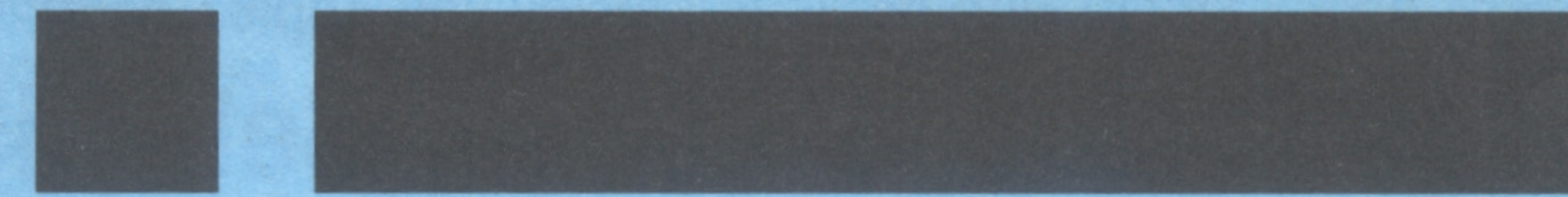


Resource Central Catalog



We're Apple II experts.

Books, software, & hardware for the entire Apple II family

Apple II users are a notoriously frugal lot. We know you like to shop around looking for the best price you can get. We have the best deal available on most of the items we sell, although we often don't have the lowest advertised price. Here are the differences between the *deal* you'll get from us and the *price* you'll get from others.

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Summer 1991

IIgs Programming

Technical Manuals

by Special Arrangement with Addison-Wesley and Apple Computer

Apple IIgs Technical Library Set--\$49.95

Plus: \$10 off Toolbox Vol 3 & GS/OS Reference Manual!

Limited Time Offer--Available only through Resource Central!

This summer, subscribers to one or more of Resource Central's publications can get all six books at the heart of the Apple IIgs Technical Library—a \$148.70 value—for just \$49.95 plus postage.

The six books include:

- | | |
|--|---|
| Technical Introduction to the Apple IIgs | Apple IIgs Firmware Reference Manual |
| Programmer's Intro to the Apple IIgs | Apple IIgs Hardware Reference Manual |
| Apple IIgs Toolbox Reference, Volume I | Apple IIgs Toolbox Reference, Volume II |

These are the official Apple IIgs manuals, which were written by Apple Computer and published by Addison-Wesley as part of its Apple Technical Library series.

The **Technical Intro** contains a full overview of the Apple IIgs, including hardware, firmware, and I/O features, a description of the computer's architecture, and a discussion of the toolbox and development environment.

The **Programmer's Intro** includes a disk and takes you step-by-step through the creation of a demonstration program called *HodgePodge*. *HodgePodge* sample source code comes on the disk you get with the book. The program has samples of creating menus, windows, and dialog boxes; of using fonts and an event loop; and of printing.

The **Toolbox Manuals** discuss each of the built-in tools available to Apple IIgs programmers and how they are used. Serious Apple IIgs programmers will find no adequate substitute for Apple's complete set of toolbox manuals. In addition to the two toolbox manuals included in the set, there is a newer, third volume that includes both new tools and updated discussions of tools introduced in Volumes 1 and 2.

Also part of this set are the **Apple IIgs Firmware Reference** and the **Apple IIgs Hardware Reference**. The firmware book discusses the routines built into the IIgs that aren't a part of the ToolBox but that make the IIgs compatible with earlier Apple IIs. The hardware manual, which is a new 2nd edition first published late in 1989, includes schematics for the Apple IIgs and a thorough discussion of

the machine's hardware.

A year ago we sold hundreds of these sets. If you bought a set last year or if you buy a set this year, you're also entitled to buy the new **Apple IIgs Toolbox Reference, Vol III** or the new **Apple IIgs GS/OS Reference** (a complete description of all the GS/OS calls and how to use them plus full information on using the GS/OS console driver for text-based interfaces) for \$10 off the regular price — an additional savings of up to \$20. This offer is available only from Resource Central and expires September 31, 1991.

Together, these eight books weigh nearly 25 pounds—over 11 kilograms. Please select your choice of shipping method and cost:

		regular price	special price
AW-018	Technical Introduction	\$9.95	
AW-011	Programmer's Introduction	\$32.95	
AW-019	Apple IIgs Toolbox Ref, Vol 1	\$26.95	
AW-006	Apple IIgs Toolbox Ref, Vol 2	\$26.95	
AW-022	Apple IIgs Firmware Ref	\$24.95	
AW-002	Apple IIgs Hardware Ref	\$26.95	
AW-SET	Apple IIgs Library Set	\$148.70	\$49.95 plus shipping

and, with purchase of Library Set (last year or now):

AW-036	Apple IIgs Toolbox Vol 3	\$39.95	\$29.95 plus shipping
AW-041	Apple IIgs GS/OS Reference	\$28.95	\$18.95 plus shipping

Shipping costs

	AW-SET	AW-036	AW-041
SURFACE			
U.S. (4th Class Book Rate)	\$7.00	free	free
Canada	\$10.00	\$2.00	\$1.00
Elsewhere	\$11.50	\$3.00	\$1.00
AIRMAIL			
U.S. (First Class, use for APO/FPO)	\$15.00	\$7.00	\$4.00
Canada	\$20.00	\$10.00	\$6.00
Central & South America, Caribbean	\$36.00	\$17.00	\$10.00
Europe	\$64.00	\$29.00	\$17.00
Elsewhere	\$91.00	\$41.00	\$23.00

Subscribers only--Offer expires September 31, 1991.

(For more information on becoming a subscriber, see page 22.)

Other Essential References

Our favorite introduction to Apple IIgs programming is Gary Little's **Exploring the Apple IIgs**. Little covers the architecture of the IIgs, its 65816 microprocessor, and its development tools, and introduces toolbox programming. A disk that includes the programs in this book is available separately.

The programmer's toolbox built into the Apple IIgs supports literally hundreds of calls. Apple's toolbox reference manuals give each call equal

time and space, which makes it difficult to find a place to start. If toolbox programming is new to you, we recommend **Mastering the IIgs Toolbox** and **Advanced Programming Techniques for the IIgs Toolbox**, by Dan Gookin and Morgan Davis. These books start at a beginning, show you which tools are most important, and have a more tutorial flavor than Apple's reference-oriented books.

The best introduction to GS/OS is Gary Little's **Exploring GS/OS and ProDOS 8**. Little's book has a tutorial style. It develops a ProDOS 8 base and then discusses GS/OS in that context. It also has a good section on the GS/OS console driver. We also have Little's disk, which includes all of the programs in the book.

Two other books of interest from Apple are the **Apple Numerics Manual, Second Edition** and **Human Interface Guidelines**. These books

Assembly Language Development Tools

Assembly Language is the most powerful language you can program in. It has its disadvantages—programs take longer to write and aren't portable from one type of computer to another—but for professional work the speed and power of assembly language programs is unbeatable. To program in assembly you need an "assembler." We carry and support the two most popular assemblers for the Apple IIgs—**Merlin 8/16** and **Orca/M**. Both can assemble programs written for the 6502, 65C02, or 65816 microprocessor.

All about Orca/M

Orca/M is more than just an assembler, it's a complete development environment. It provides a UNIX-like text-based shell for any compiler or accessory that is compatible with APW (Apple Programmer's Workshop). The shell allows you to copy, delete, move, or rename files, launch programs, create "batch" files, and more. If you want to mix programming languages (C programs with assembly modules, for example), or if you want to use the Rez resource compiler or other APDA (Apple Programmer's and Developer's Association) supplied utilities, *Orca/M* is a must.

The assembler in *Orca/M* assembles up to 5,000 lines per minute, supports partial assembly for faster turnaround, and includes an extensive macro language. Also included is a full-screen text editor, subroutine libraries, and a linker.

All about Merlin 8/16

The *Merlin 8/16* assembler comes with not only a full IIgs version, but also DOS 3.3 and ProDOS 8 versions that will run on an Apple II with 128K, and a special version that will run on a IIe or IIc that has a 65802 installed. Built-in file utilities allow copying, directory

compares, etc. The editor includes mouse control, a split screen function, and a 4,000 step undo buffer.

Merlin 16-Plus (the IIgs-only version) assembles up to 40,000 lines per minute, supports automatic partial assemblies, includes SuperMacros, subroutine libraries, and three linkers. The *Merlin* package also includes the *Sourceror* disassembler.

If you own one assembler but want to use source code that was written for the other, you either need a lot of patience or an automatic source code converter. An *Orca-to-Merlin* converter comes with the *Merlin* assembler. A **Merlin-to-Orca Converter** is available as an extra-cost option. Both converters include source code.

Both assemblers have their strengths and weaknesses. If mixing languages is more important to you, go for the *Orca/M* package. If blazing speed is what you're after, get *Merlin*. Both require a minimum of 1 megabyte memory.

Learning Assembly Language

There are a couple ways to learn assembly language. The first is the tutorial approach and for that we have a couple of books that are good for novices. The first, **Apple IIgs Machine Language for Beginners**, by Roger Wagner, uses *Merlin* source code for the examples. The second, **Programming the IIgs in Assembly Language**, by Lichty and Eyes, uses APW source code (almost identical to *Orca/M* source code). Source code disks are available for both books. We also have a *Merlin 16-Plus* source code disk, and an *Orca/C* source code disk available for the Lichty and Eyes book.

Take it apart, put it together

The second way to learn assembly language is via the "jump in and learn" route.

A big help in this area is a disassembler, which takes a runnable program and turns it into source code that you can study. The **Orca/Disassembler** is the best we've seen. Two versions are included in the package—a text version that runs under the *Orca/M* shell and a stand-alone desktop version. The disassembler automatically recognizes IIgs Toolbox and GS/OS calls to help make disassembly a snap.

The text version of the *Orca/Disassembler* requires 512K of memory and the *Orca/M* or APW shell. The desktop version requires GS/OS 5.0 and 768K of memory.

Books

CB-002	<i>IIgs Machine Lang for Beginners</i>	\$19.95
DS-005	<i>disk for this book (3.5)</i>	\$15.95
SS-005	<i>Prgrmg the IIgs in Asm Lang</i>	\$29.95
DS-008	<i>APW disk for this book (3.5)</i>	\$20.00
DS-009	<i>Merlin disk for this book (3.5)</i>	\$10.00
DS-010	<i>Orca/C disk for this book (3.5)</i>	\$20.00

Assemblers

RW-002	<i>Merlin 8/16</i>	\$99.00
BW-005	<i>Orca/M Assembler</i>	\$42.00
BW-008	<i>Merlin to Orca Source Convert</i>	\$24.00

Disassemblers

BW-007	<i>Orca/Disassembler</i>	\$30.00
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Debuggers

The ProDev Apple II debugger cards are a dream come true for assembly language programmers. Software on the cards allows you to examine your program and memory variables at any time. You can step through your program instruction-by-instruction and watch stack and register changes. You can stop your program anywhere, including when any memory address you select is accessed—something that's possible only with a hardware-based debugger. Indispensable.

PD-001	<i>Debugger for IIe</i>	\$189.00
PD-002	<i>Debugger for IIgs</i>	\$189.00

were written both for Apple IIgs and Macintosh programmers.

The **Numerics Manual** discusses the Standard Apple Numerics Environment, or SANE, in detail. The first part of the book is mainly for people who perform scientific, statistical, or engineering computations on Apple computers. The second part is for people who write these kinds of programs.

Human Interface Guidelines discusses Apple's philosophy and recommendations regarding the Desktop Interface.

The book **Apple IIgs Technical Reference** by Michael Fischer was based on early Apple documentation and isn't as strong the Little or Gookin & Davis books on toolbox programming. However, it is much stronger in its coverage of IIgs hardware, which the others don't examine.

AW-017	<i>Exploring the Apple IIgs</i>	\$22.95
DS-007	<i>disk for this book (3.5)</i>	\$20.00
CB-005	<i>Mastering the IIgs Toolbox</i>	\$19.95
CB-007	<i>Adv Prog Tech for IIgs Toolbox</i>	\$19.95
AW-026	<i>Exploring GS/OS and ProDOS 8</i>	\$21.95
DS-006	<i>disk for this book (3.5)</i>	\$15.00
AW-001	<i>Apple Numerics Reference</i>	\$29.95
AW-014	<i>Human Interface Guidelines</i>	\$14.95
MH-001	<i>Fisher: Apple IIgs Tech. Ref.</i>	\$19.95

IIgs Programming

High-Level Language Tools

Assembly language is called a low-level language because it allows you (or forces you, depending on your perspective) to program as close to the computer hardware as possible. A high-level language insulates you from the machine, thus making programming easier and your programs more compatible, yet still gives you enough control to create powerful applications.

Pascal was designed to be a language for learning how to program, though many professionals use it in their projects. Its focus on "structured" programming keeps the beginning student from learning bad coding habits. And it's also powerful enough to be used as the development platform for major (or minor) programs.

If you're beginning from ground zero, you can start with the **Learn To Program in Pascal** course from The Byte Works. This 16-lesson tutorial starts with text-based programs and works up to a simple "Break-Out" type graphics game program.

The **Learn To Program** course uses the *Orca/Pascal* compiler, which is a desktop-based ISO Standard Pascal Compiler, with extensions (fancy talk that means it's very similar to Pascal compilers on other

machines). *Orca/Pascal* provides full access to the IIgs Toolbox, support for NDAs, CDAs, desktop, and text programming. A sample disk is also included. It's filled with programming examples and complete source code. And with the included *Source Level Debugger* you can step through your programs and see exactly how the computer executes your code.

If you're an Applesoft programmer, you may like the book **Pascal for Basic Programmers**.

C is probably the "hottest" language in the computer industry today. It's in use on every major computer, including the Apple IIgs. *Orca/C* is an ANSI C compiler with complete C libraries and extensions for the Apple IIgs Toolbox. You can use *Orca/C* to create stand-alone programs, shell utilities, CDAs, or NDAs. You can use a text-based or desktop environment for program development, and just like *Orca/Pascal*, *Orca/C* includes the *Source Level Debugger*.

If you don't know C but would like to learn, try the **Learn to Program in C** course. It's just like the Pascal course mentioned above. We also have a disk with *Orca C* sample code that accompanies the book

Programming the Apple IIgs in Assembly Language.

Orca/Pascal and *Orca/C* both require 1 megabyte of memory.

Pascal

BW-001	<i>Orca/Pascal compiler</i>	\$90.00
BW-002	<i>Learn to Program in Pascal</i>	\$50.00
AW-037	<i>Pascal for Basic Programmers</i>	\$12.95

C

BW-003	<i>Orca/C compiler</i>	\$90.00
BW-004	<i>Learn to Program in C</i>	\$50.00
SS-005	<i>Prgrmg the IIgs in Asm Lang</i>	\$29.95
DS-010	<i>Orca/C disk for this book (3.5)</i>	\$20.00

Basic

Micol Advanced Basic throws open the full potential of the Apple IIgs in a friendly environment that's both easy to learn and to use. With this structured compiled language, you can write Basic programs that operate specifically for your Apple IIgs.

Also available in a version for the Apple IIe and IIc.

MS-001	<i>Micol Adv. Basic for the IIgs</i>	\$99.00
MS-002	<i>Micol Adv. Basic for the IIe/IIc</i>	\$89.00

Program Editors

Edit-16 is a new state-of-the-art text-based editor that can be used as a replacement for the editors that come with APW, ORCA, Merlin, or any other shell-based development environment. Features include pull-down menus, multiple files, clipboard support, full featured printing, mouse support, online help, search/replace, 255-character lines, real tabs, MouseText support, keyboard macros, and full error support and reporting under the ORCA and APW shells. Published by SSSI, (publisher of *Genesys*, see adjoining box.)

Rose16 is JEM software's replacement editor for the Apple Programmer's Workshop package. Written by Randy Brandt, it allows two files in memory at once, has rapid scrolling, fast macros, and your choice of APW or AppleWorks-style command sets.

SS-009	<i>Edit 16</i>	\$49.95
JE-009	<i>Rose16</i>	\$15.00

Resource Editors

GS/OS supports "resources." The use of resources can cut weeks off the time it takes you to develop desktop programs. That's because a "resource editor" will allow you to specify all your menus, windows, dialog boxes, and controls with points and clicks in a desktop environment (instead of byte-by-byte in a program editor).

Genesys is a program that creates and edits resources. You see the results of your changes on the screen in front of you, instantaneously, without compiling or linking or anything. Once you've created your program's interface with *Genesys*, it will generate *fully commented* source code for ANY language that supports Apple IIgs System Software 5.0.

Novice desktop programmers can use *Genesys* to gain insights into how desktop programs work. Non-programmers can use *Genesys* to tailor desktop programs that use GS/OS resources to their tastes. You can use *Genesys* to rename menu items or controls,

to change the shape or color of windows or controls, to add keyboard equivalents to menus and controls, and more.

Design Master, from The Byte Works, is much like *Genesys* in that it allows you to "paint" your windows, menus, etc., on the screen, and then create resource forks or source code. Unlike *Genesys*, *Design Master* won't read resource forks, even though it will create them. This means you can't edit resources with *Design Master*. However, you can save *Design Master*-created resources in a file that *Design Master* can reload and edit.

Design Master lets you visually create menu bars, windows, and dialogs in either 640 or 320 mode (*Genesys* works only in 640 mode) and it includes a unique "test run" feature that allows you to see exactly how your created objects will act in your finished program.

SS-007	<i>Genesys</i>	\$90.00
BW-006	<i>Design Master</i>	\$57.00

Ile/Ilc Programming

Applesoft and friends

Applesoft BASIC is the "universal language" of the Apple II. An Applesoft program will run on every Apple II ever built. Most Apple II programmers started with Applesoft and programming examples often use it.

We have materials suitable for teaching yourself how to write Applesoft programs and we have materials that push Applesoft to near state-of-the-art levels—incredible for a language written to run on 48K computers more than ten years ago.

Learning Applesoft

The best book for getting started with Applesoft came in the box with your computer and is called *A Touch of Applesoft BASIC*. We can't sell you one, but you should already have a copy. Another good place to start is a book we do stock called **A Bit of Applesoft BASIC**, by Margot Critchfield and Thomas Dwyer. It starts at the very beginning and is a good introduction to Apple IIs as well as Applesoft.

If the taste of Applesoft you get from one of these books pleases you, the next step is Apple's **Applesoft Tutorial**. This book comes with a 5.25 ProDOS disk with copies of the sample programs in the book.

Finally, if you intend to get serious about Applesoft, you should have Apple's **Applesoft BASIC Programmer's Reference Manual**. This book is also the one you should have if you're already familiar with computers and programming but want to learn about Applesoft.

None of these books go into much detail on what you have to do to store data on disks. If you are interested in using files from Apple's classic DOS 3.3 rather than ProDOS, Larry Wintermeyer's **Applesoft BASIC Toolbox** is the best reference available.

Applesoft was originally written well before Apple IIs were using disk drives. To this day, Apple's Applesoft manuals say very little about how to use data files on disks. Instead, this information is in Apple's **BASIC Programming with ProDOS**. The book includes a disk with utilities and sample programs.

Another good book about Applesoft programming under ProDOS is **ProDOS Inside and Out**, which was written by our own Dennis Doms and Tom Weishaar. This book also has a disk, sold separately, with the book's programs.

One other important ProDOS reference we stock is Apple's **ProDOS 8 Technical Reference Manual**. This book has a great deal of technical information on the inner workings of ProDOS, including disk, directory, and file structures and formats. Includes complete information on using the ProDOS Machine Language Interface from assembly language.

AW-040	A Bit of Applesoft BASIC	\$9.95
AW-010	Apple: Applesoft Tutorial	\$29.95
AW-021	Apple: Applesoft Prgrmr's Ref	\$22.95
AW-038	Wintermeyer: Applesoft Toolbox	\$9.95
AW-024	Basic Prgrmg w/ ProDOS (w/disk)	\$29.95
TB-006	ProDOS Inside and Out	\$16.95
DS-002	disk for this book	\$10.00
AW-023	ProDOS 8 Tech Ref (w/disk)	\$29.95

Development Tools

If you're serious about Applesoft you should know about two programs from Beagle Bros.

Program Writer is a full-screen editor specifically for writing Applesoft programs. It features search/replace, auto-number and renumber, cut and paste between programs, one-key macros, and it can list the variables you've used. **Beagle Compiler** speeds up your string-intensive Applesoft programs by a factor of 15 or more.

MD-Basic is a "pre-compiler" for Applesoft that we really like. It allows you to write programs that have many of the features Applesoft lacks, such as named subroutines (no line numbers), long variable names, IF-THEN-ELSE, REPEAT-UNTIL, and WHILE-WEND loops. It allows you to "include" files, which makes it easier to have a library of often-used routines, and to "define" constants and code macros. *MD-Basic* translates your file into standard Applesoft that can run on any Apple II and that can be compiled with the *Beagle Compiler*. *MD-Basic* itself, however, will run only on a IIGS.

You can also get help as you write an Applesoft program. Just type "HELP" at the Applesoft prompt and **BASIC Help** will provide you with an online manual for Applesoft and ProDOS. Includes command syntax, information on math and logical operations, error messages, and peek, poke and call locations. Written by a teacher who uses the program to teach Applesoft to high school students interactively, *BASIC Help* would be great for anyone trying to teach themselves Applesoft. Also useful for those

of us who know our manual is somewhere nearby but can't figure out exactly where.

BB-003	Beagle: Program Writer	\$37.50
BB-002	Beagle: Beagle Compiler	\$59.00
MD-001	Davis: MD-Basic	\$49.95
IS-002	BASIC Help	\$29.95

Applesoft Graphics

The Apple II was the first personal computer to come with a built-in color graphics capability and several books have been written about how to take advantage of this. We carry Roy Myers' **Microcomputer Graphics for the Apple Computer**.

Myers' book sticks with standard high-res but goes into more detail on the drawing routines. It includes more than eighty Applesoft programs that illustrate hidden lines, hidden surfaces, scaling, rotation, animation, and more.

AW-039	Myers: Graphics for the Apple II	\$9.95
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6502 Assembly Language

Many professional programs are written in a combination of Applesoft and 6502 assembly language. If you don't know assembly language at all, we recommend our **6502 Starter Kit**. It includes Roger Wagner's **Assembly Lines: The Book**, which is an excellent introduction to assembly language, a disk with the programs in the book, and DOS 3.3 and ProDOS 8 versions of **Merlin Pro**, the most widely used assembler on 8-bit Apples (requires 128K). The book and disk are also available separately.

Assembly Language for the Applesoft Programmer is a good book that shows how to link the two languages.

For more advanced programmers, we recommend the **Object Module Manager** from Morgan Davis of *MD-BASIC*. It's a "memory manager" for assembly language modules used with Applesoft. It supports built-in ampersand parsing, relocates modules from disk into memory, and provides a way for modules to communicate with each other.

RW-SET	6502 Starter Kit	\$39.95
RW-001	Wagner: Assembly Lines	\$19.95
DS-004	disk for this book	\$15.95
AW-012	Asmblly Lang for Applesoft Prgrmr	\$18.95
MD-002	Davis: Object Module Manager	\$24.95

DB Master Basic Programmer's Pak

The Programmer's Pak provides an easy way to access DB Master (Shareware Version 5 or Professional) data files from Applesoft. Find, add, delete, and edit records; open several files at once (up to 412 fields in all open files). Uses ampersand commands.

SE-002	Programmer's Pak	\$129.00
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AppleWorks

TimeOut UltraMacros

Beagle Bros' **TimeOut UltraMacros** lets you turn AppleWorks 3.0 into a *player piano*. You can "record" complicated keystroke sequences and play them back easily. The sequences can include AppleWorks and TimeOut commands.

In addition to recording keystrokes, you can use the Appleworks word processor to write *UltraMacros* programs. For example, *Flexical*, *Mr. Invoice*, and *GEnie Master*, which appears in our Telecommunications section, were written with *TimeOut UltraMacros*. You can write programs for your own use or you can write programs for sale. And you can license a special version of *UltraMacros* from the program's author, Randy Brandt, so that your customers won't actually have to own *UltraMacros* to run your software.

The *UltraMacros* compiler supports more than 50 commands, including IF-THEN-ELSE, recursion, PEEK, POKE, and CALL. It has a screen blanker and can execute commands at preset times. And it adds mouse control to AppleWorks. Many say this enhancement alone is worth the price of *UltraMacros*.

Beagle Bros has also published **MacroEase**, which includes a TimeOut debugging utility that allows you to see the names and values of variables in use, seven full-blown macro applications that do things

like convert word processor documents to two or three columns, write checks, and create interactive multiple-choice quizzes. The package also includes 57 sample macros you can use to do everything from eject disks to write a number as words.

BB-005	TimeOut UltraMacros	\$49.95
BB-006	MacroEase	\$34.95

Learning UltraMacros

The **UltraMacros Primer** was written by macro expert Mark Munz and published by the National AppleWorks User Group to help users get started with *TimeOut UltraMacros*. The book is the best introduction to the program available. It starts by helping you get *UltraMacros* installed and then walks you up a gentle slope all the way to advanced programming. Munz illustrates his work with useful sample macros.

Ultra-AppleWorks is a new twelve-lesson tutorial (over 100 pages) by Will Nelken designed for those who want to enhance and customize the high-performance power of AppleWorks. Well-organized, carefully written, and even funny, *Ultra-AppleWorks* offers training in using, recording, and writing macros with *TimeOut UltraMacros*.

Ultra-AppleWorks takes a step-by-step progressive approach that will lead the novice comfortably and still enhance the

veteran user's capabilities. Complete descriptions of all macro tokens are included, plus an abundance of helpful tips, useful sample macros, and reference charts. For the power macro user, a list of over 150 useful Peeks and Pokes has been included. The manual is fully indexed for ease of reference.

Ultra-AppleWorks is available in two formats: you can get the book entirely on a 3.5 disk, or for \$5 more you can get a printed, spiral bound book with an accompanying 3.5 and 5.25 disks containing the book's sample macros. Both formats include a table of contents and an index.

NA-001	UltraMacros Primer	\$19.95
MM-002	Ultra-AppleWorks (<i>UltraMacros tutorial on 3.5 disk</i>)	\$19.95
MM-003	Ultra-AppleWorks (<i>UltraMacros tutorial in book format plus disks containing sample macros</i>)	\$24.95

Ultra Awesome Macros

A package of macros for *UltraMacros* users by Will Nelkin, author of *Ultra-AppleWorks*. Includes a greeting card maker ala *Print Shop* (works best if you have *TimeOut SuperFonts*), a grammar checker, a Filecard Menu Construction Kit, and many other interesting and unusual macros.

MM-001	Ultra AWesome Macros	\$19.95
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Patch Programs

Classic AppleWorks is known for its flexibility. But not everyone knows that this flexibility extends right down to your ability to make subtle changes, or patches, to the AppleWorks program code itself. Beagle Bros **AppleWorks 3.0 Companion** makes these patches, such as bug fixes, allow extra memory to be used for both desktop and RAMdrive, change the beep sound, set the direction of the enter key in spreadsheet, overstrike cursor on startup, restore cursor position when reloading files, adjust cursor blink rate, "Yes" highlighted at prompts, use of MouseText where appropriate, move OA-Q menu, and much more. AppleWorks 3.0 only.

BB-004	Beagle AW 3.0 Companion	\$39.95
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For the Classroom

Rick Thomas. An organized approach to teaching AppleWorks. Includes lessons plans, hand-outs, quizzes, and overhead transparencies. Includes a disk with copies of all student activities. Use as-is or modify to your special needs. Successful with 7th grade through adult training.

CE-001	Thomas: ClassWorks	\$45.00
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Fantasy Football Management System

Fantasy football is a seasonal event that coincides directly with National Football League's 17-week season. Armchair quarterbacks draft teams from among professional players and decide who to play each week. Players score points based upon their performance in actual NFL games. The *Elite Fantasy Football System* is for league commissioners and includes a big, thick manual that covers everything from setting up a league to sample forms. You also get AppleWorks templates (rules, schedules, standings, and more) for coordinating the league, communications macros for capturing statistics with most popular Apple II telecom software, point scoring and league management *UltraMacros*, *Publish It* templates for a league newsletter (see page 11), samples, demo files, and forms.

FW-001	Elite Fantasy Football Management System	\$79.95
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Writeworks

Writeworks is a system of AppleWorks templates put together by professional writer John H. Hopkins. It's a project development and management system for writers. It helps you gather, organize, evaluate, and integrate information and references.

JH-001	Writeworks	\$39.95
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Publications

Resource Central publishes **TimeOut-Central**, a disk-based publication for AppleWorks 3.0 and TimeOut users. Edited by Randy Brandt and published 6 times a year, **TimeOut-Central** is the premiere publications for AppleWorks fans. See page 22 for more information.

Books

AppleWorks Classic

Both of the Appleworks books we carry have been updated to reflect changes in AppleWorks 3.0 — Ruth Witkin's **The Best Book of AppleWorks** and Arthur and Elaine Aron's **Using AppleWorks**.

Witkin writes the monthly "AppleWorks in Action" column for *inCider/A+* magazine. Her book is a combination of tutorials and hands-on samples. Its strength is a series of business-oriented samples, including cash flow management, a billing system, receivables tracking, break-even analysis, financial calculations, sales force evaluation, employee and customer data bases, mailing lists, form letters, and handbooks.

The Arons' book depends less on hands-on examples and more on a thorough discussion of each element of AppleWorks. This book includes hundreds of illustrations of the AppleWorks screen with step-by-step instructions. Like Witkin's book, it is suitable both for beginners and more advanced users.

IN-004 **Witkin: Best Book of AppleWks** \$21.95
IN-006 **Aron: Using AppleWorks** \$21.95

AppleWorks GS

As one of the authors of the product documentation of *AppleWorks GS*, Douglas Brown was in a good position to write a the premiere book about *AppleWorks GS* and he has. His book is a complete guide to using the GS-specific version of AppleWorks. The book is heavily illustrated and covers both basic and advanced applications of all six modules. The author provides numerous tips and shortcuts throughout, highlighting the product's key features such as word processing, fonts, type styles, form letters, mail merge, spreadsheets, charts and graphs, page layout, color graphics, and telecommunications. Heavily illustrated, *Using Appleworks GS* gives you everything you need to know to use this program.

AW-027 **Brown: Using AppleWorks GS** \$19.95

AppleWorks Add-Ons

Randy Brandt is a software author who has been associated with Beagle Bros for years. He has written several *TimeOut* packages, most notably *UltraMacros*, which you can read about on the previous page. He was a member of the Beagle team that wrote AppleWorks 3.0 for Claris. And he's editor of **TimeOut-Central**, our publication for TimeOut and AppleWorks users (see page 22).

Brandt is also the brains and brawn behind a small Apple II software company called JEM. He and his associates have produced a number of interesting products that work with AppleWorks.

Total Control is the newest package from JEM software. It's the ultimate add-on package for the AppleWorks 3.0 database. **Total Control** gives you mastery over the Data Base REVIEW/ADD/CHANGE module. You control minimum and maximum lengths and values for categories. Categories can be defined as text or numeric and can contain powerful formulas. Information can be imported from other Data Base and Spreadsheet files, giving relational capabilities to the Data Base. A special Apple-G command lets you pick entries from a pop-up list. And there's even more.

Outline 3.0 is JEM's integrated Outliner for the AppleWorks 3.0 word processor. Like *Total Control*, it modifies your copy of AppleWorks so that the Outliner is always there when you need it. From a word processor document, you simply press open-apple+. You'll see the word "OUTLINER" at the top of the screen.

Outline supports six levels of topics and five label options, including custom (design your own). You can arrange topics in ascending or descending order, you can bump topics up or down a level, you can collapse or expand an entire outline or zoom to a specific level. Text can be added to topics and can be displayed or hidden.

Pathfinder replaces the "Format a Blank Disk" option on the AppleWorks 3.0 "Other Activites" menu. It allows you to lock, unlock, and rename files, to delete subdirectories, and to easily add and drop subdirectories to or from the current directory. The disk also comes with the TimeOut application *PathMaster*, by Mark Munz, which gives an alternate way to add and drop subdirectories.

DoubleData, by Dan Verkade, doubles

the number of categories in the AppleWorks Data Base! **DoubleData** gives you 60 categories for every record; two pages of 30 categories each so that you can set up those large Data Bases just the way you've always wanted. Press OA-J to jump to the other page instantly, or move categories from one page to another to fine-tune your layout. The 30-category barrier is history!

Randy Brandt wrote **SpellCopy** to copy your AppleWorks dictionaries to a RAMdisk at bootup for maximum spelling checker speed! **SpellCopy** also features the ability to modify AppleWorks so that your dictionaries can be on a drive other than your AppleWorks disk. This means that if not much RAM is available you can put AppleWorks on the RAMdisk, but keep the dictionaries on the AppleWorks disk.

FlexiCal, by Lester Simpson, works with AppleWorks 2.0, 2.1, and 3.0. Never miss another appointment! Too many computer calendars unrealistically require the user to be desk-bound all day. This one is for people on the go; real people like teachers and businessmen who have to take their calendars with them, daytime or night.

Written by a teacher, **FlexiCal** gives you practical daily, weekly and monthly calendars that you print as needed. The weekly and monthly calendars are automated by a special version of *UltraMacros* (included) so that you can effortlessly enter, arrange, and view everything you need to stay efficiently organized.

Mr. Invoice, by Mark Munz & Bob Martz, is a fast and easy invoicing system for AppleWorks users. Mr. Invoice uses the power of *UltraMacros* (special version included) to guide you as you enter orders. Mr. Invoice will:

- maintain a customer data base
- automatically update inventory
- automatically track backorders
- let you print to any custom form
- print on standard continuous-feed invoice forms

JE-010	Total Control	\$49.95
JE-008	Outline 3.0	\$39.00
JE-005	Pathfinder	\$20.00
JE-007	DoubleData	\$30.00
JE-006	SpellCopy	\$12.50
JE-001	FlexiCal	\$30.00
JE-004	Mr. Invoice	\$40.00

Multimedia

Multimedia software

Multimedia, also known as hypermedia, has to do with creating messages using a variety of media, such as text, graphics or art (still or animated), sound and music, and perhaps even video from a camera, videodisc player, or VCR.

The Apple IIgs, because of its low-cost color graphics, advanced sound, and ability to display video on the IIgs screen with the addition of an Apple Video Overlay Card, is the premiere multimedia computer.

Multimedia is typically used for presenting information to users who are allowed to explore the material. You can use it to create an interactive tutorial, a computerized slide show, or to develop a complete curriculum. You can use it to organize your family tree, to classify the trees growing in your neighborhood, or to teach your scout troop how to build a footbridge.

There are three multimedia packages available for the Apple IIgs. Each has its own strengths; most multimedia creators will want to use all three. They are Apple's **HyperCard IIgs**, Roger Wagner Publishing's **HyperStudio**, and Tracy Valteau's **Nexus**.

HyperCard IIgs

HyperCard IIgs is Apple's entry in the multimedia software field. It is based upon the idea of stacks of cards. Each card has a background. You can paint designs on the cards, add text fields, and add buttons that initiate actions when they are pressed.

Button actions and other stack features are controlled using a modern object-oriented programming language called HyperTalk. This is the same language used in the Macintosh version of HyperCard. Programs written for one machine will run on the other except when features are lacking on the target machine. For example, the Macintosh version of HyperCard doesn't support color, so the HyperCard IIgs color commands don't work on the Macintosh.

HyperTalk promises to be the Applesoft of the 1990s. Like Applesoft, it is relatively easy to use, easy to learn, and powerful. Unlike Applesoft, HyperTalk gives you full and easy access to the modern desktop interface.

The *HyperCard IIgs* package includes six disks and three books, including *Getting Started With HyperCard IIgs*, *HyperCard IIgs Reference*, and *HyperTalk Beginner's Guide*. It requires an Apple IIgs with at least 1.5 megabytes (2 megs or more recommended) and a hard drive or network connection.

HyperStudio

Like HyperCard, **HyperStudio** allows you to create "stacks" made up of "cards." Each card consists of a graphic background and can also hold text objects, graphic objects, sounds, and buttons.

In both programs, text objects are scrolling windows that can hold much more information than would otherwise fit on one card. You can make the text editable or read-only. The text can be part of the stack or it can be in separate files.

Buttons can be used to move to another card, stack, or program; to play a sound or a segment from a video disk; to activate an animation; or to execute an external assembly language command called an "Xcommand". Buttons can also be used to keep test scores.

Both *HyperCard* and *HyperStudio* include graphic tools for creating Apple IIgs 640-mode Super High Resolution graphics, or you can

import graphics from other IIgs programs. For example, you can use the Quickie Scanner or the ComputerEyes Video digitizer described on page 10 to create personalized graphics you can use with either program.

Both programs can also control video disk players that have an RS-232 serial port. You can play video segments on a separate monitor, or, with Apple's Video Overlay Card, on the Apple IIgs screen itself.

The difference between *HyperCard* and *HyperStudio* are that most features of *HyperCard* require the author to use the HyperTalk programming language. Most features of *HyperStudio*, on the other hand, are selected from menus and lists using the point-and-click desktop interface. In addition, *HyperStudio* requires less memory (1.25 megs of RAM required) than *HyperCard* and *HyperStudio* includes a "runtime" package that can be distributed at no charge to people who buy your stacks. If you build stacks with *HyperCard*, your users will have to own *HyperCard* to use your stack.

HyperStudio also comes with more tools for creating sounds, including a sound digitizing hardware card that doesn't need a slot, a microphone, and a separate program called *Sound Shop* that allows you to edit and add special effects to the sounds you record. You can also use *Sound Shop* to convert sound files from other software/hardware packages into *HyperStudio* format. In addition, you can record sounds from within *HyperStudio* while you are creating a stack. You don't have to use *Sound Shop* unless you want to.

"Xcommands" are external assembly language programs that can be used by *HyperCard* and *HyperStudio*. In *HyperStudio*, you normally can only use one Xcmd per stack, but the **HyperStudio Xcmd Library Disk, Volume 1**, by Ken Kashmarek, provides a Master Xcmd that lets you use as many as you want. It also gives *HyperStudio* text-based scripting ability and includes 18 useful Xcmds.

Nexus

Since *HyperStudio* and *HyperCard* use the "stack of cards" metaphor, many people think that multimedia is defined by stacks. But multimedia is defined by *links*. Multimedia software provides users with multiple paths through a set of informational material.

Another approach to hypermedia is to present the user with text and graphic files that have links to other text, graphic, and sound files. For example, imagine that a highlighted word in a text file indicates that you can obtain expanded information on the word (more text, a picture, or a sound) by clicking on that word. Or imagine being able to click on a face in a photograph of a basketball team and getting a text file with that player's name and statistics.

Tracy Valteau's **Nexus** is an Apple IIgs program that allows you to create these kinds of "linked sets" of information. You can edit the underlying text or graphics without destroying the links. *Nexus* includes a run-time file you can distribute so anyone can use your linked set.

AP-002	HyperCard IIgs	\$99.00
RW-005	HyperStudio	\$99.95
RW-009	HyperStudio Xcmds, Vol. 1	\$39.95
GC-001	Nexus	\$69.95

Fonts, Clip Art, Clip Sounds, & Other Multimedia Goodies

Publications

Resource Central is one of the major multimedia publishers in America. We are the source of four disk-based publications that are presented in a multimedia format. Two of these focus on multimedia software itself; **Stack-Central** on *HyperStudio* and **Script-Central** on *HyperCard* IIgs.

Stack-Central is published six times a year. Each issue consists of a main *HyperStudio* stack put together by the publication's editor. Every other month subscribers get two 800K disks with that issue's main stack and stacks from other users. **Stack-Central** has been published since February 1990. The first year's issues, which are still available as back issues, include things like this:

- Examples of the *HyperStudio* test function in a stack that tests your knowledge of countries in North and Central America.
- XCMDs by Steve Allen that allow you to control the IIgs border color and that allow you to do dialog boxes.
- Abram M. Plum's *Melodia* stack for teaching music students to recognize melodies.
- Lt Col Richard Rozzak's stack on the history of the Messerschmitt airplane.
- Two XCMDs from Roger Wagner that make it easier for disabled people to use *HyperStudio* stacks.

Likewise, our *HyperCard* IIgs publication, **Script-Central**, is also published six times a year. Each issue consists of a main *HyperCard* stack and stacks from other users subscribers can use and study. Information in each issue includes letters and stacks from readers with answers to reader questions; stacks that demonstrate how to accomplish the neat things you can do with *HyperCard*, such as embed sounds and do animations; free XCMDs and tutorials on how to use them; and art and sounds you can clip from **Script-Central** to use in your own work.

Each month we also present several feature stacks. These stacks are among the best stacks we find online or in our mailbox. (Yes, you can send us your stacks and if they're good we'll make you famous!)

We also publish two other publications that use, but aren't about, multimedia. These are **8/16-Central**, which is for Apple II programmers and developers, and **Hyperbole**, which is an art and literary

journal on disk. For more information on becoming a subscriber to any of these publications, see page 22.

Fonts

The A2-Central Font Clearinghouse on GEnie (see index) is the most complete source for public domain fonts that work with Apple IIgs programs and with many 8-bit programs such as Beagle Bros' *TimeOut SuperFonts* and TimeWork's *PublishIt!* We've compressed all but the most recently uploaded fonts onto eight 3.5 disks so that you can have a complete font collection. Besides fonts, the disks include a copy of *ShrinkIt* that you'll need to uncompress the fonts, an AppleWorks database file showing the characteristics of the fonts, graphics files showing the look of the fonts, and general technical information.

All these fonts, sound clips and art clips may be used in stacks you distribute to others.

Clip Art

HyperStudio Clip-Art, Volume 1 has more than 550 Apple IIgs 640-mode graphic images you can use with *HyperStudio*, *AppleWorks* GS, or other programs. The images include 27 animations that will work within *HyperStudio*. The disk also includes a slide-show program for viewing the files and a printed manual with images of the graphics.

ClipArt Plus includes an NDA that copies any portion of the screen to the clipboard, NDAs for printing the screen and capturing images as *HyperCard* or *Finder* icons, and lots of clipart. **ClipVision** and **HyperStudio Clip-Art, Vol 2** include hundreds of images. All images can be used with *HyperCard* IIgs, *HyperStudio*, *AppleWorks* GS, *Platinum Paint*, and other 640-mode IIgs software.

Sounds

HyperStudio Clip-Sounds, Volume 1 has 41 sound files including musical transitions, button noises, and sound effects. It also includes two XCMDs, *ButtonPlay* and *DiskPlay*.

The *ButtonPlay* XCMD will play a sound that's already attached to another button so that the sound won't have to be embedded in the stack more than once. The *DiskPlay* XCMD will play sounds directly from disk. Normally *Hyper-Studio* loads sounds into

memory before playing them. On some machines you'll run out of memory before a long sound is completely loaded. On others, the sound may fit but there will be a long delay as the sound loads. The *DiskPlay* XCMD solves these problems.

ClipTunes consists of 30 synthesized songs you can play from *HyperCard* IIgs or *HyperStudio*. Includes XCMDs that play the songs on the IIgs. **ClipSounds** consists of 10 disks full of professional-quality digitized sounds for *HyperStudio*.

Books

Apple's **HyperCard IIgs Script Language Guide: The HyperTalk Language**, published by Addison-Wesley, is the definitive description of the HyperTalk language. It's a must for any serious *HyperCard* IIgs user.

HyperCard Stack Design provides the novice to the expert with basic principles of design that, when incorporated, make *HyperCard* stacks effective and usable. Although written for the Macintosh version, of *HyperCard* this book is a highly effective tool for *HyperCard* IIgs and *HyperStudio* as well.

Speakers

Add powered sound to your IIgs! You get two speakers with a built-in stereo amplifier, volume control, and balance adjustment. Effective frequency range is 70 to 16000 HZ. Each speaker is 230 x 150 x 165 mm and the pair weighs 3.5 kg. Made in China. Work with the IIgs or unpowered outputs such as those found on Walkman-type recorders. U.S. orders only.

Fonts

FC-001 **A2-Central Font Collection** \$39.00

Clip-Art

RW-007 **HyperStudio Clip-Art, Vol 1** \$19.95

TV-002 **ClipArt Plus** \$39.95

DS-011 **ClipVision 1.1** \$29.95

RW-011 **HS Clip-Art, Vol 2** \$24.95

Clip-Sounds

RW-008 **HyperStudio Clip-Sounds, Vol 1** \$19.95

TV-001 **ClipTunes (2 disks)** \$39.95

DS-012 **ClipSounds (10 disks)** \$59.95

Books

AW-042 **HyperCard IIgs Script Guide** \$23.99

AW-034 **Apple: HyperCard Stack Design** \$16.95

Speakers

DR-002 **SVI Speakers** \$129.00

Graphics/Imaging

Electronic Imaging

There are two kinds of imaging equipment available for the Apple II, scanners and digitizers. A scanner is used with graphics that are already on a sheet of paper. A digitizer is used with video images coming from a video camera, VCR, or video disk player.

Digitizer

The video digitizer we carry is Digital Vision's **ComputerEyes**. This device comes in two models. One is a black and white version that will work in any slotted Apple II and with any composite video source, including PAL and SECAM. By itself, it can create hi-res and double hi-res black and white images. With the optional enhancement software listed below, it supports *Print Shop* and *Newsroom* formats, image negate, shrink/expand, left-right flip, and more. With the optional IIGS support software listed below, it can create 320-mode graphics using a 16-level gray scale.

The Color ComputerEyes requires the North American standard NTSC video and an Apple IIGS. It can do everything the black and white digitizer and software can do, but it can also do what the black and white model can't — create 320-mode graphics with 16 colors. It can also create 640-mode graphics in black and white or four-level gray scale.

These digitizers work best with still images from video cameras or video disk players. VCRs that can display a noise-free single-frame

picture also work well. Scan times are less than 6 seconds except in 640-mode, which takes less than twelve seconds.

Scanner

The scanner we recommend is the **Quickie** hand scanner from Vitesse. It comes with a card you put into one of your computer's slots and software that runs under GS/OS or ProDOS 8. The scanner itself is about the size of a double-wide mouse. It has a cable that plugs into the card. It can scan an area about four inches wide. The length of the scan depends on how much memory you have in your computer.

The IIGS software comes both in NDA and stand-alone versions. It allows you to create both 320- and 640-mode graphics in black and white or 16-level grey scales. You can also save scans in high-res, double-high-res, and *Print Shop* GS formats. The Apple IIe software works in black and white and can save data in high-res or double high-res files.

DV-001	B&W ComputerEyes	\$119.95
DV-002	Enhancement Software	\$22.95
DV-003	IIGS Support Software	\$22.95
DV-004	Color ComputerEyes for IIGS	\$219.95
VI-001	Quickie Scanner	\$219.95

Graphics Software & Tools

Graphics Creation and Editing

Beagle Bros' new **Platinum Paint** began in October 1986 as a way for its author, Matthew Reimer, to become acquainted with the then-brand-new Apple IIGS. In 1988 it was released by JEM Software as *MiniPaint*, a \$25 "color MacPaint." Since then, it has grown into the most powerful paint program for the Apple IIGS. *Platinum Paint* takes the best features of *Paintworks Gold*, *DeluxePaint II*, and *PixelPaint* (Macintosh II software), and adds still more features.

Features include custom brush shapes and colors. Any selection you make with the marquee or lasso tools can become a brush. You can lighten, darken, smear, shade, wash, smooth, shadow, flip, mirror, stretch, slant, rotate, and add perspective to any portion of an image. Supports 3 point and Bezier (4 point) curves. Can do three kinds of gradient color fills, including sunburst radial fill. Fast, automatic color remapping. Complete color control, including cycling. Supports masking and dithering. Imports Apple II HiRes, Double HiRes, *Print Shop*, or *MacPaint* files. Works with 320- or 640-mode images up to a full page high. Allows four open documents at once. Requires an Apple IIGS with 1 megabyte of memory.

Image Enhancement

Second Chance V2.0 is an image enhancement package written to work with Apple IIGS 320-mode 16-level gray scale images. It will also convert 640-mode images to 320 and back again so they can be enhanced as well. Includes ten smoothing (blurring) algorithms, seven sharpening algorithms, sample photographs, and a technical discussion of what the algorithms (many of which use Fast Fourier Transforms) actually do.

Format Conversion Utilities

If you already have, or can get, the graphics you want but they're in the wrong format, you'll find that one or both of the following programs can solve your problems.

Roger Wagner Publishing's **The Graphic Exchange** allows you to exchange virtually any Apple II graphic image from one format to another. Supported formats include normal and double low-res and hi-res, 320- and 640-mode super high-res, *Print Shop*, *Print Shop* GS, and *Newsroom*, as well as *MacPaint* files. The program can even read, but not write to, Macintosh 3.5 disks.

Graphics can be examined, cropped, and scaled and colors can be manipulated. The current version, which runs under GS/OS and requires an Apple IIGS, does batch conversions and can also convert graphics to Mac format for use on a network or with Apple File Exchange.

If the graphics you want are in formats designed for other computers, **Jason Harper's Super Convert** is a better program for you. If you've used Harper's shareware *Convert*, you'll know the basic idea, but you won't believe the additions. Converts graphics from ProDOS 8, Mac, MS-DOS, AtariST, Amiga, Commodore 64/128, GIF, TIFF, RLE, IPI, and QRT formats to Apple IIGS formats. Also prints images, does image enhancements, and explains how to get professional quality slides of your IIGS screens.

Graphics Tools

BB-007	Platinum Paint	\$79.00
RI-001	Second Chance	\$39.95
RW-004	The Graphic Exchange	\$37.50
SH-003	Super Convert	\$39.95

Desktop Publishing

Desktop Publishing Software

The desktop publishing software we recommend for the Apple II family is **Publish It 4**. This brand new version of what already was the best-selling desktop publishing software for the Apple II family runs under ProDOS 8 and requires only an enhanced Apple IIe, a IIc or IIc-Plus, a IIgs, or a Laser computer.

Publish It will produce newsletters, advertisements, reports, menus, catalogs, term papers, brochures, business forms — virtually any printed piece you can dream up. You can type text directly into the program using its built-in word processor or you can directly import text files or AppleWorks or Bank Street Writer word processor files. With version 4 you can also export text you type into *Publish It* for use in other programs. You can create graphics using *Publish It's* built-in graphic toolbox (draw lines, boxes, circles, rules, and borders; leave them empty or fill them with built-in patterns, patterns of your own design, or colors). Or you can import any single-high, double-high, or super-high resolution graphic, including new *PrintShop*, *PrintShop GS*, and *PrintShop* or *Newsroom* graphics on DOS 3.3 disks.

Publish It even comes with over 200 graphics and illustrations of its own, in the box and ready-to-go. Themes include holidays, people, food, animals, symbols, and more. Or you can use the clip art packages listed on page 8 of this catalog. Or you can scan or digitize or draw your own graphics using the tools shown on the opposite page.

Even though it's a ProDOS 8 program, *Publish It* uses Apple's desktop interface, just like the Apple IIgs or a Macintosh. You'll see exactly how your finished document will look on your computer screen. You can use the program's built-in layout tools to overlap, reposition, and resize elements on the page. You have the power to easily change a layout or experiment with alternative page layouts. Once your pages look the way you want them to, you can print them on your dot matrix or laser printer. Supported printers include all printers commonly used with Apple IIs, including major lines from Apple, Epson, Gemini, and Okidata, all PostScript printers, and all printers compatible with one of these. The new version 4 also supports Hewlett-Packard DeskJet and LaserJet printers. Or you can print to a PostScript file that you can take a typesetting service bureau for the highest-quality output.

You use the mouse to position page elements where you want them. You can reposition and resize text and graphics. You can easily align objects. Transparent text boxes allow you to overlap text or graphics. Or text can be automatically wrapped around graphics. Text can be automatically centered or it can be aligned on the right, the left, or both the right and left (full justification). The new version 4 includes automatic hyphenation. Text boxes can be linked so that text flows from column to column and from page to page. With version 4, you can save templates of commonly used layouts.

Publish It comes with a variety of built-in fonts and works with any other standard Apple II font, such as those listed on page 9. The fonts that come with the package give you over 1200 possible type combinations. Type sizes provided range from 9 points for body copy to 72 points for headlines and include both serif and non-serif faces. You can select and set characters individually to bold, italic, underlined, outlined, shadowed, superscript, or subscript.

Publish It supports multiple-size page views, including actual, double, and half-size. Or you can reduce your document so that an entire page fits on the screen at one time. The software provides on-screen rulers, selectable customizable page guides, precision placement to 1/1000th of an inch, built-in quick keys, cut, copy, and paste for objects or groups of objects. It supports independent workareas, called worksheets, that are saved with your document but not printed. This allows you to try out ideas without messing up your work or to save alternate text or graphics with your document.

While the program requires at least 128K of memory, it will use as much memory as you allow up to all the memory you have available. This lets you create larger documents. You can also limit the amount of available memory used by *Publish It*, which means you can use a program like *SoftSwitch* (see index) on an Apple IIgs to run both *Publish It* and *AppleWorks* at the same time.

Publish It is a full-featured desktop publishing tool that allows you to design, layout, produce, and print top-quality, professional-looking, colorful documents. It allows you to do page layout, word processing, typesetting, and graphics. It comes with a quick-start mini-manual designed to get you up and running in less than 60 minutes, as well as full documentation. Requires a mouse or joystick.

TW-001 *Publish It 4* \$119.95

Optical Character Recognition

No More Retyping!

Why retype documents when you can simply scan them into your computer?

Use a scanner to create a graphics image of a block of text you'd like to be able to manipulate in your word processor, data base manager, or spreadsheet. Then use **InWords** to convert that graphic into text. *InWords* scans the graphic, recognizes characters, and converts them into text.

InWords can scan a narrow column of text and ignore text in surrounding columns. It can read blocks of text wider than the scanner by merging two separate scans into a full page. *InWords* will automatically ignore graphics, photos, or other artwork on a page. And to ensure that *InWords* will read the documents you want to

scan, it has the ability to learn how to recognize new typefaces. And if it does make a mistake, it allows you to fix it immediately.

InWords can be trained to read just about any style of printed type, however, it cannot read dot-matrix, standard fax, ditto, or handwriting.

Optical character recognition comes to the Apple II thanks to Alan Bird at WestCode Software. Bird provided the genius behind Beagle's *TimeOut* engine and has worked on numerous other key Apple II projects, including the AppleWorks 3.0 update, *Beagle Compiler*, and *QuickSpell*. *InWords* is a fabulous program that shows his touch.

To use *InWords* you need an enhanced Apple IIe or an Apple IIgs, at least 512K of memory, and a Vitesse Quickie or compatible hand scanner.

WC-001 *InWords OCR Software* \$99.00

Telecommunications

Modems

A modem allows you to hook your computer to the world-wide telephone network. Once connected, you can call other computers—from Apple IIs running local bulletin boards to the large mainframes used by international information services such as GEnie.

Modems work at various speeds, or "baud rates." Most modems sold today have a top operating speed of 2400 baud.

All of the modems we sell are *external* modems. This means they sit on the desk beside your computer. They come with one of those little power cubes that plugs into the wall and a phone cable that plugs into a modular jack. You also have to connect the modem to your computer with a "serial cable." Since the serial cable you need depends on which computer you have, the cable is sold separately. See the box below.

Our best-selling modem is the **SupraModem 2400**. It's a good, inexpensive, all-purpose modem that's fully compatible with the industry-standard "AT" command set. It will operate at 300, 1200, or 2400 baud and is compatible with Bell 103/212A, CCITT V.21, CCITT V.22, and CCITT V.22bis protocols, which means it works all over the world.

It supports automatic answer/automatic dial (tone or pulse) and has a programmable non-volatile memory that stores a telephone number and your user configuration profile without any need for setting switches. It has two modular phone jacks, one for the cable that goes to the wall and

one for a phone. It also has a speaker with volume control, a one-year warranty, and it's made in the U.S.A.

Int'l power plugs



Australia



W Germany



Britain

In addition to the 110 volt North American model, we stock three 220-volt versions of this modem. These differ only in the type of plug on the power supply. This chart shows you the types of plugs available—order the one that matches the sockets in your locality.

For those of you who spend hours on line, we also have the **Computer Peripherals ViVa24m MNP modem**. Besides being hip looking, this 2400 baud modem supports MNP error correction and data compression levels 2 through 5 when connected to other MNP modems. Most GEnie nodes support MNP to level 4, for example.

MNP is a data communications protocol for error-free communication over ordinary voice-grade telephone lines. The classes of MNP have varying levels of capability. With

MNP Class 5, you typically set your modem-computer baud rate at 9600 even though the modem-modem baud rate will be lower (1200 or 2400 baud). Besides error detecting and correcting, two MNP Class 5 modems connected to each other will also perform compression of transmitted data. On ordinary text the compression can be about 50 per cent, which doubles the effective baud rate.

All our modems, by the way, will work with any personal computer, not just an Apple II. Requires cable, see box at left.

Cables

One end of these cables plugs into any of the modems or printers we carry. The other end plugs into the type of computer you have. These cables are all 8 feet long.

RC-001	8-pin connector for IIGs, IIC-Plus, Macintosh	\$15.00
RC-002	5-pin connector for older IIC	\$15.00
RC-003	25-pin connector for serial cards (Apple IIe, MS-DOS)	\$15.00

SC-001	Supra 2400 for North America (110 volts)	\$119.00
SC-002-AU	Supra 2400 for Australia (220 volts)	\$129.00
SC-002-WG	Supra 2400 for West Germany (220 volts)	\$129.00
SC-002-UK	Supra 2400 for Britain (220 volts)	\$129.00
DC-008	ViVa24m 2400 baud MNP 5 modem (110 volts)	\$169.00
SHIP	Surface shipping any modem outside U.S.	\$3.00

Telecom Software

In order to use a modem you have to have telecommunications software running on your computer. At a minimum, this software takes your keystrokes and passes them to the modem, which passes them on to the remote computer you're connected to, and it grabs the characters coming in from the remote computer and displays them on your screen.

Talk Is Cheap is an excellent, inexpensive telecommunications package. It has the ability to save all incoming characters—you can scroll back through the text that disappears off the top of your screen. It comes with an editor you can use to write messages and it has a special mode for use in real-time conferences. It supports the file transfer protocols known as XMODEM and YMODEM, which are used to prevent errors creeping into files being transferred between computers. And it has the ability to trick mainframe and minicomputers into thinking your Apple II is one of a variety of mainframe terminals, including models from TeleVideo, Hazeltine, ADM, ADDS, and the DEC VT-52.

Its strongest feature is a robust "scripting language," which allows it to be turned into a "telecommunications robot." It can follow sophisticated scripts that log onto a service, read your mail, read the bulletin boards you are interested in, download software, and log off — all automatically. You touch the keyboard only to start the script in motion. Software such as *Co-Pilot* and *GEnie Master* provide *Talk Is Cheap* scripts you can use or you can write your own scripts using the information provided in the *Talk Is Cheap* manual.

CS-001	Talk Is Cheap	\$40.00
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Co-Pilot and **GEnie Master** are two programs designed to make it easy and cheap to use GEnie, General Electric's online information service. Resource Central manages the Apple II areas on GEnie. These programs log on for you. You read and respond to the information collected from GEnie later, while offline. **Co-Pilot** is an Apple IIGS program that uses the desktop interface. **GEnie Master** has an AppleWorks-like interface. It consists of sophisticated scripts for *TimeOut UltraMacros*, although you don't need to own *UltraMacros* to use it. Both *Co-Pilot* and *GEnie Master* require that you own either *Talk Is Cheap* or *Point-To-Point*, published by Beagle Bros. You must have one or the other.

TH-001	GEnie Master	\$20.00
KG-001	Co-Pilot	\$25.00

Introduction to Telecommunications

CompuShare's **Personal Computer Report #2** is an introduction to telecommunications. The report gives you the fundamentals of telecommunications and tells you how to select a modem and telecommunications software. You'll learn about serial communications, parity, half and full duplex, and packet switching in a few quick pages. The book also discusses bulletin boards (including where to get good lists of BBS phone numbers) and online information services. The final chapter explains the Hayes AT command set used by most popular modems.

CO-002	CompuShare Telecommunications Guide	\$12.95
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Education/Games

Books For Education

Since the primary place Apple II computers are used is in schools, it's strange that our education selection in this catalog is so small. We've found that most of the education software publishers sell direct to schools, however. That's why we don't have a large selection of their stuff.

We do have a few books related to Apple IIs and education that you'll have a hard time finding anywhere else, however.

Tom Snyder's **In Search of the Most Amazing Thing**, for example, argues that it's essential for teachers and parents to recognize the limits of technology in education. Snyder believes it's more important to put computers on teachers' desks than on those of students. Yes, this is the same Tom Snyder who is a prolific author of education software.

Discovering Science on your Apple uses short, simple Applesoft programs to help kids discover principles in Astronomy & Space Science, Earth and Life Science, and more.

Smart Apples is an introduction to artificial intelligence. It uses Applesoft to demonstrate the basic principles of AI. The book includes many complete programs, focusing on games, learning, and text generation.

How to Build a Better Mousetrap and 13 Other Science Projects Using the Apple II contains complete information (including software on disk) on fourteen projects for making measurements and controlling

electrical devices using the Apple II. All the projects can be done with an Apple II-Plus, IIe, or IIGS; all but four work on a IIC or Laser 128. Measure pH! Control DC and stepper motors!

Chaos In The Laboratory is David Vernier's sequel to *How to Build a Better Mousetrap*. It's a book of science projects based on Apple II computers (even the II-Plus!). The title project shows you how to use an Apple II to study chaotic behavior. Other projects include a temperature probe, A-to-D converter, light meter, colorimeter, barometer/pressure sensor, magnetic field sensor, smart battery charger, digitized sound, stepper motors, the speed of sound, and an ultrasonic range finder. The book gives step-by-step instructions of how to build each project, tells where to get parts, and includes two 5.25 disks with the software necessary to complete the projects.

Your Best Interest is the best book ever written on the art and science of interest rates. It shows you how to calculate the true value of investments and mortgages using simple spreadsheet templates. Shows how to avoid interest rate traps that lenders use to hide the true interest rate of a loan.

AW-013	Snyder: <i>In Search/Amaz.Thing</i>	\$10.95
TB-003	Pellino: <i>Science On Your Apple</i>	\$14.95
TB-004	Horn: <i>Smart Apples</i>	\$12.95
VS-001	Vernier: <i>Build Better Mousetrap</i>	\$24.95
VS-002	Vernier: <i>Chaos in the Laboratory</i>	\$25.95
IB-001	Weishaar: <i>Your Best Interest</i>	\$9.95

How Computers Work

Jim Sather's **Understanding the Apple II** and **Understanding the Apple IIe** are by far the best books ever written about the hardware design of the Apple II and IIe. As Sather says at the beginning of the Apple II book, "Understanding of any subject is a relative thing. You may, for instance, say that you understand rain and mean that you know to go inside when it is raining. When a meteorologist says he understands rain, however, he speaks of a more significant level of understanding. Understanding of the Apple II can likewise mean various things. You may understand how to use it. More significantly, you may understand how to program it and recognize what programs are making it do. More significantly yet, you may understand how it works."

What Sather's books are about is how the Apple II and Apple IIe work. Sather shows you the beauty and elegance of Steve Wozniak's Apple II design in detail you won't find elsewhere for Apple IIs or any other computer. If you're interested in knowing something about computer hardware, these books are as good as books get. Each book includes hardware modification notes and a chapter on the maintenance and care of your computer.

QS-002	<i>Understanding the Apple II</i>	\$22.95
QS-003	<i>Understanding the Apple IIe</i>	\$24.95

Educational Software

Spring Branch Software, publisher of **GSNumerics**, has lowered the price of this excellent math package. We can now sell it to you for \$79.95. *GSNumerics* is designed to enhance the mathematics skills of high school students. It graphs functions and curves, does matrix operations, solves systems of linear equations with up to 10 equations and 10

unknowns, and much more. Also turns your IIGS into a 64-function, four register scientific calculator. Data, functions, and sessions can be saved to disk.

And when you need to show off the sound capabilities of your Apple IIGS, reach for **Diversi-Tune**. This program turns your computer into a MIDI synthesizer, recording

studio, and hi-fi system. You can use the "follow the bouncing ball" feature to have a sing-along led by your Apple IIGS. If you're into creating your own music, use *Diversi-Tune* to record your own MIDI instrument notes—then synthesize them, edit them, or mix them.

SB-001	<i>GSNumerics</i>	\$79.95
DR-001	<i>Diversi-Tune</i>	\$59.00

Games

We don't carry many games because local software stores usually carry an ample supply. We do have a couple of good ones that you're not likely to find locally, however.

Wraith: Devil's Demise, by John Carmack, is the favorite of our game expert, Joe Weishaar (age 10). He's put tens of hours into this game alone and with jealous Nintendo-owning friends at his side. He's been finding secret passageways and treasure chests in three cities, three castles, the Well of Souls,

and Ancient Mines. He also says not to go into the toilets unless you're sure there's nobody in there or you'll have a fight on your hands. For a much longer review, see Neil Shapiro's "More Orcs for Your Bucks" in the July 1990 *Nibble*, page 11. Runs on any Apple II, but requires a 3.5 drive.

We also carry Jem Software's **I.O. Silver**, by Brad Wilhelmsen. Your job in this game is to build the first 4th-generation supercomputer while racing the clock and battling bugs.

I.O. Silver is two games in one. Without the pressure of the clock or killer bugs, it's an engrossing puzzle. When you're ready for the arcade version, the pace gets furious! *InCider* magazine said: "I.O. Silver causes acute arcade addiction—the strongest recommendation for any game. This is one of the most ruthlessly addicting games in years!" 5.25 disk only.

NO-003	<i>Wraith: Devil's Demise</i>	\$12.95
JE-002	<i>I.O. Silver</i>	\$20.00

Hard Drives

Resource Central External SCSI Hard Drives

**New! Fully assembled,
software packed hard drives**

50 Meg \$479

100 Meg \$599

42 Meg Removable \$699

Now you can get a fully assembled SCSI ("scuzzy") hard drive, with 25 per cent more capacity than the hard drive kit we've sold in the past, for **\$50 less than** the kit price. Or a fully assembled SCSI removable media hard drive with the same mechanism we've sold in the past, for **\$175 less than** the kit price. Go figure.

Our three new drives are all the same size: 25 cm wide, 25 cm deep, and 6 cm high (a little less than 10 x 10 x 2.5, for those of you who pre-fer inches). They're all the same color: Apple IIgs platinum. All operate on any AC voltage between 90v and 240v (all that is necessary outside North America is to use the supplied North American power cord with an appropriate plug adaptor). The drives come with a 2-year warranty.

All models have in-use and power-on lights, two switched power outlets, two 50-pin Centronic style SCSI connectors, a shielded SCSI cable that attaches to one of the connectors, and a SCSI terminator that attaches to the other. Both have a push button SCSI ID number selector, FCC certification, and an installation and instruction manual written right here at Resource Central. Drive heads "auto-park" on shutdown; no additional Park command is necessary or advisable. But best of all, all three models have nifty **Resource Central** logos on the front and a ton of Resource Central software and data files installed and ready to go.

The 50 and 100 Megabyte drive comes with a Quantum hard disk subassembly. Quantum systems have an internal DisCache™ RAM cache that allows a fast 1:1 interleave (10.7 to 12 ms effective access time). Quantum drives have a 50,000 hour Mean Time Between Failure rating.

Our 42 Megabyte removable drive comes with the same 44 Megabyte (unformatted) Syquest subassembly we've sold in the past and is an ideal unit for backing up your main hard drive. These drives have a 20 ms average access time.

These hard drives will work on any Apple IIe, Apple IIgs, or Laser computer. If you don't already have a SCSI controller card, you'll need to get one and plug it into one of your slots so that you have something to connect the hard drive to. These drives will also work with a Macintosh or any other SCSI-capable system, however, you may need additional formatting software and/or drivers and you won't be able to access the data we include on the drive unless you have an Apple II-based system.

If you need a SCSI card, we recommend **CVTech's RAMfast**. It provides the fastest data transfer speeds by far. It works by keeping your most frequently accessed data in a RAM cache on the card itself. If you'd prefer to save some money, we also have **Apple's High**

Speed SCSI Card, which sets the standard for SCSI cards.

Under GS/OS you can access all 100 Megabytes of big Quantumdrive with either of these cards. When running ProDOS 8 programs, however, the Apple card can access just two of the four "partitions" on the drive unless you install it in Slot 5. This is sometimes impractical, particularly on the Apple IIgs. If access to more than two partitions under ProDOS 8 is important to you, we recommend the RAMfast.

No matter which SCSI card or disk drive you buy, we'll format it for you, install Apple's latest system software, and copy over some great files that are yours to keep, including the full text of every issue of **Open-Apple/A2-Central** ever published, a complete set of Apple technical notes in text files, the most complete collection of Apple IIgs icons ever assembled, sample issues of **8/16-Central**, **Stack-Central**, **TimeOut-Central**, and **Hyperbole**, and a year's worth of **A2-Central on disk**. This last item alone regularly sells for \$60 and includes numerous public domain and shareware programs, including utilities, games, patches, font and icon editors—even a word processor!

If you haven't yet purchased a hard drive, now's a good time to find out what speed and space are all about. Apple IIgs owners in particular will find living without a hard drive increasingly difficult, as new software, such as Apple's new *HyperCard IIgs*, sometimes requires a hard drive. And don't put off buying a hard drive now because you may buy another kind of computer in the future—if you do decide to move to another system, our SCSI hard drives will move with you.

If you already have a hard drive do you back it up regularly? The easiest, cleanest, safest way to back up your hard drive is to copy everything onto a removable 40-plus Megabyte cartridge. Backup is fast and the cartridge will even fit inside a safe deposit box.

SCSI cards

AP-001	Apple High-Speed SCSI card	\$119.00
CV-001	RAMfast SCSI card	\$219.00

Full assembled hard drives

A2-007	Resource Central 50 Meg	\$479.00*
A2-005	Resource Central 100 Meg	\$599.00*
A2-006	Resource Central 42 Meg Removable Media	\$699.00*
DC-007	extra cartridges for 42 Meg drive	\$99.00
*SHIP	Surface shipping to Canada or APO/FPO adrs	\$10.00
*SHIP	Surface shipping to other points outside US	\$20.00

Hard Drive on a Card

Unique on the Apple II! Cirtech's **Internal Hard Disks** slips in a slot in your IIe or IIgs. They're very small, very fast, and very quiet. They're simple to install (no cables at all) and take up no desk space whatsoever. The small size and easy installation of the Cirtech hard drives makes them particularly attractive for applications that require portability, such as moving lots of data from one computer to another, giving presentations or demonstrations, and so on.

No need to buy a SCSI card — these drives come attached to one. Includes a SCSI connector you can use to attach external SCSI hard drives.

CT-CID-20	20-meg Internal Hard Disk	\$695.00
CT-CID-40	40-meg Internal Hard Disk	\$895.00

Introductions to Hard Drives

CompuShare's **Personal Computer Report #1** is an introduction to hard drives. The report covers such information as how a hard drive works; what formatting, initialization, and interleave are; what the Small Computer Systems Interface (SCSI) is, why it's important, and how to troubleshoot problems; drive backup and recovery; drive organization; and other tips.

The **Hard Disk Primer** is a great how-to book for users who are thinking about purchasing a hard drive, for new owners, and for experienced owners who want to get more from their investment. Compares different types of hard drives and takes you through the step-by-step procedures necessary to install and configure a hard drive. Also describes disk management programs and backing up your hard drive.

CO-001	CompuShare Hard Drive Guide	\$14.95
NA-002	Hard Disk Primer	\$16.95

SCSI Utility Software

Software for formatting SCSI hard drives comes with all the SCSI cards we sell, but some people like a little more power. That's where the **Chinook SCSI Utilities** come in.

These utilities were created for use with Apple's Rev C and High Speed SCSI cards. They don't work with the RAMfast or other types of SCSI cards.

With Chinook's utilities you can do low level formats, split one partition without erasing the others, conduct speed tests to find out the fastest interleave to use when formatting your hard drive, and print out virtually all information the SCSI card is capable of outputting. Uses a file card interface (like AppleWorks) for ease of use, and will run on all Apple IIs from the un-enhanced IIe on up.

CH-001	Chinook SCSI Utilities	\$30.00
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Disk Management Software

If your hard disk looks like my 14-year-old daughter's room, then you know what file clutter is. As program and data files multiply—whether you have a hard disk or not, managing a personal computer becomes a difficult task.

But if you have the right tools, any job is easier than before. And Apple II users are very lucky to have some excellent disk management utilities available to them.

If you use an Apple IIe or IIc, the software we recommend is Glen Bredon's **Prosel 8**. This package normally comes on a 3.5 disk, but we can supply it on 5.25s at your request. The **Prosel 8** package includes an incredible number of goodies. It's impossible to do justice to such a complete set of utilities as **Prosel** in the space we have here.

First, you get a program selector—a text-based menu that comes up when you start your computer and when you quit from programs. The menu, which you can edit, lets you select the next program you want to run by moving a cursor over the selections and pressing return. If you have more applications than will fit on one screen (60), you can create more application screens that can be jumped to at the touch of a button.

Beyond that, however, **Prosel** includes separate programs that allow file and disk manipulation, volume and directory testing and repair, hard drive or RAMdisk backup and restore, volume optimizing, block editing, password protection, and more.

The GS/OS version of this program is called **Prosel 16**. It does basically everything the 8-bit version does, but more, better, and in a GS/OS context. It handles GS/OS extended files, has online help, allows file-by-file incremental backups, and includes a math calculator that will draw graphs of functions and an appointment calendar. We highly recommend

Prosel to everyone, however, it's a complex package that may force some of you to learn more than you ever wanted to know.

Another option for Apple IIgs users is the set of **Salvation Utilities** from Vitesse. Unlike **Prosel**, these use the familiar desktop interface.

Salvation: Wings is a program launcher and disk management utility. It has 128 single-click buttons (16 per screen) that allow you to launch virtually any program file. It allows you to define each of the launch buttons yourself. You can also launch programs from an on-screen list of files. Except that if you choose a graphics file you'll see the picture. If you choose a sound file you'll hear the sound. And if you click on a text or AppleWorks file, you'll pop into a mini-word processor. The file and volume utilities allow you to copy, move, verify, delete/undelete, compare, etc. You can also sort directories, format/erase volumes, and so on.

Salvation: Guardian is a full featured backup/restore program that allows you to backup a hard drive (or just selected folders or files) to 3.5 disks, 5.25 disks, another hard drive, or a specified file. When restoring a volume, you can choose to restore the entire volume, or just selected folders or files. A single catalog disk is all that's needed to find out which disk a given file or folder is on. A unique feature of **Guardian** is the ability to stop a backup procedure in the middle and continue it at a later time. Also available are macros that allow you to setup different backup options to be run at a later date.

Salvation: Renaissance optimizes a volume by writing all the files and folders in the order they appear in the directory. By eliminating all the unused blocks between files, you end up with shorter disk access times. You can also sort directories before optimization. This allows you to put the files that are changed rarely (or

never) at the beginning of the directory. This will cut down on the amount of fragmentation that happens.

Salvation: Exorciser is a virus detection program. One of the worst things that can happen to a computer user is to find out your system is infected by a virus. Unfortunately, you usually discover this only after your hard drive has been erased, or whatever. **Exorciser** combats computer viruses by detecting and correcting infected systems. You can check for and correct any single virus or use the **Exorciser** utilities to analyze machine language calls in any file. This could help in detecting new virus strains. If you're not into virus-spotting, don't worry. **Exorciser** can handle add-on virus check files that will be available from Vitesse (if necessary).

Vitesse has added **Salvation: Deliverance** to its line of utility software. **Deliverance** is a GS/OS, graphic-interface based disk utility that reconstructs bad or damaged directories and recovers "lost" files on all types of ProDOS and GS/OS disks. It can operate in a mostly-automated mode that requires only minimal decisions from the user and it also supports byte-level editing of any block on any volume.

An exclusive feature is a built-in file copy utility that allows **Deliverance** to make file repairs in system memory, then to copy the new, repaired file to another volume for testing or for comparison with the original.

Deliverance can also identify the bad blocks on a disk and mark them so that GS/OS and ProDOS won't even try to use them.

GB-001	Prosel 8	\$40.00
GB-002	Prosel 16	\$85.00
VI-005	Salvation: Wings	\$59.00
VI-002	Salvation: Guardian	\$37.00
VI-003	Salvation: Renaissance	\$37.00
VI-004	Salvation: Exorciser	\$34.00
VI-007	Salvation: Deliverance	\$37.00

Memory, MS-DOS...

Memory Expansion

The Apple IIgs comes with 1 megabyte of additional memory installed. This is fine for many applications, but if you want to use desk accessories or a RAMdisk, you run out of memory very quickly. And if you want to run state-of-the-art software like *HyperCard IIgs*, 1 meg just isn't enough.

If you'd like to add memory to your Apple IIgs, we recommend the **CVTech GS-Memory** or the **Chinook RAM 4000** memory expansion cards. These cards are DMA compatible and can be configured for up to 4-Megabytes of memory using standard 1-meg RAM chips. You can add the memory yourself or we'll install it and check it for you for free.

Unlike other Apple IIgs cards, CVTech's GS-Memory includes a connector on the back for a second memory card. With a 4 meg card in the connector, the GS-Memory can add 5, 6, 7, or 8 megabytes of additional memory to your IIgs. The card you plug into the GS-Memory must be full, but the CVTech card itself need not be. Neither Applied Engineering nor Cirtech cards will work in the connector, though many other cards will, including 1 meg Apple memory cards, 4 meg Chinook cards, or a second CVTech card. Call for more information if you have another type of card. The GS-Memory works with DMA devices under all circumstances and will work with either a ROM 01 or ROM 03 IIgs without modification.

The Chinook card has a multi-layer circuit board that reduces electronic noise and comes with a five year warranty. It costs a little less, but doesn't have the connector for a second memory card.

	Chinook RAM 4000	CVTech GS-Memory
OK (empty)	CH-002-0 \$94.00	CV-002-0 \$99.00
1 Megabyte	CH-002-1 \$164.00	CV-002-1 \$169.00
2 Megabytes	CH-002-2 \$234.00	CV-002-2 \$239.00
3 Megabytes	not available	CV-002-3 \$309.00
4 Megabytes	CH-002-4 \$374.00	CV-002-4 \$379.00

Memory chips

Most memory cards used in Apple II computers use standard dynamic RAM chips. These chips are installed in sets of 8. A few cards and all Macintosh computers use what's called a SIMM. The 8 chips are preinstalled on the SIMM, which is like a tiny card you install in your computer.

Both the CVTech GS-Memory and the Chinook RAM 4000 use standard 1-meg chips. We carry the 256K chips primarily for owners of Apple cards who want to fill them up so they can be used in the connector of the CVTech card. We carry SIMMs because we know many of our Apple II customers also have Macintoshes. Macintosh System 7 works best with at least four megabytes of memory. If you have a Macintosh that comes open, these are the chips you need to run System 7.

DRAM-256	Set of 8 standard 256K RAM chips	\$25.00
DRAM-1	Set of 8 standard 1-meg RAM chips	\$70.00
SIMM-1	1-Meg SIMM for OctoRAM or Macintosh	\$70.00

StatDisk

An Apple IIe comes with 128K of RAM. This is fine for many applications, but if you want more than a 55K desktop in *AppleWorks*, for example, or if you want to work with larger documents in *Publish It*, you need more memory.

The best way to add memory to an Apple IIe is with a slot-based memory card that follows Apple's standard for such cards.

The **Cirtech StatDisk** is a standard-slot RAM card for the Apple IIe with a twist. It uses very-low-power static RAM chips that are backed up with an on-board battery. If you configure it as a RAMdisk, all the files you store on the card are retained, even if the card is pulled out of your machine and sent to Antarctica! The battery will hold the data intact for up to two months and it's recharged every time you turn your computer on.

The StatDisk works in an Apple IIgs as well as an Apple IIe, but only as a RAMdisk, not as system memory. Sizes from 128K to 1 meg are available. Over 512K the card blocks the next higher slot except when used in IIe slot 7.

The StatDisk has no moving parts, makes no noise, and is the fastest and most reliable storage medium you can buy.

SD-4	512K CIRTECH StatDisk	\$389.00
SD-8	1 meg CIRTECH StatDisk	\$699.00
SRAM-32	2 chips (64K) for StatDisk	\$30.00

Apple II to MS-DOS File Conversion

Even though it might be deemed cruel and unusual punishment, some people are forced to use MS-DOS computers at work. One big request they have is a way to transfer data from their workhorse Apple to their MS-DOS machine and back.

Cross-Works is a ProDOS to MS-DOS file exchange utility. You get an 8 foot cable with multiple connectors that attach to a IIe, IIc, IIc-Plus, IIgs, or Laser 128 on one end and an IBM PC, XT, AT, PS/2, or compatible on the other. You also get 5.25 and 3.5 disks for both the Apple and the PC. File conversions can be made in either direction. Formatting embedded in a file is retained—for example, an *AppleWorks* underline code will be converted to a *WordPerfect* underline code and a *Lotus 1-2-3* formula will be translated to an *AppleWorks* formula.

Cross-Works is ideal for institutions making a switch from Apple II computers to MS-DOS machines. Professors at the University of Kansas School of Nursing, for example, have purchased three copies of *Cross-Works* to transfer files between the Apple IIs they prefer to use and the MS-DOS machines used by the administrative staff.

Cross-Works supports transfers between files created with classic *AppleWorks* (not *AppleWorks GS*) versions 1.0-through 3.0 and *Lotus 1-2-3*; *dBase III*, *III-Plus*, *IV*, *Q&A*, *R:Base*, *Paradox*, *Fox Base*, and other data base programs; *WordPerfect* versions 4.1 through 5.1; and the MS-DOS version of *Microsoft Works*. Also does generic text file transfers. Modem transfers are supported but require an operator at each end.

SS-006	Cross-Works	\$79.95
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Full Text Searches

You can quickly scan through a large body of information, such as our back issues or Apple's technical notes, using software that scans every word in a file looking for matches with words you specify. Two products that can do this are the *Prosel* packages by Glen Bredon (see page 15) and **FastData Pro**. *Fastdata Pro* allows you to search, print, cut from, paste into, split, or merge any type of file. You can scroll up and down through the text it finds. You can search all the files in a particular subdirectory. You can even use it with a word processor as a free-form data base manager. (ProDOS 8, 64K, 3.5 disk.)

FD-001	Fastdata Pro	\$49.95
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3.5 Disks, Networks, etc.

3.5 Drives, Disks, Labels, and More

3.5 Disk Drives & Controllers

Our staff member Jay Jennings remembers that the best peripheral he ever bought for his first Apple was a 3.5 drive. For about \$450 he had more data storage than he ever thought he'd need. You can still pay more than \$400 for an Apple 3.5 drive, but why? We sell the **AMR 3.5 Drive** for a couple hundred bucks less. You can plug one of them straight into an Apple IIc-Plus, or you can plug one or two of them into a IIgs, or you can get the **Laser 3.5 Disk Controller Card** and use one or two AMR drives with your Apple IIe.

We've used the AMR drives here in the office for months. They're the same color as Apple drives but they're slightly smaller. The only problem we've discovered is that when you have one on a IIgs and you're running GS/OS,

you have to keep a disk in the drive. If the drive is empty, GS/OS will stop until you insert one when it polls the drives, which can be disconcerting.

Blank 3.5 disks

We use thousands of blank 3.5 disks every month in publishing our disk-based newsletters, so we're able to get them at a very good price. They're generic 800K disks that come without a box or labels. The price shown here is our normal price for these disks, but be sure to catch our special price, mentioned in a big, bold headline on page 3.

Labels

Now, you know about those blank disks that come without labels? Well, guess what we also sell? Unlike the labels you usually get with

blank disks, however, these come on continuous, tractor-feed forms so that you can run them through your printer. They come in sets of 100 and are 2.75 inches on each side. This means they wrap around the disk so that you can write or print on the spine.

Storage

Now, you know about those blank disks that come without boxes? Well, guess what we also sell? Wrong, not boxes! We have Static-Guard vinyl disk-holders that store four 3.5 disks each and that fit in a three-ring binder. Sold in packs of 10.

AM-001	AMR 3.5 Drive	\$189.00
AM-002	Laser 3.5 controller for IIe	\$59.00
A2-001	10 generic blank 3.5 disks	\$9.49
A2-002	100 blank, continuous labels	\$1.99
A2-003	10 Static-Guard pages	\$9.97

Disk Copying

Photonix is the fastest 3.5 disk copy program we've found anywhere. It can make single copies or you can use it in mass production mode to make multiple copies of a single disk (we use it ourselves to copy thousands of disks a month).

Photonix II is a new commercial version of the original shareware *Photonix*. It requires an Apple IIgs with at least 1 megabyte of extra memory and at least one Apple 3.5 drive (Unidisk and AMR 3.5s aren't supported). Unlike the original *Photonix*, *Photonix II* works on all ROM versions of the IIgs and can be installed on a hard drive.

Photonix II allows you to control the interleave on the disks you copy, will reorganize the files to speed access if you choose, and will check your source disk for several viruses. You can also control the number of retries *Photonix II* should attempt after an error. It will also copy 400K and 800K Macintosh disks.

TB-009 **Photonix II** \$45.00

Nite Owl Journal 3.5

Nite Owl's best programs from the last six years on one 3.5 disk. Includes the Applesoft development tools DAS Editor, Quick Index program selector, Screen Editor, PicturePacker, and ImageWriter graphics dumper. Also includes a mix of productivity, educational and entertainment software such as Video Poker, Word Chase, Block Busters, Shadowforge, Mail Label Writer, and Poetry Writer. Shadowforge, which is the precursor of the Nite Owl game *Wraith* (see index) is work the price all by itself.

NO-002 **Nite Owl Journal 3.5** \$12.95

AppleTalk Networks

Apple designed AppleTalk as a low-cost way for work groups to share files and expensive peripherals such as printers. The Apple IIgs, Apple LaserWriters, and Macintoshes have AppleTalk capability built-in. You can get a "Workstation Card" for enhanced Apple IIs or an AppleTalk card for Apple ImageWriter printers that allow those devices to join the network.

We've had an AppleTalk network in our office for months. The computers that are attached to it, which are a mix of Apple IIgs, Macintosh, and even one MS-DOS machine, can all access the same hard drive. By saving a file on the shared drive we can make the file available to all the computers on the network. Or, using Apple's access protocols, we can limit access to specific work groups.

We also have a LaserWriter and an ImageWriter attached to the network. Any computer on the network can print directly to these printers.

On our system, we've had to dedicate one Macintosh to running the "file server," but Apple's new System 7 for the Macintosh does away with that. System 7 supports what's called "Personal AppleShare," which lets you access the files on any Macintosh hard disk from any other computer hooked to the network. Sharing Macintosh hard disks is now as easy as sharing a printer. If you have a Macintosh with a hard drive in your home or office, you can easily hook up your Apple IIgs so it can also use the Macintosh hard disk. This allows you to access the same file from both machines.

To put together an AppleTalk network, you need a special connector for each device on the network and cables to chain the connectors together.

Apple's connector and cable solution consists of some amazingly expensive items called "LocalTalk" cables and connectors. The connectors are about the size of a mouse. They have a tail that plugs into the serial port on the device you want to add to the network.

A company called **ModuNet** makes similar connectors that replace the expensive boxes Apple sells. Not only do ModuNet's connectors cost less than Apple's, they also work with inexpensive telephone wire (not supplied) rather than Apple's expensive cables.

We bought our telephone wire at Radio Shack. We also got a tool that can attach a modular plug to the end of the cable. The ModuNet connectors have jacks for modular telephone plugs. They also have screws you can use to attach bare wire.

ModuNet Connectors:

OE-001	8-pin for IIe/IIgs/new Macs	\$34.95
OE-002	9-pin for old LaserWriters & Macs	\$34.95

Reference Books

Understanding Networks is useful for getting up to speed with networks. The other books are for programmers writing software that uses AppleTalk.

AW-030	Understanding Networks	\$9.95
AW-031	AppleTalk Network Overview	\$14.95
AW-035	Inside AppleTalk	\$34.95

Printers, Monitors...

Printers

Your local electronics superstore is filled with high-quality dot matrix printers that are cheaper than an Apple ImageWriter. The problem with them is that very few respond correctly to the ImageWriter command codes that all Apple II software supports.

For example, an ImageWriter responds to the code "ESCAPE X" by beginning to underline. But other printers might use that code to begin a subscript, or to use slashed zeros, or to perform reverse paper feeds. Thus, when you use one of these printers with an Apple II expecting an ImageWriter, the results are not what you expect. You may find there's no way to use your printer's advanced features without becoming a printer expert and patching all your software with your printer's codes.

Everyone knows that Laser Computer, Inc. builds Apple II compatible computers. It seems to be a secret, however, that Laser also makes an ImageWriter-compatible dot-matrix printer called the **Laser 190A**. It won't do color like the ImageWriter II and it has a different ribbon, but we've used Laser's printer with all our GS/OS and ProDOS 8 software with results

exactly like those of the ImageWriter. Just tell your software that you're using an ImageWriter.

Laser's printer handles standard 8.5 inch continuous-form paper or single sheets of any width up to 8.5 inches. Continuous forms of other widths require an optional tractor feed attachment. It uses standard Epson LX-80/LX-90 ribbons available from us or your local ribbon outlet (ribbons also fit Olympia NP30).

To use the printer with a IIc or IIgs, you need the "serial" version of the printer. Don't forget to also order the correct cable. With a IIc, the printer will connect to a card inside your computer. Whether you need the serial or parallel version depends on whether you have a serial or parallel card. 110 volts only.

LC-001	Laser 190A serial printer	\$249.00*
LC-003	Laser 190A parallel printer	\$199.00*
LC-006	tractor feed attachment	\$59.95
LC-007	five ribbons	\$14.95
RC-001	8' serial cable for IIgs/IIc-Plus	\$15.00
RC-002	8' serial cable for older IIc	\$15.00
RC-003	8' serial cable for serial cards	\$15.00
	* surface shipping outside U.S.	\$25.00

Reference Books

Confused by RS-232 and serial links? **The RS-232 Solution** is the best book we've found to clear things up for you.

East's **Handbook of Printer Commands** is a three volume set of books that lists the features and command codes for almost every printer on the market.

SAMS **Computerfacts** manuals are written for dealer service personnel. They include schematics, trouble-shooting tips, and so on.

Addison-Wesley's **Apple Technical Library** includes reference manuals for the ImageWriter II and LQ and the LaserWriter.

SY-003	The RS-232 Solution, 2nd Ed	\$21.95
CP-001	Handbk of Printer Cmds (3 V)	\$89.95
HS-004	SAMS Computerfacts: IWriter I	\$24.95
HS-008	SAMS Computerfacts: IWriter II	\$24.95
AW-008	ImageWriter II Technical Ref	\$19.95
AW-025	ImageWriter LQ Reference	\$22.95
AW-028	LaserWriter Reference	\$19.95

Build a Laser Printer

This book is an expanded update of a *Computer Shopper* feature titled "Boys! Grow Giant Laser Writers in Your Basement." As he explains the laser printer construction process, the author provides a complete education in current laser printer technology - including what kinds of laser printer "engines" are available, how they operate, what parts they use, and where to buy components at the best possible prices.

For use with Apple systems, you'll want to build in AppleTalk so you can share your printer on a network. And you'll want PostScript for the best quality. Includes complete information on making your printer PostScript and AppleTalk compatible.

TB-012 **Build Your Own Laser Printer** \$16.95

Printer Drivers

Many subscribers have asked us how to use Hewlett-Packard's low-cost ink jet and laser printers with the Apple IIgs. Here's how. Vitesse has released a package of GS/OS printer drivers that it calls **Harmonie**.

Harmonie allows you to print from any GS/OS program to any of the following printers:

- HP DeskJet, DeskJet Plus, DeskJet 500
- HP PaintJet, PaintJet Plus
- HP LaserJet II, IIp, III
- Epson LQ 24-pin dot matrix printer
- Epson 9-pin printers (enhanced printing)
- Apple ImageWriter II (enhanced printing)

The *Harmonie* drivers are also compatible with many other printers that follow HP or Epson standards. *Harmonie* also comes with

high-speed, GS/OS 5.0.3-compatible port drivers for the following parallel printer interface cards:

- ProGrappler
- Grappler Plus
- Parallel Pro
- Epson APL
- II-Print

We also carry a similar package of printer driver software from Seven Hills, called **Independence**. It doesn't support as wide a variety of printers as *Harmonie*, but it supports the major printers and costs a few dollars less. Call us if you need more information to make a decision.

VI-006	Harmonie	\$37.00
SH-002	Independence	\$29.95

RGB Monitors

If you're planning to buy a new IIgs or if your old IIgs RGB color monitor needs to be replaced, you can get a 14 inch **Magnavox RGB** monitor and cable from us that's cheaper than Apple's monitor and that has more features.

Magnavox designed its monitor for use with a variety of home and personal computer products. It works with any computer that

generates a 15.7 KHz digital (TTL) or analog RGB signal. That includes the Apple IIgs, but not other Apple models. Its resolution is 640 pixels across by 200 pixels high. In addition, it has stereo audio inputs, speakers and volume control, and video inputs for use with North American standard NTSC or Super VHS video tape and video disk players. It's perfect for schools or other multimedia applications—one

classroom monitor works with both a computer and a video player, such as a VCR or videodisc player. Using the VCR's tuner, you could also easily reconfigure it as a standard television. Also works great with an Apple Video Overlay Card. 120 volts, 60 Hz, 2 year warranty.

DC-003	Magnavox IIgs RGB Monitor	\$349.00*
RC-005	IIgs RGB cable for monitor	\$23.00
	* Surface shipping outside U.S.	\$20.00

Speed, Power

Acceleration, Coprocessing

Speed up your Apple IIgs with Zip's new low-power **GSX Accelerator**. Adding this card to your system speeds up everything you do on your IIgs, from older Applesoft programs, to AppleWorks, to the latest desktop programs like *HyperStudio* and *HyperCard IIgs*.

The Zip accelerator we sell is an 8 MHz accelerator with a 16K cache memory. It's DMA compatible, can be configured using either DIP switches or software or both, and includes a diagnostic LED. It comes with a paper manual, a manual on disk, and desk accessories for configuration. It installs in either slot 3 or slot 4. No need to disable your screen or mouse.

If your computer work involves lots of math, The **Floating Point Engine** provides another

way to speed your work. The FPE is a math coprocessor card for your Apple IIe or IIgs. On a IIgs running under GS/OS, any program that uses the built-in Apple IIgs SANE math calls will automatically use the FPE instead. All you have to do is copy a file called FPETOOL.INIT into the SYSTEM/SYSTEM.SETUP folder on your boot disk.

The FPE also comes with patches for all versions of classic AppleWorks. It increases the speed of spreadsheet calculations and of some data base operations. And The Floating Point Engine is also directly supported by the *Beagle Compiler*.

ZC-001	Zip GSX Accelerator	\$279.00
IS-001	Floating Point Engine	\$249.00

Fans, Batteries

Cool off your computer with our whisper quiet fans. They install in your computer in about two minutes and operate directly from the Apple power supply—you have no power cord to run. Installs on the side of the power supply on the IIgs and under the keyboard on the IIe.

And when your IIgs can't remember your control panel settings or the time of day, you need to replace the battery. Nite Owl's **Slide-On Battery** allows you to clip off your old battery and slide a new one onto the old leads, without solder, in just a few minutes.

CT-FAN-E	Cool-It for the IIe	\$49.00
CT-FAN-GS	Cool-It for the IIgs	\$49.00
NO-001	Nite Owl Battery Kit	\$14.95

Desk Accessories

Desk Accessories are those nifty Apple IIgs programs you can get to while you're running another program. You get to the Classic Desk Accessory, or CDA, menu by pressing open-apple/control/escape. You get to the list of New Desk Accessories by pressing on the Apple icon at the left edge of the menu bar on desktop programs.

If you're looking for a complete set of desk accessories for your Apple IIgs, look no further. **Deskpak** from Simple Software Systems International contains tools and utilities that will make your computing life a breeze. The fifteen NDAs in this package include an appointment calendar, 25-page note pad, mini-database, full function calculator, disk utility, two games, file printer, and more. As this catalog went to press, *Deskpak* was being completely rewritten. The bargain-basement price we show here is for the old version. If we still have some, you can get one and then upgrade to the new version when it becomes available for less than it will cost new.

If you find yourself needing to create subdirectories or move and delete files while you're in a program that doesn't have a full-featured utility menu, you're stuck. Or rather, you used to be stuck. Now you can choose between **Disk Access**, from Seven Hills Software, or **Desktop File Control**, from Roger Wagner Publishing. Both of them give you much the same control over your files. *Disk Access* gives you more functions, but *Desktop File Control* is more aesthetically pleasing (what can I say, I like groovy-looking interfaces). Do yourself a favor and get one of these packages. Quitting back to The *Finder* in order to move, copy, delete, etc., files will be a thing of the past. *Disk Access* also includes an elementary file launcher.

You can turn your Apple IIgs into a desk full of IIs that you can use at the same time with the **SoftSwitch** CDA from Roger Wagner Publishing. Switch instantly between different ProDOS 8 or DOS 3.3 programs. Return to any of the programs exactly where you left off. You

can save suspended programs in mid-operation, and you can copy and paste graphics screens between programs. You can take a "snap-shot" of any graphics or text screen. Requires a 768K IIgs.

MacroMate, also from Roger Wagner Publishing, is a CDA that allows you to create keyboard macros that work with virtually any 8 or 16-bit program. Set up a macro to create your letterhead in a word processor, or just replace any known set of keystrokes with one key. *MacroMate* allows you to record macros, or create them with the built-in editor.

Desktop Screen Saver from Roger Wagner Publishing allows you to save anything you can get on the IIgs screen into a file. Allows a time delay so you can capture pull-down menus. It can also hide the cursor.

SS-008	Deskpak	\$15.00
SH-001	Disk Access	\$30.00
RW-010	Desktop File Control	\$24.00
RW-003	SoftSwitch	\$45.00
RW-006	MacroMate	\$37.50
RW-012	Desktop Screen Saver	\$24.95

IIgs Start Here

If what you really need to know is just how to get started with your Apple IIgs, we recommend *Your IIgs Guide* and the *GS/OS Guide* from CompuShare. The IIgs book covers the Desktop, Desk Accessories, the Control Panel, memory expansion cards, disk drives, printers, modems, and more. Includes a list of more than 100 Apple IIgs-related companies. The GS/OS guide covers fundamentals such as creating a RAMdisk, copying files, and differences between versions of GS/OS.

CO-004	CompuShare IIgs Guide	\$21.95
CO-003	CompuShare GS/OS Guide	\$9.95

Technical References/Trouble Shooting

Most of the technical reference books available for the Apple II series are listed among the programming items we carry. We have a few goodies left that wouldn't fit there.

First we have Apple's own **Technical Reference Manuals for the Apple IIe and Apple IIc**. These books have a wealth of information, including long descriptions of the machines' hardware and firmware, schematics, timing diagrams, and firmware source code.

We also have **Laser's Technical Reference Manual for the Laser 128**. It contains the same kind of materials for that computer.

The **SAMS Computerfacts** series is a line of books written for the professional service technician. The books include schematics, troubleshooting tips, part numbers, and service and adjustment tips. We stock all the SAMS manuals related to the Apple II.

AW-003	Apple: IIe Tech Reference	\$24.95
AW-004	Apple: IIc Tech Reference	\$24.95
LC-005	Laser: Laser 128 Tech Reference	\$29.95
HS-005	SAMS Computerfacts: IIc	\$39.95
HS-003	SAMS Compfacts: Disk II	\$24.95
HS-004	SAMS Computerfacts: IWriter	\$24.95
HS-008	SAMS Computerfacts: IWriter II	\$24.95

Index

Books

PRODUCT NAME	CATALOG #	PAGE #	WEIGHT	PRICE
A Bit of Applesoft BASIC.....	AW-040	5	1 lb 8 oz	\$9.95
Advanced Programmer's Tech. for Ilgs Toolbox	CB-007	3	1 lb 11 oz	\$19.95
Apple Numerics Reference.....	AW-001	3	1 lb 6 oz	\$29.95
Apple IIc Technical Reference.....	AW-004	19	3 lb 1 oz	\$24.95
Apple IIe Technical Reference.....	AW-003	19	2 lb 6 oz	\$24.95
Apple Ilgs Firmware Reference.....	AW-022	2	1 lb 15 oz	\$24.95
Apple Ilgs Hardware Reference.....	AW-002	2	1 lb 15 oz	\$26.95
Apple Ilgs Library Set.....	AW-SET	2	13 lb	\$49.95*
Apple Ilgs Technical Reference (Fisher).....	MH-001	3	2 lb 7 oz	\$19.95
Apple Ilgs Toolbox Reference Vol. 1.....	AW-019	2	3 lb 13 oz	\$26.95
Apple Ilgs Toolbox Reference Vol. 2.....	AW-006	2	3 lb 2 oz	\$26.95
Apple Ilgs Toolbox Reference Vol. 3.....	AW-036	2	4 lb 14 oz	\$39.95
Apple Ilgs GS/OS Reference.....	AW-041	2	7 oz	\$28.95
AppleTalk Network Overview.....	AW-031	17	15 oz	\$14.95
Applesoft Programmer's Reference.....	AW-021	5	2 lb 2 oz	\$22.95
Applesoft Toolbox (Wintermeyer).....	AW-038	5	2 lb	\$9.95
Applesoft Tutorial (w/disk).....	AW-010	5	1 lb 7 oz	\$29.95
Assembly Language for Applesoft Programming	AW-012	5	1 lb 10 oz	\$18.95
Assembly Lines (Wagner).....	RW-001	5	13 oz	\$19.95
Companion disk for Assembly Lines (Wagner)...	DS-004	5	2 oz	\$15.95
Basic Programming with ProDOS (w/disk).....	AW-024	5	1 lb 14 oz	\$29.95
Best Book of AppleWorks (Witkin).....	IN-004	7	1 lb 15 oz	\$21.95
Build Better Mousetrap (Vernier).....	VS-001	13	1 lb 5 oz	\$24.95
Build Your Own Laser Printer.....	TB-012	18	14 oz	\$16.95
Chaos In The Laboratory.....	VS-002	13	1 lb 14 oz	\$25.95
Exploring the Apple Ilgs.....	AW-017	3	2 lb 1 oz	\$22.95
Compan. Disk for Explor. the Apple Ilgs (3.5)	DS-007	3	2 oz	\$20.00
Exploring GS/OS and ProDOS 8.....	AW-026	3	1 lb 7 oz	\$21.95
Compan. Disk/Exp. GS/OS & ProDOS 8(3.5)	DS-006	3	2oz	\$15.00
Graphics for the Apple II (Myers).....	AW-039	5	1 lb 3 oz	\$9.95
GS/OS Guide (CompuShare #3).....	CO-003	19	8 oz	\$9.95
Handbook of Printer Commands (3 vols).....	CP-001	18	2 lb 3 oz	\$89.95
Hard Disk Primer.....	NA-002	15	13 oz	\$16.95
Hard Drive Guide CompuShare #1).....	CO-001	15	12 oz	\$14.95
How to Build A Better Mouse Trap.....	VS-001	13	1 lb 5 oz	\$24.95
Human Interface Guidelines.....	AW-014	3	12 oz	\$14.95
HyperCard Ilgs Script Guide.....	AW-042	9	2 lb	\$23.99
HyperCard Stack Design.....	AW-034	9	1 lb 3 oz	\$16.95
ImageWriter II Technical Reference.....	AW-008	18	1 lb 9 oz	\$19.95
ImageWriter LQ Reference.....	AW-025	18	1 lb 14 oz	\$22.95
In Search/Amazing Things (Snyder).....	AW-013	13	7 oz	\$10.95
Inside AppleTalk.....	AW-035	17	3 lb 4 oz	\$34.95
Laser 128 Technical Reference.....	LC-005	19	2 lb 3 oz	\$29.95
LaserWriter Reference.....	AW-028	18	1 lb 14 oz	\$19.95
Mastering the Ilgs Toolbox.....	CB-005	3	2 lb 7 oz	\$19.95
Pascal for Basic Programmers.....	AW-037	4	1 lb 3 oz	\$12.95
ProDOS 8 Technical Reference (w/disk).....	AW-023	5	1 lb 9 oz	\$29.95
ProDOS Inside and Out.....	TB-006	5	1 lb 1 oz	\$16.95
Companion Disk for ProDOS Inside and Out	DS-002	5	2 oz	\$10.00
Programming the Ilgs in Assembly Language...	SS-005	3,4	2 lb 12 oz	\$29.95
APW Companion Disk (3.5).....	DS-008	3	2 oz	\$20.00
Merlin Companion Disk (3.5).....	DS-009	3	2 oz	\$10.00
Orca/C Companion Disk (3.5).....	DS-010	3,4	2 oz	\$20.00
Programmer's Introduction to Ilgs (w/ disk).....	AW-011	2	2 lb 14 oz	\$32.95
RS-232 Solution, 2nd Edition.....	SY-003	18	13 oz	\$21.95
SAMS Computerfacts: IWriter I.....	HS-004	18,19	4 oz	\$24.95
SAMS Computerfacts: IWriter II.....	HS-008	18,19	5 oz	\$24.95
SAMS Computerfacts: Ilc.....	HS-005	19	7 oz	\$39.95

Weight measurements are the exact weight of the item, please allow for the extra for the packaging.

PRODUCT NAME	CATALOG #	PAGE #	WEIGHT	PRICE
SAMS Computerfacts: Disk II.....	HS-003	19	3 oz	\$24.95
Science On Your Apple (Pellino).....	TB-003	13	14 oz	\$14.95
6502 Starter Kit.....	RW-SET	5	1 lb 9 oz	\$39.95
Smart Apples (Horn).....	TB-004	13	14 oz	\$12.95
Technical Introduction to the Apple Ilgs.....	AW-018	2	13 oz	\$9.95
Telecommunications Guide (CompuShare #2)...	CO-002	12	6 oz	\$12.95
Ilgs Machine Language for Beginners.....	CB-002	3	2 lb 5 oz	\$19.95
Compan. Disk/Ilgs Mach. Langu. /Begin (3.5)	DS-005	3	2 oz	\$15.95
Ultra-AppleWorks (3.5 & 5.25 disks, book).....	MM-003	6	15 oz	\$24.95
UltraMacros Primer.....	NA-001	6	1 lb 3 oz	\$19.95
Understanding Networks.....	AW-030	17	9 lb	\$9.95
Understanding the Apple II.....	QS-002	13	2 lb 2 oz	\$22.95
Understanding the Apple IIe.....	QS-003	13	2 lb 3 oz	\$24.95
Using AppleWorks (Aron).....	IN-006	7	1 lb 15 oz	\$21.95
Using AppleWorks GS (Brown).....	AW-027	7	2 lb 1 oz	\$19.95
Your Best Interest.....	IB-001	13	9 oz	\$9.95
Your Ilgs Guide (CompuShare #4).....	CO-004	19	1 lb 6 oz	\$21.95

Hardware

PRODUCT NAME	CATALOG #	PAGE #	WEIGHT	PRICE
AMR 3.5 Drive.....	AM-001	17	3 lb	\$189.00
Apple High Speed SCSI card.....	AP-001	14	1 lb 7 oz	\$119.00
Chinook Memory.....	CH-002-0	16	14 oz	\$99.00
Chinook Memory (1 meg).....	CH-002-1	16	15 oz	\$169.00
Chinook Memory (2 meg).....	CH-002-2	16	16 oz	\$239.00
Chinook Memory (4 meg).....	CH-002-4	16	18 oz	\$379.00
Cirtech StatDisk 512K.....	SD-4	16	1 lb	\$389.00
Cirtech StatDisk 1 meg.....	SD-8	16	1 lb 7 oz	\$699.00
Color ComputerEyes for Ilgs.....	DV-004	10	1 lb 1oz	\$219.95
Computer Eyes (B & W).....	DV-001	10	13 oz	\$119.95
Cool-It Fan for the Ilgs.....	CT-FAN-GS	19	5 oz	\$49.00
Cool-It Fan for the IIe.....	CT-FAN-E	19	5 oz	\$49.00
CVTech GS-Memory.....	CV-002-0	16	13 oz	\$99.00
CVTech GS-Memory (1 meg).....	CV-002-1	16	14 oz	\$169.00
CVTech GS-Memory (2 meg).....	CV-002-2	16	15 oz	\$239.00
CVTech GS-Memory (3 meg).....	CV-002-3	16	1 lb	\$309.00
CVTech GS-Memory (4 meg).....	CV-002-4	16	1 lb 1 oz	\$379.00
Debugger for IIe.....	PD-001	3	1 lb	\$189.00
Debugger for Ilgs.....	PD-002	3	1 lb	\$189.00
Floating Point Engine.....	IS-001	19	12 oz	\$249.00
Internal Drive (20 Meg).....	CT-CID-20	14	1 lb 12 oz	\$695.00
Internal Drive (40 Meg).....	CT-CID-40	14	1 lb 12 oz	\$845.00
Laser 3.5 controller for IIe.....	AM-002	17	1 lb	\$59.00
Laser 190A serial printer.....	LC-001	18	18 lb	\$249.00*
Laser 190Q parallel printer.....	LC-003	18	18 lb	\$199.00*
Laser 190Q Printer Tractor Feed Attachment...	LC-006	18	1 lb 10 oz	\$59.95
Magnavox Ilgs RGB Monitor.....	DC-003	18	32 lb	\$319.00*
Ilgs RGB Cable for Monitor.....	RC-005	18	8 oz	\$23.00
Memory for StatDisk--2 chips (64K).....	SRAM-32	16	2 oz	\$30.00
ModuNet Connector (8-pin for IIe/Ilgs/new Macs)	OE-001	17	4 oz	\$34.95
ModuNet Connector (9-pin).....	OE-002	17	4 oz	\$34.95
Nite Owl Slide-On Battery Kit.....	NO-001	19	2 oz	\$14.95
Quickie Scanner.....	VI-001	10	1 lb 7 oz	\$219.95
RAM Chips (set of 8 std 1-meg).....	DRAM-1	16	1 oz	\$70.00
RAM Chips (256K).....	DRAM-256	16	1 oz	\$25.00
RAMfast SCSI Card.....	CV-001	14	1 lb 1 oz	\$209.00
Resource Central 100 Meg Hard Drive.....	A2-005	14	9 lb 1 oz	\$599.00*

* Requires shipping charge for destinations outside U.S.

PRODUCT NAME	CATALOG #	PAGE #	WEIGHT	PRICE
Resource Central 50 Meg Hard Drive.....	A2-007	14	9 lb 1 oz	\$479.00*
Resource Central 42 Meg Removable Media.....	A2-006	14	10 lb 6 oz	\$699.00*
extra Cartridge for 42 Meg Drive.....	DC-007	14	12 oz	\$99.00
Serial Cable for Ilgs/Ilc-Plus (8').....	RC-001	12,18	6 oz	\$15.00
Serial Cable for older Ilc (8').....	RC-002	12,18	5 oz	\$15.00
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SIMM for OctoRAM or Macintosh (1 meg).....	SIMM-1	16	1 oz	\$70.00
Supra 2400 for Australia (220 volts).....	SC-002-AU	12	2 lb 6 oz	\$129.00*
Supra 2400 for Britain (220 volts).....	SC-002-UK	12	2 lb 6 oz	\$129.00*
Supra 2400 for North America (110 volts).....	SC-001	12	2 lb 6 oz	\$119.00
Supra 2400 for West Germany (220 volts).....	SC-002-WG	12	2 lb 6 oz	\$129.00*
SVI MA-100 Speakers.....	DR-002	9	12 lb	\$129.00*
ViVa24m 2400 baud MNP 5 Modem(110 volts).....	DC-008	12	3 lb 4 oz	\$169.00*
Zip GSX Accelerator.....	ZC-001	19	12 oz	\$199.00

Software

PRODUCT NAME	CATALOG #	PAGE #	WEIGHT	PRICE
A2-Central Font Collection.....	FC-001	9	6 oz	\$39.00
BASIC Help.....	IS-002	5	2 lb 5 oz	\$29.95
Beagle AppleWorks 3.0 Companion.....	BB-004	6	8 oz	\$39.95
Beagle Compiler.....	BB-002	5	7 oz	\$59.00
Beagle Program Writer.....	BB-003	5	12 oz	\$37.50
Chinook SCSI Utilities.....	CH-001	15	6 oz	\$30.00
ClassWorks (Thomas).....	CE-001	6	2 lb 14 oz	\$49.95
ClipArt Plus.....	TV-002	9	3 oz	\$39.95
ClipSounds (10 Disks).....	DS-012	9	13 oz	\$59.95
ClipTunes (2 Disks).....	TV-001	9	3 oz	\$39.95
ClipVision 1.1.....	DS-011	9	2 oz	\$29.95
Co-Pilot.....	KG-001	12	1 oz	\$25.00
Computer Eyes (B & W) Enhancement Software.....	DV-002	10	13 oz	\$22.95
Ilgs Support Software.....	DV-003	10	3 oz	\$22.95
Cross-Works.....	SS-006	16	1 lb 7 oz	\$79.95
DB Master Basic Programmer's Pak.....	SE-002	5	2 oz	\$129.00
Design Master.....	BW-006	4	1 lb 2 oz	\$57.00
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Desktop File Control.....	RW-010	19	3 oz	\$24.00
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Genesys.....	SS-007	4	2 lb	\$90.00
Graphics Exchange.....	RW-004	10	5 oz	\$37.50
GSNumerics.....	SB-001	13	2lb 12 oz	\$79.95
Harmonie.....	VI-006	18	7 oz	\$37.00
HyperCard Ilgs.....	AP-002	8	5 lb 3 oz	\$99.00
HyperStudio.....	RW-005	8	1 lb 13 oz	\$99.95
HyperStudio Clip-Art, Vol.1.....	RW-007	9	3 oz	\$19.95
HyperStudio Clip Art, Vol 2.....	RW-011	9	3 oz	\$24.95
HyperStudio Clip-Sounds Vol 1.....	RW-008	9	3 oz	\$19.95
HyperStudio Xcmds, Vol. 1.....	RW-009	8	3 oz	\$39.95
I.O. Silver.....	JE-002	13	2 oz	\$20.00
Independence.....	SH-002	18	6 oz	\$29.95

PRODUCT NAME	CATALOG #	PAGE #	WEIGHT	PRICE
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Learn to Program in C.....	BW-004	4	3 lb 14 oz	\$50.00
Learn to Program in Pascal.....	BW-002	4	4 lb	\$50.00
MacroEase.....	BB-006	6	9 oz	\$34.95
MacroMate.....	RW-006	19	8 oz	\$37.50
MD-Basic (Davis).....	MD-001	5	10 oz	\$49.95
Merlin 8/16.....	RW-002	3	1 lb 2 oz	\$99.00
Merlin to Orca Source Convert.....	BW-008	3	6 oz	\$18.00
Micol Advanced Basic For The Ilgs.....	MS-001	4	14 oz	\$99.00
Micol Advanced Basic For The Ilc/Ilc.....	MS-002	4	15 oz	\$89.00
Mr. Invoice.....	JE-004	7	2 oz	\$40.00
Nexus.....	GC-001	8	7 oz	\$69.95
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Ultra-AppleWorks (3.5 disk).....	MM-002	6	1 oz	\$19.95
Ultra AWesome Macros.....	MM-001	6	1 oz	\$19.95
UltraMacros (TimeOut).....	BB-005	6	1 lb	\$49.95
Wraith: Devil's Demise.....	NO-003	13	1 oz	\$12.95
Writeworks.....	JH-001	6	2 oz	\$24.95

Accessories

PRODUCT NAME	CATALOG #	PAGE #	WEIGHT	PRICE
Disks, Generic Blank (10).....	A2-001	17	8 oz	\$9.49
Labels, Blank, Continuous (100 count).....	A2-002	17	6 oz	\$1.99
Printer Ribbons (5 count).....	LC-007	18	10 oz	\$14.95
Static-Guard Binder Storage Pg's (10) 3.5 disks.....	A2-003	17	14 oz	\$9.97

Weight measurements are the exact weight of the item, please allow for the extra for the packaging.

* Requires shipping charge for destinations outside U.S.

Publications

A2-Central

A2-Central is an 8-page monthly newsletter. About half of each issue consists of letters from readers and our responses to their questions and comments. The rest consists of news about the Apple II world and technical pieces designed to enhance your understanding of some element of the Apple II universe.

The only focus of **A2-Central** is the Apple II and related lines of computers. Our editorial direction is determined month-by-month and is based on the kinds of questions subscribers send us and breaking developments in the Apple II world. We have a very short lead time compared to magazines and are well-known for being the first to print Apple II news.

A2-Central protects the self-esteem of Apple II enthusiasts from Mac and MS-DOS attacks by providing a central clearinghouse for good ideas and strong emotions that are related to the Apple II. Every day, users all over the world send us their discoveries, their frustrations, their problems, and their achievements. We get to the bottom of their problems through our network of experts and publish the results in **A2-Central**.

A2-Central on disk

Some of our subscribers pay a little extra (less than what most user groups charge for a 3.5 disk-of-the-month) and get a 3.5 disk in the envelope each month with their newsletter. We use this disk to distribute stuff that won't (or can't) fit in the newsletter, such as Apple's system software updates and technotes. Each disk also includes the latest and best public domain and shareware software.

The main feature of the disk, however, is a file holding the full text of that month's issue. We distribute the full text on disk for two reasons. First, we have a number of blind subscribers who use the disk and text-talking software that comes with it to read our newsletter each month. Secondly, we have subscribers who put each month's issue on a hard disk, where it can be quickly scanned with full-text searching software to find the latest phone number for that company you want to call or to find the solution to that problem with printer tabs you're having.

8/16-Central

8/16-Central is our monthly publication for Apple II programmers. It includes regular columns, articles, and source code for 8- and 16-bit programs as well as want-ads, tutorials, and a question-and-answer section. Each issue comes on a 3.5 disk that also includes extra utilities and programs of interest to developers.

8/16-Central rounds-out Resource Central's support of the Apple II developer. We also provide developers with a summer conference, the Apple II Programmers and Developers RoundTable on GEnie, and a central source for programming books and tools.

Stack-Central

Stack-Central is our publication for *HyperStudio* users and authors. Issued on two 3.5 disks every other month, each issue consists of a main *HyperStudio* stack put together by the publication's editor, Dean Esmay, plus other stacks and goodies from other authors. Includes the latest information on multimedia developments, authoring tips and tutorials, clip art and sounds and Xcommands you can use in your own stacks, and the best public domain and shareware stacks we can find.

Resource-Central Disk Sampler Set

Latest issue of *A2-Central* on disk, *8/16-Central*, *TimeOut-Central*, *Script-Central* and the *Stack-Central* and *Hyperbole* sample disks.

RC-SAMP Disk Sampler Set \$15.00

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A2-Central 12 issues/year, paper only	\$28	\$54	\$78
A2-Central (disk) 12 issues/year, paper & 3.5 disk	\$84	\$162	\$234
8/16-Central 12 issues/year, 3.5 disk only	\$69	\$135	\$198
TimeOut-Central 6 issues/year, 3.5 disk only	\$42	\$81	\$117
Hyperbole 6 issues/year, 3.5 disk, requires Apple IIgs	\$42	\$81	\$117
Stack-Central 6 issues/year, 3.5 disk, requires <i>HyperStudio</i>	\$42	\$81	\$117
Script-Central 6 issues/year, 3.5 disk, requires <i>HyperCard IIgs</i>	\$42	\$81	\$117

Subscription prices include free AIR MAIL delivery world-wide.

TimeOut-Central

TimeOut-Central is an 800K, 3.5-disk-based publication devoted to AppleWorks and TimeOut. Published every other month, **TimeOut-Central** is named after Beagle Bros' famous *TimeOut* series of AppleWorks add-ons.

The editor of **TimeOut-Central** is Randy Brandt, author of *TimeOut UltraMacros*, *Outline 3.0*, *TotalControl*, member of the AppleWorks 3.0 development team, and one-time documentation writer. Through his contacts at Beagle, at Claris, and in schools, offices, and homes around the world, Brandt is able to bring you the latest news and tips about classic *AppleWorks* and *TimeOut*. And because **TimeOut-Central** is a disk-based publication, he can send you not just text, but complete computer files — actual word processor documents, spreadsheets, data bases, macros, and complete *TimeOut* applications.

If you use *AppleWorks*, get the technical support you need from **TimeOut-Central**. It's the best single source for answers to your questions about *AppleWorks* and *TimeOut* applications.

Hyperbole

Hyperbole is stories. **Hyperbole** is poetry and art and sounds. **Hyperbole** is a publication that mixes literary art and hypermedia.

There's nothing else like it anywhere,...yet. Hypermedia-based publications delivered on disks or CD-ROMs will become as ubiquitous as magazines during the next 20 to 30 years. But *HyperStudio* and your Apple IIgs make hypermedia publications possible today, and Resource Central is here to see that you get them.

Unlike the other publications you can get from us, which are all about some aspect of using Apple II computers, **Hyperbole's** content has nothing to do with computers and a lot to do with literary and artistic beauty and pleasure.

Every other month you'll get two 3.5 disks for your Apple IIgs that will put you on the forefront of what's happening in hypermedia and literature. (A note to parents: unlike our other publications, but like all literature, the material in **Hyperbole** ranges from G- to R-rated. Some selections are unsuitable for children.)

Each subscription to **Hyperbole** includes Issue 0, a sampler that has a special version of *HyperStudio* on it that you can use to access subsequent issues. There's no need to own *HyperStudio*, but you do need an Apple IIgs.

Script-Central

Script-Central is our newest 3.5-disk-based publication. It's devoted exclusively to *HyperCard IIgs* and to HyperTalk scripting.

Every other month **Script-Central** subscribers will receive two disks holding that's month issue. **Script-Central** itself uses *HyperCard IIgs* as its multimedia delivery vehicle. You'll start the stack holding our current issue and be computer-transported to the **Script-Central** building. Cars whizz by on the street out front.

You knock, the door opens, and you find yourself at the current issue's information desk. To the right is a door leading to our regular columns. To the left is an elevator that will take you to this issue's feature articles. Regular columns include the Scriptor's Workshop, where you'll find a tool cabinet and drawers for scripts, buttons, sounds and xcommands, and the Radio Room, where you'll hear *HyperCard IIgs* discussions from the online services. Other regular features include letters from readers, our own tips and tricks, and the amazing Rum-R-Matic rumor dispenser.

Each month we'll also present several feature stacks that are yours to keep. These stacks will be among the best stacks we find online or in our mailbox. (Yes, you can send us your stacks and if they're good we'll make you famous!)

HyperTalk promises to be the Applesoft of the 1990s. Here's your chance to get in on the start of what could become the primary Apple II programming language.

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We respond to all Apple II-related technical questions mailed to us. And we answer questions in GEnie's Apple II and A2Pro RoundTables and in electronic mail (our address is A2-CENTRAL). We also answer technical questions by phone, but this service is limited to products you've purchased from us.

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