


April 1994

\$2.95

The Journal of Washington Apple Pi, Ltd.

# WASHINGTON APPLE PI

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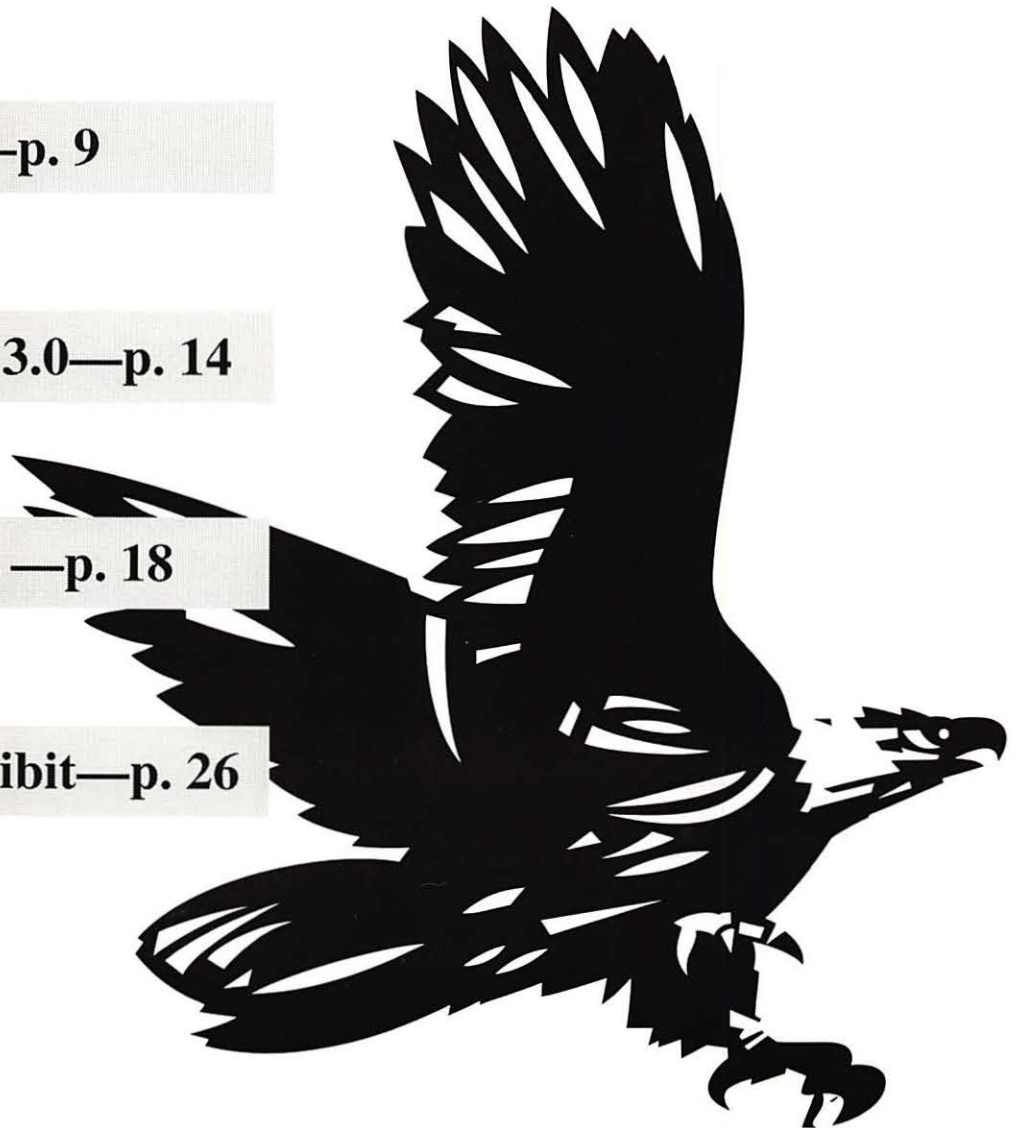
Volume 16, Number 4

Internetting —p. 9

WordPerfect 3.0—p. 14

Laser Printers —p. 18

Artist on Exhibit—p. 26



# Washington Apple Pi General Meeting

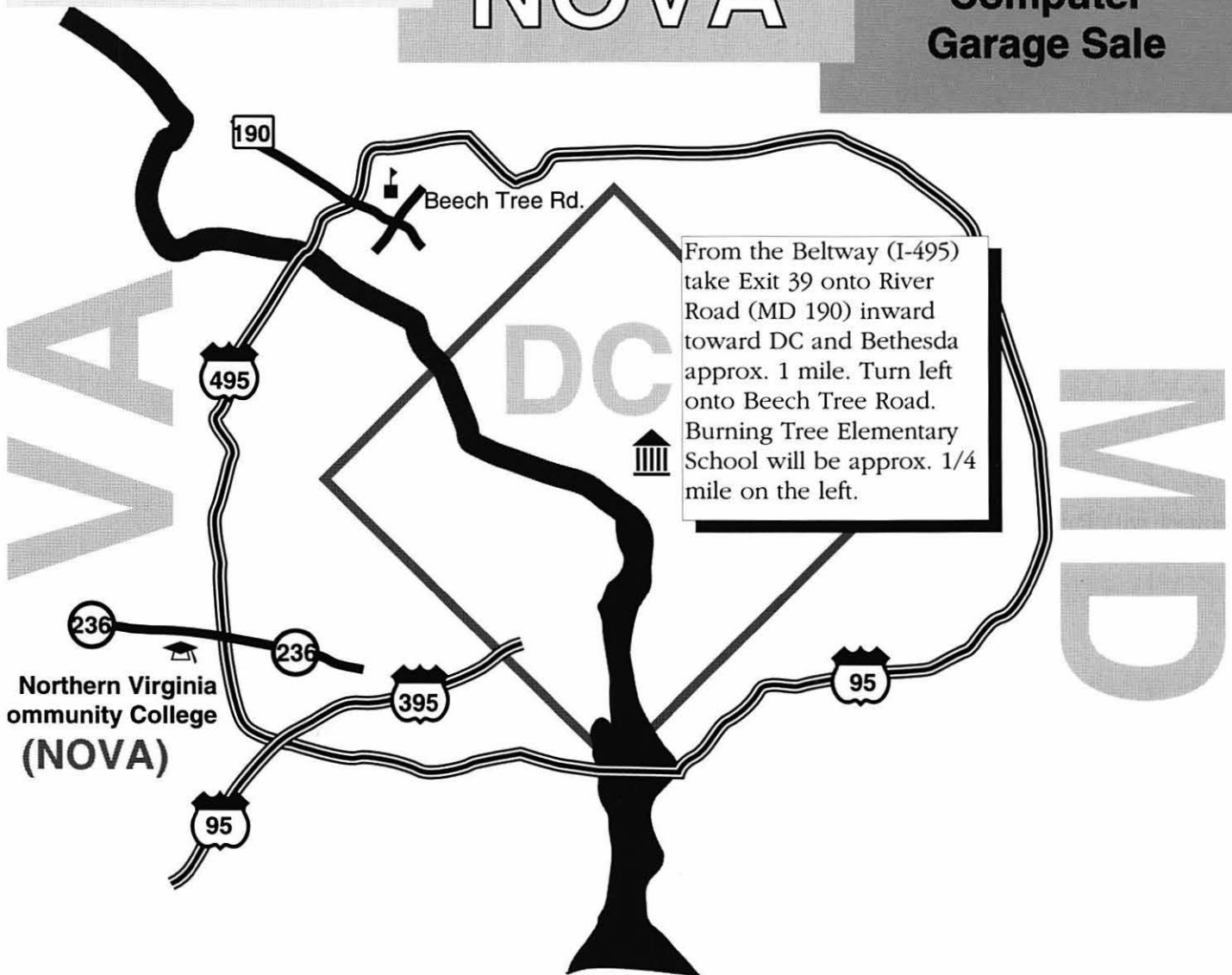
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April 23, 1994  
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Ares Software  
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Washington  
Apple Pi  
Computer  
Garage Sale



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Volume 16

April 1994

Number 4

From the President

## The TCS As It Evolves

by Lorin Evans

The operation of an electronic bulletin board such as ours is a never-ending cycle of modernization, expansion, and upgrade. The current TCS is a full replacement for the Corvus network that was cajoled and coerced into the 20th century. This first year of operation has given us a good idea as to what our members would like to see changed. We now know where to spend our next dollar so as to move toward our goal of providing friendly access to information in a timely and reliable manner.

Here are some of the things we want to accomplish:

### 1) Expand the TCS.

Electronic mail is the latest introduction in a continuing flow of improvements. Work is being done on many more such projects, some subject to the availability of additional hardware. We promised more storage potential, and you are putting us to the test by nearly filling our first 1.2 gigabyte hard drive in its first six months online. We will need another large disk drive soon.

### 2) Make TCS services more attractive to you.

The TCS is no longer solely inhabited by a small group of hobbyists. It services a wide range of members including professionals, students, senior citizens, children and others of different degrees of involvement with computers. We want you to have a choice of different levels of service, and clear upgrade paths as one way to match your interests. So, we created three levels of access for you.

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**3) Make TCS services more accessible.**

An accessible service means a reliable one, such that the appropriate-speed system will be available when you call. An increasing number of you have high-speed modems now, and the demand on those few TCS lines has been overwhelming. To compound the problem, some of our oldest hardware has proven only marginally reliable. Replacing those components will mean more systems are ready to answer when you call, effectively increasing the number of lines available. This means upgrade the low-speed lines and add additional high-speed ones.

It goes without saying that the above goals require funding, and a solid financial commitment behind them. The TCS in particular, and WAP in general, are operating in a market in which more emphasis is being placed on global telecommunications. We must adapt with this trend in order to remain competitive.

The question presented to the Board of Directors at its February meeting was how to fund the items needed to finish the initial outfitting, acquire the additions we now see as necessary to the continued growth of services to an expanding population of users, and provide a reserve for maintenance. While we could have sent out a second direct mailing asking for help as we did over a year ago, at best it would only be a temporary solution. The Board felt it was time to address the

entire fee structure with the goal of providing a regular source of funds for what looks to be a continuing cycle of modernization, expansion, and upgrade.

So, on April 1, 1994, Washington Apple Pi will restructure its pricing for TCS services. If you are eligible for TCS access according to the TCS Guidelines, you will be offered a choice of one of the following three levels of service as an adjunct to your WAP membership fee.

A transition period will be required to bring everyone from the old pricing structure to the new. On or about April 1, each existing TCS member will shift into the above levels of service as follows, for the remainder of his or her prepaid membership. If you wish to upgrade

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in the middle of your current membership, the fee is the same and the upgrade will apply for the remaining portion of that membership.

■ WAP members who already have TCS passwords but who are not listed among the contributors to the TCS Improvement Fund as of February 22, 1994, will be assigned "TCS Standard Service."

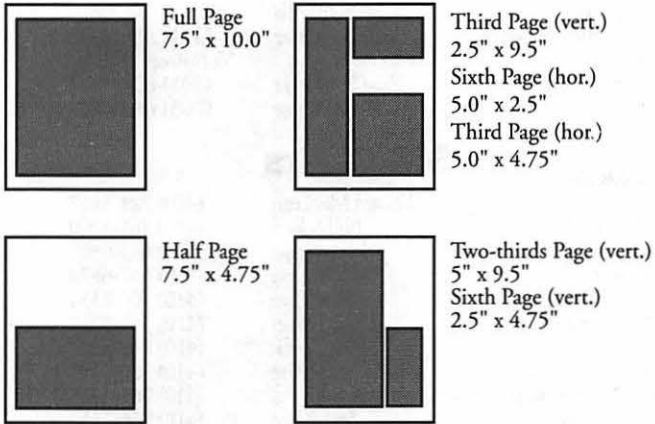
■ WAP members who already have TCS passwords and who are listed among the contributors to the TCS Improvement Fund as of February 22, 1994, will be assigned "TCS Premium Service" in appreciation of their generosity and their support which has led the TCS this far.

If you are a member and do not have a TCS password, you will not be assigned one automatically. When you renew, you may select from among the three options. ■

Category	Cost (excluding WAP dues)	Description
<b>TCS Limited Service</b>	<b>&lt;FREE&gt;</b>	Free access to the system for 15 minutes per day including full participation in intra-TCS bulletin boards, up-to-the-minute meeting announcements, read-only access to Usenet newsgroups, and downloads limited to certain key areas (currently #2, TCS Help Files, #21, Mac Essentials, and #41, Apple II Essentials.)
<b>TCS Standard Service</b>	<b>\$15/year</b>	Access to the system for 120 minutes per day including full participation in intra-TCS bulletin boards, up-to-the-minute meeting announcements, read-only access to Usenet newsgroups, and unrestricted downloading from all file transfer areas.
<b>TCS Premium Service</b>	<b>\$25/year</b>	Access to the system for 150 minutes per day including full participation in intra-TCS bulletin boards, up-to-the-minute meeting announcements, full participation in Usenet newsgroups, unrestricted downloading from all file transfer areas, and electronic mail to and from local and Internet addresses. If response to this Service is sufficient for the TCS Committee to provide more and greater services such as offline "point" message handling, graphical access or other projects currently being investigated, TCS Premium Service subscribers will be the first to be asked to beta test and/or the first to have available these new services.

# Advertising in the Journal

## Some Orientation Possibilities



No. of times ad runs	1-2	3-5	6-11	12+
Full Page	\$450	\$383	\$338	\$270
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Third Page	\$225	\$191	\$169	\$135
Sixth Page	\$125	\$106	\$93	\$75

*Special guaranteed positions incur a 10% surcharge*

### Ad Deadlines

The Washington Apple Pi Journal is published monthly. The ad copy deadlines and ad space reservations are listed below for your convenience.

Copy may be received as traditional mechanicals, rc-paper, velox prints, or film negatives. Negatives will incur an additional \$15.00 strip-in charge.

# Washington Apple Pi



This issue of the Washington Apple Pi Journal was created on a Mac SE/30, proofed on an LaserWriter IINT, and produced by electronic typesetting at The Publishers Service Bureau.

The page layout program used was PageMaker 4.2a, the word processing program was Microsoft Word 5.1; the principal typeface is New Century Schoolbook (10/12) for the articles; and Helvetica for headlines, subheads, and emphasis.

**Cover Design:** New WAP Journal cover design was created by Ann Aiken in collaboration with Nancy Seferian. The Capital artwork was illustrated by Carol O'Connor for One Mile Up, which donated it for use on our cover.

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June .....	April 17
<b>Editors' submissions</b>	
May .....	March 27
June .....	April 24
<b>Ad space reservations</b>	
May .....	March 20
June .....	April 17
<b>Camera-ready ad copy</b>	
May .....	March 27
June .....	April 24

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# General Meeting Summary Macintosh December, January & February

by Lawrence Charters

See page 1 for *From the President* column

Community College, scheduled site of the meeting, was closed down due to severe winter weather. Snow and ice-bound parents were busy trying to figure out if their kids would finish snow-makeup days before the Fourth of July. At least a couple of Pi leaders thought about making a ski trip to Capitol Hill, but bagged the idea: there are no ski lifts.

### December 1993 General Meeting

There was no General Meeting in December. Instead, roughly a thousand people showed up at the December Garage Sale to try and sell their old Mac computers in preparation for the introduction of the PowerPC-based Macs in March 1994. Or they showed up to purchase used Macs that were more powerful than whatever machine they currently had. Or they showed up to ask questions during the all-day

Question and Answer session.

One big surprise: over half the questions concerned QuickTime movies, Microsoft PowerPoint, or MOD music files. As a guess, this may be due to the QuickTime, PowerPoint and MOD music files on the Mac Iici used for demonstrating answers to people's questions.

### February 1994 General Meeting

In a break from recent precedent, the February meeting was held as scheduled. Mike Tippets came out from Utah to demonstrate *WordPerfect 3.0* for the Macintosh, and Ben Calica flew in from Tokyo to demonstrate *Lunicus* and *Jump Raven*. No one bothered to count the crowd, but Mike gave away 350 "User Group Special Offer" coupons

### January 1994 General Meeting

There was no General Meeting in January. Northern Virginia



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— all he had.

Mike gave a superb demonstration of *WordPerfect*. He started by admitting Version 1.0 was terrible, and Version 2.0 was good but not, perhaps, great. Then he put *WordPerfect 3.0* for the Macintosh through its paces, and it did, indeed, look great. It has a great table tool; better than Microsoft *Word's*. It has a great macro language; as good as *Nisus*. It has an incredible “watermark” feature (nobody else has one at all). It has a great built-in drawing package; better than Microsoft *Word's*.

Plus, it looks neat, with customizable button bars and a unique, unobtrusive but helpful help bar. Things he didn't have time to show: an integrated grammar checker, and the best, most flexible

spell checker available on any word processor.

Mike's presentation had one tiny flaw: the audience. He bravely offered to answer any question, so naturally a physicist asked him to demonstrate *WordPerfect's* new equation editor. Mike knew which button activated the equation editor, knew which file had a sample equation, and also knew he didn't know anything about equations.

The crowd, obviously, forgave him: Mike was mobbed in the lobby when he gave out special coupons offering the \$495 package for \$49. When he left for the airport, he looked both elated and somewhat shell-shocked.

In contrast, Ben Calica looked amazingly awake. As Director of Production for Knoxville-based Cyberflix, it would seem a trip to the DC area would be unremarkable — except that he made a detour through MacWorld Japan. After admitting he was suffering from jet-lag, he plunged into an enthusiastic demonstration of

two astounding CD-ROM-based games, and didn't look in the least fatigued.

*Jump Raven*, an award-winning “shoot everything that moves” style game featuring a heavily armed police vehicle, is fast-paced, beautiful, and funny. The game has astonishing detail, beautifully designed and rendered graphics, and a clever interface. It doesn't really look like a computer-based game but, rather, more like an interactive movie, which is precisely what Cyberflix intended. (The company name reflects careful thought.)

The audience was clearly impressed with the rich color, remarkable three-dimensional feel, and speed of the game. But Ben spent at least half the time on the characters, “interviewing” potential

co-pilots for the *Jump Raven* craft, purchasing weapons from the arms mistress (a hilarious spoof of TV shopping channels), and getting instructions from the boss. Ben's favorite feature, the wickedly funny Perotbot help system (“I'm glad you asked for help, not a handout”) didn't survive the corporate lawyers into the shipping version, so Ben showed a pre-production copy — and gave it away in the drawing.

While *Jump Raven* takes place on a near-future Earth, *Lunicus* is a space-based adventure. As the name suggests, most of the action takes place in and around the moon, with a daring band of U.N. personnel racing to keep an evil alien artifact from destroying humanity. It has the same rich sound and graphics, and superb speed. The characters in the game are surprisingly well detailed, with some hilarious touches.

#### Future Events

The March 26 General Meeting will be at Burning Tree Elementary School in Bethesda, Maryland, and feature Timeworks and GeoPoint. April 23rd will see us back at Burning Tree for a presentation by Microsoft on their hot new FoxPro database. The Pi will be at MacWorld Summit on May 10-12, at the Washington Convention Center. The General Meeting will return to Northern Virginia Community College on May 26 for a presentation by Ares Software — a record third attempt to make a presentation. There will be no meeting in June (but there will be a Garage Sale). Northern Virginia Community College will host the July 23rd meeting featuring Global Village and Microsoft Home. MacWorld Boston will be held Aug. 2-5.

#### Meeting Credits

**Macintosh IIci:** donated by Falcon Microsystems



**Bernoulli 150 drive:** on loan from Iomega Corporation.

**Proxima Ovation LCD panel:** loaned by Proxima Corporation.

**PowerPoint presentation package:** donated by Microsoft Corporation. (I forgot to install the Pi's copy prior to the meeting and used a privately owned copy of PowerPoint. But Microsoft still deserves credit for the donation.)

**Silver Spring Metro Station penguins:** photography by Dennis Dimick

**TCS Penguin:** Freehand illustration by Nancy Seferian

**Setup and General Worrying:** Tom Witte, Lorin Evans, Beth Medlin and Bill Wydro.

**Communications Support and Publicity:** Washington Apple Pi TCS

**Drawing Winners:**

**Digital Nation bulletin board:** Digital Nation T-shirt — Frank Potter

**Imspace Systems:** Kudo Image Browser — Michele van Horn

**Apple:** Software Dispatch CD-ROM — Frank Bingman

**Apple:** Software Dispatch CD-ROM — Gregory Stanton

**Ventana Press:** The System 7 Book — Joe Swick

**Que:** Using the Macintosh With System 7 — Chris Nottingham

**Hayden:** Macintosh Revealed, Vol. 1 and 2 — Thomas Culbert

**Cyberflix:** Lunicus — Walter Forlini

**Cyberflix:** Jump Raven — Gary Smith

**Cyberflix:** Jump Raven, Limited Edition — Chris Kolb

**WordPerfect:** WordPerfect 3.0 — Pat Garvey

**WordPerfect:** WordPerfect 3.0 — Mitchel Coak ■

**StockSIG**

by Morris Pelham

February weather is awful. Ice and snow, followed by snow and ice, followed by more snow, followed by more ice. But we met anyway.

We began with our beating the Dow strategy for 1993. I passed around my Excel spreadsheet showing the 30 Dow stocks, the 10 high yield stocks, the 5 low price stocks, and how they had prospered during 1993. Our beating the Dow strategy had picked the 5 low price stocks, which had prospered most, finishing the year with a profit of 34.20% compared to 17.89% for the Dow stocks. We feel kinda proud of ourselves. Most mutual funds, retirement accounts, and other investment advisors are reporting 1993 profits of 15 to 20%, similar to the Dow. Our 34.20% profit is worth bragging on twice.

Then we turned to beating the Dow for 1994. I passed around another set of spreadsheets showing the strategy for December 1993 and January and February 1994, with several stocks falling onto and dropping off of our lists. I see potential here to buy our stocks at lower prices, which always helps profits. Mark Pankin passed around his report on progress of one 1994 portfolio, up by 7.6% at the end of January compared to 6.0% for the Dow. A good beginning.

Then we turned to our newest idea, using the Fidelity Select mutual funds to beat our beating the Dow strategy.

Mark had given me a list of which Fidelity Select funds had been picked by his complex Excel formula, when and at what price. I set out to verify independently from my stack of old Barron's the results

of buying and selling what and when Mark's database said to.

The results are good. I passed around a detailed printout of my results, which generally agree with Mark's results. I asked if anyone saw any errors, and no one did. The profits were:

- 1989 : 34.96%
- 1990 : 18.65%
- 1991 : 44.58%
- 1992 : 43.98%
- 1993 : 60.23%

Most years this strategy buys 6 or 7 funds, one at a time, has one big profit early and 3 to 5 small profits later in the year with one or two small losses each year. It works well for an account that does not pay income taxes, such as an IRA. It is the tax-free compounding that produces these superior results. In a taxable account you would have to subtract an income tax from each profitable transaction before reinvesting into the next fund, thus seriously reducing the returns shown above. Such is the foolishness of taxing savings and investments the same as regular, every two-week, paychecks.

Several of us are following this strategy with real money, so you know we believe. If you are interested, come to our meeting, stand up and speak up. We probably will be talking about our 1994 progress at every meeting this year.

StockSIG meets the 2nd Thursday of each month at 7:30 PM at the WAP office. ■



**Mac Programmers' SIG**

by **John D. Barnes**  
Mac Programmers' SIG Chair

At its Feb 2 meeting the Pi Mac Programmers' SIG featured a discussion of AppleScript, Apple Computer Corp's latest technology for interapplication communication. Cal Simone, of Main Event, discussed the philosophy behind AppleScript, illustrated some of its features, and discussed some of the growing number of applications that support AppleScript as a way of passing information and control from one application to another. Of course AppleScript can also be regarded as a programming language and can be used to build applications on its own.

Main Event is currently working to bring Scriptor, a tool designed to let programmers and non-programmers alike build AppleScripts, to market.

The Session was a very lively one, and went on well past the 10 p.m. "witching hour".

While Cal was setting up his demos on the Pi computer, Greg Bartolette also reviewed his solutions to the Programmers'

Challenges that he had passed out at the January Meeting. Several of the SIG's members discovered quirks in the way their libraries handled floating point numbers when they tried to work one of the problems. It seems that they had forgotten that financial applications usually treat cash as a matter of cents rather than as dollars expressed in floating point. ■

**April Fool's Speculation  
on Future Viruses**

While we all know that Disinfectant\*© will protect you from all known Mac computer viruses, Donald Kahler found, on the INTERNET and passed me, the following entertaining list yet to be found viruses.

*\*(version 3.3 available from TCS file area Essentials or the Diskiteria)*

**OPRAH WINFREY VIRUS:** Your 200MB hard drive suddenly shrinks to 80MB, and then slowly expands back to 200MB.

**AT&T VIRUS:** Every three minutes it tells you what great service you are getting.

**MCI VIRUS:** Every three minutes it reminds you that you're paying too much for the AT&T virus.

**PAUL REVERE VIRUS:** This revolutionary DOS virus does not horse around. It warns you of impending hard disk attack—once if by LAN, twice if by C:>.

**POLITICALLY CORRECT VIRUS:** Never calls itself a "virus", but instead refers to itself as an "electronic microorganism."

**BILL CLINTON VIRUS:** Promises to save your disk, then once installed, does what all of the other viruses tell it to do and ignores its installer.

**GEORGE BUSH VIRUS:** It starts by boldly stating, "Read my docs...No new files!" on the screen. It proceeds to fill up all the free space on your hard drive with new files.

**ROSS PEROT VIRUS:** Activates every component in your system, just before the whole damn thing quits.

**AL GORE VIRUS:** Undistinguishable from the directory tree.

**MARIO CUOMO VIRUS:** It would be a great virus, but it refuses to run.

**TED TURNER VIRUS:** Colorizes your monochrome monitor.

**ARNOLD SCHWARZENEGGER VIRUS:** Terminates and stays resident. It'll be back.

(continued page 19)

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# Internetting

by Susan Kayser © 1994

You've finally gotten that Internet connection—or perhaps it's your child, just off to college who's got it—and an Internet address, and you want to know, "What do I use it for, and how do I go about it?" The answer to the first part is threefold: 1) for e-mail, 2) for getting information (documents, software, and data), and 3) for Usenet, the world-wide collection of news groups—the TCS multiplied many times over.

To get started on the Internet, you will do well to buy a book or two. Here are the ones I like best: If you are a complete novice to the Internet, try *The Mac Internet Tour Guide* by Michael Fraase. It guides you step by step through the most useful programs, and comes with a floppy of software. If you are a little more confident, and want a broader and deeper coverage of topics, a good list of Internet nodes to start your explorations, with a better collection of software on floppy, go for *The Internet Starter Kit (for Mac)* by Adam Engst (of Tidbit fame). He includes the MacTCP control panel, so if you don't have that Internet connection yet, you can get one now. If you need MacTCP, this alone is worth the cost of this book. The *Whole Internet User's Guide and Catalog*, by Internet guru Ed Krol, gives an excellent UNIX perspective.

Venturing onto the Internet for the first time is like walking into a library where all the books are arranged chronologically, and are uncataloged. How do you find anything? Lists of nodes, such as those in the *Internet Starter Kit* and *The Whole Internet* give you a start. The best collection of lists I've found is *The Internet Directory*, by Eric Braun, which has over 500 pages of nothing but access points.

Some of the best software for navigating the Internet is free, and this is what will be discussed below. Much of it is included on the floppies of the two Mac books mentioned.

## E-mail

**Eudora** is the program for e-mail. It has recently gone commercial, but there is still a free version available. If you have an Internet connection, you almost certainly already have a mail server. Tell Eudora its name, and your Internet address, and you can send and receive e-mail world-wide.

## File Transfer

Access to information is the most valued value of the Internet, and there are several modes of getting that information. On the lowest level, if you already know the file you want and where it is, use **Fetch**. This connects and logs you in to the requested "anonymous" (i.e., publicly accessible) server on which your files reside.

You use a dialog box like the Open dialog box from any Mac application to locate the file (see Figure 1), click the Get File button, and a few seconds later, the file appears on your Mac, unhexed and decompressed. This is very useful for getting shareware; the best archives are at [sumex-aim.stanford.edu](http://sumex-aim.stanford.edu) and [mac.archive.umich.edu](http://mac.archive.umich.edu).

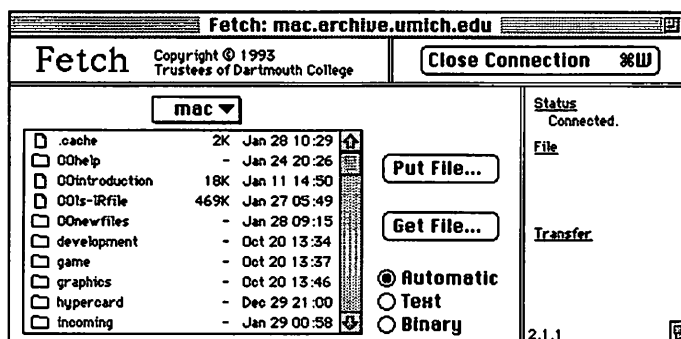


Figure 1. Fetch dialog box, at top level of mac.archive.

On the next level, if you know approximately the name of the file you want, or the subject matter if you

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want a document, use **TurboGopher**. Gopher servers contain indexes to their contents. In a document, every word may appear in an index. You do a Search for a character string (e.g., "child abuse"), and if you are linked to the appropriate server (here's where the list of nodes comes in handy), you will get a list of all documents containing those words, which you can then "Get". Clearly, you can use this to search a directory of shareware titles, and fetch your shareware that way. At the top level, we find the World Wide Web (WWW), which is an extension of the gopher idea. Every node in the WWW has created "hypertext" documents. When you access a node, you are presented with its "home page", a list of offerings of that node with some explanation as well. Highlighted offerings are hypertext: when you click on them, you are transferred to the node on which they occur. Most home pages have a gopher as one of the offerings, and every gopher lets you connect to any other gopher, so WWW access gives you everything from the lower levels. The Mac program that opens the WWW to you is **Mosaic**, which you can get from ftp.nscs.uiuc.edu; part of its home page is shown in Figure 2.

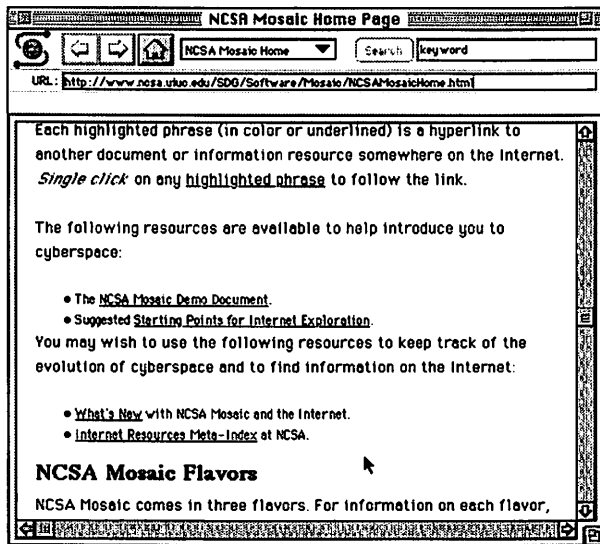


Figure 2. NSCA Mosaic's home page.

### Usenet

Usenet is like the TCS multiplied enormously. There are over 2800 different news groups on my news server, with names like comp.sys.mac.apps and rec.art.dance and soc.culture.bulgaria; you can guess from the names what the subject matter is. Warning: access to Usenet (and even more so to the WWW) may be hazardous to your social life! (On the other hand, some people feel this *is* their social life.)

There are two good, free, news readers, and also a shareware reader (\$25). The free readers are **Nuntius** and **News Watcher**. I have had trouble with the shareware program, named The News, so I won't report further on that. Deciding between these readers is difficult. Both let you select ("subscribe to") only those groups you're interested in, so you don't get swamped with all 2800, but Nuntius indicates in your group window only that there are new messages, while News Watcher tells you how many there are. Opening a group gives you a new window listing each message, organized by "threads". (See Figures 3 and 4.) That is, a message and all the responses to that message appear together (except that neither application is very good at identifying responses). News Watcher is much faster at this. Nuntius shows each message, while News Watcher shows you a "folder" and provides the number of items in each thread, which is more economical of space in your window. Both also show who sent each message. Double-clicking a thread lets you read it. Nuntius stacks the whole thread into one window; News Watcher puts only one message there, and you have to request "Next message". If you want to submit your own message ("follow up", or "post"), Nuntius lets you choose the word processor, but goes through some contortions in closing the file; to reply privately (that is, to send e-mail to the poster), Nuntius must use Eudora (a separate mini editor designed to send e-mail with Nuntius, UsenEdit, has just been announced). News Watcher has its own text editor which is used for all three kinds of response. Only News Watcher lets you search for a subject or a sender. Neither lets you "kill" a thread (omit messages with a given string in the message header) but News Watcher plans to implement this soon. News Watcher lets you "catch up" easily, by marking all messages in the window as read, closing the window, and opening the next, all with a single command.

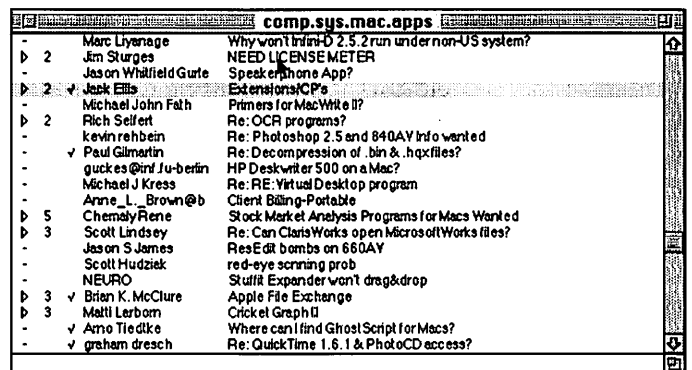


Figure 3. News Watcher window displaying a group's messages.

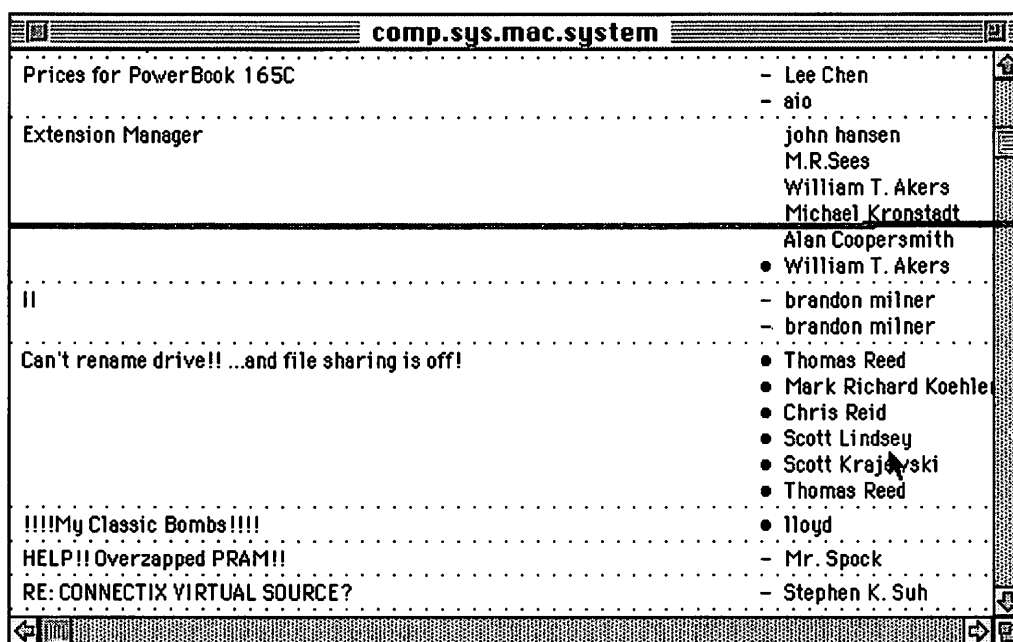


Figure 4. Nuntius window displaying a group's messages.

Nuntius defines three kinds of messages: new, old but unread, and old and read, and you can ask to have any of these displayed. News Watcher has only two kinds of messages: new (accessible from your list of subscribed groups) and all messages (which you can access only from the full group list); once you close a group window in your subscribed list, you can't go back to see an old message except by searching for a specific string in the message header (or by opening the full group list).

Documentation for NW is good, whereas Nuntius' is scanty. Nuntius takes up more room on your hard disk, and prefers more memory than News Watcher.

My personal choice goes to News Watcher. Except for the awkwardness in rereading old messages, and the extra keystrokes in reading all of a thread, I find it much easier to use.

### Getting connected

If all this has whetted your appetite, but you haven't got a connection yet, you can still get hooked up, as long as you have a modem and the right software. Some of the commercial services, such as CompuServe and America On-line, offer limited access through their own software, mostly e-mail. Delphi advertises complete access. In addition, there are independent providers of connections. In the DC area, try Digex (Greenbelt, MD, 310/220-0462) or Highlite (Laurel MD, 301/924-5998, or Sytex (Arlington, VA, 703/528-4380) or TNC (Fairfax Station, VA, 703/803-0391). I got these names from *The*

*Internet Starter Kit*. An up-to-date listing can be obtained by sending e-mail to mail-server@bts.com, with the body of the message as: get PUB nixpub.long (or nixpub.short), or check the Usenet group comp.misc; the nixpub list is posted there regularly. See? You can find anything on the Internet.

### Books

*The Mac Internet Tour Guide*, Michael Fraase Ventana Press (1993). \$27.95. Floppy has Eudora, Fetch, StuffIt Expander.

*The Internet Starter Kit (for Macintosh)*, Adam C. Engst, Prentice-Hall Computer Books (1993). \$29.95. Floppy has MacTCP, InterSLIP, Eudora, Fetch, TurboGopher, StuffIt Expander.

*The Whole Internet User's Guide and Catalog*, Ed Krol, O'Reilly & Associates (1992). \$24.95.

*The Internet Directory*, Eric Braun, Fawcett Columbine (1994). \$25.00.

You can get a 20% discount from Prentice-Hall, by virtue of being a Pi member; contact Sherrie Johnson at 1-800-428-5331 x9-4502 (there's a \$3 shipping charge). The other publishers probably offer something similar. ■



# The Curse of the Telephone in Times of Family Crisis

by Phil Shapiro

Two months ago a close relative of mine became seriously ill. Family members on both the East coast and West coast spent hours on the phone conversing with one another. Daily briefings as to the current health situation were interspersed with lengthy discussions as to treatment options. The natural stress of worrying about this individual's health were compounded by worries about the steep health care costs. And then as if to add insult to injury, sky high phone bills were added to the picture.

The phone at the house where my ill relative was staying was ringing off the hook seven days a week. The peace and quiet this ailing person so desperately needed was shattered ten or twenty times each day.

Which all got me thinking about the curse of the telephone. To be sure, real-time voice communications has its place. But phone communications can be so annoyingly disruptive at times. And when you factor in the added curse of call-waiting, these interruptions themselves can be further disturbed by even more interruptions.

Electronic mail would have worked so well during this family crisis. Daily briefings on the current health situation could be courtesy-copied to all family members. (Thereby cutting down on much of the redundant long distance conversations.) All family members could stay in touch with the situation, offering their ideas and input when

requested.

Curiously enough, each one of my relatives had a microcomputer in their homes. But none of them subscribed to a national information service.

With the stress of the family crisis, my relatives were not about to start learning how to use a modem, send e-mail, capture messages to disk, and send replies. In times of crisis, people are just not receptive to learning to use a whole new mode of long distance communications.

But had they been comfortable using this technology, there would be no doubt that they could have made good use of it. Instead of disruptive, noisy phone calls bouncing around the continent each and every day, quiet non-disruptive e-mail could carry the same information content. My relatives wouldn't have felt tied down to sitting by the phone all evening—making sure they would be available to take the call when the phone rang.

This is not to say that electronic mail can totally supplant phone contact in times of a family crisis. But e-mail can help minimize the stress and costs of lengthy long distance phone calls. And GENie's flat-rate, unlimited e-mail service could keep everyone in the family in contact with one another with a minimum of expense and disruption. *[Editor's Note: This article was written at a time when GENie had unlimited e-mail for \$4.95 per month. Since July, 1993, GENie implemented a new rate structure which works out to be about \$3 per hour.]*

Having found myself wishing that my extended family had been online during these trying times, I've taken it upon myself to become a more vocal advocate of online communications. Vocally advocacy need not be pushy advocacy, mind you. The most effective social advocacy has a strong grounding in tact—letting others draw their own conclusions in their own good time.

It's interesting to consider human nature in this case. Had all family members been communicating with one another via e-mail prior to the crisis, they would have had no problem using the technology to address the new situation. But with all the worry of a very ill family member, few persons would have the mental composure to learn to use a new communications technology.

Which all goes to say there are benefits to bringing family members online. These benefits go far beyond being able to "stay in touch" or "casually socialize." When the going gets tough you can be there for one another, day and night, via online communication.

And the phone can sit quietly off in the corner — almost inconspicuous — for days on end. So that healing can take place.

*[The author takes a strong interest in the social dimensions of communications technology. He can be reached on GENie at: p.shapiro1; on America Online at: pshapiro]*

This article was originally written for GENieLamp, the new online publication on the GENie information service. (c) Copyright 1993 T/TalkNET Online Publishing and GENie. To join GENie, set your modem to 2400 baud (or less) and half duplex (local echo). Have the modem dial 1-800-638-8369 (in Canada, have the modem dial 1-800-387-3880). When you get a CONNECT message, type HHH. A the U#= prompt, type: XTX99014,DIGIPUB and hit the [return] key. The system will then ask you for your information. Need more help? Call (voice) 1-800-638-9636 for more information.



## Macintosh with PowerPC

Power Macintosh	6100/60	7100/66	8100/80
<b>Processor</b>	PowerPC 601	PowerPC 601	PowerPC 601
Speed	60 MHz	66 MHz	80 MHz
Cache <sup>1</sup>	optional	optional	256K stdn.
<b>Performance</b>			
Native apps <sup>2</sup>	2 to 4x 68040 @33MHz	25% faster than 6100/60	Nearly 2x faster than 6100/60
Emulated apps <sup>3</sup>	fast 68030 to 6804	fast 68030 to 6804	fast 68030 to 6804
<b>RAM</b>	8MB standard	8MB standard	8MB standard
Max. DRAM	72 MB	136MB	264MB
SIMM slots	2	4	8
<b>Expansion Slots</b>	One 7" NuBus	3 full size NuBus	3 full size NuBus
<b>Storage</b>			
Std. HD configs	160MB to 250MB	250MB to 500MB	250MB to 1 GB
Floppy	1.4MB and DMA	1.4MB with DMA	1.4MB with DMA
CD-ROM	Optional	Optional	Optional
<b>Video</b>			
DRAM <sup>4</sup>	Standard	Standard	Standard
VRAM <sup>5</sup>	1MB standard	2MB standard	
VRAM expansion	2MB	4MB	
Standard Support	1 monitor	2 monitors	2 monitors
<b>SCSI<sup>6</sup></b>	High-speed asynch Dual SCSI channels	High-speed asynch	High-speed asynch

### Networking

Ethernet on-board with DMA<sup>7</sup> channel, AAUI<sup>3</sup> connector

### Other built-ins

16-bit audio stereo in/out with DMA

2 serial pots-LocalTalk and GeoPort compatible with DMA channel

Apple Desktop Bus (ADB for input devices)

<sup>1</sup>Cache is a temporary holding area in the computer's memory where the computer stores information that is used repeatedly.

<sup>2</sup>Native apps are Native Applications such as a Mac running a Mac program

<sup>3</sup>Emulated apps are Emulated Applications such as a Mac running an IBM program

<sup>4</sup>DRAM is dynamic random access memory. This type of random access memory will not hold information for any real length of time, and therefore requires the computer to rewrite the information every few thousandths of a second.

<sup>5</sup>VRAM is video random access memory. VRAM is type of memory used on some video adaptors to speed up the display images on the screen.

<sup>6</sup>SCSI is the standard for connecting of personal computers to peripheral devices and having them send information to each other. Apple is serial not parallel.

<sup>7</sup>DMA is Direct Access Memory. A DMA channel allows the peripheral device to write directly to memory.

### Macintosh PowerPC

AV Models 6100/60AV, 7100/66AV, 8100/80AV

**AV Technologies include tele-communications, video and speech**

**Video In** NTSC, PAL, SECAM

Video in resizable window

Frame and video capture

**Video Out** NTSC, PAL

**VRAM** 2MB standard, not expandable

**Interface** S-video for video in/out

Composite (RCA) adapters included

### Software

- System 7.1.2 Macintosh operating system with AppleScript, PC Exchange & QuickTime
- PlainTalk text-to-speech and speech recognition software
- MS-DOS/Windows 3.1 with Insignia Solutions SoftWindows software.

### Other

**SIMM** 72-pin 80ns or faster, installed in pairs

**CD-ROM** Apple CD 300i, double-speed CD-ROM drive supports audio CD, Kodak Photo CD

**Power** 100 to 240 volts, 50 to 60 Hz

EnergyStar compliant (7100/66, 8100/80)



# As You Like It WordPerfect 3.0

By Douglas M. Bloomfield

For someone who frequently spends 10 or more hours some days at the Mac, it is difficult to call a word processor fun. Nor is that what I'm looking for in the program. I want it to fit like the proverbial glove and resemble the cockpit of a sports car, with all the controls I need right where I want them, responding smoothly to my touch and getting me where I want to go quickly and efficiently.

WordPerfect 3.0 may have all the bells and whistles of the fully loaded Rolls Royces of word processing, but it still handles like the Ferraris. That's because it has molded its many and diverse features into a highly utilitarian and appealing package.

It is quicker, livelier, more streamlined, easier to use and customize than its predecessors and competitors.

It boasts a multitude of new attributes that make the upgrade highly recommended on their own, but several stand out as superior. Topping that list is the button bar. Actually there are several button bars, and you can create as many more as you like. Most often used program features — print, print preview, shift to graphics mode, spell checker, thesaurus, headers and footers, sub- and superscript, and so on — are readily accessible at a click.

You can customize, edit, move, save or arrange button bars and

buttons any way you wish. It comes with one for documents, another for graphics and a third for equations. You can create as many within each function as you wish, e.g., one for correspondence, another for memos, and others for faxes or for editing or

on my default button bar, customized some of the existing buttons, removed some I'll never use and kept a few I'd like to try out.

To take a test drive, WordPerfect has included a file with four sample pieces of stationery, each with its own custom button bars.

Should you forget what the symbol stands for in one of your button bars, simply pass the cursor over it and it will be identified at the bottom of the page in the status bar, another great new feature. [Fig. 2]

The Status Bar offers a dozen customizing options of its own. Atop that list is "show help," and with that activated the status bar also provides help in identifying the buttons and other features on the page. It is what Apple's disappointing balloon help

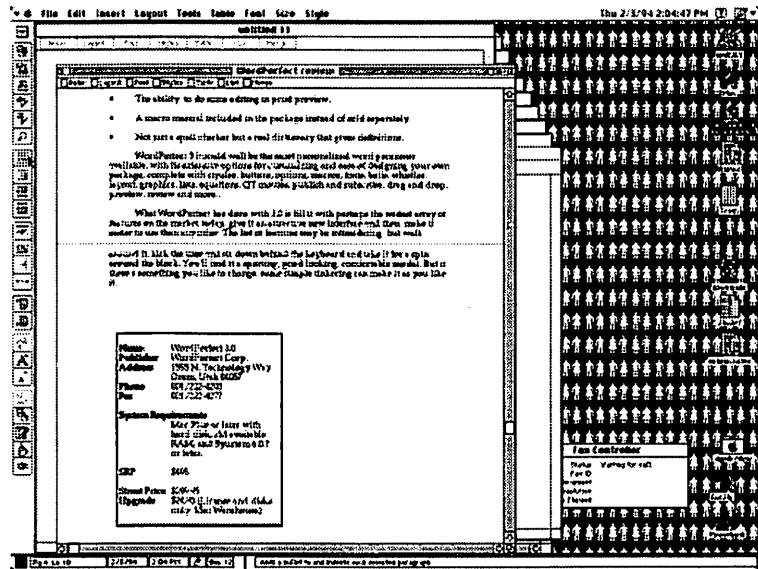


Figure 1. Draft of Review—A view of the draft of this review shows the cursor on the button bar at the far left, and you can see in the status bar at the bottom right what will happen when the button is clicked ("adds a bullet to and indents each selected paragraph."). The result can be seen at the top of the page. Other attributes of the status bar are evident at bottom left. Copy also can be boxed, as shown here.

newsletters, and on and on. Put it on any the right or left, top or bottom of your screen or hide it. [Fig. 1]

The first thing I did was put one of my most frequently used macros and most used stationery

should be. The status bar can also tell page and line, date and time, caps lock and more plus battery information to Powerbook and Duo users.

At the top of the screen are seven ruler bars, or more accurately seven separate buttons to open and close



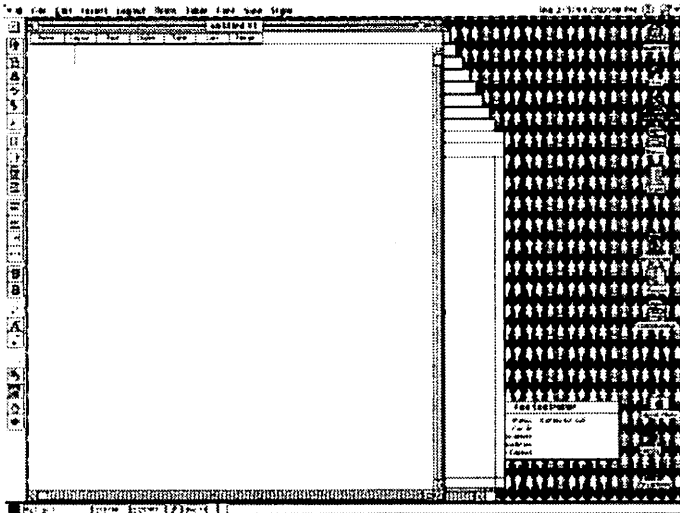


Figure 2. Cursor, status bar—Look for the cursor at the far left and at the bottom right look at the status bar to see what will happen when it that button is clicked. Button bars can be customized for each user and each

the horizontal bars singly or in any combination. They include the standard ruler bar for margins and tabs; layout for justification, spacing,

versions, document preview. In the “Open” dialogue box it is now possible not only to see the document before opening — a feature I

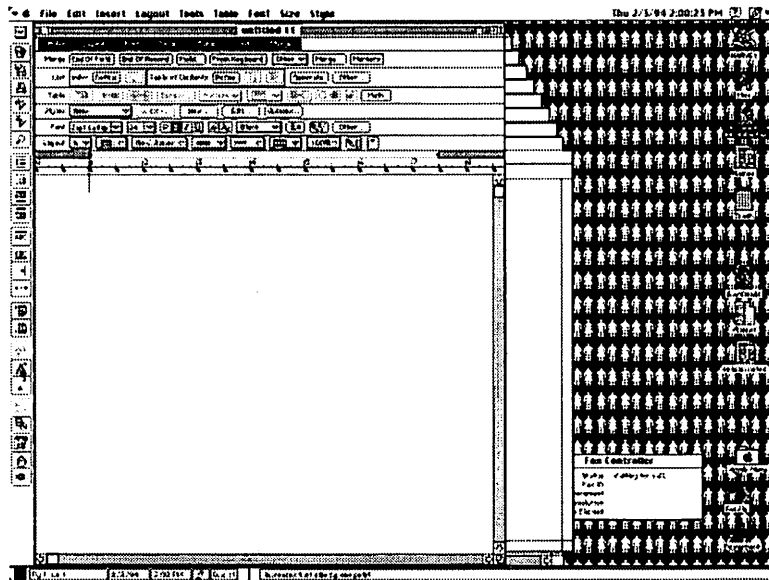


Figure 3. All Ruler bars open—You can open any or all or any combination of the ruler bars across the top of the page. Each performs a multitude of functions. Down the left side (you can put it anywhere you wish) is the button bar, which can be arranged and composed any way you wish. Along the bottom is the status bar.

columns and the like; font for type faces, sizes and features; styles for

genuinely appreciate because it is easy to forget the names of old

formatting; tables for numerical data; lists, including index and contents; and merge, which markedly simplifies that process. [Fig. 3]

Another valuable improvement is an improvement long available in DOS

documents — but also to send it directly to the printer without having to open it. That saves much time and bother.

These features alone make it worthwhile to move to WordPerfect from your old word processor or to upgrade from 2.x versions. But there is much more.

■ Grammatik 5, a grammar reviewer, is fully integrated, eliminating any need to go outside the document or program to check it and make revisions.

■ Drag & drop makes moving text easier. There’s no need to cut and paste, just highlight the text and put the cursor where you want it to go.

■ Help is greatly expanded and easier to use.

■ Macros are improved and easier to use, but instead of having a pull down menu of their own, as in previous versions, they are now buried under the “Tools” menu.

■ The Conversions feature makes it easier to interchange documents with WordPerfect on DOS and Windows as well as with other word processors. To help, some new, common fonts like Ariel and Times New Roman have been added.

■ WordPerfect can now perform simple math functions (add, subtract, multiply, divide, sum and average) as well as create and organize tables.

■ The new Equation Editor makes it possible to create and edit mathematical equations within a document.

■ Data can be organized in tables containing columns, rows and cells



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company.

remains safely tucked away unchanged. Any work that is done on the page, which is essentially a blank matrix, is saved automatically as a new document.

■ Page layout features and graphics capabilities in previous versions continue to be strong points.

■ Style sheets facilitate formatting elements or entire documents. They save a great deal of time, provide consistency and are simple to set up and use.

The list goes on and on with features new, old and improved. But there are still a few that I'd like to see added — everyone has their own, and this is by no means complete, so feel free to add your own and send them to folks in Orem, Utah.

■ A simpler method to convert old macros, and user dictionaries when updating versions.

dictionaries when updating versions.

■ A more usable manual. The new manual continues to be well written and easy to follow but impractical and difficult to use because of the way it is bound. You need three hands to work from it: one to hold the book open and two more to type and use the mouse. It would be best to return to the old loose-leaf binder, which was easy to use and to update or correct. The manual for a \$495 software program doesn't have to look like a \$4.95 paperback novel.

■ The ability to do some editing in print preview.

■ A macro manual included in the

package instead of sold separately.

■ Not just a spell checker but a real dictionary that gives definitions.

WordPerfect 3.0 could well be the most personalized word processor available, with its extensive options for customizing and ease of designing your own package, complete with styles, buttons, options, macros, fonts, bells, whistles, layout, graphics, lists, equations, QT movies, publish and subscribe, drag and drop, preview, review and more.

What WordPerfect has done with 3.0 is fill it with perhaps the widest array of features on the market today, give it an attractive new interface and then make it easier to use than any other. The list of features may be intimidating, but walk around it, kick the tires and sit down behind the keyboard and take it for a spin around the block. You'll find it a sporting, good looking, comfortable model. But if there's something you like to change, some simple tinkering can make it as you like it. ■

**Name:** WordPerfect 3.0  
**Publisher:** WordPerfect Corp.  
**Address:** 1555 N. Technology Way  
Orem, Utah 84057  
**Phone:** 801/222-4200  
**Fax:** 801/222-4277

**System Requirements**  
Mac Plus or later with hard disk, 2M available RAM, and System 6.0.7 or later.

**SRP** \$495  
**Street Price** \$299.95  
**Upgrade** \$24.95 (License and disks only, Mac Warehouse)

with versatility with the help of the table ruler bar.

Some longstanding WordPerfect features continue to be strong assets.

■ Stationery is one I use all the time. It allows creation of templates for frequently used documents, such as letterheads, memos and fax covers. Some are included and can be easily customized, but it is simple to create your own. Each can have its own button bars for added convenience. I have created my own stationery, complete with logo and custom font, for letterheads and fax memos and put them on my button bar for quick 'n easy call-up. When opening a stationery file, a copy of the document comes up as an untitled page while the original



# System Enablers

**E**nablers are system extensions that patch the Macintosh 7.x.x system software so that it best matches your particular model. If you have one of the Macs listed below you can find your enabler in your System Folder. If you click on it once and use GetInfo from the file menu you can determine if yours is the latest version. If you need the latest version, you can download it from the TCS or order it from the Disketeria.

**Here is the list of current enablers.**

\*System Enablers - 8-Feb-93

Macintosh	System Enabler Used	Current Version	Note
Macintosh Centris 610	System Enabler 040	1.1	
Macintosh Centris 650	System Enabler 040	1.1	
Macintosh Centris 660AV	System Enabler 088	1.1	
Macintosh Color Classic	System Enabler 401	1.0.5	
Macintosh IIfx	System Enabler 001	1.0.1	
Macintosh IIfx	System Enabler 001	1.0.1	
Macintosh LC III	System Enabler 003	1.0	
Macintosh LC 475	System Enabler 065	1.0	
Macintosh LC 520	System Enabler 403	1.0.1	
Macintosh PowerBook 160	System Enabler 131	1.0.3	A
Macintosh PowerBook 165c	System Enabler 131	1.0.3	A
Macintosh PowerBook 180	System Enabler 131	1.0.3	A
Macintosh PowerBook 180c	System Enabler 131	1.0.3	A
Macintosh PowerBook Duo 210	PowerBook Duo Enabler	1.0	B
Macintosh PowerBook Duo 230	PowerBook Duo Enabler	1.0	B
Macintosh PowerBook Duo 250	PowerBook Duo Enabler	1.0	B
Macintosh PowerBook Duo 270c	PowerBook Duo Enabler	1.0	
Macintosh Quadra 605	System Enabler 065	1.0	
Macintosh Quadra 610	System Enabler 040	1.1	
Macintosh Quadra 650	System Enabler 040	1.1	
Macintosh Quadra 660AV	System Enabler 088	1.1	
Macintosh Quadra 800	System Enabler 040	1.1	
Macintosh Quadra 840AV	System Enabler 088	1.1	
Macintosh TV	System Enabler 404	1.0	

**Note:**

- A—System Enabler 131 replaces System Enabler 111 and System Enabler 121
- B—Express Modem users should also install the Duo Battery Patch (Extension).

**Changes:**

- PowerBook Duo Enabler  
1.0 - First release. Replaces System Enabler 201.

**System Enabler 001**

- 1.0 - First release.
- 1.0.1 - Improved support for high speed serial communications and improved accuracy of the system clock. Also addressed a rare problem where floppies may not be ejected properly at shutdown.

**System Enabler 003**

- 1.0 - First release.

**System Enabler 040**

- 1.0 - First release.
- 1.1 - Added support for Quadra 610 and Quadra 650.

**System Enabler 065**

- 1.0 - First release.

**System Enabler 088**

- 1.0 - First release.
- 1.0.1 - Required for System 7 Pro 7.1.1 support.
- 1.1 - Added support for Quadra 660AV.

**System Enabler 131**

- 1.0 - First release to support the PowerBook 180c. Replaced System Enabler 121 (supporting 165c) as well as System Enabler 111 (supporting 160 & 180).
- 1.0.2 - Corrected a problem involving the serial driver. If a user has the serial driver open, but is not transmitting, and then puts the PowerBook to sleep, any attempt to transmit upon waking, would cause the system to hang.
- 1.0.3 - Added support for the PowerBook 165.

**System Enabler 401**

- 1.0.4 - First release.
- 1.0.5 - Fixed a problem involving erratic mouse movement with Apple II mouse based applications running on the Apple IIe card installed in the PDS slot.

**System Enabler 403**

- 1.0 - First release.
- 1.0.1 - Manufacturing release only.

**System Enabler 404**

- 1.0 - First release.

Apple Computer, Inc. February 8, 1994



# Everything You Ever Wanted to Know About Laser Printers

by Thomas J. Piwowar

There is a cult that worships the laser printer. These people know just about everything there is to know about laser printers. They speak in Cannon codes like: CX, SX, LX, and BX. They take their lasers apart and make repairs themselves. They know how toner is made, its different varieties, and where you can buy a special batch. They also know of some mighty surprising things a laser printer can do beyond just printing on paper.

The source of this laser mania is a bi-monthly magazine called "The Flash," published in West Topsham, Vermont. The Flash is a unique blend of Yankee ingenuity and the kind of computer madness that we usually associate with California.

Five years ago The Flash began as a four-page newsletter to promote the business of a laser cartridge remanufacturer called Black Lightning. Today, BlackLightning, Inc. is a supplier of many unique laser printer enhancements. The newsletter has grown to be the largest part of the enterprise, a whopping 96 pages, with a circulation over 50,000, produced by BlackLightning Publishing Company (802-439-6462; \$15/yr).

Examining a recent issue, I encountered a detailed article on replacing the paper pickup rollers in the CX printer engine—a major disassembly task. Another offered advice on preparing files for imagesetter output.

An expose of laser cleaning papers revealed that many manufacturer's claims are dubious. There was a tutorial on writing fractal geometry programs in PostScript and articles on making designs to print on T-shirts and to etch glass.

These are practical, nuts-and-bolts, how-to articles. This type of writing is more often found in computer-user-group publications, seldom in a commercial magazine. For example, the article on etching glass

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**"For \$12 the Guide is a great investment to keep your laser printer productive and safe. It can easily save you ten-times its cost the first time it helps solve a problem."**

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had a remarkable make-everything-yourself attitude. The article revealed that the normally discarded backing used for peel-off labels made an excellent release paper for laser printed art. This could be transferred to glass by cooking in a kitchen oven to coat the glass with an acid-resistant layer of toner. The only essential expenditure was for the etching gel itself.

Another article on decorating T-shirts described how a clothes iron could be clad in sheet metal to make a serviceable press for transferring toner to T-shirt.

Even the ads were educational. One advertiser offered a printing utility to print drafts with less toner by making the laser print lighter. Others offered a range of spare parts for printers and toner cartridges. If you want to take a self-reliant approach to your laser printer this is the place to be.

To add to its home-spun flavor, The Flash runs occasional phoney ads. The editors claim the phoney ads are so outrageous that anyone should be able to spot them. They also believe this is a great way to remind readers to examine all ads with a healthy dose of skepticism—good advice.

The best of the first five years of The Flash have been collected in a book—"The Underground Guide to Laser Printers"—from Peachpit Press (800-283-9444; \$12). This is must read for anyone who must work with a laser printer.

The book begins with an easy-to-understand, but thorough explanation of how a laser printer does its job. This is important information for understanding much of what follows and for learning to solve basic printing problems.

Next is an overview of laser printer marking engines. It reveals that despite the many brands we see in stores, there are relatively few companies that actually build the engines. Several pages present a "field guide" to laser printer cartridges. With this you can identify the kind of marking engine your printer uses and possibly locate a better or cheaper source of replacement cartridges. I learned that my NEC laser printer was actually manufactured by Minolta.

General maintenance procedures are outlined that go far beyond any

described in manufacturers' manuals. Specific procedures are presented for the popular CX, SX, and LX engines. If you are at all handy with tools, the common repairs described here can save you hundreds of dollars.

The health impact of laser printers is an important, but seldom discussed, issue. The Guide describes how the high voltages inherent in the printing process produce ozone. While we all know that ozone in the upper atmosphere is important to protect our environment, few of us know that ozone is undesirable in our immediate environment. Ozone can irritate the eyes, nose, and throat and lead to headaches and lung infections. In high concentrations it can be toxic. Laser printers contain activated-carbon ozone filters to break down ozone molecules into harmless oxygen molecules. Few of us know that these need to be periodically cleaned and replaced. The Guide describes where these filters are located on popular printer models and how they should be maintained and replaced. Another part of the Guide describes how clogged ozone filters can lead to frequent paper jams and how the filters can be cleaned to correct the problem.

For \$12 the Guide is a great investment to keep your laser printer productive and safe. It can easily save you ten-times its cost the first time it helps solve a problem. For those who want to push the limits of their printers to make T-shirts, etch metal and glass, or make rubber stamps, it can also be a lot of fun. ■

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**Future Viruses  
(continued from  
page 8)**

**DAN QUAYLE VIRUS:** Prevents your system from spawning any child process without joining into a binary network.

**GOVERNMENT**

**ECONOMIST VIRUS:** Nothing works, but all your diagnostic software says everything is fine.

**NEW WORLD ORDER VIRUS:** Probably harmless, but it makes a lot of people really mad just thinking about it.

**GALLUP VIRUS:** Sixty percent of the PCs infected will lose 38 percent of their data 14 percent of the time. (plus or minus a 3.5 percent margin of error.)

**TEXAS VIRUS:** Makes sure that it's bigger than any other file.

**ADAM AND EVE VIRUS:** Takes a couple of bytes out of your Apple.

**CONGRESSIONAL VIRUS:** The computer locks up, screen splits

**!!REPAIRS!!**

- Apple/Mac/I\*M Motherboard Repairs from \$45.00 + S&H
- Apple/Mac/I\*M Power Supply Repairs from \$45.00 + S&H
- Apple/Mac/I\*M Drive Repairs from \$45.00 + S&H
- Apple/Mac/I\*M Monitor Repairs from \$60.00 + S&H
- Apple/Mac/I\*M Keyboard Repairs from \$12.50 + S&H
- Apple/Mac/I\*M Upgrades Available!

Used Apple/Mac/I\*M CPUs, Disk Drives, Monitors, Keyboards available for resale

Warranties to one year on most repairs!  
Same day turnaround on most repairs!  
Arminius  
8519 Orchard Avenue  
Merchantville NJ 08109  
(609) 662-3420

eratically with a message appearing on each half blaming the other side for the problem.

**AIRLINE VIRUS:** You're in Dallas, but your data is in Singapore.

**FREUDIAN VIRUS:** Your computer becomes obsessed with marrying its own motherboard.

**PBS VIRUS:** Your programs stop every few minutes to ask for

**OLLIE NORTH VIRUS:** Causes your printer to become a paper shredder.

**SEARS VIRUS:** Your data won't appear unless you buy new cables, power supply and a set of shocks.



# New Macintosh Files on the TCS

by lcharters@tcs.wap.org

The day of the stand alone computer is long since past. While millions of people around the world still have individual computers, connected to nothing, the most *productive* computers are joined in networks. Some of these networks span offices or, occasionally, private homes. A few networks span the world. The Washington Apple Pi Telecommunications System is of the world-spanning variety.

In the past year, it wasn't at all unusual for the TCS to get calls from overseas. At any one time, the TCS almost always has someone on-line from out of state (of course, being located near four different area codes helps). But there have been an increasing number of international connections. One Pi member was on a ship in the Persian Gulf and desperately needed a utility for his PowerBook. Another member called from Japan, searching for color GIF files to use in a presentation. Yet another called from Norway during the winter Olympics — just to read the messages.

If the point isn't obvious: we have seen the future, and it is based on telecommunications. To get the most out of your computer, you *must* have a modem. To get the most out of your user group, you *must* have a modem. Otherwise, you run the risk of discovering you've become roadkill alongside the National Information Superhighway.

The TCS Committee has been struggling mightily to meet the telecommunications needs of its users and the Pi. By the time this column is printed, there is a good chance the TCS will be offering Internet-capable electronic mail. During beta-testing, it was quite a thrill seeing E-mail from New York, Denver, San Diego, and Houston as well as from Yokohama, Canberra, Stuttgart and Edinburgh. The thrill was compounded by the knowledge that the TCS is written in Applesoft BASIC by a Pi volunteer: a state-of-the-art telecommunications system for one of the oldest personal computer groups, running on the first personal computer, the Apple II.

*New, improved fine print:* a recent decision of the Washington Apple Pi Board of Directors has opened the TCS to all Pi members. But if you want to *download* something, or have E-mail (electronic mail), you must have a TCS subscription. Call the Pi Office at 301-654-8060 for information on how to fully participate in the Washington Apple Pi Telecommunications System, the Pi's "24 hour a day General Meeting."

## Area 3: Apple System Software

**DUOPATCH.SIT:** battery patch to solve problems with Duo 210, 230, and 250 with PowerBook Enabler 1.0.  
**HYPMVR11MAC.CPT:** HyperMover 1.1 assists in the translation of HyperCard stacks between HyperCard 2.0 (and earlier) and HyperCard IIgs 1.1 (and

earlier), in either direction.  
**NETWORKSOFT.SIT:** Latest AppleTalk network software including AppleTalk 58.1.2, EtherTalk 2.5.6, Network Control panel 3.02 and more.

## Area 6: Misc Documents

**BABYLON5.FAQ:** Text file containing all kinds of vital information on Babylon-5, the new science fiction space opera that uses computer animation for virtually all the space shots (no Styrofoam models, a plus for the ecology).  
**INET.SECURITY:** Malicious hackers have devised a scheme to vacuum passwords and account names off of networks on the Internet. This Bulletin gives more technical information. Must Reading if you run a Sun or Solbourne workstation.  
**LEGALISTFAQ:** Legal resources on Internet.  
**MARILLION.SIT:** Frequently Asked Questions about the progressive band Marillion.  
**STARTREKSHIPS:** text file listing all the various ships (including, curiously, unnamed ships) mentioned in Star Trek movies and episodes over the last quarter century. Really entertaining to see how many times the Enterprise has been destroyed.  
**STRANGEWAYS.SIT:** electronic magazine devoted to the rock band Kiss.  
**STARTREKPLACES:** text file listing all the various places all the various Enterprises (and Deep Space 9) have visited or mentioned over the past 25 years. A labor of either love or some deep psychological illness.

## Area 7: GIF Graphics

**ELLE9204.GIF:** Australia's best export on a bicycle wearing a bikini.  
**ELLE9205.GIF:** Australia's best export redux. Sigh.  
**HUBBLENEW.GIF:** Side by side photos of galaxy M100 taken by the Hubble, before and after the repair mission. You can see a *dramatic* difference.  
**MAINEBOAT.GIF:** Color photo of Maine fishing boats  
**MARS1.GIF:** Mars, the God of War. In this case, the planet. If you look at the GIF with CloseView, you can see the abandoned cities.  
**PACIFICCHA.GIF:** Pacific Challenger, classic steam locomotive.  
**POWERPCPENT.GIF:** When this ad appeared in the Wall Street Journal, Intel's stock took a sharp drop, and Intel responded with a flurry of press releases. It dropped further.  
**REDHAIR.GIF:** Portrait of a Girl, drawn freehand on a Quadra 660av by Pi



member Joseph Morey Jr.  
**ROMULAN.GIF:** as seen on the Enterprise's view screen.  
**SHUTTLEINSP.GIF:** shows a view looking aft on the Shuttle with the Earth in the background.  
**STTNGDISPLAY2:** an "empty" monitor screen, which you can customize with whatever strange indicators your warped mind might desire.  
**STTNGDISPLAY:** nicely done monitor display in the fashion of Star Trek: The Next Generation. Incidentally, most of the monitor displays and animation on Star Trek: TNG are done on Macs.  
**TOKYO.GIF:** Color photo of downtown Tokyo.  
**TORII.GIF:** this famous torii was built in the waters of the Inland Sea off of Hiroshima, and is ranked as one of the "seven most beautiful sights in Japan."  
**TPLAUNCH.GIF:** Topex, a joint U.S.-French satellite designed from the ground up for environmental monitoring of the Earth's oceans, is launched on a French rocket in this night shot.  
**TREK1.GIF:** 3D rendering of the starship Enterprise  
**TRIBUTE.GIF:** Shuttle Challenger's last mission patch  
**TROI.GIF:** Counselor Troi of the starship Enterprise  
**UKRAINE2.GIF:** stone castle on a rocky point overlooking a lake or sea.  
**USR0001.GIF:** U.S. Robotics Courier V.32bis modem, the industrial-strength, high-speed modem used on the high-speed lines of the TCS.  
**USR0009.GIF:** Headquarters of U.S. Robotics. The company name comes from the fictitious company in the Isaac Asimov robot novels.  
**USSATPHOTO.GIF:** incredible photo of the entire "lower 48," created from hundreds of satellite photos, showing the U.S. as it would appear without cloud cover and with a bit of false color to highlight details. Great image!  
**USSHADEDREL.GIF:** Massive image showing the lower 48 states in shaded relief, with the relief exaggerated by a factor of six to show detail. An outstanding image.  
**VANUAREEF.GIF:** Great underwater photo of a reef  
**VGERCATER.GIF:** Close-up view of Jovian moon. Either that, or the crater left when the Voyager spacecraft slammed into the surface.  
**VGERSPOTS.GIF:** Close-up view of Jovian moon. Or possibly ice crystals on the lens of the Voyager spacecraft camera.  
**VIEW.GIF:** Space shuttle orbits above the Pacific. Of course, 44% of the time the Shuttle is over the Pacific.

**VORLON.GIF:** dramatic shot of Vorlon spacecraft from the hit new series Babylon-5.  
**VOYAGER.GIF:** Close-up of Jovian moon. This picture is particularly interesting because of the telemetry data surrounding the picture.

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**"But there have been an increasing number of international connections. One Pi member was on a ship in the Persian Gulf and desperately needed a utility for his PowerBook. Another member called from Japan...."**

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**VW1958.GIF:** Loving photo of a 1958 Volkswagen bug  
**WATERWHEEL.GIF:** Great photo of a classic mill  
**WAVE.GIF:** Hiroshige's most famous painting, with a wave cresting with Mt. Fuji in the background.  
**WFPC.01.GIF:** from the Hubble Space Telescope showing a scene shot with the corrected mirror and an enlarged scene from that shot.  
**WHITEALB.GIF:** Beatle's album cover. This is hilarious.  
**YACHTRACE.GIF:** Great action photo of yacht race  
**YOSEMITEFL.GIF:** Great photo shows upper and lower falls

#### Area 8: JPEG Graphics

**DR. Fun,** the Internet daily cartoon in 24-bit color: .My Quacker Just Went Off, Mediocre Performance Artists, Check your Lotto Number First, Selling Out, TV Clogged with Televangelists, Multimedia Oafs of North America, He Ain't Gonna Shoot, Records Your Neighbors Listen To, The New Campaign Just Isn't Working, Dogs on Cruises, Zoo Complaint Department, Yippy Slimey Little Dog, The Ultimate Pole Lamp, His Therapy Was Going

Nowhere, Produce Section of the Gods, Young Nerds in Love, When Parents Finally Flip, Practical Jokes on Other Worlds, Sperm School, At the Pain vs. Pleasure Debates, Truly Pathetic Lemmings, Attack of the Ethel Mermen, As the Plane Gained Altitude, Scene Cut from Jurassic Park, Don't Let Joe Have Your Stapler, The AV Police, "Anything Can Happen" Day, We've Replaced the Bad Cybernetic Brain, Don't Take That One - That's Their King, Alien Football, Scene from "Altered Steaks," Look! Borg Get Upgrade Already!

#### Area 9: MOD Music

**TINYTOONS.SIT:** MOD file in SoundTracker format of various Tiny Toons characters' one-liners ("A computer varmit!" - "Isn't that Convenient!" etc.) to a disco beat.

#### Area 22: Mac Applications

**BBEDITLITE.SIT:** superb freeware extensible text editor. **RLAB.0.97D1:** an interpreter for the Matlab-like RLaB Programming Language/Environment (linear algebra package).  
**CONSTRUCTIO.SIT:** estimate the ratio of Cement, Fine/Course rock, water to construct a cement slab. Also a base estimator program to determine amount of rock for base; written by a Pi member.  
**DOCMAKER4.0:** program that allows you to create stand-alone documents. Documents now support QuickTime video, sound, document linking, and more.  
**EASYERRORS1.SIT:** allows you to quickly find out what a particular error means on the Mac and the Newton. Select the appropriate system, type the error code, and press return.  
**FORMAL.TEMPLATE:** Microsoft Word template for the Macintosh. This template is suitable for all sorts of formal reports.  
**LAN.SAT.1.0.4:** application for viewing, monitoring, and graphically mapping your AppleTalk network and its devices.  
**MORTCOMP.SIT:** compare Interest, Prin, or Term and get comparison printouts on screen or printer; written by a Pi member.  
**WP.THREE.MACROS:** three WordPerfect macros: Revised Endnotes->Text Macro, \*Case Convert Macro, and \*Page X of Y-BBS.

#### Area 23: Mac Utilities

**CRON1.0D13D.SIT:** Mac version of the UNIX cron utility: set up timed tasks. Quite powerful.  
**DISKEEPER.SIT:** freeware application;



catalogs disks list duplicate files.  
**DISKSWEeper.SIT**: free up space on a floppy used by an unnecessarily large Desktop file. Simply drop the offending floppy onto DiskSweeper, and in seconds it will be fixed.  
**DUOMON1.2.SIT**: nifty utility for keeping track of your power management. Needs power manager version 2 (i.e. the one that comes with the Type II battery, Duo Enabler 1.0).  
**EXCALIBUR.1.5**: Macintosh spelling checker for LaTeX documents.  
**FILELIST1.0.SIT**: builds and maintains databases of file names from collections of disks. Very fast with powerful search, sort, and text export capabilities.  
**FINDSTUFF.CPT**: sophisticated and versatile System 7 Find Command.  
**MACGZIP.02.CPT**: GNU gzip — file compression and decompression program — for the Macintosh.  
**MYBATTERY2.2.2**: PowerBook battery management; can handle multiple batteries as well as the new flat plate models.  
**POWERSCAN201.SI**: creates searchable catalogues of Mac volumes (more than one volume at a time with Thread Manager installed) in foreground OR background. It can also include the contents of Stuffit and/or Compactor Pro archives.  
**READTIME.1.0.1**: hack which shows you the Total Power On Time of your Mac, i.e. the total time your Mac (or one you may be thinking of buying used) has been on *ever*.  
**TATTLETALE1.SIT**: provides very complete information about your computer; probably more than you ever wanted to know.  
**ZIPIT1.2.6.SIT**: ZIP/unZIP archives made with the PC's PKZIP. Handles 2.x level compression.

### Area 24: Mac Extensions

**AARONSDVORA.SIT**: Dvorak keyboard for the Mac.  
**ALTCLIPBOAR.SIT**: adds the functionality of a second clipboard to any application.  
**APPLEPHONEB.SIT**: ResEdit resources that add the missing letters to the buttons in AV's Apple Phone software.  
**ATTENTION.1.0.2**: control panel that lets you customize the sound played when background applications need your attention.  
**AURORA.3.0.2**: Control Panel that gives you full control over the colors used to draw windows, buttons, scroll bars, and menus.  
**AVDIGIPTS.SIT**: unsupported piece of Apple software that provides greater

control over video capture on AV Macs.  
**CLEANING.LADY**: with Cleaning Lady installed, whenever you select "Clean up..." from the Finder's Special menu, you will be asked to confirm your selection (Are you sure you want to clean up "Desktop"?).  
**CLOCKADJUST1.2**: control panel for correcting the Mac's clock.  
**AVPATCHES.CPT**: Resource Manager tuner and a Turbo ROM patch for the AV Macs.  
**COMMENT.KEEPER**: preserves the Finder "Get Info" comments when the Desktop file is rebuilt.  
**DIALOG.VIEW.1.0**: control panel that allows you to change the font and size used in directory dialog file lists, and display the real icons of files in such lists.  
**DOUBLE.SCROLL 2.0.3**: puts both up and down arrows at both ends of the scroll bars.  
**FENCE.SIT**: simple, safe, disk password protection program. Protect your hard drive from prying eyes.  
**FINDERFIXER.SIT**: lets you allocate the amount of memory you want to devote to the Finder and Finder operations.  
**FW2.1.1.SIT**: Folder Watcher 2.0.1; shareware application that enables you to "watch" folders on your hard drive or across a network.  
**I66OICONS.SIT**: some icons of the 660AV  
**IDSEXpress**: nifty little hack that fools HD SC Set-up into thinking a third party hard disk is actually an Apple brand drive.  
**MACRO.KEY**: text tool (CDEV & INIT) to write (and repeat) a word or a sentence with a single key stroke.  
**MENUCHOICE1.9**: System 7 control panel which enables hierarchical menus under the Apple menu.  
**MONITOREXPA.SIT**: extension for Macs with 13" monitors and select video cards that gives you a larger viewable screen.  
**MOVIESTILDA.SIT**: After Dark module; Movies 'Til Dawn plays one or more QuickTime movies as an After Dark screensaver.  
**OPEN.WIDE.3.5.7**: control panel which widens the Standard File dialog boxes, and, if you wish, can also increase the vertical size of the file list.  
**OSAMENU1.0.SIT**: extension from Aladdin that gives a menu (application specific and general) for launching OSA-compliant AppleScripts. Exceedingly useful for those applications that don't have direct script-running support such as SITcomm.  
**OTHER.MENU.131**: extension that creates a system-wide hierarchical menu (up to 5 levels deep), somewhat similar to the Apple menu.

**BEHIERARCHI.SIT**: INIT/CDev which will automatically create a visual hierarchy in your Apple menu under System 7.0 up to five levels deep.  
**PARAMRAMGUA.SIT**: will save your PRAM settings and restore them without the user having to manually reset all of their options after zapping their PRAM.  
**POWERBAR.CPT**: launch apps or open files or folders — create buttons; has status pads which gives time, date, memory usage, disk space left (or used), and chooser status/access.  
**SAVETHEDISK.CPT**: FreeWare system extension which will alleviate the excessive disk drive hits experienced by owners of AV Macs.  
**SOFTWAREFPU.CPT**: control panel that allows most programs expecting an FPU to work properly on Macs without one.  
**SPEEDYFNDR7.159**: 1993 US MacUser award for Shareware utilities. It can speed up copying, remove the delay when renaming files, empty the Trash fast, automatically resolve Aliases for Get Info, opening documents of one application with a different application, and much more.  
**STARTUPFONT.CPT**: install and deinstall fonts at startup. Requires System 7.1+.  
**TWELVECHP12.SIT**: duplicate of Hewlett-Packard's HP 12c business calculator.  
**ZOOM.TO.CURSOR1**: when you press its key combination it draws a set of concentric circles, centered on the cursor.

### Area 25: Mac Fonts

**ADVENTUR.CPT**: based on Raiders of the Lost Ark look.  
**AG.WET.PAINT.2**: letters painted with shaggy brush  
**BLUEPRINTBOLD.S**: nice rich aroma, much like Tekton.  
**BOGATYR2.T1..SI**: named for the capital of Colombia?  
**BOWLEG.TT.SIT**: PostScript font for cowboys, sailors and anyone else who has a need for a bow-legged font.  
**CABLE.DINGBATS**: done by a local author, this has logos of broadcast and major cable TV networks, plus DC-area TV stations.  
**CASABLANCATI.CP**: font for plotting against French collaborators?  
**CASTIGLION.T1**: Type 1 PostScript font  
**CODE.39.BARCODE**: Code 39 (also called 3-of-9 code) PostScript font.  
**DINERTT.CPT**: just the thing for adding class to your local cafe's menu.  
**ELBJORG.SCRIPT**: unusual artistic true-type font.





**FINDERFONT.2.0:** someone's idea of a better font for viewing Finder info.  
**FSESHSCRIPT.CPT:** nice, clean, useful script font.  
**GESSELE.SCRIPT:** nicely done PostScript script font.  
**HEARLD.CPT:** collection of heraldic shields drawn from coats of arms and medieval sources.  
**INSTANTLOGOCHAR:** template for printing characters  
**INSTANTLOGOST1:** Type 1 PostScript logo font  
**WOOLYBUL.CPT:** heavy, fuzzy and wavy display face.  
**ZED:** Mathematical Symbol Font, in both TrueType and PostScript format.

### Area 26: Mac Sound

**CASABLANCA.SNDS:** collection of Sound Clips from the movie  
**DX7.LIBRARIAN.5:** Yamaha DX7 Patch Librarian 1.0.5  
**GOODBADUGLY.SIT:** Spaghetti Western or the Senate? You be the judge.  
**JERKYBOYS.LASER:** New York City radio act which makes crank telephone calls, make an appointment for hemorrhoid surgery.  
**JUNO.LIBRARIAN:** Patch Librarian for JUNO 106, v 1.0.3  
**KAWAI.K4.LIBR:** Kawai K4 Patch Librarian 1.0.4  
**MIDI.PACKEN.103:** application which allows you to keep system exclusive MIDI data in files.  
**MSTS.NDS.SIT:** sounds from Mystery Science Theater 3000. The impromptu commercial for the Mac will probably be the most popular.  
**NOW.HEAR.THIS:** simple program which will let you play sounds from sound suitcases, System 7 sound files, HyperCard stacks, SoundEdit or SoundWave files, and any other file with digitized sounds.  
**PARROT.CPT:** listens to the sound input device, remembers everything it hears, and plays everything back in a random order.  
**SOUND.MACHINE.2:** plays UNIX (ulaw or mu-law) sounds. It also plays Headerless A-law, FSSD non-compressed, Linear 8 bit mono (with Sun header), and AIFF and AIFC files.  
**VICKYS.HELLOS:** Vicky says "Hello," four ways.  
**WHITE.T.SPARRROW:** birdsong of the white-throated sparrow.  
**WISHUWRNTLVNG.S:** We wish you weren't living with us—

### Area 27: Mac Graphic Images

**BEAVISWALLP.SIT:** Wallpaper rendition of the Beavis icon.

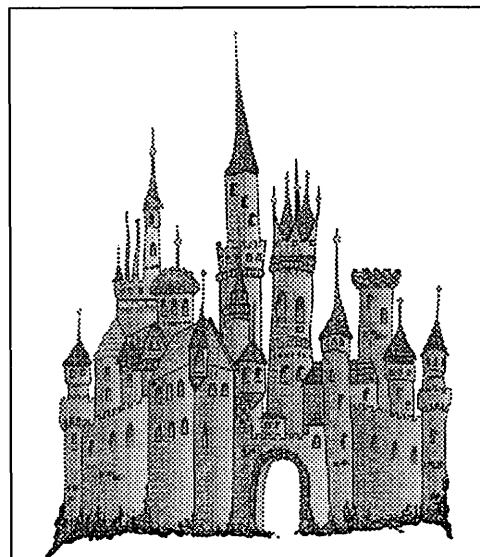
**BUGS.SIT:** scan of a 19th Century lithograph of 40-50 insects...moths, butterflies, beetles, & other creepy crawlies.  
**COLORICONS.SIT:** 60 different icons to enhance one's working environment.  
**DCAREAMAPS.SIT:** DC Area Maps, in PICT and MacDraw II formats.  
**HOTAIRWALLP.SIT:** large wallpaper pattern (you need System 7 to use it) of a very colorful hot air balloon floating in a blue sky.  
**INITS.R.US.SCRN:** envious of all of those Power Users who boast of three, four, even five rows of Inits appearing at start-up? Then you need Inits R Us, a color StartUpScreen with twelve rows of extensions and control panel icons, fifteen in each row for a total of 180!

### Area 28: Mac Graphic Utils

**COLORKNIT.SIT:** program for people who are into making knitting crafts.  
**GIFCNV2.3.7.SIT:** Updates GIF Converter 2.3.6 to 2.3.7.  
**GRAPHIC.CON.177:** GraphicConverter, v 1.7.7, converts "foreign" graphic files to Mac format.  
**GOSSAMER.2.0:** Scene Renderer, brings Virtual Reality to the Macintosh desktop.  
**SHAZAM:** Fun 8-color paint program

### Area 29: Mac Telecomm

**AMT.MORE.MODEMS:** Modem Tool definitions for AT&T and PP14400FXSA.  
**ANARCHIE110.SIT:** front end for browsing anonymous FTP sites on the Internet.  
**EUDORA.1.4.1:** Freeware version of Qualcomm's Eudora, an Internet E-mail package.  
**MACHHTTP123.SIT:** HTTP server 1.2.3 for WWW and Mosaic  
**MACTCPSWITC.SIT:** Switch MacTCP configurations  
**MARKSPACEZM.CPT:** Mark/Space ZMODEM Tool, semi-reasonably priced (\$29.95) ZMODEM tool for the Communications Tool Box. This free version works only for downloading.  
**MODEMSDATAB.SIT:** Database of >60 popular modems and the settings needed to make them operate correctly in hardware handshake, error correction, compression.



## Desktop Publishing & Graphic Design

Greencastle Graphics  
 Nancy Seferian

(202) 333-5244

1425 Foxhall Road, NW, Washington, DC 20007

**MOSAIC103.SIT:** NCSA Mosaic 1.0.3 multimedia browser, widely regarded as a "killer application" that makes it worthwhile to connect schools, libraries, and homes to the Internet. It allows the user to search and retrieve all sorts of information (text, audio, pictures, movies, database entries, etc.) from all over the world.  
**SHAMAN.1.0.0.SI:** AppleTalk Remote Access utility?  
**USR168.SIT:** A file that details how to modify your US Robotics 14.4 Sportster to do 16.8kbps when used with a Courier HST modem on the other end.

### Area 30: Mac Product Demos

**BEYOND.BREAK.24:** Excel template for managing and forecasting a small retail or service businesses.  
**COLOR.ACCESS126:** demo of version 1.2.6 of Color Access, from CIS (Color Imaging Systems), Barneyscan Corp.  
**CW20DEMO.SIT:** working demo of ClarisWorks 2.0  
**EMPIRE.MASTER26:** working demo of a



wargame similar to Strategic Conflict.  
**FA18HORNETDEMO**: demo of F-18 air simulation. Incredible cockpit detail. This demo is limited to Hawaii.  
**MARKSMAN.3.0**: user interface editor for programmers to design and prototype Mac applications.  
**TRISTAN**: Working demo of Tristan, a pinball game  
**WBADEMO.SIT**: Electrifying demo of Who Built America, a new CD-ROM from Voyager, filled with pictures, sounds and source material covering the last part of the 19th century to the early part of the 20th.  
**WORD.SOLN.2.2**: Word Solution Engine DEMO v 2.2; set of libraries for developers who wish to provide word processing capabilities in their software.

### Area 31: Mac Product Support

**AUTO.DOUB.2.0.3**: Update AutoDoubler to version 2.0.3  
**BBEDIT.254.UPDT**: Update BBEdit 2.5.x to 2.5.4  
**C.DOUBLR.203**: CopyDoubler 2.0.3 Updater  
**COMMUNICATE.SIT**: Update Communicate Lite to v.1.01.  
**CV351UP.SIT**: Canvas 3.5.1 Upgrade; fixes some bugs and seems to improve general performance. Also includes a dozen or so tool upgrades, including Styles, Spelling, Pantone, Grids, etc.  
**CVTOOLS.SIT**: three tool upgrades for Canvas 3.5.1  
**EUDORA.2.0.UPDT**: Update Qualcomm Eudora 2.0 to 2.0.1  
**EXCEL.PASCAL**: Excel Technote and Sample Code: Pascal  
**EXCELTALK2..SIT**: Let Microsoft Excel talk to you  
**FA181.1.01..SIT**: Updates F/A-18 1.1.0 to 1.1.1D  
**FIX.DAMAGED.OBJ**: Repair Microsoft Word Documents  
**FOLD.OVER.BOOK**: Word Technote; how to use Word to create "fold-over booklets."  
**GRAMMAR.SPELLIN**: Microsoft Word 5.0 Spelling & Grammar Update  
**MECHFIX.SIT**: MYST Mechanical Age Bug Fix  
**MEDICAL.DICTNRY**: Medical and Scientific Dictionary for Microsoft Word 5  
**MW.68K.C.UPDT.2**: Update Metrowerks 68K C/C++ Compiler  
**MW.68K.P.UPDT.2**: Update Metrowerks 68K Pascal Compiler  
**MW.PPC.C.UPDT.2**: Update Metrowerks PPC C/C++ Compiler  
**MW.PWRPLANT.UPD**: Metrowerks PowerPlant Update

**NOWFUN1.0.1.UPD**: NowFun! update to 1.0.1  
**OPEN.SAVE.TEXT**: Excel Technote: Open/Save Text Files  
**OPTMEM.1.5.4**: Update Optimem to Version 1.5.4  
**OUTSIDE.BARS**: Word Technote; how to add outside bar commands to Microsoft Word versions 5.0 and 5.1.  
**PAGEMAKERFA.SIT**: Usenet listing of

WordPerfect 3 including straight quotes to smart quotes, envelope printing, watermark, etc.  
**WP30.WP6.SIT**: Convert files between WordPerfect 3 Mac and WordPerfect 6 for Windows both ways.  
**XL.AE.DEMO**: Sample C program sends AppleEvents to Excel  
**XL.SCRIPT.WRITE**: an Excel 4.0 Add-In that changes the way macros are written. It employs an English-like scripting language instead of Excel's formula entry method.  
**XL.A.APPLE.EVENT**: Apple Events and Microsoft Excel 4.0

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## The TCS Committee has been struggling mightily to meet the telecommunications needs of its users and the Pi. By the time this column is printed, there is a good chance the TCS will be offering Internet-capable electronic mail.

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PageMaker Frequently Asked Questions.  
**PRINTING.ENVS**: Word Technote: Printing Envelopes  
**RAMDOUBLER.IST**: Update RamDoubler to v.1.01  
**REDLINING.NOTE**: Word Technote; how Word's Find/Replace feature can be used to perform basic redlining functions.  
**SCREENPLAY1.SIT**: long anticipated version 1.2 of the VideoSpigot software.  
**SMOOTH.CHRT.CRV**: Excel Technote: Smooth Chart Curves  
**SOUNDEDITPR.5UP**: Update SoundEdit Pro to 1.0.5  
**USING.TABLES**: Word Technote; Using Tables  
**WORD.5.0A.PATCH**: Patch for Microsoft Word 5.0  
**WORD.5.1A.PATCH**: Patch for Microsoft Word 5.1  
**WORD.FORMULAS**: Word Technote: Working with Formulas  
**WORD.POSTSCRIPT**: Word Technote: Introduction to PostScript Using Microsoft Word.  
**WP3.0MACROS.SIT**: eleven macros for

### Area 32: Mac Games

**BAZ.FAZ.1.1**: BazFaz is a little green guy who has wandered into a bad part of the universe. You must help him get back home by passing through seven wormholes.  
**BLACKJACK.SIT**: superb BlackJack game and tutor.  
**BLACKJACK10.SIT**: nice version of BlackJack with varying rules for different casinos.  
**CONCENTROIDS**: Animated Concentration-type game  
**DEAD.END.1.1**: a strategy game. Your goal is to find a path out of a dungeon by pushing massive blocks of stone out of your way.  
**KUNG.FU.CHIVLRY**: similar to Street Fighter and possibly better. You have the choice of a fighter that specializes in kicks or one that specializes in punches and throws.  
**MACJACK.III**: Casino Blackjack game.  
**MACMAN3.0.SIT**: Macman Classic v3.0  
**MACMANPRO.SIT**: Macman Classic Pro v1.0  
**MAHJONG.SIT**: real test of your gaming skill and knowledge: the oldest, most popular game in history, in a version written for the Macintosh — completely without instructions of any kind.  
**MORPION.CPT**: a great thinking game. If you like Mines you will love this.  
**MOSAICON.1.0.1**: HyperCard-based Drawing Game  
**MYSTCONFERE.SIT**: MYST Conference with Authors  
**PATHWAYS.GUIDE1**: Illustrated Guide to Pathways into Darkness  
**ROBOWAR.3.1**: RoboWar 3.1, design and program robot gladiators. "If you'd just like to throw away RoboWar and go burn penguins, please see a psychiatrist."  
**SNUGG.NADS.BOLO**: Snugg Nads Bollo Map  
**TOURNAMENT.VII**: RoboWar Tournament VII, Results & Robots, from the Seventh RoboWar Tournament.



**WAROFFLOWER.CPT:** War Of Flowers, colorful Korean card game

### Area 33: Mac Education

- ALPHABOAT.CPT:** Nice program to teach alphabet
- BABYSMASH5.SIT:** application generates random sounds and images when someone pounds on the keyboard. Intended for infants, but might come in handy at work, too.
- MATHATHON.SIT:** Exciting math learning game
- MATRIXMASTE.SIT:** Teach matrix mathematics
- STANDARD.MAPS30:** Standard Maps 3.0, Interactive Math Demo
- STELLARN.CPT:** educational program designed to allow the user to have the unique opportunity to see the closest star systems as they would appear from the outside looking in.

### Area 34: Mac Hypermedia

- AUTOCAT4.01.SIT:** Catalog files on floppies and hard disks
- CATSTUFF2.0.SIT:** Catalog files on your floppies
- CRAZED8S.SIT:** Crazy 8s game in a stack
- FINDERSCRIP.SIT:** Finder Scripting Toolkit v 1.1
- HENRY.V:** King Henry V, by William Shakespeare
- MUSICBOX.2.0.2:** Enhanced Sound XCMD
- NSTACK.2.0A:** Stack of Naturalist Information
- STACKO LOVE.SIT:** Mystery Science Theater 3000 encyclopedia
- THE.AENEID.SIT:** Virgil's Aeneid
- WINONASTACK:** Stack with pictures of Winona Ryder

### Area 35: Mac Multimedia/QT

- ACTSTOSDEPLOY1:** Satellite deployment from the Space Shuttle.
- BREIFING.ROOM:** remember the Saturday Night Live parody of Apple's "The Power to be Your Best" commercials? Well, the QuickTime programming team at Apple makes a parody of that.
- ENDEAVOURLAND:** Night landing of the space shuttle.
- ENDOFEVA3.SIT,**  
**HUBBLEOVERDOWN,**  
**PAYLOADBAYANDAS,**  
**ARRAYJETTIS.SIT,**  
**ARRAYTUMBLE.SIT,**  
**ASTRONAUTOV.SIT,**  
**MAGNETOMETERCH,**  
**MUSGRAVECHECKSN,**  
**PHOTOMETERDOORS,**  
**PHOTOMETERR.SIT,**

**HOFFMANHOLDS600:** clips from the record setting Hubble Space Telescope repair mission.

- FUSEPLUGANI.SIT:** Video animation showing the replacement of a fuse plug during the Hubble repair mission.
- HUBBLEREPANIMAT:** Video-based animation showing part of the Hubble Space Telescope repair mission.
- KLONE.KILLER.SI:** short QuickTime movie with an audio track sure to attract interest from across the room: Macs shooting PC clones.
- MACWORLDEXPO:** Comprehensive video review of MacWorld Expo last year involving a cast of dozens, with particular emphasis on video.
- MOVIESTARRC.SIT:** QuickTime movie (just a few seconds) of Pi member Bob Leedom's appearance on the TV show Homicide.
- PENCIL.TEST:** animated short subject from Apple, showing the trials and tribulations of the MacPaint pencil tool as he tries to cope in the real world.
- QUICKTIMEFEST:** Where is the QuickTime Festival? this animated clip asks. Cleverly done, on a low budget.
- THORTONFOOT.SIT:** Astronaut Thorton appears to be dancing in the foot restraints on the end of the Shuttle arm. Probably won't make it as a rock video, but it appeals to me.

### Area 36: Mac Information

- CCVENDORS.TXT:** List of 700+ Mac Software vendors
- MAZEMAKERV3.SIT:** Maze Maker 3.1 is an Excel macro that builds mazes. Really fun to watch.
- MODEMDICTIONARY:** very comprehensive dictionary of modem and telecommunications terms.
- TIDBITS# 209 to 212** (Jan. 17, 1994 to Feb. 7, 1994): the famed on-line weekly magazine.
- ZTFAQ16.SIT:** ZTerm "Frequently asked questions" 1/94

### Area 37: Mac Programming

- CONVERT.PROJ.B2:** "public beta" version 1.0b2 utility which will read a THINK C or THINK Pascal product, and produce an equivalent (or nearly so) Metroworks Code Warrior project (680x0 or PowerPC).
- GTQLIB1.0R1.SIT:** AppleScript library.
- JONSCOMMAND.SIT:** Jon's Commands 1.0b4; AppleScript library of commands.
- PROADKLITE.CPT:** 4th Dimension Development shell
- QT.MOVIE.TOOLS:** QuickTime Movie Toolbox with C source code.
- SCRIPTTL1.3.SIT:** AppleScript Script Tools 1.3

### Area 38: Mac Technical

- AVCOMPAT.I.SEA:** SuperMac's AV CPU compatibility list. This file is in Common Ground Viewer format, and no other software is required.
- MACHISTORY.SIT:** very handy (and nicely done) tables (in PICT format) that chronicle all the Macintoshes ever made.
- MEMORYUSAGE.SIT:** Screen Dump Of Ram Doubler In Action
- TN.FEB.1994:** Mac Tech Notes, Feb 1994 Update ■

### More FUTURE VIRUSES

**HOFFA VIRUS:** Your programs can never be found again.

**CONGRESSIONAL VIRUS #2:** Runs every program on the hard drive simultaneously, but doesn't allow the user to accomplish anything.

**KEVORKIAN VIRUS:** Helps your computer shut down as an act of mercy.

**IMELDA MARCOS VIRUS:** Sings you a song (slightly off key) on boot up, then subtracts money from your Quicken account and spends it all on expensive shoes it purchases through Prodigy.

**STARTREK VIRUS:** Invades your system in places where no virus has gone before.

**HEALTH CARE VIRUS:** Tests your system for a day, finds nothing wrong, and sends you a bill for \$4,500.

**CHICAGO CUBS VIRUS:** Your PC makes frequent mistakes and comes in last in the reviews, but you still love it.

**ORAL ROBERTS VIRUS:** Claims that if you don't send it a million dollars, it's programmer will take it back.

# Artists on exhibit

by Blake Lange



*This column will look at the art and artists of Washington Apple Pi and the techniques and tools used to create the art.*


**Artist Info:** Design and Illustration: Michael David Brown, President, Michael David Brown, Inc., Rockville, Maryland. Art conversion: Blake Lange, Printing Officer, Federal Election Commission. Layout: Michael Lewis, Technical Manuals Writer, Federal Election Commission.

**Tools:** Macintosh IICI, Macintosh IISI, flatbed scanner, Adobe Illustrator, Aldus PageMaker.

Although many tools exist for creating original artwork on the Apple Macintosh, more often than not it is used as a tool to efficiently reproduce artwork that has been created

April Federal Election Commission 1993

## CAMPAIGN GUIDE



**FOR CONGRESSIONAL CANDIDATES AND COMMITTEES**

### Introduction

Advisory opinion requests may be addressed to the Office of the General Counsel at:

**Federal Election Commission**  
441 Constitution Avenue, NE  
Washington, DC 20543

**Telephone:** (202) 452-3500  
**Teletype:** (202) 452-3500  
**Facsimile:** (202) 452-3500

Having prepared persons may receive the complete text of this advisory opinion by calling (202) 452-3500.

In addition to the Guide, the FEC publishes a series of brochures and other publications on several aspects of campaign financing and the election law. Subscribers to the Commission newsletter, the Record, are sent a free of charge. Write or call the FEC for a list of publications currently available.

Please note that candidates and committees need to comply with other laws, including the Campaign Finance Reform Act of 1990, the Public Law 101-552, and the Public Law 101-553.

## ONE THE COMMITTEE

### CHAPTER 1 Starting the Campaign

#### 1. Individual Becomes a Candidate

An individual becomes a candidate for federal office when that individual registers his or her name for election to a federal office in any election in which the individual is eligible to vote. The individual must file a Declaration of Candidacy with the Secretary of the State or the Clerk of the House of Representatives.

The individual must file a Declaration of Candidacy with the Secretary of the State or the Clerk of the House of Representatives within 15 days after an individual becomes a candidate in or for the election. This requirement is made by filing a Declaration of Candidacy (FEC Form 2) with the Secretary of State or the Clerk of the House of Representatives.

Within 15 days after an individual becomes a candidate in or for the election, the individual must file a Declaration of Candidacy (FEC Form 2) with the Secretary of State or the Clerk of the House of Representatives.

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# Macintosh Tutorials

## Volunteers and Instructors

You can't have training without teachers. If you have expertise in any subject useful to Mac or Apple users, please consider teaching. Instructors have an opportunity to work with students in small groups and informal settings. The teaching process is truly rewarding. Besides the spiritual and intellectual, rewards also include compensation; you will be paid. We especially need someone who can offer training in *Excel*. Call me if there is a subject that you are qualified to teach.

I am very pleased with the response to our requests for volunteers. We have a very bright and enthusiastic group of volunteers working to bring you the best possible classes and programs. We encourage and welcome additional support for the training program. Graphic designers, desktop publishers, and illustrators—we could use your help in promoting our program with brochures and fliers. For further information call Beth Medlin at the Pi office, (301) 654-8060.

## Macintosh Tutorials

The Macintosh introductory tutorials are a three-part introductory series designed for beginning users or those desiring to brush up their skills. The primary focus of these courses will be on the System, Desktop, Icons, Windows, and basic concepts in System 7, but System 6 hangers-on are welcome and encouraged to participate. Their issues and concerns will be addressed. Please try to take all three parts; this is the most beneficial arrangement.

### Some Specifics

- **Where:** Unless otherwise stated, all tutorials sponsored by Washington Apple Pi are given at the office located at 7910 Woodmont Avenue, Suite 910, Bethesda, Maryland.
- **When:** Unless otherwise stated, all tutorials are three hours in length and begin at 7:00 PM on the date listed. The office building is secured at 6:00 PM. To gain access, pick up the telephone located by the glass entry doors and tell the operator where you are going.
- **Fees:** \$25.00 per class for members and \$35.00 per class for non-members. Pre-registration and payment must be made to hold a seat.

- **Class Size:** Class size is limited to 6 students per class.
- **Bring my Computer?** All classes are taught seminar-style with the instructor using a computer and an overhead display. We encourage students who wish hands-on training to bring their computers.
- **Instructor Cancellation:** If a class is canceled by the instructor, all students will be notified of the cancellation. Please check your home answering machine if you have not given a work number for notification.
- **Student Cancellation:** A cancellation must be received by the office 72 hours before a class is scheduled. The only exception to

**Introduction to the Macintosh, Part I (Course # M041194)** You should go through the Guided Tour disk that comes with your computer or system upgrade kit before you come to class. You'll learn: how to safely turn your Macintosh on and off; what the basic dos and don'ts are; how to understand common Macintosh terminology found in manuals and other documentation; and how the basic components of your Macintosh system, hardware and software, work. You'll also learn why the Macintosh user interface is consistent across all applications, and how this makes learning and using software easier.

**Materials Required:** Your Macintosh, hard disk drive, start-up disk, and an unformatted DSDD 800k disk.

**Date:** Mon., April 11, 7-10 pm.

**Introduction to the Macintosh, Part II (Course # M041894)** Part II will continue the exploration of the basic components of your Macintosh system, hardware and software. You'll learn more of the dos and don'ts; the finer points of the Menu Bar, Error Messages, Dialog Boxes, Icons,

this is a cancellation due to illness.

### April Tutorials are the 4 basic ones:

- Intro to Mac 1 04/11/94 (M041194)
- Intro to Mac 2 04/18/94 (M041894)
- Intro to Mac 3 04/25/94 (M042594)
- Maintaining the Mac 04/27/94 (M042794)

plus

- Intro to WAP TCS 04/09/94 (TCS040994)
- Intro to Cap Access 04/02/94 CA040294



Folders, Keyboard Shortcuts, Scrapbook, and Clipboard will be discussed. You'll learn the basics of installing software, as well as about the Chooser, peripheral devices, and how they are connected to the Macintosh.

**Materials Required:** Your Macintosh, hard disk drive, start-up disk, and an unformatted DSDD 800k disk.

**Date:** Mon., April 18, 7-10 pm.

**Introduction to the Macintosh, Part III (Course # M042594)** Part III will follow up the concepts in Parts I and II. You will learn more advanced Macintosh skills and terminology; about the system software and using, installing, and updating system files; about managing memory, hard disk space, fonts, sounds, and other resources, the Apple menu, aliases, launching applications, inter-application communications (Publish and Subscribe), and Balloon Help. You'll also learn about how to buy hardware and software, how to upgrade, and what kinds of software are available for your Macintosh.

**Materials Required:** Your Macintosh, hard disk drive, start-up disk, and an unformatted DSDD 800k disk.

**Date:** Mon., April 25, 7-10 pm

**Maintaining Your Macintosh (Course # M042794)** How to maintain and troubleshoot your Mac. Topics will include: organizing and managing your hard disk; backing up and back-up strategies, archiving, disk formatting, defragmentation and optimization; managing start-up resources (including System 7 extensions or System 6 INIT's); avoiding conflicts and incompatibilities; virus protection; memory management; upgrading or replacing the operating system; system enhancements; customizing software installation; cleaning your mouse; and Macintosh "housekeeping" philosophies.

**Date:** Wed., April 27, 7-10 pm.

**Introduction to the Washington Apple Pi Telecommunications System (TCS) Course # (T040994)**

This class is designed for telecommunications novices or new

WAP members. This is the perfect seminar for those of you wanting to enjoy the many benefits of the WAP TCS. Topics for discussion will include how to apply for a password, sign on, configure a user profile, read messages, leave messages, reply to messages, upload, download or transfer files and use of the Librarian.

**Date:** Sat., April 9, 9:00 am-12 noon

### Other Educational Opportunities

Desktop Publishing & Graphics tutorials are given by Clockface & Creole Communications Inc.

Please contact Manolo Almagro at 301-718-0612 for details.

## Washington Apple Pi Tutorial Registration Form

Washington Apple Pi  
7910 Woodmont Ave., Su. 910  
Bethesda, Maryland 20814  
301-654-8060

### Basic Information

### Course Numbers

Name \_\_\_\_\_

Address \_\_\_\_\_

City/State/Zip \_\_\_\_\_

Phone (day) \_\_\_\_\_ (evening) \_\_\_\_\_

Member Number \_\_\_\_\_ Non-member \_\_\_\_\_

Number of Classes \_\_\_\_\_ x Class Fee \$ \_\_\_\_\_ = Total Fee \$ \_\_\_\_\_

Check/Money Order  Credit Card

Card Number \_\_\_\_\_

Card Expiration \_\_\_\_\_ Signature \_\_\_\_\_

Can you bring your own computer to the class? Yes  No

*Please fill in the course number of the class(es) that you wish to attend.*

Class #1 \_\_\_\_\_

Class #2 \_\_\_\_\_

Class #3 \_\_\_\_\_

Class #4 \_\_\_\_\_

Class #5 \_\_\_\_\_

Class #6 \_\_\_\_\_

WAP Form #CL006 (mod. 7/90). Mail registration and payment to the above address.



## Special Computer Offer For You:

If some is good, more is better. This month the special incentive program expands with several entries from some new companies. If you buy from any of these firms, please tell them you are from a User's Group. How else am I going to convince folks that we are a people worth courting.

### From Apple:

To go with the printer you purchased last month, Apple has two entry level computers for your consideration as part of their April Performa Purchase offerings as well as a neat piece of software.

First is the re-return of the LC II with a new badge number. This time it is called the Performa 430 sans fax modem. The central processor is a 16 mhz, 68030. Inside you will find 4 megs of RAM, a 120 meg hard drive, and System 7.1P5, while outside you get a mouse, standard keyboard and a .39 dot pitch Apple Basic Color monitor. Price is \$699.00.

Want more muscle? Interested in adding a CD-ROM, doing some desktop or graphics work or emulating a IIe? Try an LC III rebadged as the Performa 450 (without the fax modem). Included are 4 megs of RAM, a 120 meg hard drive, keyboard, mouse and System 7.1P5 operating software. The eyes have it on this one as Apple includes its .29 dot pitch Color Plus monitor. Price is \$750.00.

Now for the neat software. Ray Dream's Jag II is an image enhancement utility. It removes jagged edges automatically, delivering pixel perfect color or black

and white images and animation [that's what they said]. Instead of paying \$129.00 retail or even the street price of \$89.00, you can get unjagged for a mere \$59.95.

### Here's how to order:

Product #	Description	User Group Price
M2853LL/A	Performa 430 (w/o fax modem)	\$699.00 (1)
M2054LL/A	Performa 450 (w/o fax modem)	750.00 (1)
UGCJAG	JAG II	59.95 (2)

(1) Shipping is \$30.00 in Continental US. \$85.50 to AK and HI  
(2) Shipping is \$5.00 (no fine print - neat)

### Fine print:

- \* Refurbished by Apple - but you already know that.
- \*\* First come, first served. Last date to order is April 30, 1994
- \*\*\* 90-day in-home warranty

Orders will be accepted in one of the following 3 ways: Fax to: 408-461-5701; AppleLink: User.Groups; AOL: Apple UGS. Master Card, Visa or cashier's check payable to: User Group Connection. Send cashier's check to: User Group Connection, PO Box 67249, Scotts Valley, CA 95067-7249

### Other Neat Offers:

Hot for games? Inline Software will give you a 50% discount off list price for 15 of their popular games or the same off utilities such as HAM, Icon 7, INITPicker 3, Inline Sync, and Redux Deluxe. You can also buy PopupFolder for \$25.00. A free copy of Aladdin's Stuffit SpaceSaver comes with each order. Call 800-453-7671 and mention code # UG50 when you order.

Ohio Distinctive Software has a limited-time offer on their nutrition software (is it edible?). You get three programs: Executive Diet Helper; Menu Planner; and Weight Loss Planner. They normally sell for a total of \$218.00 (heavy), but for us they have been dollar reduced to a paltry \$8.00. Send \$8 plus \$3 s/h to Ohio Distinctive Software, 4588 Kenny Rd, Columbus, OH 43220. Mention code "UG" when you order. Oh yes, satisfaction guaranteed or full refund (including postage!).

Finally, Dream Maker Software is offering its Cliptues collection of ESP clip art at \$59 per volume. You can purchase the 5 volume collection: business images 1 & 2; sports; world flags; and borders for \$249 (plus s/h). Call 800-876-5665.



# The World Software Industry:

## A brief overview

by Joseph A. Hasson

**I**nformation processing is one of the most important and rapidly growing industries in today's world economy. This expansion has been occurring, in part, because of the increased power and productivity of computer hardware. But with software as an obviously essential part of computer systems, a rapid growth of software engineering can be expected in the future.

The American computer and software industry has held a preeminent position both domestically and internationally. However, other countries are now exerting considerable efforts to gain a foothold in the production of software. Outside the United States, those efforts are currently visible in Japan, Germany and France, and the NIE countries —the Newly Industrialized Economies —which include Brazil, Taiwan, India, the Republic of Korea, Singapore. While some are more successful than others, in all, both public and private resources are being expended in developing software for both domestic use and sale in world export industries.

Successful development varies based on resources. Countries are differentiated in the availability of skills and personnel required for program development and

production. Software producing companies in these countries are entering into joint ventures with larger producers in more developed countries as a way of building skill levels, achieving economies of scale and improving the qualities of their outputs. These and related moves are expected to reduce production costs, result in lower sales prices and improve competitive positions.

Different approaches are being taken to finance development. Some national governments, committed to a growth of domestic computer industries, have established consortia with private sector firms. National banks are providing long-term credits to assist in the financing of research and development of software and computer technology. Tax credits are being extended to provide financial incentives. In Japan, a long-term project involving 130 corporate members has been undertaken at a cost of \$150 million for the purpose of increasing productivity in software programming. The Japanese have consistently achieved higher output per unit of input in lines of code compared with more experienced U.S. programmers. In one instance, the Japanese have claimed an error rate of 0.3 bugs per thousand lines of code, a factor of 10 below typical U.S. error rates. Nevertheless

Japanese software production lags behind the United States. Yet, there are other areas where Japanese software has considerable strength and these conditions combine to make them potentially formidable software competitors in the future.

### Europe

In Europe, the principal competitors in software production are found in Germany and France. Europe is impeded, in general, by the greater emphasis on customized over prepackaged software. However, this condition will almost certainly be changed in the future. The German software industry has been experiencing the most rapid rate of growth—between 18 and 25 percent per annum. Total revenues from the sale of software now exceed those from hardware. And, France has experienced a greater penetration of computer usage than anywhere else in Europe. Given overall expenditures for R and D in software and increases in computer services, one can anticipate that Europe will attain a prominent position in the world software market.

### Taiwan

For the Government of Taiwan, the information industry is strategic to its economic development plans. That is, development of the industry is important not only *per se* but also because it will interact with other industries and facilitate their growth. The industry embodies high-technology and offers high-value-added services. The industry in Taiwan is comprised of software, commercial data processing and hardware companies. The latter focus on personal computers.

It has been estimated that Taiwan has more than 300 software producing firms employing over 4000 workers and with sales of close

to \$200 million per annum. They have thriving exports. The growth rate of the software industry is in excess of 45 percent per year. It emphasizes the production of prepackaged software. As smaller and medium sized companies progressively computerize their activities, the sales of prepackaged software are expected to soar. Taiwan is also moving into "systems integration". "Systems integration" requires combining hardware components with customized or prepackaged software so that the two function as a system through a networking arrangement, meeting the diverse needs of many end-users. A rational system, optimally integrated, will achieve the right economies of scale, deliver services at minimum costs per unit and have built-in flexibility. This will permit it to respond to the needs of a large number of users. The units of the system may be heterogeneous including hardware, software and communications equipment.

### Korea

The Republic of Korea has a National Technology Promotion Congress, established in the early 1980s, and an Institute of Electronics Technology. Together, these organizations will facilitate the country's movement into high-tech activities and its efforts to achieve national R & D goals in computers, hardware and software. In software production, Korea has more than 400 firms; some also produce hardware. Most are of relatively small size. Total software production is close to \$100 million per annum; domestic demand is growing at an annual rate of more than 40 percent. A national objective to computerize almost all activities will generate a large demand for software. Because of language difficulties, problems of

maintenance and support, the focus has been on the Korean domestic market. However, Korea faces constraints that stem from a shortage of technical manpower. Of 10,000 persons employed in the information industry, 50 percent are programmers, 20 percent, keypunchers and operators, 23 percent, system analysts and 7 percent are professionally trained engineers.

### India

The software industry in India is very small. It is dominated by three firms and has many smaller firms. In total, there are close to 400 software firms; about 250 of which process data and provide consulting services. Their total revenues are close to \$200 million, less than one-third originating from exports. Software producing firms are growing rapidly in number but lack financial viability. Two American companies have established subsidiaries in India: Texas Instruments and Citicorp. TI produces semiconductor product designs; Citicorp produces application packages for the banking industry. Most software produced in India is for mainframes and minicomputers; personal computers take less than 10 percent of software. This software is used for inventory control, financial accounting, computer-aided design, management information systems. India enters into "management contracts" with foreign firms. These are contracts between employment agencies operated by Indian entrepreneurs who supply foreign software producers with cheap programmers. Questions have been raised regarding the ethics of such practices!

India is seeking to develop joint ventures, R & D projects and education and training activities

with the United States. Indian firms are handicapped by a lack of adequate computers for developing and testing software, a shortage of venture capital, both short-term and long-term, and a need to undertake promotional activities overseas. Software requires considerable long-term capital both for its initial development and for its maintenance and modification to insure a continued niche in the market. There is a concerted effort, with commitment and assistance from the Government, to enable India to participate in the computer revolution. Several measures are a part of this effort. They include:

- (i) a reduction of import tariffs against foreign software provided it is used by Indian software exporters,
- (ii) loans at subsidized interest rates for working capital needs,
- (iii) foreign exchange and export insurance to assist in the financing imports.

Sound evaluation of foreign efforts to develop software and other aspects of the information processing industry is made difficult by the absence of reliable economic data. There is, also, an absence of a uniform terminology and uniform definitions applied across the board among different countries. Nevertheless, it is clear that the worldwide software industry is on the threshold of rapid development as the information age spreads and gains momentum. Once dominated by the United States, with France and Japan in secondary positions, a number of newly industrialized economies are attempting to enter the race by developing their domestic industries and finding their places in a worldwide competition. The changes to date have been great, but the industry is clearly in a state of evolution. If

developments in other industries are taken as the norm, one can anticipate that a few large firms will become market leaders and suppliers of major volumes. At present, industry growth is constrained by a shortage of software personnel, a lack of operating standards, and a need for integrated services. These services

will bring together hardware and software expertise into optimally defined systems.

This is a brief overview of an evolving and dynamic industry with potentially a great impact on how we work, live and interact with one another, within individual countries and in the international economy. ■

Library.

The periodicals division of Gelman takes up the third floor of the building. Close to the elevator are several terminals giving access to the "Aladin Database." Aladin is the combined library catalogs of the seven Washington Research Library Consortium schools—a "one-stop-shop" for all your online bibliographic search needs.

You can use Aladin to search for books, naturally. But you can also use Aladin for industrial-strength periodical searches covering popular magazines, academic journals, and almost every major English language newspaper. If that weren't enough, Aladin gives access to "ABI/Inform," a bibliographic database covering business and management topics. And the "Applied Sciences, Technology, and Biology Index," covers articles specifically in those fields of interest.

For researchers who prefer getting the gist of a newspaper article without getting bogged down in details, Aladin offers "Newspaper Abstracts." Also, citations from the online Reader's Guide to Periodical Literature contain convenient abstracts.

Having sized up the Aladin terminals, I ambled over to the periodicals reference desk to catch a glimpse of the list of periodicals the library subscribes to. The friendly periodicals librarian directed me to a telephone-sized book containing this list.

*Here is an "almost complete" list of publications in the computer and information science fields at Gelman:*

- Computational Intelligence
- Computational Mechanics
- Computational Statistics Quarterly
- Compute
- Computer
- Computer Abstracts
- Computer Aided Design

## Gaining Access to Computer-Oriented Academic Journals

by Phil Shapiro

Visitors to the nation's capital are often surprised to hear that few local residents ever use the Library of Congress. Sure, the Library of Congress has a handful of good books. And yes, the Library of Congress has a passable collection of periodicals. But getting access to books and periodicals requires filling out request slips. And with the library staff usually over-extended, sometimes you're forced to wait more than an hour to get the books or periodicals you're interested in reading.

Few people realize that one of the best libraries in the Washington DC metropolitan area is the Gelman Library at George Washington University. Open to the general public, the Gelman Library has many things working in its favor. Along with its deep and rich collection of books, the library subscribes to over 7000 periodicals, both popular and academic.

The Gelman Library is also part

of the Washington Research Library Consortium, a group of seven colleges and universities in the Washington DC area. The Consortium members share library resources, adding even greater depth to an already deep library collection.

I paid a visit to the Gelman Library last week to investigate their holdings of periodicals in the computer and information science fields. In my readings I often come across references to juicy sounding articles that invite further inquiry. I'm usually an incorrigible devotee of the Martin Luther King Memorial Library (the central library in the District of Columbia), but their periodical holdings do not extend far beyond the common fare of popular magazines and journals. So I wanted to find out if George Washington University's Gelman Library could provide access to the publications I was unable to locate at the Martin Luther King Memorial



- Computer Aided Engineering Journal  
Computer and Communications Decisions  
Computer and Control Abstracts  
Computer Applications in Biosciences  
Computer Architecture News  
Computer Communication Review  
Computer Contribution  
Computer Decision  
Computer Design  
Computer Equipment Review  
Computer Fraud and Securities Bulletin  
Computer Graphics  
Computer Graphics and Image Processing  
Computer Graphics Forum  
Computer Graphics World  
The Computer Journal  
Computer Languages  
Computer Literature Index  
Computer Networks  
Computer Programs for Chemistry  
Computer Readable Databases  
Computer Reseller News  
Computer Security Journal  
Computer Speech & Language  
Computer Standards & Interfaces  
Computer Studies in the Humanities  
Computer Systems Science & Engineering  
Computer Yearbook  
Computers and Automation  
Computers and Biomedical Research  
Computers and Electrical Engineering  
Computers and Employment  
Computers and Fluids  
Computers and Geosciences  
Computers and Geotechnics  
Computers and Industrial Engineering  
Computers and Mathematics  
Computers and Operations Research  
Computers and People  
Computers and Security  
Computers and Society  
Computers and Standards  
Computers and Structures  
Computers and the Humanities  
Computers in Banking  
Computers in Education  
Computers in Healthcare  
Computers in Hospitals  
Computers in Industry  
Computers in the Environmental Sciences  
Computers in Federal Government  
Computers in the Schools  
Computerworld  
Computing  
The Computing Teacher  
Design News  
Educational Technology  
Libraries  
Libraries and Culture  
Library Hi Tech News  
Library Journal  
Library Quarterly  
Library Science Annual  
Library Technology Reports  
Library Trends  
Wilson Library Bulletin  
Online  
Technology and Culture  
Technology in Society  
Technology Review  
Technology Week  
Techtrends  
Telecom Highlights  
Telecom Factbook  
Telecommunications Journal  
Telecommunications Abstracts  
Telecommunications Policy  
Telecommunications Reports  
Telecommunications Sourcebook  
Telematics & Informatics  
Telematics  
Telephony  
Journal of American Culture  
Journal of Business Communications  
Journal of Communication  
Journal of Computer-Based Instruction  
Journal of Computers in Mathematics & Science Teaching  
Journal of Creative Behavior  
Journal of Educational Computing Research  
Journal of Information Processing & Cybernetics  
Journal of Telecommunications Networks  
Communications Arts  
Communications Quarterly  
Communications News  
Information Age  
Information Broker  
Information Bulletin  
Information Economics & Policy  
Information Industry Directory  
Information Privacy  
Information Science Abstracts  
Information Service  
Information Technology & Libraries  
Infoworld

Back issues of these publications can be found either bound in books, on the shelf, or on microfiche and microfilm. The Aladin database indicates whether a particular periodical can be found as a "bound book" on the open-stack shelves, or whether it can be found on microfiche or microfilm. From the looks of it, more than two thirds of the library's periodicals are stored on microfiche or microfilm. However, the periodicals that are stored as "bound books" are housed on open shelves, free for browsing.

If the particular periodical you're looking for is stored on microfiche or microfilm, you can read and print copies of these articles in the microfiche/microfilm reading room. This room has about 25 to 30 microfiche/microfilm reading machines. (These dual-function machines display either microfiche or microfilm.) Hard copies of articles can be printed for nine cents a page using magnetic "copy cards." Copy cards can also be used in the library's photocopying machines.

What makes the Gelman library microfiche/microfilm reading room so splendid is that it is entirely "self-serve." A huge cabinet in the

middle of the room houses a gaggillion microfiche cards, all nicely organized by index number. A similar cabinet at the far side of the room houses a mega-million microfilm rolls, with back issues of 27 major English language newspapers.

If you know the particular periodical you're looking for, and if you know the general layout of these microfiche/microfilm cabinets, you could zero in right on what you needed within a minute or two. (The Library of Congress periodical reading room, by contrast, requires that you fill out periodical request forms, and then wait about an hour for someone to deliver the periodicals to your desk. The periodical holdings at the Library of Congress may be far more exhaustive, but the process of accessing them is far more exhausting.)

Having easy access to the many periodicals at the Gelman library would be one thing, but unless you have easy access to the electronic databases for searching these periodicals, the periodicals are of merely passing interest. Interestingly, the exhaustive Aladin databases that can be searched at terminals in the library can also be accessed by dial-in modem from home. (Note: While the library itself is open for public use, dial-in use of Aladin is reserved for George Washington University students and faculty.) The computer center at George Washington University makes available a Macintosh telecommunications program named "TinCan" which allows students and faculty to call the university's mainframe.

The advantages of being able to access Aladin from home are many. Not only can you do database searches in your pajamas, at the most convenient time of day (late

morning, for instance), but you can capture the results of your searches to your hard drive. Once on your hard drive, your bibliographic information can be edited, compiled, or otherwise massaged in your word processor. (And also sent via modem to your colleagues across town, or across the country.)

As it happens, one of the persons who shares my house happens to be a graduate student at George Washington University, so I may, perchance, be able to use his online account when the weather is too unseasonable for me to make a trip to the Gelman library. Doing online research in pajamas beats out the Library of Congress any day, don't you think?

**George Washington University's Gelman Library** is located at 2130 H St, NW, within three blocks of the Foggy Bottom subway station. The Periodicals Desk is open: M-Thu. 9 AM to 9:45 PM. Fri. 9 AM to 7:45 PM., Sat. 11 AM to 7:45 PM, Sun. 11 AM to 8:45 PM. The Gelman Library itself is open longer hours. For further info about Gelman Library, call the library's information desk: (202) 994-6558. ■

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## Teaching A New Trick To A Venerable Computer (teaching an old Apple ///+ to talk to a new printer).

Once upon a time, we wanted a laser printer. We wanted a laser printer that would work with our collection of orphaned Apple //s, ///s as well as the Macs we use and hope to own when we are rich. After lots of thought and consideration, we decided to adopt another orphan—a Hewlett-Packard LaserJet ///P. We knew it would work with everything we have (eventually). The ///P supports parallel and serial connections as well as AppleTalk as an optional expense.

Getting the serial connection to work was a relative snap. Get the Laserjet Driver off of the /// SIG Drivers disk we bought years ago, futz with the cables, baud rate, etc. and success. Perfect copies, albeit

on the typical slow serial side. We did have to add 2 megs of memory to the ///P so it could handle graphics from the GS.

Parallel operation was frustrating! We tried the standard .printer and .parallel drivers without luck. We tried assorted cables including a neat parallel card to 25 pin connector from Tom Linders. Disillusionment had set in with our new toy.

Notes to the TCS and Apple-3 list-serv offered hope. Paul Campbell (of the Detroit Campbells) rode (well, uploaded) to our rescue. Using the fabulous Disk Archival/Retrieval program from On Three's Bob Consorti, he uploaded not one, but two, laser drivers and



instructions about how to use them (and fix the problem we created when we edited out some of the Screen Blankers we loaded to the new /// Operating System—BOS (Bob's Operating System) which is really slick and has already been the subject of various *rave* reviews.

Both drivers work with the ///P. One is for the older style cable that works with the // family. The other with the more sophisticated Centronics printer style of cable. Paul will be glad to release these to the WAP/Three's Company systems and we might even get them added to the WAP Disketeria.

We thank Paul (and his growing family) and are glad we showed our support for the /// by buying BOS from WAP, paying our shareware fee to Bob Consorti for DAR and ... Just remember—a /// will still outnumber crunch a 486! Apple built a great computer, still do—lousy marketing...

Prepared on our Apple ///+, uploaded via our //GS using our 14,400 USR Sportster Modem. (We had to find a double density 3.5 disk because the /// has the SuperDrive, not the GS). ■

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## Notes from the Apple II Vice President

by Joan Jernigan

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**W**e had an active group at our February meeting. First we had an excellent presentation from Gerry Wright who showed us her Filecard.Bldr program written in Applesoft for the 8-bit world. There was a lot of interest from the audience and several of us took a copy of the disk with us either to use ourselves or to share with a colleague who programs.

Seth Mize then shared a collection of hyperstudio stacks from Columbia Slice and made copies available. A question and answer period followed. Sample copies of Apple periodicals such as II Alive, Shareware Solutions, Enhance, etc. were passed around and discussed.

Door Prizes went to George Griffin and Seth Mize (a book on getting your affairs in order), Gerry Wright (a Mac Optimizer), and Andy

Wallo (new and improved version), Carlos Perez, and Matt Storm (pens).

The next meeting will feature a colleague of mine from the Eastern Shore who has created 3-D models of some Virginia landmarks using paint and drawing programs. Several others may bring a 20-30 minute demo of interest to others. If you have anything that you would like to share, please don't hesitate to bring it. There is usually time for impromptu sharing. The next two meetings will be held in the Pi office.

April brings us Bill Geiger with his GS sound machine. We are hoping that Gary Hayman will be able to participate in one of the upcoming months. He seems to be traveling, skiing, cruising, and enjoying many other pursuits to the envy of us all. ■

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## Beginner's Corner: Polishing Green Apples

by Steve Weyhrich

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### Hooked on Storage (Part 1)

#### Preamble

We hold these truths to be self evident; that not all computers or

their users are created equally. Therefore, with this Polishing Green Apples article I will begin a discussion about hard disks, which can level the playing field somewhat between our



favorite computer and those Big Blue and Big Mac things out there. I plan to address their internal workings (the basics), what they can be used for, their cost, how to use them to the fullest, and anything else of interest that I can come up with.

### Consume Mass Quantities!

When talking about the resources of your computer (memory, storage, and speed), most newer applications for the Apple II and IIs tend to do just that: Consume mass quantities. Okay, so you probably don't absolutely NEED a hard drive in order to make use of your computer. You CAN continue to use floppy disks, either 5.25 inch (which hold 143K) or 3.5 inch (holding 800K). You do NOT need to take advantage of any of those ads that recently have appeared for low cost hard disks or "floptical" drives...

...and you don't really NEED power steering, power brakes, fuel injection, AM/FM Cassette, or air bags in your new car...

But...

...those items can sure make things easier for you as a driver. And in the same way, a hard disk can make things significantly more convenient for you as a computer user, whether you consider yourself a "power" user or not. In fact, using an Apple IIs WITHOUT a hard drive is getting downright frustrating these days. Some newer applications require so much disk swapping (even with TWO of the 3.5 drives) that they can become more hassle than they are worth.

Let's face it, the "good ol' days" when a program AND its data files would fit comfortably on a 143K floppy disk are long gone. Programs are larger (because users have demanded more and better features), and the data files that they create and use have also become larger.

Additionally, just keeping track of your library of programs can become difficult when they are spread over some 30 to 50 (for some users, over 200) different disks.

As in an earlier article, let's begin with some pertinent definitions. For a general review on how disks work at their most basic level, I suggest you obtain the February 1993 GENieLamp A2, which carried part 9 of my Apple II History. (Either file #1078 or #1075 from GENie's DigiPub libraries.) In that segment I explained in detail the concept of interleave, and how it affects the speed at which data can be read from or written to disks, which is applicable to hard disks as well as the older floppy disks.

### Definitions (for disk drives)

**Disk** A storage device, usually made up of a plastic film coated with magnetic particles (much like the tape used in audio cassettes). Aligning these tiny magnetic specks one way represents a binary "0", and in another direction as a binary "1".

**Floppy disk** A flexible disk within a protective envelope of firmer plastic. It has most commonly come in 5 1/4 (or 5.25) inch size in the past, (and 8 inches also, but that size never penetrated very far in the Apple II world). However, the newer 3 1/2 (or 3.5) inch size has been popularized over the past ten years by the Macintosh and other newer generation computers. Strictly speaking, the 3.5 disks are still considered to be "floppy", even though the flexible part of the disk is encased in a hard plastic shell with a metal sliding window to afford greater protection to the surface of the disk.

**Hard disk** Also known as a "fixed disk", this device is significant for its much greater storage capacity. Where the Apple II standard 5.25 disk typically holds about 143K of data, and a 3.5 disk holds 800K

(.14 and .78 meg, respectively), a hard disk holds anywhere from 5 meg to over 1000 meg of data. A hard disk is not usually as portable as a floppy disk, since it is built directly into the mechanism that reads and writes the data. However, a company known as Syquest has created a series of hard disks that are removable, with capacities of 44 meg, 88 meg, and 105 meg.

**Magneto-optical drive** These drives are currently significantly more expensive than other mass storage drives available. However, their storage capacity is quite high, and the disks are NOT sensitive to stray magnetic fields as are most other disks used in computers. The term "magneto-optical" means that this type of disk uses both magnetic AND optical technology in its function.

**An optical disk** is much like a CD or CD-ROM, except that it can be written to. When reading, a laser is aimed at the disk surface, and the direction that the light is deflected determines whether it was a "1" bit or "0" bit. When writing, a higher-powered laser heats the disk surface to the point where its previous "1" or "0" is erased, and while it cools, a magnetic field is used to determine the NEW bit that is written there.

Because it is more complicated, the currently magneto-optical drives are slower than standard hard drives, but the resistance of the disks to accidental erasure make them more reliable for long-term storage. This is currently as close to a rewritable CD-ROM that we have gotten.

**Floptical** This is a trademarked term, which means "floppy drive, optically tracked". It is made by only a few companies that have joined together to create and market these drives as a mass storage alternative to the traditional fixed or hard drive. The disks look just like a standard 3.5 floppy disk,



but is very different in the amount of data it can hold, currently either 20 or 40 megs. This type of a storage device is similar to older drives in the way which data is stored on the disk surface, using a magnetic read/write head. However, other types of disk drives use a stepper motor or a mechanical screw to position the read/write head over the disk surface; a magneto-optical drive uses an optical sensor to determine where on the disk surface the head should be placed. With this method, higher densities of data storage can be obtained, 1245 tracks per inch, compared to the more typical 135 tracks per inch on a standard floppy disk. However, it also requires a disk medium that has been specially created to containing the tracking marks that the optical sensor uses to place the read/write head, and so each disk is significantly more expensive than a standard 3.5 floppy.

Another advantage of the Floptical drives are their ability to ALSO handle the standard (in the MS-DOS world) 720K and 1.44 meg 3.5 inch floppy disks. So with this disk drive you can have the advantages of a large removable storage device, plus the ability to manage older types of disks.

**CD-ROM drive** An audio CD uses a laser to read the digitized musical "data" from the disk and relay that to other circuitry, which turns it into sound. A CD-ROM does the same thing, but uses it simply as data which COULD be sound, but also can be programs, pictures, and more. These drives are getting to a critical mass in the computer marketplace, and more CD-ROM disks are becoming available all the time.

Although SCSI CD-ROM drives meant for the Macintosh have been usable on the Apple II and IIs for some time, there have not been many of the CD-ROM disks that were useful

for our computer. However, the new discQuest software from Sequential Systems makes it possible to utilize the proprietary coded data on many of the popular CD-ROMs that are available, opening up the CD-ROM world to the Apple II.

**Tape drive** The original tape drive for the Apple II was a standard cassette recorder using audio tapes. It was slow and not very easy to use. Modern tape drives are capable of higher density for data storage, and faster access. However, because of the way that a tape works— in a linear fashion — tape access will never be as fast as disk access. (This is for the same reason that it is faster to jump between songs on a record album or a CD in random order than to rewind and fast-forward a cassette to do the same thing.) These are used primarily for backing up data from a hard disk.

**RAM disk** Acts just like a disk drive with moving parts, but is in reality just a bank of RAM chips with software that designates where data is stored in the bank. The advantage is speed (no moving parts to wait for), but the disadvantage is data stored on a RAM disk disappears when the power is turned off.

**Backup/restore** Because the law that states "Anything that can go wrong, will go wrong" definitely applies to computers, it is necessary to ensure that if something goes wrong with your large storage device you have a protection from loss of important data files. Think of it as "safe computing". In this case, it does not involve a condom, but rather making a duplicate copy of your vital files and keeping the copy in a safe place. With floppy disks, it may be as simple as duplicating the entire disk, and then putting the duplicate away. For a hard disk, it is unlikely that you just happen to have ANOTHER hard disk sitting around to use for backing it up. In that case, you need to be able

to write part of the hard disk files to several smaller capacity disks, or perhaps to a tape. When you load files back onto your hard disk from the backup disks, this is called "restoring" the files.

**Sector** A term describing a certain number of bytes that are stored as a group on the disk surface. In DOS 3.3, data was read from or written to the disk in 256-byte sectors. This was felt to be the best compromise between the limited memory available on older Apple IIs (requiring smaller sector sizes) and the speed of disk access (which could be improved with larger sector sizes).

With the small disk capacities available with the older Apple II operating systems (143K for DOS 3.3, and 112K for DOS 3.2), a smaller sector size made more sense. This is because even if a file consisted of only 50 bytes of data, 256 bytes was still the minimum size that could be used as a holding space for that data on the disk. The other 206 bytes were wasted space. A larger sector size would just have the potential for wasting more space if many small files were stored on the disk. An older operating system, CP/M, used 128-byte sectors. However, as a file gets larger and larger, it requires more overhead in the directory to store the map that tells the disk system where the sectors that make up the file can be found. A larger sector size makes for smaller file maps.

**Block** The Sophisticated Operating System (SOS) designed for the Apple III redesigned the data structure for disk access so 512-byte chunks of data were used. These were called "blocks", and allowed data to be read a bit faster with each disk operation; reading 256 bytes twice was slower than reading 512 bytes once. ProDOS was designed as a subset of SOS, and so used exactly the same disk format.

(continued page 43)



The Hotline service is only for members of the WAP. Please do not call after 9:30 pm or before 8:00 am.

## Apple II/III

### Apple II\*

#### GENERAL

Dave Harvey (days only) (703) 578-4621  
 Leon Raesly (days: 5 am-5pm) (301) 599-7530  
 Ken De Vito (703) 960-0786

#### ACCOUNTING PACKAGES

BPI Programs  
 Jaxon Brown (301) 350-3283  
 BPI & Howardsoft (Tax)  
 Otis Greever (615) 638-1525  
 Dollars & Sense  
 Barry Fox (717) 566-6709

#### Home Accountant

Leon Raesly (days: 5 am-5pm) (301) 599-7530

#### Quicken

Gary Hayman (301) 345-3230

#### Apple SSC

Bernie Benson (301) 951-5294

#### AppleWorks

Ken DeVito (703) 960-0786  
 Ray Settle (301) 647-9192  
 Harry Erwin (before 10 pm) (703) 758-9660  
 Gary Hayman (301) 345-3230  
 Leon Raesly (days: 5 am-5pm) (301) 599-7530  
 Bill Campbell (301) 498-6380  
 Allan Griff (301) 654-1515

#### AppleWorks Database

Roger Burt (301) 424-6927  
 Morgan Jopling 1 (301) 721-7874  
 Milt Goldsamt (301) 649-2768  
 Dan White (301) 449-3322  
 Allan Griff (301) 654-1515

#### COMMUNICATIONS

##### ProTerm

Allan Levy (301) 340-7839  
 Ray Settle (301) 647-9192

##### Talk is Cheap/Pt. to Pt.

Barry Fox (717) 566-6709

##### DataBases

DBMaster, Pro II

Bob Sherman 1 (305) 944-2111

##### dBase II

John Staples (703) 255-6955

##### dBase II&III, Data Perfect, Db Master-PRO

Leon Raesly (days: 5 am-5pm) (301) 599-7530

##### Profiler 3.0

Barry Fox (717) 566-6709

#### HARD DISKS

##### CMC (not CMS)

Barry Fox (717) 566-6709

##### Corvus & Omninet

Tom Vier (12N-6PM) (703) 860-4810

##### Corvus

Leon Raesly (days: 5 am-5pm) (301) 599-7530

##### Sider

Otis Greever (615) 638-1525

#### LANGUAGES

##### General

Dan White (301) 449-3322

#### AppleSoft

Louis Biggie (301) 967-3977  
 Peter Combes (301) 251-6369  
 Leon Raesly (5 am-5pm) (301) 599-7530  
 Pascal  
 Michael Hartman (301) 445-1583  
 C and TML Pascal  
 Harry Erwin (before 10 pm) (703) 758-9660

#### OPERATING SYSTEMS

##### ProDOS 8 and 16

Barry Fox (717) 566-6709  
 Dan White (301) 449-3322  
 Print Shop  
 Thomas O'Hagan (301) 593-9683

#### SPREADSHEETS

##### General

Walt Francis (202) 966-5742

##### MagicCalc/SuperCalc2.0

Leon Raesly (5 am-5pm) (301) 599-7530

##### Telecommunications

Dale Smith (301) 762-5158  
 Allan Levy (301) 340-7839  
 Ken De Vito (703) 960-0786  
 Dan White (301) 449-3322

##### TimeOut Series

Morgan Jopling 1(301) 721-7874

##### Utilities:ProSel

Barry Fox (717) 566-6709

#### CROSS-PLATFORM TRANSLATION

##### MS/DOS-Apple-Mac Transfers

Ken De Vito (703) 960-0786

#### WORD PROCESSORS

##### General

Walt Francis (202) 966-5742

##### Apple Writer 2

Ron Evry (703) 490-1534

Dianne Lorenz (301) 530-7881

Leon Raesly (5 am-5pm) (301) 599-7530

##### AppleWorks GS

Roger Burt (301) 424-6927

A.D. (Bill) Geiger (703) 237-3614

Andy Gavin (703) 734-3049

##### Letter & Simply Perf

Leon Raesly (5 am-5 pm) (301) 599-7530

##### Mouse Write

Barry Fox (717) 566-6709

##### Publish-It!

Gary Hayman (301) 345-3230

Ray Settle (301) 647-9192

##### ScreenWriter II

Peter Combes (301) 251-6369

Gene Carter (202) 363-2342

##### Word Perfect

James Edwards (301) 585-3002

Henry Donahoe (202) 298-9107

##### Word Star

Art Wilson (301) 774-8043

#### Apple IIGS\*

Neil Laubenthal (703) 691-1360

A.D. (Bill) Geiger (703) 237-3614

##### General

Barry Fox (717) 566-6709

#### Ile Upgrade

Morgan Jopling (301) 721-7874

#### APW

Andy Gavin (703) 734-3049

Leon Raesly (5 am-5pm) (301) 599-7530

#### Deluxe Paint II

Rich Sanders (703) 450-4371

#### GS BASIC

Barry Fox (717) 566-6709

#### Multiscribe GS

Ray Settle (301) 647-9192

#### TELECOMMUNICATIONS (MAC & APPLE)

Dale Smith (301) 762-5158

Allan Levy (301) 340-7839

Bob Sherman (305) 944-2111

#### TCS Help

Dale Smith (301) 762-5158

Nancy Seferian (202) 333-0126

Paul Schlosser (301) 831-9166

#### MouseTalk

Dale Smith (301) 762-5158

Ray Settle (301) 647-9192

#### TimeOut Series & Utilities: ProSel

Ray Settle (301) 647-9192

Barry Fox (717) 566-6709

#### 816 Paint/Writ'rs Ch.El

Andy Gavin (703) 734-3049

Apple II Hardware Epson printers, hard drives,  
 Guy Durant (202) 363-0366

#### Apple II laser printing

Bob Sherman 1(305) 944-2111

### Apple III\*

#### General

Paul Campbell (313) 255-6497

Dave Ortalini (9-10:30 pm) (301) 681-6136

#### 3 Easy Pieces

Robert Howe (916) 626-8198

David/Joan Jernigan (before 9 pm) (703) 822-5137

Steve Truax (304)-267-6429

#### Word Juggler

Tom Linders (408) 741-1001

J. Carey McGleish (evenings) (313) 332-8836

#### Pascal

Dr. Al Bloom (703) 951-2025

#### Apple Speller

Robert Howe (916) 626-8198

#### AppleWriter

Eric Sheard (908) 782-6492

#### Stemspeller

Steve Truax (304)-267-6429

## Beagle Buddies

#### MARYLAND

Ray Settle (Annapolis) (301) 647-9192

Scott Galbraith (Frederick) (301) 865-3035

W. T. Cook (Columbia) (301) 995-0352

Gary Hayman (Greenbelt) (301) 345-3230

Lee Raesly (Adelphi) (301) 599-7530

Dan White (301) 449-3322

Don Avery (Bethesda/DC) (202) 362-1783

#### VIRGINIA

Kenneth De Vito (Alexandria) (703) 960-0786

Neil Laubenthal (703) 691-1360

# April 1994

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
					1	<i>Navigating CapAccess</i> 2
3	4 Newton SIG PI SIG	5 TeleComm SIG	6 Mac Program- mers SIG DTP SIG	7 Columbia Slice Game SIG	8	9 Annapolis Slice Frederick Slice
10	11 <i>Intro to the Mac-Part 1</i>	12	13 DB SIG WAP BoD	14 Stock SIG	15	16 <i>DTP Seminar</i>
Writer's Deadline W 17	18 <i>Intro to the Mac-Part 2</i>	19	20 Excel SIG	21	22	Burning Tree ES WAP 23 A General Meeting
Editor's Deadline E 24	25 <i>Intro to the Mac-Part 3</i>	26	27 <i>Maintaining Your Mac</i> NoVa EdSIG	28	29	30 <i>DTP Seminar</i>

# May 1994

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
1	2 PI SIG	3 TeleComm SIG	4 Mac Programmers SIG DTP SIG	5 Columbia Slice Game SIG	6	7
8	9 <i>Intro to the Mac-Part 1</i>	MAC WORLD EXPO - D.C.		13 DB SIG WAP BoD Stock SIG	13	<i>DTP Seminar</i> 14 Annapolis Slice Frederick Slice
15	16 <i>Intro to the Mac-Part 2</i>	17	18 Excel SIG	19 Women's SIG	20	NoVa Com Col WAP 21 A General Meeting
Writer's Deadline W 22	23 <i>Intro to the Mac-Part 3</i>	24	25 <i>Maintaining Your Mac</i> NoVa EdSIG	26	27 <i>Election Ballot Deadline</i>	28
Editor's Deadline E 29	30	31	WAP Elections - Please take time to vote!			

# Meeting Notices

*Unless otherwise noted, call the SIG chairs or Slice officers for meeting information. A list of the SIG and Slice chairs is on page 4 of every Journal. Calendar events in italics are tutorials, workshops, or seminars.*

## **Annapolis Slice**

2nd Saturday; 9:30 AM; Severna Park Library on McKinsey Rd (off Rt 2), Severna Park, MD.  
Answering Machine: (410) 761-4260  
CrabApple BBS: (410) 315-8532

## **Apple IIGS SIG**

Meetings at various locations and on various dates. Looking for new chairperson. Call Gary Hayman (301) 345-3230, for details.

## **Apple III SIG**

Quarterly on 2nd Saturday; 10:00 AM; WAP Office.

## **AppleWorks SIG**

Meetings at various locations and on various dates. Call Gary Hayman (301) 345-3230, for details.

## **CAD SIG**

Call SIG chair.

## **Columbia Slice**

1st Thursday; 7:00 PM. Call for location.  
BBS (410) 964-3706.

## **DataBases (Mac) SIG**

2nd Wednesday; 7:15 PM; FHWA R&D Labs, near McLean, VA—from GW Parkway, exit at the interchange marked CIA HQs, then make a right turn to the FHWA gate, and check in with the guard.

## **DeskTop Publishing (DTP) SIG**

1st Wednesday; 7:30 PM; PEPCO Auditorium, 1900 Pennsylvania Ave. NW, DC. Contact: Scott Pectal.

## **Excel SIG**

3rd Wednesday; 7:30 PM; WAP office.

## **Frederick Slice**

General meeting time, 2nd Saturday; 10:00 AM; United Methodist Church; 22 Main Street in Walkersville.

## **Game SIG**

1st Thursday; 7:30 PM; Call for location.

## **HyperTalk SIG**

Call SIG chair for information.

## **Mac Programmers**

1st Wednesday; 7:30 PM; WAP office.

## **Newton Developer's Developer's SIG**

1st Monday; 7:30 PM; WAP Office.

## **NoVa Education (Ed) SIG**

Last Wednesday; 7:30 PM; Walnut Hill Ctr., 7423 Camp Alger Ave., Falls Church, VA.

## **Programmer's Interface (PI) SIG**

Meetings are announced on the Announcements Board of the TCS. Call Gerry Wright at (301) 422-4286 for details.

## **QuickTime SIG**

Quarterly; 7:30 PM; WAP Office.

## **Stock SIG**

2nd Thursday; 7:30 PM; WAP office.

## **Telecomm SIG**

1st Tuesday; 7:00 PM; WAP office.

## **UltraMacros SIG**

Meetings at various locations and on various dates. Call Gary Hayman (301) 345-3230, for details.

## **WAP Garage Sale**

June and December.

## **WAP General Meeting**

4th Saturday; 9:00 AM; Northern Virginia Community College, Annandale Campus, Community Cultural Center Auditorium.

## **Women's SIG**

Usually held every quarter on the fourth Thursday of the month at the Pi Office at 7:30 PM. Call SIG Chair, Ann Aiken (301) 530-1990 for details.

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**Notice:** Plans change! Anyone with calendar information please call the Calendar Editor, Bill Wydro (301) 299-5267 or Beth Medlin at the WAP office (301) 654-8060.

The Hotline service is only for members of the WAP. Please do not call after 9:30 p.m. or before 8:00 a.m.

## Macintosh

### GENERAL

Tom Witte (703) 683-5871  
 Jon Hardis (301) 330-1422  
 Dan White (301) 449-3322  
**Art & Video**  
 Nancy Seferian (202) 333-0126  
**Borland Products**  
 Doug Ferris daytime only (800) 826-4768

### DATABASE PROGRAMS

**Fourth Dimension**  
 Bob Pulgino (301) 474-0634  
 Peter Yared (301) 564-1560  
**FileMaker Pro**  
 Tom Parrish (301) 654-8784  
 Mort Greene (703) 522-8743  
**Foxbase**  
 Rick Shaddock (202) 829-4444  
**Helix**  
 Jim Barry to midnight (703) 662-0640  
 Harvey Levine (301) 299-9380  
**MS-File**  
 John Spencer (301) 730-1084  
 Mort Greene (703) 522-8743  
**Omnis 7**  
 Jeff Alpher to midnight (301) 630-2036  
**OverVue**  
 J.T. Tom DeMay, Jr. (301) 461-1798  
 Tom Parrish (301) 654-8784  
**Pro-Cite**  
 Elizabeth Mangan (703) 750-2710

### DESKTOP PUBLISHING

**General**  
 Jay Rohr (301) 655-0875  
 Freddi Galloway (V/TTY) (410) 268-5793  
**ReadySetGo**  
 Jim Graham (703) 751-4386  
 Freddi Galloway (V/TTY) (410) 268-5793  
**PageMaker**  
 Mort Greene (703) 522-8743  
**Quark Xpress**  
 Ron Mann (202) 333-3409

### GRAPHICS

**General**  
 Bill Baldrige (301) 779-8271  
 Jay Rohr (301) 655-0875  
**Adobe Illustrator**  
 Ling Wong (703) 803-9109  
**Aldus FreeHand**  
 Nancy Seferian (202) 333-0126  
**Canvas**  
 Bill Baldrige (301) 779-8271  
 Tom Parrish (301) 654-8784  
**MacDraw**  
 Tom Parrish (301) 654-8784  
 John Spencer (301) 730-1084  
**ImageStudio**  
 Mort Greene (703) 522-8743  
**Studio/1**  
 Jamie Kirschenbaum evenings (703) 437-3921  
**SuperPaint 2.0**  
 Mort Greene (703) 522-8743  
**VideoWorks**  
 Mort Greene (703) 522-8743

### PROGRAMMING

**Ada**  
 Harry Erwin (before 10 pm) (703) 758-9660  
**C**  
 Harry Erwin (before 10 pm) (703) 758-9660  
**Fortran**

Harry Erwin (before 10 pm) (703) 758-9660  
**Inside Mac**  
 Jon Hardis (301) 330-1422  
 John Love (703) 569-2294  
**Pascal**  
 Harry Erwin (before 10 pm) (703) 758-9660  
 Michael Hartman (301) 445-1583  
**SMALLTALK-80**  
 Harry Erwin (before 10 pm) (703) 758-9660

### SPREADSHEETS & CHARTS

**General**  
 David Morganstein (301) 972-4263  
 Bob Pulgino (301) 474-0634  
 Tom Cavanaugh (301) 627-8889  
**Excel**  
 David Morganstein (301) 972-4263  
 Mark Pankin (703) 524-0937  
 Jim Graham (703) 751-4386  
 Dick Byrd (703) 978-3440  
 Bob Pulgino (301) 474-0634  
 Tom Cavanaugh (301) 627-8889  
 Paula Shuck (before 10 pm) (301) 740-5255  
 Kirsten Sitnick (301) 750-7206  
 Mort Greene (703) 522-8743  
 Rick Shaddock (202) 829-4444  
**WingZ**  
 Kirsten Sitnick (301) 750-7206

### TELECOMMUNICATIONS

**General**  
 Allan Levy (301) 340-7839  
**CompuServe**  
 Michael Subelsky (301) 949-0203

### WORD PROCESSORS

**Microsoft Word**  
 Harris Silverstone (301) 435-3582  
 Tom Cavanaugh (301) 627-8889  
 Freddi Galloway (V/TTY) (410) 268-5793  
 Kirsten Sitnick (301) 750-7206  
**ThinkTank-More**  
 Jim Graham (703) 751-4386  
 Tom Parrish (301) 654-8784  
**Hebrew Word Processing**  
 Tim Childers (301) 997-9317  
**Microsoft Works**  
 Amy Billingsley (301) 622-2203  
**WordPerfect—Mac**  
 Curt Harpold (202) 547-8272

### MISCELLANEOUS

**Ile Card for the LC**  
 Bernie Benson (301) 951-5294

**MacProject**  
 Jay Lucas (703) 751-3332  
 Norbert Pink (703) 759-9243  
**HyperCard**  
 Rick Chapman (301) 989-9708  
 Tom Witte (703) 683-5871  
**HyperTalk**  
 John O'Reilly (703) 204-9332  
 Tom Witte (703) 683-5871  
**File Transfer**  
 Mort Greene (703) 522-8743  
**Backfax**  
 Mort Greene (703) 522-8743  
**HyperCard Scripting**  
 Jamie Kirschenbaum (evenings) (703) 437-3921  
 Richard Kozloski (703) 352-1523  
**SoundEdit**  
 Jamie Kirschenbaum (evenings) (703) 437-3921

### MAC DISKETERIA LIBRARY

Dave Weikert (301) 963-0063

## General

**Assistive Tech**  
 Missy McCallen (703) 323-6079  
**Games-Apple II**  
 Charles Don Hall (703) 356-4229  
 John Wiegley (after 2:15) (703) 437-1808  
**IBM**  
 Leon Raesly (301) 599-7530  
**Math-OR Applns**  
 Mark Pankin (703) 524-0937  
**Modems-General**  
 Allan Levy (301) 340-7839  
**Hayes Smartmodem**  
 Bernie Benson (301) 951-5294  
**Practical Peripherals**  
 Allan Levy (301) 340-7839  
**Printers-General**  
 Walt Francis (202) 966-5742  
 Leon Raesly (301) 599-7530  
**MX-80**  
 Jeff Dillon (301) 662-2070  
**Stat Packages**  
 David Morganstein (301) 972-4263  
**Stock Market**  
 Robert Wood (703) 893-9591  
**MS/DOS**  
 Tom Cavanaugh (703) 627-8889  
**Dvorak Keyboard**  
 Ginny & Michael Spevak (202) 244-8644

## Frederick Apple Core Help Line

Please limit calls to reasonable evening and weekend hours and NEVER after 10 P.M.

Oscar Fisher (Frederick)	694-9237	A2, GS	Doug Tallman (Frederick)	663-3268	Mac
Dick Grosbier (Frederick)	898-5461	A2, GS, Mac	Scott Galbraith (Monrovia)	865-3035	A2, GS
Harold Polk (Frederick)	662-6399	A2	J. Russell Robinson (Hagerstown)	739-6030	Mac
Tony Swajlenka (Frederick)	694-6209	A2	Ken Carter	834-6515	A2, GS

## Annapolis Slice Help Line

Area Code 410 Call in the PM unless you have an emergency.

<b>Mac</b>			<b>Gini Waters (Crownville)</b>	410-923-0139	Mac+, DTP
Richard MacLean (Crownville)	410-721-8157	MacIIsi	Bill Derouin (Severna Park)	410-766-1154	Centris 650, DTP
Steve Toth (Agapost)	410-956-6557	Mac+	Bill Waring (Severna Park)	410-647-5605	Mac, Excel
Bob Peterson (Crownville)	410-721-9151	MacSE	Helen Hamerstrom (Severna Park)	410-647-1720	Mac, CD-ROM
Sandy Bozek (Annapolis)	410-974-6062	MacII, Scanner			
Lou Sapienza (Crownville)	410-923-3415	Mac IIsi, Canvas, DTP	<b>Apple II</b>		
Barry Conner (Annapolis)	410-573-7140	Mac Telecomm	Seth Mize (Glen Burnie)	410-766-1154	IIGS, II+, III
Brian Bassindale (Annapolis)	410-757-9541	Mac IIsi, CAD	Helen Hamerstrom (Severna Park)	410-647-1720	IIGS, IIe, DTP, HS



(continued from page 38)

**Track** Data stored on the surface of a disk are arranged as concentric circles, one within another. These circles of data are called tracks. Each type of disk device has its own peculiarities as to how many tracks can be utilized on the disk surface, and how many sectors or blocks can be placed on a single track. The older 5.25 disks used on the Apple II have a standard of 16 sectors per track, and 35 tracks per disk (DOS 3.2 could only handle 13 sectors per track). The 3.5 disks use a varying number of sectors per track, with fewer as you go from the outer rim of the disk toward the center. Since the tracks are smaller in diameter at the inner part of the disk, there is less disk media available for packing data into blocks (fewer inches of disk pass under the read/write head until the track starts over), and so some disk devices have fewer blocks per track on the inner tracks.

**Interleave** Refers to the way in which groups of data are written to a disk to achieve the best throughput and speed for the device being used. A fast disk drive might be able to use a 1:1 interleave, where the physical number of a disk sector corresponds to the logical number of the data sector being written to it. A slower drive or slower controlling software may need to use a 2:1 or higher interleave, to allow the drive to read a sector, and while it is processing it, have one or more disk sectors pass beneath the read/write head that are ignored. If the interleave is set correctly, the disk should be at the right position when the software is ready for the next sector of data to be immediately read.

**DOS 3.3** (NOT the "DOS 3.3" that was released by Microsoft for the IBM PC a few years ago.) This oldest disk operating system for the Apple II still in use. (DOS 3.3 was preceded

by DOS 3.1, 3.2, and 3.2.1, but they are little more than historical curiosities now.) It is limited primarily to 5.25 disks, although with some patches it can be made to work on hard disks or 3.5 disks. This disk operating system is quite liberal in the types of characters allowed in naming files. A filename under DOS 3.3 can be nearly ANY character in the ASCII set, even if that character would not display on the screen; however, it may not handle lowercase characters well, since it was designed to work with the Apple II Plus, which did not have lowercase. A filename must start with a printable letter (A-Z), but after that, anything goes. Examples include "APPLEVISION", "AREALLY###%@FILE", or "THIS FILE IS \_\_\_\_\_". The length of the filenames was limited to 30 characters or less.

**ProDOS** Known now as ProDOS 8, it stands for "Professional Disk Operating System", and is more flexible than DOS 3.3 in the types of disk devices it will support, and how much capacity on each disk is allowed. A filename under ProDOS must start with a letter, is limited to only 15 characters, and those characters can only be letters, numbers, or a period.

Examples include "BASIC.SYSTEM", "B1.2.3.WOW", "B....C...D". The largest size disk device supported under ProDOS is 32 meg, and so a hard disk that is larger than 32 megs must be partitioned into multiple volumes that are 32 megs or smaller.

One of the other advances that came about with ProDOS 8 was device independence. That is, ProDOS was not tied down to a specific type of disk hardware, as DOS 3.3 was (which was designed to work only with 5.25 disks, although it was patched many different ways to allow it to use other types of disk devices). As far as ProDOS is

concerned, if the software that controls a disk device responds to certain types of commands in the right way, it does not care whether that device is a 5.25 disk, 3.5 disk, hard disk, RAM disk, or tape drive. If the right controlling software was designed, you could even attach a computer via a phone line and modem to a large disk storage device elsewhere, and data could be saved and loaded from that remote device just as if it was right there on the desk next to the computer. In fact, an AppleTalk network works very much like that example (minus the phone line and modem, of course).

**GS/OS** A true chameleon of an operating system. Its earlier incarnation, ProDOS 16, was shipped with the original Apple IIs, and in that form ONLY handled disk input and output, and actually made use of the older 8-bit code in ProDOS 8 for most of what it did. When GS/OS came out, it was designed to deal with nearly everything that the computer did, in addition to disk functions.

**Directory** A list of files on a disk, usually including other information about the file's size, the date it was created or modified, and the kind of information the file holds.

**Catalog** The same as a directory, but an older name used with DOS 3.3 or earlier operating systems.

**Subdirectory** Just like a directory, but at a "deeper" level than the main or root directory on a disk. Makes it possible to organize files in different groups.

**Partition** This refers to a method of taking a disk device and "breaking it up" into two or more smaller sized disks. On a PHYSICAL basis, this does not mean that the disk is actually changed. On a LOGICAL basis, the disk device may either have a storage capacity that exceeds what the operating system is able to handle, or it may need to be



divided up for the convenience of the user.

A disk drive that has been partitioned into two or more smaller devices may APPEAR to the computer and its disk operating system as if there were more than one PHYSICAL device attached. For example, the maximum size disk volume that ProDOS can handle is 32 megs. If a 40 meg hard disk is attached to a computer running the ProDOS operating system, only 32 megs of it will be usable, and 8 megs would be unavailable and therefore wasted. Partitioning that disk into different sized volumes (20/20 or 30/10 or 32/8) allows ALL of it to be used for storage.

With the older DOS 3.3 operating system, in which a 143K disk size was standard, hard drives used at that time were logically divided up into multiple 143K volumes. In this case, there was still a particular slot and drive that was assigned to the disk controller card, but any particular 143K "disk" on that hard disk was accessed via a "V" parameter ("V" for volume) in DOS 3.3 disk commands. A catalog command would then be issued as "CATALOG,S5,D1,V1", "CATALOG,S5,D1,V2", and so on.

SCSI Stands for "Small Computer Systems Interface", and is usually pronounced "scuzzy". It refers to a set of commands that are used to control storage devices of various types. The SCSI protocol even allows the use of devices such as modems and printers, but I haven't seen much of this penetrate into personal computers as a whole, and none have appeared for any computer in the Apple II line.

When the term "SCSI" is used with the name of another piece of hardware, it means that that device is intended to be used on a chain of devices that all communicate with one another via the SCSI command set. Therefore, a SCSI cable is used to connect a SCSI hard drive and a

SCSI tape drive to the SCSI controller card plugged into a computer.

Generally speaking, connecting a SCSI device to a computer is no more complicated than turning off the power, plugging it in, and turning it back on. In reality, however, this sometimes requires a bit more to be done to make it function properly.

### Concluding Statements

We'll stop here for now, and let you chew on that for a while. Next time I will begin to get into some suggestions on how to organize your hard disk to get the best use out of it. In the meantime, keep your eyes on those sale prices — hard disks are getting more affordable all the time!

*[Steve Weyhrich is a family physician from Omaha, Nebraska. He has been using Apple II computers since 1981, and writing about them since 1990. He follows closely the events that continue to shape the destiny of the leg-*

*endary Apple II and IIgs computers, and writes a monthly column called the "A2 News Digest" for A2-Central disk magazine. He is also the author of the "Apple II*

*History", available on fine bulletin boards everywhere. Weyhrich can be reached on GENIE at: s.weyhrich, and via the Internet at: s.weyhrich@genie.geis.com]*

(c) Copyright 1994 T/TalkNET Online Publishing and GENIE. To join GENIE, set your modem to 2400 baud (or less) and half duplex (local echo). Have the modem dial 1-800-638-8369. When you get a CONNECT message, type HHH. At the U#= prompt, type: XTX99014,DIGIPUB and hit the [return] key. The system will then ask you for your information. Call (voice) 1-800-638-9636 for a free pamphlet about GENIE.

## Little-Known Utilities For The System Utilities

By Hal Edelstein  
(with some additions  
by Dave Ottalini)

**B**ecause the Apple III manual was not the world's best, several convenient techniques which are available in the System Utilities often go unnoticed. For example:

1. You don't ever have to type the names of existing files that are to be copied, deleted, etc. When the file name is requested in the lower left corner, type the drive (say .D2)

or the volume name or the subdirectory pathname, then hit the up-arrow key. A slash and an equal sign (/=) now appear after your entry. A list of the files within that directory will appear in the upper right of the screen. Move the cursor to the desired file name, and hit the right-arrow key. More than one file may be selected at a time in this way. If you change your mind, hit



the left-arrow key while the cursor is on the file name. A right-arrow alongside the file name indicates those that have been selected; the arrow disappears when you un-select it.

When you're through selecting, press Return. If you're copying files, a default name will appear on the next prompt line. If that has to be changed, make sure that '/' follows the pathname.

If '.D2/=' , etc. appears as a default on the first line, *don't* press Return unless you want *all* the files in the directory. Instead type in or edit the directory name without the equal character (the end slash is optional), and hit the up-arrow as described above.

If you are working with subdirectories on the disk and wish to get a listing of those files, select the subdirectory with the right arrow key, then hit ENTER instead of Return. This will now become your pathname at the prompt line. Press the up arrow key to see all the files under that subdirectory in the window. If you want to select all the files, hit Return. Otherwise, choose the individual files as described above and then press Return.

2. There is a character insert/delete feature built in to the System Utilities and available for most (but not all) activities in the Utilities! This is handy for editing long pathnames, etc.

To enter the Insert mode, press OpenApple-I. A vertical bar will appear between two characters. This bar is a cursor indicating where characters will be inserted if typed. It can be moved with the left- and right-arrows, and toggled off and on with the same OpenApple-I command.

To delete a character under the cursor, press Open Apple-Right Arrow. To delete one to the left of the cursor, press Open Apple-Left Arrow. ■

*Reprinted from the  
ATUNC Newsletter  
April 1985*

## The Apple /// Internal RAM Test

by Rod Whitten

**F**or those A/// owners with a 12 volt, 128K machine who are having problems with their A//s memory, it has an internal diagnostic to test the RAM. To check if you have a 12V machine, not a 5V, check your serial number. If it is greater than 100,000, it is probably 5V. To run the test, one must remove all the peripheral cards, especially Grappler and Profile, and go into Monitor by holding down CONTROL and OPEN APPLE, then hit RESET. An arrow and a flashing underline should appear in the upper left-hand corner of the screen. Type F6E6G and the screen will fill with "garbage" for a moment and about every 20 seconds the following will appear on the screen.

### DIAGONISTIC RAM

```
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
```

Run for about 20 minutes, longer if it normally takes that long for the error to show up. If the dots keep appearing, then everything is normal, but if an inverse 1 shows up, you probably have a bad RAM chip at that location. The code to where on the memory board the bad chip is as follows:

```
DIAGONISTIC RAM
B9 B8 B7 B6 B5 B4 B3 B2
  B17 B16 B15 B14 B13 B12
B11 B10
  B9 B8 B7 B6 B5 B4 B3 B2
  B17 B16 B15 B14 B13 B12
B11 B10
  C17 C16 C15 C14 C13 C12
C11 C10
  D9 D8 D7 D6 D5 D4 D3 D2
  D17 D16 D15 D14 D13 D12
D11 D10
  C9 C8 C7 C6 C5 C4 C3 C2
```

If replacing the chip does not solve the problem, then it could be the memory board itself. Other error messages could show up, if so give me a call and will look it up in my Apple /// Service Reference Manual. With regards to this manual, if you wish to copy it, see me and we can make arrangements. However, it is about 200 pages long and it would be loaned with the understanding that you would do the same for someone else.

If you have a 256K///, which has different memory locations, you can go into monitor and run the same test; however, you must use another procedure to determine the problem chip, if an inverse 1 shows up. If you have this problem, let me know and I can get you the procedure. ■

*Reprinted from  
June 1985  
ATUNC Newsletter*

# The Music Goes Round and Round

by Gary Hayman

*You push the first KEY down and the music goes round and round Oh oh oh oh, oh oh and it comes out here.*

**T**he Attack of the Synth Music. No it is not a Sci-Fi film but it is what is presently going on if you are following the InterNet USENET newsgroup feed of comp.binaries.apple2 these days.

Some individuals have been able to produce a multitude of Excellent Synth Music [Synthesized Music] through the use of new programs and MIDI Translators. You can listen to the music if you have an Apple IIGS and use the SYNTHLAB program that comes with the current GS/OS disk sets.

Whether you like Bach, Beethoven, Chopin, Mozart or would like to listen to a rendition of Johnny-B-Good, the music is now becoming available to you at a fast and furious pace. Besides the BINSII [Binary Encoded ASCII] files on comp.binaries.apple2, electronic bulletin boards and on-line services (GENie, for example) are placing them in their file libraries for your downloading pleasure.

If you put these music files into your \*/SYNTHLAB/SEQ.AND.INSTR folder [\* = root or top level directory] they can be played with the SYNTHLAB program in the \*/SYNTHLAB folder. There are also other 'player' programs available, both for free or for fee. But wait, there are some more interesting ways of playing

this music — in a jukebox mode. The jukebox mode will play selection after selection, even in the background, while you are concurrently using many 16 bit applications (not 8 bit).

Two of my favorite jukebox-type players are MINSTREL which comes from Softdisk[GS] Magazine and is a NDA (New Desk Accessory) and SYNTH MUSIC PLAYER which is a CDA (Classic Desk Accessory). My favorite, at the moment (for there may be others), is SYNTH MUSIC PLAYER. With either, you can mark a multitude of selections to be played and you will hear continuous and excellent music — till you deactivate it. I like to initiate the music, go back to my ProSel.16 Spec Screen and let the Kinetic Art screen play with the multiple piece synth music in the background.

A major problem is that, as you start collecting these various musical compositions and placing them on your Hard Drive, they will multiply and take over, just as fonts, graphics and rabbits seem to do. An alternative, would be to place them on 3.5" disks.

A couple of comments and hints are now needed. In order for the music pieces to be played, not only must you have the music file but you must have MATCHING

Instrument and Wave Form files. These files are normally housed in the SEQ.AND.INSTR folder (previously mentioned). In my collection there are 5 pairs. The PIANO.BNK and PIANO.WAV, the DEMO.BNK and DEMO.WAV, the COMBO.BNK and COMBO.WAV, the ORCH.BNK and ORCH.WAV and the SYNTH.BNK and SYNTH.WAV. [XXX.BNK files are of the INS file type (\$D6), while XXX.WAV files are of the SND file type (\$D8)]. Each music file [MUS file type (\$D5)] depends upon one of the file pairs, but which pair is not obvious. You could place all of the five pairs on a 3.5" disk prior to placing the music, but that would take up some 365K of disk space.

As a suggestion, place only one pair on each of five formatted 3.5" disks. You will only be using up 73K of disk space. Label the disk as appropriate, such as Synth Music - Piano, Synth Music - Orch, etc.

Now you are ready to place the appropriate music on the disks. But which piece belongs on which disk. Here is a little hint that will identify which selection goes where. I use ProSel-16 or Copy II+ to 'type to screen' or 'view file', the ASCII of the music file. This won't work with a normal text reader because the music file is not a text file. I use Copy II+ because it operates faster for me. On the first line, you will find an indication of what XXX.BNK is necessary to play the file. Then it is just a matter of copying the file to the appropriate disk of the five prepared as above.

You will be surprised at the amount of music that you can place on the disks now. When in a jukebox mode, the delay between selections can hardly be noticed and is probably no different that the delay that a CD music disk offers you.

Remember, you can't mix types unless multiple BNK/WAV files are



on the disk.

Start collecting the music now and take advantage of the excellent sound system that the IIGS offers. I have two Yamaha amplified speakers connected through a Y plug to the mini-plug connection on the back of my IIGS. This system really belts out the music with volume and clarity.

So when I push that key down, my music goes round and round from one selection to another — and it comes out here. ■

---

## “Profile” of a Hard-Learned Lesson

by Burr Patterson, Jr.

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**D**avid has been after me for two years to write an article for *The Journal*, I made this one of the things I said I would do for the new year.

At just about the same time I messed up and down I went, I lost my Profile with all my software in it. No problem, I got “GO BACK !!!”. There is only one small problem with this, you only get out what you “got” in.

Here’s the way it went. I started noticing that something was wrong with .Profile in the middle of the night. Now anytime something goes bump in the night we should get up, go to bed and think about it the next day, I didn’t. I said, OK I have everything backed up, I can just reload and get going. I checked a few things, remembered a few bad commands I had given in the last hour or so and *assumed* I had messed up.

I couldn’t get the drive to do much that I wanted it to do, I even *fomatted*

*the D#%& Thing*, nothing seemed to help. I was starting to worry. I thought maybe I’ll put my other Profile on line and see if I can load it (I know it is messed up). When I crawled under the desk (to make a long story short) I found the plug loose. No problem, I got it “backed up”.

I got the backup disks (28) out and started, the first thing I found out was, I had not backed up this drive in 6 months, the restore went well only, boy it’s slow (maybe Bob can fix it so we can turn the monitor off!) I lost 125 files that I had formed in the last few months—files that had things I had made special and were one-of-a-kind.

I backup my files every week or more often if I do a lot of work on them. The reason my mind didn’t want to backup the Profile (all software) was that, nothing every happens to this drive - it just sits

there and runs. I AM NOW A BACKER UPPER of “all” things! I use the modified, date & time for up dates as I go along.

I think I have learned a major lesson about backing up. I hope this little story will help someone else that thinks they don’t need to B/U “everything”. ■

### Take Advantage of WAP’s Disketeria Selections

Both Apple and Macintosh files are available through the office. Two examples of those files can be seen in the March Journal All the dingbats used throughout that journal are either from the Macintosh “Animal” or “Cable” files.

See pages 58-78  
for descriptions  
and order forms.



# The Apple /// System Configuration Program (SCP)

by Joe Dombrowski  
(with some updating  
by Dave Ottalini)

One of the most important things any /// user *must* understand is how to use the System Configuration Program (SCP) and how to build a SOS.DRIVER file. Only you, the user, know your system's configuration and how you'll be using any piece of software. With this in mind we bring our first tutorial, one on SOS.DRIVER building.

## RAM, ROM and Turning It On

Between the time you turn your computer on and the time you can do something useful with it, an awful lot of things happen - if everything goes well. This discussion concerns what should, or might, go on.

The first thing that occurs when your /// is turned on is that it checks its own hardware based on the instructions (diagnostics) in the Read Only Memory (ROM) chip. If any of these tests are failed you get one of the error messages listed on pages 113-114 of the Owner's Guide. These indicate very serious problems which will require servicing, so quit right there if you get one.

If these tests are passed, the machine then looks to the internal disk drive to read its next set of

orders (booting). More exactly, it is looking for a file called SOS.KERNAL which contains the fundamental instructions the machine needs to function internally. Without these instructions the /// can do nothing.

Next the /// looks to the same drive for the file SOS.INTERP (interpreter) which contains the instructions for interfacing with you, the user.

Finally, it looks on the disk in the internal drive for a file called SOS.DRIVER which contains the instructions for the machine to manage all its other devices such as the console, printers, hard disk, etc. This file also must be present and must contain at least the CONSOLE.DRIVER. As you may have learned, the absence of any of these files prevents a successful boot and you get an error message telling you what is missing. These errors (pg 114-115), for the most part, do not indicate anything wrong with your machine, rather there is usually something wrong with the disk you attempted to boot and the message tries to tell you what.

While the 3 SOS files must be there, you do have some control over 2 of them. (The one you can't control is SOS.KERNEL which is the same for all boot disks.) You actually select

the Interpreter. This file is an assembly language program which contains the language you are using such as BASIC or PASCAL, or the actual application program you are using such as 3EZ Pieces or Applewriter. Hence you choose the interpreter when you choose the program. This also means that SOS.INTERP files are not freely interchangeable. The BASIC interpreter will not allow you to run Pascal programs even though it will boot. If you are building a boot disk, be sure you have copied the correct interpreter for what you want to do.

The one you can really manipulate to your advantage is SOS.DRIVER and you don't even need to know a thing about programming. SOS.DRIVER is actually the directory name of the file which contains the individual device drivers. A device driver is just an assembly language program that tells the computer how to read from and/or write to the device.

Using the System Configuration Program (which is only a fancy file mover) on the Utilities disk you can add device drivers to the file as you add devices. YOU CAN ALSO DELETE THEM. Why would you delete drivers? Usable memory. When you boot your system you read all the individual drivers in SOS.DRIVER into your RAM memory. (See table of contents for list of drivers and their approximate memory requirements in K bytes.)

Thus SOS.DRIVER with several drivers could take up 40K or more of memory. That is 40K you cannot use for a VisiCalc template or an Applewriter document; and, particularly if you have only 128K, you will probably miss it sometimes. The secret is, AFTER MAKING A COMPLETE BACKUP COPY OF THE COMPLETE SOS.DRIVER FILE, to reconfigure the system



using only those drivers you really need.

If you don't have an older QUME or Silentype printer you don't need those drivers and pick up 8K. You only need .FMTDX on your Utilities disk (GoBack ///, 3 EZ pieces etc.) since it is used only for formatting. Very few application packages use .GRAFIX, etc. A word of caution: Read the configuration section of an application program carefully to determine the drivers it requires.

For example, VisiCalc Advanced Version requires the .AUDIO driver. Still, the SOS.DRIVER that comes with it needs about 20K. If you use it with just a second floppy drive and a printer, you can cut that to about 14K by deleting .PROFILE (unless you need it) and .QUME.

If you are wondering about the disk drive driver, don't. It is included in SOS.KERNAL because every /// has a disk drive. Admittedly there are some more things that may automatically happen when you boot a disk. The interpreter program, e.g. VisiCalc, may automatically start. Also, your HELLO (BASIC) or System.Startup (Pascal) program may automatically start (Turnkey disk) or you may get a message telling you to insert another disk (Two-stage boot). However, these events are not necessary for an Apple /// to get started. The sequence of SOS.KERNAL, SOS.INTERP and SOS.DRIVER is necessary and under those exact file names on the same boot disk. This is true even if you are using a "Hard Disk Boot" such as BOS3, Selector or Catalyst or if you have PMOVED Pascal to your Profile or other hard disk.

### What Happens When You Boot Your Disk?

When you boot up an Apple /// application, the system loads the Operating System (SOS.KERNAL), the Interpreter or application

(SOS.INTERP), and the Drivers (SOS.DRIVER) into memory from the top down. In downloading the drivers the system WILL NOT SPLIT A DRIVER BETWEEN TWO 32K REGIONS OF MEMORY. If the driver to be loaded will not fit in the current 32K bank the loader skips the rest of that bank and loads into the next lower 32K segment. That skipped space is NOT available to any application and is wasted.

With larger configurations of drivers like print spoolers, it becomes more likely that this will occur. With a 256K or 512K machine you can probably chalk this up to overhead, but on a 128K machine you will probably wish to optimize the situation, if possible, and experiment with progressively larger configurations.

The reason we can't give you firm guidelines on which drivers to load in what order is that it depends primarily upon factors which vary completely from system to system, user to user and application to application. See the next section for a review.

### Technical Note on System Loading of Drivers

The three variable system parameters which affect the loading of any particular driver file, and thus the 32K (more or less depending on revision) boundary problem are:

- the size of the Interpreter loading below SOS, but above the drivers.
- the number and size of each driver configured, and,
- the order of those drivers in your SOS.DRIVER file (which, by the way is the opposite of the order the SCP list them in).

One example should get you on the track....

- start with a SOS.INTERP that is 25K long

- using SCP we build a SOS.DRIVER file by loading an existing file (normally a SOS.DRIVER, however in our case individual files) which contain .CONSOLE driver 5K and .PROFILE driver 3K.

- then add a 24K print spooler, let's use D.A. Datasystems .PPRINT (a parallel printer spooler) in our example.

- Since .PPRINT is added last it will be loaded before .CONSOLE or .PROFILE.

- Now save the new SOS.DRIVER on our new boot disk and boot it...

Let's discuss what this means (the technical stuff):

- SOS.KERNAL loads from FFF to 8800 of the topmost reserved System Bank leaving 14K free in that bank (8000-B7FF). SOS.INTERP loads below that extending down 11K into the top User Bank, leaving 21K free in that bank. The 24K .PPRINT WILL NOT FIT in this remaining space so it is skipped and .PPRINT followed by the 8K of .CONSOLE and .PROFILE load into the next lower bank. The net result is 21K wasted space.

### How to Maximize Memory:

1. Select the minimum number of drivers necessary to utilize your application in the manner you wish.
2. Group drivers in near 32K groups (on a separate piece of paper).
3. Load driver, first the smallest group, then the larger (one nearest 32K-not over).
4. Edit driver if necessary.
5. Set the System Parameters.
6. Generate the new system. ■

*(Originally published in the News and Views Newsletter, November 1985)*



**Coming  
in  
May!!**

**WAP  
Elections**

*Please take  
time to vote*

**Mac World  
Expo  
in  
Washington,  
DC**

## Apple II History

Compiled and written by Steven Weyhrich  
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(continued from February 1994 Journal)

(PART IV)

### The Apple II: Other Design Features

Since Steve Wozniak was the designer of the Apple I and II, exactly what contribution did Steve Jobs make to the effort? Unlike Wozniak, who would not think much of extra wires hanging out of a computer that worked properly, Jobs had an eye for the appearance of the final product. He wanted the Apple II to be a product that people outside the Homebrew Computer Club would want to own:

"Jobs thought the cigar boxes [housing the home-made computers] that sat on the ... desk tops during Homebrew meetings were as elegant as fly traps. The angular, blue and black sheet-metal case that housed Processor Technology's Sol struck him as clumsy and industrial ... A plastic case was generally considered a needless expense compared to the cheaper and more pliable sheet metal. Hobbyists, so the arguments went, didn't care as much for appearance as they did for substance. Jobs wanted to model the case for the Apple after those Hewlett-Packard used for its calculators. He admired their sleek, fresh lines, their hardy finish, and the way they looked at home on a table or desk."<sup>1</sup>

The final case design made the Apple II look quite different from most of their competition. The other

computers looked like they had been assembled at home (and many of them were). The Apple had no visible screws or bolts (the ten screws attached at the bottom). It had the appearance of some variation of a typewriter, but still looked futuristic enough to be a computer. The friendliness of the design even extended to the lid, which popped off easily to allow access to the expansion slots, almost inviting the user to look inside (unlike most electronic devices that held the warning "CAUTION! NO USER SERVICEABLE PARTS INSIDE").<sup>2</sup> Other aesthetics to which Jobs paid attention were the color of the keyboard, vents for heat dissipation (avoiding the need for a noisy fan), and a shape and color that would blend in with other items in a home or on a desk. He also hired an engineer who was good with analog circuitry (not Wozniak's area of interest) to design a reliable, lightweight power supply that would stay cool. The engineer, Rod Holt, was working at Atari at the time, but was convinced to help Jobs and Wozniak. He developed a new approach (for microcomputers) by taking household current and switching it on and off rapidly, producing a steady current that was safe for the expensive memory chips. The final design of this switching power supply was smaller than a quart carton of milk and was quite reliable. Holt also helped



design the television interface for the Apple II.<sup>3</sup> The new company was racing to have the Apple II ready for the First West Coast Computer Fair in April of 1977. Some last minute bugs had to be eliminated; because of a static electricity problem affecting a sensitive chip, the keyboards went dead every twenty minutes. Chris Espinosa and Randy Wigginton, two high school students who were early employees of Apple, had written programs to demonstrate the computer's color and sound. They were hurriedly working to duplicate these programs on cassette. People at Apple were working to fix blemishes in the computer cases that had returned from the plastics molding company. The name for this new computer was also finalized as "Apple II", following the example of Digital Equipment Company, who had given each newer version of its PDP series a higher number (PDP-1, PDP-6, etc.). They stylized the "II" in the product name by using right and left brackets, and displaying it on the case as "]][". The final product bore the mark of each person at Apple:

"The computer that appeared at the West Coast Computer Faire was not one person's machine. It was the product of collaboration and blended contributions in digital logic design, analog engineering, and aesthetic appeal. The color, the slots, the way in which the memory could be expanded from 4K to 48K bytes, the control of the keyboard and hookup to the cassette recorder, and the BASIC that was stored in the ROM chip—in effect the motherboard—was Wozniak's contribution. Holt had contributed the extremely significant power supply, and Jerry Mannock the case. The engineering advances were officially recognized when, some months later, Wozniak was awarded U.S. Patent #4,136,359

for a microcomputer for use with video display, and Holt was given Patent #4,130,862 for direct current power supply. But behind them all Jobs was poking, prodding, and pushing and it was he, with his seemingly inexhaustible supply of energy, who became the chief arbiter and rejector... [Finally,] the combination of [Mike] Markkula [Apple's first president], Jobs, and the McKenna Agency turned Apple's public bow [at the West Coast Computer Faire] into a coup."<sup>4</sup>

### **The Apple II: Product Introduction**

As they prepared for the display at the First West Coast Faire, it was decided to create a new corporate logo. The original one, used in sales of the Apple I, was a picture of Isaac Newton sitting under an apple tree, with a phrase from Wordsworth: "Newton... 'A Mind Forever Voyaging Through Strange Seas of Thought... Alone.'" Jobs had been concerned that the logo had part of the slow sales of the Apple I, and the Regis McKenna Agency was hired to help in the design of a new one.

"Rob Janov, a young art director, was assigned to the Apple account and set about designing a corporate logo. Armed with the idea that the computers would be sold to consumers and that their machine was one of the few to offer color, Janov set about drawing still lifes from a bowl of apples.... He gouged a rounded chunk from one side of the Apple, seeing this as a playful comment on the world of bits and bytes but also as a novel design. To Janov the missing portion 'prevented the apple from looking like a cherry tomato.' He ran six colorful stripes across the Apple, starting with a jaunty sprig of green, and the mixture had a slightly psychedelic tint. The overall result was enticing and warm ..." [Steve]

Jobs was meticulous about the style and appearance of the logo ... When Janov suggested that the six colors be separated by thin strips to make the reproduction easier, Jobs refused."<sup>5</sup>

For the Faire, Markkula had ordered a smoky, backlit, illuminated plexiglas sign with the new logo. Although Apple had a smaller booth than other companies displaying their products at the Faire, and some of the other microcomputer makers (Processor Technology, IMSAI, and Cromemco) had been in business longer, Apple's booth looked far more professional, thanks to Markkula's sign. Some of the other participants, companies larger than Apple, had done no more than use card tables with signs written in black markers.

Because they had been one of the first to commit themselves to displaying at the Faire, Apple's booth was near the entrance and was visible to everybody entering the convention center. They demonstrated a kaleidoscopic video graphics program (possibly an early version of "BRIAN'S THEME") on a huge Advent display monitor, catching everybody's attention. But, after the Faire its organizer Jim Warren (Homebrew club member and editor of DR. DOBB'S JOURNAL) didn't think that Apple was a strong exhibitor. Byte magazine, in their report of the show, failed to even mention Apple. Despite these early opinions by influential people, over the next few months Apple received about three hundred orders for the Apple II, over a hundred more than the total number of Apple I's sold.<sup>6</sup>

### **The Apple II: Cost**

Prebuilt systems were also sold by Commodore (the 6502-based PET, for \$595), and Radio Shack



(the Z80-based TRS-80, for \$600). This was quite a bit less than the Apple II's premium price of \$1,298 for a 4K computer, a pair of game paddles, and an audio cassette with demo programs. This price did not include a cassette recorder or monitor (which both the PET and TRS-80 did include). The hardware limitations and lack of expandability of those machines, however, offset some of the price difference. Also, one other hardware introduction for the Apple II that happened in mid-1978 set it well ahead of its immediate competitors; we'll get to that shortly.

### The Apple II: Experiences Of Early Users

The original manual for the Apple II was sparse. It consisted of thirty photocopied pages, including some handwritten notes from Woz. The cover stated, "simplicity is the ultimate sophistication: introducing Apple II, the personal computer." In early 1978 these original photocopied manuals were replaced with the new "Apple II Technical Reference Manual" (also known as the "Red Book"), and copies were mailed to previous customers. Steve Jobs realized that people often viewed the quality of a product by the quality of its documentation, and so he took pains to get manuals that were easy to read and had a professional appearance.<sup>7</sup> Setting up an early Apple II was fairly simple. The lid popped off easily, and one of the first things you would attach was the Sup'r Mod (RF modulator). This was plugged onto two pins sticking up from the back rear of the motherboard, near the video output jack (assuming that you did not also buy a REAL computer monitor). The game paddles were two small black boxes, with a knob on the top attached to a potentiometer (similar to volume

controls on a radio) and a tiny black button on the side. These boxes were attached via a narrow cable to a plug that looked (and was) fragile; this plug also went into a small socket in the motherboard. Lastly, you attached your data storage device (the cassette recorder) to the input and output jacks in the back of the computer.

After turning on the Apple II, the first thing to greet you was a screen full of random alphabetic characters and symbols, and possibly some colored blocks (lo-res graphics mode might be turned on). Here you had to press the RESET key in the upper right hand side of the keyboard, which, after releasing the key, would cause a "beep!" and an asterisk to appear in the bottom left-hand corner of the screen. (If the lo-res graphics mode had been on, it would now be off). Next to the asterisk (which was a prompt to show that you were in the Monitor) was a flashing box, the cursor. To get into BASIC, you had to press the "Ctrl" key and the "B" key simultaneously. Now you would see a different prompt, one that looked like a ">".

At this point, you could either begin entering a BASIC program, or try to load one from cassette. To load from cassette was not always easy; it took time to get the right volume and tone settings on the tape player in order to avoid getting the "ERR" or "8 SYNTAX ERR" message. (And if you didn't have much memory, you might get a "\*\*\* MEM FULL ERR" message!) When you got it properly loaded, you could type RUN and see what happened. Beyond that, it was more or less up to you to actually find something to DO with your new toy.<sup>8</sup>

### The Apple II: Early Hardware Add-Ons

Aside from the M&R "Sup'r Mod" that allowed early Apple II

users to run their computer on their color TV's, some other enterprising hackers designed their own versions of modulators. One used by an early member of an Apple user group in Washington State (Apple Pugetsound Program Library Exchange, or A.P.P.L.E.) was somewhat better shielded than the "Sup'r Mod". It had its own power supply and plugged into the video output jack on the back of the Apple. The "Sup'r Mod" was by far the biggest seller, however.<sup>9</sup> At first, there were no interface cards for the any of Woz's eight slots. With the limited funds that computer purchasers had then (and now) there was not much they could afford after shelling out anywhere from \$1200 to \$1800 just to get their own Apple II. But they were innovative, and like many other hardware hackers of the day managed to make do with old or surplus parts. Some people, for instance, had gotten their hands on used teletype printers, such as the ASR-33 (called "battleships" because they were so rugged and heavy). Since there weren't any printer interface cards to plug into the slots to allow the computer to communicate with the teletype, they used a trick they learned from Woz himself. The Apple II had four single-bit output pins on the game controller socket that could be used for various purposes. A schematic floated through the various user groups that showed how to connect the teletype to an annunciator pin; along with it was a machine language program that re-directed output from the screen to that one-bit port, and on to the printer.<sup>10</sup>

### NOTES

<sup>1</sup> Michael Moritz, THE LITTLE KINGDOM, p. 186.

<sup>2</sup> Steven Levy, HACKERS: HEROES OF THE COMPUTER REVOLUTION, pp.



263–264.

<sup>3</sup> Moritz, p. 189.

<sup>4</sup> Moritz, pp. 190–191.

<sup>5</sup> Moritz, p. 188.

<sup>6</sup> Moritz, pp. 192–193.

<sup>7</sup> Philip Chien, “The First Ten Years: A Look Back”, THE APPLE II REVIEW, Fall/Winter 1986, p. 12.

<sup>8</sup> ———, APPLE II BASIC PROGRAMMING MANUAL, 1978, 1979, 1980, 1981, pp. 1–19.

<sup>9</sup> ———, “A.P.P.L.E. Co-op Celebrates A Decade of Service”, CALL-A.P.P.L.E., Feb 1988, pp. 12–27.

<sup>10</sup> Val J. Golding, “Applesoft From Bottom To Top”, CALL-A.P.P.L.E. IN DEPTH #1, 1981, p. 8.

**(PART 5 — THE DISK II) [v1.0 :: 21 Sep 91]**

**The Disk II**

Let’s put some more trash into Mr. Fusion to fuel the next leg of our trip. How about one of those KIM-1 computers over there in the corner of the Computer Faire auditorium? We might have to break it up a bit to make it fit ... Okay, now we’ll just make a small jump, to December of 1977. By this time the Apple II had been generally available for about six months. Most customers used their television as an inexpensive color monitor, and used a cassette recorder to store and retrieve their programs and data. Apple’s major competitors were the TRS-80 and the Commodore PET. The products made by these two companies, together with Apple, could be considered as the second generation of microcomputers; they all came fully assembled and ready to use out of the box, with a keyboard and cassette interface. The TRS-80 and the PET even came with a monitors and cassette recorders. The strength of the Apple was expandability and graphics, while the strength of the

others was cost (both the TRS-80 and the PET sold for around \$600, half the price of the Apple II).

By late 1977, Apple had introduced a some enhancements to the II, including their first version of a floating point BASIC (called “Applesoft”) on cassette, and a printer interface card to plug into one of the slots on the motherboard. But the Apple II still needed something to make it more attractive to buyers, to stand out above the TRS-80 and the PET. One area that needed improvement was its program and data storage and retrieval system on cassette; it was a continued source of frustration for many users. The cassette system used on the TRS-80 was more sophisticated than that of the Apple II, allowing named files and easier storage of files and data on the same tape. On the Apple II it took VERY careful adjustment of the volume and tone controls on the cassette recorder to get programs or data to successfully load. The Apple cassette system also needed careful attention to the location on the tape where a program was stored, and was no more accurate than the number on the recorder’s mechanical tape counter (if it had one).

Apple president Mike Markkula was one Apple II user that was dissatisfied with cassette tape storage. He had a favorite checkbook program, but it took two minutes to read in the program from the tape, and another two minutes to read in the check files.<sup>1</sup> Consequently, at the executive board meeting held in December 1977 he made a list of company goals. At the top of the list was “floppy disk”. Although Wozniak didn’t know much about how floppy disks worked, he had once looked through a manual from Shugart (a Silicon Valley disk drive manufacturer):

“As an experiment Woz had

[earlier] conceived a circuit that would do much of what the Shugart manual said was needed to control a disk drive. Woz didn’t know how computers actually controlled drives, but his method had seemed to him particularly simple and clever. When Markkula challenged him to put a disk drive on the Apple, he recalled that circuit and began considering its feasibility. He looked at the way other computer companies—including IBM—controlled drives. He also began to examine disk drives—particularly North Star’s. After reading the North Star manual, Woz knew that his circuit would do what theirs did and more. He knew he really had a clever design.”<sup>2</sup>

Other issues that Wozniak had to deal with involved a way to properly time the reading and writing of information to the disk. IBM used a complex hardware-based circuit to achieve this synchronization. Wozniak, after studying how IBM’s drive worked, realized that if the data was written to the disk in a different fashion, all that circuitry was unneeded. Many floppy disks sold at that time were “hard sectored”, meaning that they had a hole punched in the disk near the center ring. This hole was used by the disk drive hardware to identify what section of the disk was passing under the read/write head at any particular time. Wozniak’s technique would allow the drive to do self-synchronization (“soft sectoring”), not have to deal with that little timing hole, and save on hardware.

Wozniak asked Randy Wigginton for help in writing some software to control the disk drive. During their week of Christmas vacation in 1977 they worked day and night creating a rudimentary disk operating system, working hard to get the drive ready to demonstrate



at the Consumer Electronics Show in the first week of 1978. Their system was to allow entry of single letter commands to read files from fixed locations on the disk. However, even this simple system was not working when Wozniak and Wigginton left for the show.

When they got to Las Vegas they helped to set up the booth, and then returned to working on the disk drive. They stayed up all night, and by six in the morning they had a functioning demonstration disk. Randy suggested making a copy of the disk, so they would have a backup if something went wrong. They copied the disk, track by track. When they were done, they found that they had copied the blank disk on top of their working demo! By 7:30 am they had recovered the lost information and went on to display the new disk drive at the show.<sup>3,4</sup> Following the Consumer Electronics Show, Wozniak set out to complete the design of the Disk II. For two weeks, he worked late each night to make a satisfactory design. When he was finished, he found that if he moved a connector he could cut down on feedthroughs, making the board more reliable. To make that move, however, he had to start over in his design. This time it only took twenty hours. He then saw another feedthrough that could be eliminated, and again started over on his design. "The final design was generally recognized by computer engineers as brilliant and was by engineering aesthetics beautiful. Woz later said, 'It's something you can ONLY do if you're the engineer and the PC board layout person yourself. That was an artistic layout. The board has virtually no feedthroughs.'"<sup>5</sup>

#### THE DISK II: COST

The Disk II was finally available in July 1978 with the first full

version of DOS, 3.1. It had an introductory price of \$495 (including the controller card) if you ordered them before Apple had them in stock; otherwise, the price would be \$595. Even at that price, however, it was the least expensive floppy disk drive ever sold by a computer company. Early production at Apple was handled by only two people, and they produced about thirty drives a day.<sup>6,7</sup> Apple bought the drives to sell with Woz's disk controller from Shugart, right there in Silicon Valley. To cut costs, however, they decided to go to Alps Electric Company of Japan and ask them to design a less expensive clone. According to Frank Rose, in his book "West Of Eden":

"The resulting product, the Disk II, was almost obscenely profitable: For about \$140 in parts (\$80 after the shift to Alps)[not counting labor costs], Apple could package a disk drive and a disk controller in a single box that sold at retail for upwards of \$495. Better yet was the impact the Disk II had on computer sales, for it suddenly transformed the Apple II from a gadget only hard-core hobbyists would want to something all sorts of people could use. Few outsiders realized it, but in strategic terms, Woz's invention of the disk controller was as important to the company as his invention of the computer itself."<sup>8</sup>

#### NOTES

<sup>1</sup> Gregg Williams and Rob Moore, "The Apple Story, Part 2: More History And The Apple III", *BYTE*, Jan 1985, pp. 167-168.

<sup>2</sup> Paul Freiberger and Michael Swaine, "Fire In The Valley, Part Two (Book Excerpt)", *A+ MAGAZINE*, Jan 1985, p. 45.

<sup>3</sup> Williams and Moore, "Part II", p. 168.

<sup>4</sup> Freiberger and Swaine, (Part Two), p. 45.

<sup>5</sup> Freiberger and Swaine, (Part Two), p. 46.

<sup>6</sup> —, "A.P.P.L.E. Co-op Celebrates A Decade of Service", *CALL-A.P.P.L.E.*, Feb 1988, pp. 12-27.

<sup>7</sup> —, "Apple and Apple II History", *THE APPLE II GUIDE*, Fall 1990, pp. 9-16.

<sup>8</sup> Frank Rose, *WEST OF EDEN: THE END OF INNOCENCE AT APPLE COMPUTER*, 1989, pp. 62.

#### (PART 6—THE APPLE II PLUS) [v1.0 :: 21 Sep 91]

#### THE APPLE II PLUS: HARDWARE

We now go cruising ahead in time about one year, to June of 1979. Applesoft BASIC had been in heavy demand since the introduction in late 1978 of an improved version. It was needed by those wanting to write and use applications that needed the capability of floating-point math. Because of this, Apple engineers had begun working in 1978 on the Apple II Plus, a modest enhancement to the Apple II. The main attraction of this newer Apple would be Applesoft in ROM, available immediately without having to load it from cassette or disk. Also, having it in ROM would move it out of the part of memory where RAM Applesoft conflicted with hi-res graphics (after all, Applesoft had commands specifically written into it for manipulating those graphics, something that Integer BASIC could only do via special CALLs to the routines in the Programmer's Aid #1 chip).

With the decision made to upgrade the Apple II, other changes were made to make it more attractive to new computer buyers. The cost of RAM chips had dropped considerably, so most new II Plus systems came standard with a full





48K of RAM. Since the disk operating system consumed about 10K of memory, having the full complement of available RAM made it easier to use the Disk II with either version of BASIC. Since users would not need to add the smaller 4K memory chips, the strapping blocks that had made it possible to use either 4K or 16K RAM chips on the original Apple II were removed.

Small changes had already been made to the product since it first began distribution. Most of these changes were made primarily to simplify it and decrease costs of manufacturing. First of all, the original Apple II motherboard, designated as "Revision 0"<sup>1</sup>, was changed to make it possible to display two more colors in hi-res graphics. The Revision 0 board had only four colors (green, violet, black, white), but Wozniak had learned that by making a simple alteration he could get two more colors (blue and orange) and two more varieties of black and white. The Revision 1 and later boards were capable of displaying all eight colors. The means of making this modification to Revision 0 Apples was described by Wozniak in his reply to an article by Allen Watson III about hi-res graphics (in the June 1979 issue of *Byte* magazine). With that change, people who were not afraid of doing a little electrical work on their computers had some of the benefits of an updated Apple II.

Hardware bugs that Apple engineers fixed included one that caused text characters to be displayed with green and violet fringing, whether in graphics mode or text mode. The "color killer" circuit they added fixed things so that non-graphics text would display in black and white only. Another problem involved RAM configurations of either 20K or 24K (a 16K RAM chip plus one or two 4K RAM chips). In

those systems a hardware bug caused the 8K of memory from \$4000 to \$5FFF to be duplicated in the next 8K of memory, from \$6000 to \$7FFF, whether there was RAM present at those locations or not. This made a 20K Apple appear to have 24K, and a 24K Apple appear to have 36K. The Revision 1 motherboard fixed this problem as well.<sup>1</sup> Revision 1 boards also modified the cassette input circuit to respond with more accuracy to a weak input signal, making it easier to load data and programs from cassette. Also, one "feature" of the original Apple II was that any sound generated by the internal speaker also appeared as a signal on the cassette output connector; this was fixed in the new motherboards. Lastly, the RESET cycle was made part of the power-up circuitry, eliminating the requirement that the RESET key be pressed after turning on the computer.<sup>2,3</sup>

### THE APPLE II PLUS: FIRMWARE

More important than the minor hardware changes, however, were the changes in the ROM code. The new ROM replaced the original Monitor with one that, among other things, better supported the new Disk II drive. Since RESET was now automatically activated when the power was turned on, the new ROM code had the computer automatically do a few things. It cleared the screen (displaying "APPLE ][" at the top), and began a scan down the slots, starting at slot 7 down to slot 1. It examined the first few bytes of code in each card's ROM for a specific sequence that identified it as a Disk II controller card. If one was found, control was passed to that card, causing the disk drive to startup and begin loading the disk operating system into memory. If no disk controller was found, the ROM code jumped

instead to the start of BASIC (instead of leaving the user in the Monitor, as in the old ROM). This "Autostart ROM", as it was called, made it possible to have a system that started up a program on the disk with little action needed by the user.

The RESET code was more intelligent in the Autostart ROM than in the Old Monitor ROM. There was now a "Cold Start" RESET (which functioned as described above), and a "Warm Start" RESET. A Warm Start RESET could occur without re-booting the Disk II (if it was present); in fact, it ensured that the disk operating system remained "connected" after RESET was pressed. This feature was implemented by setting three bytes at the end of page \$03 in memory. Two of the bytes were the address of the place in memory to which the Apple should jump if RESET was pressed. The third byte was a specially coded byte created from half of the address byte. When RESET was pressed, this special "power-up" byte was checked with the address byte. If they didn't properly match, the Monitor assumed that the power had just been turned on, and it executed a Cold Start RESET. This feature was extensively used by writers of copy protected software, so users could not modify or copy the code in memory simply by pressing the RESET key.

The other major change, mentioned earlier, was the BASIC that was supplied in ROM. Gone was Steve Wozniak's hand-assembled Integer BASIC, in favor of the newer Applesoft. Since these ROM versions of BASIC used the same memory locations, they could not be used simultaneously. With the introduction of the II Plus, Apple also released the Applesoft Firmware card. This card, which



plugged into slot 0, made it possible for previous Apple II owners to have some of the benefits of the II Plus without having to buy an entirely new computer. Even with that card, however, you could not use features of one BASIC while the other was active, and switching from one BASIC to the other erased any program that was being used at the time. The two BASICs could be told apart by the prompt they used; Integer BASIC used the ">" character, but Applesoft used the "]" character.

Another change made to the Monitor ROM made screen editing easier. The original Apple II's procedure for editing a line typed in BASIC or in the Monitor was tedious at best. To change a line of text in BASIC, you had to list the line, move the cursor up to the start of the line, and then use the right-arrow key to "copy" text from the screen into the input buffer. If you wanted to skip part of the line, you had to move the cursor past the text that you wanted to eliminate WITHOUT using the arrow keys. If you wanted to INSERT something into the line, you had to move the cursor off the line (above it or below it), type the additional text, and then move the cursor back into the line to finish copying the original part of the line.

For example, suppose you had typed this line in Applesoft and displayed it on the 40-column screen:

```
]LIST 100
```

```
100 FOR I = 1 TO 100: PRINT "I
LIKE MY APPLE": NEXT : END
```

To change that line so the PRINT statement read "I REALLY LIKE MY APPLE" meant either retyping the entire line, or using the edit feature. (If the line was particularly long, it was preferable

to edit rather than retype the entire line). To edit this line, you would have to move the cursor up to the "1" of "100" and begin pressing the right arrow key. When you got to the "L" of "LIKE" you would have to move the cursor above or below the line, type the word "REALLY" followed by a space, then move the cursor back to the "L" of "LIKE", and continue copying with the right arrow key. After editing a line, the screen might look like this:

```
100 FOR I = 1 TO 100: PRINT "I
LIKE MY APPLE": NEXT : END
REALLY
```

(In this example, I moved the cursor down one line, typed "REALLY", and then moved it back to the start of the word "LIKE"). If you didn't make any mistakes it would read like this:

```
]LIST 100
```

```
100 FOR I = 1 TO 100: PRINT "I
REALLY LIKE MY APPLE": NEXT
: END
```

However, if you didn't take care to skip over the extra spaces inserted in front of the word "LIKE" by the Applesoft LIST command, it could appear this way:

```
100 FOR I = 1 TO 100: PRINT "I
REALLY LIKE MY APPLE": NEXT
: END
```

The big problem with these cursor moves for editing under the Old Monitor was that each move required two keypresses. To move the cursor up, you had to press "ESC" and then "D" EACH TIME you wanted to move the cursor up. "ESC A" moved right, "ESC B" moved left, and "ESC C" moved the cursor down. With a long line that needed much editing, this would get old real fast.

Not only was it cumbersome, but the layout of the keyboard made it difficult to remember the correct letters used for cursor movement; although "D" (up) was above "C" (down), it seemed that "D" should stand for "Down". Also confusing was that "A" was to the left of "B", but their functions were the opposite of their position!

The new Autostart ROM improved this screen editing process just a bit. Now, pressing "ESC" turned on a special editing mode. Repeated presses of "I" (up), "J" (left), "K" (right), and "M" (down) continued to move the cursor until a key other than ESC was pressed. On the keyboard these letters were arranged in a sort of "directional keypad" or diamond, which made remembering the moves a little easier. The previous ESC editing codes were still supported, but still with their previous limitations. Unfortunately, however, you still couldn't tell whether you were in the regular text entry mode or in the ESC editing mode, and often attempts at changing a line took several tries to get it right.<sup>4,5</sup> Other features added in the new Autostart ROM included the ability to pause a listing by pressing Ctrl-S (VERY helpful when trying to scan through a long program!) As mentioned above, pressing RESET would return control through the soft-entry vectors on memory page \$03. This would allow a user to exit from a runaway BASIC program by pressing RESET, and still keep program and variables intact in memory (which could not be guaranteed with the old Monitor ROM).<sup>6</sup> John Arkley at Apple wrote the changes to the original Monitor ROM and created the Autostart ROM in November 1978 (he's the "John A" mentioned in the source code listing found in the 1981 edition of the APPLE II REFERENCE



MANUAL). After he had done the work and the ROMs had been created, Apple wanted to publish a new version of the Reference Manual to cover the Apple II Plus. The older Reference Manual (affectionately known as the "Red Book") had included an assembly language source code listing of the Monitor ROM. They wanted to include the source for BOTH versions of the Monitor, but a problem came up. While developing the Monitor, Apple had used a local mainframe computer dial-up service known as "Call Computer." They used a cross-assembler on that computer, assembled the code, and then used the resulting object code to create the ROM. (A cross-assembler is an assembler that creates object code for a processor other than the one the cross-assembler runs on. For example, if you can write 8080 machine code with an assembler running on a 6502-based computer, you are using a cross-assembler). Unfortunately, Call Computer had accidentally done a system backup with the source and destination disks reversed, erasing all the files containing the source code for the Apple II Monitors. There were no disk or cassette copies of the source code for the Autostart ROM back at Apple. Working from the source listing in the Red Book, John recreated the source file for the original Monitor, and then disassembled his own modifications for the II Plus and re-created his Autostart ROM source file. Those reconstructed listings are what appeared in the 1981 edition of the Apple II Reference Manual.<sup>7</sup> Not everyone was pleased with the modifications made in the Autostart ROMs, however. Some of the authors of the magazine CALL-A.P.P.L.E. liked to refer to the new computer as the "Apple II Minus", since Arkley had to remove some of their beloved routines from the ROMs to make

room for the new features. Missing from the Apple II Plus ROMs were Integer BASIC, the miniassembler, and Woz's SWEET 16 interpreter (that entire space now being used by Applesoft). Missing from the Monitor were the assembly language STEP and TRACE features, and a set of sixteen-bit multiply and divide routines.<sup>8</sup>

#### THE APPLE II PLUS: COST

The new Apple II Plus, at \$1,195, sold for over \$100 less than the original Apple II, although it came with more memory and had Applesoft (previously an added expense item) in ROM.

#### THE APPLE II PLUS: BELL & HOWELL

Apple made a deal early on with Bell & Howell to let them sell the Apple II Plus with a Bell & Howell name plate on it for use in schools. These Apples were black colored (instead of the standard beige), and had screws on the back to keep the lids on (apparently to keep students' hands out). These Apples (sometimes called "Darth Vader" Apples) also had the "shift-key mod" (see below) applied. Since Bell & Howell was a major supplier of school equipment, this was a means for Apple to get a foothold in the school environment.<sup>9</sup> Bell & Howell also had electronics correspondence courses, and used the black Apple II Plus for one of their courses. They offered a one year warranty, instead of the ninety-day warranty offered by Apple.<sup>10,11</sup>

#### THE APPLE II PLUS: EARLY USER EXPERIENCES

An Apple II veteran on GENIE, Dennis Ulm, kindly provided me with the following reproduction of his ORIGINAL Apple II Plus packing list. It gives a little picture of what early non-disk users had to work with:

#### APPLE II PLUS

#### PACKING LIST

This package should contain the following items:

item no.	part number	description
----------	-------------	-------------

- |    |            |  |
|----|------------|--|
| 1  | 1 600-2023 | cassette tape: LITTLE BRICKOUT, COLOR DEMOSOFT   |
| 2  | 1 600-2024 | cassette tape: R E N U M B E R / A P P E N D , ALIGNMENT TEST TONE                                 |
| 3  | 1 600-2025 | cassette tape: FINANCE I, PENNY ARCADE   |
| 4  | 1 600-2026 | cassette tape: LEMONADE, HOPALONG CASSIDY  |
| 5  | 1 600-2027 | cassette tape: BRIAN'S THEME, PHONE LIST   |
| 6  | 1 030-2057 | manual: Introductory Programs for the Apple II Plus  |
| 7  | 1 030-0044 | manual: The Applesoft Tutorial   |
| 8  | 1 030-0013 | manual: Applesoft II BASIC Programming Reference Manual  |
| 9  | 1 030-0004 | manual: Apple II Reference Manual  |
| 10 | 1 030-0035 | publication: Apple Magazine  |
| 11 | 1 600-0033 | 1 pair of game controls  |
| 12 | 1 590-0002 | cable: to hook up a cassette recorder  |
| 13 | 1 590-0003 | cable: power cord for the Apple II Plus  |
| 14 | 1 030-0001 | Apple Warranty Card  |
| 15 | 1 600-0816 | Apple II Plus System 16K or 600-0832 Apple II Plus System 32K or 600-0848 Apple II Plus System 48K |

(LITTLE BRICKOUT was an abbreviated Applesoft version of Woz's Integer BASIC Breakout game (the reason he designed the Apple II in the first place). BRIAN'S THEME was a hi-res graphics program that drew lines on the screen in various patterns. HOPALONG CASSIDY was a "guess who" program that also used the hi-res screen).<sup>12 13</sup>

#### Apple II History

(to be continued next month)



# Macintosh Disketeria

by Dave Weikert

## New Disks

There are sixteen new disks this month; all are in the System Extensions series. Descriptions of the files on the new and revised disks are included below.

## System Extensions

After a complete revision this month, Disk series 9.XX now extends through Mac Disk #9.16C. The first six disks—#9.01C through #9.06C—include files previously in our collection. In order to conserve space, only the folder or file names are listed for these disks. Mac Disks #9.07C through #9.16C include new and revised files. Descriptions of the new files are included below.

System Extensions were previously called INITs and cdevs. INITs and cdevs get their names from the standard file types (type INIT and type cdev) that Apple has assigned to these system files. INITs are small auxiliary programs that are run when you start up your Mac. INITs modify the Macintosh operating system in some way. Control Panel Devices, cdevs, may be accessed from the Control Panel item under the Apple menu. They give you a way of enabling and configuring modifications to the operating system. Control Panels may or may not have an INIT component which is run at start-up. Many of the INITs and cdevs display an icon along the bottom of the screen during start-up.

Under System 6.0.8 or earlier, place the INIT or cdev in the System folder and reboot for them to take effect. For System 7.0 or later, place

the INIT or cdev on the System folder icon and you will be asked if you want the Mac to install it for you. Answer yes to the prompt and then reboot. The Mac will place INITs in the Extensions folder and cdevs in the Control Panels folder located with the System 7.X folder. For either system, you may have to turn cdevs on or change their configuration via their respective Control Panels.

INITs may conflict with one another because they modify the operating system. In case of unexpected operation, remove all INITs to a separate folder and reboot. Then add one INIT at a time back into the System folder or Extensions folder rebooting each time until you isolate which one is causing the problem. Sometimes a problem may be eliminated by changing the alphabetic order in which the INITs load. In some cases you may change the order of loading by adding a character in front of the INIT name to change its position (to load before or load after) relative to others. Commercial programs such as INIT Picker and others are also available to enable or disable INIT loading and to control the load order of INITs.

All of the files in the System Extensions series are compressed with Stuffit so you receive more value per disk. Members may purchase disks individually for the normal Disketeria price of \$4.00 per disk or \$3.50 each for five or more. You may also purchase this collection as separate sets: the six disks of files previously in the Disketeria for \$15 and ten disks of new and revised files for \$30. Or you may purchase all sixteen

of the disks for a total of \$40.

## About Shareware Requests

Please honor authors' requests for shareware fees if you decide to add shareware programs to your software library. Shareware is a valuable distribution channel for low cost software and it is important to encourage authors to use this channel by paying them for their efforts.

### Disk #9.01C — IC 1

#### EXTENSIONS (INITs & CDEVs)

**UnStuffIt™.sea**, Alias Repair 1.0 f.sit, Apollo 1.0 f.sit, ApplWindows 2.0 f.sit, AppSizer 2.1 f.sit, AppSwitcher7 v1.02 f.sit, ARAClient 2.0.3 f.sit, AutoAssassin 1.1 f.sit, AutoFlush 1.0 f.sit, AutoMenus II 1.0.2 f.sit, Backlight Control f.sit, Basic Black 1.1 f.sit, Basic Color Monitor 1.0 f.sit, BeHierarchic 1.0.2 f.sit, BeHierarchic 2.0 f.sit, Brightness 7.1 f.sit, Broadcast 2.1 f.sit, ButtonKey 1.2 f.sit, CFloppy 1.0 f.sit, Chime 4.0.4 f.sit, ChooserUser 1.2 f.sit, Cleaning Lady 1.0 f.sit, Color Cursor f.sit, Color Tracks 1.0.1 f.sit, ColorMaster 1.2.1 f.sit, CommentKeeper 1.0 f.sit, Cursor Fixer 1.0 f.sit, Default App 1.0d5 f.sit and Defont 1.01 f.sit.

### Disk #9.02C — IC 2

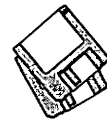
#### EXTENSIONS (INITs & CDEVs)

**UnStuffIt™.sea**, Compatibility f.sit, DepthCharge 1.4 f.sit, DepthGauge 2.5.4 f.sit, DeskTop Pattern 1.1 f.sit, DesktopReset 1.1 f.sit, DesktopFolder 1.0 f.sit, Digit 1.0.2 f.sit, Disk Expander 1.2 f.sit, DOS cdev 1.2 f.sit, DoubleScroll 2.0.5 f.sit, Drag'in 1.5 f.sit, DragWindow II 2.3 f.sit, Drop Menus 1.2 f.sit, Earth 1.1 f.sit, Easy KEYS 1.7 f.sit, Escapade 1.3.2 f.sit, Extension Kit 1.1 f.sit, FCB Inspector 1.1 f.sit, FileInfo 1.0 f.sit, Finder View 1.0 f.sit, finderappmenu 1.1.1 f.sit, FinderBar 1.01 f.sit, First Things First Demo 1.....sit, Function Keys 1.2 f.sit and GetInfo++ 1.0b1 f.sit.

### Disk #9.03C — IC 3

#### EXTENSIONS (INITs & CDEVs)

**UnStuffIt™.sea**, Flash-It 3.0.2 f.sit, Get More Info 1.5 f.sit, Grader! 1.0 f.sit, HeapTool 1.4 f.sit, Helium 2.1.1 f.sit, ICONOpen! 1.2 f.sit, InBasket Notifier 1.1 f.sit, INIT Tracker 1.3 f.sit, In-



somnia 1.0a1 f.sit, Invisible Hand 1.00 f.sit, Keep the Bozos Out 1.2 f.sit, Key Tools 1.0.1 f.sit, Kolor 2.0 f.sit, LaterLaser 1.0b1 f.sit, MacBrightness 1.0.2 f.sit, MacPassword 3.9.2 f.sit, Marker Control 0.6 f.sit, MeanScreen 7.0 f.sit, Menu Bar Pattern 1.04 f.sit and MiniScreen 1.7 f.sit.

**DISK #9.04C — I/C 4**  
**EXTENSIONS (INITs & CDEVs)**

**UnStuffIt™.sea**, Menuette 1.1.2 f.sit, MICN 1.9 f.sit, Modal Keys 1.0b1 f.sit, MODE32 f.sit, MountImage 1.2b2 f.sit, NameViewer 3.2 f.sit, NetBunny 2 1/2 f.sit, NewLook 2.1 f.sit, Notify 3.04 f.sit, OkeyDokey 1.0.1 f.sit, Open Spaces 1.1 f.sit, PBTools 1.2 f.sit, PICTify 1.02 f.sit, Portable 1.3 f.sit, Pre-Version 1.1.1 f.sit, Print2Pict 3.5 f.sit, PrintOne 1.0.1 f.sit and RAM Disk Namer 1.0 f.sit..

**DISK #9.05C — I/C 5**  
**EXTENSIONS (INITs & CDEVs)**

**UnStuffIt™.sea**, Privacy 1.0 f.sit, Quadra 900 BootSnd f.sit, Radiation 1.0 f.sit, RAMDiskSaver 1.0 f.sit, RandomBeep 1.0.3 f.sit, Reference Link 1.0 f.sit, Remote Shutdown 1.1 f.sit, Replace-ExistingOptions 1.....sit, Safety Belt 1.0B2 f.sit, Sav-O-Matic 1.51 f.sit, SaveAll 1.12 f.sit, Savvy 0.1 f.sit, Scout's Honour 1.1 f.sit, Screen Shrink 1.0.2 f.sit, Scroll2v2.1.11 f.sit, SCSI Accel 7.0 f.sit, SCSI Odometer 1.2 f.sit, SCSIProbe 3.5 f.sit, SCSIProbe-3.5sq f.sit, Serial Mouse Driver 1.0 f.sit, Set Paths 1.1b4 f.sit, SFDesktop Windows 1.0b4 f.sit, Shhh! & Shaddup! f.sit, Siesta 1.0 f.sit, SmartFolder 1.1 f.sit, SmartKeys 2.1 f.sit, sniff 1.0.0 f.sit, Speak2Me 1.0 f.sit, Startup Downloader 1.06 f.sit, Startup Font Manager 1.1.1.....sit and Super Apple 2.0b0 f.sit.

**DISK #9.06C — I/C 6**  
**EXTENSIONS (INITs & CDEVs)**

**UnStuffIt™.sea**, Stretch 2.0 f.sit, SuperClock! 4.0.4 f.sit, SuperSaver 1.0 f.sit, SwitchApp 1.1 f.sit, SwitchProcINIT 1.0 f.sit, System 7 Pack! 3.3 f.sit, TearOFFs™ 1.0b6 f.sit, The Regulator 1.2 f.sit, THINK Back 1.1 f.sit, THINK windows f.sit, TOM INIT II 1.0b2 f.sit, Trash Alias 1.1.1 f.sit, TrashMan 4.0.2 f.sit, TrashPicker 1.0 f.sit, Trek Cursor f.sit, Tweety 1.0 f.sit, TwiLight 7.1.2 f.sit, Up Your FCBs 1.8 f.sit, Victoire 1.0.1

f.sit.sit, WatchDos 1.0.0 f.sit, WDef III - 3.1 f.sit, WindowWarp 2.1.2 f.sit, WindowWizard.1.1 f.sit, WithAView 1.1 f.sit and Zoomin' 1.0 f.sit.

Disk #9.07C — I/C 7  
Extensions (INITs & cdevs)

**Unstuffit.sea**: See description on Disk #9.01C.

**a friend 1.3.0 f.sit**: By Alex Kourakos. Types something to you every now and then, in an attempt to make a friend. It's not very bright; it types no matter what you are doing, and pays no attention to what's going on. **a friend README** is in TeachText format.

**ABZmon 2.0 f.sit**: By Alain Birtz. A debugger like MacsBug but with a graphical interface. Includes text viewer, disassembler, operand evaluation, cut/paste of addresses, support for a second video monitor, and a graphical interface. **ABZmon.doc.english.MSW** is in Word format.

**Airport QuickStart 1.0.1 f.sit**: By John Bascombe. Get your PowerBook or Duo up quickly to prove to airport security that it is indeed a Mac, not a bomb.

**Announce 1.2 f.sit**: By Tad Woods. A simple network utility for sending instant messages to other users. You may send the same message to many others on the net, send several messages at the same time and send messages across multiple zones (although not at the same time). **Read Me/Instructions (MacWrite)** and **Read Me/Instructions (MS Word)** are in the format indicated. **Shareware — \$39.**

**Apple Event Manager 1.0.3 f.sit**: By Apple Computer, Inc. An extension to enable Apple Events.

**AppleTalk On 1.0 f.sit**: By Jon Pugh. your Macintosh. At Restart or Shutdown time, examines the current state of AppleTalk and turns it on. It will also save the state of AppleTalk and optionally restore that state when you boot up next time. **AppleTalkOn ReadMe** is in text format. For System 7.0 and later. **Shareware — \$5.**

**ApplWindows 2.0.2 f.sit**: By Hiro Yamamoto. Helps you navigate through many windows by adding a list of available windows to the Application menu on the right side of the menu bar. **ApplWindows 2.0.2 (MS**

**Word)** is the documentation. For System 7.0 and later.

**Arnold 1.3.1 f.sit**: By David Shaw and John Price. Plays Arnold Schwartzenegger saying "Hasta la vista baby" on shutdown and "I need a vacation" on restart. **Arnold™ READ ME!** is in TeachText format. Requires System 6.0.5 or later. **Shareware — \$5.**

**Attention 1.0.2 f.sit**: By Marco Piovaneli. Control the sound selected when a background application needs attention and prevent background applications from displaying an alert box. **Attention Read Me** is in double clickable Style format. Requires System 6.0.4 or later.

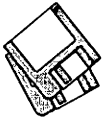
**Aurora 3.0.2 f.sit**: By Mike Pinkerton. Control the colors used to draw windows, controls and menus; color selection is via the circular color wheel. Requires color Mac running System 4.1 or later. **Aurora 3.0.2 Docs** is in Word format. **Pay me what you think it is worth.**

**autoboot 1.2.2 f.sit**: By Karl Pottie. Forces a reboot of your Macintosh whenever a System Error has occurred. Particularly useful for Macs that must be on line at all times such as when used as a server, BBS, FAX receiver, etc. **About AutoBoot** is in BP Viewer format (included). **Shareware — \$20 for first Mac, \$10 for each additional one.**

**AutoBuild 1.0.1 f.sit**: By René G.A. Ros. At preset intervals, automatically deletes the Desktop Database which is maintained by the system (since 7.0) for every volume larger than 2 Mb. After deletion the Desktop Database is then rebuilt by the Finder. **AutoBuild ReadMe** is in double clickable Style AutoViewer format. For System 7.0 and later.

**AV Cache Tuner 1.0.1 f.sit**: By Steve Kiene. Speeds up disk-related activities of model AV Macs by a great percentage. **AV Cache Tuner Docs** is in text format. For Mac 660AV and 840AV series.

**AV Digitizer Options 1.0b1 f.sit**: By Fernando Urbina, Apple Computer, Inc. Provides greater control over video capture on AV Macs. **AV Digitizer Options README** is in TeachText format. For Mac 660AV and 840AV series.



**AV Patches 1.0 f.sit:** By Steve Kiene. AV Resource Manager Tuner completely removes all FlushFile calls from the Resource Manager in the SuperMario ROMs. This makes the Resource Manager work like it did in the pre-SuperMario days. AV Turbo ROM copies the ROM down into RAM. This speeds up things because the CPU can access RAM much faster than ROM. **AV Resource Manager Tuner text** and **AV Turbo ROM Text** are the documentation. For Mac 660AV and 840AV series.

**AV Serial Extension 1.0 f.sit:** By Apple Computer, Inc. Fixes for (a) difficulties when printing with the LaserWriter Select 310 printer; (b) a possible system error when both the serial port and an AppleTalk network connection are being used heavily; and (c) a possible system crash when simultaneously receiving a fax and transferring files over a network. **AV Serial Extension (1.0)** is in text format. For Mac 660AV and 840AV series.

**AV Speedup 1.0 Patch f.sit:** By Matt Gough and Brian Stroud. A patch to work around the ChangedResource and AddResource slow downs on the AV Macs. **AV patch READ ME** is in text format. For Mac 660AV and 840AV series.

**Bail 2.0b1 f.sit:** By Christopher Evans. Permits you to 'bail out' of a program you inadvertently launch without waiting for it to completely load so you may use the Quit command.

Disk #9.08C — I/C 8  
Extensions (INITs & cdevs)

**Unstuffit.sea:** See description on Disk #9.01C.

**Belch! 2.0 f.sit:** By Andrew Welch. An obnoxious prolonged belch during startup and at unpredictable times thereafter. This is quite out of character with Andrew's usually genteel works (Maelstom, Palencia font, FlashWrite II, etc.). I guarantee you won't keep this one in your System Folder for long. **Belch 2.0 Notes** and **Belch! License** are in text format.

**Big Cheese Key 1.2.1 f.sit:** By Andrew Welch. Provides a 'hot key' to initiate a phony Mac window that hides all of the Mac desktop; use it to hide personal work or a game when a visitor or the boss pops into your office. Requires

System 6 or later. **Shareware — \$10.**

**Blood 2.0 f.sit:** By Alessandro Levi Montalcini. A useless control panel that puts up to 16 drops of blood on your screen — on top of anything. Essentially, you'll have red holes in your screen. **Blood 2.0 note** is in text format.

**Bomb Shelter 1.01 f.sit:** By Andrew Welch. A tiny extension that enables the 'Resume' button in all crash dialogs that most applications don't have enabled. **Bomb Shelter 1.01 Notes** is in text format.

**CacheOut™ 1.1 f.sit:** By F. Hollander. Automatically turn off the '040 cache with programs that can't handle it. Just tell it what applications you have that don't work with the '040, and it turns off the '040 cache when you launch them. For Macs with 68040 CPUs and System 7.0 and later.

**Carpentbag 1.4 f.sit:** By James L. Walker. Carpentbag permits you to keep DAs, fonts, keyboard layouts, sounds and FKeys outside your System file such as Suitcase II or MasterJuggler. Ancillary files **CarpUnmount**, **Laser Path**, **Outboard Keyboard**, **Outboard Sound** and **Universal Suitcase** are also included. **Contents** is in TeachText format. **Shareware — \$5.**

**Chuuzr 1.3 f.sit:** By Mark J. Romano. Allows you to quickly mount server volumes using a hierarchical menu from the Chooser menu item or a popup menu in standard file dialogs. **Chuuzr 1.30 Release Notes** is in text format. **Shareware — \$10.**

**Click there it is! 1.0.1 f.sit:** By Richard C. Cardona. Permits you to open/save a document into a place where the Finder already has a window opened for it. You can also make any visible window in the Finder your current folder by clicking on it. **Release Notes** is in TeachText format. For System 7.0 and later. **Shareware — \$5.**

**ClicSleep 1.2 f.sit:** By Benjamin Herrenschmidt. Click to put Macs with the Power Manager (i.e., Macintosh Portable and PowerBooks) to sleep. It will put your machine to sleep when you click in one of the screen's corners and you can choose which corner. **About ClicSleep 1.2** is in text format.

**Clock Adjust 1.2 f.sit:** By Günther

Blaschek. Keeps Mac clock accurate by adjusting its value at each reboot and switching back and forth between daylight savings and standard time as necessary. **ClockAdjust doc** is in Write format.

**Color72.0 f.sit:** By Michael Landis. Permits you to change the colors of highlighted text, windows, buttons, and menus. It also lets you save color sets for later use, and to see your color changes on the fly. **READ ME FIRST** and **System 7.0 Notes** are in text format. **Shareware — \$10.**

**ColorKey 4.0.1 f.sit:** By Mike Pinkerton. Cycle through preselected screen depths so you pick the desired one without going to the Monitors Control Panel. **ColorKey 4.0.1 Docs** is in Word format. For color or gray scale Macs with System 7.0 and later. **Shareware — \$10.**

**ColorSwitch 2.2.0 f.sit:** By Andrew Welch. Permits you to easily switch between color modes on one or more attached monitors. For color capable Macs running System 6.0.5 with Color QuickDraw and later systems. **ColorSwitch 2.2.0 Notes** is in text format. **Shareware — \$10.**

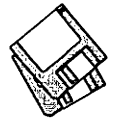
**ColorSync 1.0.3 f.sit:** By Apple Computer, Inc. Provides color synchronization profiles for Apple 12, 13, 16 and 21 inch and Performa, Performa Plus monitors and Classic, LC 520, PB 165C and PB 180C displays.

**Crooked Mouse 1.0 f.sit:** By Mark Pilgrim. Causes your mouse to move at an angle 45 degrees counterclockwise from the angle it should be moving. **From the author** is in text format.

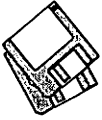
**Cursor Animator 2.0.1 f.sit:** By Wilhelm M. Plotz and Alexander Falk. Allows you to choose from a list of animated cursors which will be used instead of the standard "spinning watch" cursor displayed when the Mac is busy. **Cursor Collection** includes a wide variety of animated cursors. **CA - Read Me 2.0.1 (TT)** is in TeachText format. **Postcardware.**

**Daylight! v.4.01 f.sit:** By Mark Malson. Automatically makes the time changes for Daylight Saving Time for you. System 6 and 7 compatible. **Daylight! READ ME** is in TeachText format.

**Décor 1.1.2 f.sit:** By François Pottier.



- Replace the standard desktop pattern with a PICT or StartupScreen picture of your choice. You can specify a particular file to display or have one chosen at random from a pre-selected folder. **Programmer info** and **Release Notes 1.1.2** are in text format. For System 7.0 and later and 32 bit QuickDraw. **Shareware** - \$5.
- DepthKey 2.0 f.sit:** By Tom Thompson. Displays and changes the screen depth of Mac monitors. It eliminates the trek to the Monitors cdev when you need to change a monitor's screen depth. Requires color or gray scale Macintosh. **Read Me** is in TeachText format. **Shareware** - \$5.
- DepthMaster 1.0 f.sit:** By Victor Tan. Watches which applications are launched and which application is currently active and sets the monitors bit depth and sound level you specify. **DepthMaster.txt** is in text format. For System 7.0 and later and color or gray scale Macs. **Shareware** - **Aus\$20**.
- Disk #9.09C — I/C 9  
Extensions (INTTs & cdevs)
- Unstuffit.sea:** See description on Disk #9.01C.
- Default Folder 2.42 f.sit:** (formerly DFaultD) By Jon Gotow. Lets you assign, for each application you run, a default folder in which to store documents. The idea is that you shouldn't have to navigate throughout your disk the first time you try to save a document after starting up an application. **Default Folder Docs** is in double clickable Print2Pict PostCard format. **Shareware** - \$20.
- DeskPict 1.1 f.sit:** By Clay Meackel. Allows you to use a startupscreen file or any PICT file as a Finder background. **DeskPict info.TXT** is in text format and includes an excellent description of creating startup screens.
- Dialog View 1.0.8 f.sit:** By James W. Walker. (Previously List Font.) Allows you to change the font and size used in directory dialog file lists, and display the real icons of files in such lists. **recent changes** is in text format. Requires System 7.0 and later.
- Discolour 1.02 f.sit:** By Andrew Welch. Displays floppy disk icons in color when in 16 color mode or greater. **Discolour 1.02 Notes** is in text format. For System 7 and later.
- DiskPrint 2.1 f.sit:** By John Young. A Print2Pict extension that permits you to create your own standalone documents. Unlike the Postcard extension that comes with Print2Pict, DiskPrint also saves the bitmaps of fonts used in the documents so you do not have to depend on the user to have your fonts installed. **DiskPrint-Read Me** is in double clickable Print2Pict DiskPrint format. **Shareware** - \$5.
- Dockernaut 1.3 f.sit:** By Steve Martin. Keep multiple configuration files for your Duo' depending upon whether it's docked or not and what monitor it may be connected to. **Dockernaut ReadMe** is in TeachText format. For Duo Macs only. **Shareware** - \$15.
- Downer 1.5 f.sit:** By Roman Software. Automatically turns off your computer if you do not move the mouse or type a key for a specified amount of time. **Downer CDEV ReadMe** is in text format. **Shareware** - \$5.
- DragAnyWindow 3.0 f.sit:** By Alessandro Levi Montalcini. Allows you to easily move any kind of window, including dialogs, alerts, standard "Open" and "Save" dialogs, game windows and other non-movable windows. **DragAnyWindow 3.0 note** is in text format. **Shareware** - \$5.
- Du-UH! 1.0 f.sit:** By Bill Monk. Patches out the "You have changed your printer" alert after you've changed printers in the Chooser. **Du-UH! Read Me** is in TeachText format. **Shareware** - "Four-Step Guilt-Free Plan".
- Dumpster 1.1.b f.sit:** By Donald Perreault. Replace your trash can icon with one of about 20 colorful substitutes. **Read Me First** is in double clickable DOCMaker format. Registration gets you over 90 pairs of replacement icons. **Shareware** - \$20 for registered version.
- Duo Battery Patch 1.0 f.sit:** By Apple Computer, Inc. Resolves a problem discovered with PowerBook Duo 210/230/250s using version 1.0 of the PowerBook Duo Enabler. Apple recommends that all Duo users upgrade to version 1.0 of the PowerBook Duo Enabler. Users of 210's, 230's, or 250's should also install the Duo Battery Patch. Users of 270c's do not need to install this patch. This patch is being rolled into future versions of Duo enablers. When the next version of the PowerBook Duo Enabler is released, users can feel free to remove this patch from their system. **Duo Battery Patch ReadMe** is in TeachText format.
- DuoMouseOctane 1.0.0 f.sit:** By Bill Cerniuk. Make your Duo Dock's mouse act like a normal mouse in terms of maximum speed and acceleration. In addition, Mouse2, SuperRat!, and other Mouse acceleration utilities should work as they do on any other Mac. **DuoMouseOctane ReadMe** is in TeachText format.
- Eclipse 2.0 f.sit:** By Andrew Welch. Automatically dims your screen after a specified amount of inactivity. **Eclipse Notes** is in text format. For System 6 and later. **Shareware** - \$10.
- Extension Manager 2.01 f.sit:** By Ricardo Batista, Apple Computer, Inc. Permits you to enable or disable loading of system extensions at startup much like Init Picker and other commercial utilities do. **Notes for Extensions Mgr** is in text format. Requires System 4.1 or later although written with System 7 in mind.
- Felix 1.0ß f.sit:** By François Pottier. Allows you, when double-clicking on a document, to choose which application you want to use to open it. **Double-click me** is in TeachText format. For System 7.0 and later. *This is a Beta version; use it at your own risk.*
- FileSharingImprovDoochick f.sit:** By Jim Luther, Apple Computer, Inc. **AppleShareSetup** control panel lets you set or disable various options supported by the AppleShare Chooser extension. **Remote Control** and **Server Controller**, allow you to start or stop the file server running on your Macintosh using another Macintosh at another location on the network. **UnmountIt** lets you easily unmount and eject sharable volumes when Macintosh File Sharing is in use. **AppleShareSetup Read Me** and other documentation are in TeachText format. For AppleShare 3.0, AppleShare 7.1, and future AppleShare Chooser extensions under both System 6 and System 7.
- Finder Fixer f.sit:** By Mayson G.



Lancaster. Lets you allocate the amount of memory you want to devote to the Finder and Finder operations. Why you may want to do this is left as an exercise for the student. For System 7.0 and later.

**Finder Sounds 1.3.1 f.sit:** By Greg Smith. With System Software version 6.0.4 or later, the Finder can play sounds corresponding to various events. The **Finder Sounds Config** cdev permits you to select sounds for these events include opening and closing windows, creating and deleting files, and even modifying windows. **Finder Sounds READ ME** is in text format. Requires System 6.0.4 through 6.0.8; not for System 7.0 and later.

**FinderEars 1.0 f.sit:** By Stan Logan. Just speak the name of an item in the front most window of the Finder, and it will open for you. **Ears Docs** is in text format. For AV Macs only. **Shareware - \$5.**

**FinderXtender 1.7 f.sit:** By Kim, SungJong. Directly open specific folder or System related folders without opening multiple windows. Its universal launcher can open any kind of Application, Desk Accessory, Control Panel and Documents. **FinderXtender Manual** is in text format. For System 7.0 and later.

**Forker 1.3 f.sit:** By J. S. Howlett. Designed to fool ResEdit so that it permits editing data forks of files in addition to resource forks. **READ ME - Forker 1.3** is in text format.

Disk #9.10C — I/C 10  
Extensions (INITs & cdevs)

**Unstuffit.sea:** See description on Disk #9.01C.

**Folder Watcher 2.0.2 f.sit:** By Joe Zobkiw. Monitors an unlimited number of folders on your Macintosh, or a remote Macintosh or server and responds if the contents of any of these folders ever change. Response may include showing an alert, playing a system beep or a custom sound, writing to a log file, executing an AppleScript script, or any combination of these. **Folder Watcher 2.0.2 • Read Me** is in text format. For System 7.0 and later. **Shareware - \$20.**

**Forward Delete 1.0.1 f.sit:** By Fabrizio Oddone. Lets you use the forward delete key on extended keyboards to de-

lete the character to the right of the insertion point cursor. **Forward Delete docs** is in TeachText format.

**Ghost mouse 1.0 f.sit:** By Mark Pilgrim. Causes your mouse to disappear as soon as you stop moving it. Great gag for somebody else's Mac. **Ghost notes** is in text format.

**Gravity Mouse 1.0 f.sit:** By Mark Pilgrim. Causes your mouse to occasionally be overcome by gravity. If you have to ask why this is useful, you don't need it. **Grave notes** is in text format.

**Greg's Browser 1.1 f.sit:** By Gregory D. Landweber. Allows you to easily move up and down the folder hierarchy to select one or more files or folders. Create 'bookmarks' for frequently accessed files or folders. **Browser Docs** is in TeachText format. For System 7.0 and later and Color QuickDraw. **Shareware - \$10.**

**Greg's Buttons 3.1.3 f.sit:** By Greg Landweber. Replace the standard black and white push buttons, check boxes, and radio buttons with shaded, color 3-D ones. The new buttons are designed to match the windows and scroll bars under System 7 and support the color tinges that you can select in the System 7 Color Control Panel. **Greg's Buttons Docs and Registration Form** are in TeachText format. For System 7.0 and later. **Shareware - \$15.**

**IdleCPU cdev 1.0 f.sit:** By George D. Cantrell. Keeps the CPU of PowerBooks, Duos and Portables from going into idle mode (slowing down to save power). This permits PB use with MIDI devices and other applications requiring full speed operation at all times. **ReadMe** is in text format.

**iDSExpress 1.0 f.sit:** This nifty little hack fools HD SC Set-up into thinking a third party hard disk is actually an Apple brand drive. To use it, you'll have to make a startup floppy (or have a second boot HD), and have iDSExpress installed as an active extension; i.e. copy it to your Extensions folder and restart. It won't allow a complete HD set-up, but just a simple restart will force the Mac OS to finish the format & initialize procedure. Not recommended for the novice!

**In Box Notify 1.0 f.sit:** By Dana Basken.

Monitors a folder and reports when it contains anything. Highly useful when using a folder as an 'in-box' to receive files or mail across the network. **About "In Box Notify™"** is in TeachText format. For System 7.0 and later. **Shareware - \$10.**

**INIT-Scope 2.1 f.sit:** By David P. Sumner. Monitors the startup process and logs information concerning what is happening to your computer during the critical phase. Permits you to skip loading particular INITs during startup. This powerful tool is most useful to programmers and advanced users but may be informative to others as well. System 6 and 7 compatible. **INIT-Scope Docs (WORD)** is in Word format. **Shareware - \$15.**

**INSTANT Area Code f.sit:** By Adam Stein. An easy to use area code utility; accessible via the hot key of your choice. **INSTANT Area Code Read Me** is in text format. **Shareware - \$9.95.**

**Interrupt Button 3.0 f.sit:** By Geoffrey Fink. Supposed to allow you to return to the Finder from a System Error (bomb) or minor system freeze. It does not always work. **README - Interrupt Button!** is in double clickable DOCMaker format. Requires System 4 or later.

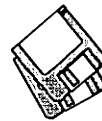
**Keyboard PLUS 1.0 f.sit:** By Berrie Kremers. Permits you to use a standard or PowerBook/Duo keyboard and access most of the keys available in the extended keyboard. **About Keyboard PLUS** is in text format. Requires System 6.0.4 or later. **Shareware - \$15.**

**Keyboard Switcher 1.0 f.sit:** By Mike Samuels. Enables you to view a list of all active applications or switch to any active application using keyboard commands only (i.e. no mouse selection is required). **READ ME!** is in text format. **Shareware - \$10.**

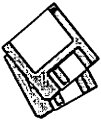
**KeyClicks 1.0 f.sit:** By Alessandro Levi Montalcini. A memory based utility that plays some very short sounds when you press a key. Useful for people with the PowerBooks and Duos whose keyboards have little feedback, making it difficult to tell whether a key was pressed. **KeyClicks 1.0 docs** is in text format. **Postcardware.**

**LetterHeader 1.3 f.sit:** By Tim Herzog. Allows you to add a letterhead or other graphic to a printed (or faxed) docu-





- ment at print time. Saves storage space since your saved documents do not need to include the letterhead graphic. **LetterHeader Docu/ReadMe** is in text format. *Shareware* - \$20.
- Lil' BeepSay 1.0.0 f.sit:** By Siren Enterprises. Lets your Mac speak a configurable phrase in the selected voice using the Speech Manager. ••**ReadMe for Src!** is in text format. Requires Speech Manager.
- Madness - RAGE! UR 1.5 f.sit:** By Me and John. For those of you who have wanted to destroy your Mac without adverse financial impact, Madness lets you shoot it with a variety of high powered guns. **Madness - RAGE! 1.0.3 Docs** is in double clickable DOCMaker application format. For System 6 and 7. *Shareware* - \$21.
- Disk #9.11C - I/C 11  
Extensions (INITs & cdevs)
- Unstuffit.sea:** See description on Disk #9.01C.
- Locks (Control Pnl & Finder) f.sit:** By Roy Wood. Locks the System Folder and the Control Panels Folder to prevent unauthorized access. Useful to control your Macs in a multi-user environment. **Locks Info** is in text format. *Shareware* - \$5, \$10.
- MacLifeInsurance f.sit:** By Adam Stein. Protect your work from system crashes, accidental deletions, power outs, corrupted files, and other Macintosh disasters with two levels of protection. FileSaver protects you at the file level, by automatically saving your files. KeySaver protects you at the keystroke level, saving every key you type. **MacLifeInsurance-Documentation** is in TeachText format. For System 7.0 and later. *Shareware* - \$9.95 each; \$14.95 for both.
- macppp 1.1.3 f.sit:** By Merit Network, Inc. A Macintosh implementation of PPP, the Point-to-Point Protocol, which allows you to use TCP/IP (Transmission Control Protocol/Internet Protocol) over asynchronous serial lines. **macppp.txt** is in text format. Requires MacTCP 1.1 or higher, Macintosh System 6.0.5 or higher, and a Hayes-compatible modem for dial-in connections.
- Macro.Key 1.1 f.sit:** By Alain Birtz. A text tool to write (and repeat) a word or a sentence with a single key stroke. You record any sequence of characters. Then you link the sequence to a special keystroke (or key combination with shift, option, command,...). **MK.doc.English.MSW** is in Word format.
- MacTCPNetswitch 1.0b2 f.sit:** By David Walton. For Macs accessing TCP/IP from multiple locations. Automatically swaps in the correct version of the MacTCP Prep file when your Macintosh starts up. **MacTCP Netswitch Guide** is in Word format. **MacTCP Netswitch Guide.MWII** is in MacWrite II format. Requires System 6.0.1 or later and AppleTalk version 53 or later.
- MaxAppleZoom 1.44 f.sit:** By Naoto Horii. Reprograms Apple's standard Mac II video card so that it displays a 704 by 512 pixel screen instead of the normal 640 by 480. Most applications will gain more usefulness and comfort thanks to this larger display area! **MaxAppleZoom Doc** is in MacWrite format. *Shareware* - \$25.
- MenuBall 2.0 f.sit:** By Alessandro Levi Montalcini. Puts a bouncing ball in your menu bar. **MenuBall 2.0 note** is in text format.
- MenuChoice 1.9 f.sit:** By Kerry Clendinning. Enables hierarchical menus under the Apple menu. Every folder stored in your "Apple Menu Items" folder will show up as a submenu under the Apple menu. **ReadMe** is in TeachText format. For System 7 and later. *Shareware* - \$15.
- MenuDropper 7.1b8a f.sit:** By David Winterburn. Allows the you drag Icons from the Finder and 'drop' them onto items inside various system menus. **MenuDropper Instructions** is in TeachText format. For System 7.0 and later.
- MenuMail 1.0.6 f.sit:** By Jan Bruyndonckx. An unobtrusive paging and conferencing system for the Mac. It includes 4 user keys absolutely free, so you can test it out as much as you like. **Manual** is in Word format. **Read me first !** is in TeachText format. *Shareware* - \$30 for 5 keys, \$300 for unlimited site license.
- MFZoom INIT 2.0 f.sit:** By Narayan Sainaney. Increase the menu and window title font size to 14 points. Useful for big screen monitor users and those who have to squint to see the normal menu font. **MFZoom INIT 2.0 Doc** is in text format.
- Moire 4.01 f:** By John Lim. A color Moire screensaver with a built-in menu clock. Includes a variety of user selectable shapes, colors, lengths and speeds as well as sleep and wake position selection. *Shareware* - \$10.
- Monitor Expander 1.0 f.sit:** By Men & Mice. Allows you to enlarge your desktop area by "eating away" at the borders that surround the usable portion of your monitor or by scrolling around a virtual desktop that is bigger than the usable portion of your monitor, or both. For System 7.0 and later. Requires Apple Macintosh II video card (a.k.a. Toby card) or the Apple High Resolution Video Card (a.k.a. HRVC card). *Shareware* - \$25.
- MoonIT 1.1 f.sit:** By Eiji Nitasaka. Displays the current moon phase at the bottom of your screen during startup (watch for it during INIT loading). **MoonIT v1.1 Read Me** is in text format.
- Mousebroken 1.0.1 f.sit:** By Mark Pilgrim. A gag utility to achieve less control over your mouse (or someone else's). **Mouse Modules** contains the different mouse types. **From the author** is in TeachText format.
- Narrow21 v1.0 f.sit:** By David Suggs. Makes the display from your built-in video appear narrower at the normal Macintosh 21-inch resolution of 1152 by 870 pixels. **Read Me** is in text format. Works on the Centris and Quadra families of computers and should work on any future Macintoshes with similar built-in video hardware. *Shareware* - \$10.
- Network Launch Fix 1.0 f.sit:** By Apple Computer, Inc. Corrects a problem that caused some programs to quit unexpectedly or caused the computer to freeze when you attempted to open programs over the network. For Macintosh computers with a 68040 microprocessor. **Network Launch Fix (1.0).bbe** is in text format.
- Disk #9.12C - I/C 12  
Extensions (INITs & cdevs)
- Unstuffit.sea:** See description on Disk #9.01C.
- NetworkTime 2.0 f.sit:** By Pete Resnick. Sets the clock on your Mac to the correct time of day by contacting a



time server using the Apple MacTCP network software to get the correct time of day. Documentation folder includes TeachText and MacWrite II formats. Network Time-Read Me is in TeachText format. **Shareware** - \$5.

NiceStopShutDown f.sit: By Eugene Cohen. Restarts the computer when 'Shutdown' is chosen from the 'Special' menu. Meant for school computer labs, where the computers have numerous users during the day. However, if the option key is down, the computer will shut down gracefully and the hard disk's head will be parked. **NiceStopShutDown README!** is in TeachText format. **Shareware** - \$5.

NTP Client 1.0 f.sit: By John Dundas. The client portion of the NTP software system that lets you synchronize the system clock of the Macintosh with other computers in a network. **README** is in TeachText format. Requires System 6.0.5 or later. **Shareware** - \$25.

Open-wide 3.5.7 f.sit: By James W. Walker. Widens the Open and Save dialogs so that you can see long file names. Very useful when the only differences in a file name is near the end of a long name. **recent changes** is in TeachText format. **Postcardware**.

Oracle 2.1.0 f.sit: By Andrew Welch. Presents you with a thoughtful remark each time you boot your computer or once a day. **Oracle 2.1.0 Notes** is in text format. **Shareware** - \$10.

OSA Menu 1.0 f.sit: By Leonard Rosenthal. Provides a menu (application specific and general) for launching OSA-compliant scripts. Exceedingly useful for those applications that don't have direct script-running support such as SITcomm. **OSA Menu 1.0 Docs** is in text format.

OtherMenu 1.3.1 f.sit: By James W. Walker. Creates a system-wide hierarchical menu (up to 5 levels deep), somewhat similar to the Apple menu. It can be used for launching applications and documents, restart and shut down, various file management functions, and executing FKEYs. **OtherMenu Manual** and other documents are in TeachText format. For System 7.0 and later. **Shareware** - \$10.

PB Sleeper 2.0 f.sit: By Kristofer H. Cruz. Control how, when and why your PB should sleep with more options than Apple's control panel. **PB Sleeper 2.0 init README** is in text format.

Peeping Tom 1.2 f.sit: By Bret Olmsted. Track the amount of time you use particular programs and how much process time they grab. Saves data to a log file. **README** is in TeachText format. For System 7.0 and later. **Shareware** - \$5.

Disk #9.13C - I/C 13  
Extensions (INITs & cdevs)

Unstuffit.sea: See description on Disk #9.01C.

PeeWee 1.0.1 f.sit: By Mark Maxham. Like the bit on Pee Wee's Playhouse, it picks a secret word, and if you type the word (in any application, including the Finder), your Mac will yell at you. **Pee Wee README** is in TeachText format.

PlayOn! 1.0.1 f.sit: By John Brewer. Lets you play the sound coming in through your Mac's microphone jack out through the speaker. This play through feature is part of all Macs with built-in sound input, but has been difficult to get at - until now. **PlayOn! Docs** is in TeachText format. For System 7.0 and later. **Shareware** - \$5.

Plug Alert f.sit: By Sean Hummel. Puts up a message telling you that the plug has been taken out when you unplug the PowerBook. **Plug Alert ReadMe** is in text format. Requires System 6.0.5 or later. For Portable, PowerBook and Duo Macs.

PopChar 2.6.2 f.sit: By Günther Blaschek. Enables you to generate every possible character that is available in the current font without having to remember keyboard combinations or to resort to Key Caps. It's all done with the mouse. **PopChar Docs** is in TeachText format. System 6 and 7 compatible.

PowerBar 1.1 f.sit: By Scott A. Johnson. Launch applications or open files or folders; creating buttons to do this is a drag-&-drop snap. Also has optional status pads which take up very little space while giving you time, date, memory usage, disk space left (or used), and Chooser status/access. Offers programmers a modular extensible capa-

bility. **Quick Install...READ NOW!!** is in TeachText format. **Shareware** - \$25.

PowerClick 1.0.1 f.sit: By Daniel A. Segel. Allows you to independently set the function of the two trackball buttons on a PowerBook Duo (and maybe other PowerBooks as well). You can set \*each\* button to be either: nothing, single click, double click, or click lock. **PowerClick README** is in text format.

Practical Jokes f.sit: By David Peck. Three extensions, all based upon the same theme - ejecting a disk as soon as it is inserted. One just ejects the disk, another ejects it and appears to melt the screen and the last ejects it with a vocal message. **README** is in TeachText format.

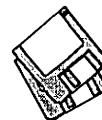
Preview 3.0 f.sit: By Software by Design. Gives a print preview even in applications that don't specifically have such a feature. Also includes an FKEY to toggle your 'real' driver and this one. **Preview 3.0 Docs** is in Word format.

Print to QuickTime 2.0 f.sit: By Nigel Perry. An extension for Print2Pict (following) that permits printing to QuickTime. Requires Print2Pict 3.x and QuickTime 1.5 or greater. **Print to QuickTime™ ReadMe.qt** is in QuickTime movie format and **ReadMe (Text)** is in text format. **Postcardware**.

PrintChoice 1.0 f.sit: By Kerry Clendinning. Provides a quick way to rechoose a printer without going back into the Apple Chooser. A submenu in your Apple Menu will let you maintain a list of your frequently used printers. **ReadMe** is in TeachText format. **Shareware** - \$14.

PwrSwitcher 1.1.1 f.sit: By David B. Lamkins. Lets you change from one active application to another using your keyboard instead of the Finder's application menu. Also lets you 'mark' an application so you can toggle back and forth between two applications of your choice that aren't next to each other. **PwrSwitcher Instructions** is in TeachText format. For System 7.0 and later.

QuickNotes 1.0b6 f.sit: By Joe Zobkiw. Allows you to quickly and easily jot down notes on your Macintosh saving them for later perusal with the



TeachText application or any text editor. **Read Me** is in TeachText format.

**Quit It! 1.0 f.sit:** By Berrie Kremers. Whenever the last window of an application is closed using the close box, this Control Panel will quit the application. Options permit excluding selected applications and overriding normal close functions. **About Quit It** is in TeachText format. **Shareware - \$15.**

**RAM Disk Helper 1.3 f.sit:** By David Riggle. Allows you to configure and create a Ram Disk, and will even automatically copy files and switch finder operations to your new disk. Includes periodic copyback to your hard disk of revised files. **RAM Disk Helper Info** is in text format. For System 7.0 and later and a 68020 CPU or higher.

**RamDisk+ 3.22 f.sit:** By Roger D. Bates. A RAM Disk program designed to run automatically on startup. It copies any selected files and folders to the RAM disk and optionally installs a crash saver to recover from system bombs. This program is considered by many to be the best of the shareware RAM disks. **Read Me - RamDisk+** is in TeachText format. System 6 and 7 compatible. **Shareware - \$35.**

**REO 1.0.1 f.sit:** By Jonathon Summers. Allows you to remap the buttons in the Standard File's 'Replace Existing...' alert (presented when a file of the same name exists) to change their behavior so that the 'Replace' button is the default. **Replace-Existing Options** is in text format. Requires System 6.0.4 or later. **Postcardware.**

**sAVe the Disk 1.3.1 f.sit:** By Todd Ouzts. Alleviate the excessive disk drive hits experienced by owners of AV Macs. Note that the extension AV Speedup 1.0 addresses only the first set of problems. AV Resource Manager Tuner and AV Cache Tuner improve the Resource Manager and the disk cache respectively. Their functionality has been integrated into sAVe the Disk, which adds a solution for the sound related disk trashing, too. **Read Me** is in text format. For AV Macs only.

**ScreenChooser 2.2 f.sit:** By Marcio Luis Teixeira. A fully featured CP that permits selection of startup screens and sounds and permits you to use pictures as desktop patterns. Includes

randomization, backdrops and tiling. **Read Me First!** is in text format. Requires System 6.0 or later. **Shareware - \$20.**

**SF Windows 1.0 f.sit:** By Damon Cokenias. Adds a popup menu to "Open" and "Save As..." dialogs. This menu contains the names of all the open windows in the Finder. When you select one of the windows from the menu, you will "Jump" to that folder. **SFWindowsReadMe** is in TeachText format. For System 7.1 only. **Shareware - \$7.**

**Shhh! f.sit:** By Patrick C. Beard. Disables the software that make the PB go 'click' whenever sound is used. **Shhh! Readme** is in text format.

**ShifTrash 2.01 f.sit:** By Kas Thomas. When you want to delete a file, hold the Shift key down when you drag it to the Trash, and POOF! The file (or folder, or lass'o'd group of garbage files) vanishes. **ShifTrash 2.01 Readme Notes** is in text format. For System 7.0 and later. **Shareware - \$5.**

**ShrinkDown 1.0 f.sit:** By Scott Fenton. I am not sure what this extension does as there was no documentation.

**Shutdown Fade 1.0 f.sit:** By Mark Pilgrim. Causes your Macintosh to fade all attached screens to black every time it shuts down. Requires color or gray scale capable Mac. **From the author** is in TeachText format.

**Shutdown FX 1.2 f.sit:** By Mark Pilgrim. Clears your screen with a cool graphic effect whenever you shut down your Macintosh. **From the author** is in text format.

Disk #9.14C - I/C 14  
Extensions (INITs & cdevs)

**Unstuffit.sea:** See description on Disk #9.01C.

**ShutDowner 1.0.1 f.sit:** By William Uther. Holding down the 'end' key on an extended keyboard during startup will cause your Mac to shut-down immediately. For those occasions when you need to rectify a spastic selection of Reset rather than Shutdown. **README** is in text format. **Shareware - what it is worth.**

**Snap-To 2.0 f.sit:** By Trevden Sherzell. Snaps the "pointer" to the default box in an open dialogue. **Snap-To ReadMe** is in TeachText format. **Shareware - \$5.**

**SoftwareFPU 2.45 f.sit:** By John Neil. Allows most programs expecting an FPU to work properly on the Macintosh Classic II, Color Classic, LC series and IIsi and some models of PowerBook, Centris and Performa series which are not configured with an FPU. An FPU (Floating Point Unit) is a hardware chip that performs certain types of mathematical operations quickly. An FPU is also known as a floating point co-processor or a math co-processor. **About SoftwareFPU and Programmer Info** are in Word format; **Release Notes** is in TeachText format. For System 6 and later. **Shareware - \$10.**

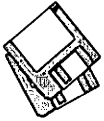
**Sound Manager 3.0 f.sit:** By Apple Computer, Inc. Allows any application to play and record sounds using the built-in sound hardware found on Macintosh computers. This version adds support for 16-bit CD-quality audio, redirection of sound to third-party hardware cards, and plug-in audio compression/decompression software (codecs). **Sound Manager Read Me** is in TeachText format.

**Sounder 1.2 f.sit:** By Andy Barbolla. Permits you to change the sound volume from the keyboard. Not saved to Parameter RAM so your original volume is restored each time you reboot. **Sounder Docs** is in TeachText format. For System 7.0 and later (may work on earlier systems but not tested).

**SoundMaster 1.7.4 f.sit:** By Bruce Tomlin. Specify startup, beep, disk insert, disk eject, bad disk, restart, shutdown and key click sounds, rates and volumes from folders inside your System folders. Use System 6.0.4 or higher. System 6 and 7 compatible. **SoundMaster.doc** and **SoundMaster changes** are in text format. **Shareware - \$15.**

**Speech Manager 1.1.1 f.sit:** By Apple Computer, Inc. Change the voices spoken by your Mac. Not sure what system or Macs this is for as there was no documentation.

**SpeedyFinder 7 1.5.9b f.sit:** By Victor Tan. Speed up the Mac Finder when copying files, opening or closing windows, changing file name and emptying the trash. It also has some other features such as adding additional command key shortcuts and optionally removing Balloon Help from the menu.



**SpeedyFinder7 doc and Release v1.5.4 notes** are in Word format. For System 7.0 and later. *Shareware - Aus\$20.*

**Stack6000 f.sit:** By Chuck Pliske. Expand Stack space on 68000 portables (Plus, SE, PB100, etc.) to ensure that you don't get the ID=28 (stack overflow) errors when running large applications. **Stack6000.doc** is in text format.

**Startup Screen Picker 1.0 f.sit:** By Mark Pilgrim. Let you have a random startup screen, displayed when you start up your Macintosh while system extensions are loading. **Just read it** is in TeachText format.

**STDFileSaver 1.1 f.sit:** By Eric Simenel, Apple Computer, Inc. Allows you to print any file to disk as either a PICT or TEXT. Including FileMaker Field and Script Definitions. **READ ME DAMN IT!.txt** is in text format.

**SwapKey 1.1 f.sit:** By Nagatoshi Nawa. Permits you to swap the functional meaning of pairs of keyboard keys; for example—swap the control and caps lock key functions. **README** is a real challenge.

Disk #9.15C — I/C 15  
Extensions (INITs & cdevs)

**Unstuffit.sea:** See description on Disk #9.01C.

**Symbionts 2.3.3 f.sit:** By B. Kevin Hardman. Manage the loading of Extensions. Also monitors the startup process and displays the name of, and bytes of memory used by each system extension. The name and number appear beneath the extension's icon, and also in the menu bar. **Symbionts Readme** is in TeachText format. *Shareware - \$20.*

**Talking Clock Pro 2.0b0 f.sit:** By Jon Wätte. Speaks the time every hour on the hour. **Talking Clock Pro™ Instructions** is in TeachText format. Requires the Speech Manager (MacinTalk II or MacinTalk Pro).

**TeFix 1.0 f.sit:** By Scott Bronson. Fixes a bug in TextEdit that may impact other programs that use the routines. **About TEFix** is in text format.

**Timelord 1.4 f.sit:** By The University of Melbourne. Allows the Macintosh time to be set over an AppleTalk network from a Macintosh or UNIX/CAP based time server. **README** is in text for-

mat.

**TimeServer 1.0.2 f.sit:** By John Raymonds, Jr. A Time Server and client package that permits all clients to update their system time at startup. Requires System 6.0 or later. **Read Me** is in text format. *Postcardware.*

**TypeIt4Me 4.0 f.sit:** By Riccardo Ettore. Provides a pop-up menu accessed to the left of the Apple menu from which you can select pre-stored phrases. **TypeIt4Me User Manual** is in double clickable DOCMaker format. Requires System 4.1 or later. *Shareware - \$30 for disk with latest version plus other free and shareware programs.*

**useKBD.led 2.0 f.sit:** By Alain Birtz. Configure the LEDs on extended keyboards to inform you of floppy disk drive and SCSI drive activity. **Led.doc.English** and **Led.doc.francais** are in Word format.

**VizBeep 1.0 f.sit:** By Eric Hustvedt. Allows you to play a movie for your System Beep. **Read Me - VizBeep Version 1.0** is in text format. Requires System 7 or greater and QuickTime. *Shareware - \$5.*

**WeekdaySound 1.0 f.sit:** By Ola Montán. Plays a sound when the Macintosh is started. You can specify a different sound file for each day of the week. **Read me if you want** is in TeachText format. For System 7.0 and later.

**Who's There f.sit:** By Kevin W. Ramer. Lists all the people, machines, printers, processes on your network. Neat and useful. **README** is in text format.

**WindowFinder 1.4 f.sit:** By Edward Agoff. A most useful utility. Just Command click in the menu bar at any time to pop up a menu that lets you select any open window and bring it to the front. **WindowFinder Info** is in text format.

**WithAView for 7 f.sit:** By David P. Sumner. Allows the user to change the view in a Finder window from 'by icon' to 'by name' by clicking in an appropriate part of the window. To go the other way, hold down the option key while clicking. **WithAView for 7 Docs** is in Word format. For System 7.0 and later.

**WorldTime 1.5.1 f.sit:** By J. David Sexton. Tells you the time in other cities,

resets the clock for the beginning and end of Daylight Savings Time and permits any change of the location of your computer to automatically adjust the clock. **WorldTime Manual** is in TeachText format. Requires System 4.1 or newer. For Mac Plus and later. *Shareware - a fair price.*

**WrapScreen 1.2 f.sit:** By Eric Aubourg. Allows your mouse to wrap across your screen and come out the other side. You can choose to wrap horizontally, vertically or both. **WrapScreen README** is in TeachText format. *Shareware - what you think it is worth.*

**Xmas Lights 1.1 f.sit:** By Tiger Technologies. Places flashing Christmas tree lights under the Menu bar of your Mac as if someone had strung them from the top of your screen. Select any of a number of light patterns.

**YesNoCancel 1.1 f.sit:** By Xan Gregg. Use the keyboard to select dialog box normal, check and radio buttons, text fields, etc.

**ZapTCP 1.2 f.sit:** By Steve Falkenburg, Apple Computer, Inc. This little hack for MacTCP Programmers shuts down MacTCP and all of its processes after a system crash. **About ZapTCP** is in text format. For System 7.0 and later.

**Zipple 1.8 f.sit:** By Christopher Suley. Adds an animated image of your choice over the title of the Apple, Balloon Help or Application menu. **Zipple 1.8 Manual** is in TeachText format. For System 7.0 and later. *Shareware - \$10.*

**ZoomBar 2.2 f.sit:** By Brian Westley. Shrink windows to just a title bar. You can now have many windows available on the screen and still see them all without having to move them to uncover hidden ones. Don't use with Microsoft applications. **zoom docs** in text format refers to an earlier version (1.7). *Shareware - \$5.*

**Window 1.02 f.sit:** By Hyo E. Ahn. Provides keyboard shortcuts for things that normally have to be done using the mouse. This includes application switching, window selection, hiding, zooming, moving and resizing, closing and some other functions. **Read Me** is in TeachText format. *Shareware.*

Disk #9.16C — I/C 16  
Extensions (INITs & cdevs)

# Macintosh Library Order Form



- Pi Library**
- \_\_\_ 0.01 - C 01 Catalog
- \_\_\_ 0.02 - C 02
- Sampler**
- \_\_\_ 0.03 - C 03
- MemDir**
- Anti-Virus Utilities**
- \_\_\_ 1.01G - AV 1
- \_\_\_ 1.02K - AV 2
- \_\_\_ 1.03K - AV 3
- Desk Accessories**
- \_\_\_ 14 disk set; \$42
- \_\_\_ 2.01D - DAs 1
- \_\_\_ 2.02D - DAs 2
- \_\_\_ 2.03D - DAs 3
- \_\_\_ 2.04D - DAs 4
- \_\_\_ 2.05D - DAs 5
- \_\_\_ 2.06D - DAs 6
- \_\_\_ 2.07D - DAs 7
- \_\_\_ 2.08D - DAs 8
- \_\_\_ 2.09D - DAs 9
- \_\_\_ 2.10D - DAs 10
- \_\_\_ 2.11D - DAs 11
- \_\_\_ 2.12D - DAs 12
- \_\_\_ 2.13D - DAs 13
- \_\_\_ 2.14D - DAs 14
- F Keys (Function Keys)**
- \_\_\_ 4.01A - FKs 1
- \_\_\_ 4.02A - FKs 2
- ImageWriter Fonts**
- \_\_\_ 5.01A - IW 1
- \_\_\_ 5.02A - IW 2
- \_\_\_ 5.03A - IW 3
- \_\_\_ 5.04A - IW 4
- PostScript Fonts**
- \_\_\_ 6.01B - PS 1
- \_\_\_ 6.02B - PS 2
- \_\_\_ 6.03B - PS 3
- \_\_\_ 6.04B - PS 4
- \_\_\_ 6.05B - PS 5
- \_\_\_ 6.06B - PS 6
- \_\_\_ 6.07B - PS 7
- \_\_\_ 6.08B - PS 8
- \_\_\_ 6.09B - PS 9
- \_\_\_ 6.10B - PS 10
- \_\_\_ 6.11B - PS 11
- \_\_\_ 6.12B - PS 12
- \_\_\_ 6.13B - PS 13
- \_\_\_ 6.14B - PS 14
- \_\_\_ 6.15B - PS 15
- \_\_\_ 6.16B - PS 16
- \_\_\_ 6.17B - PS 17
- \_\_\_ 6.18B - PS 18
- \_\_\_ 6.19B - PS 19
- TrueType Fonts**
- \_\_\_ 7.01A - TT 1
- \_\_\_ 7.02A - TT 2
- \_\_\_ 7.03A - TT 3
- \_\_\_ 7.04A - TT 4
- \_\_\_ 7.05A - TT 5
- \_\_\_ 7.06A - TT 6
- \_\_\_ 7.07A - TT 7
- \_\_\_ 7.08A - TT 8
- \_\_\_ 7.09A - TT 9
- \_\_\_ 7.10A - TT 10
- \_\_\_ 7.11A - TT 11
- \_\_\_ 7.12A - TT 12
- \_\_\_ 7.13A - TT 13
- Graphics**
- \_\_\_ 6 disk set; \$18
- \_\_\_ 8.01 - G 1
- \_\_\_ 8.02 - G 2
- \_\_\_ 8.03 - G 3
- \_\_\_ 8.04 - G 4
- \_\_\_ 8.05 - G 5
- \_\_\_ 8.06 - G 6
- INITs & cdevs**
- \_\_\_ 27 disk set; \$81
- \_\_\_ 9.01B - I/C 1
- \_\_\_ 9.02B - I/C 2
- \_\_\_ 9.03B - I/C 3
- \_\_\_ 9.04B - I/C 4
- \_\_\_ 9.05B - I/C 5
- \_\_\_ 9.06B - I/C 6
- \_\_\_ 9.07B - I/C 7
- \_\_\_ 9.08B - I/C 8
- \_\_\_ 9.09B - I/C 9
- \_\_\_ 9.10B - I/C 10
- \_\_\_ 9.11B - I/C 11
- \_\_\_ 9.12B - I/C 12
- \_\_\_ 9.13B - I/C 13
- \_\_\_ 9.14B - I/C 14
- \_\_\_ 9.15B - I/C 15
- \_\_\_ 9.16B - I/C 16
- \_\_\_ 9.17B - I/C 17
- \_\_\_ 9.18B - I/C 18
- \_\_\_ 9.19B - I/C 19
- \_\_\_ 9.20B - I/C 20
- \_\_\_ 9.21B - I/C 21
- \_\_\_ 9.22B - I/C 22
- \_\_\_ 9.23B - I/C 23
- \_\_\_ 9.24B - I/C 24
- \_\_\_ 9.25B - I/C 25
- \_\_\_ 9.26B - I/C 26
- \_\_\_ 9.27B - I/C 27
- Miscellaneous**
- \_\_\_ 10.01A - M 1
- \_\_\_ 10.02A - M 2
- Paintings (MacPnt)**
- \_\_\_ 5 disk set; \$15
- \_\_\_ 11.01 - P 1
- \_\_\_ 11.02 - P 2
- \_\_\_ 11.03 - P 3
- \_\_\_ 11.04 - P 4
- \_\_\_ 11.05 - P 5
- Digitized Sounds**
- \_\_\_ 9 disk set; \$27
- \_\_\_ 12.01B - S 1
- \_\_\_ 12.02B - S 2
- \_\_\_ 12.03B - S 3
- \_\_\_ 12.04B - S 4
- \_\_\_ 12.05B - S 5
- \_\_\_ 12.06B - S 6
- \_\_\_ 12.07B - S 7
- \_\_\_ 12.08B - S 8
- \_\_\_ 12.09B - S 9
- Telecommunications**
- \_\_\_ 13.01B - T 1
- \_\_\_ 13.02B - T 2
- \_\_\_ 13.03B - T 3
- Programmer/Hacker**
- \_\_\_ 14.01A - PH 1
- \_\_\_ 14.02A - PH 2
- Miscellaneous Utils**
- \_\_\_ 15.01C - MU 1
- \_\_\_ 15.02C - MU 2
- \_\_\_ 15.03C - MU 3
- \_\_\_ 15.04C - MU 4
- \_\_\_ 15.05C - MU 5
- \_\_\_ 15.06C - MU 6
- \_\_\_ 15.07C - MU 7
- \_\_\_ 15.08C - MU 8
- \_\_\_ 15.09C - MU 9
- \_\_\_ 15.10C - MU 10
- \_\_\_ 15.11C - MU 11
- \_\_\_ 15.12C - MU 12
- \_\_\_ 15.13C - MU 13
- \_\_\_ 15.14C - MU 14
- \_\_\_ 15.15C - MU 15
- System Utilities**
- \_\_\_ 16.01E - SU 1
- \_\_\_ 16.02E - SU 2
- \_\_\_ 16.03E - SU 3
- \_\_\_ 16.04E - SU 4
- \_\_\_ 16.05E - SU 5
- \_\_\_ 16.06E - SU 6
- \_\_\_ 16.07E - SU 7
- \_\_\_ 16.08E - SU 8
- \_\_\_ 16.09E - SU 9
- \_\_\_ 16.10E - SU 10
- \_\_\_ 16.11E - SU 11
- \_\_\_ 16.12E - SU 12
- \_\_\_ 16.13E - SU 13
- \_\_\_ 16.14E - SU 14
- \_\_\_ 16.15E - SU 15
- Word Processing Utils**
- \_\_\_ 7 disk set; \$21
- \_\_\_ 17.01C - WP 1
- \_\_\_ 17.02C - WP 2
- \_\_\_ 17.03C - WP 3
- \_\_\_ 17.04C - WP 4
- \_\_\_ 17.05C - WP 5
- \_\_\_ 17.06C - WP 6
- \_\_\_ 17.07C - WP 7
- Adobe Screen Fonts**
- \_\_\_ 18.01A - AF 1
- \_\_\_ 18.02A - AF 2
- Fun & Games Series**
- \_\_\_ 22.01 - F/G 1
- \_\_\_ 22.02 - F/G 2
- \_\_\_ 22.03 - F/G 3
- \_\_\_ 22.04 - F/G 4
- \_\_\_ 22.05 - F/G 5
- \_\_\_ 22.06 - F/G 6
- \_\_\_ 22.07 - F/G 7
- \_\_\_ 22.08 - F/G 8
- \_\_\_ 22.09 - F/G 9
- \_\_\_ 22.10 - F/G 10
- Online Bible**
- \_\_\_ 24 disk set; \$50
- \_\_\_ Set 1, 6 disks; \$15
- \_\_\_ Set 2, 7 disks; \$15
- \_\_\_ Set 3, 6 disks; \$15
- \_\_\_ Set 4, 5 disks; \$15
- Disketeria ValuPaks**
- (†)
- \_\_\_ Best of Pi, 15 disks; \$30
- \_\_\_ PS Fonts 1, 14 disks; \$30
- \_\_\_ PS Fonts 2, 5 disks; \$10
- \_\_\_ TT Fonts 1, 9 disks; \$20
- \_\_\_ TT Fonts 2, 4 disks; \$10
- \_\_\_ Calc/Clk Utils 1, 5 disks; \$15
- \_\_\_ Pers Mgt Utils 2, 5 disks; \$15
- \_\_\_ Misc Utils 3, 5 disks; \$15
- \_\_\_ Sys Utils 1, 5 disks; \$15
- \_\_\_ Sys Utils 2, 5 disks; \$15
- \_\_\_ Sys Utils 3, 5 disks; \$15
- \_\_\_ Fun/Games 1, 10 disks; \$25
- \_\_\_ LW 8.1.1 & PPDs - 4 disks; \$10
- Apple System Software**
- \_\_\_ 6.0.3 - 4 disks; \$12
- \_\_\_ 6.0.5 - 4 disks; \$12
- \_\_\_ 6.0.7 - 4 disks; \$12
- \_\_\_ 6.0.8 - 4 disks; \$12
- \_\_\_ 7.0 - 8 disks; \$20
- \_\_\_ 7.0.1 - 6 disks; \$20 (‡)
- \_\_\_ 7/7.0.1 Tune-Up \$3
- \_\_\_ 7.1 Sys Updater 2.0.1 \$3 (‡)
- \_\_\_ Sys Util Update 1.0.1 \$3 (‡)
- \_\_\_ QuickTime 1.6.1; \$3
- \_\_\_ LaserWrtr 8.1.1 - \$3 (‡)
- \_\_\_ LaserWrtr 8.0; \$6
- \_\_\_ Network Installer \$3
- \_\_\_ TrueType; \$6
- \_\_\_ Basic Con Set 1.1.1; \$3 (‡)
- \_\_\_ Express Modem; \$3 (‡)
- \_\_\_ CD ROM Setup; \$3
- \_\_\_ Comm 1 (CTB); \$3
- \_\_\_ LW PPDs - 3 disks; \$9
- \_\_\_ ASHare 4 Tune-Up; \$3
- \_\_\_ AtEase Updater 2.01 \$3
- \_\_\_ StyleWriter II; \$12
- \_\_\_ Iie Installer; \$3
- \_\_\_ Mon Energy Star; \$3
- \_\_\_ LW Pro Tune-Up; \$3
- HyperCard Update**
- \_\_\_ 1.2.5 - 3 disk set; \$9
- \_\_\_ 2.0 - 5 disk set; \$15
- (†) all files compressed (except LW 8.1.1 & PPDs)
- (‡) on 1.44 Meg diskette

HyperCard Upgrade requires HyperCard proof of purchase; any of original disk, first page of manual, receipt or previous HyperCard Upgrade disk.

Mail this form with your check to : Disk Library Washington Apple Pi 7910 Woodmont Avenue, Suite 910 Bethesda, Maryland 20814			Are you a member of Washington Apple Pi, Ltd.? Y/N ___ If Yes, Member Number _____. All payments must be in U.S. funds drawn against U.S. banking institutions. Non-members add \$3.00 per disk to listed prices.		
Number of <b>Disks</b>	Member <b>Price @</b>	Member <b>Extended</b>	Name		
Singles	4 or less @ \$4.00= 5 or more @ \$3.50= Sets (marked above) \$ (above) + postage \$1.00/disk, maximum \$5.00. Disk Catalogs + \$1.50 postage \$4.50	\$	Box Number, Apartment, Suite, etc.		
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# Apple Disk Library

by John B. Ruffatto

Welcome to the Apple Disk Library section of the Journal, as you can see there is always room for improvement. In this issue there are now Disk Order Forms for the Apple II, Apple IIGS, and the Apple III. The librarians would like to receive comments pro and con to the new set-up versus the old listing format. Direct your comments to me via the Washington Apple Pi office and I will try to respond them.

I would also desire your comments in regard to Public Domain software you would like to see included in our Disk Libraries. Since we no longer publish the titles of the disks in the library, it is advisable to order the Disk Library Catalog Disks for the machine you are using.

Each month we will endeavor to provide information on new additions to the libraries or feature disks currently in the libraries. Some of the disks in the Apple Disk libraries contain SHAREWARE. If you use any Shareware program, please send the shareware fee to the author. By submitting the fee we encourage the author(s) to develop more software.

**Special Note:** All Apple II, Apple III, and Apple IIGS Catalog Disks may be exchanged for most current edition of the Disk Catalog series— free of charge - if exchanged at the office. For exchanges by mail, please be certain to include your old disks and \$1.00 per disk to cover shipping and handling.

Thank you.

## GAMES

### GSGM-01 B - Mean 18 Golf Courses 1

This disk contains additional Mean 18 Golf courses for use with the game Mean 18. Follow the instructions included with your game for using extra course disks. An ASCII text file named Mean.18.Info is included. This file provides further information on Mean 18 golf courses. Also included on this disk is an ASCII text file named Mean18.Hint. This file contains a chart showing the yardage ratings for your clubs at various power levels.

The Mean 18 Golf courses on this disk have been compressed into self-extracting archive files. This allows me to include more Mean 18 Golf courses than I would normally be able to fit onto a single disk.

The file "Courses.01.SEA" contains the following Mean 18 golf courses:

ABYSS.M18 Abyss C.C. for Mean 18  
ACHAFALA.M18 The Atchafalaya for Mean 18  
ACHILLES.M18 Achilles Hills course

for Mean 18  
ALW.M18 All Around Worst course for Mean 18  
AMAZON.M18 Mean 18 in the Amazon basin!

The file "Courses.02.SEA" contains the following Mean 18 golf courses:

AMERICAS.M18 America's Best 18 course for Mean 18  
APACHE.M18 Apache Wells G.C. for Mean 18  
AQUAPHOB.M18 Aquaphobia C.C. for Mean 18  
BAIN.M18 Bain's Pros course for Mean 18  
BALLBUST.M18 Ballbuster course for Mean 18

The file "Courses.03.SEA" contains the following Mean 18 golf courses:

BEIJING.M18 Beijing C.C. for Mean 18  
BRANDY.M18 Brandywine C.C. for Mean 18

BREWSKEY.M18 Mean 18 Brewskey Park G.C.  
BUTLER.M18 Butler National for Mean 18  
CAJUILES.M18 Campo de Cajules course for Mean 18

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APACHE.M18 Apache Wells G.C. for Mean 18  
AQUAPHOB.M18 Aquaphobia C.C. for Mean 18  
BAIN.M18 Bain's Pros course for Mean 18  
BALLBUST.M18 Ballbuster course for Mean 18

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BREWSKEY.M18 Mean 18 Brewskey



Park G.C.

BUTLER.M18 Butler National for Mean 18

CAJUILES.M18 Campo de Cajuales course for Mean 18

### IIGS.GM.03 to IIGS.GM.05 - BOUNCING BLUSTER

Bouncing Bluster is a variation on the traditional Breakout game. You must destroy a wall of bricks with a racket and a ball. This game includes advanced features: randomly moving monsters; a construction set module; six types of bricks (Normal, Rainbow, Invisible, Teleport, Steel and Come-Back); bricks that resist several times; and bricks that release a capsule. Touching the capsule with your racket will produce a variety of good or bad effects.

This game is contained on a three disk set. The disk /B.BLUSTER/ contains the game Bouncing Bluster. The disk /BB.DATA/ contains the game's data files and documentation. The disk /BBCSET/ contains the construction set module.

#### Disk: /B.BLUSTER/ - Boot Disk

This disk contains the Bouncing Bluster game. Boot this disk if you wish to play the game. This disk is configured to bypass the Finder. Bouncing Bluster will load automatically when this disk is booted. This disk contains GS/OS v4.0 because Bouncing Bluster is not compatible with newer versions of GS/OS.

The /B.BLUSTER/ disk may be configured to load the Finder rather than booting directly into the game. To do this, you must rename the file START.FINDER which is located in the SYSTEM folder on this disk. Change the name to START. Double click on the icon named B.BLUSTER.SYS16 to launch this game from the Finder.

#### Disk: /BB.DATA/ - Data Disk (with Documentation)

The disk /BB.DATA/ contains data files needed by the B.BLUSTER program. This disk should be online when you boot the B.BLUSTER program. You may have some problems if you have only one 3.5 inch disk drive.

This disk also contains a utility, named WINDOWS, that will display or print the documentation that is located on this disk. Boot this disk if you wish to view or print the documentation. Included on this disk are 2 AppleWorks Classic word processing files, DOCUMENTATION and

DOCUMENTATION.M. These files explain how to use the construction set module and includes instructions on how to play this game. DOCUMENTATION.M contains the information found in DOCUMENTATION and includes a note describing an incompatibility with GS/OS v5.0.

Several files may be deleted from this disk if you do not wish to use the WINDOWS utility. These files are: READ.ME, WINDOWS, DOGPAW, BASIC.SYSTEM, DOCUMENTATION, PRODOS and STARTUP. Please, do not make changes to the original disk. Don't take any risks, use a copy of this disk!

#### Disk: /BBCSET/ - Construction Set Module

The disk /BBCSET/ contains the construction set module. This disk is not required to play this game. Boot this disk if you wish to use the construction set module. The application BBCSET allows you to create new boards for the Bouncing Bluster game. This disk also includes GS/OS v4.0.

#### GSGM-06 A - Games 1

In the /Ark.II.Levels/ folder:

This folder contains the file ARKIILEVELS, which is a "game" for Arkanoid II: Revenge of DOH.

In the /DHW.Arch.1/ folder:

Two complete "games" for Arkanoid II: Revenge of DOH. One is "Crashanoid" (inside joke) which is about as tough as "ArkII". "Artanoid" is easier, and everything in that one looks like something. By David Wood.

In the /DHW.Arch.2/ folder:

Three complete "games" for Arkanoid II: Revenge of DOH. CRUEL.BASTARDS is a collection of screens which have no right existing. RHAPSODY.IN.RED and THE.BLUES are two obvious theme boards with some tricks. By David Wood.

In the /PreThex/ folder:

PreThex 1.0 by Jason Harper. Thexder is a great game for the IIGs, but it has one annoying problem: you absolutely must turn off Keyboard Buffering in your Control Panel settings to be able to control the game. This can only be attributed to lack of knowledge about the ADB (Apple Desktop Bus) Toolset by the programmers who did the IIGs version, since the problem could have been eliminated

by a dozen or so extra lines of code. Hopefully, Sierra On-Line will fix this (feel free to send them a complaint), but in the meantime those of you who prefer to leave Keyboard Buffering turned on can use PreThex.

It temporarily disables buffering and then runs Thexder. The effect lasts until the computer is turned off or you access the Classic Desk Accessory Menu by pressing Control-Apple-Escape. This means that you cannot access the Control Panel during the game: if you need to adjust the volume or some other option, do so before running PreThex.

In the /Shovel/ folder:

This game is similar to Sokaban. The game-screen consists of a "maze" which contains a number of packets and storage locations. The player must push the packets into the storage spaces. The problem is that these packets can only be pushed from behind, and only one at a time. Sometimes it will be necessary to actually push a packet away from the storage area so that others may be pushed instead. It is really quite complex and addictive.

In the /Worm.Runner/ folder:

The game begins with the worm poised and ready to seek out a nice, juicy mushroom ('mushies') to satisfy his palette. Pressing the 'I' key will start the game with the worm travelling to the top of the screen. Try to guide him to the mushroom by moving the worm to the left or right and up or down.

The worm is very sensitive and one wrong move will cause it to 'crash into the wall and lose a life' time. There are three lives to start, and a bonus life will be awarded after 1000 points.

After 5 'mushies' have been eaten in a level, it is up to you to get the worm safely out of one of the opened up passageways. He must get through to wiggle over to the next level. This game is shareware, \$5.00 fee. By Jim Van Hassel.

In the /Yahtzee/ folder:

This is the familiar dice game for the Apple IIGs. The game itself is easy to use and play, and the instructions are included within it. Requires System Disk 3.2 or latter. Includes a Yahtzee Finder icon file. By David W. Buell.

#### GSGM-07 A - Games 2

In the /BB.Triva/ folder:

Baseball Triva v4.2 by Russ Eagle and



TinaSoft. Baseball Triva is a two player game. You must correctly enter the answers to a series of Baseball Triva questions. Shareware, \$10 fee.

In the /F1.Racer/ folder:

A graphic's based Formula I race-game written by Joel A. Quejahda. In this game, you will be racing against the clock. You must travel a set minimum distance within a set time before you can move on to the next leg of the race. You will have to avoid hitting the other race cars on the track. You start the race with five cars at your disposal and a full tank of gas. Depending on how fast you are running, you will soon run out of gas. Every now and then, a "Gas Pump" will appear on the road and you will be able to stop and fill up. You get an extra car for each leg that you finish. Requires at least 512k RAM. This software is Shareware, \$15 fee.

In the /Match.Game/ folder:

Matching Game by Matt Wachowski. This game was written using Super BASIC. Super BASIC expands Applesoft by giving it commands that deal with super high resolution graphics, animation, and sound. In this game you are given a set of cards, face down, on the screen. Each player selects any 2 of these cards with the mouse. When a card is selected it turns over and reveals it's identity. If the cards do not match then they flip back over and it is the next players turn. If they DO match then they disappear and the same player scores a point and gets to try again. When all of the cards are gone the game is over and the scores are shown on the screen.

### GSGM-08 - IIGS.GAMES.08 - Games 3

In the /IIGS.GAMES.08/GAMES/ folder:

This folder contains a variety of IIGS games. The following 4 folders can be found in the GAMES folder: BlackJack, Cards, Pyramid, Solitaire2.0.

In the /IIGS.GAMES.08/GAMES/BLACK-JACK/ folder:

Black Jack GS version 1.0 by Bob Moragues. BlackJack GS is a single player game of BlackJack for the Apple //GS. One player plays against the dealer. The house rules for this program are modeled after the casinos in Lake Tahoe. This program is mouse controlled and uses pull down menus and Apple key equivalents. Requires at least 512K. This program requires many of the toolsets found on the system disk.

In the /IIGS.GAMES.08/GAMES/CARDS/ folder:

This folder contains a variety of card decks for use with any of the great Wood and Davies GS Solitaire Games. This includes Pyramid and Solitaire2.0 which can be found on this disk, and MonteCarlo and Poker which can be found on the next disk in this series: GSGM-09 - Games 4. The following 8 folders can be found in the CARDS folder: AppleLink, Batman, Bears, Converter, Pyramid, Rummy, Solitaire, Summer.

In the /IIGS.GAMES.08/GAMES/CARDS/ APPELINK/ folder:

This is a great AppleLink Logo card set. The backs of the cards in this deck displays the AppleLink logo. By Doug, Todd, changes by Bob.

In the /IIGS.GAMES.08/GAMES/CARDS/ BATMAN/ folder:

A new card set featuring all your favorites from Batman stories. By Andy Francis.

In the /IIGS.GAMES.08/GAMES/CARDS/ BEARS/ folder:

Here's a new set of cards for any of the Wood and Davies GS Solitaire Games. For those who love teddy bears this will be a fun card set! By Douglas Leland Davies.

In the /IIGS.GAMES.08/GAMES/CARDS/ CONVERTER/ folder:

Card Convert Utility by Todd J Wood. Now you can make your own cards for Solitaire, Pyramid, Poker, or Monte Carlo. This utility allows you to convert standard \$C1 super-hires pictures into card sets. This utility provides 4 templates for each card suit. You can modify these templates in the paint program of your choice (as long as you save it as a standard \$C1 picture) and then run this convert utility on them, to generate the cards!

In the /IIGS.GAMES.08/GAMES/CARDS/ PYRAMID/ folder:

A set of cards that can be used with Pyramid or any of the great Wood and Davies GS Solitaire Games.

In the /IIGS.GAMES.08/GAMES/CARDS/ RUMMY/ folder:

Rummy cards designed to be as close to the real thing! Just replace the old card files with this set. This was done using the Card ConverterGS for the Solitaire games, by Todd Woods & Doug Davies. By Lendal & Judy Derreberry.

In the /IIGS.GAMES.08/GAMES/CARDS/ SOLITAIRE/ folder:

A set of cards that can be used with Solitaire or any of the great Wood and Davies GS Solitaire Games.

In the /IIGS.GAMES.08/GAMES/CARDS/ SUMMER/ folder:

New cards for Solitaire GS, Poker GS, MonteCarlo GS, or Pyramid GS. Summer Time edition. Includes a tribute to all of the author's special Alink friends! By Doug Davies.

In the /IIGS.GAMES.08/GAMES/PYRAMID/ folder:

This is the new shareware version of Pyramid Solitaire. Neat SHR graphics and nearly impossible to beat. The object of the game is to remove all the cards in the pyramid. You can only remove 2 cards at a time, and they must add up to 13. You can look at the next card on the deck by clicking on the deck. The cards on the deck do not need to be completely disposed of to win, but they will help in removing cards in the pyramid.

In the /IIGS.GAMES.08/GAMES/SOLITAIRE2.0/ folder:

This is the new shareware version of Solitaire, a SHR game from Applelink. Nice graphics, hard to beat.

### GSGM-09 A - Games 4

In the /Eucre.2.2/ folder:

In Euchre v2.2, you and your computer partner play against two computer opponents. Your partner has been programmed to play very intelligently. However, so have your opponents. This software is Shareware, \$10 fee. By Bill Hamshire.

Euchre is a card game in which the team that calls trump must get three out of five tricks. Therefore, to start each hand, all four players start with five cards. Your partner is the player opposite you making the players to the left and right your opponents. This game is played with only the cards numbered 9 up through Ace, leaving four cards for the blind. The blind is the group of cards left out of each hand. In Euchre, when trump is decided, the jack of that suit is the highest trump, commonly called the right bower. The jack of the same color suit is the second highest. This is the left bower. The rest of the trump and the other three suits are ranked ace high. The dealer turns up the top card of the blind. The suit of that card is the first one up for bidding.





Play begins with the player to the left of the dealer leading. Each player must, in turn, play one card from their hand. If they have cards of the suit that was lead, they must play one of them, this is called following suit. Otherwise, the player can play any card in his hand. The trick is won by the player who played the highest trump card, or, if none where played, the highest card in the suit that was lead. This player collects the four cards and turns them face down in front of him. He then continues play by leading the next trick.

In the /Monte.Carlo/ folder:

Monte Carlo-style Solitaire card game. The Latest and Greatest card game from Todd Wood. It's also winnable! The object of MonteCarlo is to get rid of all the cards. When the game starts 20 cards are layed down in a 5x4 grid on the table. You remove adjacent cards of the same type. Then you click the DEAL button and the cards will snake-up and new ones will be pulled out of the deck. You continue this, until you can no longer remove any cards or you win the game. Instructions are provided. By Todd J Wood.

The previous disk in this series, GSGM-08 - Games 3, contains additional card decks which may be used with this game and two additional Todd Wood and Doug Davies solitaire games: Pyramid and Solitaire.

In the /Poker/ folder:

Video Poker version 1.0 is a Casino-type Draw Poker game. From the card freaks who brought you Solitaire in all its permutations, Todd Wood and Doug Davies. Shareware, \$10 fee.

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In the /PowerPlay.v1.1/ folder:

PowerPlay version 1.1 by P. Brinkley. An earlier version (1.0) is not system 6 compatible. PowerPlay is a GS program containing 4 different games. The 4 games are:

Tron— A 2-player light-cycle race game.

FourPlay— A brain-twisting Tetris- like game.

GridLock— A puzzle with ever-increasing complexity.

PIGnBULL— A number matching game, similar to Mastermind.

Instructions for these games are built-in

and are available through an online Help button. PowerPlay is FREEWARE.

In the /Return.Woz/ folder:

In this simple but challenging game, you control a helicopter with a man hanging from the landing gear. The man will fall off and you must help him land in a hay wagon. By Parik Rao and Scott Pease.

In the /Sheepshead/ folder:

Sheepshead version 1.1 SHR 640-mode card game by Bill Hamshire. This software is Shareware, \$10 fee. You against 3 computer opponents. By the creator of GSEucru. Sheepshead is the rough translation of Schafskopf, the original German name. There are many variations of this game. There are 32 cards in the deck, 7 up to Ace. Each card has a rank. The object of the game is to get the most points, not tricks or cards.

Each of the five players get six cards and the last two are put face down in the middle. Starting with the left of the dealer, each player gets to decide if he wants to "pick." Picking involves adding the two cards in the middle to your hand and discarding two that you don't want.

The partner is the player with the Jack of Diamonds. No one except the player with the Jack of Diamonds knows who is on their side until the Jack is played. As opponents, your team is trying to get 60 points to set the picker.

Once the picker has been determined. Play starts with the player to the left of the dealer leading. As usual, you must follow suit and when everyone has played a card, the highest card takes the trick and that player leads the next trick. The high point cards are called schmear or schmear cards. If someone on your team has the trick already you would want to schmear the trick so that your team takes as many points as possible.

There is no real end to the "game" Sheepshead. It is just a series of hands that usually ends when someone is out of chips or money.

In the /Tetrotrix/ folder:

Tetrotrix version 1.1 by Pierre Abel. This is a "Tetris" clone. Groups of blocks fall from the top of the screen. You must move and rotate the blocks into a position where they will match the blocks at the bottom of the screen. High scores are saved to disk. This is Shareware, \$15 fee. By Pierre Abel.

GSGM-09 A - Games 4

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In this simple but challenging game, you control a helicopter with a man hanging from the landing gear. The man will fall off and you must help him land in a hay wagon. By Parik Rao and Scott Pease.

In the /Sheepshead/ folder:

Sheepshead version 1.1 SHR 640-mode card game by Bill Hamshire. This software is Shareware, \$10 fee. You against 3 computer opponents. By the creator of GSEucre. Sheepshead is the rough translation of Schafskopf, the original German name. There are many variations of this game. There are 32 cards in the deck, 7 up to Ace. Each card has a rank. The object of the game is to get the most points, not tricks or cards.

Each of the five players get six cards and the last two are put face down in the middle. Starting with the left of the dealer, each player gets to decide if he wants to "pick." Picking involves adding the two cards in the middle to your hand and discarding two that you don't want.

The partner is the player with the Jack of Diamonds. No one except the player with the Jack of Diamonds knows who is on their side until the Jack is played. As opponents, your team is trying to get 60 points to set the picker.

Once the picker has been determined. Play starts with the player to the left of the dealer leading. As usual, you must follow suit and

when everyone has played a card, the highest card takes the trick and that player leads the next trick. The high point cards are called schmear or schmear cards. If someone on your team has the trick already you would want to schmear the trick so that your team takes as many points as possible.

There is no real end to the "game" Sheepshead. It is just a series of hands that usually ends when someone is out of chips or money.

In the /Tetrotrix/ folder:

Tetrotrix version 1.1 by Pierre Abel. This is a "Tetris" clone. Groups of blocks fall from the top of the screen. You must move and rotate the blocks into a position where they will match the blocks at the bottom of the screen. High scores are saved to disk. This is Shareware, \$15 fee. By Pierre Abel.

**GSGM-10 - IIGS.GAMES.10 - Games 5**

In the /IIGS.GAMES.10/GAMES/ folder:

This folder contains a variety of IIGs games. The following 2 folders can be found in the GAMES folder: Orbzone, Rogue.

In the /IIGS.GAMES.10/GAMES/ORBZONE/ folder:

By the authors of Xenocide. Orbzone is similar to the classic game Asteroids. You pilot a spaceship as it hurtles through space while blasting asteroid like objects before they crash into your spaceship. Requires a joystick. You can create and use your own asteroid like shapes in the game. Includes a "template" that you will draw your custom shapes onto. Use Paintworks Gold to create your own shapes and put them into the template. You can have up to 10 levels in your custom game. Orbzone was designed specifically for use with stereo output. Written by Brian Greenstone. Artwork by Dave Triplett. This game is Shareware, \$5 fee. (C) 1989 Pangea Software.

In the /IIGS.GAMES.10/GAMES/ROGUE/ folder:

This is a game called Rogue. The original game was written by Ken Arnold and Michael Toy for Unix. Tim Stoehr wrote a clone of the game which I have ported to the IIGs. This is a plain-vanilla version of rogue (5.3). This game is fairly true to the original. It uses the text screen and the normal set of VI keys (hjkl) for movement. I/O has been severely hacked for speed.

Rogue (the Dungeons of Doom) is a fantasy game. You have just finished your years as a

student at the local fighter's guild. After much practice and sweat you have finally completed your training and are ready to embark upon a perilous adventure. As a test of your skills, the local guildmasters have sent you into the Dungeons of Doom. Your goal is to grab as much treasure as you can, find the Amulet of Yendor, and get out of the Dungeons of Doom alive.

**GSGM-11 - IIGS.GAMES.11 - Games 6**

In the /IIGS.GAMES.11/GAMES/ folder:

This folder contains a variety of IIGs games. The following 3 folders can be found in the GAMES folder: Golem, MAG, Moria.

In the /IIGS.GAMES.11/GAMES/GOLEM/ folder:

This is a IIGS tank game with 30+ levels of play. Written by Jason L Smart (Travelling Faire Software.) A Golem is a powerful, compact tank, designed for efficient movement through small, narrow passages and caves. Golem contains an unlimited number of shots and 5 missiles. It also has a powerful cloaking shield which effectively prevents detection.

The moon XG4 had been a peaceful, settled place for decades. Its small colony mined the moon for krymite, a red rock that stored incredible amounts of energy. In the year 2132, an intergalactic terrorist force took over the small moon XG4 and threatened to kill every colonist if the Alliance attempted a rescue. Alliance officials explored their options and agreed on a plan. If they could safely land one tank by an entrance to the mines, it could move safely inside the moon without attracting any attention. The tank would then detonate a bomb in the mines directly below the terrorist headquarters, which would set off a chain reaction destroying the terrorists. Just as the tank was laying the bomb a strange creature appeared and destroyed the tank, leaving the bomb untouched. The plan was then revised: infiltrate the mines, find the bomb, and detonate it. This program is Shareware, \$10 fee.

In the /IIGS.GAMES.11/GAMES/MAG/ folder:

Moria Adventurer's Guild, Version 1.1. MAG has been designed to work with Moria. Moria was originally developed on Unix, and Jason Harper was kind enough to port it to the Apple IIGs. While Moria is an excellent game, you can only have one character and there is no support for creating and playing multiple



characters. And when you die, you're dead! There's no starting over at the last saved position. MAG addresses these shortcomings. MAG is freeware. Copyright 1990, Zak Enterprises. All Rights Reserved. By Bryan Pietrzak.

In the /IIGS.GAMES.11/GAMES/MORIA/ folder:

Mines of Moria version 4.83. Moria is a dungeon exploration game originally written for VAX/VMS computer systems, and now available for a wide variety of computers. The IIGS version was ported from an IBM PC translation of the Unix conversion of the VMS original. By Jason Harper.

The game of Moria is a single player dungeon simulation. A player may choose from a number of races and classes when creating their character, and then 'run' that character over a period of days, weeks, even months; attempting to win the game by defeating the Balrog which lurks in the deeper levels.

The player will begin his adventure on the town level where he may acquire supplies, weapons, armor, and magical devices by bartering with various shop owners. After preparing for his adventure, the player can descend into the dungeons of Moria where fantastic adventures await his coming!

#### **GSGM-12 A - Games 7**

In the /BattleShip.GS/ folder:

This game is based on the traditional Battleship game. Requires two players. You must wait until the end of the game before you can quit back to the Finder. Includes nice graphics and sound effects. By Chad Faragher.

In the /Daleks/ and /GS.Daleks/ folder:

Your object is to kill all the Daleks by making them crash into each other. Daleks will move straight towards you, ignoring each other so they crash quite easily. Once per level you may use the Sonic Screwdriver. The Sonic screwdriver destroys all the Daleks in a one move radius of your guy. You may also Teleport to a random place on the screen, watch out you can teleport right onto a Dalek. Last Stand makes your guy stand still until he dies or all the Daleks are dead.

In the /Mystery.Color/ folder:

Mystery Colors by Warren Stone. The object of the game is to decipher a color code created by the computer. You alter the difficulty by picking the number of positions and available colors. You guess by clicking on a

color in the available color box. When all positions are filled, the guess is scored.

The computer will tell you how many dots are of the correct color AND in the right position. It will also tell you how many dots are of the correct color BUT in the wrong position. A color dot will never be counted twice, if it is scored "correct position & color" then it will not be included in the correct color score.

In the /Senseless.2/ folder:

Senseless Violence 2 (c)1990 Pangea Software. By the authors of Xenocide. Senseless Violence 2: You Use, You Die, is a game which is meant as a teaching tool about some of today's most pressing problems: Smoking, Drug use, and Racism. The game requires a joystick, and at least System Disk 5.0.

In the game, you have to guide yourself thru a wormhole and avoid objects which represent smoking, drugs, and racism. When you exit one wormhole, you will be thrown into another even harder one. You start the game with only 200 lasers, so use them sparingly. Each time you hit an object in the wormhole, it will affect one of your 3 shield status meters. When a meter runs out then the game is over.

The music in this game was designed specifically for stereo use. Written by Brian Greenstone, music and advice by Gene Koh. This game is shareware, \$5 fee.

In the /Tank.GS/ folder:

GSTanks by Ian House. An attempt to make an artificially intelligent supertank, has gone horribly wrong. Someone accidentally switched the tanks cd-rom memory with an Elvis cd and the tank went bezerk, it began blowing people away while doing its impersonation of Elvis' dancing. You, out fitted with an inferior tank must destroy this evil menace which threatens to pollute the world with its terrible music.

In the /Tesseract/ folder:

Tesseract version 2.0p by David Lo. Freeware. A IIGS text adventure game for the geometrically inclined. This game has the standard text adventure game command parser (200 word vocabulary.) You type two-word 'Verb Noun' commands, such as 'use stack' or 'get all'. Type 'quit' to quit the game.

#### **GSGM-13 - IIGS.GAMES.13 - Games 8**

In the /IIGS.GAMES.13/GAMES/ folder:

This folder contains a variety of IIGS games. The following 8 folders can be found in the

GAMES folder: AsTheLinkTurns, Backgammon, Beast, Four.In.A.Row, Four.Play, Romulans, Spell.Binder.GS, TicTacToe.

In the /IIGS.GAMES.13/GAMES/ASTHELINKTURNS/ folder:

Welcome to the most sophisticated, graphics oriented, public domain program for the Apple IIGS. Programming and Layout by Parik Rao. Sound and Graphics by Scott Pease. The object is to destroy as many creatures in the given time as possible. Merely position your cross-hairs over any of the flying bugs, and press the fire button or spacebar. You need to kill at least 50 to frighten them all away. You have only 2 minutes, 15 seconds to accomplish your mission. Can you do it?

There are many easter eggs in this program! Try typing in things, one thing is the name of a information service (abbreviated) at the game screen, it will bring up something interesting.

This game includes a joystick calibrator, its a graphic representation, and allows you to set your joystick to the exact center of the graphics screen. This program will not quit back to the Finder. When you're finished, you will have to reboot your computer. This game is freeware. By Parik Rao and Scott Pease, Rogue Systems.

In the /IIGS.GAMES.13/GAMES/BACKGAMMON/ folder:

GS Backgammon Version 1.1. Version 1.1 of GS Backgammon includes an improved computer opponent and all known bugs in version 1.0 have been fixed. The computer player will give you a hard time if you think you can win.

Select "Help..." from the "Game" menu to see the game instructions. These instructions provide details on the play of GS Backgammon (how to move etc.) and assume the player already knows the rules of backgammon. If you need help on the rules, refer to "Hoyle" or any standard game reference. By Phil Doto. The game runs under GS/OS.

In the /IIGS.GAMES.13/GAMES/BEAST/ folder:

Move the blocks around and trap the beasts! By Justin Legakis. Complete instructions for playing this game are included in the program. Don't let it's small size fool you, this is a fun game! Freeware, author encourages donations.



In the /IIGS.GAMES.13/GAMES/FOUR.IN.A.ROW/ folder:

Four In A Row is a strategy game played on a vertical rack of eight columns. Each column can hold eight playing pieces. To play you drop one of your pieces in the column of your choice. The piece slides down to the lowest position in the column (the bottom, or to the top of other pieces in that column). If a column is full it cannot be used for new moves. The object of the game is to have get four of your pieces in a row before the computer does. There is an optional game called GiveAway. In GiveAway you try to force the computer to get four in a row BEFORE you do. This program is in the public domain. By Bill Fortenberry.

In the /IIGS.GAMES.13/GAMES/FOUR.PLAY/ folder:

A variation on Tetris. Elegantly programmed. Has a help file which is accessible within program. The squares drifting down must match the adjacent colors of the neighbors when they land, otherwise they turn grey. Grey and Black match any color. A completed row (and any grey squares below it) disappears. The game is lost if the pile reaches the top. Version 1.0, By P. Brinkley. This software is Freeware, and is in the Public Domain.

In the /IIGS.GAMES.13/GAMES/ROMULANS/ folder:

Fight an invisible ship ala Star Trek. Remember the classic (weren't they all!) episode of Star Trek where the Enterprise was fighting an invisible Romulan warship and they only way that they could kill it was by plotting the vectors. Well, this is an SHR GS recreation of that fight and it is hard! But fun! Included is an icon to place in your Icons folder of the system disk. The game was developed under system disk 4.0 and it seems to work fine on 5.0 as well. Live long and prosper! By Kevin Bradley.

In the /IIGS.GAMES.13/GAMES/SPELL.BINDER.GS/ folder:

This is a brand-new text adventure game with a twist. It totally follows the standard ][GS interface and is mouse-driven. Requires min. of 768k of memory. In this game you are a novice spell caster on a desperate mission to defeat your former master. All of the spells that you know must be written in your spellbook. Other spells can be found on scrolls and cast directly from there or you can transcribe these spells from a scroll to your

spellbook. This game is Shareware, \$10 fee. By Dave Word

**GSGM-14 - IIGS.GAMES.14 - Games 9**  
In the /IIGS.GAMES.14/GAMES/ folder:

This folder contains a variety of IIGs games. The following 5 folders can be found in the GAMES folder: Ballistics.GS, Chips, Copy.Killers, Dungeon.Master, Music.Game.

In the /IIGS.GAMES.14/GAMES/BALLISTICS.GS/ folder:

In this two player game, you and your opponent must fire your cannon at each other. The first player to score a hit on his opponent's cannon wins the game. You control the elevation with the up and down arrow keys and control the range with the left and right arrow keys. Press return to fire. Online help is available, but the game appeared to freeze on me when I selected the help option. By R. M. Yost.

In the /IIGS.GAMES.14/GAMES/CHIPS/ folder:

Chips & DIPS by James W. Winter. Chips & DIPS is an arcade style game. All of the instructions for the game are available from within the game by pressing the ? key after the game screen comes up. Includes an icon file for Chips & DIPS which should be placed in the Icons folder on your system disk. If you have the Chips & DIPS Designer (sent to all registered owners), you can design new levels for the game. Chips & DIPS is Shareware, \$10.00 fee.

In the year 2009, it was discovered that the world wide RAM chip shortage of the past 2 decades was caused by industry insiders who were hoarding chips in order to keep prices high. One of these insiders, Dr. Albert Manschaft, even built a special warehouse to store the chips in and built security robots to protect the chips.

You have been hired to penetrate the warehouse and recover as many chips as you can, for which you will be paid well. Because human contact with the DIPS is frequently fatal, you have built 4 robots which you can control within the warehouse. For every \$5,000 in chips you recover, you are able to build 1 more robot, up to the maximum of 8 robots.

You start the game with 4 robots. Move your robot around the screen picking up chips. Each chip is worth \$100. It costs money to operate the robot, so your money will decrease over time. If at any time, you have no more robots or your money runs out, the game

is over. An extra robot is built for every \$5,000. To activate your magnetic field, hold down the mouse button, joystick button, or Apple key.

In the /IIGS.GAMES.14/GAMES/COPY.KILLERS/ folder:

A PacMan-like Arcade Game. Git The Software Pirates Before They Destroy The Apple II Software Industry. By Brian Greenstone and Dave Triplett. Online help is available by pressing the "?" key. Freeware.

In the /IIGS.GAMES.14/GAMES/DUNGEON.MASTER/ folder:

This folder contains Dungeon Master maps and hint files. There are maps for levels 1 through 13. They can be viewed and printed by any paint program that can load APF (Apple Preferred Format) graphic files. There are three ASCII text hint files. These files can be loaded into your word processor or they can be printed by the program "WINDOWS" which is included on this disk. "DM.SPELLS" is a list of the various spells found in Dungeon Master. Compiled By David Adams. "DMADVLSDT" contains a list of the adventures that can be played. "HINTS" includes many helpful hints.

In the /IIGS.GAMES.14/GAMES/MUSIC.GAME/ folder:

This is a musical guessing game. The computer will play a random sequence of notes. The object of the game is to remember and play the same notes. Online help is available under the Apple menu. Version 1.2, by PC Doto.

In the /IIGS.GAMES.13/GAMES/TICTACTOE/ folder:

A desktop based, mouse controlled, Tic Tac Toe game. Play against another player or the computer. This software is Shareware, \$2 fee. By David M. Good.

**GSGM-15 - IIGS.GAMES.15 - Games 10**  
In the /IIGS.GAMES.15/GAMES/ folder:

This folder contains a variety of IIGs games. The following 5 folders can be found in the GAMES folder: Adventure, Lunar.Lander, MageMaze, Medieval.War, Quadrnome.

*Games will be continued in April issue starting with Games 15.*

# Apple II Disk Library Order Form



## 5-1/4" DISKS:

### System Software

- \_\_\_ APSD-01 #1
- \_\_\_ APSD-02 #2

### Apple Disk Catalog (DOS 3.3)

- \_\_\_ 3 disk set #3

### Apple Disk Catalog (PRODOS)

- \_\_\_ 4 disk set #4

### Appleworks

- \_\_\_ APWK-01
- \_\_\_ APWK-02

### Communications

- \_\_\_ 10 disk set = \$15.00
- \_\_\_ COMM-01
- \_\_\_ COMM-02
- \_\_\_ COMM-03
- \_\_\_ COMM-04
- \_\_\_ COMM-05
- \_\_\_ COMM-06
- \_\_\_ COMM-07A
- \_\_\_ COMM-08
- \_\_\_ COMM-09
- \_\_\_ COMM-10A

### CP/M

- \_\_\_ 11 disk set = \$16.50
- \_\_\_ CP/M-01
- \_\_\_ CP/M-02
- \_\_\_ CP/M-03
- \_\_\_ CP/M-04
- \_\_\_ CP/M-05
- \_\_\_ CP/M-06
- \_\_\_ CP/M-07
- \_\_\_ CP/M-08
- \_\_\_ CP/M-09
- \_\_\_ CP/M-10
- \_\_\_ CP/M-11

### Eamon Adventures

- \_\_\_ 24 disk set = \$36.00
- \_\_\_ EAMN-01
- \_\_\_ EAMN-02 #5
- \_\_\_ EAMN-03 Eamon Master
- \_\_\_ EAMN-04 #5
- \_\_\_ EAMN-05 #5
- \_\_\_ EAMN-06 #5
- \_\_\_ EAMN-07 #5
- \_\_\_ EAMN-08 #5
- \_\_\_ EAMN-09 #5
- \_\_\_ EAMN-10 #5
- \_\_\_ EAMN-11 #5
- \_\_\_ EAMN-12 #5

- \_\_\_ EAMN-13 #5
- \_\_\_ EAMN-14 #5
- \_\_\_ EAMN-15 #5
- \_\_\_ EAMN-16 #5
- \_\_\_ EAMN-17 #5
- \_\_\_ EAMN-18 #5
- \_\_\_ EAMN-19 #5
- \_\_\_ EAMN-20 #5
- \_\_\_ EAMN-21 #5
- \_\_\_ EAMN-22 #5
- \_\_\_ EAMN-23 #5
- \_\_\_ EAMN-24 #5

### Education

- \_\_\_ 20 disk set = \$30.00
- \_\_\_ EDUC-01
- \_\_\_ EDUC-02
- \_\_\_ EDUC-03
- \_\_\_ EDUC-04
- \_\_\_ EDUC-05
- \_\_\_ EDUC-06
- \_\_\_ EDUC-07
- \_\_\_ EDUC-08
- \_\_\_ EDUC-09
- \_\_\_ EDUC-10
- \_\_\_ EDUC-11
- \_\_\_ EDUC-12
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- \_\_\_ EDUC-16
- \_\_\_ EDUC-17
- \_\_\_ EDUC-18
- \_\_\_ EDUC-19
- \_\_\_ EDUC-20

### Forth

- \_\_\_ FRTH-01
- \_\_\_ FRTH-02
- \_\_\_ FRTH-03

### Games

- \_\_\_ 13 disk set = \$19.50
- \_\_\_ GAME-01
- \_\_\_ GAME-02
- \_\_\_ GAME-03
- \_\_\_ GAME-04
- \_\_\_ GAME-05
- \_\_\_ GAME-06
- \_\_\_ GAME-07
- \_\_\_ GAME-08
- \_\_\_ GAME-09
- \_\_\_ GAME-10
- \_\_\_ GAME-11
- \_\_\_ GAME-12
- \_\_\_ GAME-13

### Logo

- \_\_\_ LOGO-01
- \_\_\_ LOGO-02

### Membership Directory

- \_\_\_ MEMD-01

### Miscellaneous

- \_\_\_ 25 disk set = \$37.50
- \_\_\_ MISC-01
- \_\_\_ MISC-02
- \_\_\_ MISC-03
- \_\_\_ MISC-04
- \_\_\_ MISC-05
- \_\_\_ MISC-06
- \_\_\_ MISC-07
- \_\_\_ MISC-08
- \_\_\_ MISC-09
- \_\_\_ MISC-10
- \_\_\_ MISC-11
- \_\_\_ MISC-12
- \_\_\_ MISC-13
- \_\_\_ MISC-14
- \_\_\_ MISC-15
- \_\_\_ MISC-16
- \_\_\_ MISC-17
- \_\_\_ MISC-18
- \_\_\_ MISC-19
- \_\_\_ MISC-20
- \_\_\_ MISC-21
- \_\_\_ MISC-22
- \_\_\_ MISC-23
- \_\_\_ MISC-24
- \_\_\_ MISC-25

### New Print Shop

- \_\_\_ 31 disk set = \$46.50
- \_\_\_ NWPS-01
- Graphics
- \_\_\_ NWPS-02
- Graphics
- \_\_\_ NWPS-03
- Graphics
- \_\_\_ NWPS-04
- Graphics
- \_\_\_ NWPS-05
- Graphics
- \_\_\_ NWPS-06
- Graphics
- \_\_\_ NWPS-07
- Graphics
- \_\_\_ NWPS-08
- Graphics
- \_\_\_ NWPS-09
- Graphics
- \_\_\_ NWPS-10
- Graphics
- \_\_\_ NWPS-11
- Graphics
- \_\_\_ NWPS-12

### Graphics

- \_\_\_ NWPS-13 Graphics
- \_\_\_ NWPS-14 Graphics
- \_\_\_ NWPS-15 Graphics
- \_\_\_ NWPS-16 Graphics
- \_\_\_ NWPS-17 Graphics
- \_\_\_ NWPS-18 Graphics
- \_\_\_ NWPS-19 Graphics
- \_\_\_ NWPS-20 Graphics
- \_\_\_ NWPS-21 Graphics
- \_\_\_ NWPS-22 Graphics
- \_\_\_ NWPS-23 Graphics
- \_\_\_ NWPS-24 Graphics
- \_\_\_ NWPS-25 Graphics
- \_\_\_ NWPS-26 Graphics
- \_\_\_ NWPS-27 Graphics
- \_\_\_ NWPS-28 Graphics
- \_\_\_ NWPS-29 Borders
- \_\_\_ NWPS-30 Borders
- \_\_\_ NWPS-31 Fonts

### Pascal

- \_\_\_ 8 disk set \$12.00
- \_\_\_ PASC-01
- \_\_\_ PASC-02
- \_\_\_ PASC-03
- \_\_\_ PASC-04
- \_\_\_ PASC-05
- \_\_\_ PASC-06
- \_\_\_ PASC-07
- \_\_\_ PASC-08

### Pilot

- \_\_\_ PILT-01

### Utilities

- \_\_\_ 24 disk set = \$36.00
- \_\_\_ UTIL-01
- \_\_\_ UTIL-02
- \_\_\_ UTIL-03
- \_\_\_ UTIL-04
- \_\_\_ UTIL-05
- \_\_\_ UTIL-06
- \_\_\_ UTIL-07
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- \_\_\_ UTIL-21
- \_\_\_ UTIL-22
- \_\_\_ UTIL-23

## \_\_\_ UTIL-24

- (#1) System Disk V. 4.0.2 - \$1.50
- (#2) DOS 3.3 System Master - \$1.50
- (#3) Apple Disk Catalog (A) (DOS 3.3) - 3 disk set - \$3.00
- (#4) Apple Disk Catalog (A) (ProDos) - 4 disk set - \$4.00
- (#5) Requires EAMN-03

## 3-1/2" DISKS:

### System Disk

- \_\_\_ 2APS-01 #6

### Apple Disk Catalog

- \_\_\_ 2ADC-01A #7
- \_\_\_ 2ADC-02A #7

### Appleworks

- \_\_\_ 2AWK-01

### Communications

- \_\_\_ 2COM-01
- \_\_\_ 2COM-02
- \_\_\_ 2COM-03

### Education

- \_\_\_ 2EDU-01

### Membership Directory

- \_\_\_ 2MRD-01

### Utilities

- \_\_\_ 2UTIL-01
- \_\_\_ 2UTIL-02A

(#6) - System Disk - V. 4.0.2 - \$3.00

(#7) - Apple Disk Catalog - 2 Disk set - \$4.00

**Note:** Some disks may contain Shareware. Please send a remittance to the author of the program if you use it.



# Apple IIGS Disk Library Order Form

## 3-1/2 DISKS:

### System Software

- \_\_\_ GSAS-01 (\*1)
- \_\_\_ GSAS-02 (\*2)
- \_\_\_ GSAS-03 (\*3)
- \_\_\_ GSAS-04 (\*4)

### Communications

- \_\_\_ 7 disk set = \$21
- \_\_\_ GSCM-01E
- \_\_\_ GSCM-02C
- \_\_\_ GSCM-03B
- \_\_\_ GSCM-04C
- \_\_\_ GSCM-05B
- \_\_\_ GSCM-06
- \_\_\_ GSCM-07

### DAs, CDevs, FExts, Dvrs, and Inits

- \_\_\_ 16 disk set = \$48
- \_\_\_ GSDA-01C
- \_\_\_ GSDA-02D
- \_\_\_ GSDA-03E
- \_\_\_ GSDA-04C
- \_\_\_ GSDA-05C
- \_\_\_ GSDA-06B
- \_\_\_ GSDA-07C
- \_\_\_ GSDA-08B
- \_\_\_ GSDA-09A
- \_\_\_ GSDA-10A
- \_\_\_ GSDA-11A
- \_\_\_ GSDA-12A
- \_\_\_ GSDA-13A
- \_\_\_ GSDA-14A
- \_\_\_ GSDA-15B
- \_\_\_ GSDA-16B

### Demos

- \_\_\_ 35 disk set = \$35
- or \$1 per disk
- \_\_\_ GSDM-01
- \_\_\_ GSDM-02
- \_\_\_ GSDM-03
- \_\_\_ GSDM-04
- \_\_\_ GSDM-05
- \_\_\_ GSDM-06
- \_\_\_ GSDM-07
- \_\_\_ GSDM-08
- \_\_\_ GSDM-09
- \_\_\_ GSDM-10
- \_\_\_ GSDM-11
- \_\_\_ GSDM-12
- \_\_\_ GSDM-13A
- \_\_\_ GSDM-14
- \_\_\_ GSDM-15
- \_\_\_ GSDM-16
- \_\_\_ GSDM-17A
- \_\_\_ GSDM-18
- \_\_\_ GSDM-19
- \_\_\_ GSDM-20A
- \_\_\_ GSDM-21A
- \_\_\_ GSDM-22
- \_\_\_ GSDM-23
- \_\_\_ GSDM-24
- \_\_\_ GSDM-25
- \_\_\_ GSDM-26
- \_\_\_ GSDM-27

- \_\_\_ GSDM-28
- \_\_\_ GSDM-29
- \_\_\_ GSDM-30
- \_\_\_ GSDM-31
- \_\_\_ GSDM-32
- \_\_\_ GSDM-33
- \_\_\_ GSDM-34
- \_\_\_ GSDM-35

### Developer

- \_\_\_ 20 disk set = \$60
- \_\_\_ GSDV-01
- \_\_\_ GSDV-02
- \_\_\_ GSDV-03
- \_\_\_ GSDV-04
- \_\_\_ GSDV-05A
- \_\_\_ GSDV-06A
- \_\_\_ GSDV-07
- \_\_\_ GSDV-08A
- \_\_\_ GSDV-09
- \_\_\_ GSDV-10A
- \_\_\_ GSDV-11A
- \_\_\_ GSDV-12A
- \_\_\_ GSDV-13
- \_\_\_ GSDV-14A
- \_\_\_ GSDV-15A
- \_\_\_ GSDV-16
- \_\_\_ GSDV-17A
- \_\_\_ GSDV-18
- \_\_\_ GSDV-19
- \_\_\_ GSDV-20

### Disk Catalog

- \_\_\_ 3 disk set = \$6
- \_\_\_ GSDC-01J
- \_\_\_ GSDC-02J
- \_\_\_ GSDC-03J

### Education

- \_\_\_ 10 disk set = \$30
- \_\_\_ 7 disk set = \$21
- (\*5)
- \_\_\_ GSED-01A (\*5)
- \_\_\_ GSED-02A (\*5)
- \_\_\_ GSED-03A (\*5)
- \_\_\_ GSED-04A (\*5)
- \_\_\_ GSED-05A (\*5)
- \_\_\_ GSED-06A (\*5)
- \_\_\_ GSED-07A (\*5)
- \_\_\_ GSED-08A
- \_\_\_ GSED-09
- \_\_\_ GSED-10

### Fonts - BitMapped

- \_\_\_ 27 disk set = \$81
- \_\_\_ GSFT-01
- \_\_\_ GSFT-02
- \_\_\_ GSFT-03
- \_\_\_ GSFT-04
- \_\_\_ GSFT-05
- \_\_\_ GSFT-06
- \_\_\_ GSFT-07
- \_\_\_ GSFT-08
- \_\_\_ GSFT-09
- \_\_\_ GSFT-10
- \_\_\_ GSFT-11
- \_\_\_ GSFT-12
- \_\_\_ GSFT-13

- \_\_\_ GSFT-14
- \_\_\_ GSFT-15
- \_\_\_ GSFT-16
- \_\_\_ GSFT-17
- \_\_\_ GSFT-18
- \_\_\_ GSFT-19
- \_\_\_ GSFT-20
- \_\_\_ GSFT-21
- \_\_\_ GSFT-22
- \_\_\_ GSFT-23
- \_\_\_ GSFT-24
- \_\_\_ GSFT-25
- \_\_\_ GSFT-26
- \_\_\_ GSFT-27

### Fonts - TrueType

- \_\_\_ 30 disk set = \$90
- \_\_\_ GSTT-01
- \_\_\_ GSTT-02
- \_\_\_ GSTT-03
- \_\_\_ GSTT-04
- \_\_\_ GSTT-05
- \_\_\_ GSTT-06
- \_\_\_ GSTT-07
- \_\_\_ GSTT-08
- \_\_\_ GSTT-09
- \_\_\_ GSTT-10
- \_\_\_ GSTT-11
- \_\_\_ GSTT-12
- \_\_\_ GSTT-13
- \_\_\_ GSTT-14
- \_\_\_ GSTT-15
- \_\_\_ GSTT-16
- \_\_\_ GSTT-17
- \_\_\_ GSTT-18
- \_\_\_ GSTT-19
- \_\_\_ GSTT-20
- \_\_\_ GSTT-21
- \_\_\_ GSTT-22
- \_\_\_ GSTT-23
- \_\_\_ GSTT-24
- \_\_\_ GSTT-25
- \_\_\_ GSTT-26
- \_\_\_ GSTT-27
- \_\_\_ GSTT-28
- \_\_\_ GSTT-29
- \_\_\_ GSTT-30

### Games

- \_\_\_ 63 disk set = \$189
- \_\_\_ GSGM-01B
- \_\_\_ GSGM-02B
- \_\_\_ GSGM-03
- \_\_\_ GSGM-04
- \_\_\_ GSGM-05
- \_\_\_ GSGM-06A
- \_\_\_ GSGM-07A
- \_\_\_ GSGM-08
- \_\_\_ GSGM-09A
- \_\_\_ GSGM-10
- \_\_\_ GSGM-11
- \_\_\_ GSGM-12A
- \_\_\_ GSGM-13
- \_\_\_ GSGM-14
- \_\_\_ GSGM-15
- \_\_\_ GSGM-16
- \_\_\_ GSGM-17A

- \_\_\_ GSGM-18A
- \_\_\_ GSGM-19A
- \_\_\_ GSGM-20
- \_\_\_ GSGM-21
- \_\_\_ GSGM-22
- \_\_\_ GSGM-23A
- \_\_\_ GSGM-24B
- \_\_\_ GSGM-25B
- \_\_\_ GSGM-26A
- \_\_\_ GSGM-27
- \_\_\_ GSGM-28
- \_\_\_ GSGM-29
- \_\_\_ GSGM-30
- \_\_\_ GSGM-31
- \_\_\_ GSGM-32
- \_\_\_ GSGM-33
- \_\_\_ GSGM-34
- \_\_\_ GSGM-35A
- \_\_\_ GSGM-36
- \_\_\_ GSGM-37A
- \_\_\_ GSGM-38
- \_\_\_ GSGM-39
- \_\_\_ GSGM-40
- \_\_\_ GSGM-41
- \_\_\_ GSGM-42A
- \_\_\_ GSGM-43
- \_\_\_ GSGM-44
- \_\_\_ GSGM-45
- \_\_\_ GSGM-46
- \_\_\_ GSGM-47
- \_\_\_ GSGM-48
- \_\_\_ GSGM-49
- \_\_\_ GSGM-50
- \_\_\_ GSGM-51
- \_\_\_ GSGM-52
- \_\_\_ GSGM-53
- \_\_\_ GSGM-54
- \_\_\_ GSGM-55
- \_\_\_ GSGM-56
- \_\_\_ GSGM-57
- \_\_\_ GSGM-58
- \_\_\_ GSGM-59A
- \_\_\_ GSGM-60
- \_\_\_ GSGM-61
- \_\_\_ GSGM-62
- \_\_\_ GSGM-63

### Graphics

- \_\_\_ 68 disk set = \$204
- \_\_\_ GSGX-01
- \_\_\_ GSGX-02
- \_\_\_ GSGX-03
- \_\_\_ GSGX-04
- \_\_\_ GSGX-05
- \_\_\_ GSGX-06
- \_\_\_ GSGX-07A
- \_\_\_ GSGX-08A
- \_\_\_ GSGX-09B
- \_\_\_ GSGX-10A
- \_\_\_ GSGX-11
- \_\_\_ GSGX-12
- \_\_\_ GSGX-13A
- \_\_\_ GSGX-14
- \_\_\_ GSGX-15
- \_\_\_ GSGX-16
- \_\_\_ GSGX-17
- \_\_\_ GSGX-18

- \_\_\_ GSGX-19
- \_\_\_ GSGX-20
- \_\_\_ GSGX-21C
- \_\_\_ GSGX-22B
- \_\_\_ GSGX-23
- \_\_\_ GSGX-24
- \_\_\_ GSGX-25
- \_\_\_ GSGX-26
- \_\_\_ GSGX-27
- \_\_\_ GSGX-28A
- \_\_\_ GSGX-29
- \_\_\_ GSGX-30
- \_\_\_ GSGX-31A
- \_\_\_ GSGX-32A
- \_\_\_ GSGX-33
- \_\_\_ GSGX-34
- \_\_\_ GSGX-35
- \_\_\_ GSGX-36
- \_\_\_ GSGX-37
- \_\_\_ GSGX-38
- \_\_\_ GSGX-39
- \_\_\_ GSGX-40
- \_\_\_ GSGX-41
- \_\_\_ GSGX-42
- \_\_\_ GSGX-43
- \_\_\_ GSGX-44
- \_\_\_ GSGX-45
- \_\_\_ GSGX-46
- \_\_\_ GSGX-47
- \_\_\_ GSGX-48
- \_\_\_ GSGX-49
- \_\_\_ GSGX-50
- \_\_\_ GSGX-51
- \_\_\_ GSGX-52
- \_\_\_ GSGX-53
- \_\_\_ GSGX-54
- \_\_\_ GSGX-55
- \_\_\_ GSGX-56
- \_\_\_ GSGX-57
- \_\_\_ GSGX-58
- \_\_\_ GSGX-59
- \_\_\_ GSGX-60
- \_\_\_ GSGX-61
- \_\_\_ GSGX-62
- \_\_\_ GSGX-63
- \_\_\_ GSGX-64
- \_\_\_ GSGX-65
- \_\_\_ GSGX-66
- \_\_\_ GSGX-67
- \_\_\_ GSGX-68

### HyperCard

- \_\_\_ 6 disk set = \$18
- \_\_\_ GSHC-01
- \_\_\_ GSHC-02
- \_\_\_ GSHC-03
- \_\_\_ GSHC-04
- \_\_\_ GSHC-05
- \_\_\_ GSHC-06

### HyperStudio

- \_\_\_ Demo Ver. (1-10) = \$10
- \_\_\_ GSHS-01
- \_\_\_ GSHS-02
- \_\_\_ GSHS-03
- \_\_\_ GSHS-04
- \_\_\_ GSHS-05

# Apple IIGS Disk Library Order Form



- \_\_\_ GSHS-06
- \_\_\_ GSHS-07
- \_\_\_ GSHS-08
- \_\_\_ GSHS-09
- \_\_\_ GSHS-10
- \_\_\_ 66 disk set  
(11-76) = \$198
- \_\_\_ GSHS-11
- \_\_\_ GSHS-12
- \_\_\_ GSHS-13
- \_\_\_ GSHS-14
- \_\_\_ GSHS-15
- \_\_\_ GSHS-16
- \_\_\_ GSHS-17
- \_\_\_ GSHS-18
- \_\_\_ GSHS-19
- \_\_\_ GSHS-20
- \_\_\_ GSHS-21A
- \_\_\_ GSHS-22
- \_\_\_ GSHS-23
- \_\_\_ GSHS-24
- \_\_\_ GSHS-25
- \_\_\_ GSHS-26
- \_\_\_ GSHS-27
- \_\_\_ GSHS-28
- \_\_\_ GSHS-29
- \_\_\_ GSHS-30
- \_\_\_ GSHS-31
- \_\_\_ GSHS-32
- \_\_\_ GSHS-33
- \_\_\_ GSHS-34
- \_\_\_ GSHS-35
- \_\_\_ GSHS-36
- \_\_\_ GSHS-37
- \_\_\_ GSHS-38
- \_\_\_ GSHS-39
- \_\_\_ GSHS-40
- \_\_\_ GSHS-41
- \_\_\_ GSHS-42
- \_\_\_ GSHS-43
- \_\_\_ GSHS-44
- \_\_\_ GSHS-45
- \_\_\_ GSHS-46
- \_\_\_ GSHS-47
- \_\_\_ GSHS-48
- \_\_\_ GSHS-49
- \_\_\_ GSHS-50
- \_\_\_ GSHS-51
- \_\_\_ GSHS-52
- \_\_\_ GSHS-53
- \_\_\_ GSHS-54
- \_\_\_ GSHS-55
- \_\_\_ GSHS-56
- \_\_\_ GSHS-57
- \_\_\_ GSHS-58
- \_\_\_ GSHS-59
- \_\_\_ GSHS-60
- \_\_\_ GSHS-61
- \_\_\_ GSHS-62
- \_\_\_ GSHS-63
- \_\_\_ GSHS-64
- \_\_\_ GSHS-65
- \_\_\_ GSHS-66
- \_\_\_ GSHS-67
- \_\_\_ GSHS-68
- \_\_\_ GSHS-69
- \_\_\_ GSHS-70

- \_\_\_ GSHS-71
- \_\_\_ GSHS-72
- \_\_\_ GSHS-73
- \_\_\_ GSHS-74
- \_\_\_ GSHS-75
- \_\_\_ GSHS-76
- Icons**
- \_\_\_ 12 disk set = \$36
- \_\_\_ GSIC-01B
- \_\_\_ GSIC-02B
- \_\_\_ GSIC-03B
- \_\_\_ GSIC-04B
- \_\_\_ GSIC-05B
- \_\_\_ GSIC-06B
- \_\_\_ GSIC-07B
- \_\_\_ GSIC-08A
- \_\_\_ GSIC-09A
- \_\_\_ GSIC-10A
- \_\_\_ GSIC-11A
- \_\_\_ GSIC-12A
- Membership Directory**
- \_\_\_ GSDM-01
- Miscellaneous**
- \_\_\_ GSMS-01A
- Music**
- \_\_\_ 83 disk set = \$249
- \_\_\_ GSMU-01C
- \_\_\_ GSMU-02
- \_\_\_ GSMU-03
- \_\_\_ GSMU-04
- \_\_\_ GSMU-05
- \_\_\_ GSMU-06
- \_\_\_ GSMU-07
- \_\_\_ GSMU-08
- \_\_\_ GSMU-09
- \_\_\_ GSMU-10
- \_\_\_ GSMU-11
- \_\_\_ GSMU-12
- \_\_\_ GSMU-13C
- \_\_\_ GSMU-14
- \_\_\_ GSMU-15
- \_\_\_ GSMU-16A
- \_\_\_ GSMU-17
- \_\_\_ GSMU-18A
- \_\_\_ GSMU-19A
- \_\_\_ GSMU-20A
- \_\_\_ GSMU-21A
- \_\_\_ GSMU-22
- \_\_\_ GSMU-23A
- \_\_\_ GSMU-24A
- \_\_\_ GSMU-25A
- \_\_\_ GSMU-26A
- \_\_\_ GSMU-27A
- \_\_\_ GSMU-28A
- \_\_\_ GSMU-29A
- \_\_\_ GSMU-30A
- \_\_\_ GSMU-31A
- \_\_\_ GSMU-32A
- \_\_\_ GSMU-33A
- \_\_\_ GSMU-34A
- \_\_\_ GSMU-35A
- \_\_\_ GSMU-36A

- \_\_\_ GSMU-37A
- \_\_\_ GSMU-38A
- \_\_\_ GSMU-39A
- \_\_\_ GSMU-40A
- \_\_\_ GSMU-41A
- \_\_\_ GSMU-42
- \_\_\_ GSMU-43A
- \_\_\_ GSMU-44A
- \_\_\_ GSMU-45
- \_\_\_ GSMU-46
- \_\_\_ GSMU-47
- \_\_\_ GSMU-48
- \_\_\_ GSMU-49
- \_\_\_ GSMU-50
- \_\_\_ GSMU-51
- \_\_\_ GSMU-52A
- \_\_\_ GSMU-53A
- \_\_\_ GSMU-54A
- \_\_\_ GSMU-55A
- \_\_\_ GSMU-56A
- \_\_\_ GSMU-57A
- \_\_\_ GSMU-58A
- \_\_\_ GSMU-59
- \_\_\_ GSMU-60
- \_\_\_ GSMU-61
- \_\_\_ GSMU-62
- \_\_\_ GSMU-63A
- \_\_\_ GSMU-64
- \_\_\_ GSMU-65
- \_\_\_ GSMU-66
- \_\_\_ GSMU-67
- \_\_\_ GSMU-68
- \_\_\_ GSMU-69
- \_\_\_ GSMU-70
- \_\_\_ GSMU-71
- \_\_\_ GSMU-72
- \_\_\_ GSMU-73
- \_\_\_ GSMU-74
- \_\_\_ GSMU-75A
- \_\_\_ GSMU-76
- \_\_\_ GSMU-77
- \_\_\_ GSMU-78
- \_\_\_ GSMU-79
- \_\_\_ GSMU-80
- \_\_\_ GSMU-81
- \_\_\_ GSMU-82
- \_\_\_ GSMU-83
- Sounds**
- \_\_\_ 20 disk set = \$60
- \_\_\_ GSSN-01A
- \_\_\_ GSSN-02A
- \_\_\_ GSSN-03
- \_\_\_ GSSN-04
- \_\_\_ GSSN-05
- \_\_\_ GSSN-06
- \_\_\_ GSSN-07
- \_\_\_ GSSN-08
- \_\_\_ GSSN-09
- \_\_\_ GSSN-10
- \_\_\_ GSSN-11
- \_\_\_ GSSN-12
- \_\_\_ GSSN-13
- \_\_\_ GSSN-14
- \_\_\_ GSSN-15
- \_\_\_ GSSN-16
- \_\_\_ GSSN-36
- \_\_\_ GSSN-37

- \_\_\_ GSSN-38
- \_\_\_ GSSN-39
- SOUNDS - CDEV**
- rSOUNDS**
- \_\_\_ 20 Disk Set = \$60
- \_\_\_ GSSN-17A
- \_\_\_ GSSN-18
- \_\_\_ GSSN-19
- \_\_\_ GSSN-20
- \_\_\_ GSSN-21
- \_\_\_ GSSN-22
- \_\_\_ GSSN-23
- \_\_\_ GSSN-24
- \_\_\_ GSSN-25
- \_\_\_ GSSN-26
- \_\_\_ GSSN-27
- \_\_\_ GSSN-28
- \_\_\_ GSSN-29
- \_\_\_ GSSN-30
- \_\_\_ GSSN-31
- \_\_\_ GSSN-32
- \_\_\_ GSSN-33
- \_\_\_ GSSN-34
- \_\_\_ GSSN-35
- \_\_\_ GSSN-40
- Utilities**
- \_\_\_ 18 disk set = \$54
- \_\_\_ GSUT-01C
- \_\_\_ GSUT-02
- \_\_\_ GSUT-03C
- \_\_\_ GSUT-04B
- \_\_\_ GSUT-05C
- \_\_\_ GSUT-06A
- \_\_\_ GSUT-07B
- \_\_\_ GSUT-08D
- \_\_\_ GSUT-09B
- \_\_\_ GSUT-10B
- \_\_\_ GSUT-11B
- \_\_\_ GSUT-12
- \_\_\_ GSUT-13B
- \_\_\_ GSUT-14
- \_\_\_ GSUT-15B
- \_\_\_ GSUT-16
- \_\_\_ GSUT-17
- \_\_\_ GSUT-18
- Best of The Apple IIGS**
- \_\_\_ 25 disk set = \$56.25  
(save \$6.25 - normally \$62.50)
- Best of The Apple IIGS Disk Catalog**
- \_\_\_ 1 disk set = \$2.00
- Best of Communications**
- \_\_\_ 1 disk set = \$2.50
- Best of DA's, Cdevs, FExts, Dvrs, & Inits**
- \_\_\_ 1 disk set = \$2.50

- Best of Bit-Mapped Fonts**
- \_\_\_ 2 disk set = \$5.00
- Best of Games**
- \_\_\_ 5 disk set = \$12.50
- Best of Graphics**
- \_\_\_ 2 disk set = \$5.00
- Best of Icons (Finder)**
- \_\_\_ 1 disk set = 2.50
- Best of Music**
- \_\_\_ 4 disk set = \$10.00
- Best of Sounds**
- \_\_\_ 2 disk set = \$5.00
- Best of True Type Fonts**
- \_\_\_ 5 disk set = \$12.50
- Best of Utilities**
- \_\_\_ 2 disk set = \$5.00
- The Best of the Apple IIGs may be purchased as a 25 disk set or as individual sets as listed above.**
- (\*1) System 5.0.4 - 2 Disk Set = \$6.00
- (\*2) Hyper Mover v1.1 - 2 Disk Set = \$6.00
- (\*3) GS Bug & Debug Tools v1.6 = \$3.00
- (\*4) System 6.0.1 - 6 Disk Set = \$18.00
- (\*5) Astronomer - 7 disk set (GSED-01 to GSED-07) \$21.00
- Note: Some disks may contain Shareware. Please send the requested remittance to the author if you use the program. Most of the programs on these library disks may require a IIGS with a minimum of 1.25 megs of memory.**



# Apple III Disk Library Order Form

## 5-1/4" DISKS:

### Accounting

- \_\_\_ 3 disk set = \$4.50
- \_\_\_ 3ACT-01B
- \_\_\_ 3ACT-02B
- \_\_\_ 3ACT-03B

### 3 Easy Pieces

#### Templates

- \_\_\_ 15 disk set = \$22.50
- \_\_\_ 3AWZ-01
- \_\_\_ 3AWZ-02
- \_\_\_ 3AWZ-03
- \_\_\_ 3AWZ-04
- \_\_\_ 3AWZ-05
- \_\_\_ 3AWZ-06
- \_\_\_ 3AWZ-07
- \_\_\_ 3AWZ-08
- \_\_\_ 3AWZ-09
- \_\_\_ 3AWZ-10
- \_\_\_ 3AWZ-11
- \_\_\_ 3AWZ-12A
- \_\_\_ 3AWZ-13
- \_\_\_ 3AWZ-14
- \_\_\_ 3AWZ-15

### Business Basic

- \_\_\_ 9 disk set = \$13.50
- \_\_\_ 3BSB-01
- \_\_\_ 3BSB-02
- \_\_\_ 3BSB-03
- \_\_\_ 3BSB-04
- \_\_\_ 3BSB-05
- \_\_\_ 3BSB-06
- \_\_\_ 3BSB-07
- \_\_\_ 3BSB-08
- \_\_\_ 3BSB-09A

### Disk Catalog (ASCII TEXT)

- \_\_\_ 3 disk set = \$3 or \$1 per disk
- \_\_\_ 3CAT-01B - Disk 1
- \_\_\_ 3CAT-02B - Disk 2
- \_\_\_ 3CAT-03B - Disk 3

### Disk Catalog (3 EZPC's)

- \_\_\_ 2 disk set = \$2 or \$1 per disk
- \_\_\_ 3CAT-04B - Disk 1
- \_\_\_ 3CAT-05B - Disk 2

### Games

- \_\_\_ 5 disk set = \$7.50
- \_\_\_ 3GAM-01
- \_\_\_ 3GAM-02
- \_\_\_ 3GAM-03A
- \_\_\_ 3GAM-04
- \_\_\_ 3GAM-05

### Graphics

- \_\_\_ 43 disk set = \$64.50
- \_\_\_ 3GRX-01
- \_\_\_ 3GRX-02
- \_\_\_ 3GRX-03
- \_\_\_ 3GRX-04
- \_\_\_ 3GRX-05
- \_\_\_ 3GRX-06
- \_\_\_ 3GRX-07
- \_\_\_ 3GRX-08
- \_\_\_ 3GRX-09
- \_\_\_ 3GRX-10
- \_\_\_ 3GRX-11
- \_\_\_ 3GRX-12
- \_\_\_ 3GRX-13
- \_\_\_ 3GRX-14
- \_\_\_ 3GRX-15
- \_\_\_ 3GRX-16
- \_\_\_ 3GRX-17
- \_\_\_ 3GRX-18
- \_\_\_ 3GRX-19
- \_\_\_ 3GRX-20
- \_\_\_ 3GRX-21
- \_\_\_ 3GRX-22
- \_\_\_ 3GRX-23
- \_\_\_ 3GRX-24
- \_\_\_ 3GRX-25
- \_\_\_ 3GRX-26
- \_\_\_ 3GRX-27
- \_\_\_ 3GRX-28
- \_\_\_ 3GRX-29A
- \_\_\_ 3GRX-30
- \_\_\_ 3GRX-31
- \_\_\_ 3GRX-32
- \_\_\_ 3GRX-33
- \_\_\_ 3GRX-34
- \_\_\_ 3GRX-35
- \_\_\_ 3GRX-36
- \_\_\_ 3GRX-37
- \_\_\_ 3GRX-38
- \_\_\_ 3GRX-39
- \_\_\_ 3GRX-40
- \_\_\_ 3GRX-41
- \_\_\_ 3GRX-42
- \_\_\_ 3GRX-43

### Information

- \_\_\_ 37 disk set = \$55.50
- \_\_\_ 3INF-02D
- \_\_\_ 3INF-03
- \_\_\_ 3INF-04
- \_\_\_ 3INF-05
- \_\_\_ 3INF-06
- \_\_\_ 3INF-07
- \_\_\_ 3INF-08
- \_\_\_ 3INF-09
- \_\_\_ 3INF-10
- \_\_\_ 3INF-11
- \_\_\_ 3INF-12
- \_\_\_ 3INF-13
- \_\_\_ 3INF-14

- \_\_\_ 3INF-15
- \_\_\_ 3INF-16
- \_\_\_ 3INF-17
- \_\_\_ 3INF-18
- \_\_\_ 3INF-19
- \_\_\_ 3INF-20
- \_\_\_ 3INF-21
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- \_\_\_ 3INF-26
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- \_\_\_ 3INF-28
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- \_\_\_ 3INF-30
- \_\_\_ 3INF-31
- \_\_\_ 3INF-32
- \_\_\_ 3INF-33
- \_\_\_ 3INF-34
- \_\_\_ 3INF-35
- \_\_\_ 3INF-36
- \_\_\_ 3INF-37
- \_\_\_ 3INF-38
- \_\_\_ 3INF-39

### Membership Directory

- \_\_\_ 3MRD-01
- \_\_\_ 3MRD-02

### Miscellaneous

- \_\_\_ 20 disk set = \$30
- \_\_\_ 3MSC-01
- \_\_\_ 3MSC-02
- \_\_\_ 3MSC-03
- \_\_\_ 3MSC-04
- \_\_\_ 3MSC-05
- \_\_\_ 3MSC-06
- \_\_\_ 3MSC-07
- \_\_\_ 3MSC-08
- \_\_\_ 3MSC-09
- \_\_\_ 3MSC-10
- \_\_\_ 3MSC-11
- \_\_\_ 3MSC-12
- \_\_\_ 3MSC-13
- \_\_\_ 3MSC-14
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- \_\_\_ 3MSC-16
- \_\_\_ 3MSC-17
- \_\_\_ 3MSC-18
- \_\_\_ 3MSC-19A
- \_\_\_ 3MSC-20

### Pascal

- \_\_\_ 20 disk set = \$30
- \_\_\_ 3PCL-01
- \_\_\_ 3PCL-02
- \_\_\_ 3PCL-03
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- \_\_\_ 3PCL-05
- \_\_\_ 3PCL-06
- \_\_\_ 3PCL-07

- \_\_\_ 3PCL-08
- \_\_\_ 3PCL-09
- \_\_\_ 3PCL-10
- \_\_\_ 3PCL-11
- \_\_\_ 3PCL-12
- \_\_\_ 3PCL-13
- \_\_\_ 3PCL-14
- \_\_\_ 3PCL-15
- \_\_\_ 3PCL-16
- \_\_\_ 3PCL-17
- \_\_\_ 3PCL-18
- \_\_\_ 3PCL-19
- \_\_\_ 3PCL-20

### Repairs

- \_\_\_ 11 disk set = \$16.50
- \_\_\_ 3REP-01
- \_\_\_ 3REP-02
- \_\_\_ 3REP-03
- \_\_\_ 3REP-04
- \_\_\_ 3REP-05
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- \_\_\_ 3REP-07
- \_\_\_ 3REP-08
- \_\_\_ 3REP-09
- \_\_\_ 3REP-10
- \_\_\_ 3REP-11

### TeleCommunications

- \_\_\_ 13 disk set = \$19.50
- \_\_\_ 3TEL-01
- \_\_\_ 3TEL-02
- \_\_\_ 3TEL-03
- \_\_\_ 3TEL-04
- \_\_\_ 3TEL-05
- \_\_\_ 3TEL-06
- \_\_\_ 3TEL-07
- \_\_\_ 3TEL-08
- \_\_\_ 3TEL-09
- \_\_\_ 3TEL-10
- \_\_\_ 3TEL-11
- \_\_\_ 3TEL-12
- \_\_\_ 3TEL-13

### Utilities

- \_\_\_ 56 disk set = \$84
- \_\_\_ 3UTL-01A
- \_\_\_ 3UTL-02
- \_\_\_ 3UTL-03
- \_\_\_ 3UTL-04B
- \_\_\_ 3UTL-05A
- \_\_\_ 3UTL-06
- \_\_\_ 3UTL-07
- \_\_\_ 3UTL-08
- \_\_\_ 3UTL-09
- \_\_\_ 3UTL-10
- \_\_\_ 3UTL-11
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- \_\_\_ 3UTL-15
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- \_\_\_ 3UTL-19
- \_\_\_ 3UTL-20
- \_\_\_ 3UTL-21
- \_\_\_ 3UTL-22
- \_\_\_ 3UTL-23
- \_\_\_ 3UTL-24
- \_\_\_ 3UTL-25A
- \_\_\_ 3UTL-26
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- \_\_\_ 3UTL-42
- \_\_\_ 3UTL-43
- \_\_\_ 3UTL-44A
- \_\_\_ 3UTL-45
- \_\_\_ 3UTL-46
- \_\_\_ 3UTL-47
- \_\_\_ 3UTL-48
- \_\_\_ 3UTL-49
- \_\_\_ 3UTL-50
- \_\_\_ 3UTL-51
- \_\_\_ 3UTL-52A
- \_\_\_ 3UTL-53
- \_\_\_ 3UTL-54
- \_\_\_ 3UTL-55
- \_\_\_ 3UTL-56

### Word Processing

- \_\_\_ 7 disk set = \$10.50
- \_\_\_ 3WDP-01B
- \_\_\_ 3WDP-02
- \_\_\_ 3WDP-03
- \_\_\_ 3WDP-04
- \_\_\_ 3WDP-05
- \_\_\_ 3WDP-06
- \_\_\_ 3WDP-07

**Note:** Some disks may contain Shareware. Please remit to the author of the program the requested amount if you use that program.

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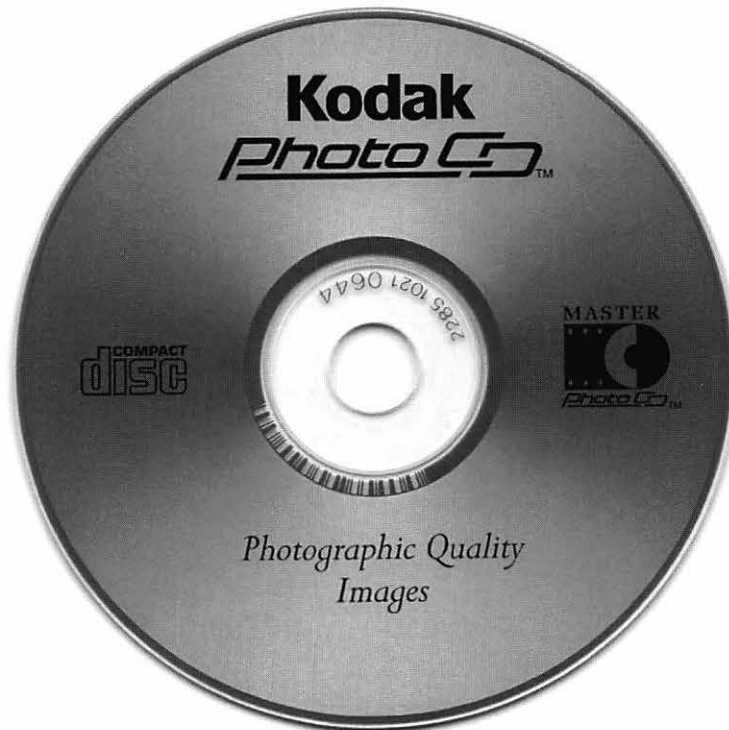
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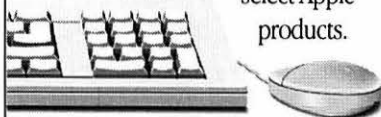
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