory of the disk. If you will not be running ProDOS 8 software, you can remove ***:System:P8** (18K).

If you do not care what time it is, you can delete the following file:
***:System:CDevs:Time** (11K)

After that, the files that you can safely remove depend on your *hardware setup*.

If you have a ROM 01 IIGS, you may delete the file:
***:System:System.Setup:TS3** (41K)

If you have a ROM 03 IIGS, you may delete the following file:
***:System:System.Setup:TS2** (37K)

If you do *not* have a 5.25-inch drive, you may delete the following 8K file:
***:System:Drivers:AppleDisk5.25**

If you do *not* have a printer, you may delete the following file:
***:System:CDevs:Printer** (5K)

Finally, if you have deleted all control panels, and you won't be installing any control panels from the *GS+* Disk, you can also delete the 19K file:
***:System:Desk.Accs:ControlPanel**

Removing some or all of these files should give you ample room (up to 139K on a ROM 01 IIGS and up to 135K on a ROM 03 IIGS) on your startup disk to install EGOed or any of the other system utilities from your backup *GS+* Disk.

Note: You will *not* be able to print from EGOed or any other desktop program when using an 800K, System 6.0 boot disk. (There isn't enough room for all of the required drivers and control panels.)

If you want to save even *more* space, you might want to consider using Autopilot (from *GS+* V4.N1) as a replacement program launcher. With Autopilot installed on the minimal System 6 boot disk, initial free space goes up from 26K to 163K! You can then use Autopilot to autolaunch the Finder from a second 3.5-inch disk drive and still have plenty of room on your boot disk for lots of system extensions. For more information on Autopilot, refer to the "Autopilot v2.0" article in *GS+* V4.N1 or give us a call here at *GS+* Magazine.

Self-Extracting Archive

We use GS-ShrinkIt v1.1 to compress the *source code* and related files on the *GS+* Disk into a *self-extracting archive*. To extract the files from the archive, simply double-click on the **GSP.V4.N3.SEA** program on your backup *GS+* Disk. ***You do not need to have a copy GS-ShrinkIt in order to use any of the programs or other materials on this GS+ Disk!*** However, you will gain better control over the files you wish to extract if you have GS-ShrinkIt v1.1. If you do not have GS-ShrinkIt v1.1 and you would like a copy, check with your local user group or

DISKLESS?

If you did not receive the disk with this magazine and have decided you would like to have it, just send a check or money order for $6.50 to:

GS+ V4.N3 Disk Offer
P. O. Box 15366
Chattanooga, TN 37415-0366

Or call us at 1-800-662-3634, Monday through Friday between 9 a.m. and 6 p.m. Eastern Time, to bill it to your MasterCard or VISA.

Tennessee residents add 7.75% sales tax.
Price includes First-Class delivery to the U.S., air mail to Canada and Mexico, or surface mail to all other countries. Add an extra $3.50 ($10 total) for air mail to all other foreign countries.

IMPORTANT!
Use scissors or a knife to open disk bag!
Do not attempt to pull bag away from magazine!

give us a call here at *GS+* Magazine and we will try and help you locate a copy.

What's On The Disk

The programs on this disk *require* System Software v6.0 unless explicitly stated that System Software v5.0.4 or later is required. There are eight items in the root directory of this issue's disk. They are:

a.Read.Me

A lot can happen from the time we send this magazine to the printer and the time we get ready to mail them out. If anything does happen, we will put everything we can find out about it in this file. Please try to read this file before you attempt to use the *GS+* Disk. This is a plain text file.

Documentation

This folder contains the glossary as well as the EGOed documentation files. The glossary is a plain text file containing all of the terms defined in the past installments of our "Glossary" department. The EGOed documentation is a Teach file which can be read using Teach, EGOed, or any other TextEdit-based text editor.

GSP.V4.N3.SEA

This is a self-extracting archive (SEA) containing the source code and related files for all the programs contained on this *GS+* Disk. The archive also contains the OS Library and Miscellaneous Library. Technical information, such as the OS Library documentation, Miscellaneous Library documentation, and technical notes are supplied in the archive as well.

To extract the files from the archive, simply double-click on this file from the Finder. Note that if you try to extract *all* of the files from this archive at one time, they will *not* fit on an 800K disk!

Icons

This folder contains Finder icons used by the various programs on the *GS+* Disk.

Installer

This is the Apple IIGS Installer. Run it to install the other programs on this issue's disk. For more information on using the Installer, refer to your IIGS owner's manual.

Programs

This folder contains the Battery Brain, Batt Reporter, EGOed, Open From Desktop, Rainbow, and Rebuild Desktop programs. Use the Installer provided on your backup *GS+* Disk to automate the installation of these programs.

Scripts

This folder contains all of the scripts that are used by the Installer in order to automate the installation of the files from this *GS+* Disk.

Talk.To.GSPlus

This folder contains the feedback form, the problem form, and the *GS+* Magazine writer's guide.

The feedback form is a plain ASCII text file. Fill it out, and send it to us to let us know what you thought of this issue of *GS+* Magazine and what you want to see in future issues of *GS+* Magazine.

If you have a problem with one of our programs, *please* fill out the problem form and send it to us! This a Teach file, you may use EGOed or the Teach application from System 6 to view it.

The writer's guide is a Teach file that explains what you need to do in order to write reviews, articles, programs, etc. for *GS+* Magazine—you may use EGOed or the Teach application provided with System 6 to view it.

Please Remember . . .

The contents of the *GS+* Disk are *not* public domain or shareware! We depend on *your* honesty to stay in business. Please do not give away copies of the *GS+* Disk or any of the programs on it. If you do, we will not be able to stay in business. It really is that simple! *GS+*

How to Get System 6

Everyone should have a copy of System 6. Fortunately, we have a license to distribute it to our magazine-and-disk subscribers as a part of their subscription. Unfortunately, we can't afford to mail all five of the disks that System 6 takes up to every magazine-and-disk subscriber. However, we still want to make it easy for you to get System 6. So, if you are a subscriber to *GS+* Magazine with the companion *GS+* Disk (sorry, but we can *not* distribute System 6 to our magazine-only subscribers), send us the following items and we will send you System 6:

1) Five (5) *blank* and *formatted*, 3.5-inch diskettes to our P. O. Box address (which is shown on the back of your magazine). We are asking for "blank and formatted" disks because formatting takes time that we don't have, and it's a great way to tell if a disk is good before you send it to us. *If you send us a bad disk, we aren't going to replace it.*

2) A *self-addressed* return disk mailer with enough postage on it to mail the five disks back to you. (Foreign subscribers without access to United States postage may include International Postal Coupons instead. See your local post office to obtain these.) *If you don't provide a postage-paid, self-addressed return mailer, your disks will be considered "gifts" and will be used for backups.*

3) That's all. Don't send any money. We don't want any money for this.

How Else Can You Get System 6?

If you are a magazine-only subscriber, here are some other ways to get System 6.

Your Apple dealer. Bug them until they get it in for you. The retail price is $39, but that includes manuals. The part number is #A0077LL/A. For the name of your local Apple dealer, call (800) 538-9696.

Your user group. Bug them until they get it in. Take your own disks and they should only charge you a small copying fee. Some user groups may have it already copied for you and available for a nominal charge. (Note that some user groups make these services available only to their members. Of course, you do plan on joining, don't you?) If you need to know where your local user group is, call the Apple User Group Connection at (800) 538-9696 extension 500.

Resource Central. You won't have to bug them, they have it in stock, and in no less than three different "flavors." For just the disks (item number DA-006), the price is $24. For the complete end-user package, including manuals, the price is $39 (item number DA-0013). Finally, if you want the *ultimate* System 6 bundle, you can get the official System 6 Golden Master CD-ROM for only $99 (item number DA-0029). Take your pick, and then give Resource Central a call at (913) 469-6502.

And, of course, if you have a modem, you can download it from your favorite online service. The total download time is about 5 hours. *GS+*

Nite Owl Saves Thousands of Computers!

If you purchased an Apple IIGS computer before August 1989, a Lithium battery was soldered onto the computer board at the factory and the internal clock started ticking. It is just a matter of time until the battery runs out of juice and your computer forgets what day it is and any special settings you have selected in the Control Panel.

The easy way to tell if your IIGS will require the Slide-On battery is to turn it on, the message at the bottom of the first screen should read 'ROM Version 01'. Newer, ROM 3 versions of the IIGS will require the Tadiran battery TL-2150/S that we stock ($10).

If the software you are running uses the date and time to keep track of records, you could be in for trouble when the clock dies.

Before the introduction of Nite Owl's Slide-On battery, the normal method for replacing the IIGS battery was to pack your computer up and take it to your local computer dealer. That was very inconvenient, time consuming, and expensive for the typical computer owner. Service centers usually charge more than $40.

Slide-On battery replacement is not much more difficult than changing a light bulb. Using wire cutters, scissors, or nail clippers, the old battery is removed leaving the original wires still soldered to the mother board. The new Slide-On battery has special terminals which have been designed to fit onto the old battery wires. It usually takes only a few minutes. Complete, easy-to-follow instructions are included with every kit.

Our Slide-On replacement batteries also work on early models of the MAC II computers which were sold before the FDHD 1.4Mb disk drives were released, as well as the Kaypro PC, and Xerox Memory Writers.

Typically, our customers have reported that the original equipment batteries have been running out of steam in as little as two years. Some last longer than others. Slide-On replacement kits include Heavy Duty batteries which should provide for a longer service life.

We highly recommend that every IIGS owner keep a spare battery on hand, ready for when the inevitable battery failure occurs. These Lithium batteries have a shelf life of over 10 years. They can "sleep" in a desk drawer for years with virtually no loss of power. Thousands of computer owners have found that our Slide-On battery is the best way to replace a dead soldered on battery!

Nite Owl's

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Battery Replacement Kit
1/2 AA Lithium • 3.6 Volts

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- No Solder Required
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- Heavy Duty Battery

Slide-On Battery Kits $14.95 ea.

$120 / 10 kits

Don't wait for your Computer to go Bonkers!

We tossed out alot of good programs and saved the best for you. The ones selected for this collection work properly with GSOS operating system and are organized on ten 3.5 inch disks.

The operating system was omitted to allow room for several programs on each disk. To use these programs you will need two 3.5 inch disk drives, or one drive and a hard disk.

Best of ShareWare & Public Domain for the Apple IIGS

#	Disk	
1	Games	Tetrotrix, Backgammon, Plasmalab, Othello, Simon, One Arm Battle
2	Games2	Spellbinder, Mage Maze, Power Play, Chips.dips, Ballistics
3	Games3	Plunder, Four in a Row, Tic Tac Toe, Beast, Romulan, Dazzler
4	Cards	Solitaire, Cartus Primus, Poker, Pyramid Solitaire, Yahtzee
5	Arcade	Woz Stunt Copter, Race, Rush Hour, Orbizone, Qburt
6	Arcade2	Grackel, Senseless Violence, As Link Turns, Copy Killers
7	PixMix	Puzzle Game and lots of pictures
8	Graphics	Cheap Paint, Mathmusic, Video Jazz, Graphic Generators
9	Utility	Font Editor with Fonts, Icon Editor, Resource Editor
10	Utility2	Telecommunications, Sound Studio, Fractals, Desk Accessories

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Reviews

CV-Ram Memory Card

Typical mail-order prices:
4MB: $215
5MB: $255
6MB: $295
7MB: $335
8MB: $375

C.V. Technologies, Inc.
1800 E. Whipp Road, Suite 200
Kettering, OH 45440
Tech Support: (513) 435-5743

Reviewed by Bill Moore

$0201—The Error From Hell

Well, I did it. I finally took the plunge and bought a hard drive, and life was so much sweeter . . . for a short while. Then, the System 6 Finder would put up the ugly message, "The Finder is dangerously low on memory..." Sound files would hang up in the middle of playback. Even old trusty AppleWorks 3.0 ran out of room with just a few big files. The culprit of all my woes? My Apple memory card, which when full holds a paltry 1 megabyte. This was a lot of memory in 1986, but in 1993 it just doesn't cut the mustard. A new RAM card was the answer. But cheap memory cards abound for the IIGS. Which do you choose? One company may have an answer.

C.V. Technologies, famous for the RamFAST/SCSI hard drive controller, is at it again—bringing you the CV-Ram memory card. This card sets itself apart from the pack by being one of only two cards I know of that expands to 8MB without connectors, piggyback boards, or whatever. Since the IIGS will only address 8MB of memory, one of these would be the only memory card you will need. (The other card is the OctoRAM [reviewed in *GS+* V3.N2,] but the differences between the OctoRAM and the CV-Ram are like night and day—read on.)

I ordered the CV-Ram from the folks at TMS right after Christmas, when everything was out of stock. When it finally arrived, the first thing I noticed was, this sucker is small! It measures in at only 4 1/8" long—perfect if (like me) you already have several cards in your IIGS, and are worried about overcrowding. The small size leaves plenty of room for extra cable from things like my Apple SCSI Card in Slot 7. I don't really have an eye for circuit boards, but this one, to me, seems well thought out. Some thought has been put in to keep the design from being overly complex, and anything the user needs to mess with is clearly laid out. Due to its small size and simple circuit layout, it should not create (or add to) any heat problems.

The lowest priced version of this card (and the one being reviewed) is the bare-bones 4MB version. That's right, kiddies, this card comes with 4MB already soldered on and ready to go! This explains why it's a little pricey. Anyway, if you decide that's not enough, expansion is very simple. This card expands using 1MB x 4 DRAM chips (Note: the CV-Ram *cannot* use the 1MB x 4 chips used on the Applied Engineering GS-RAM III. For those who technospeak, the CV-Ram uses DIP RAM chips, as opposed to the ZIP RAM on the GS-RAM III.) Expansion is possible to 5, 6, 7, or 8 megabytes—just plug in two chips per megabyte and move one jumper. Since getting the card, I've had no problems—from it, anyway. Now that I have spare RAM to play with, I've gone hog wild with INITs, Desk Accessories, Finder Extras, and what have you. My only real trouble so far has been getting them to coexist peacefully with each other and my programs.

Alas . . .

Not that the card is perfect, mind you. Installation was a bit troublesome—the card's connector is almost too big to go in the slot! I had to push a *lot* harder than I like to when installing a fragile electronics device. The manual leaves a bit to be desired, as well—three photocopied pages stapled together. Now it's just a RAM card, so I wasn't expecting a tome the scale of *War and Peace*, but I thought it could be a little more professional looking. Though brief, the manual is thorough, covering installation, expansion, and detailing known bugs and conflicts. For example: If you have a ROM 03 IIGS, the manual recommends that you not expand the card over 6MB, since the ROM 03 has a bug that will not allow it to create a RAM disk if system memory is 8MB or above. But who needs 8MB right now anyway? No diagnostic program is included with the card, but CV-Tech recommends the **MemoryTest.CL** program included with AppleWorks GS v1.1. If you don't have AppleWorks GS (like me), a IIGS self-test (pressing Command-option-control-reset) is supposed to check the card as well.

This card is targeted at IIGS owners who either don't own a RAM card, or who have a pitifully small one like the Apple card. If you already own a large capacity card, you'll have to either sell your current card or eat your investment (and Apple memory cards just aren't that tasty, if you ask me), because the CV-Ram is not like its predecessor—it does not have a piggyback slot for your present card. You cannot, I repeat, *cannot*, use SIMMs, or 1MB x 8 chips. The CV-Ram is very choosy about the chips it will accept. The manual lists the correct chips (with part numbers), from various manufacturers.

CHIPs (not Erik Estrada!)

And since we're on the subject of chips, I'll air out another major gripe about this card. I had never heard of the chips this card uses until I got one, and a *lot* of the memory vendors out there haven't heard of them either. Just to comparison shop, I called around to several places to see if they had the correct chips, and for how much. These prices were current as of 2/8/93:

LRO Computer Sales: in stock, $42 per megabyte. ($21 per chip.)

TMS Peripherals: in stock, $40 per megabyte. ($20 per chip.)

I even risked a hernia to wade thru an issue of *Computer Shopper* to see if a PC place could beat those prices. However, the best deal I got was about $18 a chip, and that was for 24 of them! LRO and/or TMS would seem to be the best bet for these chips. They know what it's for, have competitive prices, and won't ship you chips you can't use.

Prices for these chips as recently as October were around $12 to $15 a chip—you have the Congress to thank for the higher cost. Tariffs were imposed on Korean products, which include most RAM chips and SIMMs. This caused the price for 1 megabyte of RAM (regardless of what kind of chip—SIMM, 1x4, 1x8) to jump from around $30 to the current $40 range. This also explains why the initial street price for the CV-Ram was *much* more than the price in some early ads!

Don't get me wrong, because I really like this card, minor warts and all. It's not perfect, but few things on this planet are. Sooner or later (*sooner* if you only have 1.25MB), memory expansion will become a need, rather than a want. When that happens, give the CV-Ram a whirl. I don't think you'll be disappointed. *GS+*

StyleWriter Printer

This printer was discontinued in January 1993 by Apple after the release of the StyleWriter II printer. Prior to that time, the StyleWriter was available for $359 in the Apple Catalog. It may still be available for around $300 from your local Apple Dealer or Macintosh oriented mail-order company.

The Apple Catalog
One Apple Plaza
P. O. Box 9001
Clearwater, FL 34618-9001
1-800-795-1000

Reviewed by Greg Zimmerman

The Apple StyleWriter printer is an Ink Jet printer which will work with the Apple IIGS using the driver provided by Apple with System Software v6.0.

The StyleWriter is a compact printer; it's smaller and much lighter than the ImageWriter II. It uses plain paper instead of traction-fed paper, and sports the same platinum exterior color as the Apple IIGS.

So what's the big deal? It's discontinued so why bother with it?

Well, if you're reading this magazine, chances are you are using a lot of discontinued products! I, for one, am using a discontinued hardware product to write this review: a product that contains a discontinued hard drive, and is separated from the monitor by a discontinued fan! I'm typing right onto a discontinued keyboard, connected to my computer by a discontinued cable. And the whole thing is connected to a discontinued printer, the Apple StyleWriter. Now I know that there's a line in here somewhere about all living together in a discontinued house, but I will leave that to some creative reader and a letter to the editor.

Now guess what. When I send a letter from this discontinued morass, it isn't a discontinued letter! When my kids print out their school work, it's not discontinued. In fact, the quality is so good, you'd think we were all using one of those "productive" computers that they still make (I was going to say that when I write a review the quality is *so* good, but I figured I would leave that judgment up to you).

So, what makes the StyleWriter so good? Well, it's a combination of price and quality. You get high quality for a relatively low price. Read on, read on.

Ink Jet Printers

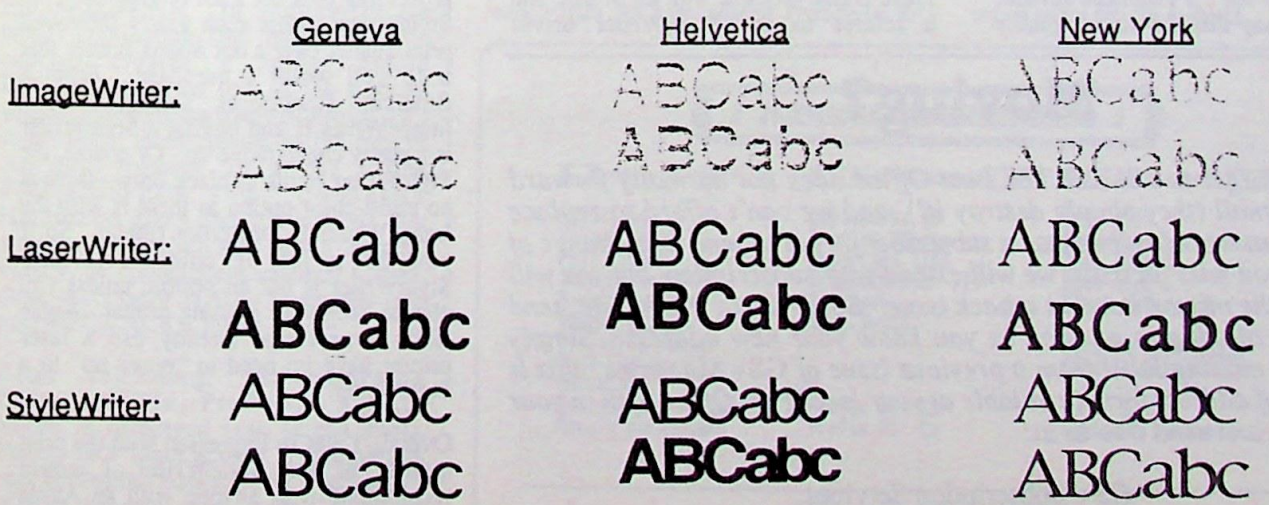
What is an "Ink Jet" anyway? I have a picture in my mind of my mother-in-law standing behind a jet engine as the ink sprays out the back (lots of noise and wind too), but that's not really it.

An Ink Jet printer works by spraying ink from a reservoir in an ink cartridge through small nozzles and onto a piece of paper. The computer and the printer work together so that the ink goes exactly where it should, and the spray of ink is so small and precise, that the quality is generally much better than the output from pin or dot-matrix printers such as the ImageWriter II.

Are there problems with this approach to printing? Of course there are. As a product reviewer, I can find the one flea in paradise, or a whole nest of them if they're there; it's my job as a reviewer to ferret out the bad news. The main headache with Ink Jet quality is that the ink, which is basically being poured onto the paper (in extremely small amounts) can produce fuzzy-edged characters when it is absorbed by the paper (much like the coffee spill in a paper towel commercial). Try and print a graphic or logo where the printer lays on a lot of ink over a relatively large area and it will soak the paper. Special papers are available which somewhat mitigate this problem, but it doesn't go away completely.

But, for these few minor (to me) problems, you get laser-quality resolution at dot matrix prices. How high is the resolution you ask? The StyleWriter will print at 360 dots per inch (dpi) which is as good or better a resolution than many more expensive laser printers. [The proof pages for this magazine are printed at a mere 300 dpi - Ed.] Of course, the final product may not be better than, say, a 300 dpi laser printer, owing to several variables, the main one being the absorption of the ink of the StyleWriter by the paper you print on. This absorption may cause the StyleWriter to produce slightly inferior results when printing letters when compared to the output from an Apple Personal LaserWriter NTR or a printer with similar quality. Of course, the StyleWriter is a lot cheaper than these laser printers, and the quality is far superior to that of an ImageWriter II and similar dot matrix

Figure 1
Print Samples for the ImageWriter, LaserWriter & StyleWriter



Print samples are 18 point plain (first line) and 18 point bold (second line). The Geneva and New York samples for the LaserWriter were printed using the technique described in "TrueType on a LaserWriter," in *GS+* V3.N5.

printers generally used by Apple IIGS owners.

How Hard Is It to Use?

The StyleWriter is as easy to use as an ImageWriter II. It comes with a power cord/power adapter, a cable to connect it right to the printer port of your Apple IIGS, a sheet feeder (with a little wire paper support piece), several Mac disks, and an Owner's Guide. If you are buying new, it also comes with one cartridge of black ink.

I went through the manual looking for the Apple IIGS information, but couldn't find the right section, it seemed to be all Mac stuff. Of course, the setup is pretty straightforward, so maybe Apple left out the IIGS section figuring Apple IIGS owners didn't really need instructions. No matter, the setup can easily be accomplished following the instructions in the Mac section, ignoring the stuff about software installation, and instead installing your software driver using the System Software v6.0 Installer. Don't forget you have to select the printer in the DC Printer control panel to get it to work! So if the guy at the Apple dealership or mail-order house tells you that the printer can't be used with the Apple IIGS, ignore that person!

Are those Mac disks in the package worth anything to the IIGS owner? You bet they are. They contain 39 TrueType fonts, most of which don't come with Pointless, so *don't* toss or reformat those disks. To use these "Mac" TrueType fonts, you'll have to have both Pointless and the HFS file system translator installed on your computer. Just drag the fonts onto your hard drive from the Mac disk, and use the Pointless control panel's "add" option to let Pointless know where they are. This isn't a Pointless review, but suffice to say that the output quality is vastly improved using Pointless; therefore, you should get it if you are interested in quality output with this printer. Everything in this review was done with Pointless installed on my IIGS.

The ink cartridge will be something new for IIGS owners. The cartridge contains a reservoir of ink, which is "jetted" onto the paper during the printing process. These cartridges cost between $15 and $20 to replace, and I believe they are good for between 300 and 500 pages of type (I haven't printed out that many pages yet, but I believe it is correct).

Printing Speed

To test the printing speed, I printed this review, up to the end of this sentence in 10 point Geneva using EGOed on a ROM 01 IIGS equipped with a 7MHz TransWarp GS.

In best quality mode on the StyleWriter (360 dpi), it printed in 3 minutes and 40 seconds. In lower quality mode (180 dpi) it printed in 3 minutes and 20 seconds. The main differences in modes were that the lower quality mode didn't print in 10 point (10/72s of an inch print height), it printed out larger than specified, and of course the quality of the 180 dpi was poor.

I printed to the same point on an ImageWriter II in Best mode from the same computer, and it took 7 minutes and 54 seconds to print. The Best quality on the ImageWriter II compared to the 180 dpi mode on the StyleWriter, both in quality and size. As with the 180 dpi mode on the StyleWriter, the ImageWriter II did not print in true 10 point size, the type was larger than specified.

Problems?

There is one problem with all of this, and it relates to the StyleWriter driver supplied by Apple with System Software v6.0.

The driver does not handle stylized text spacing very well in all circumstances, and there may be problems with justifications other than left justified text settings as well. I have heard that these problems will be fixed in System Software v6.0.1, but the release date for the new System Software is anyone's guess.

If It's Discontinued, Can I Buy It?

Of course you can buy it, even though it's discontinued. I called the Apple Catalog on January 23, 1993, and they said they have it in stock. So did several mail-order firms. And by the time you read this review, the price should have dropped as the StyleWriter II becomes generally available, thereby making the StyleWriter less attractive. Also, there is a good used market for these printers. I have seen them for sale used in the area of $200. This isn't such a bad option, because you can take a used printer to an Apple Dealer, and buy a one-year warranty for $36 if it's in working order when you get it there. So if you can find a used one in excellent condition, figure in $36 extra dollars for a warranty from Apple, and you may have a like new, warrantied printer, for a pretty attractive price.

By the way, I was unable to find out if the new StyleWriter II will work with an Apple IIGS using any of the printer drivers currently in existence. If it does, I'll review it in an upcoming issue of *GS+* Magazine.

Should I Buy It?

A purchase decision on this printer depends on what you usually print with your IIGS. If you do a lot of word processing (but not a lot of graphics), the StyleWriter offers such vastly improved print quality over a dot matrix printer that it is well worth a purchase. From a financial standpoint, selling a used ImageWriter II and buying a StyleWriter is a pretty cheap move up. Of course, the StyleWriter prints in black only—there is no multi-color option as there is with the ImageWriter II four-color ribbon. So if you do a lot of color work, the StyleWriter is not an option, unless you plan to keep your existing printer. Apple IIGS owners that already use a laser printer have no need to "move up" to a StyleWriter.

Overall, I was so impressed with the print quality of the StyleWriter, I would recommend it to anyone with an Apple IIGS that is looking for high-quality output at a reasonable price. *GS+*

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Well, don't forget to tell us! The Post Office does not normally forward Third-Class mail (they simply destroy it!), and we can't afford to replace magazines that were lost because a subscriber forgot to send us a change of address! If you miss an issue, we will extend your subscription, but you will have to buy the missed issue as a back issue! So, to avoid this hassle, send us a change of address as soon as you know your new address! Simply remove your mailing label from a previous issue of GS+ *Magazine, affix it to a change of address form (available at your local Post Office), fill in your new address, and send it to us at:*

GS+ Subscription Services
P. O. Box 15366
Chattanooga, TN 37415-0366

ProSel-16
Programmed by Glen E. Bredon

Retail price: $89.95
Typical mail-order price: $70.00
Not copy protected
Requires one 3.5-inch disk drive, hard disk recommended

Available through:
Charlie's AppleSeeds
9081 Hadley Place
San Diego, CA 92126
(619) 566-1297

Reviewed by Mark Ranes

ProSel-16 is a text-based disk management system that can accomplish most any task necessary to keep your hard disk running at peak performance. Included are utilities for launching applications, backing up and restoring your hard drive, volume optimization, a block editor, and volume repair. In addition to these basic features, ProSel-16 also includes a very powerful scientific calculator, an appointment calendar, a text editor, and a shell command processor.

ProSel-16 is supplied on a single 3.5-inch disk and is accompanied by a well-written (and thankfully indexed) 140-page manual. The package includes its own custom installation routines. All the user must do is select Greeting & Installation from ProSel-16's main screen and then follow the on screen prompts. Users are given the option of either making ProSel-16 the bootup **Start** file or not. If you choose to boot into ProSel-16, the original **Start** file is renamed to **Old.Start** and the installation routine writes ProSel-16's **Start** file into your system folder. Otherwise, ProSel-16 is copied into your **System** folder and called **PROSEL.SYS16**. In addition to the actual application file, the installation routine creates a folder called **PROSEL.16** in the root of the selected volume that contains many of ProSel-16's commands. Also created in the root of the boot volume is a file called **PROSEL.SPECS** that contains information about the applications that appear on ProSel-16's main screen. Finally, an appointment calendar Classic Desk Accessory (CDA) is copied into your **DESK.ACCS** folder.

After rebooting, or launching **PROSEL.SYS16**, ProSel-16's main screen is displayed (see screen shot). ProSel-16's main screen is completely user definable. Applications, ProSel-16's utilities and even other ProSel-16 screens can be displayed in any fashion the user chooses. All changes made to ProSel-16's main screen are accomplished through the ProSel-16 text editor. Using the editor, users can add selected applications to ProSel-16's main screen and even design their own screens. Adding applications to ProSel-16's main screen allows applications to be launched simply by using the mouse to select the application's name and then double-clicking. Additionally, two other methods of selecting applications to be launched are available. Users can press an alpha key, causing ProSel-16 to highlight the next item in the launch list starting with that letter, or applications can be selected using the arrow keys. Once selected, either double-clicking or pressing the return key causes the application to be launched.

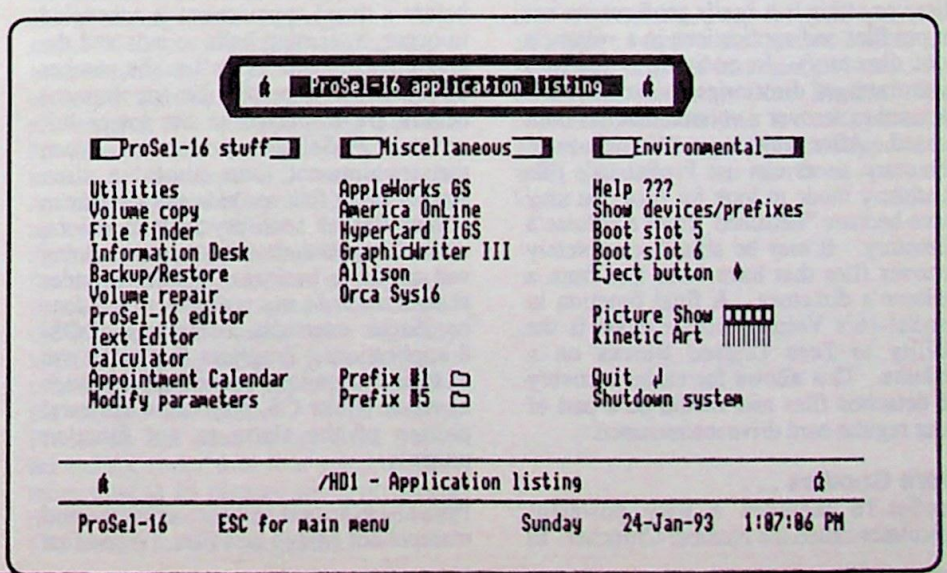
The Big Guns . . .

ProSel-16's utilities can be accessed either from the main screen or by hitting escape to view ProSel-16's main menu. The list of ProSel-16's utilities are spread out over two screens and includes a multitude of utilities (see Figure 1). All of ProSel-16's utilities work well and as expected, although selecting volumes and files is cumbersome because of ProSel-16's text-based environment.

ProSel-16's backup and restore functions will do either a full-volume or incremental backup or restore. Users can choose to backup all files on a volume, files with modifications dates after a specific date, or files that have changed since the last backup. You can also tell ProSel-16 to ignore specific file types (such as application and system files) while backing up a volume, thus speeding up the backup process and requiring fewer disks in the backup set. Also, backup scripts can be written with any text processor, simply by creating a file listing which files the user wishes ProSel-16 to backup. Information on how to write backup scripts is included in the ProSel-16 documentation, but users should realize that creating backup scripts, unlike other backup utilities, is far from automatic. Currently, ProSel-16 supports backup only to 3.5-inch disks. ProSel-16 also performs a certain amount of file compression when backing up a volume.

Users have several options when restoring previously backed up files. When restoring all files on a backup set, the files can be restored either to the default (original) directory or users may specify the directory they wish files to be restored to. Also, individual files can be restored either manually or based on modification date. A final option for file restoration allows for only those files on the backup set that are missing from the destination volume to be written.

ProSel-16 contains a volume optimization utility that will help users keep their hard drive flying at maximum. Any volume that undergoes many file saves and deletions will have files that become fragmented. Fragmented files load more slowly than files that are stored on volumes in contiguous blocks. An optimizer simply reads each file and then rewrites it to contiguous blocks for faster loading. Unlike other currently available volume optimizers as of the writing of this review, ProSel-16 offers users two modes of volume optimization, Complete and Turbo. The Complete mode optimizes both directories and files, while the Turbo mode optimizes only the *files* on a selected volume. Users should use the Complete mode the first time a volume is optimized, and the procedure can take quite some time to execute. Thereafter, users can use the Turbo mode, and the process will be completed in a much more timely fashion.



The Zap module of ProSel-16 is a full-featured block editing utility. It allows users to edit the bytes on any ProDOS volume. It includes powerful options that allow for global data searches on a volume, as well as the ability to follow either the data or resource fork of any file. Changes made to a volume can be easily written back to a volume. It should be noted that volume editing isn't for the meek of heart (or weak of mind!), and only those users who are absolutely sure of what they are doing should use this option (and never on original copies of software)!

ProSel-16 also includes a Volume Repair function that can help solve many of the problems IIGS users may encounter during the course of regular use of their computers. After selecting Volume Repair from ProSel-16's main screen, users are given several options. The first option, Test Directory Structure, scans the directory structure of the selected volume and reports any problems it finds. This function does not actually repair any problems it finds, it is merely informational. The Fix Directory Structure function is similar to the previous routine, except that it tries to repair any problems it finds. ProSel-16 also provides users with the ability to scan for and then lock out bad blocks it may find on a volume.

One of the busiest blocks on a ProDOS volume is block 2. A volume's directory information is stored here, and it changes frequently as files are written to and deleted from the disk. Unfortunately, sometimes the block becomes mangled. ProSel-16 includes a routine, called Main Directory Repair, to repair a volume that has block 2 corrupted. It can be used to revive subdirectories in the main directory and all other files that are *not* in the main directory (this is a *really* good reason not to put files and applications in a volume's root directory). In addition to volumes with damaged directories, this routine can be used to recover a volume that has been erased. After repairing a volume's main directory, users can use ProSel-16's File Recovery mode to look for files that may have become "detached" from a volume's directory. It *may* be able to completely recover files that have been lost from a volume's directory. A final function in ProSel-16's Volume Repair mode is the ability to Zero Unused Blocks on a volume. This allows for easier recovery of detached files and should be a part of your regular hard drive maintenance.

More Goodies . . .

ProSel-16 includes a very powerful calculator called the Number Cruncher. In addition to being very powerful, it is also very complex. Documentation for the Number Cruncher spans forty-five pages in the manual. It can carry out any calculations a traditional scientific calculator can, and supports functions such as sin, cos, tan, arcsin, arccos, arctan, exp, log, abs, powers, and more. Furthermore, it is programmable, in that programs can be written for it, using a built-in editor, and then saved to disk. Included are more than seventy-five programs, such as the ability to find averages, standard deviations, compute the area of geometric figures, and more. The Number Cruncher is easily accessed through ProSel-16's main screen. This feature of ProSel-16 may justify the entire purchase price to those who regularly carry out complex calculations, while other users may find that it is just too complex to use for simple computations.

One of ProSel-16's coolest features is the Appointment Calendar. It is accessed from ProSel-16's main screen and allows users to set appointment reminders for up to thirty events per day. When first invoked, the Appointment Calendar displays the current month with a red diamond displayed on the current day of the month. An open-apple character denotes a programmed monthly or yearly event, such as holidays. A closed-apple character indicates that the day has user-defined appointments. Users can easily view other months and years by using the Command key in conjunction with the arrow keys. A Classic Desk Accessory, appropriately called ProSel-16 Appointments, allows users to view the titles and times of all appointments for the current day from within any program.

An appointment editor allows users to enter appointment titles, times and a text field describing the event. Nine minutes before a timed appointment is scheduled to occur, a warning bells sounds and the appointment name as well as the number of minutes left before the appointment occurs are displayed in the lower left corner of ProSel-16's main screen. When the appointment time comes, a siren sounds every four seconds and the screen border flashes semi-psychedelic colors, reminding you to drop what you are doing and attend to business. These reminder actions occur in any program which does not disable interrupts, including ProDOS-8 applications. Programs that make use of their own unique sound routines, such as AppleWorks GS, may cause the aural portion of the alarm to not function properly.

ProSel-16's text editor creates and manipulates simple text files. When first called up, the text editor is simply a blank screen with a blinking cursor. Users will need to learn no less than fifty commands to effectively use ProSel's text editor. To its credit, the text editor does have readily available online help, but with the large number of relatively inexpensive shareware and freeware text editors available today, I can hardly recommend this feature of ProSel-16.

The Shell Command Processor allows for the direct keyboard entry of commands to tell ProSel-16 to do something. Like the text editor, when invoked, it presents the user with a blank screen. The manual lists and describes about a page and a half of internal and user-inputted "transient commands." As Glen Bredon points out in the documentation, the command shell need not be used to effectively make use of ProSel-16. It is included for those users who prefer the Shell Command Processor interface. Ex-MS-DOS users will probably feel right at home in ProSel-16's Shell Command Processor.

Finally, a few other features are available while using ProSel-16. Before ProSel-16 launches any program, it checks for known viruses. It even checks memory for viruses that don't infect files, such as Lode Runner and Black Out. A nice touch! A simple screen blanker is also included in ProSel-16 that displays interesting geometric shapes. Alternately, users may elect to display a slide show of their favorite Super Hi-Res pictures in place of the standard screen blanker. Users also have the ability to directly boot slot 5 or 6 from ProSel-16's main screen. Users can also access online help files from ProSel-16's main screen. They help clarify some simple problems users may have while using ProSel-16.

The Good, the Bad & the Ugly . . .

First and foremost, any potential ProSel-16 users should realize that in addition to being the first integrated Apple IIGS hard drive management program on the market, ProSel-16 simply has more features than any other currently available hard drive utility program (although ECON's Universe Master is hot on ProSel-16's heels). Some of ProSel-16's features were not listed or described in this review because Diz wanted to have some room for other stuff in the magazine! ProSel-16 attempts to do many things and it does those things well. Users simply wanting a wide variety of features will not be disappointed at all with the ProSel-16 package.

Glen Bredon has updated ProSel-16 constantly over the four years I've owned the program. In addition to bug fixes,

new features have been added to further enhance the total package. Users with access to the major online services, such as America Online, GEnie, or CompuServe will be pleased to know that they can upgrade ProSel-16 simply by downloading an application that updates their existing copy of ProSel-16. It's too bad other companies don't follow this practice.

Amazingly, ProSel-16 does support the use of New Desk Accessories (in a strange sort of way.) When the user presses Command-*, ProSel-16 displays a standard IIGS desktop that does nothing but support New Desk Accessories. While it is nice to be able to access New Desk Accessories in ProSel-16, I always thought that the purpose of New Desk Accessories was to allow for the use of the desk accessories *within* a given application. Rarely do I wish to use New Desk Accessories in isolation of what I'm working on.

My biggest complaint with ProSel-16 is its user interface. It frequently gets in the way of what you are trying to do. When I buy IIGS programs, I want them to *look like* and *behave like* IIGS programs. ProSel-16 does neither. Its text-based interface is one that was abandoned by Apple and most other developers *many* years ago. Navigation around ProSel-16's many areas could be simplified through the use of a desktop-based environment. At times I feel like ProSel-16 is working against me. I constantly find myself longing for standard Get File dialogs when I use ProSel-16! I'm not much for typing in pathnames.

While ProSel-16 presents itself as an integrated hard drive management program, it feels more like a compilation of separate utility programs. At times, accomplishing the same task in various areas of ProSel-16 requires different commands. For example, quitting different utility modules may be accomplished using one of the following module-specific commands: Command-Q, simply pressing "Q", typing BYE, or hitting the escape key. You have to remember what module you are in and then be sure to use the right command. It lacks the consistency of commands found in other hard drive management applications, like Universe Master, by ECON Technologies, Inc.

Although ProSel-16 supports mouse use, because of the text-based environment, mouse movements are jerky and often unpredictable. I found it much easier to use the arrow keys for navigating around ProSel-16's menus. I also experienced occasional lockups while attempting to carry out some of ProSel-16's functions. Upon rebooting and retrying the functions, ProSel-16 would perform as expected.

A last gripe; in some instances where ProSel-16 was not able to carry out a particular function, it would return me directly to the Utilities menu with no explanation of what had happened. For instance, if I tried to catalog an empty directory, I would instantly be dumped back at the Utilities menu with no dialog telling me that the directory was empty. Not too user friendly.

ProSel-16 is a powerful and complex program. It does most anything you'd want it to do to keep your IIGS hard drive operating at peak performance, yet the user interface builds a big wall around these capabilities. ProSel-16's learning curve is far steeper than other comparable hard drive management packages. Your manual will get as good a workout as the actual ProSel-16 program will, so be sure to keep it at hand. For instance, I spent no less that five minutes going through the documentation trying to find out how to turn off the flashing border when the Appointment Calendar reminded me of an upcoming event. When I finally found the information (Command-Shift-Control, for those of you who read even slower than I do), it wasn't located in the area of the manual that I would have logically looked. In many cases, it is necessary to read large portions of the manual to find the desired information. Even though ProSel-16 has been in my IIGS utility arsenal for better than four years, I spent more time in its manual while preparing this review than any of the other reviews I've written for *GS+* Magazine.

Figure 1
ProSel-16 Utilities

Catalog	Move Files
Copy Files	Dump Files
Type Files (view or print)	Hide Files
Lock / Unlock Files	Disable / Enable System Files
Delete / Recover Files	Eject a Disk
Verify Files	Format a Disk
Rename Files	Auto Format
Sort Directory	Erase a Volume
Change File Date	Compare Files
Create Directory	Compare Directories
Show Volume Names	Locate (text) String
Volume Copy	

It should be noted that some IIGS users cut their computing teeth on ProSel-16. It was the *first* hard drive management package available that was capable of handling files with resource forks. Many users have simply updated ProSel-16 over the years and not moved on to other integrated packages. Like other programs, once you've mastered ProSel-16's numerous commands, its interface is manageable.

Despite its amazingly complete list of powerful utilities, ProSel-16 is not the hard disk management program of choice on my IIGS. Its user interface is difficult to learn and frequently requires keyboard entry of pathnames, which makes me less than eager to use ProSel-16, let alone recommend it. When I get a new program, I don't want to spend extended periods of time reading documentation and learning how to use the program. The programs I use on a daily basis are those that are intuitive, easy to learn and use, and don't require the memorization of pages and pages of commands. I can only hope that someday Glen Bredon will rework ProSel-16 into a desktop-based application. When and if that happens, it will definitely be worth a second look. ***GS+***

TransProg III v1.1
Programmed by Etienne Petitjean

Retail price: $39.95
Typical mail-order price: $24.95
Not copy protected
Requires one 3.5-inch disk drive and System Software v5.0.4 or later, hard drive recommended

Seven Hills Software
2310 Oxford Road
Tallahassee, FL 32304-3930
(904) 575-0566

Reviewed by Mark Ranes

OK. I admit it. I'm a utilities freak! If there's a new one, I want it! When I heard that Seven Hills Software had teamed up again with the French developers at BrainStorm Software to publish a commercial version of TransProg v2.2 (previously shareware), I had to have it! TransProg III is an application launcher with a twist. Instead of quitting back to the Finder before starting up a new application, TransProg III automatically quits the current application you are working in and fires up the new program of your choice, completely bypassing the Finder. TransProg III also allows for the use of hotkeys that permit you to skirt your usual **Start** application.

TransProg III is supplied on a single 3.5-inch disk. An excellent, well-written 30-page manual is included in the TransProg III package. The utility itself comes to your system in the form of a permanent initialization file. Also included in the TransProg III package is another permanent initialization file, Hierarchic, which gives TransProg III the ability to use hierarchical menus. A hierarchical menu is a sub-menu that opens off to the side of the original when you select that item. Menu items that contain a hierarchical menu are marked with a right arrow icon.

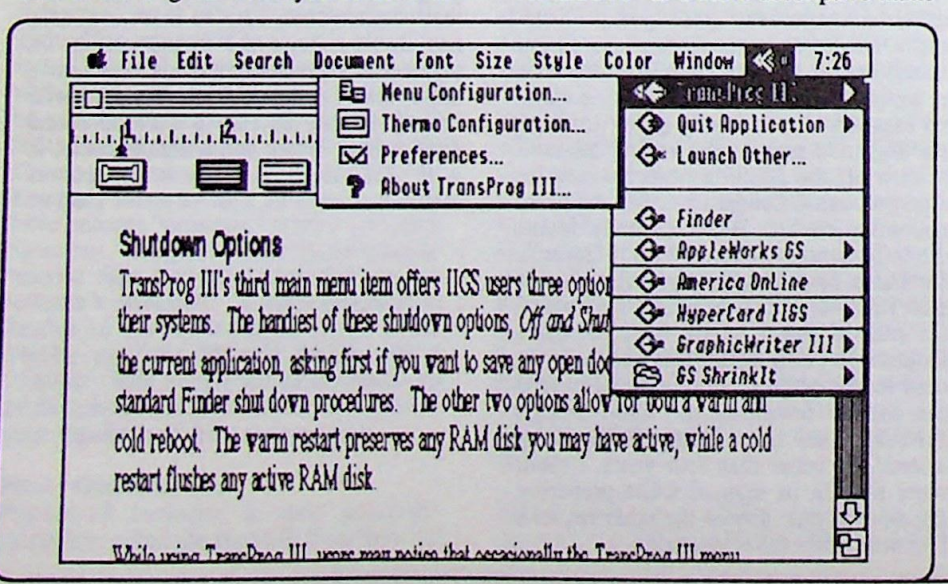
The TransProg III package includes a simple installation program that personalizes your copy of TransProg III and then starts Apple's Installer program. Installing TransProg III requires that 94K be available on your boot disk. Users without a hard disk may have to delete some system files from their boot disk to make installation of TransProg III possible.

After rebooting, you will see the TransProg III and Hierarchic icons on the system startup splash screen. Once you arrive in the Finder you'll see the TransProg III icon to the right of the menu items. Clicking on TransProg III's menu icon causes a menu to be displayed with its three main items, TransProg III, Quit Application, and Launch Other (see screen shot).

The TransProg III menu item allows you to add applications to its launching menus, configure how its menu items will be displayed, and set global preferences for TransProg III. Also available in this portion of TransProg III is the ability to configure startup options.

Configuring an Application

Selecting Menu Configuration lets you add applications, groups, and dividers to your TransProg III menu. Clicking Application in the Add pop-up menu returns a Standard File dialog box that allows you to select the desired application to add to your TransProg III menu. After adding an application, you can change the way the name of the application will appear in the TransProg III menu. For instance, I can change "AO.SYS16" to a more descriptive name such as "America Online." This is a nice feature, as many file names on disk are more than just a bit strange. You can also change the application's pathname, should you change an application's location sometime in the future. You can also simplify the pathname change process by clicking on the Path button to bring up a Standard File dialog box. Finally, one of TransProg III's coolest features is the ability to set the data prefix you'd like the application to default to when the program first fires up. Clicking on the Data button allows you to select the folder of your choice using a Standard File dialog box. You can even add an application to the TransProg III menu twice, each with a different data path!



Applications can be placed into groups in the TransProg III menu to help organize the launching of applications and shorten the length of TransProg III's menu. For instance, you can create a group called Word Processing into which you place AppleWorks GS, Teach, and GraphicWriter III. When you select the Word Processing group, a hierarchical menu pops up that offers the three previously mentioned applications for launching. I have a GS-ShrinkIt group that includes the GS-ShrinkIt application twice, each with a different data path for each of the online services I frequent. That way I don't need to dig through folders looking for the packed files I want to decompress.

Users can also enter select documents to launch using TransProg III. Just like double-clicking on a document in the Finder, TransProg III will start up an application and then open the chosen document. This is a great feature of TransProg III for users that regularly use the same specific files! A real life example of this is a database file, called **Class.File92.93**, that I keep on all of my students at school for printing mailing labels. Pressing the Add button in an application's set-up window brings up a standard Open File dialog that allows you to select a document to add to the hierarchical menu of an application's launchable files. All I have to do is select AppleWorks GS from the TransProg III menu and up pops a hierarchical menu with **Class.File92.93** as a choice to launch. For me, this feature is a great time saver and comes close to justifying the entire price of TransProg III!

After entering an application and setting default pathnames, you can edit the way the new application appears in the TransProg III menu. User-selectable items include the application name's text color, text style, and background color. If you

so choose, you can elect to place a divider under the application's name that will visually separate it from the other application names in the list.

Clicking the Options button opens a menu that allows you to make several choices that will affect a specific application as it is running. One option, Speed, allows you to set the speed of an installed accelerator card. TransProg III knows which kind of accelerator you have, either a Zip GS or a TransWarp GS, and allows you to choose the desired speed from a pop-up menu. A check box also allows you to purge your IIGS's memory before running an application. While most applications won't benefit from this option, some programs do seem to run better when memory is purged.

Also found in the Options menu is the ability to set the configuration of each of the seven slots in your IIGS to either their built-in function or "Your Card" while the chosen application is running. In addition, users can check the box called "Restore config. when quitting" and TransProg III will restore the slot settings as they were before the application was started. This is a handy feature for those times when you need to turn down the speed on your accelerator to run an older ProDOS 8 game. Upon quitting the game, the accelerator is returned to its regular accelerated speed.

"Stack application," the final preference you can set in the Options menu, allows you to tell TransProg III to return you to the last application you ran before starting a new program. For example, while in the Finder, you use TransProg III to launch AppleWorks GS. You then use TransProg III to quit AppleWorks GS and immediately start HyperCard IIGS. With the Stack application option active, when you quit HyperCard IIGS, you are returned to AppleWorks GS rather than being returned to the Finder. While this feature of TransProg III can be helpful in some situations, I found it to be confusing. I tend to leave this option off.

Thermo Configuration

Thermo Configuration allows users to set a default startup program, set a system startup password, and also specify hotkeys that will launch a chosen application during the boot process. Selecting Custom from the startup application pop-up menu in Thermo Configuration brings up a standard Open File dialog that allows you to choose the application you want TransProg III to automatically launch on startup. Users that *always* use the same application will find this to be a real advantage, but I found that setting application hotkeys was a much better route to go. Selecting Add Application from the Thermo Configuration menu item lets users create a list of applications that can be launched by pressing a hotkey during startup. After selecting an application from a standard Open File dialog, the user is presented with a list of available keys that can be selected as an application's hotkey. Pressing a letter's key usually selects both the upper and lower case letter chosen, but the control key can also be used in conjunction with a letter to avoid problems with other utilities during startup. "What kinds of conflicts?" you ask. Well, if I select the letter "A" as the hotkey for AppleWorks GS and press it during startup, it does indeed launch AppleWorks GS, but that also tells AutoArk not to load. Bad news. Instead, I use Control-A as my AppleWorks GS hotkey, and AutoArk loads as it should.

TransProg III Preferences

The Preferences menu item allows you to set global preferences while using TransProg III. The Preferences dialog box consists of a series of check boxes and allows you to select at least one way to access TransProg III in desktop applications. The simplest (and in my opinion, the preferred) method is to install the TransProg III menu icon. Another method causes the TransProg III menu to be displayed while holding down the mouse button in the upper left screen corner. Finally, a third option of displaying the TransProg III menu is the use of a modifier key in conjunction with the mouse button. By holding down the modifier key and then holding down the mouse button, the TransProg III menu is displayed wherever the user clicks. Any combination of the following modifier keys can be used: Command, Option, Shift, and Control. Any or all of the previous methods of accessing TransProg III's menu can be selected via check boxes in the Preferences menu item.

Selecting Launch Other from TransProg III's menu brings up a standard file dialog box that allows you to launch any other applications, bypassing the Finder, that have not already been added to the TransProg III application list. A check box allows you to automatically add the chosen application to the launch list, although any editing must be done through the Menu Configuration area.

Shutdown Options

TransProg III's third main menu item offers IIGS users three options for shutting down their systems. The handiest of these shutdown options, Off and Shut Down, simply quits the current application, asking first if you want to save any open documents, bypassing the standard Finder shut down procedures. This function is a *real* time saver! The other two options allow for both a warm and cold reboot. The warm restart preserves any RAM disk you may have active, while a cold restart flushes any active RAM disk.

While using TransProg III, users may notice that occasionally the TransProg III menu icon starts blinking. I searched for the cause of this in the documentation without results. Dave Hecker at Seven Hills explained that the blinking icon signifies that when the current program was told to quit and launch another application, it asked the user if it should save the changes made to an open document before closing and the user cancelled the process. At this point, you should manually close the application and the program you previously selected will be launched. The icon may also blink if TransProg III attempted to quit an application and got no response from the program. Again, manually quitting the program resolves the problem.

Concerns . . .

TransProg III currently has a couple of problems. Nothing major, but a couple of bugs seemed to have crawled into TransProg III just before its general release. First, after personalization, the users name is not properly decrypted. The user's name and organization is displayed as gibberish when the About TransProg III menu item is selected. In addition, the startup password option does not work properly in the current version. After entering the correct password, my system locked up tight. Dave Hecker of Seven Hills stated that both of these features worked correctly in pre-release versions, but problems seemed to have popped up in the release version.

I encountered one last problem while testing TransProg III. After reducing the speed of my Zip GS and telling TransProg III to restore the speed to the original setting when quitting, it failed to do so. The system continued to run at the reduced setting until I manually reset the speed on the Zip GS. I did test the configuration restoration option on a TransWarp GS and it seems to work perfectly. Again, both Seven Hills and BrainStorm Software are aware of the problem and are looking into a fix as this review is being written.

Bringing It All Together . . .

TransProg III is a well implemented utility. It is a very useful addition to the Finder and simplifies the launching of all

types of applications. The greatest advantage to using TransProg III is bypassing the Finder when switching applications or shutting down your system. In addition, using TransProg III will allow you to unclutter your desktop of icons as all programs for launching can be accessed using the TransProg III menu. Using application groups will further help organize the launching of applications.

Users that utilize Vitesse's Wings as their application launcher will find that TransProg III and Wings will not peacefully coexist on the same system. This is not TransProg III's fault and is not the first program that has trouble working correctly with Wings. Personally, I've been looking for a reason to end my association with Wings until Vitesse sees fit to update it to be more System 6 friendly. Besides, TransProg III essentially replaces Wings' main function, launching applications!

TransProg III might also be the ticket for those users who have made several of *GS+*'s programs a regular part of their lives. TransProg III's functions essentially replace those of both Autopilot and Quick Folder (Sorry, Joe!), and better yet, it's always available from the menu bar! Additionally, TransProg III's usefulness far outweighs the abilities of Seven Hills' own freeware Finder Extension, Quick Launch. Users who currently have the aforementioned utilities running on their systems may wish to upgrade to TransProg III to combine the functions of the individual programs into a single utility.

It should be noted that IIGS users running System 6 without hard drives will have a hard time finding room on their boot disks to install TransProg III. (Subliminal Message: "Buy a hard drive!") After working with TransProg III for a couple of weeks, experienced users will wonder how they survived without it all of these years. New IIGS users should do themselves a favor and purchase TransProg III now, before they realize what they are missing!

While TransProg III does have a few minor bugs in the release version, from past experience with Seven Hills Software, I can rest assured that the problems will be fixed. All software companies could take a lesson from Seven Hills in customer support. IIGS users can only hope that Seven Hills Software continues to pump out new utilities and continues to support the IIGS with dynamic programs like TransProg III! *GS+*

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The Software Bargain Bin

Shareware Reviews
By Robert A. Ribaric

SQUARES!
I don't know why, but all three shareware titles we have for you this month involve squares. Part of the object of Ant Wars is moving killer ants from square to square on the screen. How about FloorTiles? Just look at the title! Finally, in Quest for the Hoard you must search underneath square tiles for hidden treasure. Well, all of these games are entertaining, so check them out. I still can't help but wonder why they had me review games about squares. I hope it had nothing to do with my personality!

Ant Wars
Programmed by Karl Bunker

Shareware price: $10.00
Download time (at 2,400 baud): Less than 5 minutes.

Karl A. Bunker
59 Parkman St.
Brookline, MA 02146

This is the one of two games we received from Karl A. Bunker for review here at *GS+* Magazine. The game is Ant Wars, and it is a fast-paced strategy game. You command an army of red ants whose goal is to defeat an equal number of opposing black ants. Both sides start with six ants each. While the bad guys are computer-controlled and supposedly move randomly, you must use the mouse to navigate your troops. The object is to pick off the enemy ants one at a time by facing two of your ants toward any two sides of an opponent. The victim then disappears, leaving your ants free to stalk another target. You might think you're ahead at this point, but if you wait too long—black reinforcements will arrive. You have a secret weapon, though, in the form of a "berserker ant" that appears every once in a while. This guy destroys any ant he touches—black or red! If you move fast with your berserker, you can wipe out most of the enemy ants before more can appear. Be careful not to run in to your own troops! If you kill all the black ants, you move on to the next level. There are four boards which get progressively harder. I wasn't quite able to clear out the last level in the time I had to play this game. When only one of my ants remained, the game was over.

Ant Wars is a pretty addictive game. Like Mr. Bunker's other game, FloorTiles (see review below), this game can get frustrating. Also like FloorTiles, Ant Wars doesn't use the keyboard for control. But, since you must move many ants, mouse-control is pretty much a required feature (unlike FloorTiles, which could have used the keyboard). As in FloorTiles, good sound effects keep things interesting.

One approach to this game is to set up traps for your opponents. I'm sure there are several other strategies, but I found it best to move quickly and offensively. If I had a little more time, I'm sure I could have finished the last level. Unlike FloorTiles, Ant Wars seems to get boring after a while. Once you have a strategy, it is pretty much automatic. In conclusion, this is a good game, and I'm not sure what happens after the fourth level, but I don't think it's worth the full ten dollars. However, I'm always eager to support new IIGS game development on any level.

FloorTiles
Programmed by Karl Bunker

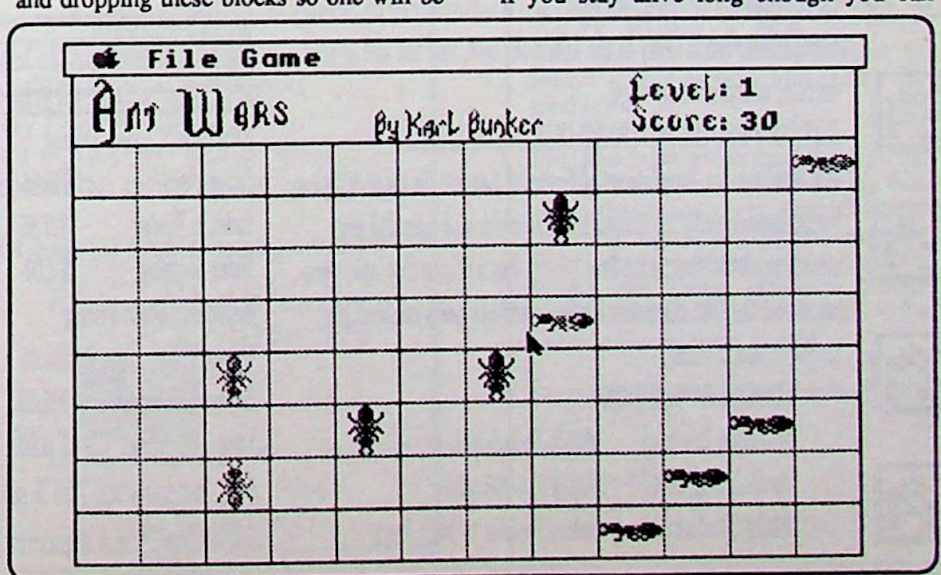
Shareware price: $10.00
Download time (at 2,400 baud): Less than 5 minutes.

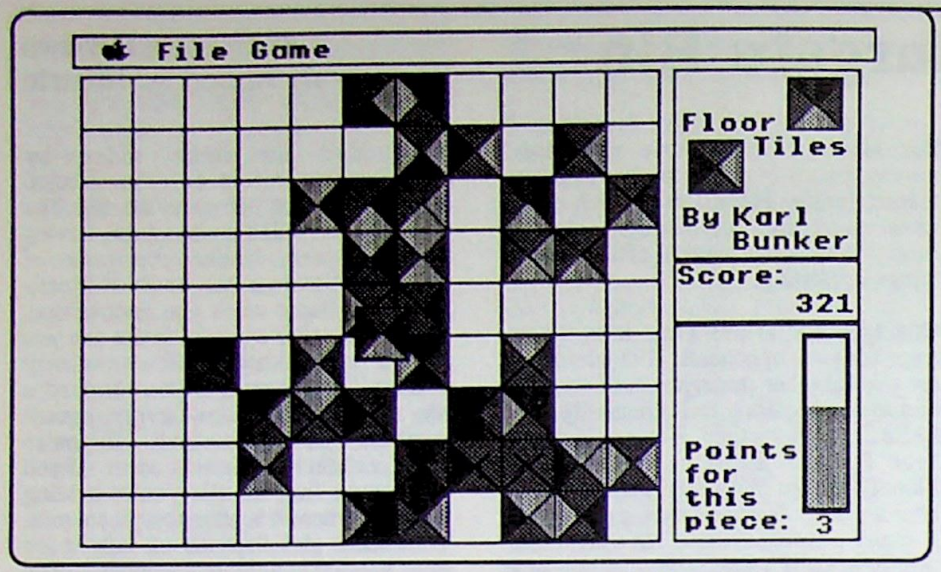
Karl A. Bunker
59 Parkman St.
Brookline, MA 02146

FloorTiles is a new twist on an old concept. It is a cross between Tetris, Columns, and Klax. Your job is to selectively place four-colored squares on the play field. Each of a square's sides is any combination of red, blue, green, and yellow. Things will soon start to get crowded, so you must remove some blocks. This is accomplished by rotating and dropping these blocks so one will be surrounded on three sides by corresponding colors of other blocks. Hitting the space-bar spins the tile. The middle square will then disappear, leaving an empty space. Unlike other games of this type, however, the stack of blocks will not collapse when you remove one. Instead, any tiles adjacent to the one you zapped will rotate clockwise ninety degrees. As a bonus, if you surround a tile on all four sides—every square involved will be removed! If you're lucky, a chain reaction will occur. If you don't move fast, the tile you're holding will drop where it is after several seconds. Your score also depends on how much time you take to place a block. The longer you take, the lower your score. If you really get behind, the screen will fill up with useless blocks and the game is over.

At first, I thought this game would be too similar to other games for it to be interesting. I was amazed to find myself hooked! It is different enough to make it fun. Of course, you use the mouse to position each new tile, but I might have liked to be able to use the arrow keys. There are many similarities between this game and Ant Wars (see review above). Both use a grid-like screen and the goal is to surround and remove objects. Mr. Bunker's sound effects for both are always entertaining. There are save, pause, and high score features (high scores are saved to the disk). Both games run in 320 mode and support New Desk Accessories. FloorTiles does seem to be the most addictive of the two.

You can't clear a board on FloorTiles, but if you stay alive long enough you can





certainly rack up lots of points. If you reach this stage and get bored, the grid size can be reduced for more of a challenge. This set-up gives you less space to work in, so you really have to think fast. The author reports that distribution of this game has been a success.

You might want to find out why for yourself.

Quest for the Hoard
Programmed by Ken O. Burtch

Shareware price: $15.00
Download time (at 2,400 baud): Approximately 40 minutes.

Pegasoft
Second Avenue, R.R.#1
Jordan Station, Ontario Canada
L0R 1S0

An evil sorceress has stolen the treasures of the world and has hidden them deep within the floor of her dungeon. As the local sorcerer's apprentice, you must retrieve these objects in order to return them to their rightful owners. Even if you can locate them under the floor's tiles, you must use your magic to disarm the spells protecting them. You'll know that you're getting close when you sense the spell's aura . . . .

Quest for the Hoard is a game from Pegasoft and is written in Pascal by Ken O. Burtch. The premise is a good one, but it makes it sound like this is an adventure game. In reality, it is a strategy game, but don't get disappointed. This is an *interesting* strategy game. The screen is covered by tiles that you can remove by using the mouse to click on them. When you get close to a treasure, a ring of color will appear. You must then guess which square this aura is actually surrounding and use a spell to retrieve the treasure. You are playing against the clock, so you must locate all of the treasures as quickly as you can. If you're lucky, you might run in to a diamond which is good for points, or an hourglass which puts more time on the clock. If you accidentally click directly on a treasure without

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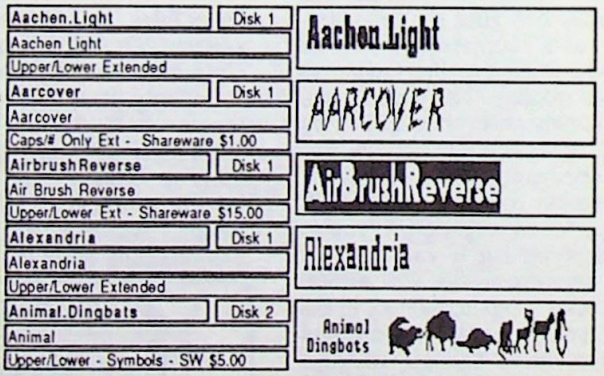

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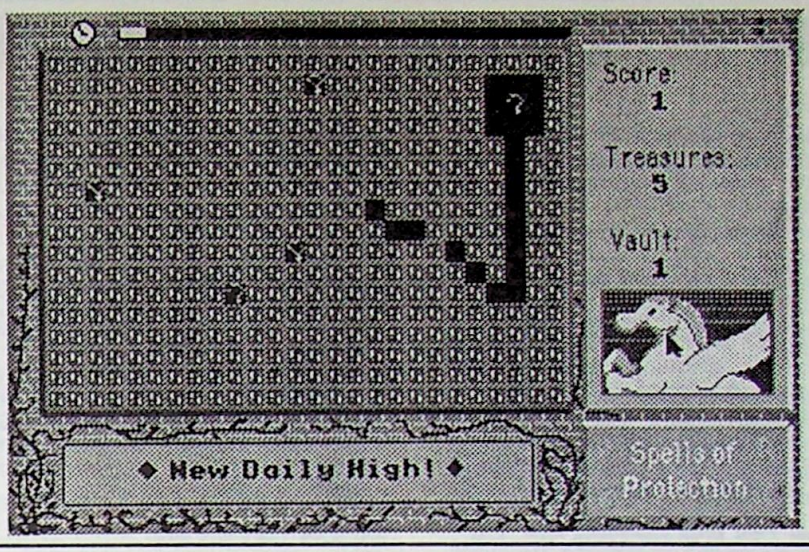
disarming the trap—the game is over. Speed and caution are both necessary.

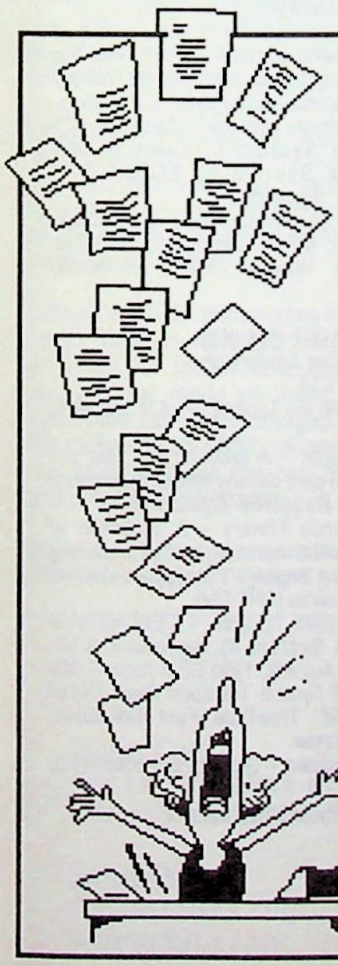
A good strategy is to slowly but consistently click in a line across the screen. This way, if you don't get impatient, an aura will soon appear and a treasure can be recovered. Once across the screen, you can move over two blocks and start making your way back. This will eventually cover the whole screen so nothing is missed, but your score also depends on the time taken. With this in mind, another technique is to madly click randomly until all the treasures are found. This works surprisingly well on the early levels, but is useless later on. Different approaches might be used, but if you don't get clumsy with the one you're using, things should work out fine.



This is simply a well-written game. The instructions are informative, as well as entertaining, and cover all the necessary material. The graphics and stereo sounds are also excellent, and many cool pictures appear between levels. Even the pause feature involves an animated sequence which keeps your attention. There is also a restart key. The high score function automatically saves daily, personal, and overall scores. A multi-player selection allows up to fourteen people to alternate play at fifteen, twenty, or sixty second intervals. Hours of fun seem to be possible with practice.

The only problems I found were the fact that this game does not support New Desk Accessories, and that the multiple mouse clicks might take their toll on your equipment. Other than these two things, Quest for the Hoard is a very impressive product.

A lot of work obviously went in to this program's creation, and it shows. I was misled by the title, however, and found myself craving an actual adventure game. I haven't seen too many offerings like that, but if anyone could do it, I think the people from Pegasoft could. Support this game, and drop them a line pertaining to what you'd like to see from them in the future. ***GS+***



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Hi, gang! Robert "Bob" Ribaric here. I just wanted to let you know that I gave up a fabulous job in the food-service industry to work here at ***GS+*** Magazine, and so far, I love it! (I do miss the free tacos, though!) One of my favorite parts of this job, other than keeping Diz's toupee in tip-top condition, is writing reviews! If you've written a neat piece of shareware for the IIGS, I want to review it here in ***GS+*** Magazine! So send it in!

I've also been given the job of going through your feedback and seeing that your suggestions get consideration from the big rat, er, cheese, and that your questions get answered. So start filling out those feedback forms (which can be found on your ***GS+*** Disk) and send them in too!

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- System Software 5.0 Compatibility Chart
- NoDOS - A file utility New Desk Accessory (ORCA/C)
- Graphics Galore - Drawing "how-to" with pictures on disk
- Reviews of Arkanoid II (new custom levels on disk), Crystal Quest, ORCA/C, Rocket Ranger, Silpheed, Test Drive II, TransWarp GS, Turbo Mouse ADB

May-Jun 1990 (V1.N5)
- AppleFest Report
- Beginner's Guide to System Disks - Part 1
- GS/OS prefixes - PreFixer CDev (ORCA/Pascal)
- Brush with Greatness - How your IIGS makes colors
- Reviews: CMS 45MB Removable Hard Drive, S&S-RAMCard, DataLink Express modem, Visionary GS digitizer, GraphicWriter III, ZapLink, McGee, Math Blaster Plus IIGS, The New Talking Stickybear Alphabet, ZipGS

Jul-Aug 1990 (V1.N6)
- KansasFest Report
- Beginner's Guide to System Disks - Part 2
- Transfusion - An NDA telecommunications program (ORCA/C)
- Reviews of AMR AS800K 3.5-inch drive, Salvation—Exorciser, Disk Access, MD-BASIC, Katie's Farm, Task Force, BLOCKOUT, OMEGA, 2088: The Cryllan Mission, Hunt for Red October, Revolution '76, Where in the U.S.A. is Carmen Sandiego?

Sep-Oct 1990 (V2.N1)
- Brush With Greatness - Making the most of your digitizer
- Interview with Brian Greenstone (programmer of Xenocide)
- PING - Video table tennis program (Merlin assembly)
- Shuffle - An INIT that shuffles desktop windows (ORCA/M)
- Battery Brain - A CDev that saves BRAM parms (ORCA/C)
- Reviews of GS Sauce memory card, Salvation—Wings, World GeoGraph, Orange Cherry Talking Schoolhouse series, QIX, Solitaire Royale, InnerExpress

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- AppleFest/Long Beach '90 & Apple II Achievement Awards
- Interview with Jim Carson of Vitesse, Inc.
- Introduction to System Software v5.0.4
- RAM Namer - A CDev that allows you to rename RAM disks (ORCA/C)
- ***GS+*** program updates - Battery Brain v1.1, EGOed v1.32c (written in ORCA/C), Teach Translator for GraphicWriter III v1.1
- Reviews of ZipGSX, LightningScan, Design Your Own Home, Print Shop Companion IIGS, Your IIGS Guide, Dragon Wars, 2088: The Cryllan Mission - Second Scenario, Space Ace, Sinbad & the Throne of the Falcon

Sep-Oct 1991 (V3.N1)
- Protecting Your Investment - A Guide to Surge Protection
- A Conversation with Roger Wagner - Part 2
- Working with the Toolbox - Part 4: QuickDraw II
- FGS - A desktop program that generates Fractals (ORCA/C)
- ***GS+*** program updates - EGOed v1.36, Autopilot v1.1, NoDOS v1.6
- Reviews of two 100MB hard drives, Nite Owl Slide-On Battery, ORCA/Integer BASIC, ORCA Talking Tools, Storybook Weaver: World of Adventure, HyperBole, HoverBlade, Shareware: DeskTop Painter, SoundSmith, IIGS Classic: The Bard's Tale IIGS

Jan-Feb 1992 (V3.N3)
- How Printing Works - An article by Matt Deatherage
- Working with the Toolbox - Part 6: The Resource Manager
- Buying & Using Mac Hard Disks
- Cool Cursor - A Control Panel that replaces the old watch cursor with an animation (ORCA/M, ORCA/C)
- Replicator - A desktop-based disk duplication program that works with any GS/OS device and file system (ORCA/Pascal, ORCA/C, ORCA/M)
- ***GS+*** program update - EGOed v1.4
- Reviews of MacLand 105MB Hard Drive, Tulin 120MD Hard Drive, SuperConvert, Signature GS, Learn to Program in C, 4 shareware reviews

May-Jun 1992 (V3.N5)
- TrueType on a LaserWriter
- Using Archiver
- Writing Phantasm Screen Blankers
- Working with the Toolbox - Intermission: System 6 Updates
- Whoosh - A Control Panel that turns off the System 6 whooshing rectangles (ORCA/M). **Requires System 6.**
- Rebuild Desktop - A Finder Extension that will rebuild the invisible desktop file under System 6 (ORCA/C). **Requires System 6.**
- ***GS+*** program updates - Shuffle v2.0, Cool Cursor v1.0.1, EGOed v1.6 **(requires System 6)**, Replicator v1.2
- Reviews of Pegasus Internal Hard Drive, Express, Formulate, Second Chance v2.0 & X2, Shoebox
- Casual 6 - System 6 Tips

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- KansasFest 1992
- Introduction to 3-D Graphics - Part 3: Speeding Things Up (demo program written in ORCA/C)
- Working with the Toolbox - Part 8: The Control Manager
- Understanding FSTs
- Using rBundles in Your Programs
- Quick Folder - A Finder Extension that allows you to open folders from the Finder's Extras menu (ORCA/C). **Requires System 6.**
- Extra Bits - A Control Panel that lets you change the new Battery RAM parameters that System 6 didn't provide a Control Panel for (ORCA/C). **Requires System 6.**
- ***GS+*** program updates - EGOed v1.7 **(requires System 6)**, Quick DA v2.0 **(requires System 6)**, Replicator v1.3
- Reviews of ZipGS (10MHz CPU/64K Cache), Gate, Space Fox, Utility Launch & Utility Works

Sep-Oct 1992 (V4.N1)
- Apple EXPO East
- Open From Desktop - A Finder Extension that allows you to open any item on your desktop from the Finder's Extras menu (ORCA/C). **Requires System 6.**
- II Notes - A 20-page NDA notepad (ORCA/M). **Requires System 6.**
- Miscellaneous Library - A collection of various useful routines to use from any programming language that suppors linking to standard libraries (ORCA/M)
- ***GS+*** program updates - Autopilot v2.0 **(requires System 6)**, Quick DA v2.1 **(requires System 6)**, EGOed v1.7.1 **(requires System 6)**
- Reviews of ContactsGS, GSymbolix, Kangaroo, ORCA/Debugger, UltraCat, Storybook Weaver: World of Make-Believe

Nov-Dec 1992 (V4.N2)
- Understanding Accelerators
- The Basic IIGS
- Working with the Toolbox - Part 9: The Menu Manager
- Font Reporter - A program that lets you display and print out any font in your system (ORCA/C). **Requires System 6.**
- Miscellaneous Library - A collection of various useful routines to use from any programming language that suppors linking to standard libraries (ORCA/M)
- ***GS+*** program updates - EGOed v1.8 **(requires System 6)**, Replicator v1.3.1
- Reviews - AutoArk, 1990 GEM Apple II CD-ROM, IIGS System Transport Case, Out of This World, TrueType Font Collection, Universe Master
- Review updates - Desktop Enhancer v2.0, Pointless v2.0
- Casual 6 - Those *Crazy* Icons

Miscellaneous Library

By Josef W. Wankerl

[Editor's Note: The Miscellaneous Library is not a stand-alone program! It is a programming tool that we think advanced readers of *GS+* Magazine will find very useful. It is intended for those doing advanced IIGS programming. The information provided here is cursory and does not provide complete documentation for the calls—if you plan to use the Miscellaneous Library, read the **MiscLib.Docs** file (which is on your *GS+* Disk) for detailed information!]

The Miscellaneous Library (MiscLib) is a collection of various routines I have found myself using over and over. They can be used from any language that supports linking to standard libraries, such as ORCA/C and ORCA/Pascal. For detailed assembly language stack diagrams on how to make the calls, and for a short description of the parameters, see the figures in the **MiscLib.Docs** file. (This file is located in the **GSP.V4.N3.SEA** self-extracting archive that is on your *GS+* Disk.)

I hadn't planned to make any changes in the Miscellaneous Library for this magazine, but as things always go around here, I found a tiny tiny bug, and then I thought up a couple new routines that I could easily add in. The bug that I found was in the `ClickCount` code—when a non-`mouseDown` event was detected, the `clickCount` field of the extended task record was not being set right. Now it is correctly set to zero.

I also did a little rearranging of the source code. There is no longer a **Prefs.ASM** or a **Split.ASM** source code file. The two routines that made up those two source code files have been merged into a new file called **Paths.ASM**. A new section of the **MiscLib.Docs** file has been created that deals with pathnames.

And now for the groovy new stuff: first, the Finder section. While I was rewriting Open From Desktop and Rebuild Desktop Database, I wrote similar code twice—code to work its way through the clumsy `stringList` structures that the Finder returns. There are two new routines in the Miscellaneous Library that will simplify dealing with those hideous `stringList` structures: `StringListPtr` and `ExtendedListPtr`. These routines are extremely similar—they take an entry number and a `stringList` handle and return a pointer to the entry in the `stringList`. For more information on what a `stringList` is, consult the *Programmer's Reference for System 6.0*. You should use `StringListPtr` when working with normal `stringList` structures. It returns a pointer to a class 1 GS/OS input string. You should use `ExtendedListPtr` when working with extended `stringList` structures. It returns a pointer to the extended record structure in an extended `stringList`.

I hadn't planned to make any changes in the Miscellaneous Library for this magazine, but as things always go around here, I found a tiny tiny bug, and then I thought up a couple new routines that I could easily add in . . . .

Secondly, I got really fed up trying to convert one type of string into another. The result of my frustration is a new section of code: the string section. The string section currently contains two calls now, `ConvertString`, which will convert one type of string into another, and `AppendString`, which will concatenate two strings. Valid string types are Pascal strings, C strings, GS/OS class 1 input strings, GS/OS class 1 output strings, and generic text blocks. Short descriptions of all of these new Miscellaneous Library calls can be found in Figure 1.

Inner String Workings

The two string routines rely on two support routines which are not meant to be called from outside the library. One support routine determines the length of any type of string, and the other support routine sets the length of any type of string. A string header length lookup table is used to determine the number of header bytes for a particular string. For instance, a Pascal string has a header of one byte, while a GS/OS class 1 output string has a header of four bytes. Both C strings and text blocks have no header information. Once the length of a string is determined, the header can be skipped to locally convert the string to a generic text block type. Once the destination string length is determined, it is marked in the output string, and the generic text is copied to the appropriate place.

With all of the different string types on the IIGS, I think you'll quickly find these routines to be very useful. If you do, be sure to let me know what other string routines would you like to see added to the Miscellaneous Library!

For the specifics on how to use the the new routines (and all the other Miscellaneous Library routines) from your programs, break out the **MiscLib.Docs** file located in the **GSP.V4.N3.SEA** self-extracting archive on your *GS+* Disk.

If you have any questions about the Miscellaneous Library, send them in! I especially want to hear any suggestions you might have for additions to the Miscellaneous Library. Putting all of these routines in one place has already made my IIGS programming easier—I hope it does the same for you. *GS+*

Figure 1
The New Miscellaneous Library Calls

Finder Calls	
`StringListPtr:`	Returns a pointer to an entry in a normal `stringList` handle.
`ExtendedListPtr:`	Returns a pointer to an entry in an extended `stringList` handle.
String Calls	
`ConvertString:`	Converts one string type into another.
`AppendString:`	Appends one string to the end of another.

EGOed v1.9

By Steven W. Disbrow

Issue after issue, I get calls and letters telling me how much folks like EGOed, but how they wish that you could set tabs and change the margins. Well, guess what? This time out, you get your wish! That's right, EGOed v1.9 features a graphic ruler that lets you set margins, indents, and tabs! (See screen shot.) You can also change the justification of your documents. And, unlike other New Desk Accessory (NDA) text editors, EGOed does all this in both 640 and 320 mode! But that's not all EGOed v1.9 does; read on for more great new features!

Ruler of All You Edit

If you are familiar with AppleWorks GS, you should find the EGOed ruler fairly easy to get used to. However, there are a few differences. First, the hash marks on the EGOed ruler are closer to the text than the hash marks in the AppleWorks GS ruler. This makes it easier to tell exactly where your text is on the page. Another difference is that the left indent marker looks a bit different. Rather than the inverted "T" that AppleWorks GS uses, I've gone with an upside down margin marker. I just like the looks of it better. (But if enough of you hate it, I can change it. Just let me know!) The last difference from AppleWorks GS is that you can only have one ruler per document. This is a limitation of the TextEdit tools that EGOed uses to actually edit text.

For those of you that aren't familiar with graphic rulers, Figure 1 identifies all of the controls you will see in the EGOed ruler.

Using the Ruler

Using the EGOed ruler is simple. First, you pick the Show Ruler item from EGOed's Document menu (more on the Document menu later). Then you use the mouse to drag around the tabs and margins or to click on one of the justification controls. From the top to bottom of the ruler, here's how to use it:

To change the justification of your document, simply click the mouse on one of the justification icons at the top of the ruler. The text will then reflow itself to match the justification you selected. You can choose from left-justified, centered, right-justified and full-justified text. (One note about justification: When you try to print full-justified text, what you will actually get is left-justified text. I've reported this problem to Apple, and they are looking into it.)

Just to the right of the justification icons is the tab well. This is where you go to get new tabs to place on the ruler. To get a new tab, simply move the mouse on top of the tab well, click the mouse button and hold it down. A new tab will appear under the tab well. As long as you hold down the mouse button, you can drag the tab to where you want it to go on the ruler. To place the tab, drag it to the bottom of the ruler (just under the hash marks) and let go of the mouse button. If you let go of the tab with it *above* the hash marks, the tab will *not* be placed.

After you have placed a tab, it will remain in place just below the hash marks on the ruler. If you want to move a tab, simply click on it and, while holding down the mouse button, drag it to its new location. Note that if you drag the tab above the hash marks, it will be removed from the ruler! Also note that you can not move a tab beyond the left or right margins or the left margin indent.

Speaking of margins, you use those just like you use the tabs: just click on them and start dragging. The left indent marker can be dragged all the way to the left-hand side of the EGOed window or right up next to the first tab. If there are no tabs placed, you can drag the left indent all the way over to the right margin. The left margin marker works the same way. However, when you drag the left margin, the left indent will move along with it!

As you might expect, the right margin works pretty much the same way as the left margin, except that the left indent doesn't move when you move the right margin. You can drag the right margin all the way over to the right-hand side of the EGOed window, or right up next to the last tab. If there are no tabs placed, you can drag the right margin all the way over to either the left indent or the left margin, whichever is closer.

That's all there is to actually using the EGOed ruler. Now we need to talk about how the ruler affects your documents.

One of the reasons I've put off adding a ruler to EGOed for so long is that I wanted to "do it right." So, what does *that* mean? Well, it means is that the page setup and the ruler are very closely tied together to give you a much better idea of what your document is going to look like when you print it out. While this is generally a good thing, it does have one minor drawback as far as EGOed is concerned. In the past, when you resized the EGOed window, the text in the window would wrap to fit the new window size. Now that EGOed has a real ruler, it assumes that you want to use that ruler to specify how your text should look on the page, and so, it no longer wraps the text when you resize the window.

Lots of products lie and call this What-You-See-Is-What-You-Get text editing. I'm not going to tell you that, because EGOed doesn't do that . . . yet.

Begin at the Beginning

Take another look at the screen shot of the EGOed Ruler. Notice how the ruler starts at about 1/4-inch? That's because, for the page setup that I have selected, that's where the printable area of the paper actually start. I simply can't print anything in the area between the physical

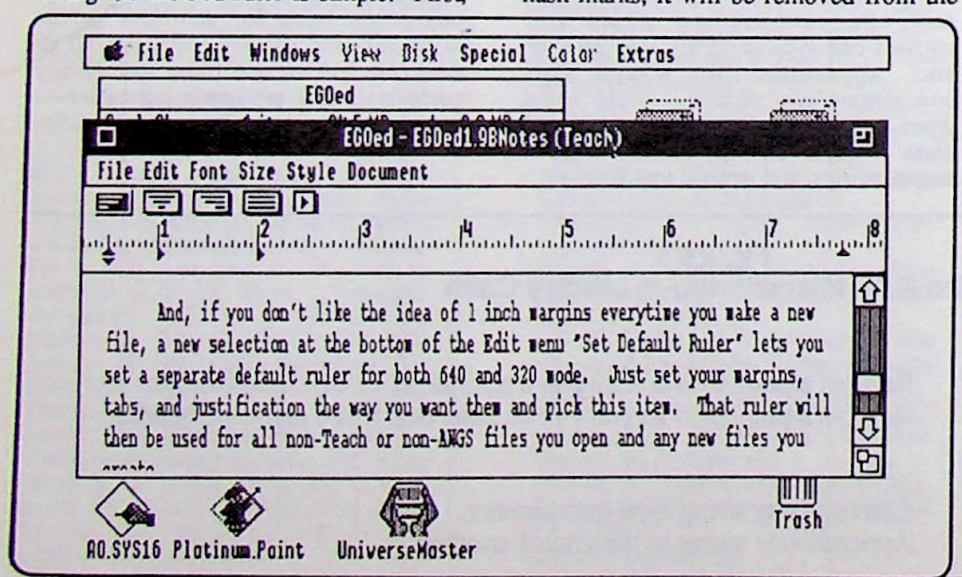
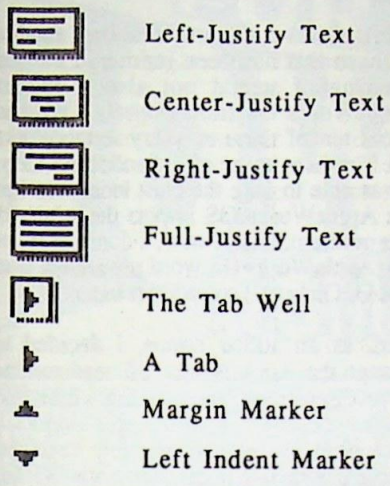


Figure 1
EGOed Ruler Controls



edge of the paper (which is at 0-inches) and 1/4-inch, so EGOed doesn't show me that.

So, basically, the EGOed window is actually showing you the printable part of the paper that you have selected in the Page Setup dialog.

Showing the left-hand side of the printable page is easy, just start the ruler there. However, showing the right-hand side of the printable page is a little trickier. EGOed does it by using colored hash marks in the ruler. If, for example, the printable part of the page ends at six inches, the hash marks beyond six inches will be blue instead of black. The EGOed ruler also shows you where the edge of the *physical* paper is with red hash marks. So, for example, if the printable part of the page ends at six inches and the paper is only seven inches wide, the EGOed ruler will have black hash marks up to six inches, then blue hash marks between six and seven inches, and then red hash marks from seven inches out to the right-hand side of the EGOed window. (Note that while this sounds great on paper, the colors don't display exactly right in 640 mode. In 640 mode, you will see red and blue alternating hash marks to mark the end of the printable paper. It works just great in 320 mode though. Rule of thumb: If it ain't black, you can't print there.)

If you want to see all of this in action, select the ImageWriter printer in the Control Panel and then, using the EGOed Page Setup menu item, select some different paper types and orientations.

The Ruler Dictates Changes

Now that we've gone over the ruler and how to work with it, we can talk about the changes that it's caused in other parts of EGOed.

I've already mentioned that by adopting the ruler-based method of text editing, we've given up the old "resize the window and the text reflows" style of editing. But I just wanted to mention it again to make sure everyone is clear on it. OK? OK.

Changes to File Menu Items

When you create a new EGOed window (either by selecting the New Window menu item or by double-clicking on a file in the Finder to open it), EGOed will automatically create a page setup for the new window and use it to create the window's ruler. By default, this ruler has one-inch left and right margins. (This can be changed though, see the discussion of the Set Default Ruler menu item, below.)

If your selected printer is either an ImageWriter or LaserWriter (and you are using the Apple drivers for these printers), this new page setup is automatically configured to give you the best print quality possible. On the ImageWriter, that means that Print Quality will be set to "Best" and Vertical Condense will be turned on. On the LaserWriter, it just means that Condensed printing will be turned on. (Users of Harmonie and Independence take note, I didn't have time to enable this feature for all of the printers that these packages support. I hope to add them as soon as possible.)

Save Your Ruler

Now that you can edit the ruler, it would be really silly if you couldn't save the ruler information with your documents. So, there is a new preference (see the section on the changes to the EGOed Preferences, below), that allows you to save the ruler and page setup information with your Teach documents.

And, of course, EGOed will look for ruler and page setup information in any Teach files that you open.

Of course, the way the Page Setup item is handled has changed a bit. Now when you pick the Page Setup item and click the OK button in the dialog, EGOed takes your new page setup and uses it to give you one-inch left and right margins from the edge of the physical paper. Note that this happens whenever you change your page setup and, yes, it can be annoying to automatically get one-inch margins everytime you change your page setup. However, this is necessary to ensure that EGOed accurately reflects your current page setup.

Changes to Edit Menu Items

Well, the Preferences subsystem has gotten a good going over again, but we'll talk about that later. Right now, I want to point out a new item at the very bottom of the Edit menu: the Set Default Ruler item.

When you select this item, EGOed takes the ruler that you have set up in the current EGOed window and saves it in your **EGOed.Prefs** file. This ruler will then be used for every new EGOed window you create and every file that you open that does not have any ruler information saved with it. So, once you get your margins and tabs set up just the way you want them for most of your documents, pick this item and save the ruler for automatic use. (Note that EGOed actually keeps *two* default rulers: one for 640 mode, and one for 320 mode. This allows you to have a different default ruler for each screen mode. This is important because the different horizontal resolutions between modes would make a 640-mode ruler look really funky in 320 mode, and vice versa.)

That's about all there is to the new EGOed ruler and the changes it's caused in this version of EGOed. Now it's time to talk about the other new stuff in version 1.9!

Every Document For Itself

One thing that's always bugged me about EGOed is how some of the preferences don't take affect immediately. For example, if you wanted to turn automatic word wrap off, you had to open the Preferences dialog, turn word wrap off, and then create a new document window,

What Is EGOed?

EGOed *is a New Desk Accessory (NDA) text editor. When you install EGOed on your startup disk, you can use it to edit and print ASCII text, Teach, AppleWorks Classic and AppleWorks GS word processor files from inside any desktop program that properly supports NDAs. To use EGOed v1.9, you must install it on a IIGS System Software v6.0 (or later) startup disk with at least 100K of free space. For more information on installing and using EGOed, see "How to Use Your* GS+ *Disk."*

or re-open the file you were working with in a new window so that it wouldn't word wrap. Well, thanks to a neat TextEdit trick that I found while giving EGOed it's new ruler version 1.9 fixes all of that. Yes, you can now change word wrap, or smart cut/paste (and two other preferences), for an individual document, *on the fly* and the changes will take effect immediately! Best of all, the changes you make to these preferences in one document have no affect on any other documents you may have open. They also have no affect on the preferences you set in the Preferences dialog.

The Document Menu

To implement this change, I've added a new Document menu to the end of the EGOed menu bar. Pulling down this menu will reveal the following menu items, with the following purposes:

Automatic Word Wrap - This item turns automatic word wrap on and off for this document. If automatic word wrap is on, this item will have a check mark next to it. This item gets its initial value from the Automatic Word Wrap item in the Preferences dialog.

Enable Undo/Redo - This item turns Undo/Redo support on and off for this document. If Undo/Redo support is on, this item will have a check mark next to it. This item gets its initial value from the Enable Undo/Redo item in the Preferences dialog. Turning Undo/Redo off for a document can reduce the amount of memory that a document uses.

Smart Cut/Paste - This item turns Smart Cut/Paste on and off for this document. If Smart Cut/Paste is on, this item will have a check mark next to it. This item gets its initial value from the Smart Cut/Paste item in the Preferences dialog. (For complete information on what Smart Cut/Paste is, see the discussion of the Smart Cut/Paste preference in the **EGOed.Docs** file.)

Smart Quotes - This item turns Smart Quotes on and off for this document. If Smart Quotes is on, this item will have a check mark next to it. This item gets it initial value from the Smart Quotes item in the Preferences dialog. (For complete information on what Smart Quotes are, see the discussion of the Smart Quotes preference in the **EGOed.Docs** file.)

Show Ruler (Hide Ruler) - This item shows or hides the ruler for this document.

Info... - Formerly in the EGOed File menu, this item displays a dialog containing information about the document in this EGOed window.

The Document menu is pretty straightforward. But, as I hinted at earlier, this new document-oriented approach means that the Preferences dialog has changed once again.

Changed Preferences

(Note that this section is just an overview of the changes from EGOed v1.8. You should read the "Preferences" section of the **EGOed.Docs** file for a complete overview of all the preferences.)

First of all, the old General Preferences are gone. They have been combined with the New Document Preferences. All of these preferences affect new EGOed windows that you open, they have no effect on any windows that are already open. The new, New Document preferences are: Automatic Word Wrap, Enable Undo/Redo, Smart Cut/Paste, Smart Quotes, Show Ruler, Zoomed On Open, Default File Type, and Default Font.

The only new preference here is Show Ruler. Turning this preference on will tell EGOed that you want it to automatically show the ruler whenever you create a new EGOed window. If this Preference is not turned on, you will have to use the Show Ruler item in the Document menu to show the ruler for a document.

The next preferences group, Load/Save preferences, has one new preference: Save Page Setup w/Teach Files. If this preference is checked, EGOed will save the page setup and ruler information with every Teach file.

The old Print With Wide Left Margin preference has changed its name to "Ensure Wide Left Margin" and it can now be found on the new Printing preferences page of the Preferences dialog. Why the name change? Well, since EGOed v1.9 gives you total control over your margins, the Print With Wide Left Margin preference was kind of obsolete. However, if you are printing a lot of files with a narrow left margin, it can be tedious to change the ruler for each one. So, the Ensure Wide Left Margin preference does just that, it makes sure that every file you print has a wide left margin when it gets printed.

That's all there is for new features in EGOed v1.9. But, there's still more to talk about . . . .

Bug Fixes & Other Improvements

There was only one bug reported in EGOed v1.8: if you double-clicked on a Softdisk G-S Personal Journal file in the Finder, EGOed would attempt to open the file. This has been fixed.

While that was the only real bug, another problem that had been lurking in EGOed was that it would not always import AppleWorks GS files properly. We had about ten of these naughty AppleWorks GS files here at the office and fortunately, I was able to take the time to go through the AppleWorks GS import code and fix this problem. As of now, I don't know of any AppleWorks GS word processing files that EGOed can't correctly read.

And, as an added bonus, I decided to change the AppleWorks GS read routine to recognize and use the first ruler that you have defined in your AppleWorks GS document! So, when you read an AppleWorks GS document with EGOed v1.9, you should get all of the margins and tabs that were specified in the documents first ruler! (Note however, that the AppleWorks GS ruler starts relative to the document window, *not* the physical paper, so when it is translated to an EGOed ruler, it is about 1/4-inch off.) This version of EGOed also reads in and uses the page setup that is saved with the AppleWorks GS document.

Next We Have . . .

Nothing! That's it for EGOed v1.9! I really hope that you like this new EGOed, I certainly had a lot of fun writing it. If you want to know all of the technical goings-on in this version of EGOed, be sure to check out the **EGOed.1.9.Tech** file on your *GS+* Disk. And be sure to read the **EGOed.Docs** file completely! A lot has changed, and that's the best way to get the complete picture of what EGOed v1.9 can do! *GS+*

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What's New

By Steven W. Disbrow

New Stuff From Apple

Of course, this is not new Apple IIGS-specific stuff, but it is stuff that has the potential to be used with the IIGS.

First of all, there are two new LaserWriters, the LaserWriter Pro 600 and LaserWriter Pro 630. The neat thing about these printers is that they print at 600 dots per inch (dpi) and they cost a lot less than previous Apple LaserWriters. For example, we paid $3,500 for our 300-dpi LaserWriter less than four years ago, and the LaserWriter Pro 630 *retails* for only $2,529! Street prices should be a lot less. As I said, these printers aren't intended for use with the IIGS, but, since they are PostScript printers with AppleTalk networking built-in, they *should* work just fine.

Apple also released a new version of the StyleWriter, the StyleWriter II. This is basically the same printer as before, except it's twice as fast, can print almost 100 shades of grey and has been redesigned to look a *lot* different from the original StyleWriter. Unfortunately, after reading all of the technical documentation that I could find on this printer, it seems just different enough from the original StyleWriter that it won't work with the IIGS. (Unless someone writes a driver specifically for it.) This is a pity, because its initial retail price is only $359, which is about $200 *less* than the original StyleWriter.

Getting away from printers, Apple also introduced a new mouse and a new keyboard. The mouse isn't really that big of a deal, it's just a sleeker looking replacement for the mouse that came with your IIGS.

The keyboard, however, is pretty cool. It's an ergonomically designed keyboard designed to prevent repetitive motion injuries. (Which is just fancy talk that means it won't hurt your hands and wrists as much when you work with it for long periods of time.) How does it do this? Well, the keyboard is *split* down the middle and the two halves swing out to make sort of a wide "V" shape. This lets you type with your hands in a straight line with your forearms, which reduces stress on the muscles and tendons in your hands and wrists. I know, this *sounds* silly, but if you do a lot of typing, you know how much your wrists and fingers can hurt at the end of the day. This new keyboard design may be just the thing to reduce some of that pain.

Unfortunately, this keyboard makes use of some new Apple Desktop Bus features that are only available on the Macintosh through the use of a special INIT, so it probably won't work with the IIGS. This is a real pity. After all, IIGS users type a lot too!

For more complete information on these new products from Apple, check out just about any of the Mac magazines. (And if you end up buying one of these products, don't forget that we would love to print a review of it!) Or, if you want to go ahead and order something, contact your local Apple Dealer or:

The Apple Catalog
One Apple Plaza
P. O. Box 9001
Clearwater, FL 34618-9001
(800) 795-1000

Wow.

OK. We've all heard rumors that someone, somewhere was working on MultiFinder for the IIGS. Well, it seems that it was true. Seven Hills Software, in conjunction with BrainStorm software, is just about to release The Manager, which they claim is a *true* MultiFinder for the IIGS.

According to the press release, The Manager allows you to have multiple applications open and running at the same time, all you have to do to switch between them is click on a different window! In theory, this means that you could have AppleWorks GS running on top of the Finder desktop. Click on the desktop, and you are back in the Finder, click on an AppleWorks GS window and you are back in AppleWorks GS!

If this thing works, and boy do I hope it works, it will get rid of one of the two reasons we have Macintoshes in the office (the other one is we have to use the Mac as a file server). The Manager should be available by the time you read this and you can look for a full review in the next issue of *GS+* Magazine. The retail price is $69 with an expected mail-order price of about $50. For more information, contact:

Seven Hills Software
2310 Oxford Rd.
Tallahassee, FL 32304-3930
(904) 575-0566

Go West!

We've talked about it before, but I just want to make sure that everyone knows about the Apple EXPO West. It's going to be held April 23-25, 1993, at the Brooks Hall/Civic Auditorium in San Francisco, CA. For more information on the show, including information on special hotel rates and air fares, contact:

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(617) 784-4531

Maps! Maps! and More Maps!

If you use your IIGS for desktop publishing, you'll be happy to hear about Maps! Maps! Maps!™. This is a set of clip-art maps for the IIGS, published by Bruce Jones Design, Inc. It's a five-disk set of Super Hi-Res maps, showing all the countries of the world in several styles (color, black and white, outlined, etc.).

Included with the press release was a sheet showing several sample printouts of the maps, and they look really good. Incredibly, they even seemed to be up to date, showing the Commonwealth of Independent States, and the various bits of what used to be Yugoslavia. If you need maps for your projects, you need to give this collection a look. For more information, contact:

Bruce Jones Design, Inc.
31 St. James Ave.
Boston, MA 02116
(800) 843-3873

It's A Festival!

Last issue, we reported the rumor that Roger Wagner Publishing was going to be holding a HyperStudio Festival in the summer. Well, it's true!

The first annual HyperStudio Festival will be held on July 8-10, 1993, somewhere in San Diego, California. (Sorry, but the press release didn't specify an actual location for the Festival. It did however, have lots of pre-highlighted sentences that I suppose I was supposed to print here. Stuff like: "Special 'family rates' are planned," "workshops with both the Apple IIGS and new Macintosh versions of HyperStudio," and "Ties, Ties, Ties!")

For more information on the Festival, contact:

Roger Wagner Publishing
1050 Pioneer Way, Suite P
El Cajon, CA 92020
(800) 421-6526

Price Changes

ECON Technologies has announced that it is lowering its prices on certain models of its Pegasus internal hard drives (see review in *GS+* V3.N5). The new prices are:

Pegasus 42i:	$419
Pegasus 85i:	$479
Pegasus 127i:	$559
Pegasus 170i:	$599
Pegasus 240i:	$799

ECON Technologies
P. O. Box 195356
Winter Springs, FL 32719
(407) 365-4209

And, due to fluctuating currency exchange rates, Bright Software (which is based in Switzerland) has announced that the pricing for GSymbolix (reviewed in *GS+* V4.N1) has changed for North American customers. However, there are so many different ways you can buy GSymbolix (i.e. with the manual, without the manual, etc.) that it would take up more space than we have to list them all. Besides, currency exchange rates are changing all the time. So, for current prices, be sure to contact Bright Software before you order. The address is:

Bright Software (USA)
P. O. Box 120
Exeter, ME 04435-0120
(207) 379-3181

It's BASIC

Still working with AppleSoft BASIC? Then you should check out version 2.0 of MD-BASIC (reviewed in *GS+* V1.N6). For those of you that don't know, MD-BASIC lets you write your BASIC programs in a nice, structured language (which looks like a cross between BASIC, C and Pascal), and then convert those programs to AppleSoft. You can even convert your old AppleSoft programs to MD-BASIC.

Version 2.0 of MD-BASIC gives you all of the above, with the addition of a desktop-based editor that you can write your MD-BASIC programs in. Just imagine, being able to use your favorite New Desk Accessory while writing BASIC programs. The mind boggles. (At least mine does.)

The retail price of MD-BASIC v2.0 is $89, and registered owners of previous versions can upgrade for $30 (which also gets you a new manual). For more information, contact:

Morgan Davis Group
10079 Nuerto Ln.
Rancho San Diego, CA 91977-7132
(619) 670-0563

Drivers, Drivers, Drivers

"If only the IIGS had a driver for it." How many times have you heard that sad statement? Well, if you are in the market for some mondo huge storage devices but were afraid that there weren't any drivers for the equipment you wanted, check this out. Tulin Technology has developed drivers for the Apple High-Speed SCSI card that will let you use NEC CD-ROM drives, InSite Floptical Drives (the 21MB floptical drive that everyone is talking about), Teac Tape Drives, and Ricoh Optical Drives! And, they sell lots of different bundles, with or without the SCSI card, featuring different size devices. If, for example, you need a one *gigabyte* drive for your IIGS, they got 'em. For another example, they have their 21 MB Floptical drive available without the SCSI card for only $399, (that price includes two disks; with the SCSI card, the price is $499). In fact, they have so many different subsystems listed in the information they sent me that there is no way I can fit them all on this page.

But that's not the good part! The good part is that you can also buy the driver software separately for only $49 each (that is, the CD-ROM driver is $49, the Teac driver is $49, etc.). So, if you've got your eye on a used piece of NEC, InSite, Teac, or Ricoh equipment, you also have a reason to give the Tulin folks a call. (Of course, if you have a RamFAST/SCSI card, you don't need no stinkin' drivers.) Contact them at:

Tulin Technology
2156H O'Toole Ave.
San Jose, CA 95131
(408) 432-9057

Got a IIGS product that you want the world to know about? Send us your press release and we'll do our best to help out! Send your press releases to:

GS+ What's New
P. O. Box 15366
Chattanooga, TN 37415-0366 ***GS+***

GS+ Classifieds

Experienced Programmers Wanted . . .
to fill positions in the Apple Development Group at Softdisk Publishing. If you are proficient in Apple II (8-bit) assembly or the Apple IIGS desktop environment, you've got the right stuff. Proficiency in more than one environment (or in Macintosh programming) is a definite plus. You must be willing to relocate. Send your résumé, including a list of the environments and languages you know, to one of the following addresses:

U.S. Mail: Softdisk Publishing
ATTN: Lee Golden
P. O. Box 30008
Shreveport, LA 71130-0008

America Online: Bryan Zak
AppleLink: SOFTDISK
GEnie: SOFTDISK.INC
internet: softdisk@applelink.apple.com

Fax: 318-424-0174

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Contact: Ryan Lanctot
General Delivery
Kelowna, British Columbia
Canada V1Y 7N2

Get On Line!
You want Apple II information? You got it! You want internet mail? You got it! You want shareware? You can get all of it on your local ProLiner BBS:

The Algonquin Round Table	St. Paul, MN	(612) 772-8628
Pro-Cynosure	Baltimore, MD	(410) 549-2584
Pro-Gateway	Tulsa, OK	(918) 592-4419
Pro-Novapple	Falls Church, VA	(703) 671-0416

Bargains! Bargains! Bargains!
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"Magnetic Media! Do not bend or X-Ray!" labels, perfect for mailing diskettes. 144 labels for $5

Contact:
GS+ Magazine
P. O. Box 15366
Chattanooga, TN 37415-0366

Readers can place an ad in the *GS+* Classifieds for only $5. This cost buys 25 words in one issue of *GS+* Magazine. Additional words are just 25 cents each. The *GS+* Classifieds are a great way to contact thousands of other IIGS owners.

The deadline for inclusion of a classified ad in the next issue (Volume 4, Number 4) of *GS+* is April 1, 1993. Simply fill out a photocopy of the coupon below; or send your ad along with your name, address, phone number, number of issues to run, and payment (made payable to "EGO Systems") to *GS+* Classifieds, P. O. Box 15366, Chattanooga, TN 37415-0366; or call us at (615) 843–3988, Monday through Friday between 9 a.m. and 6 p.m. Eastern Time, to place an ad with your MasterCard or VISA. You can also FAX us your classified ad by calling our FAX number: (615) 843-3986.

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Glossary

In each issue of *GS+* Magazine, we present a glossary of some of the more common terms in the IIGS world and some of the more uncommon terms that we use in each issue. To go along with our article, "The World at Your Fingertips," most of the terms in this issue's Glossary have to do with telecommunications. If you have a term or bit of jargon that you would like to see explained, let us know and we'll try to get it in a future "Glossary" installment. Also, don't forget about the glossary that's in your IIGS owner's manual! At this point, it contains many more terms than the *GS+* Glossary!

Past installments of the *GS+* Glossary can be found on your *GS+* Disk in the plain ASCII text file, **Glossary**, in the **Documentation** folder. (Entries marked with an "*" have appeared in previous installments of the *GS+* Glossary and are repeated here for our beginning readers or because they have relevance to topics discussed in this issue.)

Battery RAM
Battery RAM is an area of RAM that is used to hold configuration information (mouse speed, screen colors, etc.) for your IIGS. A battery is used to preserve the contents of this memory while the power is off, hence the name "Battery RAM."

Baud Rate
An obsolete term often confused with bits per second, baud rate defines the number of times per second that your communications signal fluctuates.

Bit
The most basic unit of computer data, represented by a "1" or a "0". This can be thought of as a switch which is either on (having a value of "1"), or off (having a value of "0").

bps
This stands for "Bits Per Second." In telecommunications, this is a measure of the number of bits that are transmitted every second.

Bulletin Boards
These are areas where questions and answers to a wide variety of topics can be posted and read by interested users. See "BBSes" below.

BBSes
This stands for "Bulletin Board Systems." These are third party computers set up as "clearing houses" with bulletin boards, data bases, message centers, software libraries, and e-mail. Most are small, but some are very large, serving thousands of users.

Communications Software
The program by which you, your computer, your modem, and the computer that you are calling communicate with each other. This is also sometimes referred to as "comm software" or a "comm program."

Compressed File
A file that is "squeezed" to a smaller size, primarily to reduce the amount of disk space it uses and the time it takes to transmit via modem. This is accomplished by a data compression program like GS-ShrinkIt.

cps
This stands for "Characters Per Second." In telecommunications, this is a count of the number of characters that are transmitted every second.

Conference
An online "event" that allows you to "talk" via modem with other users and special guests on an online service.

CCITT
This is short for the Comité Consultatif Internationale de Télégraphie et Téléphonie. The CCITT is an international committee which sets worldwide standards for telecommunications.

Download
This is the process whereby your computer receives data from another computer via modem.

Dual Standard Modem
A dual standard modem is a modem that implements both the HST standard established by U. S. Robotics, and the CCITT standard.

e-mail
This stands for "Electronic Mail." Electronic mail is mail that is sent, almost instantaneously, via modem or over a computer network or BBS.

Full Duplex
The ability of a modem to send and receive data simultaneously.

HST
The High Speed Telecommunications protocol developed by U.S. Robotics.

Icon *
An icon is a graphic representation of something. On the IIGS, icons are used to represent disks, applications, data files, folders, and other "items" that you work with while using your computer.

MNP
The Microcom Networking Protocol. This family of protocols define several types of error correction and data compression for telecommunications.

Modem
A modem is a device that allows your computer to transmit and receive data over telephone lines. It does this by modulating the data into audible tones that can be sent over the phone. When the tones are received, they are demodulated back into data. The word "modem" is a contraction of the words "*mo*dulate," and "*dem*odulate."

Noise Suppression
"Noise" is a term used to describe a bad telephone line or connection. Excess noise can appear on your screen as random characters (affectionately known as "garbage") and, if severe enough, can cause your computer to abort a download in process. Noise suppression is the ability of the modem to reject or filter this noise. Some modems are manufactured with a much higher toleration of noise than others.

Packet
A group of characters or bytes sent as a single unit. Data is transmitted in packets during the downloading and uploading of files.

Protocol
A "protocol" can be thought of as a "way of behaving." In telecommunications, a protocol is an agreement between two online computer systems so that they will react to the same commands in the same way, and when transferring files, both computer systems will follow the same procedure.

Telecommunications Package
Everything you need to telecommunicate. This includes a telephone outlet, modem, modem cable and communications software.

Upload
This is the process whereby you send data from your computer to another computer. *GS+*

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