GS+

Premier Issue
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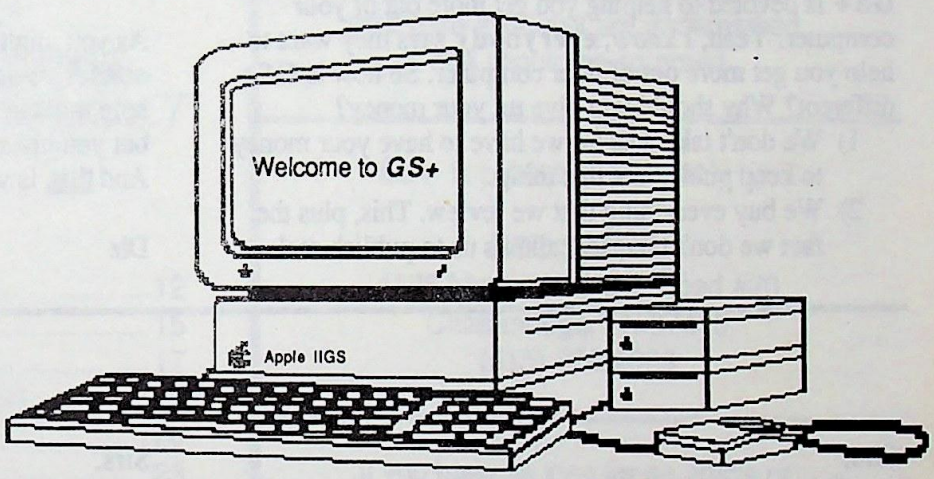
September-
October
1989

Volume 1,
Number 1

The First Apple II**GS** Magazine + Disk Publication!

- System Software 5.0 Compatibility Chart - What Works, What Doesn't

- 8 Reviews:
  Arkanoid II
  (with new custom levels on disk!)
  Crystal Quest
  ORCA/C
  Rocket Ranger
  Silpheed
  Test Drive II
  TransWarp GS
  Turbo Mouse ADB



- NoDOS - A File Utility Desk Accessory Complete With ORCA/C Source Code

PLUS:

Graphics, Rumors & The Most Over-Hyped Product Of The Year

So how should I start off this first editorial of the first issue of *GS+*? Should I try the angry young man approach and yell at people for not giving more support to the IIGS? Should I tell you about all the wonderful stuff that we've got in this issue? Maybe I should do like all the other computer magazines and tell you what a wonderful choice you made when you bought your IIGS, and how everybody else is an idiot for buying the computer that they bought. Maybe I should just jump right in and bash the Mac, like all good Apple II owners are supposed to do. Nah. I think I'll skip that easy stuff and just tell you what *GS+* is all about.

GS+ is about the IIGS. Not the IIe. Not the IIc. Not the II+. Just the IIGS. Pretty simple huh?

GS+ is devoted to helping you get more out of your computer. Yeah, I know, everybody says they want to help you get more out of your computer. So how is *GS+* different? Why should you give us your money?

1) We don't take ads. So we have to have your money to keep publishing this thing.
2) We buy everything that we review. This, plus the fact we don't take ads, allows us to publish real reviews. Not just recaps of the outsides of packages. If a product stinks, we're gonna tell you exactly what it smells like.
3) Real programs. Useful programs. Written in computer languages that, when you learn them, you can put on a résumé. No AppleSoft.
4) All programs that we feature come with source code on the disk. **No keying required.**
5) It's a big planet. Not everybody owns a IIGS. Instead of engaging in "computer bashing", *GS+* will try to help you learn how to use your IIGS to get along and co-exist productively with all the other computers out there.
6) Lots of other stuff: Hints, tips, upgrade information, a 24 hour BBS that you can call, and a group of people **committed** to the IIGS.

As you might expect, we can't do this alone. We need articles, reviews and programs to publish. If you want to help out, check the Writer's Guide. You won't get rich, but you just might help somebody else out there. And that, is what *GS+* is all about. Pretty simple huh?

Diz

Letters (from the editor)

Sirs,

Congratulations on your new business venture! It is wonderful to see young companies like yourselves devoted to the Apple II. We don't talk about it much now, but for several years, the Apple II paid all the bills while our other systems gathered dust in the warehouse. We are thrilled that the Apple II is still a part of so many peoples lives and we look forward to a long and productive relationship with both your company and the Apple II.

Apple II Forever!

Mr. G and Mr. S
JustKidding!, CA.

Sirs,

What do you mean when you say we should add an 'F' to our name?

T. Hawkins
CompletelyClueless, CA.

Sirs,

How dare you say that a hard drive is more important than our accelerator!? Preposterous! Say, what's this? An ad for an internal hard drive? What a great idea! We can claim we had one in the works all along! Yeah, that's the ticket. Now we've got 'em at both ends!

Annoying Engineers
ComingUpBehindYouWithABaseballBat, TX.

Sirs,

Let me see if I understand this, you mean to say that you actually used AppleWorks GS to lay out and print this entire thing?! Ha, HA! HA! Oh, man that makes my head hurt... Hee, sphhht, glick, HA! HA!HAHAHAHAHAHAHAHA! Whoo Hoo Hoo!

K. Harvey
RakingInTheDough, CA.

(continued on page 30)

FEATURES

REVIEWS

DEPARTMENTS

This publication was produced with an Apple IIGS using AppleWorks GS and an Apple LaserWriter IINT

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General Information

All submissions become the property of EGO Systems. If we return your submission to you, we give up our rights to it and you are free to do whatever you want with it. All submissions to *GS+* should include the following items:

1) A cover letter (on paper please) telling us who you are and what your submission is.
2) Return postage (if you want your submission back).
3) A diskette (3.5" preferred) containing your article/review/program. We can read just about any word processor format, but we would prefer that you send your submissions to us in AppleWorks, AppleWorks GS or plain ASCII text format.

Submissions to *GS+* may be made by one of the following methods:

1) US Mail.
   Send your submission to:
   GS+ Submissions
   c/o EGO Systems
   P.O. Box 15366
   Chattanooga, TN 37415

2) AppleLink Personal Edition
   Pack your submission with ACU or ShrinkIT and send it to, 'Obnoxio'.

Please don't submit stuff that you've already put in the Public Domain. One exception to this would be a program that you may have originally released to the Public Domain and have since enhanced.

Articles

Articles should cover something that will help readers get more use out of their IIGS with the lowest cost and time investment possible. To be a bit less vague, here are some examples of articles we would LOVE to print in the near future:

1) Using low-cost Macintosh and/or IBM hard drives (and other peripherals) with the IIGS.
2) A survey of IIGS programming languages.

The main point to remember is that we want all of the material we print to be genuinely useful to the largest number of readers possible. If you have an idea but aren't sure it is what we might be looking for, drop us a line through any of the means listed above and we will let you know what we think.

Feature Reviews

Feature Reviews should be between one and two thousand words in length and should fully describe the product and your experiences, both good and bad, with it. All reviews should, at the least, cover all of the following points:

- Introduction
  What the product is, what it is supposed to do, who makes it, where to get it and how much it costs.
- Good Points
  Everything has it's good points. Tell us about them. What is it that makes this product worth buying?
- Bad Points
  Nothing's perfect. Every product will have something wrong with it. We want to tell folks exactly what those things are. This includes copy protection. If the product is copy protected, tell EXACTLY what form of protection is used and suggest ways to work around it. If the product is not copy protected, be sure to mention that too. We need to let publishers know that we WILL support them if they remove copy protection from their products. We also need to let them know that we are not thieves and are tired of being treated as such.
- Summary
  Would you buy this product again? Would you advise that ANYONE buy it? If not, why not? What could be done to improve the product? Who should buy it?

Short Reviews

Short Reviews are exactly like Featured Reviews except, shorter. Short Reviews should be between 250 and 500 words in length.

Graphics

Everybody loves fabulous graphics. Send your original graphics to us along with a short letter explaining the tools and any special tricks that you used to create them.

Programs

Programs should be written in C, Pascal or Assembly Language and **must** include source code. You should also write an article explaining how to use the program.

Source code should be heavily commented and structured so that folks can figure out what you are doing. Programs should follow Apple's Human Interface Guidelines. We want all of the programs published in *GS+* to be useful and/or entertaining. Here are a few examples of programs we would love to publish for the IIGS:

1) A decent Backup/Restore utility for hard disk owners.
2) A IIGS specific telecommunications program.
3) A desk accessory to find files hidden away on a hard drive.
4) Some great games!

Rates

So, what's in it for you? Well, at this point, all we can afford to offer is the following:

For	You Get
An Article or Feature Review	$10
A Short Review	$ 5
Each Graphic	$10
A Program	Varies with the program. No less than $50.
Any of the above	Your name in print.

We admit it's not much, but it's more than you get for keeping your programs, graphics and opinions to yourself!

In The Next Issue of *GS+*, Look For...

FEATURES

1) Beginner's Guide to the Finder
2) New Desk Accessory that allows you to read text files
3) Wildlife Art

REVIEWS

1) Dungeon Master
2) Gnarly Golf
3) Laser Force
4) Neuromancer
5) TML Pascal II (if available)

DEPARTMENTS

1) Results of "What my 'GS' means to me..." contest plus a brand new contest!
2) Letters to the editor (provided you write some)
3) Letters from the editor (provided we don't get sued)
4) More icons, more rumors, and another Trash Can Award

PLUS MUCH, MUCH MORE!

SUBSCRIPTION INFORMATION

Future issues of ***GS+*** will be published bimonthly and sold for $8.00 (including disk). But, if you sign up for a yearly subscription (that's six issues), you can save 25% off the cover price. That's right, instead of $48 a year, you will only pay $36! That's $6 an issue. Disk included! What a bargain! To sign up, send this completed form (or a photocopy) along with a check or money order (payable to EGO Systems) to:

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System 5.0 Compatibility Chart

by Steven W. Disbrow

Apple does a great job of maintaining backwards compatibility. The IIGS itself is a testament to that fact. But, sometimes software and hardware companies don't do quite so good a job of ensuring **forward** compatibility. The result is that some programs just don't run under System Software 5.0. Over the last month or so we've compiled this list of programs that do work, programs that don't work, and programs that act a bit goofy. All programs were tested on a IIGS with 2.75 Megabytes of RAM, ROM version 01 and a 60 Megabyte CMS hard drive using the CMS SCSI controller card. Items marked with an asterisk have an update in the works.

Programs that Work

Arkanoid II
Bubble Ghost
Cartooners
Crystal Quest
Defender Of The Crown
Deluxe Paint II
Laser Force
Mean 18
Print Shop GS
Reach For The Stars
Shadowgate
Shanghai
Silpheed
Tetris
Thexder
Warlock

Programs We Can Not Get To Work

Bard's Tale II: The Destiny Knight
Chessmaster 2100
ComputerEyes GS *
Gnarly Golf
King Of Chicago
Rocket Ranger
Star Saga One *
Where In The World Is Carmen Sandiego

Programs That Act Funny

AppleWorks GS

Surprise! AppleWorks GS is even flakier under System 5.0. At this point, we cannot recommend that you use AppleWorks GS with System 5.0 at all. Apart from the fact that it bombed every five minutes when we were trying to create this issue (which is why it took two weeks longer than we expected to get it done), the absolute worst problem (from our point of view anyway) is that you can only print one page to the LaserWriter at a time. Claris is aware of this problem (and many others) and is *considering* fixing them. We are considering another page layout program. Any suggestions?

Arkanoid

This one is hard to describe. The game plays as it usually does, but **occasionally,** the alien shapes that appear at the top of the screen and then drift around, leave little "slime trails" behind them. Very odd.

Music Studio 2.0

Music Studio 2.0 will start up fine and then ask you to insert the disk that contains Tool Set number 32. This file is called **Tool032** and is located on the disk **:System.Tools:** that comes with the System 5.0 update. The complete pathname of the file is **:System.Tools:System:Tools:Tool032** and you should copy it into the **System:Tools:** folder of your startup diskette and restart your computer. Music Studio 2.0 will work normally from then on.

WordPerfect version 2.0

WordPerfect 2.0 suffers from several problems under System 5.0. The most obvious of these problems is that quite a few of the menus are trashed and the <option> key no longer works. However, WordPerfect Corp. is aware of the problems and they have a new version (2.1e) ready to go. Call 1-800-321-4566 and have your WordPerfect manual and credit card close at hand. The cost of the upgrade is a measly $10 and it should fix any problems you may have using WordPerfect with System 5.0.

This list is by no means complete. These are just the programs that we happen to have. If you have a program you've been able to test with System 5.0, let us know about it. We want to update this list periodically so that no one has to wonder about whether a program is compatible or not.

by Michael J. Quinn

The Apple IIGS is known for its fantastic graphics abilities. This column will help you take full advantage of the IIGS's graphics capabilities. The pictures that accompany this article: "SPACE", "DESSERT.MAN", and "WHITE.HOUSE", can be found on this issue's disk in the folder called "GRAPHICS.GALORE". They can be viewed using any paint program that will read Apple Preferred Format graphics files, such as DeluxePaint II, Paintworks Gold, and SHR Convert. All three pictures were drawn using DeluxePaint II. I will describe how I created each picture in detail so that you may be able to recreate them and enhance your computer graphics abilities, and maybe learn some shortcuts on the way.

First I'll talk about how I did the picture SPACE. I wanted it to look as realistic as possible. I decided to make it appear to be a photo from one of the black and white video cameras on the space shuttle's arm. I went to the palette under the color menu and selected the WHITE color, then chose SPREAD and clicked on the BLACK square at the opposite end of the palette. This will change all colors in the middle to shades of grey. For more detail on manipulating the palette, consult your paint programs user's manual.

To get the basic shape of the Earth, I used the curved line tool then filled the underside of the curved line with a fairly bright shade. The next step, after the Earth had been created, was to give it a sky (clouds). This step is important in making the Earth look like a sphere and not a flat disc. A trick to doing this is you have to realize that the cloud cover near the edge of the visible Earth is distorted or "squashed" than what would be at the center of the visible Earth. The better you are in comprehending geometry, the better you will be at making the Earth look round and not flat. Don't be discouraged if you failed geometry, that's part of the reason for this article! To make the cloud cover look believable, pay attention to the weather satellite photos on the evening news. Most of these photos are of a relatively small section of the Earth, so you probably won't be able to see a broad enough view that would make it look like a sphere. Just familiarize yourself with different types of large area cloud formations.

Once you have familiarized yourself with the different kinds of cloud cover formations, it's time to put them on your Earth in your graphic masterpiece. If you think you may have trouble "squishing" the clouds near the edge of the Earth, draw a large circle on a piece of paper. Draw about four circles inside the circle as if you were drawing a bullseye, with equal distance between all of them. Now, draw some cloud cover as if it were on a flat map of the world over the circles. Feel free to draw over the edges. Once you are satisfied with your clouds, draw lines over the entire creation on paper as if you were cutting a pizza into eight pieces. Look at your Earth on the computer screen that you have already drawn. Draw a square around the section of the circle on the paper that would fit over the Earth on the computer. For example, if I were doing it for my "SPACE" picture, I would draw a square a little less than 1/4 the the size of the circle on the upper left on my paper because the Earth on my graphic is about a quarter of a circle.

Once you have your "cut" out of the paper drawing, draw lines on your computer Earth just as they appear on the drawing EXCEPT for one thing; the circles closest to the outside of the circle should be placed CLOSER to the outside of the computer Earth (The first circle inside the Earth should be relatively large and closer the the outside of the outermost circle on the computer, than on the paper). Put more distance between the next two circles and even more between the next. Repeat this until you have drawn all your circles or you have run out of room on the computer screen.

Copy the contents of the sections you have rectangled out on the paper onto the computer screen. Since the sections on the edge of the Earth on the computer screen are longer and narrower than their counterparts on the paper, this will force your clouds to be "squashed" near the edge and the ones close to the center will not be as distorted. When you are done with this part, your Earth should look like a sphere. If not, try making your outer circles closer to the edge than you had previously done. Now, clean up the Earth by getting rid of the unwanted lines. Select DRAW and a single pixel brush then use the magnification tool to do the detailed cleanup work.

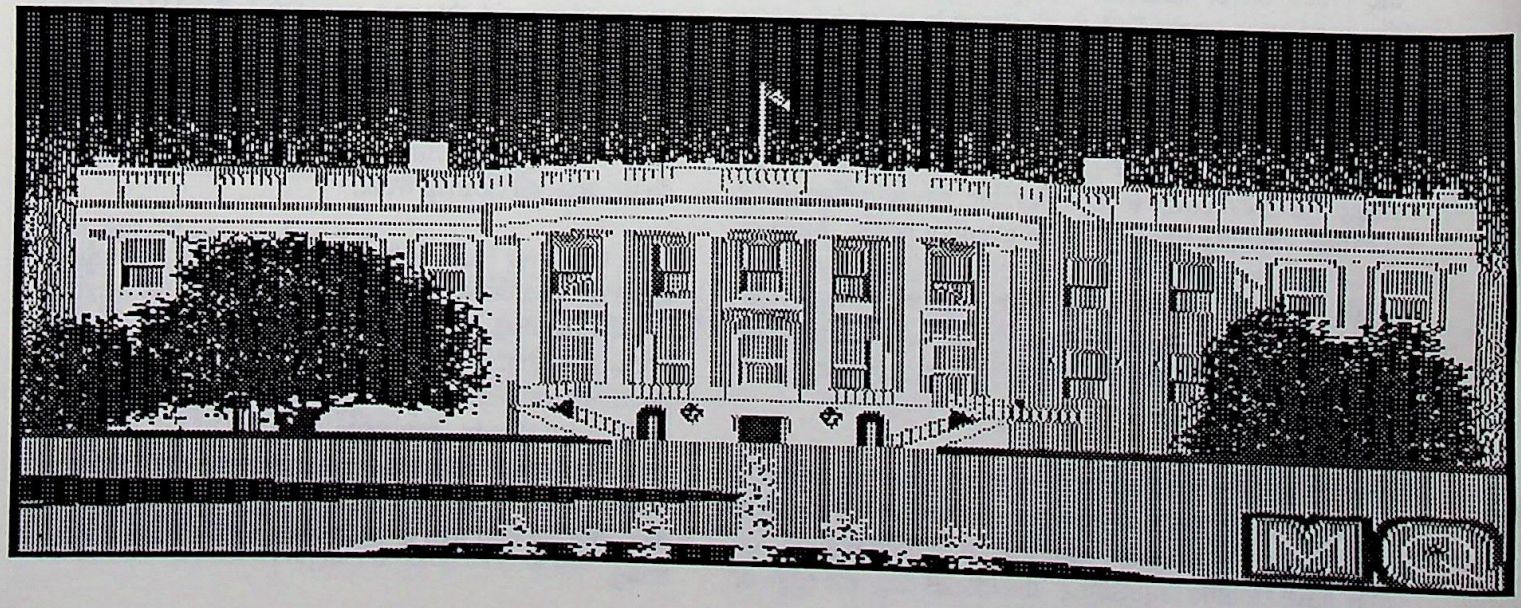
Now that your Earth is basically completed, it probably looks rough around the edges. This is where the magic of the IIGS comes in. Select a fairly large brush from the brush selection. Now go to the MODE menu and drag the mouse down to the SMOOTH function. Select the draw tool. Now slowly draw over the edge of the Earth and watch the rough edges disappear and see the Earth sink into the picture as if it were a photograph! This tool is probably the best tool to make pictures look like the real thing.

You don't have to make your satellite identical to the one in the "SPACE" picture. Use your pen and paper again and design your own satellite. Once you have designed it, trace it out in black over your Earth then fill it in with black. Be sure to disable the smooth function by choosing COLOR from the previous menu so you can draw in black. Smooth the edges of your satellite when you have completed a black mask of it. Put a glare or two on it by drawing white blobs on the edges or corners then SMOOTH them more than usual to get the blurred glare affect. Any detail that should be visible on the satellite can be partially drawn with a medium grey scale color line, then smoothed so it will blend in. Complete your masterpiece by adding stars. Do this with low intensity colors (not all the same color, though).

Next I'll talk about how I did the picture DESERT.MAN. As with any graphic creation, the first step is to set up your palette. It can be quite confusing trying to decide what colors to use when there are so many to choose from, and an almost equally large amount in the picture in your imagination, but only a small amount to be selected for the palette. Maybe Apple Computer will give us more of a minimum in the future, but for now we have to use what we have. The best way to decide what colors to use is to mentally divide your picture into as few main chunks as possible. For example, the main chunks in this picture would be (a) the turbin, (b) the background, and (c) the rectangular section where his eyes are. Already we have the basic building blocks for the color: (a) black, (b) light tan, and (c) a reddish skin color. From here we can divide each chunk into even more colors. In the turbin, for example, there need to be slightly lighter colors for the "wrinkle" effect of the cloth. One or two more colors for that effect would be sufficient. The background, since it has no detail in it, can be one color. The eyes have the most detail in them, so it would be best to set aside more colors for this section, from almost black to a reddish skin tone to light tan. Again, use the SPREAD tool in the palette to accomplish this.

Now start the drawing. Set the background color. Draw the largest basic shape (in this case the turbin) in it's color, then fill it. Draw the other basic shapes and fill them. If you are copying from a photograph, get some transparent paper and draw squares on it (enough to divide your original into a 16 by 16 grid or more). Now copy the contents of the squares onto the screen with their closest colors that you have selected. If the colors don't suit your fancy, you can always change the palette anytime you like. A note on setting up a palette: Usually the most detailed object in a picture (as in the WHITE.HOUSE picture) receives the most assigned colors. Don't forget about the SPREAD tool in the palette window! This is as important as SMOOTH tool. It helps to get rid of the dreaded "Resolution Jags".

Goodbye for now! I hope you have found this article useful. If you have any questions, complaints, praises, problems, or suggestions, write to Michael Quinn in care of ***GS+.***



NoDOS is written in ORCA/C.
This program contains material from the ORCA/C Run-Time Libraries, copyright 1987-1989 by Byte Works, Inc. Used with permission.

by Steven W. Disbrow

I love Desk Accessories. A good desk accessory not only saves you time, it also makes the programs that you use it with seem more powerful. NoDOS was designed with just those things in mind.

So, What Is It?

NoDOS is a New Desk Accessory (NDA) which provides the ability to delete, rename, and get/set file information for GS/OS and ProDOS files. File information includes such things as the file's type (BIN, S16, TXT, etc.), Auxiliary type (which can specify different things, depending on the type of the file), creation date, last modification date, size and access switches. NoDOS runs only under GS/OS, so you must install NoDOS on a disk that use's System Software 4.0 or 5.0.

Installing NoDOS

To use NoDOS, you must first copy it into the ***:System:Desk.Accs:** (see "What Does '*:' Mean?" sidebar) folder of the disk (or disks) that you start-up up your computer with. Next, restart the computer using one of the disks you have copied NoDOS onto. When you restart the computer, GS/OS looks in the ***:System:Desk.Accs:** folder and places any New Desk Accessories that it finds into the Apple menu at the left end of the menu bar.

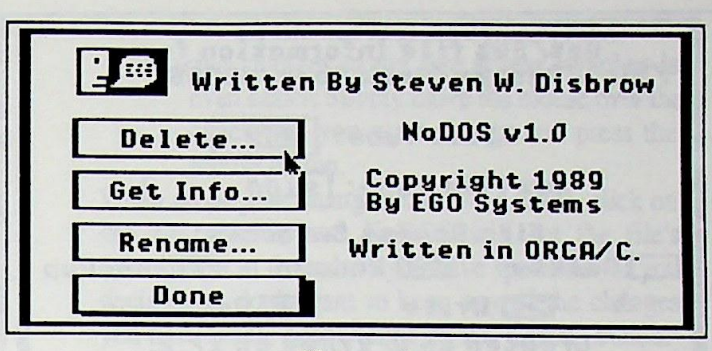


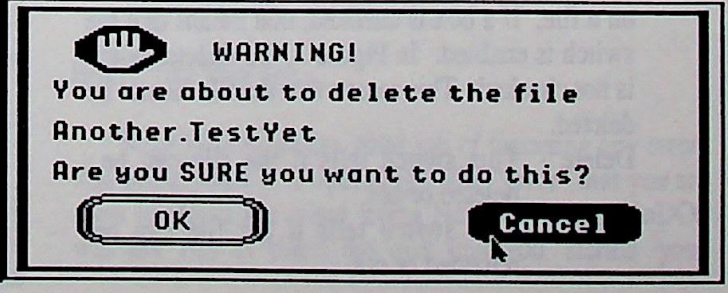
Figure 1.

Using NoDOS

Once you have NoDOS properly installed, you can select it from the Apple menu that is available in most GS/OS and ProDOS 16 programs. NoDOS itself is a simple dialog box with 4 choices (see Figure 1). The talking head at the upper left corner of the dialog box displays messages to inform you on the results of your actions. To select a file utility, simply click on the appropriate button with the mouse. In order, the options available in NoDOS are:

1) Delete...
   When you select the 'Delete...' button, a Standard File Dialog box will appear. Use the buttons in this dialog to select a file to delete. When you have specified the file you wish to delete, NoDOS will display a warning dialog box that will inform you that you are about to delete the file (see Figure 2). Pressing the <return> key or clicking on the 'OK' button will delete the file. Clicking on the 'Cancel' button will cancel the deletion of the file. In either case, you will be returned to the NoDOS dialog where the talking head will tell you what the final result of the operation was. Please note that NoDOS can not delete folders. Perhaps in the next version....

Figure 2.



What Does '*:' Mean?

'*:' is the GS/OS shorthand for the name of the diskette that the computer was started with. This is also called the Boot Prefix. For example, if you start your computer with a disk named 'System.Disk', GS/OS sets the value of '*:' to ':System.Disk'. The reason it is called a prefix is that whenever you say something like, "Copy NoDOS into the *:System:Desk.Accs: folder...", GS/OS prefixes the value of '*:' onto 'System:Desk.Accs:' to come up with (in this example), ":System.Disk:System:Desk.Accs:". GS/OS keeps track of 32 other prefixes ('0:' through '31:') that allow developers to write programs that are not dependant on what disks are named and can be run from anywhere. Note the use of a colon ':' as a separator. Older IIGS operating systems (ProDOS 8 and 16) used a slash '/' as a separator. GS/OS can use either. You will often see examples such as this written in the form '/System.Disk/System/Desk.Accs/'.

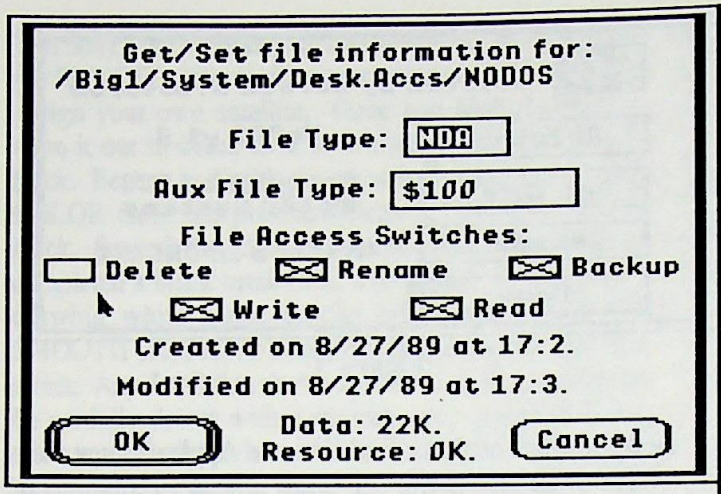


Figure 3.

Get Info...

This button also brings up a Standard File Dialog. Once you select a file, you will be shown a dialog that contains just about everything you could want to know about the file (see Figure 3). From top to bottom, the things you will see are:

a) The pathname of the file:
If the file's pathname is more than 35 characters long, only the beginning and the end are shown.

b) The file's type:
NoDOS knows 43 file types by their three character designator (see "What NoDos Knows" sidebar). If the type of the file is one of those that NoDOS knows, the three character designator is displayed. If NoDOS does not know the three character designator for the file, the file type code is converted into hexadecimal notation and displayed.

c) The file's Auxiliary type:
This field is used for different purposes by different applications. Since there are no standards for Auxiliary type numbers, NoDOS simply converts this number to hexadecimal and displays it.

d) File Access Switches:
These five switches (represented with check boxes) limit the operations that can be performed on a file. If a box is checked, that means that the switch is enabled. In Figure 3, the Delete switch is not checked. This means that the file cannot be deleted.

Delete - This switch tells if the file can be deleted or not.

Rename - This switch tells if the file can be renamed or not.

What NoDOS Knows

Here is a list of all the 3 character file type descriptors that NoDOS v1.0 knows:

Descriptor	Decimal	Hexadecimal	Description
BAD	1	$01	File of bad disk blocks.
PCD	2	$02	Pascal code file
PTX	3	$03	Pascal text file
TXT	4	$04	ASCII text file
PDA	5	$05	Pascal data file
BIN	6	$06	Binary file
FNT	7	$07	Font file (Apple III)
FOT	8	$08	Graphics screen file
BA3	9	$09	Business BASIC program file
DA3	10	$0A	Business BASIC data file
WPF	11	$0B	Word processor file
SOS	12	$0C	Sophisticated Operating System (Apple III) file
DIR	15	$0F	Directory file
RPD	16	$10	RPS data file
RPI	17	$11	RPS index file
ADB	25	$19	AppleWorks Data Base file
AWP	26	$1A	AppleWorks Word Processor file
ASP	27	$1B	AppleWorks Spreadsheet file
SRC	176	$B0	APW/ORCA source file
OBJ	177	$B1	APW/ORCA object file
LIB	178	$B2	APW/ORCA library file
S16	179	$B3	ProDOS 16 application program file
RTL	180	$B4	APW/ORCA run-time library file
EXE	181	$B5	ProDOS 16 shell application file
STR	182	$B6	ProDOS 16 permanent initialization file
NDA	184	$B8	New Desk Accessory
CDA	185	$B9	Classic Desk Accessory
TOL	186	$BA	Tool set file
DRV	187	$BB	Device Driver
PNT	192	$C0	Compressed picture file
PIC	193	$C1	Uncompressed picture file
FON	200	$C8	IIGS Font File
FND	201	$C9	Finder data file
ICN	202	$CA	Finder Icon file
PAS	239	$EF	Pascal area on a partitioned disk
CMD	240	$F0	ProDOS 8 added command file
P16	249	$F9	ProDOS 16 file
INT	250	$FA	Integer BASIC program file
IVR	251	$FB	Integer BASIC variable file
BAS	252	$FC	Applesoft program file
VAR	253	$FD	Applesoft variable file
REL	254	$FE	Relocatable code file
SYS	255	$FF	ProDOS 8 system program file

Backup - This switch tells if the file needs to be backed up.
Write - This switch tells if the file can be written to.
Read - This switch tells if the file can be read from.

e) Creation and Modification Dates:
These two lines show the date and time that the file was created on and the date and time that the file was last modified.

f) File Size(s):
The last two lines show the size(s) of the file. Two lines are used because some newer GS/OS files have two parts (called 'forks') to them, a Data fork and a Resource fork. The first line shows the size of the Data Fork and the second line shows the size of the Resource Fork.

Changing the file's information.

Once you have a file's information on screen, you can, if you wish, make changes to the files type, Auxiliary type and access switches.

To change the file's type, just double click on the box beside 'File Type:', and then type in the new file type. The new type that you enter can be one of the 3 character designators (see sidebar "What NoDOS Knows" on page 8), a decimal value or a hexadecimal value. Decimal values can be anything from 0 to 255. Hexadecimal values **must** begin with a '$' and can be any value from $00 to $FF.

To change the Auxiliary type of the file, double click on the 'Aux Type:' Box and type in the new Auxiliary type. Since the meaning of the Auxiliary type of a file is dependent on the type of the file and the application that created it, only decimal and hexadecimal values are allowed in this field. Even though eight hex digits (4 bytes) are available for this field, you can only give it a value from $0000 to $FFFF. Any other value, plus a few that you would think should work, will generate a 'Parameter out of range' error.

Three things to note about editing these values:

a) Pressing the <tab> key will move you from one field to the other.
b) You may use both upper and lowercase letters (or any mixture).
c) Entering a nonsense value in either field will result in a value of zero for that field. If, for example, you enter a file type of '!*?' and click the 'OK' button, the file will be given a type of zero.

Making changes to the five access switches is even easier. Simply move the mouse over the check box you want change and press the mouse button.

When all of your changes have been made, click on the 'OK' button and NoDOS will set the file's information to the values you have specified. If you decide you don't want to keep any of the changes you have made, simply click on the 'Cancel' button. In either case, you will be returned to the main NoDOS dialog where the talking head will tell you what happened. Note that NoDOS does **not** ask for confirmation of any changes you have made. You should know what you are doing when you use this portion of NoDOS! If this is not to your liking, make your first project the addition of a confirmation box to this portion of NoDOS. That's what the source code is there for.

3) Rename...
Selecting the 'Rename...' button will bring up yet another Standard File Dialog. Select the file you want to rename and click on the 'Open' button. NoDOS will then display a smaller dialog box containing the current name of the file. Type the new name for the file. The new name can be a maximum of 15 characters long. Spaces and other special characters (except for periods '.') are not allowed. If you decide you do not want to rename the file, click on the 'Cancel' button and you will be returned to the NoDOS dialog. If you do want to rename the file, press the <return> key or click the mouse on the 'OK' button. You will then be returned to the NoDOS dialog. As usual, the talking head will tell you what happened.

4) Done
NoDOS operates in a Modal Dialog. This means that you MUST quit NoDOS before you can resume working with your current application. To quit NoDOS, make sure you can see the copyright notice and then press the <return> key or click on the 'Done' button.

Errors You May See.

NoDOS does a very good job of reporting any errors that occur while it is operating. The "error" that you are most likely to see when using NoDOS, is that NoDOS will ask you to insert the disk that you started your

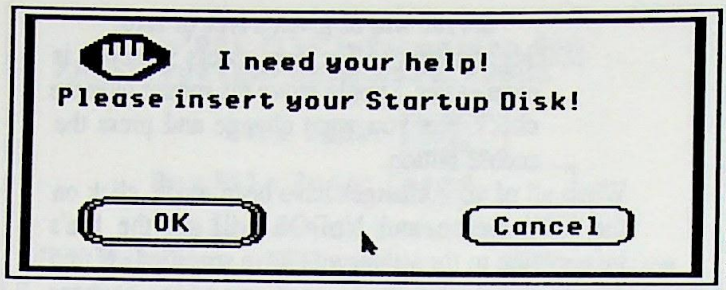


Figure 4.

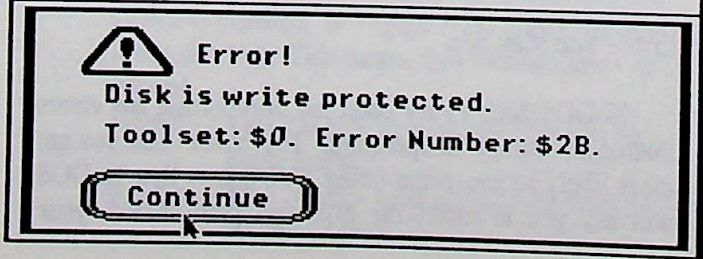
computer with (see Figure 4). This will occur in any application that does not use Standard File Dialog boxes. When you see this message, simply insert your Startup Diskette into any drive and press the <return> key or click on the 'OK' button. NoDOS will then load the tools that it needs and will continue on as described above. If your dog has eaten your startup disk since you ejected it, click on the 'Cancel' button and you will be returned to the NoDOS dialog.

NoDOS reports other errors in a similar manner (see Figure 5). This dialog plainly tells you that an error occurred, gives a brief description of the error (if one is available) and also tells you the IIGS Tool that caused the error and the number of the error (in hexadecimal). When you finish looking at the error message, press the <return> key or click on the 'Continue' button and you will be returned to the NoDOS dialog where the talking head will describe the effect the error had on the operation you were trying to perform.

Modifying NoDOS

Over the past couple of years, I have found NoDOS to be incredibly useful. It is also incredibly simple. Like anything else, it could use some improvements. Rewriting it in Assembly Language is one thing I've considered, but I've just never been able to find the time. Cutting down the overall size of NoDOS is one thing I am always trying to do. The original version, written in TML Pascal, was almost 40K! MUCH to big for a desk accessory. Since then, I've rewritten NoDOS in ORCA/Pascal (25K), ORCA/Pascal and Assembly (19.5K), and ORCA/Pascal plus Assembly and ORCA/C (25K). This last version was the one I was originally going to publish here, but I found some really odd bugs in it about a week ago and decided that this was the perfect excuse to rewrite NoDOS in C. NoDOS's current size of 22K is still too big for my taste, but it will have to do for this version. A MUCH more powerful version is on the drawing board (actually it's scribbled on a napkin) and will be featured in a future issue of *GS+* if this version gets enough positive response. But, I digress....

Figure 5.



The source code for NoDOS is available on your *GS+* diskette in the file, **:GSP.V1.N1:NoDOS:NoDOS.CC** and is fully documented. I have tried to explain the few tricks used as clearly as possible. As I said, it is a simple program. Some simple modifications you might want to make to NoDOS could be:

1) Having the user confirm any changes that they made in the Get/Set file information dialog.
2) Adding more error messages to the DosErrors() procedure.
3) Adding more 3 character, file type descriptors to NoDOS's vocabulary.

Well, that's it. If you have any questions, comments, criticisms or corrections, please send them to me here at *GS+*. I hope you find NoDOS to be as useful I have. It sure beats a trip to the Finder and back!

A Tiny Smidgen Of History

About 7 years ago, a good friend of mine (Jeff Walker) and I were both proud owners of TRS-80 Model I computer systems. The hottest Disk Operating System for the Model I was (at that time) a program called NEW-DOS 80. After an all-niter of playing such classic games as Morlock's Tower, Robot Attack, and Galaxy Invasion, we started kicking around ideas for a program of our own. Eventually, we came up with, NODOS-80. The programs only function would be to boot up the system, emit a rather disgusting noise from the tape recorder we TRS-80 owners were forced to use as speakers, and then hang up the computer with the following words plastered on the screen:

NODOS-80: You get what you pay for...

A few years later, one of my math professors (a Macintosh owner) complained (as Mac owners often do) to me that he had been in the middle of saving a file that would effectively solve all of mankinds problems when, suddenly, his Mac informed him that he was out of disk space. "Woe and alas", he said, "if only this stupid thing would let me delete but a single file I could save my brainstorm in progress and truly I would be a happy camper. In truth", he continued, "using Mac DOS is as bad as using No DOS at all!" Well, he didn't say it with the capital letters, but you get the idea. And the rest... is unprintable. Sorry.

Get Serious!

If you are serious about programming the IIGS, make sure you get both of the Toolbox Reference volumes. The original version of NoDOS was written without the help of those books, not something I reccommend to anyone. Also, if you want to have your programs take advantage of the speed and power of GS/OS, be sure to get Gary B. Little's new book on the subject, "*Exploring GS/OS and ProDOS 8*", published by Addison-Wesley.

Every so often, a really great product comes out that has absolutely no Finder icon. In each issue of *GS+*, we will try to provide icons for programs that don't have them. This time out, we've got icons for Crystal Quest and ORCA. They are on your *GS+* disk in the **Icons** folder. I did the Crystal Quest icon, and my good friend, Jeff Walker, did the ORCA icon. If you have any neat, cool, boffo and/or boss icons that you yourself have created, send them to us here at *GS+* (via one of the means listed in the Writer's Guide on page 2). Be sure to tell us which program you used to create your icons and any tricks you used. If we use your icon, we'll put your name in this column and call you up to give you a word of thanks. After all, we can't give away prizes for **everything!**

OK. This icons in this issue were created with version 1.1 of DIcEd. This is a ShareWare ($15) icon editor by DAL Systems (POB 287, N.Liberty, IA. 52317). It's good, and it's available from just about any on-line service including our own Great Scott!! BBS (615-875-4607).

To do the Crystal Quest screen, I used a FingerPrint GSi to capture a Crystal Quest screen which I then loaded that into Deluxe Paint II. I then copied several of the Crystal Quest nasties into the clipboard, quit DPaint and started up DIcEd. Then I hand drew the items I wanted in the icon, using the contents of the clipboard as a guide (you can not just paste a regular graphic from the clipboard in to an icon with DIcEd version 1.1).

Jeff just drew the ORCA icon by hand. What a show off.

How to Use the GS+ Disk

First things first. ***MAKE A BACKUP COPY!*** Use Copy II Plus, the Finder, or any other disk utility program you like, to make a backup copy of your *GS+* disk. Then put your original disk in a safe place.

Now that you have a backup copy (you do, don't you?) let's talk about what's on it. The disk itself is named, **:GSP.V1.N1:** and there are four folders on the disk:

- Ark.II.Levels
  This folder contains only one file: "GSP.1.Levels". This file contains 65 brand new levels for Arkanoid II (reviewed on page 18) developed by Steven Disbrow and Jeff Walker. To use them, copy them into the **:ARCII:LEVELS:** folder of your **backup** copy of Arkanoid II. Then, when you start up Arkanoid II, press the <C> key to enter the construction mode. When the construction set appears, click on "Load". A file selector box will appear. Click on the "Levels" folder and then click the "Open" button. You should then see the files, "ARCII" and "GSP.1.Levels". The file "ARCII" contains the original levels that come with Arkanoid II. The other file, "GSP.1.Levels" is the one you want, so click on it and then click on the "Open" button. The first level (which looks a little like the arrow pointer) will then show up on the screen. No peeking! Click on the "Quit" button and you will be returned to Arkanoid II's main menu. From this point on you will be playing with the levels contained in "GSP.1.Levels".
- Graphics.Galore
  This folder contains the three pictures discussed in Graphics Galore (page 5). To view these pictures, use any paint program that reads Apple Preferred Format pictures. Deluxe Paint II, PaintWorks Gold and SHRConvert will all do the job.
- Icons
  There are two files in this folder, "CQUEST.ICON" and "ORCA.ICON". The "CQUEST.ICON" file is an icon for the game Crystal Quest (reviewed on page 20) and the file "ORCA.ICON" is an icon for the programs ORCA.SYS16 from ORCA/C (and ORCA/Pascal and ORCA/M). Just copy these files into the Icons folder on your Crystal Quest and ORCA/C backup disks, respectively. The next time you are in the Finder, you should see the new icons for these programs.
- NoDOS
  This folder contains two files, "NoDOS.CC" and "NoDOS.NDA". "NoDOS.CC" contains the ORCA/C source code for NoDOS and the file "NoDOS.NDA" is the NoDOS New Desk Accessory itself. Detailed instructions for using these files is given in the article beginning on page 7, so check there.

That's all for this time. We hope to have the disk packed full for the next issue. But, we can't write all this stuff by ourselves! Be sure to check out the Writer's Guide on page 2 and get involved with *GS+*!

ORCA/C - retail $150
Not Copy Protected.

Program written by Mike Westerfield
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Albuquerque, NM 87114
(505) 898-8183

Reviewed by Steven W. Disbrow

ORCA/C is a compiler for the IIGS that is based on the current ANSI draft standard for the C language. ORCA/C comes with two complete development environments, each of which allows you to develop programs using more than one language. The first environment is a text-based one similar to what you might find running on an MS-DOS machine or a UNIX system. The second (called PRIZM) is a graphics based, mouse and menus style development environment. The text-based environment, which is basically an enhanced version of the Apple Programmers Workshop, uses less memory than PRIZM, but it does not allow you to use some of the more interesting features of the ORCA/C package, such as the source level debugger. Both environments are completely compatible with the Apple Programmers Workshop and any languages or utilities that run under it. Since I am most familiar with the PRIZM environment, that is what I will base this review on.

What You Need

To use ORCA/C, you need at least 1024K RAM and one 3.5" disk drive. If you are using System Software 5.0, you will probably need about 1.5 Megabytes of RAM. While it is possible to run ORCA/C from a single drive, you should have at least two drives to avoid having to constantly swap diskettes. I **highly** recommend using a hard drive to get the best possible performance out of ORCA/C.

What You Get

ORCA/C comes with a spiral bound 350+ page manual. The software itself comes on three 800K diskettes and runs under GS/OS. The first disk contains GS/OS. The second contains the compiler, the ORCA/C Libraries and both development systems. The third disk is packed full of excellent sample programs that actually work the first time you compile them! Since ORCA/C is such a large system, I will examine each of its major components separately.

The Documentation

The ORCA/C documentation is excellent. While the ORCA/C manual is not a substitute for a good C language text (the ORCA/C manual recommends several good C texts), it **is** a very complete guide to the ORCA/C compiler and the PRIZM development environment. The manual covers everything from writing your first IIGS desktop program to the development of Assembly Language subroutines. If you are a more advanced reader, you can quickly find the information you need by using the **very** complete index or table of contents. It's all there: detailed Library descriptions, compiler directives, error messages - everything you need to get busy 'porting your old C programs to the IIGS. The is only one major mistake in the documentation and it pertains only to users of ORCA/Pascal (see **"Don't Do It!!"** sidebar).

Don't Do It!!

On page 354 of the ORCA/C manual, it states that you should delete the ORCA/Pascal library, PASLIB. According to Byte Works, this is incorrect and you SHOULD NOT delete PASLIB. If you do, your ORCA/Pascal programs will not link properly.

The Editor

The PRIZM editor is one of the best I have ever used on any computer, and is, without a doubt, the best available for the IIGS. Almost every feature a programmer could want is included. There is even a column shift feature for those of us that were raised on structured programming! Some of the other features that make the PRIZM editor stand out are:

1) You can open as many files as available memory will allow.
2) Files can be as large as available memory will allow.
3) Each edit window can be "split", so that you can view and edit two parts of the file at once.
4) An unlimited number of UNDO's.
5) Very easy to use.
6) *Fast* search and replace.
7) You can set different defaults (word wrap, tabs, overstrike/insert mode, etc.) for each language you have installed.

But, the absolute best thing about the PRIZM editor is its speed. Even on an unaccelerated IIGS, the PRIZM editor is a real speed demon. Scrolling, selecting, and entering text all take place at a speed that will amaze even the most

jaded IIGS user. If you do a lot of text entry, ORCA/C is worth the price tag for the PRIZM editor alone (although you can buy the editor as part of the ORCA/Desktop package for a mere $69).
The only things wrong with this editor are the things that have been left out. At risk of picking nits, let me list the three things I would like to see in a future version of the PRIZM editor:

1) It would be nice to have a REDO facility. Unlimited UNDO's are nice, but once you UNDO something, it stays undone. Perhaps REDO could be implemented as an <option> key selection.
2) A 'Show Clipboard' option would be much appreciated.
3) A Macro facility. Macros are already available in the text environment editor and would make this great editor even better than it already is.

The Compiler

The ORCA/C compiler is very good and it appears to adhere very closely to the ANSI draft standard. While there are a few problems, it is remarkably bug free for a version 1.0 compiler. I have managed to crash it a couple of hundred times, but all of those were the result of the fact that I have not really programmed in C for about two years and I was doing some really stupid things. Minimal error checking is a "feature" of the C language and can lead to lots of crashes. This is an important point. When you first start (or start back) programming in C, you are going to crash the computer a few (hundred) times. The IIGS, with it's strange and wonderful Tool Sets, is going to crash approximately 1000 times more. The C language expects you to know **exactly** what you are doing. The IIGS Tool Sets expect you to know **exactly** how to use them. Trying to program the one with the other can be a very rough experience. But, I digress.
The bottom line is that the ORCA/C compiler itself has only a few problems, and Byte Works has promised to fix all of those in the next release. But, to avoid a brown-noser review, let me touch on the four biggest problems with the compiler. Note that two of these problems occur only when you use the PRIZM environment.

1) There is no progress indicator to show you how far along the compilation is. From the time you select one of the compile commands to the time the Linker starts up, there is really no way of knowing if the compiler is alive or not. Byte Works has promised to fix this one.
2) The compiler does not properly handle break points (see **"The Debugger"** section) that you have set in the source code. This one will be fixed also. If you use the text environment, you can't use the debugger, so this one would not be a problem.
3) Sometimes, after compiling and running a program, the source code for a program becomes screwed up. To be a bit more specific, sometimes the bottom half of the file will be missing. Other times, the bottom half will be gone, and the top half will be repeated starting at the point where the bottom half should be. This can really be troublesome if you have the "Auto Save" feature turned on. To be safe, I've turned this feature off and **ALWAYS** jump to the bottom of my source code, and check it, before I save it. This takes a bit of time, but it takes even more time to rewrite a trashed program. Byte Works is looking into this one as well.
4) The worst problem with the ORCA/C compiler is its speed. ORCA/C is almost unbearably slow. I don't know the reasons for the lethargic performance, but I do know it could be a lot faster. As opposed to rattling on about precompiled headers and so forth, let me just refer you to the **"Compile & Link Times"** sidebar on the next page so you can get an idea of what I'm talking about.

The Debugger

The PRIZM debugger is, as far as I know, the only source level debugger available for the IIGS. It allows you to view the source code and variables for your program as it executes. You can single-step or trace through your program and watch the values of your variables change. You can also look in on memory and the stack if you want. The PRIZM debugger also supports setting break points (places in the program where execution will stop) in your source code, but the ORCA/C compiler does not yet generate the proper code to use this feature. While the PRIZM debugger is a great help in troubleshooting a program, there are a few places where it could, and should, be more powerful. Most of these shortcomings are in the way the viewing of variables is handled. For example:

1) You can not use the debugger to look directly at the fields of a record or structure variable. Instead, you must use an extra pointer variable to find the address of the variable and then use the Memory window to see the contents of the variable. Ugh.
2) You can not change the value of a variable as the program is running.
3) You must type in the names of the variables that you want to view. It would be much simpler to just

select the variables you want to view from a menu. Every other debugger I've used has these features as standard equipment. It would be great if the PRIZM debugger included them as well.

Support

When I say that Byte Works is aware of these problems and is working to fix them, I am somewhat understating the quality of Byte Works customer service and support. Even without a toll free phone number, Byte Works, Inc. gets my award for the best service and support of any company in the Apple field (Please note that I did **not** say "Apple II field"). When you call the Byte Works, you get to talk to a **pleasant** person that knows his or her stuff backwards and forwards. If he isn't chained to the computer (as he was during the development of ORCA/C), you might even get to talk to Mike Westerfield himself. These folks work with the IIGS every day, and are committed to it and to the people that use it. Best of all, Byte Works' upgrade fees are **very** reasonable. The most I have ever paid at one time for an upgrade (to both ORCA/Pascal and ORCA/M) was about $13! Very reasonable indeed.

The Bottom Line

ORCA/C is an excellent product that stands an excellent chance of becoming THE programming standard for the IIGS. If you want to program the IIGS in C, this is the product you want. If you want to learn C on the IIGS, this is the product you want. Just be prepared for a whole lot of crashes until you learn your way around, and make sure you have a lot of RAM and a hard drive to get the most out of it.

Compile & Link Times

All of the following times were obtained by using the "Compile to disk" option to compile the NoDOS.CC program that is on your *GS+* disk. The "Initial Compile" and "Second Compile" categories are used because during the initial compilation of a program, the compiler must be loaded into memory. On subsequent compilations, the compiler is already in memory so the time is almost always faster. The hardware used was a IIGS with ROM version 1.0 running System Software 5.0. The IIGS was equipped with 2.25 Megabytes of RAM, a CMS 60 Megabyte hard drive with a CMS SCSI controller and a 6.3 MHz TransWarp GS. A RAM disk was used for all compiler work files. All times are in minutes and seconds. Note that debug code was generated in all cases where optimizations were turned off.

	System Speed	Optimizations	Compile Time	Link Time	Total Time
Initial Compile	6.3 MHz	Off	1:18	0:18	1:36
Second Compile	6.3 MHz	Off	0:50	0:15	1:05
Initial Compile	6.3 MHz	On	2:03	0:22	2:25
Second Compile	6.3 MHz	On	1:42	0:13	1:55
Initial Compile	2.6 MHz	Off	2:05	0:38	2:43
Second Compile	2.6 MHz	Off	1:35	0:29	2:04
Initial Compile	2.6 MHz	On	4:00	0:41	4:41
Second Compile	2.6 MHz	On	3:35	0:25	4:00

TransWarp GS - retail $399

Applied Engineering
P.O.B. 5100
Carrollton, TX 75011
(214) 241-6060

Reviewed by Steven W. Disbrow

"A review? Of TransWarp GS? Why? Everyone knows that you have to have one if you want to get anything done with a GS! You guys must be filling space, right?" Wrong. Like a few other products in the Apple Universe there has been more "Hype" than fact published about the TransWarp GS (TWGS). This isn't so much a review as it is an attempt to give those of you that are still considering the purchase of a TWGS some facts to help base your final decision on.

For Those That Came In Late...

TWGS is an **accelerator** card that helps to speed up all operations that your IIGS performs. Graphics, disk access, mathematical operations, etc., **all** benefit from TWGS. The overall effect (with System Software 5.0 and a speedy hard drive) is like having a Macintosh II on your desk. I am not kidding. Until Apple announced System 5.0, the TransWarp GS was the biggest thing to hit the IIGS market since, well, the IIGS!

TransWarp GS Works.

That's all there is to it. You plug it in and ZOOM! Your IIGS acts like someone rigged a nuclear reactor into slot 3. Everything is faster. You and your GS become MUCH more productive. It works. Period.

But There Are A Few Problems...

The biggest problem with TransWarp GS is its price. Four hundred dollars is a lot to pay for ANY peripheral. It has been said in other publications that the money you pay for TransWarp GS is the best $400 you will spend on peripherals for your GS. That's just not true. The best $400 dollars you will spend on peripherals for your GS is the first $400 dollars you put towards the purchase of a hard drive. This is true for any computer, not just the IIGS. How many PC clones have you seen with math co-processors and no hard drive?

The second biggest problem is that all but the first 1,000 TransWarp GS's shipped run at 6.3 MHz and not the 7 MHz that was originally advertised. As a consolation to those of us that bought some of the first TransWarp GS's and thought we would be getting the 7 MHz version, Applied Engineering offered either a $40 gift certificate or an upgrade to the 7 MHz version when it becomes available. I opted for the $40 coupon, hoping that I could use it to upgrade my 6.3 MHz TransWarp GS to the 10 MHz version AE had also announced. More on this later.

Third, this thing is a real bear to install. I've been plugging things into computers for about 10 years now and I can't remember anything that has been more trouble to get running. First, you must remove your IIGS's 65816 Central Processing Unit (CPU) from its socket on the motherboard. The manual suggests that you use a small, flat blade screwdriver to do this. To me, this is no problem. But, at this point, about 10 out of 15 of the IIGS owners in my users group would have wet themselves. It would be nice if AE could include an inexpensive chip puller. You would be amazed at how much braver beginners become when they know they have the proper tools! Once you have the CPU removed, you are supposed to place the card in slot 3 (slot 4 is not an option as was originally advertised) and then plug the connecting cable into the CPU socket. It's a good thing that slot 4 is no longer listed as an option because the miniscule cable which connects the TransWarp GS card to the CPU socket is almost too short to even install the thing in slot 3! A longer connecting cable would go a long way towards making this card easier to install (no pun intended). Also, not being able to operate the TransWarp GS from slot 4 is going to cause some folks a lot of grief when they find out that Apple's new Video Overlay Card also works in slot 3 only. While the card itself is easy to plug in, you really have to pound on the CPU plug to get it correctly seated. One member of our users group thought his TransWarp GS was defective until I explained to him that the checkerboard pattern he saw when he turned on his computer meant he was not using a large enough hammer to install the device.

The next problem I had was with program compatibility. The very first program that I tried to run at TransWarp speed, died. That program was Dungeon Master.

This brings me to the next problem I had with my TransWarp GS. Service. Applied Engineering does not have a Toll-Free service number. This is very surprising when you consider the large amounts they charge for their products. A great many smaller companies have Toll-Free numbers for support even though they charge less for

their products. Anyway, having found an incompatible program, I hurried to the phone to report my findings. The technician I spoke with was very surprised to hear of an incompatible program and told me he did not have any idea what I could do to work around it. He then asked me if I was going to AppleFest. I told him I was and he suggested that I ask some of the technicians there. This sounded like a good plan to me.

At AppleFest, I managed to actually talk to someone (who's last name sounds a little bit like my first name) that was actually on the design team for TransWarp GS! He listened carefully to my stories describing the Dungeon Master incompatibilities (and a few others I had found) and then told me I should call tech-support again when I got back home! This is not what I call good technical support.

When I got back home and began to consider all of this, I became just a tad angry. After all, four hundred bucks is four hundred bucks! So I got on one of those national information services (the one that promises to link you with other Apple users) and tried to find out if it was just me or if anyone else had gotten this sort of service. While there, I left a message explaining my feeling that I had been "jerked around" just a little bit. A few days later, the very same person that I had spoken with at AppleFest responded by saying that it was wrong of me to blame AE for these things. I was asked if I knew that there was only one supplier of 65816 chips in the whole world and that they might have trouble delivering them on time? I knew that. I wonder why no one told Applied Engineering that before they started to advertise those 7 MHz TransWarp GS's.

During this same visit to that particular on-line service, I found out that the coupon which I had hoped to use to upgrade my 6.3 MHz TransWarp GS would expire on 12/31/89. It is now 9/11/89 and I still have not received my coupon. So, I called Applied Engineering and they told me that the coupon (and the 7 MHz upgrades) would be on its way within the month. When I inquired about the 10 MHz upgrade, I was told that it should be ready by mid-February. Ouch! I outsmarted myself on that one.

All of these problems, except for the service, are very minor and really should not deter anyone from buying a TransWarp GS. It works. I have been able to solve all of the software compatibility problems I was having; in fact, some of them just disappeared (this means that they were my fault). As for the service problems, the unit is so well put together that, if you can get it installed, you probably won't ever have to call AE.

The Bottom Line.

So the final question is, "Do you need to spend $400 on a TransWarp GS?" In my opinion, this depends on the peripherals you already have. Beyond the initial purchase of a monitor, one or two disk drives and the computer itself, you should probably buy the following peripherals in the following order:

1) More memory. Up to at least 1.25 Megabytes.
2) A fan. You void your warranty when you have that much memory and no fan. In the TransWarp GS manual, Applied Engineering recommends the System Saver GS from Kensington Microware. I second that recommendation. (NOTE: Purchasers of the new IIGS (the 1Megabyte model) don't really have to worry about more memory, but I still recommend the System Saver.
3) A hard disk.
4) An accelerator or math co-processor.

In fact, after using my hard drive with the new System Software v5.0 (which is **free** at your local Apple dealer) for almost a month now, I would **almost** say that anything after a hard drive is a luxury. But, if a System 5.0/Hard Drive combination just isn't fast enough for you, and you have about $400 burning a hole in your pocket, the TransWarp GS will probably be the best thing you can buy for your IIGS.

Turbo Mouse ADB (Version 3.0) - retail $169

Kensington Microware, Ltd.
251 Park Avenue South,
New York, NY 10010
(800) 535-4242

Reviewed by Steven W. Disbrow

Do you hate your GS mouse? Do you love your mouse? If you answered yes to either of these questions, you will probably love Kensington's Turbo Mouse for the Apple Desktop Bus (ADB). Turbo Mouse ADB is a trackball pointing device that plugs directly into your computers ADB port or either ADB port on your keyboard. The Turbo Mouse ADB is advertised as a complete replacement for your trusty Apple Mouse and Kensington even goes so far as to include one of their "Mouse Pocket" mouse holders, so you can retire your mouse in style. Before I tell you how much I love this device, let me get objective (as any good reviewer should be) and try to present a few facts about the Turbo Mouse.

The main advantage of any trackball pointing device is the fact that it uses only a finite amount of desk space. Since you only move the ball on top of the device, you no longer have to worry about mousing your way into your coffee cup or that pile of very important papers. Any trackball device will give you those things. Kensington has done an excellent job of designing THIS trackball to meet the needs of IIGS and Macintosh users.

Installation is a snap. Just turn off your computer (NEVER plug or unplug ADB devices while the computers power is on! If you do, you can destroy the ADB controllers in one or all of the devices, including the IIGS itself), unplug your mouse, plug the Turbo Mouse into the keyboard (using the length of ADB cable Kensington provides with Turbo Mouse) and then plug your mouse into the Turbo Mouse's second ADB port. This pass-through arrangement is what makes the Apple Desktop Bus so versatile. It allows the keyboard, mouse, and Turbo Mouse ADB to all be plugged in and available at the same time.

The Turbo Mouse has two buttons on it. One of these acts just like your old mouse button. The other button acts as a click-lock button. When you click this button once, the GS thinks that you have clicked the mouse button and HELD IT DOWN. This makes it easy to drag things into the Trash and navigate through long menus (i.e. font menus) and documents. On older models of the Turbo Mouse, this was almost impossible to do without using both hands. Just click the click-lock button again to release it. Notice that I was not very specific about WHICH button was the ordinary mouse button and which was the click-lock button. That's because Turbo Mouse lets you decide which button you want to be which. This makes the Turbo Mouse easily usable for both left and right handed folks. You set your button preferences via a set of DIP switches located on the rear of the Turbo Mouse. The panel covering these switches is very hard to remove, but since you only need to do this once, it is not that much of a problem.

These same DIP switches also contain the only actual hardware problem that the Turbo Mouse ADB has. In early ads for the Turbo Mouse ADB, it was stated that you could program the Turbo Mouse ADB to perform one of seven common menu command keystrokes (OpenApple-A, OpenApple-O, OpenApple-W, OpenApple-S, OpenApple-P, OpenApple-Q or OpenApple-Z) when you pressed both mouse buttons at the same time. This feature, which Kensington calls "chording", works on the Macintosh, but it will completely hang up the computer when you attempt to use it with the IIGS. I called Kensington's toll-free support number and was immediately connected with someone that knew of the problem and assured me that it would be corrected in the next version. In fact, I just called Kensington again (when I finished that last paragraph), and they told me that they had fixed this problem just six weeks ago. I was then given a Return Authorization number and told to send in my Turbo Mouse ADB along with a brief letter describing the problem and they would fix the unit and get it back to me as soon as possible! All this took less than 5 minutes! Now that's service!

Well, I seem to have lost my objectivity there at the end. Let me conclude by saying that a trackball is not for everyone. This is one of those product categories where you should try before you buy. If your local dealer does not have one for you to try, run down to your local arcade and try to find a game that uses a trackball. Plunk a few quarters into it and decided if a trackball is for you (Note that this is generally cheaper than a trip to your dealer). When you **do** decide that you want a trackball, this is the one to get. The only other thing I could wish for in this product is a IIGS Control Panel Device that would allow you to set the speed, tracking and other Turbo Mouse parameters. With a retail price of $169, I would suggest that you buy it through one of the more reputable Macintosh mail-order firms, they have lower prices. Just make sure you ask for the Turbo Mouse ADB (**not** the Turbo Mouse Plus!) and don't be dissuaded when they say they don't know if it will work with the IIGS or not!

Arkanoid II: The Revenge of Doh - retail $35
Copy Protected.

Program written by John Lund & Ryan Ridges
Taito Software, Inc.
267 West Esplanade
North Vancouver, B.C. V7M 1A5

Reviewed by Wayne Packard

Arkanoid II: The Revenge of Doh is the sequel to the now famous Arkanoid. These games were produced by Taito Software, Inc., a leading manufacturer of video game machines, especially in Japan. All that experience with arcade games really pays off in their games for the IIGS. I loved Arkanoid when it was introduced a few months ago, because it loaded quickly (under GS/OS), had great graphics, dazzling digitized sound, and a simple user interface which translated into a game that was easy to learn but challenging to master. Just about the time I finally solved Arkanoid and saved the world from the threat of Doh, I began to see ads for Arkanoid II. At first I thought this was just going to be Arkanoid remade with different levels, but I was pleasantly surprised. I told you before why I enjoyed Arkanoid, and I like Arkanoid II: The Revenge of Doh for all the same reasons... and more!

The user interface has not been changed as far as game play is concerned. You still use only the mouse to move your "ship" along the bottom of the screen and deflect the ball toward the blocks. You still use the right and left arrow keys to change the volume, and you still use escape to pause, <Control> - A to abort a game and <Control> - Q to quit. (They really should have made that <Apple> - A and <Apple> - Q, but who really cares.) So, if you know how to play Arkanoid then you also know how to play Arkanoid II. But it is by no means the same game!

The premise for the game is simple. Years have passed since you took your small ship, "VAUS", and defended the world from Doh. Having eradicated him from existence, you had returned to earth and eventually human outposts had been established on distant planets. Now, Doh is back, and he wants revenge! You are again commissioned to battle Doh in a last chance attempt to save your planet and your race; this time your shuttle is called "VAUS2".

This basic idea serves as the backdrop against which the game is to be played, and it makes from some impressive title screen graphics, but it really has little to do with the game play itself, and is easily forgotten while playing. As a matter of fact almost everything is easily forgotten while you are playing... even lunch!

The manual for Arkanoid II is well written, and provides an excellent overview of the game and its features. It is printed on slick paper in easy to read type. Although it does not have color, it includes some very clear screen shots and you will have no problem understanding what they are telling you about. This may seem like a trivial thing, but I feel that a clear, attractive manual is an important part of any program.

The idea of the game is very simple. You use your "VAUS2" to deflect a bouncing ball (or several balls) up into a design of bricks, in an attempt to destroy them. This game may sound something like "Breakout" from long ago, but while it is similar in appearance, it is not too similar in play. In Arkanoid II, some "Energy Blocks" take two or three hits before they are destroyed, while others disappear the first time. At random, certain bricks change into energy capsules which may be caught with the "VAUS2" and which make the game very interesting. A few of the bricks disappear when hit, only to reappear a few seconds later, and others (the solid gold ones) can only be destroyed by a special "MEGA Energy Ball". The object of the game is to clear off all the bricks (except the last two kinds I described) and when this is complete you advance to the next level. You can exit to either the left or the right after clearing the screen, and each exit takes you to a different level. The game comes with sixty-seven levels, and I imagine this will take some time to complete! Each level presents a different challenge, and they get more difficult as you progress.

If you have played Arkanoid, you are familiar with the "Energy capsules" that fall periodically. You may remember that only one capsule could fall at a time, and no capsules would fall if you had more than one ball on the screen. I really didn't like that about Arkanoid, and the Revenge of Doh is much better. Now, many power capsules can fall at the same time, and you can have many balls on screen at once with the capsules still falling. The original game had such capsules as "L" for Laser, "B" to advance levels, "C" to make the Vaus Catch the ball, and "P" to give you an extra man, as well as a few others. Arkanoid II has all those capsules and more! Below is a list of what changes have been made:

D Gives you eight energy balls, instead of one.
I Creates a sliding "shadow" that deflects energy balls.
M MEGA Energy Balls - will destroy any type of

Energy Block.

N Allows one Energy Ball to continuously divide into three.

R VAUS2 shrinks to half-size. Each Energy Block you destroy doubles point value.

T A second VAUS2 appears on the screen.

A flashing capsule randomly awards one of the following powers:

1) 20 Energy Balls.
2) 20 MEGA Energy Balls.
3) Continuous Laser fire.

As you can see, they have changed the game quite a bit with all those additions, so if you're tired of Arkanoid, it won't be just more of the same.

The control of the "VAUS2" as I said before is very simple. But being able to control it well enough to win is a different matter all together. And, when you do learn to control the ball well, there is still a lot of strategy involved in some of the levels. Even when you have good control and good strategy, you still have to contend with the fact that there is a certain amount of chance involved with Arkanoid, and every game is a little different. Each time you play a level the same block will turn into energy capsules, but the computer chooses which capsule, and it is done at random. That helps keep the game from becoming boring, and makes it almost impossible to develop "patterns" for clearing levels.

The graphics in Arkanoid II are superb! You will be amazed at the variety of colors on the screen, and at the speed of the animation. This game is FAST! Especially with 20 energy balls on the screen at once. Even with all those balls, several aliens (which can become obstructive to your strategy), and a few energy capsules falling, the animation is hardly slowed at all. I did however experience a little bit of lag time when you have a screen full of objects and then you get 20 MEGA Energy balls. I guess this is to be attributed to the speed of the GS's processor, and I imagine that this would be eliminated with TransWarp GS although I was not able to try it. **(Editors's note: No, even with TransWarp GS, there is still a little bit of lag time with that many objects on the screen.)**

The game has several features that have become quite common to arcade games, such as a Hall of Fame which is saved to disk, and a two player option. However, Arkanoid II has one feature which makes it even more outstanding. Included in the box "at no additional charge" is a game screen construction set. With it you can design your own levels or alter the levels that are provided. I hope that this will bring about a whole aspect of public domain software, similar to the widespread availability of courses for Mean 18 golf. We could even have a contest to see who could send in the best level, and then publish them all in a future issue of *GS+* (hmmm...). **(Don't give away next issue's contest, Wayne! - *Ed.*)**

The construction set is based on a standard IIGS interface. It is completely mouse driven (except for entering the file names of course) and it allows quite a bit of control over your creation. Using the mouse you can choose the background pattern, the arrangement and color of the blocks, and the type of block. You can also decide for each block whether it will become a power capsule, be in motion, or both.

Commands are provided for loading and saving files, clearing the screen, undoing the last operation, and even playing the current level so that you can test it. Notice that I said saving and loading of files instead of levels? The reason is that individual levels are parts of entire games (consisting of 67 screens); therefore, they cannot be saved or loaded separately. All 67 rounds are saved when you save a construction set file, even if you only edit one or two. This doesn't seem to present any problem, except maybe in terms of disk space. **(Editor's note: a set of 67 levels takes up 31K in disk space.)**

Editing a round is quite easy, and you will catch on to it quickly. Some hints on designing good levels are presented in the manual as well, so you will be expressing your creativity in no time.

Overall, Arkanoid II: The Revenge of Doh is an excellent program, and a good value for your money. The list price is $34.95 (relatively cheap for a game) and you can probably get it for as little as $25.00 if you shop around. I found very few problems with the program. And I feel that Taito has once again done an excellent job. I hope to see more from this company in the near future.

I did notice that occasionally when you catch a blinking energy capsule, nothing happens. I don't know if this is a bug, or if things were just happening too fast for me to notice. Anyway, the game didn't crash and this is only a minor annoyance.

Also, sometimes upon exiting a level, the VAUS2 leaves

Energy Block.

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Also, sometimes upon exiting a level, the VAUS2 leaves

a trail behind it. Once again, this has no effect on the game itself, and it does not happen every time. These are the only two bugs I found in the program, and they are hardly worth mentioning.

The game is copy protected, but it doesn't use the on-disk (risk $35.00 every time you play) method. Instead it uses the now common key-disk protection which I find much more tolerable. You can copy it with a standard copy program such as the Finder, and the copy will boot and play fine. Each time it boots however, you will be prompted to insert your original disk (to verify that you actually bought the game) and after a moment your original may be removed and stored safely away. This is still a little bit of a bother, and it does require that you keep your master disk handy every time you play, but this game is worth the effort. It would be nice in the future however, if Taito would consider removing all copy protection. Maybe they could use the "honor system" that Crystal Quest has.

You should have no problem installing this game on your hard disk, just copy all the files except ProDOS and the System folder into a folder on your hard disk. Then you may double-click the Arkanoid II icon (very nice icon by the way) to launch the game, and upon quitting the game you will be returned to the Finder. The game will run in 512K of RAM, but the manual states that at least 768K and preferably a megabyte is required to launch it from the Finder. Even booting the game from the floppies is fairly fast, because it utilizes the new GS/OS operating system.

If you like arcade games, then get Arkanoid II: the Revenge of Doh. You will not be disappointed. It is well worth the money you will pay for it, so please don't pirate it. Every game you pirate is a vote for piracy, and maybe even a vote against having Taito make new games for the GS. These guys are good, and they offer great programs at an unusually low price. Let's not mess that up.

Crystal Quest - retail $49

Programmed by Bill Heineman
Casady & Greene Inc.
P.O. Box 223779
Carmel, CA 93922

Reviewed by Wayne Packard

Crystal Quest is an exciting new game from Casady and Greene, that promises to keep the attention of arcade gamers for quite a while. It combines an excellent game concept with superb graphics and dynamite sound to create a game which is destined to become a classic.

I originally encountered this game about ten months ago when it was first introduced on the Macintosh. For me it was love at first sight, and for the next several months I spent numerous hours (during lunch breaks of course) staring into the Mac at work, completely mesmerized by the graphics and sound. And this was on the Mac SE's small screen - in black and white! Needless to say, as soon as I heard that Casady and Greene were porting Crystal Quest to the GS, I set out on a quest (no pun intended) to be reunited with my old friend (with whom I had reluctantly parted at the suggestion of my boss). My first glimpse of Crystal Quest on the GS came from a demo version which I downloaded from a local BBS.

This version is included on the Crystal Quest disk, and it is legal to give copies of it away. As soon as the title screen appeared I fell in love once more. Here was the same game I had been addicted to a few months before in black and white, in full color on my screen. Those hours of playing time had made me quite proficient at the lower levels of the game, and before I knew it I had cleared level five. "Here is where it gets really good!", I thought to myself, but then... GAME OVER appeared on my screen. I had been shocked back into the reality that this was after all, just a demo. The programmer had baited the hook well - I was caught.

The day that Crystal Quest arrived in Chattanooga, I took it home. I ripped open the package, popped the disk in the drive and waited for the game to load. I must have played for hours that night, and I have had the game for three months or so now... I'm still hooked!

The idea of the game is quite simple really. You just move around the screen (using the mouse) and collect these "crystals" which are placed at random by the computer when the level begins. Sounds easy right? Well actually on the first few levels it is - once you learn how to control your ship. At first glance, it would appear that to move the ship you move the mouse (the same way you control the arrow in the Finder) but as soon as you

make the first movement of the mouse you realize something about this is vastly different. You see, in Crystal Quest you do not control the position of your ship at all. Instead, you control the DIRECTION and SPEED in which you are moving. The faster you move the mouse, the faster your ship moves in that direction. Want to stop? Then you must move the mouse the other way until your ship changes direction. Actually stopping entirely is quite difficult, but this really isn't a problem, because if you don't keep moving, you're gone. Being able to control the ship well takes a lot of practice, but this is part of the fun, and the first few levels are tame enough that you will be able to develop some skill before you really need it. Also, I haven't had the nerve to play it this way for long, but if you set your control panel to high speed mouse, it becomes a whole different game!

As you move about collecting your crystals, you will soon discover that there are several nasties whose purpose in life is to keep you from collecting crystals. Since this is the case, you will be happy to know that you have two weapons for your defense. The first is a gun which never runs out of ammunition (it's a good thing!) and which you fire by clicking the mouse button. You may be wondering how you can both control your velocity and aim the gun with just the mouse. It's really quite simple - the gun only fires when you are moving, and it only fires in the direction you are moving. So, while you are trying to run for you life away from the numerous nasties which haunt you, you must move toward them to be able to shoot at them. This keeps the game interesting, and takes a lot of practice to be able to do well. The second weapon is ultimately effective. No matter when you use it, it will completely destroy all of your enemies which are currently visible. It is, of course, a smart bomb. You start the game with three bombs, which you may detonate at any time during the game by pressing the space bar. There is no limit to how many bombs you can use on a level, but obviously the supply is not endless. You may collect more bombs while you play the game, if the computer chooses to place some on the screen. This is done at random, just like the crystals, so each game is different, and you never can tell. One word of advice here: don't use the bombs on the lower levels, just stock pile them as you play. To my knowledge, you can have as many on reserve as you want, and believe me, you will need them on the higher levels!

You begin the game with three ships, and are awarded a new ship every 15,000 points up to level eleven, every 4,000 points up to level twenty-six, and every 75,000 points thereafter. This makes it important to shoot as many nasties as possible, because each has a specific point value. There is also a time bonus if you complete the level quickly enough, and a Bonus Crystal which appears occasionally and awards you any number of points if you run into it before you shoot it.

Now that you understand how to play, and what weapons you have at your disposal, I will introduce you to the nasties. Each nasty has a unique personality. Some just wander around the screen and if you bump into them you're history. Others take a more aggressive approach and fire a few bullets now and then. Still others emit a shower of small bullets or a laser beam which extends the length of the screen. The one called Pest moves about dropping mines which are not affected by bombs and only leave when you die. This can make it impossible to clear a level without sacrificing a life. Some of these guys are harder to kill than others. Annoyer, Worrier, Pest, Zarklephaser and several others are all destroyed by a single shot. Dumple, on the other hand, requires several shots (I believe the exact number varies depending on his mood) to kill, but awards you more points. Trimpet will hibernate for a few seconds when shot, only to spring back into action later on.

Perhaps my favorite nasty is the one called Shrapwarden. He moves around the screen very quickly, never fires a shot, and is not too aggressive. If you shoot him you receive 10,000 points which is very nice. There is one catch however. When hit Shrapwarden explodes and sends an ever-widening circle of shrapnel across the screen. If you are any where near him when you hit him, you're gone.

Parasite is the one I dislike most of all. He doesn't show up until the more advanced levels, but when he does, he's a real pain. The box describes it as "A bit like someone nailing your shoes to your feet really." and I wholeheartedly agree. Parasite never shoots, doesn't wander about in strange patterns, and doesn't explode when you shoot him. He even dies on the first shot. So what's the big deal? Parasite's only job is to follow you until you're dead. As soon as he appears on the screen, he makes a straight line for you and the only thing you can do is run or shoot him (see my description of the gun above to find out how easy that is). You are faster than he is, but you would have to be crazy to go flying around a screen full of mines and "nasties" (this is Casady & Greene's word for the little critters you play against) which outnumber you by about twenty or thirty to one! I

hope you're crazy, because that is the only way to beat this guy. There are a few other surprising characters, but I'll let you find out about those on your own.

This game is based on a great idea and the high speed animation (the box claims it's faster than the color Mac II version) and the 300K of incredible digitized sounds make it real winner! This one is well worth the price, and I've gotten my money's worth out of it many times over. If you like arcade games with fast action, graphics, and sound which truly take advantage of your GS's hardware, THIS GAME IS FOR YOU!

The thing I enjoy most about this game, aside from all I mentioned above, is the copy protection scheme. You may make as many copies as you like (for personal use ONLY of course), and you can make them with any standard copy program such as the Finder. You can install the game on your hard drive with no problem, and it even runs under GS/OS so the loading is pretty fast. You probably think it has a key disk protection, right? Or maybe it asked you for a word from the manual every time? Nope. There isn't even a manual at all. All the instructions are on the disk and are accessible from the game's main menu by pressing <return>. They tell you all you need to know, and even include full color pictures. So you say, "I thought you said it had a copy protection scheme." Well, it does, of sorts. When you first boot the game it asks you one simple question: "On your honor did you purchase this game or did someone give you a legal copy?" If you reply "Yes", then the game appears and you play. If you press "W", the definition of a legal copy is explained to you. If you reply "No", then the game returns to the Finder, or reboots. This is by far the best method of trying to keep people from stealing your work. Legitimate users are not hassled by having to keep the manual handy, insert a key disk or even play with the original (which I refuse to do unless a backup is provided free of charge). And, hopefully, the conscience of software pirates is bothered enough by the question that they will not continue their CRIME and will purchase a legal copy if they want to play. I hope to see all companies going to a similar method in the future, especially as hard drives on the GS become more common. I would like to thank Casady and Greene for providing an excellent product which we will want to play again and again, and then not making it a bother every time we boot it. I for one will be anxiously awaiting the opportunity to purchase their next IIGS offering.

Now comes the time when I am supposed to give the negative points of this game. Really, I don't have any. The game is great fun to play, does not take a long time to load, takes full advantage of the GS hardware, is not copy protected and only requires 512K RAM and one 3.5" drive! What more could we ask for in a game?
The game did crash with me on level 20 once, but I think that might have had something to do with some public domain CDA's I had installed. Anyway, it only happened once, and I've played it at least a hundred times. Also, I have heard that entering the control panel to adjust the volume results in an "Unclaimed Sound Interrupt Error" and you have to reboot. I tried to duplicate this several times, but was unable to do so. Maybe Casady and Greene found the problem and corrected it in a later release... I don't know. This really is not a major problem anyway, because the volume can be adjusted from within the program by pressing the number keys from 0 (silent) to 9 (too loud).

Overall, this game is an excellent value, and like I said, it probably will become a classic. Crystal Quest is probably the most addicting game I have ever played (along with Arkanoid) and I think it will be a long time before I become bored with it. By the way, the Mac version of the game has a Critter Editor now. Hmmmm... that would be nice!

Rocket Ranger - retail $49
Not Copy Protected.

Cinemaware Corporation
4165 Thousand Oaks Blvd.
Westlake Village, Ca., 91362

Reviewed by Steven W. Disbrow

Rocket Ranger is the latest and possibly best, in Cinemaware's line of 'Interactive Movies'. In Rocket Ranger, you are an Army Scientist stationed at Fort Dix in 1940. You are sitting at your desk when suddenly a blinding flash of light engulfs the room! When your eyes clear, you find a Rocket Pack (filled with Lunarium fuel), Wrist Computer, Secret Decoder Wheel, Radium Pistol and pamphlet lying on your desk. Inside the pamphlet is a message written to you by someone who claims to be from 100 years in the future! According to this message, the Nazis will shortly kidnap a prominent American scientist, Dr. Otto Barnstorff, and his daughter, Jane. The Nazis will then use Dr. Barnstorff's knowledge to escalate the war in Europe and eventually conquer the world! These items have been sent to you in the hope that you can use them to protect the Barnstorffs and turn the tide against the Nazis. As fantastic as all this seems, the Barnstorffs are kidnapped that very night! Strapping on the Rocket Pack, you launch yourself into the sky in an effort to change history, little realizing that your battles will carry you around the world and eventually, to the moon.

If you think that sounds like a great game, you're right. Rocket Ranger **is** a great game. This one has so much going for it, it's hard to pick a starting place. The music (composed by former *A+* editor Bob Lindstrom), for instance, really helps to set the mood for the game and is some of the best I've ever heard, computer or otherwise. The graphics are colorful and super-sharp. The first time you fellas get an eye-full (and it is an eye-full!) of Jane Barnstroff, you'll find yourself wishing for some REAL 'Interactive Movies'! As for the game play itself, Rocket Ranger has just about everything you could wish for.

In the strategy department, we have the War Room at Fort Dix. This is where you dispatch your spies around the globe in an effort to learn the locations of hidden Nazi bases. These bases contain either rocket parts or Lunarium fuel. If you capture enough rocket parts and enough Lunarium fuel, you can assemble a rocket and fly it to the source of the Nazi's power, the moon. Another good reason to find the Lunarium is that your Rocket Pack runs on Lunarium (and lots of it!). Spies can also organize partisan forces in a country. These forces can buy you valuable time while you are trying to capture rocket parts and Lunarium. All War Room activities take place on a beautifully drawn world map that depicts exactly how the war effort is going. Once you find a base and decide to "visit" it, you dial up your destination on the Secret Decoder Wheel and load the indicated amount of Lunarium into the Rocket Pack. The Secret Decoder Wheel, while slightly annoying at times, actually adds to the 1940's atmosphere of the game and gives Cinemaware a good method to protect against software theft without having to actually copy-protect the disks. Arriving at your destination, you are faced with one of five foes: a Zeppelin filled with hydrogen and a missile launcher, a squadron of ME-109 fighters, a field full of antiaircraft guns, a jungle temple full of machine guns, or a big, burly, foul-tempered Nazi guard. The Zeppelin, ME-109 fighters, antiaircraft guns and jungle temple are all fairly traditional shoot 'em ups. The most innovative thing here is that, in the Zeppelin, ME-109 and antiaircraft gun segments, you have a first person view of the bottom of the Rocket Ranger's feet as he flies directly at his enemies! The animation and sounds in all of these segments is absolutely top notch. The Nazi Guard, however, is the most fun to deal with because you have to literally beat him into submission. You can reason with him if you like, but I find that an uppercut is the best way to convince him that you don't want to give him your autograph.

Unlike some games that have a lot of really great buildup only to have a wimpy ending, the ending of Rocket Ranger is quite satisfying even if it is a little sudden. Best of all, it looks like there's going to be a sequel. I hope my favorite Nazi punching bag is in that one too....

Before you get the impression that this game is perfect, let me throw an uppercut or two at Cinemaware. Almost all of the problems with this game are things that could have been avoided if the producers knew their IIGS basics just a bit better. The first thing you'll notice is that Rocket Ranger is **SLOW**. Now, I know that the IIGS is a slow machine to begin with, but I ran Rocket Ranger from both a ram disk and a Hard Disk **with** a TransWarp GS installed and the silly thing is still so slow that, if it were not for the excellent plot and game play, I would have tried to get my money back. After seeing games like Thexder and The Bard's Tale, I find it extremely difficult to buy the argument that the hardware is the reason for all of the unbearably slow IIGS software out there. The main

reason that Rocket Ranger is so slow is that it does not run under GS/OS. In fact, if you start up your computer with GS/OS and then try to run Rocket Ranger, Rocket Ranger will actually *reboot* your computer and force it to start up using a version of that wonderful old sloth, ProDOS 16!

Rocket Ranger is also what I call Hard-Drive Hostile. While the disks themselves are not copy-protected, the disks that you copy them to MUST have the exact same names as the originals! Also, the two disks have files/folders with duplicate names! This means that you MUST run Rocket Ranger from two disks; therefore, you can't just put it in a folder on your hard drive and run it from there. Hopefully Cinemaware can get it's act together on this one and fix it in future games.

The actual game itself comes up short in just a few places. First of all, the keyboard controls are basically useless. If you want to win this game, use a joystick. Second, the manual states that you can skip certain music and animation sequences by pressing the Open-Apple key or a fire button on the joystick. As near as I can tell, this only works in one place (the animation of Rocket Ranger flying from country to country). Rocket Ranger is also memory stupid. That is to say, it apparently does not take advantage of any memory over the 768K minimum that it needs to run. If it were running under GS/OS, the built in disk-caching would have been an easy way to use any extra memory and would have sped things up quite a bit. The last, and most inexcusable, problem is that there is no quit option. You have to restart the computer to exit Rocket Ranger. Talk about lazy...!

All in all, this game is Cinemaware's best IIGS effort to date. If I had to, I would buy it again. Fun. Fun. FUN! I especially enjoy beating up on the Nazi guards. If you don't mind a bit of a wait, get this one.

Silpheed - retail $39

Sierra On-Line, Inc.
Coarsegold, CA 93614
(209) 683-6858

Reviewed by Steven W. Disbrow

A Sequel To Thexder?

Silpheed is a new arcade game that was originally designed by the folks that brought us Thexder. That is where the similarity ends. The basic premise is that a group of interplanetary terrorists has gotten hold of the new and ultra-powerful battleship, *Glorie*. YOU have been selected to go up against these vacuum villains in the new *Silpheed* fighter prototype. You must fight through 20 different levels of defenses to reach your showdown with the terrorists evil leader, Xacalite. This is NOT easy to do....

Listen To The Music...

The first thing about Silpheed that grabs you is the soundtrack. The music used is very original and adds greatly to the feel of the game. The music flows smoothly from one screen to the next. In fact, this is the first game I've seen that does not suffer from the horrid 'start-the-music-stop-the-music' problems that just about all IIGS games seem to have.

If you don't like the music, you can, of course, turn it down using the '-' key. You can even turn it off completely, if you want. Silpheed offers a very nice set of commands for controlling the game, including the ability to continue with either the last level you were at or the highest level you have made it to in this session. If only Arkanoid could do that....

The game itself is fast and furious. Enemies hurtle down the screen towards you in a semi-three-dimensional fashion. Your ship can move either towards or away from (and sideways, of course) the approaching enemies as you attempt to blow them to bits. Some enemy craft contain power-up items that repair your shields or give you bonus points (so useful in deep space!) or new weapon capabilities. Silpheed steps outside the usual "shoot 'em up" mentality by allowing you to decide which weapons (from a list of the ones you have earned) you want to use before the start of each level. Some weapons shoot to the side, some fire two shots in a 'V' pattern and others just blow stuff up. This adds a small amount of strategy to the game and can help make the odds just a bit more even on any given level.

The game disks are not copy protected. Sierra even includes instructions on how to install the game onto a hard disk, if you have one. I can only hope that more and more games will follow this example.

Now for the bad news...

Actually, the first thing you notice about Silpheed is the fact that it seems to take forever and a day to load. The wait is not so bad if you have a hard drive or a TransWarp GS, but if you have only one disk drive, make yourself a TV dinner. Yawn.

When the game does finally finish loading, you are presented with a graphic of an enemy fighter. You must look up this graphic in the center of the manual ("The Silpheed Enemy Flight Guide") and then type in the name of the fighter in order to be allowed to play the game. Generally speaking, I don't mind off-disk copy protection; but only if it is done in such a way that it adds to the play of the game. The "Flight Guide" is easy to find and use, but it certainly does not add anything to the play of the game.

Sadly, the best thing you can say about the graphics in Silpheed is that they are very mediocre. The Fortress levels are particularly bad and appear to have been designed for an old Apple IIe Hi-Res game. There are a few pleasant surprises here, but certainly not enough to support the claim of "a mind-boggling display of graphics...."

All In All...

Silpheed just isn't worth the money that is asked for it. There just isn't that much original stuff here to justify the $39 retail price tag that it carries. After one or two levels of Silpheed you find yourself saying, "Cute. Really cute." and wishing you'd saved your money. Still, if you like arcade style games, be sure to ask your dealer if you can test drive Silpheed. You may find something in it that I could not.

The Duel: Test Drive II - retail $45

Accolade
20813 Stevens Creek Blvd.
Cupertino, CA 95014
(408) 446-5757

Reviewed by Wayne Packard

If you have been anxiously awaiting the arrival of Accolade's latest offering to the IIGS arena, The Duel: Test Drive II, you'll be happy to know that it is now readily available on dealer shelves and, of course, by mail. You will probably also be impressed by the pictures on the box, and by the excellent graphics and sound with which you are presented while playing the game. However, there are a few things about The Duel that you may not be too happy about. Before I get into all that, let me just tell you about the game.

When you boot the Test Drive II Master Disk you are presented with a menu giving the various options for the game. You may choose to race against the computer or against the clock. You may also decide which car (there are two choices on the Master Disk) you will drive, and which the computer will drive. The car selection screens have wonderful graphics of each car, as well as a chart showing some vital statistics such as: engine type, transmission, acceleration, and approximate price. These help to enhance the realism of the game, and are meant to serve as a criteria by which to choose your car. You may also choose where you would like to race, but unless you have purchased an additional scenery disk, you only have one choice. The last menu option allows you to create what Accolade calls a Play Disk on which you can install various cars and courses from the Master Disk or the two currently available add-on disks which are (of course) sold separately. The menu is completely graphic and quite easy to use. Selections can be made using the joystick (if you have one) or the keyboard. One interesting (read annoying) note about the menu is that the computer pictured is an Amiga 1000! I'm not sure why this is, and it really doesn't make any difference, but it would have been nice if they had taken the time to put a IIGS or at least a more generic-looking system there. After making your selection, you are presented with an impressive looking scale on which you rate your talent in the game. Don't be too overconfident to start with, this isn't as easy as it looks.

After you choose your skill level, the game loads and you are presented with an impressive looking instrument panel (different depending on which car you have chosen) and a windshield through which you can see the open road ahead. Also visible inside the car are your radar detector (very handy for this sort of driving) and a set of dots which represent your car, your opponent's car, and the Police car. This is meant as sort of mini-radar which allows you to track your position in relation to that of the others. This also gives you some idea of how far you have left to go in the race. It is from this screen that the entire game is played, with the scenery roaring by on either side.

The game play is quite simple, all you have to do is drive your car as quickly as possible along the race course, negotiating the curves, and avoiding maniac drivers and stubborn trees. Sounds easy right? But at 200 MPH nothing is easy. You may play the game with the keypad or a joystick, but I found the joystick to be almost a necessity. Not only does it add to the realism, but it is difficult to accelerate, shift, steer and brake with the keyboard. The game is very responsive to input, and the animation is fast and clear. I had no complaints at all with this portion of the game, and it would be truly AWESOME to play with a steering wheel. (Hmmm... maybe I'll look into that!)

As you drive along enjoying the scenery and avoiding the other drivers, you will notice various road signs along the way. One such sign indicates that there is a gas station ahead. Pay special attention to this one, because soon you will see two white lines across the highway. You MUST stop between these two lines, so that you can refuel your car. If you fail to do this, you will soon run out of gas and the game will be over. While you are stopped you will also be presented with some interesting facts about your driving and that of your opponent. Things such as average speed, time taken + penalty time, and overall score. The gas station is the finish line for each individual leg of the race. After looking over your performance, and enduring some smart remark from the computer if your not quite up to par, you return to the road to try again. This continues until you complete the race or run out of lives. You lose a life every time you hit another car or a large obstacle, blow up the engine by accelerating and not shifting (really smart!), or severely damage the car by hitting too many rocks, signs and potholes along the way.

After the race, and if you're good enough, you will be asked to enter your name and it will be recorded on the TOP GUN LIST for that particular group of scenery.

cars, or looking at the same old stretch of road, you may want to invest in some add-on disks. There are two currently available from Accolade, Supercars (which provides five more ways to travel from Porsche, Lotus, Ferrari, Lamborghini, and Chevrolet), and California Challenge (which provides seven additional roads on which to race).

If you wish to use these scenery disks, you will want to make a Play Disk to minimize your disk swapping. When you create a Play Disk, you install only the cars and scenery that you want (or as many as will fit) on a floppy, or if you have one, a hard drive. Accolade recommends that you create a Play Disk, and so do I. If for no other reason, just to avoid wear and tear on the Master. I found the installation procedure to be fairly straight forward, and the instructions are clear. If you have only one disk drive, however, be prepared for a lot of disk swapping and a long wait. Keep in mind though that you will only have to do this once for each play disk and that will greatly reduce disk swapping while actually playing the game. One thing about the installation process that could be improved is the fact that you must format the floppy before booting Test Drive II, and you must remember the disk name EXACTLY. The installation could be greatly improved by providing the ability to scan the drives and give you a choice instead of having you type in the entire pathname from memory.

By now I am sure that you are all wondering what could possibly be wrong with this game. If I had read the above description, I would have probably run right out and bought it. I am not suggesting that you should not do this, I just think you should know a few things about The Duel, and maybe you should let Accolade know how you feel about it. So just sit back, take a deep breath and listen to this....

First, lets talk about booting times and operating systems. Perhaps many of you remember the old IIGS specific operating system known as ProDOS 16. This was the operating system that was released with the original IIGS, and it amounted to nothing more than a shell which ran on top of ProDOS 8. ProDOS 16 was NOTORIOUSLY slow, and many people who used the IIGS never booted into it (choosing rather to use ProDOS 8) and many potential buyers of the IIGS chose another machine because of it. Then Apple (in its infinite wisdom) sensed a need for a more powerful 16 bit operating system for the GS and viola: GS/OS was born. Apple began distributing GS/OS as system disk 4.0 in the fall of 1988. News of the tremendous speed increase spread quickly, and by now I hope that no IIGS user is still enduring ProDOS 16. However, evidently some software companies didn't hear about this great new operating system, and they are still distributing ProDOS 16 (and its snail pace) with their games. I'm sorry to report that this is the case with Accolade.

When you boot the Test Drive II disk, you are greeted with that dreaded message "ProDOS 16... Copyright Apple Computer, Inc.". Then you wait... and wait... and wait... I used my stopwatch to time several different operations in The Duel, and I got some disappointing (although not surprising with ProDOS 16) results. My tests are admittedly not as accurate as they could be, but they are adequate in a situation like this. Even if you allow for a ten (10) second variance (which is highly unlikely) this test will give you some idea of the performance of Test Drive II. I found that to warm-boot the disk, from the system beep to the title screen took about 2 minutes and 29 seconds! And that is just to the title screen. After watching a very impressive graphic display and hearing some awesome music (or pressing a key to skip it) we proceed to the menu screen. From the title to the menu takes approximately 30 more seconds. Then, after making our selections we leave the menu and head for the actual game. From the press of the joystick button to the point where the game begins takes about 1 minute and 19 seconds. This gives us a total waiting time of approximately 4 minutes and 18 seconds!! This is completely unnecessary, when you consider other games (such as Crystal Quest) which require a fraction of this time to load, and yet have the same awesome graphics and digitized sounds. The massive delay is clearly due to the use of ProDOS 16 which all will admit is outdated. I would have preferred to wait another month for this game to be released under GS/OS rather than waiting for it every time I want to play.

Perhaps you are thinking "Well, I guess that 4 minute wait at the beginning is not so bad, I'll just start it booting and go do something else for a while." This would seem like a reasonable response, but the problem is simply that the waiting does not end with the loading process. As you play, you lose lives for various things as I mentioned before. When your lives are all gone, the game is over and you are returned to the menu to select again. The process of returning to the menu requires about a 1 minute and 43 second wait! Then after choosing your settings (even if they are exactly the same) you must wait 1 minute and 19 seconds for the game to return to the playing

and 19 seconds for the game to return to the playing screen!! If you are a beginner, and not very good at the game yet, you can use up all your lives quickly, and therefore you spend a LOT of time waiting for the game instead of playing it.

Even if you do manage to get pretty good at driving your car and avoiding road hazards, you must stop periodically along the way to "refuel" and see how well you are performing. After a while I was finally able to complete the first leg of the race, and I pulled in to the gas station. The disk light came on and I waited.... Approximately 54 seconds later I was presented with a great Super Hi-Res picture of the station, and then with a screen full of data about my average speed, time, and score as compared with the computer's. I click the joystick button to continue and a short minute and 23 seconds later, I'm back in the race. I was never able to complete the second leg of the race (like I said, this isn't easy), but I would guess that the waiting just keeps showing up. Maybe Accolade will release this game again, with free upgrades of course, and use the faster GS/OS operating system. We can only hope.

Aside from the speed problem, which is my major complaint, there were a couple of other things as well. First, the package states that the game requires 512K. My machine has 1.25 megabytes of RAM, so I thought it would be all right to leave my little 64K RAM disk set aside. How wrong I was! I booted the game four times, enduring about half of that initial wait each time, only to be greeted by a message stating that my memory was fragmented and that I must reboot. I tried cold-boots and warm-boots... nothing helped. Then I remembered my RAM disk. I went into the control panel, set the RAM drive to 0K, and cold-booted. This time I was allowed to sit through the rest of that wait, and the game booted. I consider it a major problem when a program that only requires 512K forces me to remove a dinky little 64K RAM drive from a 1.25 megabyte system.

Another thing I feel rather strongly about is that I was unable to make a working backup copy of the Master Disk. I understand that a software author has a right to protect his product from theft, but there are better ways of protecting programs than just flat out copy protection. For example, why couldn't Accolade have used the key disk protection scheme of Arkanoid (still a little annoying, but you don't have to worry about zapping the master), or the Sierra method of requiring you to enter a key word from the manual, or better yet the direct to the conscience approach used in Crystal Quest? It is not fair to the consumer not to allow some form of backup protection against the inevitable glitches involved when using computers. Of course Accolade states in the manual that you may PURCHASE a backup disk from them for a small charge. Why should you and I pay Accolade extra for something that Sierra, Taito, and Casady and Greene are giving us for nothing? This is something to really think about when you go shopping for a new software package. To make matters even worse, you must boot the Test Drive II Master disk every time you play, and it must NOT be Write Protected. Leaving your only copy of an expensive game in the disk drive with it write enabled is just asking for trouble. By the way, I tried protecting it... it crashes while loading.

My last complaint is about The Duel's incompatibility with the GS/OS Finder. In the documentation, it is mentioned that you may create a play disk on your hard drive if you have one. A clear explanation is given, and you are instructed to boot from the hard drive, insert the Test Drive II disk into the drive, and click on the ProDOS icon to launch The Duel. I tried this with both GS/OS 4.0 and GS/OS 5.0, and each time the system crashed with the message: System Error 0201 has occurred. The only option - RESTART. This boils down to sort of a Catch-22 situation. No one I know of who has a hard drive still uses ProDOS 16, and no one in their right mind would boot System Disk 1.3 from a floppy and then launch Test Drive from there! That would take about twice the boot time! I assume that if you wanted to use the old system disk you could successfully launch the program from the Finder, but we will have to take their word for it because I didn't feel up to trying it.

Overall I think that The Duel: Test Drive II is an excellent game surrounded by an outdated operating system. As a race car driving simulation/game this is an excellent choice. The animation is smooth, the graphics are great and the sound plays an excellent supporting role. But be warned about the long boot times, minor annoyances and operating system incompatibilities before you sink your money into this game.

(Designed To Stir Up Controversy And Increase The Circulation)

Compiled By Prof. G.S. Gumby

Our AppleWorks GS wish list includes:

1) The ability to include Encapsulated PostScript graphics in page layout documents.
2) Honest to goodness What-You-See-Is-What-You-Get capabilities that would compensate for the GS's screwy 640 mode pixel aspect ratio.

Who says Applied Engineering (AE) isn't moving into the Mac market? AE does, that's who. So, how do you explain the fact that when one of our contributors made job inquiries at AppleFest, the first question he was asked was, "How much Mac programming experience do you have?" Upon confessing that he had none, he was told that, "We're only really interested in Mac programmers right now. Unless... Are you left-handed by any chance?" Makes your brain hurt, doesn't it? Can AE survive in the relatively **low cost** Mac market? Stay tuned....

On August 15th, Apple began shipping a new model of the IIGS. The only differences listed in the dealers bulletin we saw were a new logic board, a full Megabyte of memory on the motherboard and 256K of ROM. IIGS's currently in dealers hands will simply be equiped with an extra 768K of memory on the Memory Expansion card (for a total of 1.25 Meg). No upgrades were mentioned. The price will remain the same. Sounds like an interim machine to us. Possibly a smoke screen to cover the new Apple II we expect to be introduced at AppleFest in San Francisco (anyone remember the System Disk 3.2/System Disk 4.0 smoke screen from about this time last year?).

So what will the new Apple II be like? Well, our best guess is that it will be the long awaited bridge between the Apple II and Macintosh lines. We call it the Apple IIM and look for it to replace the Macintosh Plus. It should run all Apple II software, and most low end Macintosh stuff. Just a dream? Probably. A machine like that just makes too much sense. Maybe Compaq will build it. Nah!

We have a rumor here that Electronic Arts has suspended all Apple IIGS development. Reportedly, this announcement was made by the president of EA, Trip Hawkins, during a recent AppleLink - Personal Edition conference. Our man on the spot, B. Walker, is reported to have suggested to Mr. Hawkins that this was a rather, um, short sighted business move. Of course, we agree with Mr. Walker. If you would like to let Mr. Hawkins know how you feel, write to him at:

Trip Hawkins
c/o Electronic Arts
1820 Gateway Dr.
San Mateo, CA. 94404
(415) 571-7171

In other bad news, Infocom says that it will not develop GS specific versions of any of thier new graphics based games. Apparently, Infocom feels that they can make more money by developing only for the IIc/e. I guess we gotta let these guys have it too.... Vent your anger towards:

Infocom
125 Cambridge Park Dr.
Cambridge, MA. 02140

Waiting for TML Pascal II? Don't hold your breath. Apparently, TML is having all sorts of problems with System 5.0. The nice lady on TML's end of the phone said that management would not even give her a hint as to a new release date for the product.

Speaking of things long overdue, Seven Hills Software hopes to have the new Graphic Writer III finished in time to show at AppleFest in San Francisco. Apparently they want to get ALL of the bugs ironed out before they release the product. If only more companies had that attitude!

One thing not to look for in GraphicWriter III (or just about any other program) is the ability to import AppleWorks GS files. According to several folks we've talked with, Claris just isn't being very cooperative in that area.

Also on the wish list... A IIGS dust cover that would take into account that just about every IIGS is topped off with a fan of some sort.

Well, that's more than enough for this time! If you have a Rumor, Wish or Blatant Lie that you want to circulate about the Apple IIGS, send it on a post card to:

"Rumors, Wishes And Blatant Lies..."
c/o Ego Systems
POB 15366
Chattanooga, TN. 37415

Each post card will be entered into a drawing (which we will have every other issue) for a 2400 Baud External Modem with cable. Enter as often as you like, Mrs. Gumby collects post cards and stamps you see....

Letters

(continued from inside front cover)

Sirs,

We invented the first IIGS internal hard drive, our prices are lower, our service people are nicer and we have a toll free support and order number (800-346-0811). Aren't you going to mention us even once?
Applied Ingenuity
WeDontGetNoRespect, CA.

No. - *Editor*

Sirs,

It's a little known fact, but we used IIGS's (running Sticky Bear CAD) to design our next machine. Just thought you'd like to know.

S. Jobs
Limbo, CA.

Sirs,

GS/OS/2! Has a nice ring to it, don't you think?

B. Gates
FarToRichForHisOwnGood, WA.

Sirs,

How do you get AppleWorks to print 3-up address labels? Gee, I can't remember. But, hey! If you go right out and buy a LaserWriter IINTX and a 60 Megabyte hard drive to go with it, I can show you how to do it with AppleWriter!

The Guru
RapidlyLosingSightOfHisAudience, AZ.

"What my 'GS' means to me..."

When Apple first rolled out the IIGS, they told us that the 'G' was for Graphics and the 'S' was for Sound. For the first few months that I was using it with my old Apple //c software, I thought it stood for "Great Speedup!" However, after I began to use packages like Multiscribe GS and DeluxePaint II, I began to notice that it really stood for "Grievously Slow!" Along the way from then to now, I've heard a lot of different meanings tacked on to the 'G' and the 'S', but, none of them seem to really tell the whole story. That's where **you** come in. Send us your best answer to that burning question, "What does the 'GS' in IIGS ***REALLY*** stand for?" The person that sends in the very best answer will win a copy of one of the following books (winners choice):

The IIGS ToolBox Reference: Volume I
by Apple Computer, Inc.
The IIGS ToolBox Reference: Volume II
by Apple Computer, Inc.
Exploring GS/OS and ProDOS 8
by Gary B. Little.

The Rules:

1) Send your entry(s) on a post card to the following address:
   "What my 'GS' means to me..."
   c/o Ego Systems
   P.O. Box 15366
   Chattanooga, TN. 37415
2) Entries must be received no later than October 15, 1989.
3) Be sure to indicate your prize choice and a phone number we can reach you at (an address will be fine if you are paranoid about stuff like that).
4) Only 1 prize will be awarded, but Honorable Mentions will get their names and entries printed along with the winner.
5) No naughty entries will be considered for the prize, but they will be greatly appreciated and laughed at by all of us here. Heck, maybe we'll box 'em up and send 'em to Mr. G. and Mr. S.!

Every issue, the editors here at *GS+* pick out a product for the Apple IIGS that you should avoid like the plague. Then we write about it and put what we've written here in the back of the magazine so you can find it easily, read it, and not have to buy the magazine. But, with the money we've saved you, you really should buy the magazine you know.

HyperStudio - Retail $129
Not copy protected.

Program written by Ken Higgins, Michael O'Keefe & Dave Klimas
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El Cajon, California 92020

Reviewed by Steven W. Disbrow

Back in May, at the Boston AppleFest, Roger Wagner Publishing, Inc. **finally** released HyperStudio. I was one of the first people in line and bought my copy for the low, low introductory price of $99. I was thrilled! Later in the hotel, I tore open the box and began to read about the wonders that awaited me in the wonderful world of Hyper Media. The first thing that greeted my eyes was a little yellow flyer that screamed, "**Read Me First!!**" The first sentence of that little yellow flyer said, "The HyperStudio software in this package is a preliminary version of the system." Let me translate that for you, "You have just spent $100 on a piece of unfinished software. There are enough bugs in this software to choke an aardvark." I was a bit disappointed, but, I was determined to give it a try.

Returning home, I installed HyperStudio on my hard disk and began to play with it. It bombed. Again, I was disappointed. So, I tried reading the manual. The first example in the manual tells you how to make a sample HyperStudio application (called a stack). However, the little yellow flyer stated quite clearly that the HyperStudio software was in such a sorry state that the instructions in the manual would not work. Thus, a set of work-around instructions were provided in the little yellow flyer. I tried those. It bombed.
Let me get right to the point: **Every single time I used HyperStudio, it bombed.**

To be fair, Roger Wagner Publishing, Inc. has provided me with one free update and has promised two more are on the way. I have managed to use the updated version of HyperStudio one time that it did not bomb. I have shown HyperStudio at my Users Group three times. It has bombed each time.

Apparently, it is possible to do things with HyperStudio. I have seen quite a few HyperStudio applications become available on some of the national on-line services, so people are using it.

But what really ticks me off is the fact that not **one** of the current Apple II magazines has bothered to mention the fact that HyperStudio bombs just about every time you run the thing! One even went so far as to give it an editor's award as the most significant new Apple IIGS product! The next month, HyperStudio was their cover story. Again, there was no mention of the rampant bugs and constant crashes. All we were told was what a great concept Hyper Media is an how HyperStudio was the first such product for the IIGS. Even though the IIGS market is a little soft right now, there is no reason to give good press to bad software.

I **want** to like HyperStudio, but I can't. In it's present form, HyperStudio is an unfinished product and should not have been released. This is especially disappointing when you consider the fact that Roger Wagner Publishing, Inc. is one of the oldest and most respected names in the Apple II market.

So, the bottom line is that I can not recommend that **anyone** purchase HyperStudio. While HyperStudio is one of the most exciting products to come along for the IIGS, at present, it is unfinished, unstable and, for the most part, unusable. When Roger Wagner Publishing, Inc. gets us the third upgrade, we will publish a full review of HyperStudio. Until then, don't buy it.