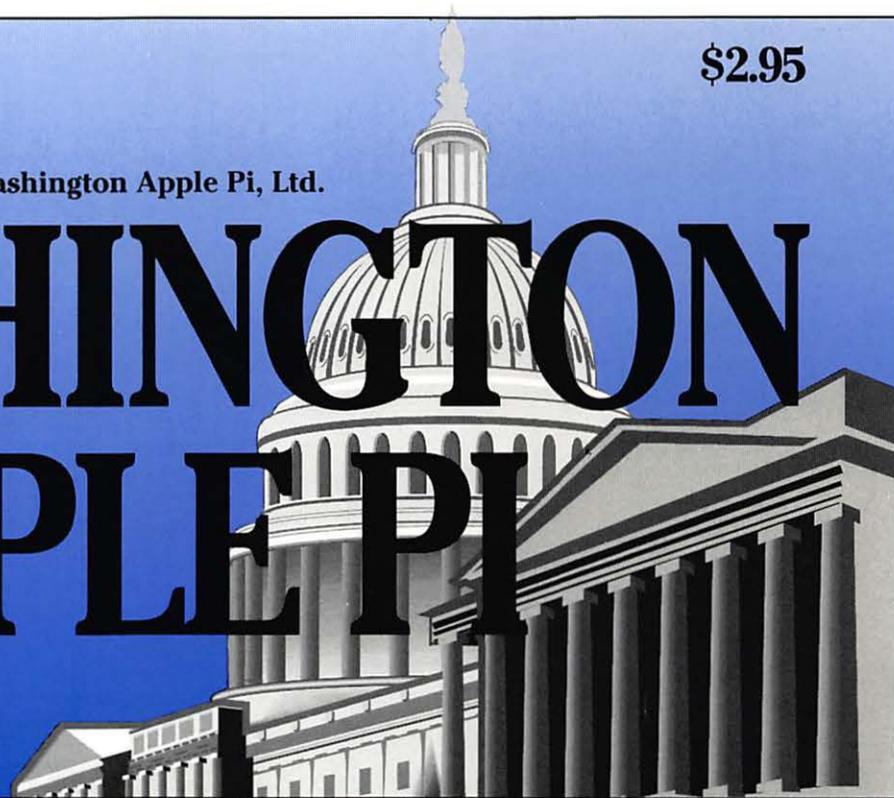


March 1993

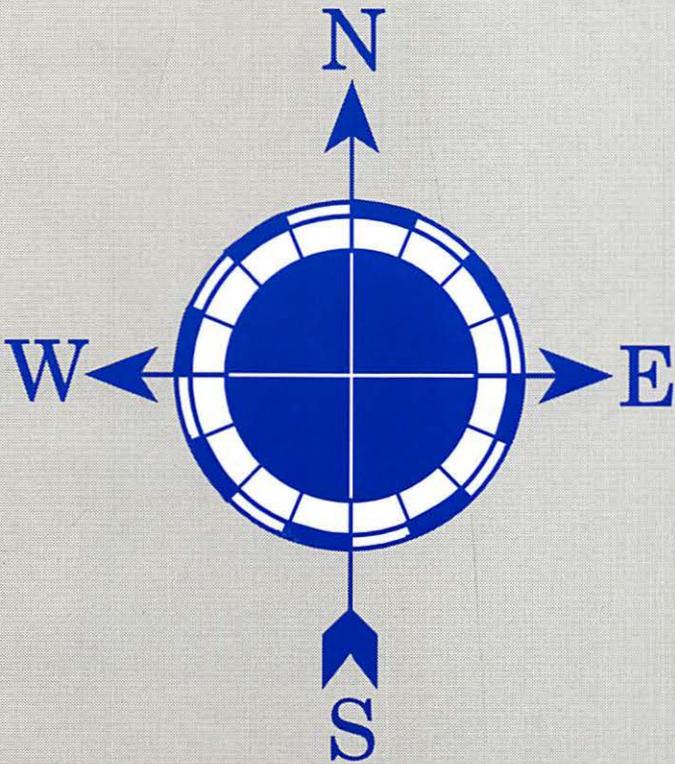
\$2.95

The Journal of Washington Apple Pi, Ltd.

# WASHINGTON APPLE PI



Volume 15, Number 3



*Graphic  
Tips*

**30**

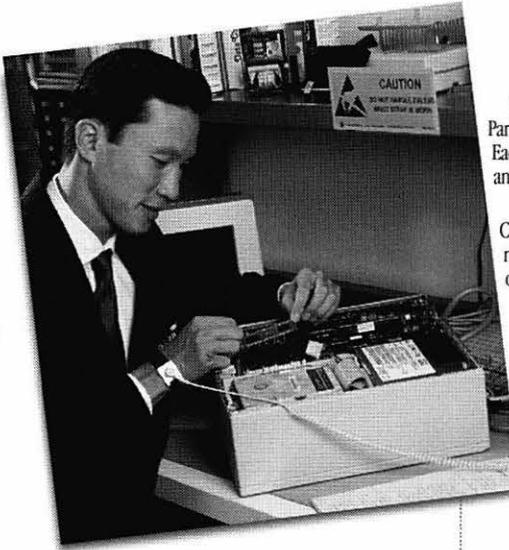
*Artists on  
Exhibit*

**28**

*Your Money  
Matters*

**60**

# If you count on your Macintosh®, count on service from Falcon.



## Nationwide service means a quicker response.

With its network of Service Centers and Service Partners, Falcon provides equipment service nationwide. Each center is fully stocked with commonly-needed parts and features the latest in diagnostic equipment.

Each center is also part of our nationwide Service Coordination System. So, if you need help, the only number you need to call is 301-386-1816. That's our national Falcon Service Hotline.

## Our comprehensive inventory delivers parts *without delay*.

Each of Falcon's Service Centers maintains an extensive inventory of commonly-needed parts. And our Landover, MD, center maintains an even larger stock to supply our regional centers. So you don't wait for parts. And you save on service since our system reduces the cost of parts inventories.

## Quality = customer satisfaction.

For Falcon, quality is more than just a buzzword, it's a way of doing business – everyday. Our commitment to quality is reflected in the most important way – complete customer satisfaction. And it shows in every service call, repair, and installation.

That's why Falcon Microsystems has been awarded the "Outstanding Customer Satisfaction" award by Apple Computer, Inc. – not just once, but three times.

## Falcon does more than just repairs...

Different customers have different needs. That's why Falcon offers not one, but a variety of Hardware Service Programs. Whether you use a single system or manage an entire network, you can choose the program and service features that precisely match your requirements. Falcon's GSA Schedule and contract service features:

- Telephone technical support.
- Affordable support costs.
- Response and coverage tailored to your needs.

Falcon's range of service programs include:

- Installing equipment and/or software *at your site*. Let the experts make sure your system is up and running right.
- Performing warranty service *at your site*. Can you afford to wait for standard warranty service?
- Installing upgrades (at our facility or *at your site*). Make sure new cards, memory, and drives are correctly installed for maximum performance.
- Performing critical repairs on a time/materials or contract basis (at our facility or *at your site*).
- While-you-wait estimates and repairs at one of our service depots (on a time and materials basis).
- On-site contracts with response times tailored to your specific needs and budget.
- Self-maintenance.

## Protect your investment in microcomputing equipment.

It's this simple: If your system goes down, you need prompt, certified service to bring it back on-line quickly. So for emergency service or to protect your investment in equipment, software, productivity, and data, please call this number immediately:

301-386-1816

That's Falcon's Nationwide Service Hotline. Our technical representatives are standing by to dispatch the help you need.

We'll check your installation requirements and cover your systems with services that are just right for you.



Computer equipment downtime is more than just an inconvenience; it's a crisis that could have a lasting impact on your office.

At Falcon, our business is making sure you can use your Macintosh when you need it – each and every day.

Our installation, warranty, upgrade, and repair services make sure each component you buy performs up to specification – from the moment we unpack your equipment through years of reliable operation.

Here's how Falcon safeguards your investment in Macintosh systems and software:

## Certified technicians = faster service.

Falcon's award-winning Technical Service Representatives (TSRs) are fully certified by Apple®, Radius, RasterOps, Iomega and other manufacturers.

What does this mean to you? It means our TSRs know your equipment, new or old, inside and out. And it means that they can diagnose problems and put your malfunctioning system back on-line – FAST!

Falcon is proud to be recognized as an authorized service center for products from...

Apple Computer  
radius™ I-MEGA  
RASTEROPS®  
THE ART & SCIENCE OF COLOR™

Apple, the Apple logo, AppleTalk, and Macintosh are registered trademarks of Apple Computer, Inc. All other trademarks are proprietary to their respective owners.

**Falcon**  
Technical  
Services

Call: 301-386-1816  
Fax: 301-773-5799

To request information or service, please mail this request to:

Falcon Microsystems  
1100 Mercantile Lane  
Landover, MD 20785-5337

Or for faster service, call the number at left or fax us your request.

- Yes! Please send me information on Falcon's complete range of Macintosh Services.  
 I need coverage! Please have a Falcon Technical Service Rep call me immediately.

Name \_\_\_\_\_  
Position/Title \_\_\_\_\_  
Agency/Organization \_\_\_\_\_  
Address \_\_\_\_\_  
Mail Stop or Room Number \_\_\_\_\_  
City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_  
Business Phone \_\_\_\_\_

# Washington Apple Pi General Meeting

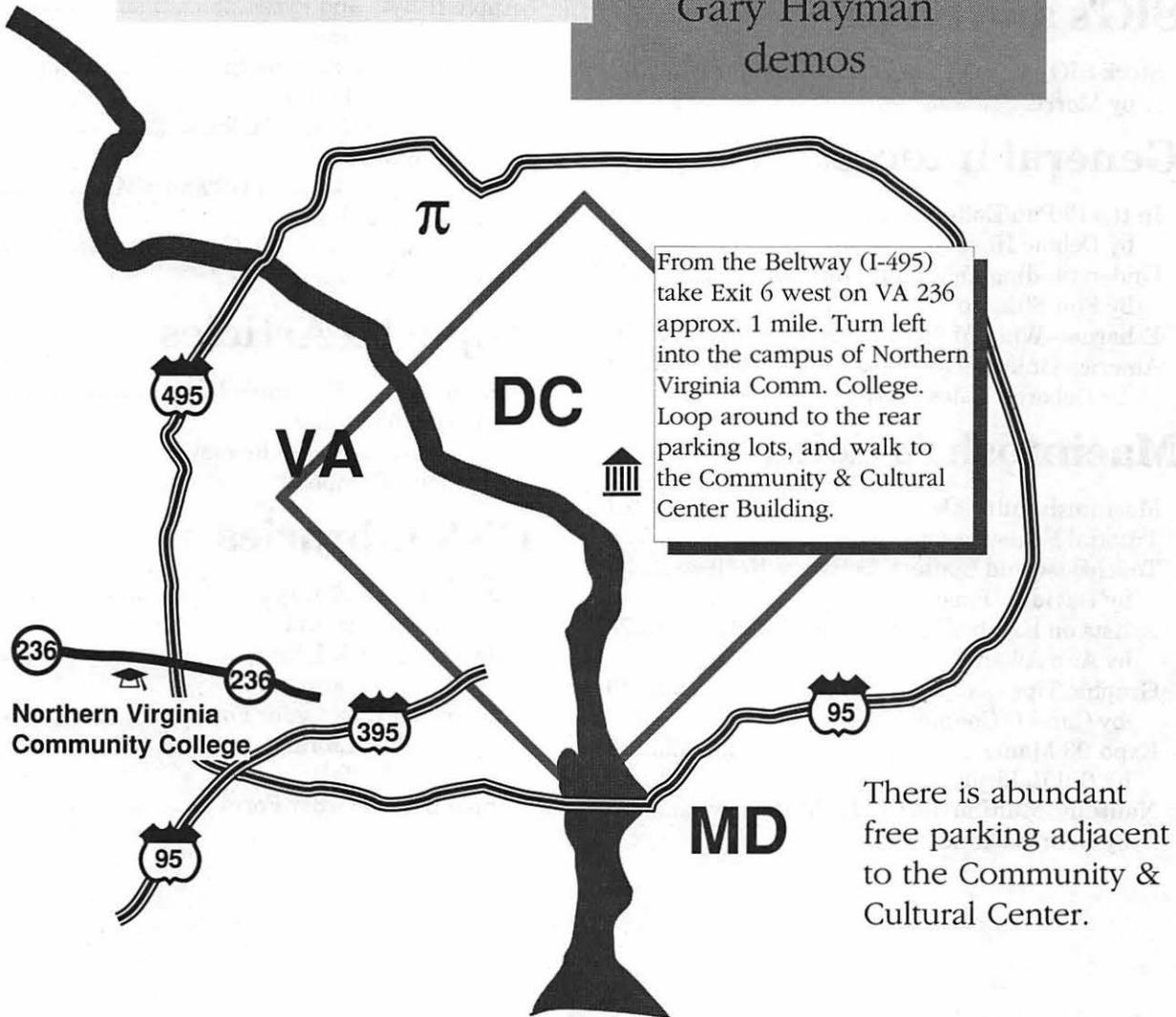
4th Saturday • 9:00 a.m. • Community & Cultural Center  
Northern VA Community College • 8333 Little River Turnpike  
Annandale, Virginia

**March 27, 1993**

**Mac:** Symantec,  
Canon printers  
**Apple II:** Printers,  
Pointless

**April 24, 1993**

**Mac:** One Mile Up  
Graphics Special  
**Apple II:** Scanners,  
Gary Hayman  
demos



# Table of Contents

Volume 15 ..... March 1993 ..... Number 3

## Club News

|                                    |        |
|------------------------------------|--------|
| Map to General Meeting .....       | 1      |
| Index to Advertisers .....         | 5      |
| Bylaw Amendments .....             | 11     |
| Call for Nominations for BoD ..... | 18     |
| Bod Summary .....                  | 18     |
| Editor Search .....                | 22     |
| WAP Hotline .....                  | 39, 42 |
| WAP Calendar .....                 | 40, 41 |
| Classified Advertisements .....    | 79     |
| WAP Membership Form .....          | 80     |

## SIG's and Slices

|                  |   |
|------------------|---|
| Stock SIG .....  | 8 |
| by Morris Pelham |   |

## General Interest

|  |    |
|--|----|
| In the Pi Pan/Editorial .....              | 5  |
| by Debbie Hoyt                             |    |
| Understanding Telecommunications .....     | 9  |
| by Phil Shapiro                            |    |
| Ethernet—What Makes a LAN Tick? .....      | 16 |
| America Online: The Book/Book Review ..... | 19 |
| by Deborah Miles-Hoyt                      |    |

## Macintosh Articles

|  |    |
|--|----|
| Macintosh Tutorials .....                    | 23 |
| Tutorial Registration Form .....             | 24 |
| TouchBase and Contact!/Software Reviews .... | 25 |
| by David K. Page                             |    |
| Artists on Exhibit/Art by James Burch .....  | 28 |
| by Ann Aiken                                 |    |
| Graphic Tips .....                           | 30 |
| by Carol O'Connor                            |    |
| Expo '93 Manic .....                         | 33 |
| by Bill Baldrige                             |    |
| Nautilus: Multimedia CD-ROM/Review .....     | 35 |
| by Dennis Dimick                             |    |

|   |    |
|---|----|
| Aldus <i>WalkThrough</i> /Software Review ..... | 43 |
| by Jacque Davidson                              |    |
| <i>Help!</i> /Software Review .....             | 46 |
| by Jim Campbell                                 |    |
| ClarisWorks has a Problem .....                 | 47 |
| by John Boren                                   |    |
| New Files on the TCS .....                      | 48 |
| by Lawrence I. Charters                         |    |

## Apple II Articles

|   |    |
|---|----|
| Apple II Byts and Pyces .....             | 51 |
| by Gary Hayman                            |    |
| Profile of Ellen Rosenberg .....          | 56 |
| from GENIE Lamp                           |    |
| Apple II Walkabout: Taglines .....        | 59 |
| by Seth Mize                              |    |
| Connecting an Apple II GS and a Mac ..... | 60 |
| by Mark Ballard                           |    |
| Your Money Matters/ Software Review ..... | 62 |
| by Russ Messana                           |    |

## Apple III Articles

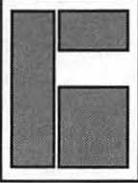
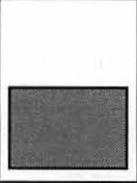
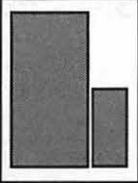
|                                     |    |
|-------------------------------------|----|
| On the Trail of the Apple III ..... | 63 |
| by David Ottalini                   |    |
| GoBack III/ Software Review .....   | 66 |
| by Paul Campbell                    |    |

## Disk Libraries

|                                 |        |
|---------------------------------|--------|
| Apple III PD Library .....      | 65     |
| by David Ottalini               |        |
| Macintosh Disk Library .....    | 68     |
| by Dave Weikert                 |        |
| Macintosh Disk Order Form ..... | 72, 73 |
| Apple II Disk Library .....     | 74     |
| by John Ruffatto                |        |
| Apple II Disk Order Form .....  | 78     |

# Advertising in the Journal

## Some Orientation Possibilities

|  |                           |   |  |
|--|---------------------------|---|--|
|  | Full Page<br>7.5" x 10.0" |  | Third Page (vert.)<br>2.5" x 9.5"<br>Sixth Page (hor.)<br>5.0" x 2.5"<br>Third Page (hor.)<br>5.0" x 4.75" |
|  | Half Page<br>7.5" x 4.75" |  | Two-thirds Page (vert.)<br>5" x 9.5"<br>Sixth Page (vert.)<br>2.5" x 4.75"                                 |

| No. of times ad runs | 1-2   | 3-5   | 6-11  | 12+   |
|----------------------|-------|-------|-------|-------|
| Full Page            | \$450 | \$383 | \$338 | \$270 |
| Covers               | \$550 | \$468 | \$413 | \$330 |
| Two-thirds Page      | \$360 | \$306 | \$270 | \$216 |
| Half Page            | \$300 | \$255 | \$225 | \$180 |
| 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, repro, paper, velox prints, or film negatives. Negatives will incur an additional \$15.00 strip-in charge.

### Editorial Staff

|                                 |                |
|---------------------------------|----------------|
| <b>Apple II co-Editors</b>      |                |
| Stan Palen                      | (703) 775-7027 |
| Jack Mortimer                   | (804) 224-0609 |
| Seth Mize                       | (410) 766-1154 |
| <b>Art Editor</b>               |                |
| Anne Aiken                      | (301) 530-1990 |
| <b>Calendar Editor</b>          |                |
| Bill Wydro                      | (301) 299-5267 |
| <b>Mac Editorial Consultant</b> |                |
| Rick Zeman                      | (301) 498-5311 |
| <b>Mac Software Liaison</b>     |                |
| Lawrence Charters               | (410) 730-4658 |
| <b>Managing Editor</b>          |                |
| Deborah Hoyt                    | (703) 450-0714 |

### Deadlines

|                              |          |
|------------------------------|----------|
| <b>Writers' submissions</b>  |          |
| May .....                    | Mar. 15  |
| June .....                   | April 15 |
| <b>Editors' submissions</b>  |          |
| May .....                    | Mar. 15  |
| June .....                   | April 23 |
| <b>Ad space reservations</b> |          |
| May .....                    | Mar. 18  |
| June .....                   | April 19 |
| <b>Camera-ready ad copy</b>  |          |
| May .....                    | Mar. 26  |
| June .....                   | April 27 |

## Washington Apple Pi



This issue of the Washington Apple Pi Journal was created on a Mac IIci, proofed on an HP DeskWriter, 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.

### Icon Guide

|   |                                 |   |                      |
|---|---------------------------------|---|----------------------|
|   | Macintosh                       |   | Calendar Pages       |
|  | Apple II, IIe, and IIGS         |  | Apple Disk Libraries |
|  | Apple III (SARA)                |  | Macintosh Disketeria |
|  | Hotline or Phone List           |  | General Interest     |
|  | TeleCommunications System (TCS) |   |                      |

### Postal Information

Washington Apple Pi (ISSN 1056-7682) is published monthly by Washington Apple Pi, Ltd., 7910 Woodmont Avenue, Suite 910, Bethesda, MD 20814. Second Class Postage paid at Bethesda, MD.

Annual membership dues for Washington Apple Pi, Ltd., are \$32; of this amount \$24 is for a subscription to the Washington Apple Pi Journal. Subscriptions are not available without membership.

**POSTMASTER:** Send address changes to Washington Apple Pi, 7910 Woodmont Avenue, Suite 910, Bethesda, MD 20814.

Change of Address should reach us 60 days in advance of the move to ensure that your Journals continue uninterrupted.

## Officers and Board of Directors

|                        |                   |                |
|------------------------|-------------------|----------------|
| President              | Lorin Evans       | (202) 543-1248 |
| Vice President-Apple   | Ken DeVito        | (703) 960-0786 |
| Vice President-Mac     | Bob Shaffer       | (301) 384-3724 |
| V.P.-Administration    | Tom Witte         | (703) 683-5871 |
| V.P.-Community Affairs | Lawrence Charters | (410) 730-4658 |
| Treasurer              | Charles Froelich  | (410) 889-9395 |
| Secretary              | Dana Schwartz     | (301) 725-6281 |
| Directors              | Bill Campbell     | (301) 498-6380 |
|                        | Lawrence Charters | (410) 730-4658 |
|                        | Jon Hardis        | (301) 330-1422 |
|                        | Leon Raesly       | (301) 220-3111 |
|                        | Guy Durant        | (202) 363-0366 |
|                        | Bernard Urban     | (301) 229-3458 |
|                        | Tom Vier*         | (703) 860-4810 |
|                        | David Weikert     | (301) 963-0063 |
|                        | Tom Witte         | (703) 683-5871 |
|                        | Bill Wydro        | (301) 299-3592 |

\*Noon to 6pm

## Office Staff

|                |                                      |
|----------------|--------------------------------------|
| Office Manager | Beth Medlin                          |
| Office Staff   | Ambrose Liao (Tuesday nights only)   |
|                | John Ruffatto (Saturday)             |
|                | Phil Shapiro (Mon., Tues., & Thurs.) |

## Library Volunteers

|                         |                |                |
|-------------------------|----------------|----------------|
| Apple II Head Librarian | John Ruffatto  | (301) 735-4259 |
| Apple IIGS Librarians   | John Ruffatto  | (301) 735-4259 |
|                         | Chris Hutmire  | (301) 871-1203 |
| Apple II Librarian      | Ron Evry       | (703) 490-1534 |
| Apple III Librarian     | David Ottalini | (301) 681-6136 |
| Macintosh Librarian     | David Weikert  | (301) 963-0063 |
|                         | Martin Milrod  | (410) 464-5981 |
| Mac Library             | John DeMarco   | Ben Frank      |
|                         | Mary Hockmeyer | William Jones  |
|                         | Fred Rodgers   | Tony Salerno   |
|                         | Joe Swick      |                |

### Washington Apple Pi, Ltd.

7910 Woodmont Avenue, Suite 910  
Bethesda, MD 20814  
Business Office (301) 654-8060  
Telecommunications System (301) 986-8085

Office hours: Mon.-Sat. 10-2:30\*  
Tues. 7-9pm

\* The office will open at 1pm on  
the day of the General Meeting

## Volunteers

|                            |                  |                |
|----------------------------|------------------|----------------|
| Head Reading Lib.          | Brian Mason      |                |
| Dealer Relations Comm.     | John Alden       | (202) 686-1656 |
|                            | Harvey Kaye      | (301) 299-8994 |
| Legal Counsel              | Richard Wohltman |                |
| Membership                 | Dana Schwartz    | (301) 654-8060 |
| SIG's & Slices Coord.      | Bob Shaffer      | (301) 384-3724 |
| Journal Store Distribution | Teresa Drag      | (301) 897-5103 |
| Telecom SysOp              | Paul Schlosser   | (301) 831-9166 |
| Volunteer Coordinator      | Tom Witte        | (703) 683-5871 |

## SIG Chairs

|                        |                     |                |
|------------------------|---------------------|----------------|
| <b>Annapolis Slice</b> |                     |                |
| President              | Bob Peterson        | (410) 721-9151 |
| V. President           | Phil Scheel         | (410) 761-4260 |
| Secretary              | Ed Coleman          | (410) 757-3197 |
| Treasurer              | Mel Benson          | (410) 647-6873 |
| Membership             | Grant Shackelford   | (301) 923-6748 |
| Mac Programming        | Teresa MacGregor    | (410) 551-5913 |
|                        | Lloyd Olson         | (410) 544-1087 |
|                        | Seth Mize           | (410) 766-1154 |
| Apple II Programming   |                     | (410) 923-6748 |
| AAS Info Recording     |                     | (301) 345-3230 |
| AppleWorks             | Gary Hayman         | (301) 345-3230 |
| Apple IIGS             | Gary Hayman         | (301) 345-3230 |
| Art SIG                | Joe Morey           | (703) 281-5385 |
| <b>Columbia Slice</b>  |                     |                |
| President              | Ellen Baniszewski   | (410) 730-4891 |
| Co-V. President, Mac   | Ramesh Sardana      | (410) 992-9884 |
| Co-V. President, Mac   | Tim Helsing         | (410) 730-7272 |
| V. President, Apple II | Tom Cook            | (410) 995-0352 |
| Editor, Macintosh      | Lawrence Charters   | (410) 730-4658 |
| Editor, Apple II       | Andy Wakshul        | (410) 997-0156 |
| Treasurer              | Tom Cowley          | (410) 730-2319 |
| BBS SysOp              | Henry Yee           | (410) 964-3706 |
| Disk Librarian, Apple  | Bill Campbell       | (410) 997-9317 |
| Disk Librarian, Mac    | Tim Childers        | (410) 997-9317 |
| <b>CADSIG</b>          | Jeff Sutton         |                |
| Database SIG           | Eric Gutsche        | (703) 379-1265 |
| DisabledSIG            | Jay Thal            | (202) 244-3649 |
| Desktop Publishing SIG | Tom Piwowar         | (202) 223-6813 |
| EDSIG                  | Phil Shapiro        | (202) 686-5465 |
| Excel SIG              | Dick Byrd           | (703) 978-3440 |
| <b>Frederick Slice</b> |                     |                |
| President              | J. Russell Robinson | (301) 739-6030 |
| V. President           | Peter Alvestad      |                |
| Sec./Treas.            | Mike Dalrymple      | (301) 203-4145 |
| GameSIG                | Mike Dickman        | (703) 525-2410 |
| HyperTalk              | David Mudd          | (703) 683-1746 |
| Mac Programmers        | Nancy Byrd          | (703) 978-3440 |
|                        | Bruce Jacobs        | (301) 439-7812 |
|                        | Ed Moser            | (301) 924-1573 |
| Music SIG              | Ted Meyer           | (703) 893-6845 |
| PI-SIG                 | Ambrose Liao        | (301) 530-3255 |
| QuickTime SIG          | Morris Pelham       | contact on TCS |
| StockSIG               | Allan Levy          | (301) 340-7839 |
| Telecomm. SIG          | David Ottalini      | (301) 681-6136 |
| Three SIG              | Jim Jutzin          | (703) 790-1509 |
| UltraMacros SIG        | Gary Hayman         | (301) 345-3230 |

©COPYRIGHT 1992, by WAP, Washington Apple Pi, Ltd. User groups may reprint without prior permission any portion of the contents herein, provided proper author, title, and publication credits are given, except in cases where the author has reserved copyright permission. In these cases, the author should be contacted directly. Please send a copy of the article as printed to Washington Apple Pi; 7910 Woodmont Ave., Suite 910; Bethesda, MD 20814.



**COMPUTER AGE<sup>SM</sup>**

**NOW CELEBRATING  
OUR 14TH YEAR  
SERVING YOU!**



**NEW! Macintosh IIvx**



**NEW! Macintosh  
PowerBook 145**



**Authorized  
Dealer**



**NEW! Macintosh Duo 210**



**NEW! Macintosh  
PowerBook 160**

**VISIT  
US  
TODAY**

**FOR THE NEW  
APPLE  
MACINTOSH  
MODELS!**



**NEW! Macintosh Duo 230**



**NEW! Macintosh  
PowerBook 180**

**COMPUTER AGE<sup>SM</sup>**

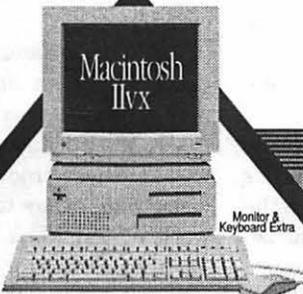
**SILVER SPRING  
(301) 588-6565**

**BELTSVILLE  
(301) 937-0300**

**CATONSVILLE  
(410) 719-0200**

**ANNANDALE  
(703) 642-2310**

**RAM  
UPGRADE**  
**\$39**  
PER MEG  
INSTALLED



Macintosh IIvx  
4 MB RAM  
Monitor & Keyboard Extra

**Macintosh IIvx**

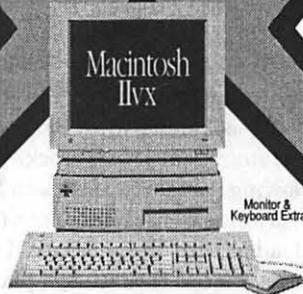
80 MB APPLE HARD DISK  
**\$2349**



Macintosh IIvx  
4 MB RAM  
Monitor & Keyboard Extra

**Macintosh IIvx**

230 MB APPLE HARD DISK  
**\$2999**



Macintosh IIvx  
5 MB RAM  
1 MB VRAM  
Monitor & Keyboard Extra

**Macintosh IIvx**

80 MB APPLE HARD DISK AND APPLE CD 300i CD-ROM DRIVE  
**\$3099**



4 MB RAM

**Mac PowerBook Duo 210**

80 MB APPLE HARD DISK  
**\$1899**



4 MB RAM

**Mac PowerBook Duo 230**

80 MB APPLE HARD DISK  
**\$2399**



8 MB RAM  
1 MB VRAM  
Monitor & Keyboard Extra

**Macintosh Quadra 950**

230 MB QUANTUM HARD DISK  
**\$5499**

**Service Specialists!**

**SILVER SPRING SERVICE CENTER**  
9431 GEORGIA AVENUE  
(301) 565-9130

OPEN SAME HOURS AS OUR SALES SHOWROOM



**Authorized Dealer**

**COMPUTER AGE**<sup>SM</sup> A MicroAge<sup>®</sup> Affiliate

|  |  |   |   |
|--|--|---|---|
| <b>SILVER SPRING</b><br>9433 GEORGIA AVENUE<br>Take Beltway Exit 31B<br>(301) 588-6565 | <b>BELTSVILLE</b><br>10606 US ROUTE 1<br>Take Beltway Exit 25A<br>(301) 937-0300 | <b>CATONSVILLE</b><br>US 40 AT ACADEMY ROAD<br>Baltimore Beltway Exit 15A<br>(410) 719-0200 | <b>ANNANDALE</b><br>COLUMBIA PIKE AT RT 236<br>Take Beltway Exit 6 East<br>(703) 642-2310 |
|--|--|---|---|

PRICES/SPECIFICATIONS SUBJECT TO CHANGE. WE RESERVE THE RIGHT TO LIMIT SUPPLY.

**PLEASE CALL FOR OUR LATEST PRICE UPDATES, OR CHECK OUR AD IN MONDAY'S POST.**

# Π SIG's and Slices

## StockSIG

by Morris Pelham

Well, we now have our SyQuest cartridge. This puts 44 Megabytes of storage in our own hot little hands. Now all I have to do is find time to use the office Mac and SyQuest Drive to install my System 7.1 and Excel 4.0, all 14 or so floppies of them on the cartridge, and we will be ready to do wonderful things.

Speaking of wonderful things, Mark Pankin again brought in his "Beating the Dow" spreadsheet and passed it around at our January meeting. We spent quite a bit of time talking about it. We now know the results of buying on 12/27/91 and holding until 12/31/92 the five lowest-priced of the ten highest-yielding of the 30 Dow stocks. It was a 21.0% gain, plus dividends, minus commissions and taxes. The dividends changed during the year and Mark did not capture what

was actually paid into his spreadsheet. In case you want to run the numbers yourself, the purchases were AmerExp, div \$1.00; GenMotors, div \$1.60; UnCarbide, div \$1.00; Westinghouse, div \$1.40; and Woolworth, div \$1.08.

By way of comparison, the 30 Dow stocks gained 10.7% according to Mark's spreadsheet. Barron's reports that of the major stock averages in 1992 the Nasdaq Composite "soared 15.5% to a record 676.95," the Dow "climbed 4.17% to 3001.11," and the S&P 500 "logging a 4.46% advance to 435.71."

It looks like this "Beating the Dow" strategy really does work. Mark is following it again in 1993, and I am doing a variation of it. When I get the SyQuest loaded with the software, I plan to put this on it so that we can play around at the meeting with various calculations, such as adding in the dividends actually paid and subtracting commissions paid to buy and sell the stock. I also want to keypunch in the data from earlier years,

at least 1991 and 1990, just so I can confirm to myself that it really has worked over time.

Also at our January meeting we discussed Quicken and Managing Your Money. As usual we had more questions than answers, and we continue to invite users of these products to come join the discussions of how to make them work or work better. The more users we get together, the better our chances of being able to answer a question.

We also have our first new "expert" for 1993. Barry Creech has bought one of the technical analysis packages for the Mac and promises to bring it in for "Show and Tell" at our February meeting. I think he said it is Personal Analyst by Trendsetter Software, but I will get the name and write about it after we see it work.

As always we welcome both experts and novices to join us. Our meetings are held in the WAP office on the second Thursday of each month at 7:30 PM.

PUBLICATION PRODUCTION • GRAPHIC DESIGN • PRINTING • TEMPORARY PERSONNEL



**Our  
job  
is  
to  
give  
you  
the  
freedom  
to  
create.**

Creativity thrives on freedom.  
Freedom to express your best ideas.  
Freedom from the pressure of tight budgets and even tighter deadlines.

BOSS Services will give you that freedom.

For everything from page layout to graphic design, full mechanical production and printing, count on our combination of experienced production personnel and the latest computer technology.

Whether we work at our location or send you an experienced publications or graphics temporary, we'll deliver beautiful results—on time and within budget.

BOSS Services. We help your creative vision break free.

**BOSS** Publication  
PRODUCTION  
SERVICES  
MACTEMPS

Publication & Graphic Solutions

**301 948-2175**

9059 Gaither Road, Gaithersburg, MD 20877

# Understanding Telecommunications

by Phil Shapiro

The other day I paid a visit to the city public library to dig up some books about telecommunications. I've been an active telecommunications enthusiast for the past several years and my curiosity was getting the better of me.

As with most computer enthusiasts, I've got a passing acquaintance with most basic telecommunications concepts. But my understanding still remains at a superficial level. For a long time I've had a burning curiosity to find out more about these magical "packet switching systems" that allow people to place a local phone call to connect to a national telecommunications network. And I've always wanted to know more about how this process, called "multiplexing," makes the packet switching systems work.

A computerized search of the library's holdings turned up about three dozen books dealing with telecommunications. As I wrote down the call numbers of these books, I couldn't help but think of my past experience trying to find books or magazine articles to explain the fundamental concepts of modern telecommunications.

About one third of all such books were written

before 1982, strongly suggesting that their contents are at least ten years out-dated. Major changes in the telecommunications industry have happened in the past ten years. Whatever was written about telecommunications before 1982, therefore, ought to be taken with a large grain of silicon.

Another third of all books on telecommunications are written primarily for third graders. These books cover the subject in such a simplistic manner that any child who has ever dialed a telephone is likely to be yawning before the close of the first chapter. The last third of all books on telecommunications are written for graduate electrical engineering students. Identifying such books requires no special skill. One telling characteristic is that the

preface of these books contain more schematic diagrams than English language sentences.

So I was especially delighted to discover the book "Understanding Telecommunications," published by TAB Books in 1989. Written neither for third graders, nor for graduate electrical engineering students, the book explains all the basics of telecommunications theory and practice at a level that any typical college graduate could understand.

The book starts out with a concise yet comprehensive review of telecommunications history. Starting with Morse's telegraph, moving through Bell's phone, covering early radio and television, the transistor, and the earliest electronic computers. The author even sneaks in a few words about the reasons for establishing the Federal Communications Commission (FCC) in 1934.

The second chapter of the book logically follows from the first. This second chapter, "Electricity and Electronics," gives a solid explanation of the differences between direct current and alternating current. A discussion of the development of vacuum tubes is accompanied by an informative illustration.

## PROMPT & RELIABLE REPAIR

- *Apple, Radius, SuperMac & RasterOps* authorized
- Experienced factory trained technicians
- Warranted repair - original parts
- *AppleCare* maintenance contracts

*Note: Special Discounts for W.A.Pi members*

### FC BUSINESS SYSTEMS



Authorized Dealer

10565 Lee Hwy., Fairfax, VA • (703) 385-2758

# π

Definitions of capacitors, transistors, and other electronic doodads are presented for you to nod your head in feigned acknowledgment.

The third chapter, "Computers," gives a good general grounding in basic computer operations and theory. Most interesting is the last section of the chapter which explains how computer technology has been incorporated into so many different facets of the national phone system. If you're already familiar with basic computer concepts, this chapter can easily be skipped over.

Chapter 4, "Telephone Systems," does a great job of explaining about telephone switching equipment, the phone company's central office, the amplification and transmission of phone signals, private branch exchanges (PBX's), and the movement towards digitalization of the entire phone system. What makes the author's explanations so compelling is that he places concepts in their historical perspective. So before explaining about the complexities of modern telephone switching systems, he first explains about the early manual switchboards. The end result is that you learn historical context as well as modern developments.

The fifth chapter, "Communication with Computers," explains such things as modems, ASCII, protocols, and error detection techniques. Good for beginners to learn about. Eminently skipable for the rest of us. The sixth chapter, "Radio," did not hold my attention that much. Sure, the new mobile radio and cellular phone systems are interesting. But radio theory remains one of the most colossally boring subjects ever conjured up by the human mind. If radio is not your bag, it's easy enough to flip over to the next chapter of the book.

The seventh chapter gives a good

overview of the technical aspects of television. Compared to radio theory, television theory is almost interesting. But the real goodies can be found in chapter 8, "Long Distance Telecommunications." This chapter starts out discussing transmission mediums, including copper wire, coaxial cable, fiber optic cable, and air. The fascinating historical treatment of the subject continues on in this chapter. So you can find out about how MCI gained permission from the FCC to build a microwave radio system between St. Louis and Chicago, thereby setting off a whole series of events leading to the breakup of AT&T. And you can learn about WATS systems and INWATS systems. You can revisit multiplexing (packet switching) from a data communications viewpoint.

Ronald R. Thomas, who authored *Understanding Telecommunications*, has a natural and breezy writing style that illuminates the most complicated of subjects. In this book he achieves the unique feat of making serious telecommunications subjects intelligible for the general reading public.

Can't wait to hear about what new books Thomas may be working on. It sure would be interesting to learn more about the behind the scene action at the major national information services. A behind-the-scenes report about GENie, America Online, and CompuServe would make for a delectable read. With the cooperation of these services, such a book would not be difficult to construct. And with hundreds of thousands of people now on the national information services, the market for such a book would be quite large.

*[The author takes a keen interest in the social and psychological aspects of communications technology. He can be reached on GENie at: p.shapiro1; on America Online at: pshapiro; and on the Internet at: pshapiro@pro-novapple.cts.com]*

*Reprinted with permission from GENieLamp, the new free online publication on GENie. Volume 1, Issue 9. (c) Copyright 1992 T/TalkNET Online Publishing, GENie, and the GENie Computing Roundtables. To sign up for GENie service, call (modem) 1-800-638-83690. Upon connection type HHH. Wait for the U# prompt. Then type: XTX99368,-GENIE, and press <return>. The system will then prompt you for registration information.*

*A free booklet about GENie is available on request by calling (telephone): 1-800-638-9636.*

**Title:** *Understanding Telecommunications*

**Author:** Ronald R. Thomas, TAB Books, 1989, 243 pages, \$24.95.

**ISBN:** 0-8306-9229-0 (hard cover)

**ISBN:** 0-8306-3229-8 (paperback)

**Publisher:** TAB Books, Inc. Blue Ridge Summit, PA 17924-0214

# WAP Bylaw Amendments

by Jonathan Hardis

The WAP Board of Directors, at the January 13 meeting, voted to amend WAP's Bylaws. The Bylaws were last amended on November 13, 1991 (Journal, Jan. 1992), changing the full text as previously published (Journal, June 1990). While this article is required for notice, I also elaborate to explain some of the details of the changes.

I group the changes into three categories: membership, officers and directors, and elections. Deleted material is shown in ~~brackets~~. New material is shown set out like this. Issues of the WAP Journal giving notice of previous amendment, adoption or repeal of particular sections are indicated in brackets.

## Membership

These changes (1) give a meaning to member "in good standing" (which is a qualification of running for office, holding office and voting), (2) adopt efficient practice in the processing and expiration of memberships, such as to produce mailing labels for Journals and ballots, and (3) unify the terminology when referring to a Director.

## ARTICLE V - MEMBERSHIP

**SECTION 3. DUES.** The annual dues for each class of membership shall be determined by the Board of Directors. For a member to remain in good standing, renewal payment is due and must be received at the Corporation's Office by the end of

the month in which the membership expires.

**SECTION 6. EXPULSION.** A member may be expelled from membership in WAP for (a) failure to pay the annual dues for more than ~~thirty (30)~~ seven (7) days after the due date thereof, or (b) engaging in activities prohibited by these Bylaws or any rule or practice adopted by the Board of Directors of which notice has been given to members. Damaging WAP property or disrupting WAP services shall be ground for expulsion. Before any member may be expelled for engaging in prohibited activities, written charges specifying the alleged cause shall be filed with the Secretary and a copy thereof shall be served on the member charged. The member charged shall be given notice of the meeting of the Board of Directors at which the member's expulsion is to be considered and the member charged shall be allowed a hearing before the Board. If the Board determines that the prohibited activities are correctable, the member charged may, at the discretion of the Board, be given an opportunity to correct such conduct. The member charged may be expelled by the affirmative vote of two-thirds of those Directors present and voting at the Board of Directors meeting of which the member charged received notice, a quorum of Directors being present. The member charged shall receive prompt written notice of the Board's action. A person expelled from mem-

bership by virtue of (b) above may be reinstated as a member by a majority vote of the Board. [Amended March 1986, July 1986 and August 1989.]

**SECTION 7. QUALIFICATIONS FOR OFFICERS AND DIRECTORS.** All officers and ~~members of the Board of~~ Directors must be members in good standing in WAP. Notwithstanding Articles VII and VIII of these Bylaws, an officer or ~~member of the Board~~ Director who ceases to be a member in good standing shall be deemed to have vacated the office or the ~~Board~~ director effective as of the date he or she ceased to be a member in good standing. [Added March 1987.]

## Officers and Directors

These changes (1) clarify that certain officers are not necessarily Directors, (2) move text from Article VIII, Section 1, to Article VII, Section 2, (3) make the term of Directors consistent with Maryland law, (4) provide a workable mechanism for the removal of a Director, (5) generalize the provision for filling vacancies on the Board, (6) modernize an old provision supposing two, rather than the current four vice-presidents, (7) remove references to a Director of Group Purchases, a position that no longer exists, (8) conform to Maryland law by noting that no one person may be both President and Vice-President concurrently, (9) in the spirit of Article XII of the Bylaws, prohibit any one person from serving as both President and Treasurer concurrently, (10) remove redundant provisions, (11) generalize the provision that allows the Board to appoint officers, (12) unify the description of the terms of all officers, (13) synchronize the ascension of all officers to meetings of the Board, rather than by the calendar or an ill-defined time when an election concludes, (14) make additional technical amendments, simplify the wording and add clarify-



ing language.

**ARTICLE VII - BOARD OF DIRECTORS**

**SECTION 2. COMPOSITION.**

~~[The Board of Directors shall consist of 15 members: the President, the two Vice-Presidents for Programs, the Secretary, the Treasurer and ten Directors-at-Large. The Directors-at-Large shall be elected annually pursuant to Article IX hereof.] +>The Board of Directors shall be comprised of Directors elected annually by the membership pursuant to Article IX hereof. Ten Directors shall be elected as Director-at-Large. Additional Directors are elected as President, Vice-President for Apple II Programs, Vice-President for Macintosh Programs, Secretary and Treasurer. An officer who is also a Director does not cease to be a Director if removed or replaced as an officer, and a person appointed by the Board to be an officer does not become a Director by virtue of this appointment.<+ [Amended April 1984, February 1987, June 1988, August 1989, and June 1990.]~~

**SECTION 3. TERM.** Directors shall serve ~~for a one year term beginning on June 1.] +>until the next annual election and until their successors are elected and qualify.<+ [Amended January 1992.]~~

**SECTION 4. REMOVAL.** A Director may be removed at any time, with or without cause, either at a Regular Membership Meeting or at a ~~special meeting] +>Special Membership Meeting<+ called for such purpose. +>A quorum being present, a Director may be removed by the majority vote of members in good standing present and voting. (The preceding sentence shall be effective June 1, 1993, after which this sentence shall cease to be a part of these Bylaws)<+.~~

**SECTION 5. VACANCIES.** Upon the resignation or removal of a Director ~~at-Large], that Director~~

~~position shall be declared vacant. [The Board of Directors may, by majority vote, appoint a member as Director-at-Large to fill any vacant Director position. The Director-at-Large so appointed shall serve the remainder of the term of the Director he or she replaced.] +>If the number of Directors falls below 15 for any reason, the Board of Directors may, by majority vote, appoint an eligible member a Director.<+~~

**SECTION 7. SPECIAL MEETINGS.** Special meetings of the Board of Directors may be called by the President, ~~either] +>a<+ Vice-President or two or more Directors on seven (7) days notice to each Director, if such notice is delivered personally, by telegram or by telephone; or on fourteen (14) days notice if sent by mail or published in the WAP Journal. No business other than that stated in such notice shall be conducted. [Amended June 1988.]~~

**ARTICLE VIII - OFFICERS**

**SECTION 1. DESIGNATION AND TENURE.** The officers of the Corporation shall be the President, four Vice-Presidents, the Secretary, the Treasurer, one or more Editors of the Journal, one or more Librarians, the Telecommunications System Operator, ~~the Director of Group Purchases,] and one or more Tutorial Directors. +>The President shall not concurrently hold the office of Vice-President, Secretary or Treasurer.<+ [Only members of the Corporation are eligible to serve as officers, and an officer who ceases to be a member shall cease to be an officer.] A member who has held an office for three consecutive years is not eligible to serve in that office for one year. (The preceding sentence shall be effective ~~July] +>June<+ 1, 1993, for all offices, after which this sentence shall cease to be a part of these Bylaws.) [The President, the two Vice-Presidents for Programs, the Secretary~~~~

~~and the Treasurer shall be elected annually by the members pursuant to Article IX of these bylaws.] +>An election shall be held annually, pursuant to Article IX of these bylaws, for the President, the two Vice-Presidents for Programs, the Secretary and the Treasurer.<+ The Board of Directors ~~has] +>shall have<+ the power to appoint all ~~other] +>not chosen by election<+. [An officer shall serve a term of one year and until his or her successor is elected. Other officers shall serve a term of one year, until the Board appoints someone else to that office, or until they are removed by the Board.] +>An officer shall serve a term of one year and until a successor is appointed, or until a successor is elected and qualifies before the Board.<+ The Board +>of Directors<+ may by majority vote remove any officer of the Corporation if the Board finds in its judgment that the best interests of the corporation will be served by doing so. The removal of an officer does not prejudice any of his or her contract rights. [An officer who is also a member of the Board of Directors does not cease to be a member of the Board if removed or replaced as an officer, but in the case of removal or replacement by the Board the member appointed to fill the resulting vacancy does not become a member of the Board of Directors by virtue of his or her appointment as an officer.] If any office becomes vacant for any reason, the Board +>of Directors<+ may appoint ~~someone] +>an eligible member<+ to fill that vacancy. [Any officer appointed to fill a vacancy in an office elected pursuant to Article IX shall hold office until the term of office of his or her successor begins.] [Amended June 1984, June 1988 and June 1990.]~~~~~~~~

**SECTION 8. DIRECTOR OF GROUP PURCHASES.** ~~[The Director of Group Purchases shall, subject to the general policy direction of~~



~~the Board of Directors, negotiate arrangements for the purchase of computer products and accessories by members. The Director of Group Purchases may sign checks on behalf of the Corporation in amounts not in excess of \$500. The Director of Group Purchases may appoint one or more assistants. [Amended August 1989 and June 1990.]~~ +>(Repealed)<+

**ARTICLE XI - COMMITTEES**

**SECTION 1. AUDIT COMMITTEE.** The Audit Committee shall be appointed by the Board of Directors to select the Corporation's accounting firm and to review the financial records and reports of the Corporation. The President, Treasurer, ~~Head Librarian, Director of Group Purchases~~ or +>any<+ other ~~{officer}~~ +>member<+ receiving or disbursing funds of the Corporation may not serve as a member of the Audit Committee.

**ARTICLE XII - FISCAL CONTROL**

**SECTION 1. DISBURSEMENTS.** Disbursements over \$25.00 shall be made only by check. Any disbursement over \$5.00 shall be supported by voucher or receipt. All checks, drafts notes and evidence of indebtedness of the Corporation shall be signed by the Treasurer and either the President or one of the Vice-Presidents. However, checks in an amount not to exceed \$6,000 may be signed by either the Treasurer or by both the President and one of the Vice-Presidents. ~~[The Director of Group Purchases shall have authority to sign checks in an amount not to exceed \$500.00.]~~ Designated staff shall have the authority to sign checks in an amount not to exceed \$6,000.00 from an imprest fund established by the Treasurer or from such other accounts as the Board of Directors may by resolution determine. [Amended April 1983, June 1983, January 1984, October 1986 and Feb-

ruary 1987.]

**Elections**

The Article on Elections is extensively rewritten in order to (1) make necessary modifications to the timing of an election so that ballots can be distributed in the May Journal, (2) to incorporate the experience of the past few years, (3) to codify and standardize much of current practice, (4) to add a minimum vote requirement for election, (5) to remove the provision for a run-off election, which has never been needed, (6) to let the Board appoint officers in the event of difficulties during the election or as the result of an inconclusive vote, and (7) to provide for redress of grievances.

(Because of the extensive nature of the changes, additional comment follows each Section, like this.)

**ARTICLE IX - ELECTIONS**

**SECTION 1. SCOPE.** An election shall be held annually for ten Directors-at-Large, the President, the Vice-President for Apple II Programs, the Vice-President for Macintosh programs, the Secretary and the Treasurer. Each person who is a member in good standing on April 8 shall have a ballot mailed or made available to him. The election shall be concluded, to the extent possible, by May 31 of each year in order to allow those elected to begin their terms on June 1. The newly elected Board of Directors may, at their first regular meeting of the term, appoint any qualified members to fill any vacancies remaining after the election, including Director and officer vacancies separately, pursuant to Articles VII and VIII.

(The foremost purpose of the annual election is to have the members choose Directors. The Board of Directors has, and has had, the power to appoint and remove all officers at any time. Our tradition is to choose some of our officers through election,

as well, though this aspect is less fundamental. The changes allow additional methods of getting ballots to members; WAP has the discretion to choose the delivery method. An operative date is changed from April 1 to April 8, to allow for the new 7-day grace period. The last sentence acknowledges that an election may not fill all positions, for example if no one receives a majority vote to be an officer (leaving both an officer and a Director seat open), if one person is elected to two officer positions (leaving a Director seat open), or if an election has a fault or a defect that prevents a fair decision from being reached. It authorizes the Board, rather than the members through another election, to deal with such situations. The old bylaws had a run-off election requirement for President in the event no one got a majority vote, had a tie-breaking provision (which unlike the new Bylaw required one of the tied candidates to win), and had a vague reference to an Election Challenge Committee that could determine that a new election was necessary. None of these three old provisions survive.)

**SECTION 2. DELEGATION.**

The Board of Directors (the Board) shall appoint an Election Committee composed of at least three members in good standing who are not candidates in the election. This committee shall be charged with conducting a fair, impartial and timely election. Within rules, policies and procedures established by these Bylaws and the Board, the Election Committee shall have discretion to conduct the election as it sees fit. The Board shall appoint an Election Review Committee composed of at least three members in good standing, none of whom is a candidate, an Election Committee member or a Board member, to hear and resolve protests that might arise during the course of an election. The Election Review Committee acts



pursuant to Section 7 of this Article. Any dispute regarding the eligibility of a candidate or voter shall be resolved by the Board.

(This section adds to the Bylaws a requirement for an independent Election Committee, and defines its purpose and general responsibilities. The old Bylaws also mentioned an ill-defined Election Challenge Committee. This section defines a new Election Review Committee with specific authority. The authority of the Board to decide the eligibility of candidates is unchanged from old Bylaws; the authority which was implicit (and exercised in the past) to decide who is a member is made explicit.)

### **SECTION 3. NOMINATIONS.**

Nominations for Director-at-Large positions and officer positions must be made at the February Regular Membership Meeting or received by the Secretary through the Corporation's office by that date. Candidates for office must be members in good standing from the time of their nomination until the conclusion of the election. Members in good standing may nominate themselves or others. A single nomination for each nominee is sufficient for any position. It is the responsibility of the nominator to provide sufficient information to identify and locate the nominee, who may be known to the Corporation under another name or through another family member.

(This section incorporates the nomination procedure set out in the old Bylaws, but changes the month mentioned from March to February, and changes some emphasis and wording. It allows nominations to be received at the office on the day of the meeting (usually a Saturday), rather than making the deadline the day before the meeting (usually a Friday). It expands the requirement in Section 2 of the old Bylaws that candidates must be members in good standing—it spans the requirement

over time. It goes on to give more detail about the traditional nomination procedure that might be of interest to members interested in Pi office.)

### **SECTION 4. SUBMISSIONS.**

As soon as possible after the conclusion of nominations, the Election Committee shall ascertain which nominees wish to stand for election as candidates. An individual may accept nomination and be a candidate for more than one position, except that no one person shall be a candidate for both President and another officer position. The Election Committee shall apprise the candidates of the rules and timetable for the election, and shall solicit from the candidates whatever declarations, certifications, statements, disclosures or other information as may be permitted or required by the Election Committee, the Board or these Bylaws. This information shall be held in confidence by the Committee until the deadline for its receipt or until all such information is received. A candidate for more than one position shall designate the one contest under which any candidate statement or background information concerning the candidate shall appear.

(This section defines some responsibilities of the Election Committee, mirrors the restriction elsewhere in the Bylaws about holding two officer posts, allows for conflict-of-interest disclosures and candidate statements, and standardizes on candidates having only one statement irrespective of the number of positions they are running for.)

### **SECTION 5. BALLOTING.**

The Election Committee shall supervise and have responsibility for the production, distribution, collection and accurate counting of election material. The Election Committee shall, subject to the instructions of the Board, set a time in the

month of May by which ballots must be received to be valid and counted. The Election Committee is authorized to rule on the validity and intent of each returned ballot. Each ballot may contain one vote for each office, except that up to ten votes (noncumulative) may be cast for Director-at-Large.

(This section sets down more responsibilities for the Election Committee. It sets a flexible deadline of a "time in May" by which ballots must be received.)

**SECTION 6. RESULTS.** For each officer position, if any one candidate receives both (a) more than one half of the votes cast for that position and (b) votes for that position on more than one tenth of all valid ballots returned, then that candidate shall be certified by the Election Committee as being elected to that position. Otherwise, the Election Committee shall certify no winner. A person elected to an office also becomes a Director by virtue of such election. In the event that any candidate for Director-at-Large is elected as an officer, such candidate shall not be eligible for election as a Director-at-Large. The ten or fewer (in the absence of ten) eligible candidates for Director-at-Large with the greatest number of votes and the votes of at least 3% of all eligible voters shall be elected Directors. The Election Committee shall certify the results of the election of Directors to the membership as quickly as possible but no later than ten days after the deadline for the receipt of ballots. The Election Committee shall present to the new Board at its first regular meeting of the term the results of the election of officers. The Election Committee shall apprise the Board of anyone elected by the membership who declined to accept election or who appears not to be eligible to serve, so that the Board may declare their

positions vacant.

(The verb "appoint" in the Bylaws refers to something the Board of Directors does. The verb "elect" refers to something the membership does, as determined in this section. As in the past, elected officers become Directors; appointed officers do not become Directors without a separate appointment. This section tightens the standard for election. For officers, it imposes a new requirement of a majority vote. In the past, only the President had to receive a majority vote, and a runoff election was called for in the absence of one. The situation never arose; we drop the runoff provision so as to remove its unnecessary burdens. We also establish a new requirement of a minimum vote. This is to prevent anomalous results in the event there is no candidate for an office, too few candidates for Director, or the membership simply doesn't want to elect someone. The certification provision is similar to the old. However, the wording is modified to emphasize timeliness, and the distinction is made that the report of the election of Directors must go to the membership, while the report of the election of officers must go to the Board. This is not to suggest that the result of the election of officers must be sequestered, only that the Bylaws require that the officers be under the control of the Board. The last sentence resolves the ambiguity about what to do if a candidate "drops out" during the election. Since in the broader case write-in votes are allowed, skipping the earlier steps, the best the Election Committee can do is to report the actual results to the Board so that they can exercise their power to determine eligibility and, if necessary, declare and fill vacancies. A with-

drawal from candidacy or a refusal to accept office is treated as a resignation after election; the candidate with the next greatest number of votes does not automatically replace the winner.)

**SECTION 7. PROTESTS.** Any candidate for any position that believes that a specific fault in the election caused, or would cause, him or her to lose the election may petition for review. Petitions must be submitted immediately upon discovery of the fault so that timely corrective action, if warranted, may be taken. The Secretary and the Board shall promptly forward such petitions to an Election Review Committee (ERC) formed pursuant to Section 2. The ERC shall render an opinion as to whether or not such a fault exists, and, if so, what an appropriate remedy for the fault shall be, if any. Before votes are counted, the ERC may instruct the Election Committee to (a) extend any deadline by up to one month, with or without further notice, notwithstanding any other provision of the Bylaws, (b) report "no winner" in

any officer race, or (c) certify fewer than 10 Directors-at-Large, provided that at least 13 Directors total shall be elected from among the officer and Director-at-Large contests, combined. The ERC may not spend or cause to be spent more than \$100 without concurrence of the Board of Directors. In the absence of protests, the ERC dissolves at the first regular meeting of the term of the new Board.

(This section replaces the vague provision in the old Bylaws that an Election Challenge Committee may order a new election. This section requires that an election continue to the extent possible, with the newly elected Board of Directors filling holes that might be left. It requires a significant fault, and it emphasizes timely and measured responses. The "one-month delay" option anticipates situations that could be fixed on that time scale, say, a problem that would take the June Journal to resolve. It limits petitions to candidates; other members must first convince a candidate of the soundness of their complaint.)

**PC Resources ♦ "The Total Macintosh Solution Since 1985"**

*"Where Every Copy Is An Original"™*

**Instant LaserCopy Printing**

Up to 11" x 17" output • QMS 860 Print System • Quantity pricing available

**Heat Transfer Printing**

1. Create color images up to 10.6" x 14.9" on your computer
2. Print heat transfer images with our QMS Colorsript 100/30
3. Transfer the images to fabric at home or at your favorite T-shirt shop

**Order Desk Special: QMS 860 Print System—\$3999**

FREE resource information available on request.

**Commerce Executive Park ♦ Reston, Virginia ♦ 703-860-1100**



## Ethernet—What Makes a LAN Tick?

---

---

**M**any Local Area Networks (LAN) are based upon a set of communication rules called a protocol, which is known as Ethernet. All devices attached to and communicating over the LAN must follow the rules of Ethernet or the smooth operation of the LAN would become chaos. The type of network cable and devices that move the computer's messages across the LAN must also follow the Ethernet protocol. So what are the basic rules of Ethernet? They could be stated as such: One At A Time, Must Be Quick, Only So Far, Knock On Every Door, and Messages Are Private. Let's take a look at them:

### One At A Time

No matter how many computers are attached to the LAN cable system, only one may transmit its information in the form of electrical signals over the cable at a time. You could have a thousand computers on the LAN, but only one can transmit at a time.

Each computer on the cable 'listens' for silence, or no electrical signals, on the cable before it transmits. The information is placed into orderly groupings called packets or frames. If its information is in large quantity, such as a multi-page report, it will break this large amount of data into small groups, called packet streams and transmit

it a piece at a time, listening between the transmitting of the pieces. This allows other computers to transmit their information in turn. A very complex set of rules governs the transmittal and receipt of the packets so no information is lost or delivered to the wrong computer.

If two computers transmit at the same instant, both will 'hear' the signals of the other and will stop transmitting. This is known as a collision. Both will wait a random period of time and re-transmit their packets. Collisions can be caused by too-long a segment of cable, which disrupts the timing on the LAN. Collisions in small numbers are a natural part of Ethernet. Large quantities of collisions disrupt the timing of the signals and cause problems.

### Must Be Quick

It takes an amazingly short time for electrical signals to traverse a piece of copper wire. This time is measured in millionths of a second, called nanoseconds. It only takes few nanoseconds for a computer to transmit its information to another computer even if it is at the far end of the cable. The Ethernet protocol requires that all signals travel the cable within a prescribed time interval. If the information arrives late, it is considered to be corrupted and is discarded by the receiving computer. So much for "better late

than never."

The short transmission times allows for an enormous amount of information, referred to as network traffic, to travel the cable system in a short time frame. It gives the illusion that many computers are transmitting at the same time. Similar to polite adult conversation, there is but one voice being heard at a time with others waiting their turn.

### Only So Far

The cable itself must follow the rules of Ethernet. The distance traveled affects the transmission time, so the cable must be equal to or shorter than a prescribed length. Different types of copper cable have different electrical conducting properties so their maximum lengths vary. The cable types must meet rigid standards of material, construction, thickness, and electrical conductive properties. The attachment devices must also meet Ethernet standards. The coaxial cable used in your home for cable TV will carry the TV signal very well but just will not pass muster with Ethernet. And you can't get HBO on the BLS LAN.

Some Ethernet LAN's use fiber optic cable and copper cable. The fiber optic cable is attached to devices that convert the electrical signals to infrared light pulses. The fiber optic cable is mostly used to connect multiple floors of a building, while copper wire runs horizontally to the computers. The infrared light pulses are immune to the various problems associated with electrical signals, such as electromagnetic interference from other electrical signals (radio waves and fluorescent lighting). Fiber optic cabling is much more expensive than copper wire, making its use in

the horizontal cabling prohibitive. Fiber optic cable can be used to support a more advanced protocol known as Fiber Data Distribution Interface (FDDI). FDDI allows for even faster transmit speeds but requires supporting equipment that is much more expensive than its Ethernet counterparts, so it's prohibitively expensive for most installations.

Specialized devices called repeaters, bridges and routers can be used to extend the overall lengths of the LAN cable. A repeater, like at least one person in every family, repeats everything that it hears. This is done by re-amplifying the signal. All electrical signals lose strength as they travel the cable, and repeaters give the signals a boost as they pass through the circuitry, much like a stereo amplifier. (Also, like a home stereo set, computers and cable devices, like repeaters, do not generate much electricity. That's why your dog can chew the speaker wire and not get barbecued.)

A bridge will regenerate the signals and is very choosy with how it handles the packets. A bridge is primarily used to divide a LAN into more easily-manageable parts or segments. It can decide whether to send a packet to one segment or the other, depending upon the logical or geographical placement of the sending and receiving computers. Once a signal exits a bridge, the rules of Ethernet concerning cable lengths start over, thus allowing for geographically dispersed segments to be within the same LAN.

A router is even smarter than a bridge. Whereas a bridge will send or not send a packet according to the destination, a router will do that, plus it will choose the best possible route for the packet to take

to get to its destination. A router's main function is to route traffic between distinct networks, such as the GAO and BC LAN's, and to send only the traffic destined for the other network.

### **Knock On Every Door**

Why would you need a device to decide whether to transmit a packet to one or more networks? Or, a better question would be, How does the information know how to get to the destination computer? Are there electronic street signs on the cable?

The answer is that the information does not know where to go to find the recipient, so it goes to all computers on the LAN. The signal will travel the length of the cable looking for the recipient; it will go wherever it is sent by repeaters, bridges, and routers. It will 'knock on every door' looking for the destination computer. Every computer on the LAN, unless denied by a bridge or router, will be visited by every packet.

As the packet travels the cable, its addressing information is read by the network interface card (NIC) in the computer. The NIC will determine whether or not the packet is intended for itself; and, whether it is or not, the packet passes through its circuitry and continues on its journey. If the computer determines that the packet is intended for its reception, it will read the contents of the packet into its memory and proceed with any required information processing. But it does not stop the packet from traversing the cable and passing through the connections of the other computers.

All NIC's have a unique 12-digit number assigned by the manufacturer known as their Ethernet Address. Each packet is sent with

basic travel information including the source and destination Ethernet addresses. Here's how it works:

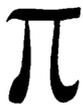
Let's say that there are 1000 computers on the LAN cable. A computer with an Ethernet Address of 02608C789645 sends a packet to a computer with an Ethernet Address of 02608C778819; every computer on the LAN, unless denied by a bridge or router, sees the packet, but only the computer with the destination address of 02608C778819 will read and process it. Each computer will read the destination Ethernet Address and decide whether it is the same as its own; if not, it does not read it.

What happens to this packet once it goes to all computers? Does it continue to travel until it is claimed? No, it continues to travel the cable until it is terminated! A device no larger than the last joint of your little finger, known as a terminator, has the dubious task of terminating the signal. It is a 50-ohm plug that absorbs the electrical signal. All cable segments must be terminated or the signals will bounce back up the cable and disrupt the orderly transmission of future packets. This is what happens when the cable is cut, or disconnected, or any other malady that may befall the copper.

### **Messages Are Private**

Computers only read the packets that are addressed to them. They are deaf to everyone else's messages, insuring privacy and security on the LAN. Routers and bridges further the cause of security by being traffic cops and not allowing unwanted traffic onto specified segments.

All networking protocols use the same concept of private messaging. There are, however, sophisticated devices that listen on the cable and read all or just specified packets.



These devices are mostly used for monitoring the traffic flow on the LAN and, subsequently, they make managing the LAN an easier task. Good thing the Cold War is over. The KGB must have had a Fire Sale on network monitoring devices when the Communist Party lost power.

Hopefully this serious yet light-hearted summary of the infrastructure of an Ethernet LAN has given you new insights into the technology that drives microcomputer networks.

*The author's name didn't appear with the article; however, the information was good and we felt that it should be run. We have advertised several times on the TCS for the author, but no one came forward.[Ed.]*

### Summary of Activities Washington Apple Pi, Ltd. Board of Directors Meeting December 9, 1992

**Officers and Directors Present:** Lorin Evans, Charlie Froehlich, Dana Schwartz, Bill Campbell, Jon Hardis, Bill Wydro, Bob Shaffer, Dave Weikert, Lawrence Charters.

**Officers and Directors Absent:** Lee Raesly, Tom Vier, Bernie Urban, Guy Durant, Ken De Vito, Tom Witte.

**New Member Handbook:** The President reported that help was needed in the production of a new edition of the New Member Handbook, and asked the assistance of the Board.

**Membership Directory:** The Board directed that the Membership Directory be produced on disk as well as on the traditional paper.

**Equipment Disposal:** The President and the TCS committee were authorized to sell or otherwise dispose of excess equipment with a book value of zero, identified at their discretion, at the garage sale on December 12, 1992.

**Applications to Stores:** The Board received a report on the success of the effort to deliver membership applications to local stores, and discussed the need to keep up the pace of distribution with everyone's help.

**Apple III SIG Funding Request:** The Board received a request for funding for an Apple III SIG software development project. The Board stated that it is their intention that WAP will support the development of Apple III software. The Board requested that the SIG return with the Apple III community's recommendations for distribution of the monies, prior to WAP's commitment of funds.

**Member Renewal:** The Board, with due cause, rejected the membership renewal application of an individual.

Dana J. Schwartz, Secretary

## 1993 WAP Annual Election

The business and affairs of WAP are managed by the Board of Directors, which is composed of the Officers and Directors elected each year. Those elected are expected to attend monthly Board meetings and to exemplify the service and leadership that our active volunteers provide in support of our activities and programs.

The statements of candidates are due Monday, March 15, 1993. A package of requirements will be provided to candidates by the Election Committee.

Additional information may be found in the WAP Bylaws, which have precedence over this notice in case of differences. Current Officers and Directors can answer questions, as well.

Help is still needed on the Election Committee and the Election Challenge Committee to conduct the election. Please call the office to assist.

## Watch for your annual Ballot in the May Journal.

# America Online: The Book

by Deborah Miles-Hoyt

Online services and electronic bulletin boards have become all the rage. From them one can keep up with the news, enhance his/her career skills, relax and play games, plan a vacation, learn about new and upcoming hardware and software innovations, get product information, and even do some shopping. Because there is such a vast array of things that telecommunications make available to us, it is often daunting to get started with a new online medium. Perhaps this is the reason that Tom Lichty took it upon himself to write a book demystifying one of the biggest nationwide online services, America Online.

## How the Book is Arranged

The book *America Online Membership Kit & Tour Guide: Mac Version* is easily read and understood. It goes to great pains to take the agony out of trying a new online service for the first time. And it is visually quite Apple/Mac-like itself: Each chapter has its very own icon in the upper right and left hand corners. Now what other publication does that remind you of?

The text begins logically enough by introducing the reader to what America Online (AOL) is, where it is located (right here in Vienna, Virginia), which computers are used to make it all happen (nine computers collectively referred to as "The Stratus"), the software provided with the kit which enables the user to sign on

(a self-configuring package which queries The Stratus for new features each time that the user logs on, thereby eliminate the need for new versions of the software), and a brief description of the topics available for online enjoyment (with a fuller description of these given in later chapters). The book's purpose is twofold: to serve as the official documentation for using AOL; and to guide you through the jungle of AOL's offerings to just the board(s) that you want to frequent. The text also includes five appendices, an index, and even a glossary for the truly new at online communications.

What else does the kit contain? It also gives you a certificate with a temporary account number and a temporary password; these enable you to try out your ten free hours of log-on time. You'll find both of these items tucked securely behind the floppy disk which is encased in a plastic sleeve and folded away inside of the back cover. Something that I found rather crass, although understandably practical from an economic point of view, was AOL's insistence on being informed exactly how you plan to pay for any time that you use the service beyond the ten initial hours right as you signed on the first time. Depending on who you are, this can be off-putting. Frankly, I'm not sanguine about giving some electronic dooda my credit card number. Once all of the economic hooaha is out of the way, you decide on and type in your

screen name (up to ten characters), then do the same for your password (you can choose this yourself, so make it something that you'll remember).

Installing the software is simple, just double-click on the installer and let it do the rest. You'll need to have at least two megabytes of free space on your hard disk and 700K of available RAM. The installer will create a new folder containing the AOL application and four folders (Online Files, Online Mail, Online Downloads, and Online Tools), and it will place it wherever you specify.

Now you're ready for your first online session. This takes 15 or more minutes but it is not counted as part of your ten free hours. After that you are allowed two free hours per month (your \$7.95 monthly fee not withstanding) and beyond that they charge you \$.10 a minute. The initial call is made to an 800 number. The software checks your modem set up and selects a baud rate for you. I was disappointed that only 300, 1200, and 2400 bps were available when I can sail along at a brisk 14,400 or higher, but that's life. This same dialog box which comes up and allows you to select a modem speed also reminds you to have your AOL Registration Certificate and either your credit card or checking account numbers handy before continuing.

Next you are asked if you would participate in an AOL survey. If you don't wish to, you are able to move on, but all the survey really wants to know is what kind of Mac you are using and the possible speed of your modem (maybe they are taking a count to see if it would behoove them to boost their modem capabilities to 9600). From this point the process is self-explanatory and, if the need arises, you can cancel out and hang up at any time. One very nice feature was that AOL offered local primary and secondary phone numbers for the user to call into so that you are



not required to call long distance every time that you dial in.

After the logistics are out of the way, AOL will attempt to assign you a screen name. The book urges you to select your own. Next you are asked for another password. This is different from the temporary password that was on your certificate. At this point you will be informed that you have mail—an E-Mail message from AOL president, Steve Chase. Choose Read New Mail from the Mail menu or type Command-R. Now, wander around a bit, click the Departments button and see what's out there.

### Logging On

So there I was online. I wandered around and looked through all seven of the departments (I even found a Bunny Board!), entered a chat room or two (and yes, they really are real-time), and made arrangements to have an AOL Welcome Kit mailed to me (it takes one to two weeks). It was fun and even easy to figure out the navigation process. As the book promised, it was overwhelming. There were so many different forums and topics to check into within the departments, not to mention the libraries that are part of each board within a department I can see where you could easily eat up the free ten hours in a matter of a few days. I rather enjoyed the adventure.

### What Is Out There?

The remainder of the book (chapters 3-13) is devoted to covering what is available to you. The list is rather impressive, but to tell you everything would spoil your fun. You can, however, see the sidebar for a brief listing and description of the many boards that you have to choose from. The real purpose of AOL is interconnectivity of people and ideas by means of telecommunications. So, get online and join the fun!

## What's Inside?

**Chapter 1, Starting the Tour**—basic information about AOL.

**Chapter 2, Making the Connection**—walks you through the set-up and initial sign-on process. Just as it relieves you from worrying about the complexities of most of the other technical aspects of telecommunications, AOL automates most of the process of getting started as well. The chapter is short and sweet.

**Chapter 3, Online Help & the Members**—serves as an introduction to the AOL software. The chapter includes pull-down menus and shows you what's inside them. It also takes you on a visit to the AOL Lobby and introduces an online guide (a member of AOL who serves as a real-time assistant to the users). You also get to examine the Members' Directory of Services, a convenient method of searching all the services that AOL has to offer.

**Chapter 4, Entertainment**—is one of AOL's seven departments. It features news and updates on best-selling books, cartoons, celebrity info, horoscopes, movie reviews, music, games, joke boards, and more.

**Chapter 5, News & Finance**—is one of AOL's seven departments. It features top stories, nation and international news, weather, sports, features, USA Today, business news, Editorial cartoons of Mike Keefe, election news, the Ernest & Young Business Series, an investor's network, stock market information and updates, etc.

**Chapter 6, Lifestyles & Interests**—is one of AOL's seven departments. It is one of AOL's largest departments with about 30 forums. It features astronomy, Ethics & Religion, Comedy, Cooking, Science Fiction, Star Trek, Stocks And Markets, Writers' Club, Tax Forum, Trivia, Wine & Dine, Ham Radio, Issues In Mental Health, Kodak Photography, Military & Vets Club, disABILITIES, Environmental Issues, Real Estate, Pet Care, Scuba, Seniornet, Student Access, etc.

**Chapter 7, Computing & Software**—is one of AOL's seven departments. It features Macworld magazine, software libraries, industry connection, education, games & entertainment, graphic arts & CAD, hardware, user groups, Utilities & DAs, PC forums, Apple II forums, business, development, desktop publishing, music & sound, HyperCard, Craig Crossman's nationally syndicated Q&A article from the Miami Herald, Home-office Computing magazine, Microsoft Knowledge Base, etc.



**Chapter 8, Travel & Shopping**—is one of AOL's seven departments. It features airline & hotel reservations, the Comp-u-Store Gateway, Flower shop, classifieds, LaserDirect Printing Service, Penny Wise office products store, PC Catalog, publications for computers, and more.

**Chapter 9, Education & Reference**—is one of AOL's seven departments. It features Compton's Encyclopedia and the Online Campus (yes you can even enroll in a class), National Geographic, Interactive Education Services, Academic Assistance Center, Electronic University Network, Teachers' Information Network, Parents' Information Network, NEA Online, Library of Congress Online, Entrepreneurial Education Plaza, InQuizitive, Dictionary of Computer Terms, Mac Educational Software, Apple II Educational Software, PC/MS-DOS Educational Software, etc.

**Chapter 10, People Connection**—the real-time telecommunications community of AOL where you can meet and become friends with many people is one of AOL's seven departments. You begin your journey in this department by taking a trip back through the Lobby, AOL's primary public chat room. From here you can go on to other "rooms," places where topic-specific conversations are held. Another interesting feature is the Center Stage chat room. You go there to hear the special guests that AOL has invited or play the "game shows" that AOL offers.

**Chapter 11, Electronic Mail**—teaches you everything you need to know to master AOL's E-Mail feature. You can also delve into the international service that allows AOL users to send and receive E-Mail worldwide.

**Chapter 12, FlashSessions & the Download Manager**—two of the high end features that AOL offers. FlashSessions sign-on automatically at a predetermined time, send and receive mail, download pre-designated files, and sign-off all without human intervention. And because they don't need the user present to work, they can be set to operate at a time when the System is not very active. With the Download Manager, you can establish a list of files that you want to download while you are online, and when your session is almost over, you can then instruct it to download the files and sign-off. Once this has begun you can leave and the computer will do the rest.

**Chapter 13, Ten Best**—this is collection of the Ten Best...out of several categories. And which categories? The Ten Best...tips for using AOL, downloads, ways to make friends online, smileys (you know: =:-) , :-@, :-\$, etc.), and the ten most frequently asked questions of Customer Relations at AOL, and the best online top ten list.

**Title:** America Online Membership Kit and Tour Guide, Mac Edition, Version 2

**Author:** Tom Lichty

**Publisher:** Ventana Press

**Address:** P.O. Box 2468  
Chapel Hill, NC  
27515

**Phone:** 919-942-0220

**Fax:** 919-942-1140

**ISBN:** 1-56604-012-4

## Notice

The first group of register tapes collected from Giant and Safeway supermarkets has been sent to a local area school to help enhance its programs. The office requests that you please turn in any register receipts that you may still have by the end of February so that one of the following schools can also get the equipment that it needs:

Owens Road elementary School  
Seabrook Elementary School  
Trinity School  
The Kennedy Institute

Please note that selection was based on receipt of a letter requesting assistance by local area schools. The Washington Apple Pi did not choose one school to the exclusion of another.



# Request for Bid for the Position of Managing Editor

The Washington Apple Pi is seeking applicants for the position of Managing Editor, Washington Apple Pi Journal. Interested applicants should submit:

- A résumé, outlining qualifications, experience and abilities relevant to the position.
- A list of computer equipment and software that will be used for the preparation of the Journal. Indicate whether the equipment is currently owned or whether acquisition is planned. If planned, indicate whether it will be available through ownership, rental or lease or describe any other access alternative (such as a via service bureau). For equipment not currently owned or available, a planned acquisition date should also be included.
- Samples of work products that demonstrate the qualifications, experience and abilities described in the résumé.
- A bid, based on a flat rate monthly payment for fulfilling the following tasks:

1. The principal task of the Editor is the page layout and blue line production of the Journal. The Editor will arrange submitted articles and ads so as to prepare a Journal each month. The Journal will be 80 pages in length, unless otherwise specified by the Board of Directors.
2. The Editor must be able to work with copy provided in Macintosh and Apple II file formats as well as hard copy. In addition the Editor must be able to accept files by modem. Generally file transfers will be made through downloads from the Washington Apple Pi Telecommunications System, where a file area has been established for this purpose. However, the editor must have the capacity for direct modem transfer from individuals when extenuating circumstances make such the most expeditious means of data exchange.
3. The Editor is responsible for all information contained in the Journal. The Editor is responsible for working with authors and volunteers in a proactive, positive fashion to ensure the timeliness, accuracy and completeness of all material. Although a specific task (e.g., recruiting writers, soliciting articles) may be delegated to volunteers, the Editor retains primary responsibility for the final result.
4. The Editor reviews submitted material for suitability for inclusion. It is not the job of the Editor to rewrite articles. The Editor may make grammatical changes or any minor changes needed to improve the quality/clarity of an article. When a contributed article is of such poor quality that it needs sub-

stantial improvement before it can be used, the Editor provides the author with comments indicating steps needed to make the article suitable. These comments must be positive, aimed at encouraging the author to make the needed changes/improvements.

5. In general, the Editor is expected to use all articles submitted. When a backlog of articles exists, the Editor will give priority to previously submitted articles. However, articles which are time critical, such as descriptions of upcoming events or reviews of important new products, should receive priority over backlog material.
6. When insufficient Pi-generated material is received to support a complete issue, the Editor shall acquire and use material from other sources, such as material identified by volunteers or SIG chairs or other articles from user group publications. The Editor is responsible for maintaining a sufficient supply of this material to ensure a complete Journal every month.
7. At the Editor's discretion, an editorial column may be included. The column should be one that is supportive of WAP, reports or comments on events in the computer field and/or suggests ideas for consideration. The column shall never contain personal criticisms of individual WAP members. The Editor may also choose letters received for publication in a Letters to the Editor column. Only letters commenting on WAP policy (either supporting or suggesting improvements) or commenting/reporting on events in the industry or personal computer-related experiences may be included. No letter shall be included that criticizes a specific individual or group of individuals.
8. The Editor will keep the WAP President informed of the progress of Journal produc-

tion and any potential problems that will have a negative impact on the Editor's ability to meet established deadlines and/or requirements.

9. The Editor will establish, publish and adhere to a schedule for submission and production deadlines. The schedule will cover both article and ad copy.
10. The Editor will deliver all production copy and mechanicals to the printer at a designated time each month. Delivery to the printer will be in such time as to ensure second class mailing in sufficient time (estimated twelve calendar days lead time) to ensure delivery to local members prior to the fourth Saturday of the month (normal meeting day) as resolved by the BOD.
11. The Editor will deliver a copy of the Journal (in page layout format on disk(s)) to the WAP Office Manager within five days of delivery of mechanicals to the printer.
12. The Editor is expected to establish and maintain a pro-active relationship with the Washington Apple Pi office, initiating regular contact designed to insure that all parties are up-to-date regarding matters concerning the Journal's content, advertisers, etc.

Applicants must submit all materials described above. Materials may be submitted in person or by US Mail at the offices of the Washington Apple Pi; 7910 Woodmont Avenue, Suite 910; Bethesda, MD, 20814, ATTN.: Editor Search Committee. All submissions must be received or postmarked by April 1, 1993. Late or incomplete submissions cannot be considered.

Questions should be directed to Lou Pastura, Chair, Editor Search Committee, at (703)560-1477.

## SF 171 Software

**FEDERAL JOBLINK** - contains SF 171, SF 171-A, SF 172, SF 15, SSW 32, SSW 555, SSW 585, and SSW 800.

- 9 of 10 in WAP Review
- Forms appear on screen
- Modified pages for jobs
- Makes unlimited copies
- Prints form and answers
- Creates typeset 171
- SF 171 software since 1987
- Updated manual describes
  - Federal employment
  - Job descriptions
  - Personnel terms
  - Interview tips
  - Organizing a SF 171

**Career Advancement - only \$59.95**  
 (Add \$3.00 s/h, MD res. add 5% tax)  
**WAP Members get 10% discount**  
 Requires Macintosh and MacDraw;  
 specify version of MacDraw (1, II, Pro)  
 Printer must be able to print at 50% reduction

**Questions???? Contact us .....**

**MULTISOFT RESOURCES**  
 P.O. Box 235  
 Washington Grove, MD 20880  
 (301) 977-6972



# 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. Beyond the spiritual and intellectual, rewards also include compensation; you will be paid. We especially need someone who can offer training in *HyperCard*.

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 Craig Eastman (202) 234-1088.

## Fees and Other Matters

The rates for the Washington Apple Pi tutorials are as follows: \$25 per class for WAP members; \$35 per class for non-members. All classes are taught in seminar style and students need not bring their computers. However, students who feel that they would benefit from hands on training will need to bring their computers. The office can only supply a computer for the instructor.

## 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 main focus of these courses will be on the System, Desktop, Icons, Windows, and basic concepts in System 7; System 6 users are welcome and encouraged to participate. Please try to take all three parts; this is the most beneficial arrangement.

**Introduction to the Macintosh, Part I (Course # M30893)** 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 (optional), hard drive, startup disk, and an unformatted DSDD 800k disk.

**Date:** Mon., Mar. 8, 7-10 PM.

**Introduction to the Macintosh, Part II (Course # M31593)** 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, 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 (optional), hard drive, startup disk, and an unformatted DSDD 800k disk.

**Date:** Mon., Mar. 15, 7-10 PM.

**Introduction to the Macintosh, Part III (Course # M32293)** 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 (optional), hard drive, startup disk, and an unformatted DSDD 800k disk.

**Date:** Mon., Mar. 22, 7-10 PM.

**Maintaining Your Macintosh (Course # OS32493)** 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., Mar. 24, 7-10 PM.

**Introduction to Microsoft Word 5.X, (Course #MW030993)**

For those with limited experience of Microsoft Word, this will be a basic introduction to the powerful word processing program. Topics will include, based on student needs: how and when to use Word, its environment, features, menus and commands, window icons, keyboard shortcuts, formatting exercises, different views, and the purpose of style sheets.

**Materials Required:** Your Ma-



cintosh (optional), hard drive, startup disk, and a copy of Microsoft Word, preferably version 5.X or later.

**Date:** Tues., Mar. 9, 7-10 PM.

**Introduction to HyperCard, (Course # 031693).** This class is designed for the HyperCard novice. It is the perfect seminar for those wishing to learn how they might enjoy the many benefits of HyperCard.

**Date:** Tues., Mar. 16, 7-10 PM.

**Using Claris FileMaker Pro, Part 1 (Course #FMP 032393).** An introduction to the popular and powerful flat-file database program from Claris will include the basic database management terminology, how to create, change, edit, and sort records; and how to structure, preview, and print reports.

**Materials Required:** Your Macintosh (optional), hard drive, startup disk, and a copy of Claris FileMaker Pro.

**Date:** Tues., Mar. 23, 7-10 PM.

**Other Educational Opportunities**

I've listed some training resources to supplement our class schedule. I

am not endorsing the listed resources. Call or write me about your training experiences outside the Pi. I am very interested in documenting courses at local schools, colleges, universities, adult and continuing education programs, courses at the Smithsonian, and other Macintosh or Apple II training. Any information would be very helpful in this regard.

If you are interested in college, graduate, or professional study involving the Macintosh in a field like graphic design, photography, filmmaking, animation, training design, etc., write to me at 9505 Draycott Court, Burke, VA 22015-3253, enclosing a SASE, and I'll get some options and info to you.

- **Rochester Institute of Technology, Technical and Education Center of the Graphic Arts** (Frank E. Gannett Memorial Building, P.O. Box 9887, Rochester, NY 14623-0887, (716) 475-5000) The T&E offers graduate and professional-level study including seminars, credit courses, degree and other programs in color prepress, digital photography, desktop publishing, and other fields of

interest to the Macintosh communicator.

- **Personal Training Systems** (828 S. Bascom Avenue, Suite 100, San Jose, CA 95128): 1-(800)-TEACH-99. Personal Training Systems offers a pretty comprehensive set of 90-minute tutorial modules which consist of an audiocassette and computer disk. Most sets have four or more modules ranging from beginning to more advanced topics. At mail order prices of \$60 or less per module (\$99.95 list), these packages are relatively cheaper than other such training materials. Check them out.

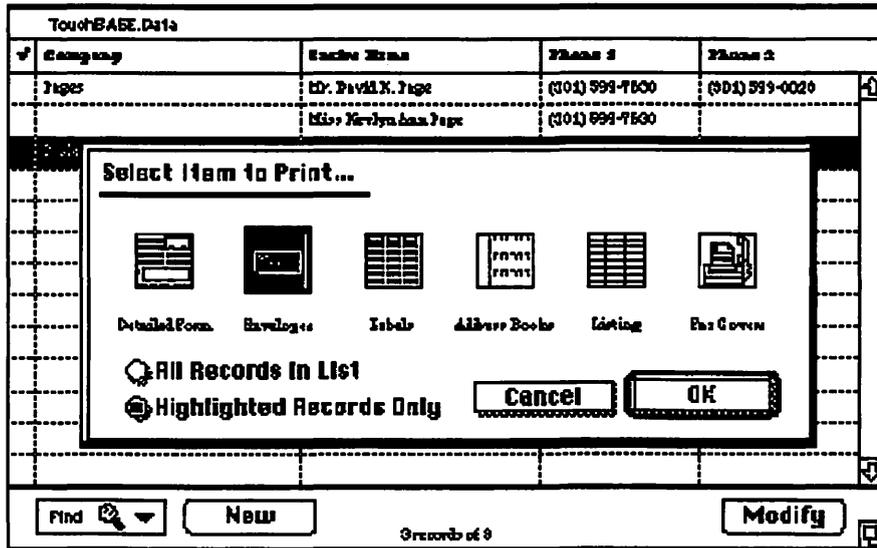
- **Northern Virginia Community College**

**Alexandria Campus**, (3001 North Beauregard Street, Alexandria, VA 22311) (703)-845-6301)

**Loudoun Campus**, (1000 Harry Flood Byrd Highway, Sterling, VA 20164 (703) 450-2571) Continuing education classes in Macintosh computing. Associate Degree in Applied Science programs in Communication Design and Computer-aided Graphic Design at the above campuses.

| <b>Washington Apple Pi Tutorial Registration Form</b>  |   |
|--|---|
| Washington Apple Pi<br>7910 Woodmont Ave., Su. 910<br>Bethesda, Maryland 20814<br>301-654-8060         |   |
| Basic Information  | Course Numbers  |
| Name _____   | <i>Please fill in the course number of the class(es) that you wish to attend.</i> |
| Address _____  |   |
| City/Zip/State _____   |   |
| 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? <input type="checkbox"/> Yes <input type="checkbox"/> No |   |
| WAP Form #CL006 (mod. 7/90). Mail registration and payment to the above address.                       |   |





The various Print options in TouchBase.

occurred to you. You may wish to drag the TouchBase files over to another folder so that they do not show up under the Apple Menu with System 7—I use the Preferences folder for storing my TouchBase data files. You may use another as well since it's user-definable.

The first time you use TouchBase, it will need to create a new data file. Type in the name of the database that you are going to use, as in "Business Contacts," and it will use it from then on. Later you can create several other database files for your other addresses, such as: Family, Friends, Personal or whatever. Switching from database to database is as easy as selecting it from a menu. I have several set up for my uses, both personal and business, and switch as necessary.

Use the General Preferences menu under the TouchBase pulldown menu to set up the formatting of TouchBase's fields and startup options. Then start entering information. A new screen will appear to allow the entering of the information such as name, address, etc., and it will show a Rolodex

Card as you type the information.

From this menu you can export information to a Sharp Wizard or to a text file. Dialing the phone is as easy as clicking on the phone icon next to the phone number you wish to dial. The setup allows for dialing the phone through the modem or the Mac's internal speaker.

I use TouchBase to store several thousand names, addresses and phone numbers; it works fantastically. The sorts are fast and the program works seamlessly.

I imported a Tab delimited FileMaker Pro file of about 6,000 names and addresses with no problems at all, although it did take some time to do so.

An excellent program and one of the easiest that I have ever used.

### Contact!, An Overview

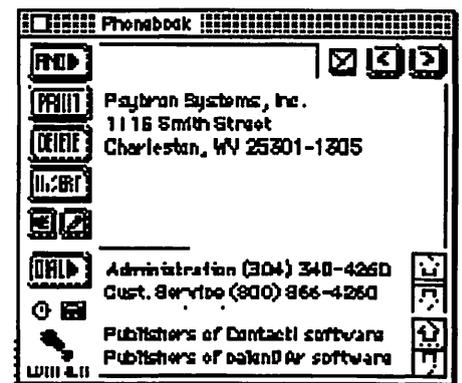
Contact! is a DA for organizing names, addresses, phone numbers; it can dial the phone, print envelopes, lists, labels, postal bar codes, and more. The features are similar to TouchBase's, but Contact! is a freeform database. This is something that takes some getting use to. There isn't a card or several

blocks to fill in, you just setup the information the way you want it shown and enter it. The block for the names and addresses (or whatever information you want) is huge. The number area is large and can contain many telephone numbers. I have one file with 36 numbers, as a test, and it works great.

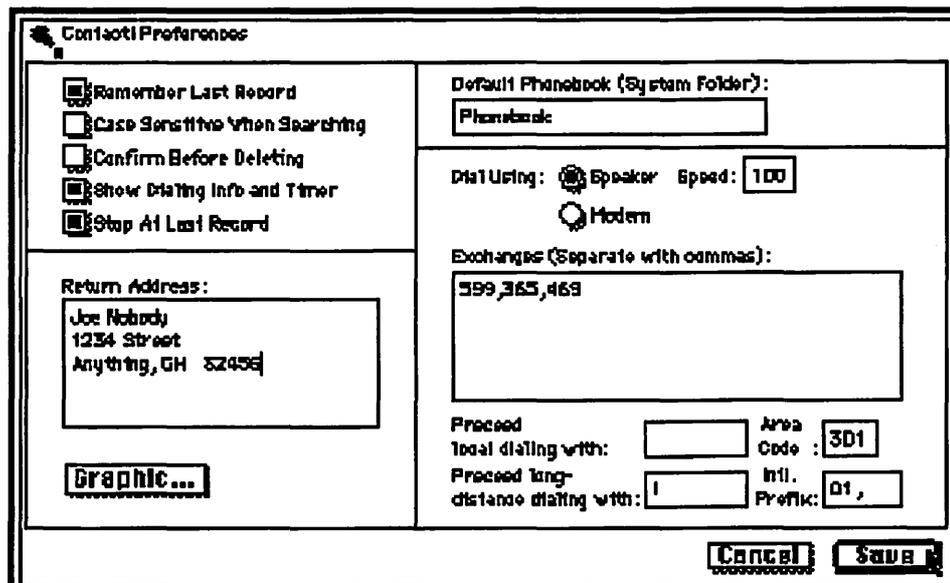
The manual is fantastic. It is well thought out and has lots of pictures for us computer users and it is very colorful, too. Installation is a snap under System 6 or 7. (System 6.07 or higher is required) To start inserting information, just delete the sample entries and type your information in the first window.

Add the telephone numbers in the second window and you are ready. To print to an envelope just click the Print button. To dial the phone—through modem or speaker—hold the Dial button or use Command-D and select from the list the number to dial. A phone pad comes up and highlights the numbers as they are dialed and a progress window will show you how things are going including the total duration of the call.

If you wish to use the name and address in your document, after a Find, just click the icon of the camera and it is copied to the clipboard



Addresses and phone numbers are entered in separate windows in Contact!.



Preferences dialog box.

automatically. A nice touch.

A feature that I don't now have a use for but that is cute, is the recorded sound or playback button. With a Mac that has a microphone you can record sounds to store in the database along with the names. It works well but I don't know what I would use it for.

Contact! has an area for the printing setup. In this section it says "The printing capabilities of Contact! are both extensive and remarkable for a Desk Accessory." That could well be the best understatement I have seen in some time. Printing is, well, intense....yeah,

intense!

### Envelope and Label Printing

One can print 14 different sizes of envelopes in the Business section alone and then go to the Executive, Baronial, Catalog, Booklet, International and Custom settings as well. It will print Zip+ 4 if entered and graphics and comments and...well you get the picture.

I must say that for the occasional envelope that this is very easy, but it has some elements of overkill. It can almost be overwhelming....

Label printing is about as versatile. The list of labels that can be printed and used with Contact! is extensive. It includes Avery (ALL Avery Sheet label sizes known), Dennison, InMac, Paper Direct, Quill, and Varco. And then there is the list of continuous feed labels which are too numerous to list.

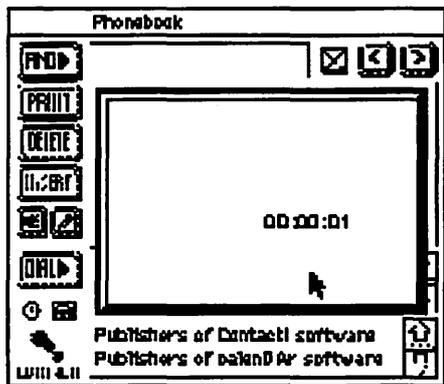
### Conclusion

Both programs do a great job for what they are, but they are totally different in what they can do. TouchBase has the best interface for just names, addresses and

telephone numbers, but lacks in printing and attached notes. Contact! on the other hand does a fantastic job of printing, but the information that we may need is not visible in the window. The information can be there, but it just isn't convenient.

If you need an address book to just look up a name and find a telephone number to dial, either program would be fine. But if your needs are of the label, and/or envelope printing and addressing and you need the power to do anything, then Contact! is the choice.

For a great address book with an easy interface and click and run printing for the masses, then TouchBase is the clear and simple winner.



Contact!'s progress window.

**Title:** TouchBase

**Publisher:** After Hours Software

**Address:** 5636 Van Nuys Blvd., Su. B  
Van Nuys, CA 91401

**SRP:** \$125

**Discount Price:** \$79

**Title:** Contact!

**Publisher:** Psybron Systems

**Address:** 1116 Smith St., Su. #206  
Charleston, WV 25301-1305

**SRP:** \$98

**Discount Price:** \$65

# Artists on exhibit

by Ann Aiken

**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:** Our artist this month is James Burch. He earned a BFA from Virginia Commonwealth University with an emphasis on graphic design. He is currently a graphics specialist with Cangemi Graphics in Bethesda, Maryland.

**Tools:** Quadra 900, QuarkXPress, Photoshop, FreeHand, Illustrator, and PageMaker.

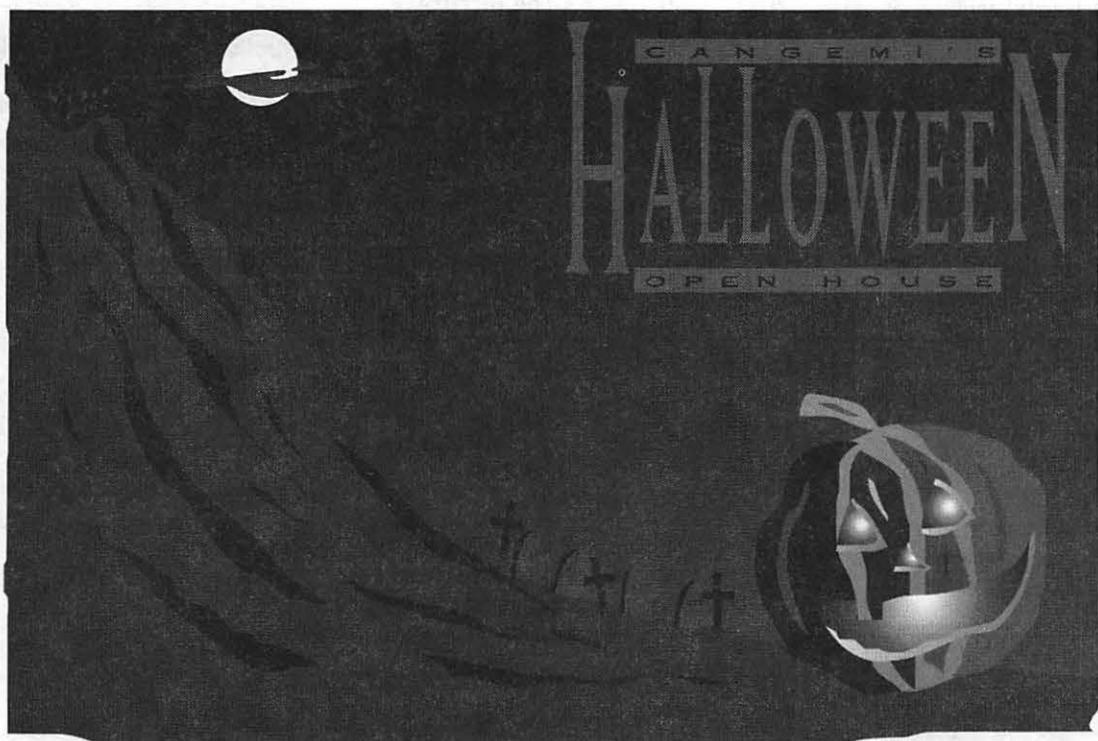
**Technique:** "I have seen great changes in the computer graphics field from when I started out just

four years ago. I began my first computer oriented job with a MacPlus and a six-inch monitor. There have been tremendous strides made in both software and hardware since then. We used to give our photos directly to the printer without putting them into the Mac at all, and used the Mac for text layout only. Now we scan the photos in camera-ready and place them in the page layout.

"On the *Halloween* invitation, the pumpkin illustration took the most time. It was drawn directly on the Mac in FreeHand using the freehand tool. I filled it with graduated tone and placed in the dividing lines.

Then I drew the eyes, nose and mouth with the freehand tool and added a light (10% to 20%) graduated fill to give the pumpkin walls a three-dimensional look. I drew four separate radial fills from white to black and pasted them inside the eyes, nose and mouth. With the freehand tool, I drew the hilltop; I then drew the house using the pen tool and placed a graduated fill in the background.

"The *Cangemi Lino and Graphic Services* logo was drawn in FreeHand. I started with a square box and rotated it 90 degrees and filled it with black. Then I pulled down the ruler guide to zero and ungrouped the box. I pulled the bottom and top points



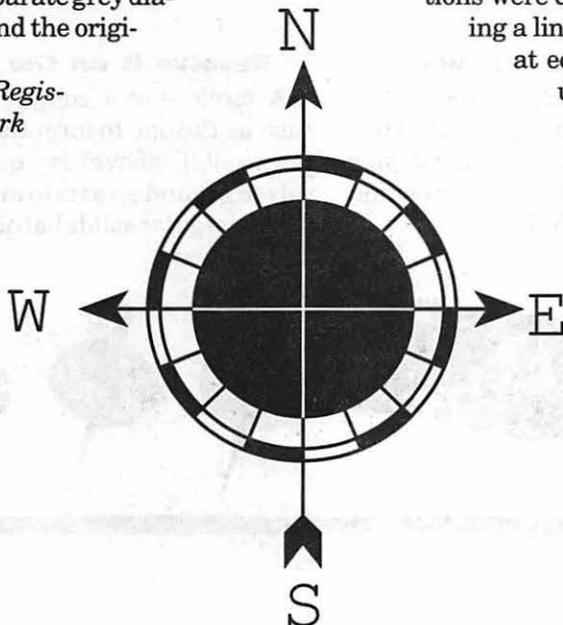


down to make a diamond shape. Then I typed in a line of triangles in Zapf Dingbats and joined it to the diamond. I drew a circle and wrapped it with different dingbats which I condensed and filled with white. The circle was then placed toward the bottom of the diamond itself and pasted inside. I added the bar first, duplicated it to keep the curvatures identical and placed the text with the Join to Path command. I added a separate grey diamond behind the original one.

*"The Registration Mark was created*

in FreeHand. I started by drawing the three circles and using the space align tool to center the circles. I find this function very useful when creating all of my artwork. I then drew the vertical and horizontal lines and applied the arrowheads in the line dialog box. I cloned the arrowheads, changed the lines to white, and used the paste inside function to place them in the circle. The lines which

divide the circle into sixteen sections were created by drawing a line and rotating it at equal increments until it filled the circle. The outer edge



was filled by tracing within the lines and adding a black fill. Each piece was rotated to fill every other section.

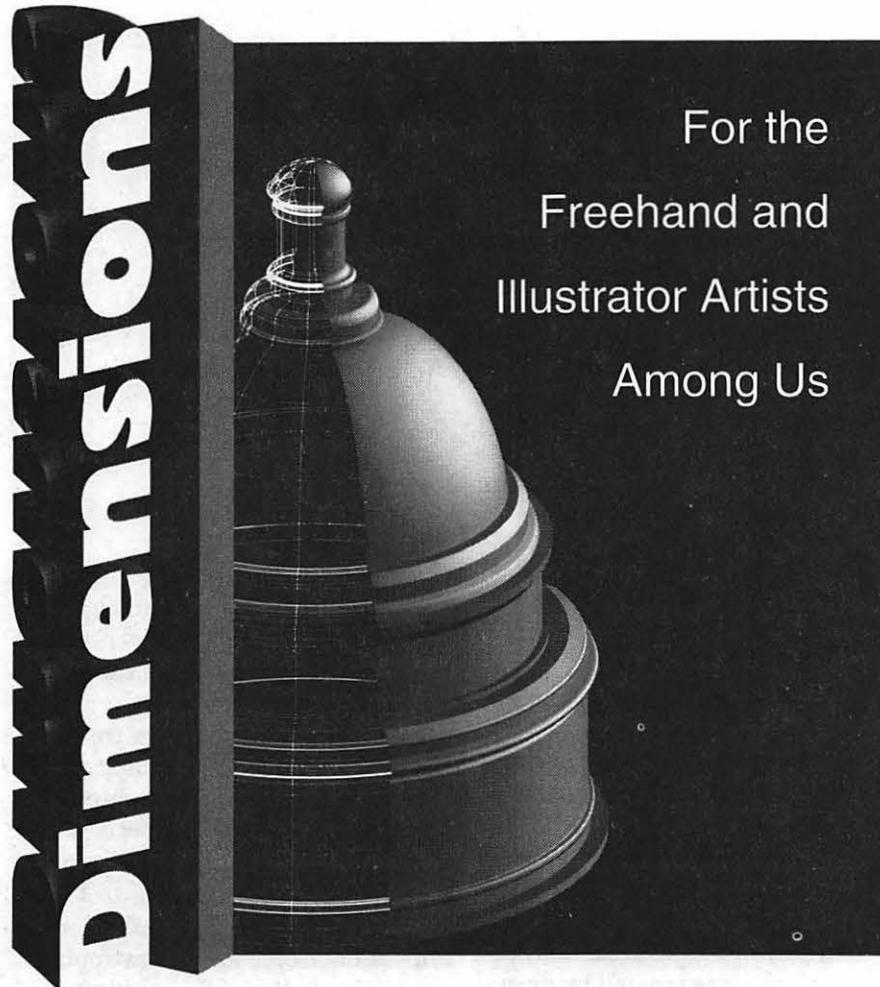
*"In my job, I also do a lot of troubleshooting for clients who submit work for lino output. My design procedure has changed since I've worked in a service bureau. I now think through a project before beginning to keep the pieces as simple as possible, and to make linotronic output less troublesome. Graduated fills, pasting inside, and too many points can add up to frustrating problems."*

To submit art by mail, send a copy on disk and a hard copy to:  
**Ann Aiken**  
 9212 Cedarcrest Drive  
 Bethesda, MD 20814

To submit art by modem to the TCS, dial (301) 986-8085. At the Main Menu select (F) for File Transfer Area. Then choose area 24 for Journal Submissions, and upload.

# Graphic Tips

from Carol O'Connor



Now we need no longer be frustrated in our efforts to render complex three dimensional objects in FreeHand or Illustrator. Adobe Dimensions does it for us, adding multiple lights and correctly modeled surfaces.

Last month we explored how Adobe Photoshop and Illustrator can be used together. This month we are delighted to display the new Adobe Dimensions package for the working artist. It is a significant new illustrator's tool.

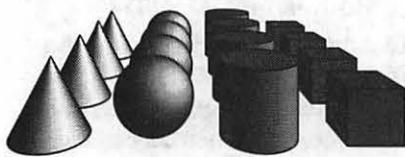
Most often it works like this:

1. Draw in your drawing program.\*
2. Import your drawing into Adobe Dimensions.
3. Perform the 3-D rendering routines on your import.
4. Export the result to your original application for editing and/or integration into your layout and printing.

*\*You can also render primitive shapes directly within Dimensions.*

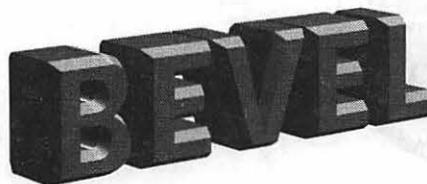
## Draw by Dragging

Each of these objects can be drawn simply by dragging along any diagonal. They are created automatically as 3-D objects which can be resized and repositioned in true perspective.



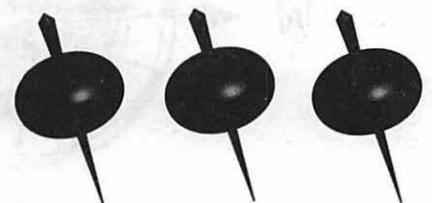
## Extrude and Bevel

Objects, including outlined texts can be extruded to any length. They can be beveled in simple or complex ways and placed in any position above or below eye level.



## Revolve it on the Axis

A circle, (or a complex outline such as the one to form the dome of the capitol, above) is quickly revolved around an axis to make regular or irregular solids bathed in light and shadow.



### Put Text in Real Perspective...

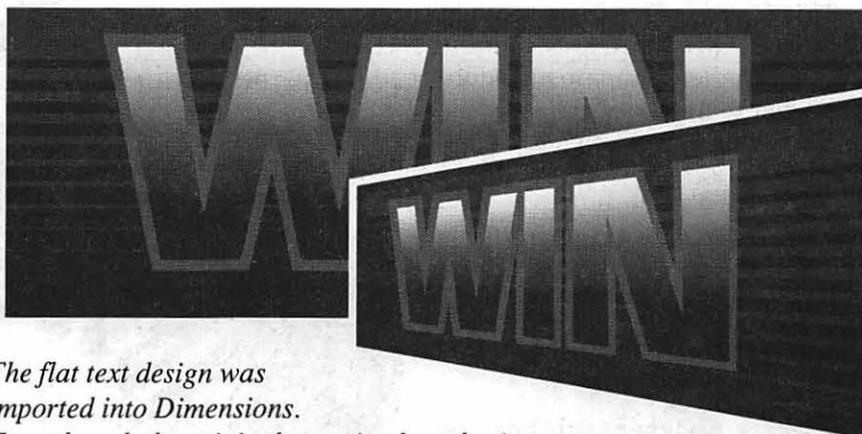
Outline text created in your favorite drawing program can be imported and then made to "point" to a vanishing point with a flick of the mouse. Adobe Dimensions allows one to choose:

- No perspective
- Normal perspective
- Telephoto perspective and
- Wide angle perspective

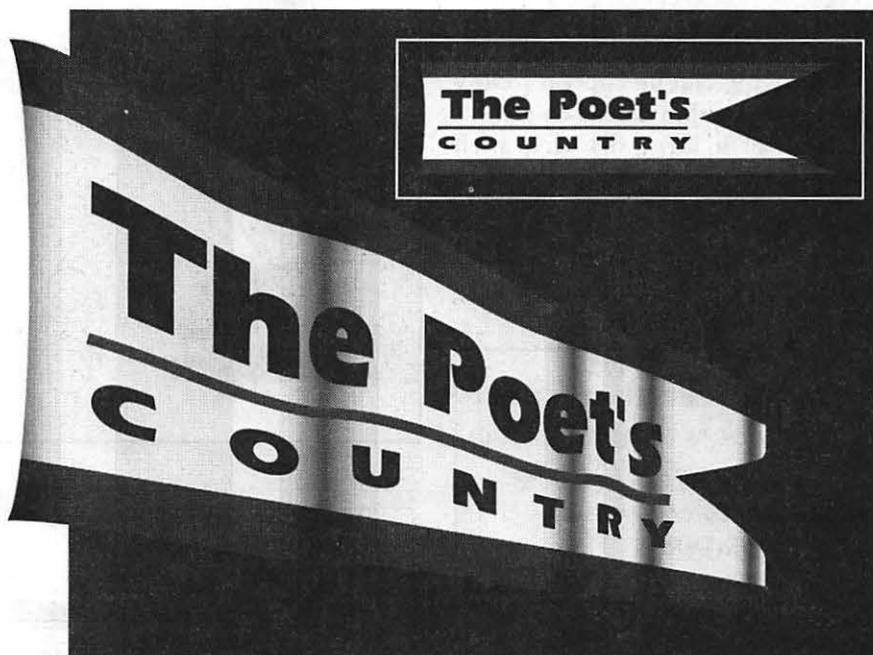
for the orientation of the rendering.

### ...And/Or Make It Ripple Over an Extruded Surface...

For the flag at right, the ripples (one line, right, below) were drawn in Illustrator and imported into Dimensions. The line was extruded making a new object. The flat flag (an Illustrator drawing) was mapped onto the extruded line with a simple import and click. After the lighting was adjusted to emphasize the shadows, it was exported to Illustrator where the layers were separated and the background discarded leaving only the flag. The flat, dark rectangle was added in Illustrator.



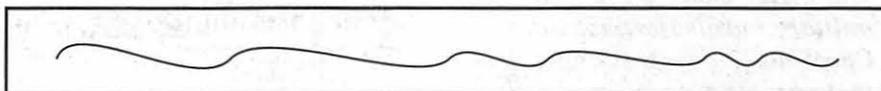
*The flat text design was imported into Dimensions. Even though the original contained masks, it easily rotated on the vertical axis and responded to the Wide Angle Perspective direction.*



*The flat map shown in the upper corner was mapped onto an extruded surface of the line below.*



### ...Or wrap your text around a cylinder



*The original line from which the extrusion was made for the flag above. Dimensions makes mapping drawings onto 3-D surfaces extremely easy and quick.*

This *Graphic Tips* issue does not attempt to give a full review of the new application rather to introduce the artist to the possibilities for his or her illustrations. Some notes follow.

The extruded text, right, could be moved in such a way that all the vaning point lines would reflect the new position relative to the line of sight. Amazing!

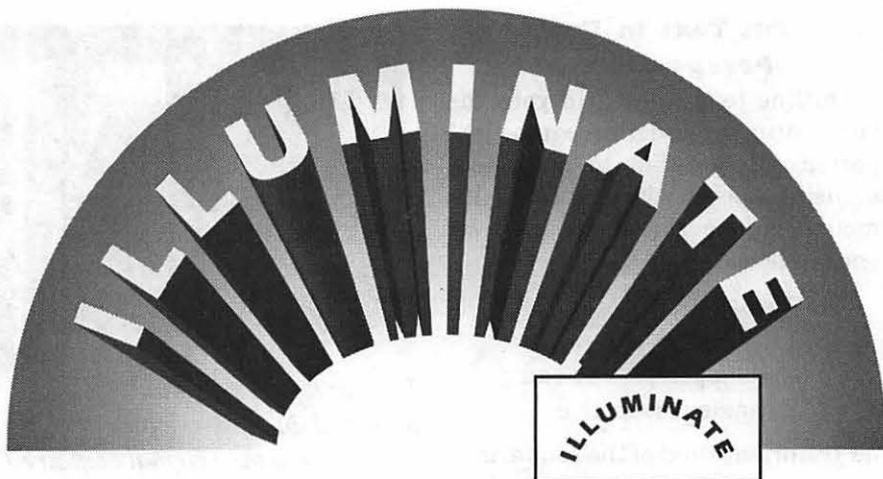
Package designers will love the ability to map the surfaces of their boxes with all the text and drawing they wish. Detailed labels can be affixed to jars and bottles and be shaded themselves in the bargain.

A drawing can be clipped to any shape in this application as well.

Think of a large drawing with many blends being cut as with a cookie cutter for a special requirement.

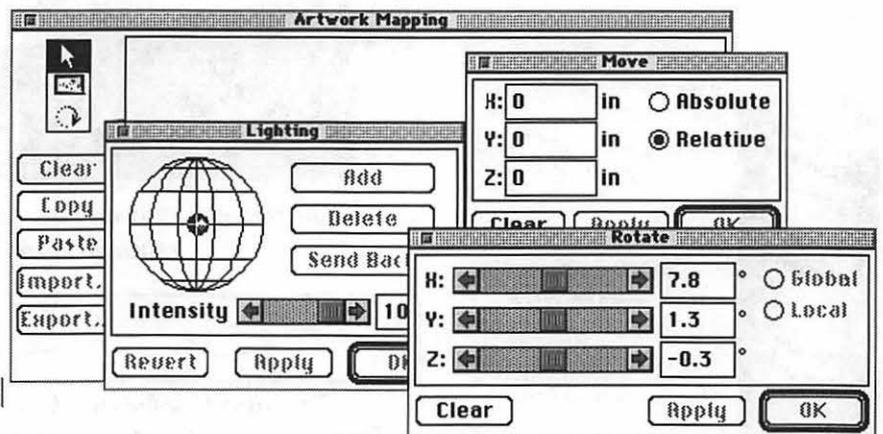
**I need feedback** from my readers to make these articles useful. I invite readers to call me at 703 430-5881.

*Carol O'Connor has been using Macintosh graphic programs for years. Her work is often for the military, but also for publications. Carol most enjoys training artists in techniques which make electronic art unique and pleasurable.*



Revolving objects is the most fun for me. Import a line drawing of half of the silhouette you need. Revolve the frame full circle or any number of degrees, to the back or the front.

The result can be rendered as a wire frame or as the "skin" which covers it. The lighting control box, see below, is straightforward, yet I personally get frustrating surprises. It is challenging to think in 3-D.





## Expo '93 Manic

by Bill Baldrige

**F**or those who didn't get to visit MacWorld Expo '93 in San Francisco (which I think is about 99.9% of you), I offer a short report of my experiences—partly to inform, partly to entertain, but mostly to let you know all the hassles you missed. Sort of a curmudgeon's-eye view of the Expo.

The trip out was on short notice—I had about a four-day lead time, as any who saw my messages on the WAP Telecom System would realize. I have never enjoyed unplanned trips, and probably never will, so this was the first step on the wrong foot. No one responded to my messages the first day, which was the most critical juncture, because tickets had to be procured at the three-day discount point. Eventually, about three people *did* respond, but by that point I had all but made the decision to go. John O'Reiley volunteered to help man the 'stall' Apple had given us, as he was going to the show, anyway. So, we had a staff of three (or 2.5, because John wouldn't be there most of Friday, and none of Saturday).

The trip to San Francisco on Tuesday, the 5th of January, wasn't a problem at all. Get in car, drive to Baltimore-Washington International, park car, hop bus, check bags, grab a snack (*five bucks* for a mystery-meat burger and Coke!...no extras, no fixin's bar...I even heard one of the employees complaining about the prices!), clear terror-control (learned a new trick about belt

buckles), get on plane...*ZIP*...arrive San Francisco, claim bags, take shuttle to hotel.

The hotel, it turns out, is on the other side of town from the Expo (Moscone Convention Center), but we're not complaining, because the view from the hotel is incredible! Plus, we weren't far from Chinatown—source of all pleasures gastronomic in San Francisco.

It's funny how one plans so carefully for a trip, and how there's always this short circuit that seems to happen that blocks out the fact that you're going to one of the more scenic cities in the United States. I have this great 35mm camera (as does my hotel roomie, Cal Simone [chief benefactor and head code slinger for Main Event]), but both of us left them at home, for who knows what reason. And here we stand, looking over San Francisco Bay and the Golden Gate Bridge...if I'd had a pencil and paper, maybe I could have sketched it. Such is life....

Actually, I took to going up on the roof of the hotel (eleven stories...we were on the ninth) to have a cigarette, as Cal is a non-smoker [and vegemite, to boot...I think he's a displaced Californian]. The view was expansive and even more incredible than from the room's big picture windows. I spent enough time up there to paint a mental picture that will last a lifetime... it recharged my esthetic batteries!

The 'project' was an Apple special

'System Software Showcase,' where they were showing off their new and still unreleased technologies—Applescript, A.O.C.E. [Apple Open Collaborative Environment], and Quickdraw GX. They also had on show a diskless Mac set-up, where a Mac LC and Classic II (both diskless with special ROMs) were set up to boot off a special server. Our part of the showcase was a product called 'Scripter,' which is a graphic front-end to Applescript—Apple's scripting language for Apple Events. Scripter was developed by Main Event (a local software developer), and I was invited to go along to help show off this product in the special room Apple had set up for their showcase, and for the 35 developers they had invited. Some of the other invited developers were people like Claris, CE Software (Don Brown actually manned their booth for most of the show. He was the only one who was allowed a chair!), Deneba, SAS, and a few other biggies, but mostly little developers with unique products like ours. Scripter actually got mentioned in MacWeek's lead article of the January 11 issue and is also mentioned in the following week's issue.

The show went very well. Estimates run to 55,000 visitors for the four days, and they were fairly well distributed over that period. We were surprised that so many showed up on Saturday, as that was the same afternoon as the playoff game between the 49-ers and Redskins. Just shows, I guess, that Macintosh users just like watching a different screen.

If you've ever been to an Expo, Macworld Expo is not much different—it's a 'same show, different goodies' type thing. Some things that stood out about this show were: More CD-ROM vendors than you could shake a stick at (and about half of them vending games and/or R- or X-Rated wares), some really cool printers (large-format color inkjet, Apple's new



LW Pro 600/630), Klingons (from Berkely Systems), and an unusually large assortment of tacky giveaways—the ones that always end up in a bag in the back of a closet somewhere at home.

Most of my impressions of the Expo were taken on the run, because we were having to get our visits in between the times the show actually opened and when Apple's showcase opened, which didn't always coincide. Otherwise, my impressions would have been even more fleeting. I'm sure there were some really new and innovative products shown this year, but I just didn't have the time to spend perusing the 700 plus booths and displays. My visits were more like expeditionary raids into the MacJungle of MacExpo.

We were all relieved of duty at 4 P.M. on Saturday, and a great cheer went out from the gathered guests of Apple in the showcase area, as Apple's rep thanked us all for participating in a very successful show. For our part, we thought Apple had done a good job of organizing this special showcase, but I thought the layout could have been better, and they should have had handouts that highlighted the special products being shown by their invited guests. We did have our own handouts (the 35 pounds of which I hauled to and fro'), but very few visitors got close enough to either see or grab one of the handouts. John and I solved part of that problem by snagging anyone who looked like 'someone interested in AppleScript.' This was a particularly effective tactic, as it turns out. You develop a feel for your mission, and the geeks and paper-grabbers are fairly easy to identify, with their Macworld bags stuffed to the max.

The return voyage was a horse of a different color. I had a 6:20 A.M., Sunday flight out of S.F. International, and figured a 5:00 air-

port shuttle would get me there in plenty of time to check baggage... enhhh...wrong! After ten stops at every hotel on the waterfront, we arrived at the airport at 5:45, and I faced six lines of about ten each at the United check-in. At 6:10 I started to sweat, and snagged a United employee to explain my situation. Luckily, he pulled me out of line, and had me checked through in about two minutes flat. I ran to the gate, cart trailing, just in time for the plane. I started thinking back to the black cat I saw rounding a corner as the shuttle left the hotel....

After a delay for a mechanical problem (loose flaps, flat tire, bats in the belfry?...who knows), we took off to assurances we would make up the time in the air...enhhh...wrong! After circling for half an hour over Denver we finally get clearance to land. Turns out that my connecting flight is... you guessed it, at the *far end* of the *other* concourse. And I have five minutes to make it. Guess there's no chance of a stop for a quick smoke? *Not even!* And, of course, one of the people movers isn't moving. I made it, but not without thoughts back to the aforementioned black cat.

Once aloft, thoughts drifted to a

nice snack and a drink to calm the 'gotta have a smoke' jitters that were setting in. Luckily, I had stocked up on liquor the night before at a local grocery and could thus by-pass the 'make up for cheap fares' prices of the airborne variety—\$4 for a shot of hooch just seems a bit un-American to me. Conversation with a neighboring passenger from Alaska became more liquid and animated as the flight progressed, but after the third drink he cut me off to take a snooze. I was left to contemplate the clouds and the drone of the turbine engines.

By the time we arrived at BWI, I had polished off a half-pint of Canadian Club and was lucky that I still had to find my bags and catch the shuttle bus to the parking lot, or I might not have been in any condition to drive. Add the effects of the first cigarette in over 12 hours, and I might have been arrested on drug charges had a policeman observed my erratic gait.

All in all, the trip was worth it. Despite the hiccups, hostile cab drivers, and hectic beat of the Expo, the overall residue is positive. Heck, I could probably be persuaded to do it again...*Not!*



- 100% guaranteed
- Free delivery
- Many references
- We buy empties
- Special WAP member pricing

All  
Apple  
HP  
Laser  
Printers



Repair?  
Maintenance?  
SupplyLine will save  
you money and time

5649-Q Gen. Washington Dr.

Alexandria VA 22312

Tel (703) 658-3084 Fax (703)658-3059

Toll Free (800)678-3083. Call Danny

**Special Introductory price !**

**Quality Toner  
Cartridges**

**\$ 34.95\***

**703-658-3084**

\* Prices based upon exchange cartridge.



# Nautilus: Multimedia CD-ROM Subscription

by Dennis R. Dimick

This monthly CD-ROM disk subscription expands your Macintosh information horizons in ways hard to imagine. Like the spiral seashell of many chambers, Nautilus, The Disk, holds treasures in many and layered folders. We're talking information measured in several hundreds of megabytes delivered every four weeks.

Nautilus seems to pose the "Which came first—the chicken or the egg?" quandary. Unless you have a CD-ROM drive how can you take advantage of all this information? Nautilus may be reason enough to consider getting one. If

you have a CD-ROM drive, and don't try Nautilus, you're missing one of its best attractions. Nautilus could be called a personal library of nearly everything current about Macintosh.

## So What Does Gigabyte Mean?

Until you've tried to peel off the folders and files of half a gigabyte of information each month, you won't understand why it's hard to describe. Before Nautilus, my view of disks was 1.4 MB high-density floppies, storage was defined by 80 MB hard drives, and new files came by phone line, slowly. With Nautilus, I now understand the meaning of

gigabyte (1000 MB.) Nautilus arrives on a 500 MB disk weighing less than an ounce. Printed documentation is minimal, yet it takes weeks to read, see, hear, try, or play everything. Realistically, I don't even try.

Nautilus is similar to an on-line service such as CompuServe or America Online in the type of choices available. Like a computer bulletin board, you can spend too many hours exploring. Once you pay for the disk, though, you can spend as much time as you like (too much) without paying phone or connect charges.

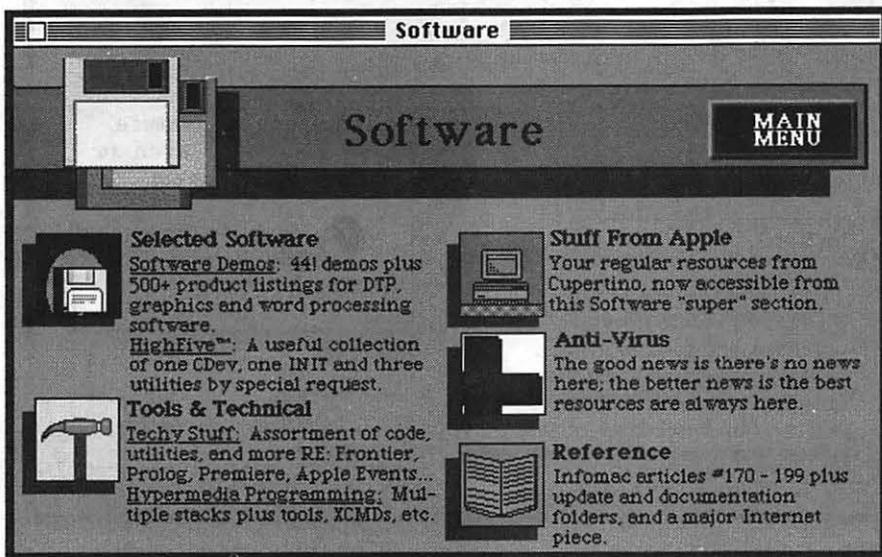
The people who prepare this monthly CD-ROM disk call it "an evolving information service." Nautilus offers software demos, games, FreeWare photographs, ShareWare and FreeWare, new music from Windham Hill, and software updates.

You get *QuickTime* movies, current ShareWare anti-virus programs, news and commentary articles on Macintosh computing, and complete archives of Infomac Digest from the Internet. If you're looking for disk image copies of Apple System software, these too are here, at least through Version 7.0 and Tune-Up v.1.1.1.

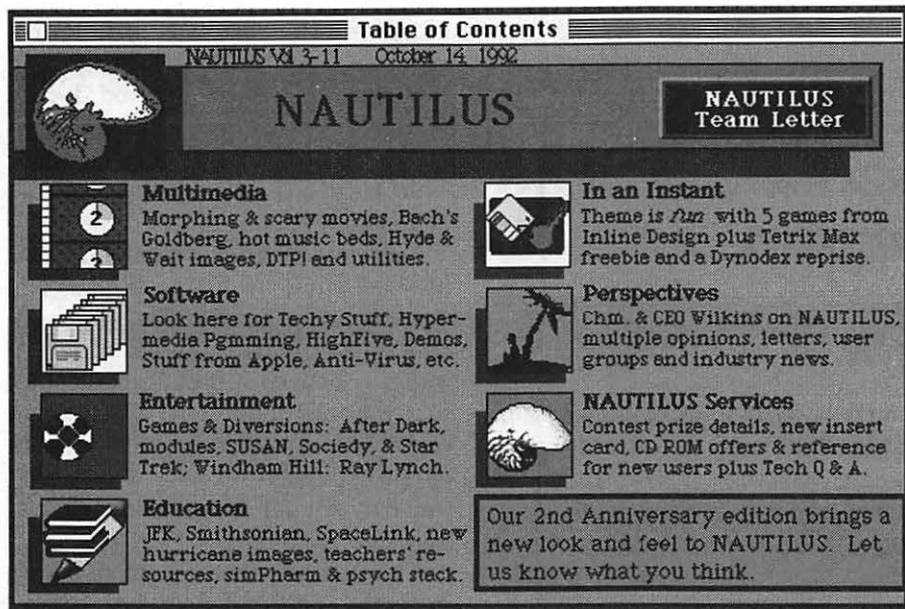
I discovered Nautilus a year ago after buying an Apple CD-ROM drive. Packed in the box were a couple of sampler CD-ROM disks, including Nautilus, produced by Metatec Corporation/Discovery Systems of Dublin, Ohio.

## There's Too Much Stuff Here

That sampler held almost 200 MB of ShareWare, utilities, articles, screen saver modules, system software through version 6.0.8, programming code, utilities, photographs, music, and too much else to remember. My main impression was there's an awful lot of information



**3-11 Software.gs**—After you click on the Software icon in the main Table of Contents screen of a Nautilus shell program, this Software screen pops up. All screens are in color.



**3-11 Table of Contents.gs**—A SuperCard interface greets you when you first open the Nautilus shell program. Clicking icons moves you through to underlying topic areas. This screen is from the October 9, 1992 issue.

here, much more than I was used to except in a library.

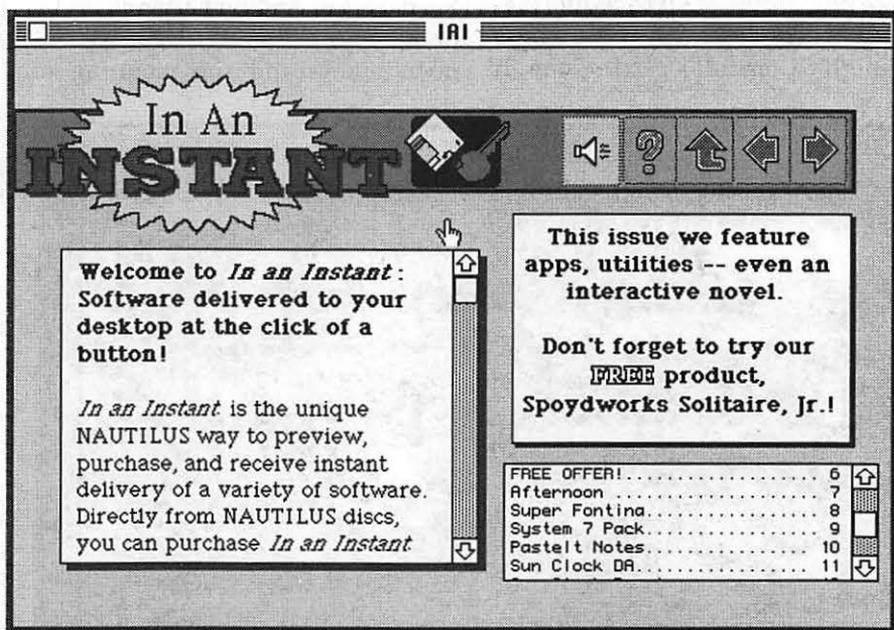
Being the child of a librarian, too much information has never daunted me. I dug up the year's subscription tariff, about \$11 a month, and awaited the next arrival of the "bottomless" disk. They've been piling up. At last count more than 6,000 MB (six gigabytes) of Nautilus have arrived.

(If the current issues don't satisfy, you can always order their "BackPacs." Three back-issue compendiums, sold in six-month sets, are available from a variety of mail-order houses like Mac's Place and MacConnection for less than \$45 each.)

The only way you could plumb all of Nautilus' depths is to have no other relationship than one with your Mac and Nautilus. My eyes glaze over at the thought. It's either total immersion, or more sanely, you can try to focus on some subjects of interest.

### Navigating the Magazine

You can access an issue three ways. A shell program, based on a



**In an Instant screen.gs**—In-an-Instant is a recent addition to Nautilus. You can purchase software by phone using a modem, and telecommunications program integral to Nautilus. Using a 1-800 number and a credit card, Nautilus will send you a code that unlocks full-use programs already stored on your monthly disk.

SuperCard 1.6 interface, leads you through featured areas and allows you to see pictures and hear people speak about their contributions. Akin to HyperCard, this interactive program even contains an audio Letters-to-the-Editor column. You get detailed previews of everything on disk that month, but often you must access programs directly from content folders on a regular Macintosh desktop. The shell program is System 7.0 compatible, but not every program on disk is.

Access also is achieved through 16 desktop folders found in recent issues. These include (with brief content description): Apple (system software and Apple utilities), Anti-Virus (latest versions of Disinfectant, Gatekeeper and Virus Detective), Commentary (several columnists exclusive to Nautilus), Desktop Publishing (fonts and font utilities, graphics, text utilities), Education (NASA photos and reports, foreign language programs,



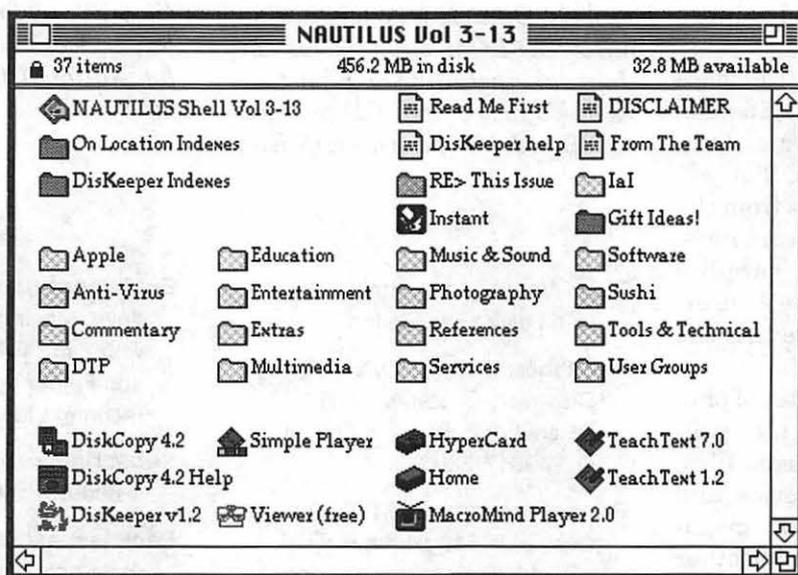
astronomy and science programs, Smithsonian Institution research expeditions, medical education programs, *HyperCard* stacks and other items), Entertainment (games and music), and Extras (upcoming computer events calendar, company press releases).

There's more: High-Five (tested *ShareWare*), Multi-media (*QuickTime* movies), Music & Sound (MIDI files

and sound utilities), Photography (photographer portfolios, free-use pictures), References (Internet files and program updates), Services (information and offers from Metatec Corp.), Software (program demos), Sushi (hundreds of megabytes of *ShareWare* and *FreeWare*), Tools & Technical (programming tools and utilities), and User Groups (files and information from user groups all over the country and world). Each month a folder may contain a few items or hundreds contained in many sub-folders.

A recent addition is "In-an-Instant," programs available for purchase by means of Nautilus' on-line telephone link. Nautilus offers a 1-800 number and telecommunications module in each issue so you can ask questions, send letters to the editor, and purchase software over the phone. The phone link purchase provides access codes so you can unlock full-use versions of a variety of programs already on disk.

The third and fastest way to locate Nautilus files comes by



**3-13Desktop.gs**—If you choose to access files via the normal Macintosh desktop, this window greets you first. All contents are indexed with *On Location* and *DisKeeper*.

using *On Location*. This disk indexing and access desk accessory comes from *On Technology*, a company Mitch Kapur started after he sold his founding stake in Lotus, the home of *1-2-3*.

### A Year's Index At Hand

Every issue contains *On Location* indexes for that issue and Nautilus issues of the past year. By using keyword filename or text searches, you can locate contents,

and find out if anything relating to your interest areas was published on disk the past year. *On Location* contains Claris XTND file-format filters, so it can display the text of word processor files on disk. A sample version of *On Location* is included each month. It only searches half of the alphabet, but you get an idea of *On Location*'s power to find a needle in the haystack of CD-ROM disks.

Here also are *DisKeeper* text format indexes of current and the past

year's issue contents, so you can use the "Find" function of many popular word processors to locate files of interest.

### Some Disk Statistics

Using *On Location*, I tried a quick cumulative assessment of the past three issues. At this writing, (mid-December) this includes issues of October 14, November 11, and December 9. The three disks combined



# MacSpecialists®

Macintosh Temporaries & Consultants

**How we save you time and money**

- ◆ No Mac training necessary
- ◆ Reduce stress of tight deadlines
- ◆ Strong Mac skills get the job done fast

Washington DC  
202-338-4163

Philadelphia  
215-387-8237

New York  
212-924-3979

New Clients Get

## 5 HOURS FREE

when using MacSpecialists  
40 hours or more.  
Just mention this ad.



hold 1,503 megabytes and contain 12,268 files.

Education files make up more than 100 megabytes. These include educational programs, games, templates, and NASA files. For example, a variety of photos from the latest Space Shuttle trips are here. This fall Nautilus had satellite photo images of Hurricane Andrew over Florida and its move into the Gulf of Mexico.

More than 170 megabytes of photographs are here, most all available for free use. Multimedia files, including *QuickTime* movies and tools, take up nearly 200 megabytes. Programming tools and other technical files make up another 80 megabytes. Entertainment includes more than 33 megabytes, games, more than 15 megabytes, and the rest music from Windham Hill. The Desktop Publishing folder in one issue contained more than 20 megabytes of TrueType and PostScript fonts.

The References folder includes back issues of Infomac, a regular column on Macintosh issues found on the Internet from Stanford University. This same folder includes software updates. Recent items include *Canvas 3.0* to *3.04* update, *DiskDoubler 3.7.7* update, *Suitcase 2.1.2* update, *Stuffit Lite* patch, and a *Thunder* update.

Early Nautilus issues seemed a bit rough in organization, but recent issues are like a good revision to a software program—better interface, fewer bugs, better features. If you don't want to buy a year's subscription, Nautilus also offers two- or three-issue trial subscriptions so you can get your toes wet before diving in.

*Dennis Dimick has written on other CD-ROM subjects for the Journal, including a report on Kodak's new Photo CD technology. Besides helping his wife Kim*

*Kostyal care for their new daughter, he works as a picture editor for National Geographic Magazine.*

**Title:** *Nautilus*, a monthly CD-ROM disk subscription.

**Publisher:** Metatec Corporation/Discovery Systems, 7001 Discovery Boulevard, Dublin, OH 43017-3299

**Price:** Basic price is \$119.40 a year, plus \$18 postage. Trial subscriptions of two issues available, and other payment options. Contact publisher for special offers.

**Equipment Required:** CD-ROM drive, Macintosh Plus or later with 2 MB RAM, System 6.04 and Finder 6.1 or later. Hard disk recommended.

**Subscription/Sales Information:** 1-800-637-3472.

**Back Issues/Sampler Disks:** Available from several mail order firms including MacConnection, Mac's Place, and others. Approx: \$20-\$45.

## COMPUTER SLIDES

### Severn Graphics Imaging Services

Hassle free imaging from your computer files. Practically all graphics, presentation and DTP software programs supported.

35MM  
from

**3<sup>95</sup>**

- 35MM Slides
- Overhead VG
- Color Negatives
- Color Thermals
- MAC / PC / Amiga
- NeXT, Unix
- Prompt Service
- 24Hr Modem

For More Information  
or Imaging Kit Call

**800-825-9134 ext 25**

Severn Graphics, Inc. 7590 Ritchie Highway Glen Burnie MD 21061

### Custom Photo Lab Services Computer Graphics Exhibits and Displays

Severn Graphics, Inc. 7590 Ritchie Highway Glen Burnie MD 21061 (410) 768-6118





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, 9-5) (301) 220-3111  
 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, 9-5) (301) 220-3111  
**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, 9-5) (301) 220-3111  
 Bill Campbell (301) 498-6380  
**AppleWorks Database**  
 Roger Burt (301) 424-6927  
 Morgan Jopling 1 (301) 721-7874  
 Milt Goldsamt (301) 649-2768

#### 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 IIe**  
 Bob Sherman 1 (305) 944-2111  
**dBase II**  
 John Staples (703) 255-6955  
**dBase II&III, Data Perfect, Db Master-PRO**  
 Leon Raesly (days, 9-5) (301) 220-3111  
**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, 9-5) (301) 220-3111  
**Sider**  
 Otis Greever (615) 638-1525

#### LANGUAGES

**AppleSoft**  
 Louis Biggie (301) 967-3977  
 Peter Combes (301) 251-6369  
 Leon Raesly (days, 9-5) (301) 220-3111  
**Pascal**  
 Michael Hartman (703) 445-1583

#### C and TML Pascal

Harry Erwin (before 10 pm) (703) 758-9660

#### OPERATING SYSTEMS

**CP/M**  
 Art Wilson (301) 774-8043  
**ProDOS 8 and 16**  
 Barry Fox (717) 566-6709  
**Print Shop**  
 Thomas O'Hagan (301) 593-9683

#### SPREADSHEETS

**General**  
 Walt Francis (202) 966-5742  
**MagicCalc/SuperCalc2.0**  
 Leon Raesly (days, 9-5) (301) 220-3111  
**Telecommunications**  
 Dale Smith (301) 762-5158  
 Allan Levy (301) 340-7839  
 Ken De Vito (703) 960-0786  
**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 II**  
 Leon Raesly (days, 9-5) (301) 220-3111  
**AppleWorks GS**  
 Roger Burt (301) 424-6927  
 A.D. (Bill) Geiger (703) 237-3614  
 Andy Gavin (703) 734-3049  
**Letter & Simply Perf**  
 Leon Raesly (days, 9-5) (301) 220-3111  
**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  
**IIE Upgrade**  
 Morgan Jopling (301) 721-7874  
**APW**  
 Andy Gavin (703) 734-3049  
 Leon Raesly (days, 9-5) (301) 220-3111

#### Deluxe Paint II

Rich Sanders (703) 450-4371  
**GS BASIC**  
 Barry Fox (717) 566-6709  
**Multiscribe GS**  
 Ray Settle (301) 647-9192

#### TELECOMMUNICATIONS

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

Jim Jutzin (703) 790-1509  
 Dave Ottalini (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) 220-3113  
 Dan White (301) 540-1070  
 Don Avery (Bethesda/DC) (202) 362-1783

#### VIRGINIA

Kenneth De Vito (Alexandria) (703) 960-0786  
 Neil Laubenthal (703) 691-1360







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

## Macintosh

### GENERAL

Tom Witte (703) 683-5871  
 Jon Hardis (301) 330-1422  
**Art & Video**  
 Nancy Seferian (202) 333-0126  
**Borland Products**  
 Doug Ferris day 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  
**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  
 Marty Milrod (301) 464-5981  
 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 (301) 333-0126  
**Canvas**  
 Bill Baldrige (301) 779-8271  
 Tom Parrish (301) 654-8784  
**MacDraw**  
 Tom Berilla (301) 434-3256  
 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  
**WingZ**  
 Kirsten Sitnick (301) 750-7206

### TELECOMMUNICATIONS

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

### WORD PROCESSORS

**Microsoft Word**  
 Marty Milrod (301) 464-5981  
 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

**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 DISKETTERIA LIBRARY

Dave Weikert (301) 948-587

## General

**Games-Apple II**  
 Charles Don Hall (703) 356-4229  
 John Wiegley (after 2:15) (703) 437-1808  
**IBM**  
 Leon Raesly (301) 220-3113  
**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) 220-3111  
**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          |                                  |          |        |

## Annapolis Slice Help Line

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

|                             |              |                  |                             |              |                 |
|-----------------------------|--------------|------------------|-----------------------------|--------------|-----------------|
| <b>Mac</b>                  |              |                  |                             |              |                 |
| Richard MacLean (Crofton)   | 410-721-8157 | MacIIsi          | Bill Waring (Severna Park)  | 410-647-5605 | Mac,Excel       |
| Steve Toth (Edgewater)      | 410-956-6557 | Mac+             |                             |              |                 |
| Bob Peterson (Crofton)      | 410-721-9151 | MacSE            |                             |              |                 |
| Sandy Bozek (Annapolis)     | 410-974-6062 | MacII,Scanner    | <b>Apple II</b>             |              |                 |
| Bill Arndt (Glen Burnie)    | 410-761-6997 | MacII,CRABBS BBS | Seth Mize (Glen Burnie)     | 410-766-1154 | IIGS,II+,III    |
| Lou Sapiaza (Crownsville)   | 410-923-3415 | MacIIsi,Canvas   | Louise Tanney               | 410-647-0875 | IIGS, AW        |
| Barry Conner (Annapolis)    | 410-573-7140 | Mac Telecomm     | Helen Hamerstrom            | 410-647-1720 | IIGS,IIe,DTP,HS |
| Theresa MacGregor (Odessa)  | 410-551-5913 | PowerBook, DOS   | Manse Brouseau              | 410-757-5215 | IIc,AW          |
| Dick Stewart (Millersville) | 410-987-2057 | Mac+             | Bill Derouin                | 410-647-0802 | IIc,pc,AW,DB    |
|                             |              |                  | Dick Stewart (Millersville) | 410-987-2057 | IIc+            |



## Software Review

# Virtus WalkThrough—Virtual Reality for the Desktop Cybernaut

by **Jacque B. Davidson**

**V**irtual Reality (VR) began with a bang for me. Actually, it was a series of bangs all inflicted by polygon shaped aliens in "The Colony." The Colony allowed a player to move about within a structure of rooms and hallways at near real time, within the confines of a Mac Plus. At one point, after being killed or tricked into numerous accidental deaths, I found a room that I could look into but not enter. Twenty soldiers who worked for me, in an Army computer facility, had kibitzed the entire game play. They were stumped too. I called the creator, David Smith. "You can't get into that room," he told me (and was genuinely pleased about it too!). Our discussion departed from the game and turned to user VR interfaces and the need to put VR into the hands of users. It sparked, for me, a continuing love affair with 3D and places that can only exist within the cyberspace of a computer.

*Virtus WalkThrough*, from Virtus Corporation, is Davis Smith's answer to a long seated wish by many users to create and walk around in models using home computer technology. *Virtus WalkThrough* allows a user to create 3D objects in a *MacDraw* type environment and navigate with the ease of "The Colony." All of this will fit in just about any Mac. Performance is much improved with increased memory (4 megabytes or better) and a faster CPU clock speed. I use a Mac IIsi with 5 MB and have

produced some complicated models.

Unpacked the program requires about one megabyte of storage, so a hard drive is recommended. Other files such as libraries may require additional disk storage space. A big surprise is the amount of storage space a model data file occupies. I have one complex model which when unpacked takes more than a megabyte but is stored in 45K.

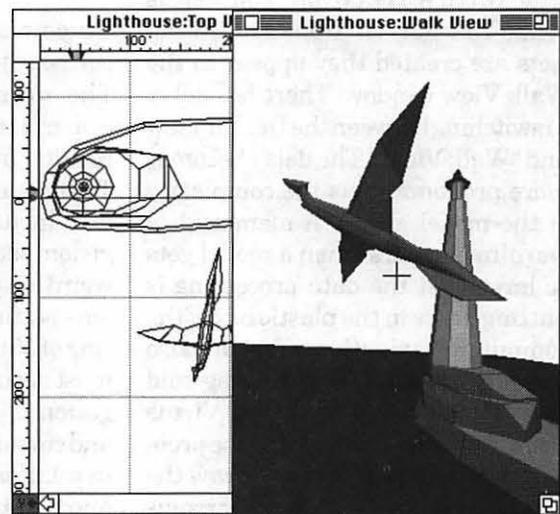
The program opens from left to right with a tool box, a narrow Design View window, and a Walk View window. The background for the Walk View window is always sky blue and is restful; I almost expect weather after extensive use.

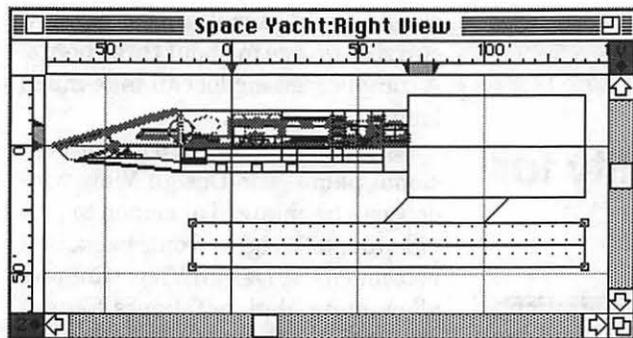
Models are made up from polygons created in the Design View window. Rulers are provided on the top and left side of the window. Guidelines are also selectable from the ends of the rulers. All sorts of tools are provided to assist in the creation of shapes. They breakout in to the following categories: Creating Tools, Opacity Modifiers, Orienting Tools, Movement Inhibitors, Placement Tools, Editors (more on this later), Recording Tools, and finally Editing Tools. The tools are impressive! The preceding list may appear daunting but ease of use will come quickly with practice. A good idea or visualization as to what the results

should be is essential. I created a starship bridge in about three hours. A complicated model can take much longer to construct.

All creation occurs in a two dimensional plane. The Design View window can be changed or cloned to provide top, left, right, front, back, and bottom views. Design View windows allow manipulation of shapes. Shapes are initially extruded to make objects. Changing an object requires a return to the Design View where the object was originally created. That is a limitation, but I can live with it. *Virtus WalkThrough* does not save automatically like *FileMaker Pro*. I save my work frequently, especially when I approach memory limitations.

Further object modification can be accomplished through an impressive array of editors accessed from the command bar. The first is the Tumble Editor which allows a selected object to be turned in all three dimensions and carved to suit. The Surface Editor allows you to make a surface translucent (like glass, and is handy for making windows), opaque (pick a color, any color) and transparent (Wall? What wall?). Two dimensional (flat) differently colored objects can also be placed on selected surfaces. Mountains of fun can be had punching holes and making pictures, win-





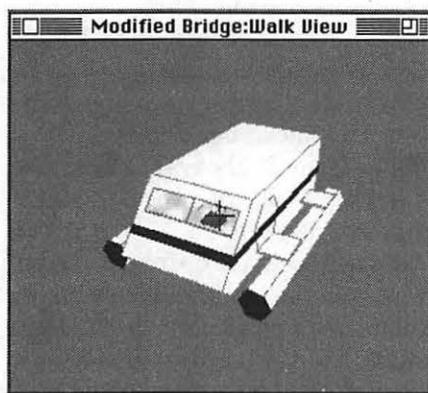
dows, doors, and so forth. Every adjustment in an editor, a painting on a wall, or slice off an object is treated by *Virtus WalkThrough* as a new object. Consequently adjustments can be cut and pasted. A drawback is the inability to label or use text in a model. Letters must be created graphically. Additionally, concave constructions can not be created as single objects multiple objects are required.

Objects can be stored in libraries. Why create a chair or table more than once? The library is a mini version of the application. When a library is open objects are shown dynamically in all three dimensions. Library objects can be examined from any angle using the same navigation commands used in the model itself. The familiar Command-c and Command-v put a library object in a model.

*Virtus Walk-Through* provides a true WYSIWYG (What You See Is What You Get) environment. As objects are created they appear in the Walk View window. There is a delay in switching between the Design View and "Walk View." The delay becomes more pronounced as the complexity of the model grows. A memory low warning appears when a model gets so large that the data processing is putting dents in the plastic box of the computer. Navigation is fast but also slows with complexity. Having said that, I should point out that *Virtus Corporation* has anticipated the problem. The program does not draw the objects contained within other rooms

if the model has separate rooms. Speed, consequently, is not lost due to completely hidden object rendering. Lighting can be adjusted for separate rooms or the world as a whole. Objects will be shaded to indicate lighting effects, but no shadows are thrown. Objects can be colored in whole or in part, but there is no function to texture objects.

Once a model is completed it is time for adventure! The screen of the Walk View window can be expanded to a full screen. The command bar is available but hidden. The Tool window changes when the Walk View



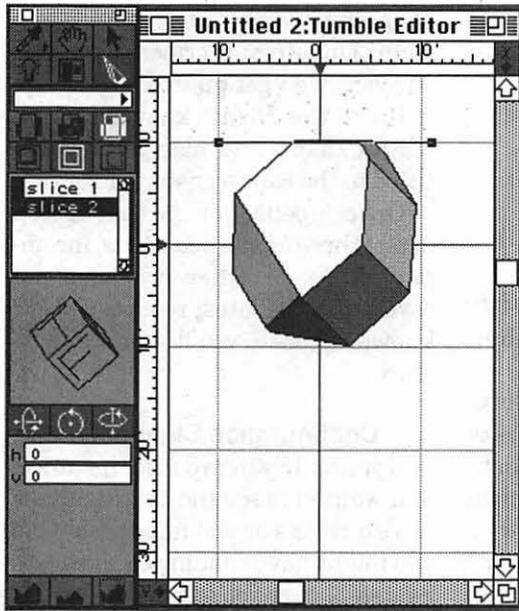
window is selected. The field of vision can be adjusted through a zoom slide. The zoom slide is a bit like being Superman. Extreme telescopic vision results from use of the slide bar. There is a very fine picture of a house on a mountain side to help with the vision setting. I have discovered a weird visual effect when a fish-eye lens setting occurs. The default setting of 35 (like a 35 mm camera) is the most desirable for general use. Navigation is tied directly to the mouse and cursor position on the view screen in relation to the center screen cross mark. If the cursor is above the cen-

ter mark, forward motion results. Right and left turns occur when the cursor is to the right or left of center mark. A cursor placed at the bottom of the screen causes the viewer to backup. The greater the distance of the cursor from the center mark, the more pronounced the action on the screen. It is also possible to gain and lose altitude and to look up and down. These command movements are firmly locked in relation to the horizontal plane. Rotation of the viewer is also possible but I avoid it because I get lost. *Virtus Corporation* provided a Level Observer *WalkThrough's* command which sets the observer upright when disorientation occurs. *Tool palette.*

There is no collision detection in *Virtus WalkThrough* models. There are no solid walls; any object can be passed through. I once got carried away in a house model and passed into another room. I stopped, very confused, inside a piano.

*Virtus WalkThrough* offers one cubic mile of cyberspace to play in as long as the level of resolution remains in multiples of an inch. If an object is created with a resolution of a half inch, cyberspace will shrink to a half cubic mile. A cubic mile is significant volume for modeling space. Tours of models can be recorded and played back later but you can not edit a tour once created. If you add the *Voyager* application to





The Tumble Editor and its tools.

your software, a recorded tour can be exported as an independent application. Voyager models will run on any Mac *without* Virtus WalkThrough! This capability is a very big plus. Voyager models do require more disk storage space. A compacted 45K Virtus WalkThrough model requires around 400K as a Voyager model. The extra size is due to a run-time engine. The capability to carry a virtual world around in your pocket is awesome.

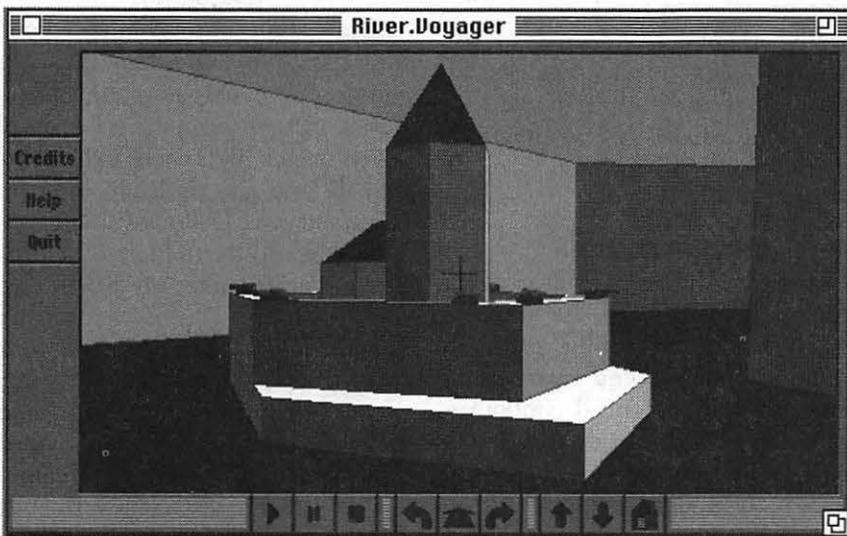
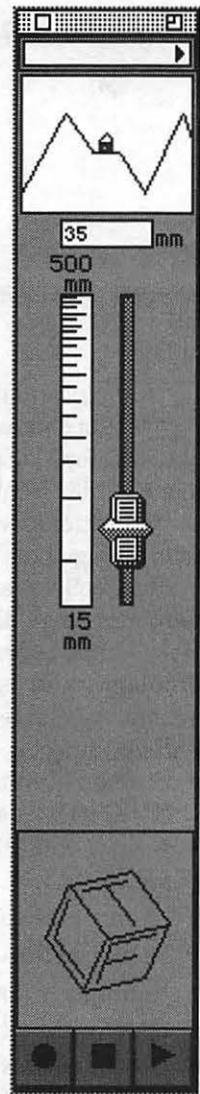
commands to make solid walls. A flying mode is also under consideration.

I met with David Smith recently both at his offices in Cary, North Carolina and at a conference on VR in Washington, D.C. His big push is for interactive modality which includes the ability to extract data from other applications for display in Virtus WalkThrough models. Finally, David mentioned that he was considering a game construction module so

An IBM version of Virtus WalkThrough should be available by the time this article is published. [A Windows version of Virtus WalkThrough is now on the market. It's introductory offer price is \$275.00.] Virtus WalkThrough Pro (Mac-based) is promised by the summer of 1993. Major enhancements to the Mac version will include the following: the ability to insert movies in models; placement of Virtus WalkThrough models in Microsoft Word 5.0 documents; the capability to apply texture raps to objects; the ability to edit WalkThrough scripts; and

any one could make a VR game like The Colony!

If you are a potential cybernaut with a driving need to create your own worlds and walk around in them, this is your program. Virtus WalkThrough costs \$495.00 and includes Virtus Voyager. Also bundled with the package are a respectable number of libraries. It is available at a lower price in some software catalogs. However, catalog purchases may not include libraries or the Voyager application.



**Title:** Virtus WalkThrough

**Publisher:** Virtus Corporation  
117 Edinburgh South, Suite 204  
Cary, NC 27511

**Telephone:** 1-919-467-9700

**SRP:** \$495.00

**Discount Price:** \$309.00



## Software Review

# Help! Review

by Jim Campbell

**H**elp! is your personal first line of defense diagnostic utility for Mac configuration problems. It aids analyzing your system configurations, detects problems and tells you how to fix them!

Help! collects a profile of your system, compares the data using the Help! knowledgebase and detects problems and suggests corrective actions to resolve them.

Help! detects:

- Startup document conflicts (INIT's/Extensions, CDev's, etc.)
- Incompatibilities of hardware or software
- Memory size problems
- Damaged files
- Improperly installed files
- RAM cache sizing problems
- Duplicate files

Help! uses a three step process of collecting data, comparing the data to its knowledge base, and then providing a report of its findings.

### System Requirements

- Mac Plus or later
- 1 MB memory
- System 6.0 or later
- Hard Disk Drive with one megabyte of free space

### Reports

Help! works two ways. It either offers you the opportunity to review its analysis on the screen using pop-up menus, or it creates a multi-page report that is generated for which-

ever volumes and partitioned disks which are treated as separate disks for the report. The desktop publishing quality report that is developed by Help! can be saved for further reference. The diagnostic routine categorizes problems by their severity.:

- A Warning—identifies a critical problem which requires immediate resolution.
- A Caution—suggests non-critical problems that could retard you computer's current performance or could lead to further, more serious problems.
- A Note—indicates conditions that you need to be aware of but which do not indicate immediate problems.

One feature of the report is that it provides an inventory of your software and the version numbers and compares this to the latest known version numbers reflected in the knowledgebase. It also catalogs the hardware configuration that you are using. The report can be saved for future reference or printed.

### Knowledgebase

The heart and soul of this program is the knowledgebase. As you can readily understand, new program releases, updates, and reissues all have different potential configuration problems. In order for you to keep up-to-date, you need to subscribe to the update services. You are entitled to 120 days of free customer

support, but after that, you must be a Help! Update subscriber. For \$110 per year, you get quarterly disk updates to the Help! knowledgebase within Help! and also you are entitled to the call-in customer service.

On compensation is that if you detect three or more conflicts, incompatibilities, or other problems not covered by the latest release of their knowledgebase, you'll win a free T-shirt.

### Configuration Simulation

If you had System 6.0, for instance, and wanted to see the extent of software conflicts or potential problems, you might have should you switch to System 7.0, then Help! is for you. It permits simulations of such situations and can provide information on which software needs to be updated.

### Documentation

Excellent documentation is provided which tells you how to install the program (move two disks into one folder on the hard drive) and walks you through report generation and configuration simulation. Many features such as the CDev's, INIT's, and other extensions are explained in this book.

### Evaluation

Evaluations were conducted on a Mac II, SE/30, and a Mac Plus. The software installed easily on each computer and performed perfectly. All seven copies of "TeachText" on my Mac II and the multiple copies of other software that continually "get lost" inside other folders so I must reinstalled them on my SE/30 were carefully listed. The information provided on possible conflicts due to some older software was excellent. Help! noted that my version of FileMaker Pro was not compatible with System 7.0; however, I've had no problems!—yet! It also noted that my Desktop Publisher could cause system errors



if it was used with 32-bit addressing which I have turned on. Could be—but it hasn't happened yet either! The information provided, often lists data on update and later version releases along with the manufacturer's address and phone number for further information.

Overall *Help!* is a good software item to have, but whether or not it would be useful to run it over time for a single user is another story. The cost to benefit ratio of purchasing new knowledgebases would have to have a big payoff before it would seem valuable. For a commercial operation with lots of users and much more diverse software, it would seem to be a very prudent investment in maintaining a hassle-free computer environment.

So, try it—you might like it—*Help!*

**Title:** *Help!*

**Publisher:** Teknosys

**Address:** 3923 Coconut Palm Drive, Suite 111  
Tampa, FL 33619

**Telephone:** 813-620-3494

**System Requirements:** Mac Plus or later, 1 MB memory, System 6.0 or later, Hard Disk Drive with 1 MB free space

## ClarisWorks Has a Problem

by John J. Boren

I have used Microsoft Works, an integrated package, for several years and liked it. However, after reading reviews saying that the new ClarisWorks was perhaps the best of the integrated packages, I decided to try it. Unfortunately, the word processor component has a problem—at least if you are using a Mac SE or a Mac Plus. Word processing slows down markedly as you approach the bottom of a page. Although I am not a fast typist, by the end of the first page I can type faster than the screen can show. Furthermore, when I try to delete several words by repeatedly pressing the delete key, the characters are deleted at a snail's pace, and I find that I have deleted too much by the time the screen display finally catches up. Curiously, typing and deleting is fast and perfectly acceptable when you begin at the top of the first page. However, after you type several pages and then return to the top of the first page to make revisions, typing and deleting have become aggravatingly slow.

The slowness occurs with a Mac SE and a Mac Plus (and presumably a Mac Classic). When I tried the word processor on a Mac IIsi, on the other hand, the problem was imperceptible. Apparently, the faster and more expensive machines overcome any sluggishness in the program. Although the Claris Technical Support staff has known of the problem since March, the most recent revision of ClarisWorks, version 1.0v3, failed to correct the difficulty. Since the word processor is typically the most frequently used component of an integrated program, owners of Plus's, SE's, and Classics may want to wait and see if the Claris corrects the program before investing in ClarisWorks.

*Jim Campbell, P.E., is an avid Macintosh enthusiast who plies his trade with Interlog, Inc., in Falls Church, Virginia, working on a variety of logis-*

*tics programs. In the past few years, he has written four other software reviews for the Washington Apple Pi.*

## Diagnostic Results

### Summary



**Congratulations!** Help! has not detected any critical problems which are known to cause system errors.



**Caution:** Help! has detected 8 non-critical problems which may cause abnormal system behavior.



**Note:** Help! has detected 2 conditions which are not necessarily problems, but you may want to look into.



# New Macintosh Files on the TCS

The following are some of the files uploaded to the Macintosh File Transfer areas of the TeleCommunications System (TCS) from mid-December to mid-January. Two words of caution: first, files are frequently replaced, with the frequency based on how popular and useful a file might be, and how much space it occupies. Second, the TCS is undergoing a major remodeling, and much of what is listed might be outdated by the time this is printed.

This listing represent only a small portion of the constantly changing library of files available for downloading. Call the Pi Office at 301-654-8060 for information on signing on to the TCS, the Pi's "24 hour General Meeting."

## File Area 13: Macintosh Fonts

**TYPEBOOK3.0.8:** essential font utility, and if you use a Mac, you use fonts. theTypeBook prints samples of fonts, spec sheets, key charts, six-up sheets (six fonts on one page, great for comparisons), and other wonders.

**NONROMAN.FONTS:** several bit-mapped non-Roman fonts, including a number of Cyrillic, some Indian, and one called "Super Hebrew."

## File Area 14: Macintosh Games

**SOFA.SIT:** Application and Fkey that try to address the paradox of the sofa in the stairwell.

**MACMORIA.SIT:** an interactive Dungeons and Dragons-type role playing game. You get to choose certain character types (human, elf)

and occupations (warrior, priest) and then go try to kill the Balrog. This may not earn you points with Greenpeace, Balrogs being protected by international wildlife protocols, but will they ever find out?

**SPECTREWORLDDEDI:** Spectre World Editor allows you to change the Spectre "world" by moving obstacles, changing positions of obstacles, adding or deleting obstacles, flags, etc. and by changing colors.

**ARASHI.1.0A.CPT:** a derivative of something, and in an earlier form was called Storm. It probably works only in color. But who cares: this is an outstanding piece of programming, fun, with fast action.

**MACSOKOBAN.2.1:** latest version of a challenging thinking game.

**MACMAN.3.0.SIT:** well done Macintosh version of one of the world's first, and finest, arcade games.

**CLASSIC.DALEKS:** splendid update to the first Macintosh game. This version now supports color (still works in B&W), and you can now stockpile your screwdrivers, which can be a life saver. Recommended!

**MINEFIELD.1.3.:** wander around in a minefield, looking for exciting new ways to make explosions.

**MIDWAY.SIT:** Mac version of a UNIX game in which you can play one of various Japanese or American commanders as they wander around in the Pacific and try and sink each other.

**MINEFIELD.DELUX:** shareware upgrade to the freeware MineField. Adds several new features.

**EUCHRE5.2.SIT:** the well known card game. Supports color. User-configurable personalities for your fellow computer players.

**AD.X.O.SIT:** Three Dimensional Noughts and Crosses. Kind of like Tic-Tac-Toe but it requires 4 in a row to win rather than three.

**SADDAM.SREV.SIT:** a take-off of MineSweeper but infinitely better. When you hit a bomb Saddam laughs. When you win he growls.

**COLUMNS.SIT:** kind of like Tetris except that instead of different shaped blocks differently SHADED blocks are dropped.

**ORION.SIT:** pilot a space ship in the local area of the solar system. Pretty

cool.

**GUNSHY2.0.SIT:** same game, different day. New Icons. New Background. STILL addictive.

**JET.CARRIER.HEL:** two aircraft plus a text file about Microsoft Flight Simulator. Included is a fast jet, for crashing faster, a carrier takeoff (have no idea how you can land) and a text file explaining how you can simulate a helicopter.

## File Area 15: Macintosh Graphics

**THEATER1.CPT:** update to the Quicktime utility that takes a movie and puts it in a custom background of a standalone application.

**MYSTERY.PLANE:** a stand alone 3 D virtual reality model of the supersonic jet plane mentioned recently in the newspapers. It is rendered in Virtus Voyager and you can go any place you want in the model or just watch the show.

**PSPCD.SEA:** a more current version of the Photoshop Plug-in that allows direct access to Kodak PhotoCD.

**JPEGVIEW20.SIT:** shareware utility for manipulating pictures compressed with JPEG (Joint Photographer's Expert Group) software.

**PICTUREDECOMPRES:** latest version of Storm Technology's freeware JPEG decompression utility.

**INTERNETCRUISE:** just when you thought you understood the TCS there comes — the Internet! A vast, globe-spanning network of networks, reaching in to the dim recesses of almost every science and pseudo-science and academic institution! This massive 1.2 MB MacroMind Director presentation (self-running) will take you on a tour.

**SATYRIA.CPT:** miniature (160x120) of an original 640x480 full-motion (30fps) animation done for MacWorld Expo '93 by Linker Systems.

**ELVIS.SUS.CPT:** the new 29 cent Elvis stamp as a StartupScreen.

**WIN3.1.SIT:** shock your friends, neighbors and loved ones with these startup screens which give your Mac that oh-so-Microsofty look.

**MEDICINEWHL.DD:** diagram of a Native American medicine wheel in MacDraw format.



## File Area 16: HyperCard

- FACTBOOK92.SIT** : CIA's World Factbook 1992 in HyperCard format. Handy reference and indispensable for students.
- LAZYBONES.DEMO**: several files intended to help teachers.

## File Area 17: Technical Notes

- PRIC1214.SIT**: Apple price lists issued Dec. 14, 1992. Microsoft Word document; covers hardware, software, training, AppleCare.
- PBGUIDE3.SIT**: Third Edition of Apple's PowerBook Guide. Includes press releases and contact info for over 100 PowerBook third party enhancements.
- STTNGCHART.SIT**: *Superb* Word episode chart of the first 5 1/2 seasons of *ST:TNG* plus hints of some upcoming episodes.
- CD.DRIVES.CPT**: list of Photo CD compatible drives as posted to AOL by Eastman Kodak.
- WELL.PCD2.CPT**: more posts to Whole Earth Electronic Link about Photo CD.
- COMPUTER.CO.PHO**: tab-delimited text file containing the names and phone numbers of 450 computer companies.
- DCBB1292.ZIP**: Dec 1992 update: list of DC area computer bulletin boards.
- TIDBITS #157 to TIDBITS #158**: the latest Apple and Mac news, faster than MacWeek, more powerful than MacWorld, easier to understand than MS-DOS, etc.
- MACTRICK.CPT**: Macintosh Secret Trick List. A "trick", also known as a "cookie" or an "Easter egg", is something amusing or otherwise nonproductive (like a poem, a picture, or a song) hidden in a program.
- S7VERS.CPT**: list of approximately 750 applications, cdevs, inits, rdevs and their required versions to be System 7 compatible. Also lists developer phone info for each.

## File Area 18: Macintosh Utilities

- A93.CALENDER**: 1993 calendar done as a Quark XPress 3.1 library file.
- A5.INCH.DTP.RUL**: three 15" rulers, very, very detailed, laid out in Quark XPress 3.1, which is required.

- SIT.FNTIER.SIT**: new version of utilities to link Stuffit Deluxe and Frontier via Apple Events.
- SPACESAVER.1.0.3**: updates Aladdin (Stuffit Deluxe) SpaceSaver to Version 1.0.3.
- SUUFFIT.DELUXE**: updates Stuffit Deluxe to Version 3.0.4.
- MYBATTERY.1.21**: small utility to show you exactly how much juice is left in your PowerBook battery.
- ADDRESS.BOOK.3.5**: Jim Leitch's shareware Address Book.
- FAX.UTILS.SIT**: unsupported utilities for FAXstf owners.
- TAPELABELER4.0**: program that allows you to print out cassette tape covers. Can vary font and size.
- PROMETHEUSULTIM**: AppleTalk Remote Access (ARA) Script Tool.
- ERRORTONES.1.0**: Mac II-only (may be applicable to a Quadra) utility will trigger the Startup and diagnostic ("Something's Wrong, Martha!") musical tones that make life tuneful on a Mac II when things are going really bad.
- LITEUP.SEA**: updates Stuffit Lite 3.03 (only!) to 3.04.
- BLACKBOARD.CPT**: neat little application for creating and distributing documentation and information. Works on B/W and color Macs.
- ADD.STRIP.3.0.3**: utility which can convert, to some extent, non-Macintosh data into something a Mac could love and, conversely, convert fancy-pants Mac documents into something more mundane.
- FM.PRO.CONTACTS**: FileMaker Pro database for maintaining name, address and phone number contact lists. Also includes a database for document tracking. Well done.
- FMPRO.WRITEITDO**: FileMaker Pro 1.0 database for maintaining organized free-form text notes and such.
- FMPROLOVE13.SIT**: FileMaker Pro 1.0 database for maintaining insurance, banking, and other records required by your loved ones in case you kick the bucket.
- FMPROMAIL.SIT**: FileMaker Pro 1.0 database for maintaining mailing lists Nicely done.
- POWERALIAS.1.0**: application that can be used to alias up to five other applications.

- RESET.DTDBS.CPT**: application to reset (rebuild) the System 7 desktop files.
- PROBABILITY.CAL**: a probability calculator.
- POWERBOOK.REST**: two companion applications, one enables a PowerBook's rest mode, the other prevents the PowerManager from starting up rest mode. Written by Insignia Solutions to prevent some problems with SoftPC, these utilities are free and \*very\* useful if you get tired of your PowerBook going to sleep at critical times.
- POWERLOCK.II.CP**: designed to lock up your PowerBook to prevent unauthorized access to the data on the PowerBook.
- MENUMAIL.SIT**: send and receive mail on a LocalTalk network.
- SYS7FOLDERS.SIT**: several dozen custom System 7 (only) icons, just the thing for jazzing up your desktop.
- TIES.SCAN.SIT**: archive filled with a) a summary of a court decision, b) a technical white paper, c) lots of other stuff, and d) a utility which will scan all your drives searching for files which cannot be sent using a modem that has the TIES command set, a competitor to the "Hayes standard" command set.
- BUGLITE.CPT**: lets you enter the product you're having a problem with, plus a description of the problem, and then generates a text file with that info plus: System info (RAM, ROM, heap, sys S/W, etc), a list of INITS (and cdevs, etc), and your Apple menu items.
- PHOTOIMAGE.ICON**: really nice color icons that are actually small photographs, for System 7 only.
- R.SOUNDS1.SIT**: a collection of cool sounds from the cult favorite Nickelodeon animated show "Ren and Stimpy".
- R.SOUNDS2.SIT**: more cool sounds from the Nick cable program "Ren and Stimpy".
- BATFILER**: program that lets you do things that can't be easily done with Apple's Finder software: manipulate groups of files (possibly in many folders) at once.
- GEUPLoads92.CPT**: listing of all 2948 files uploaded to GENie during 1992. Sorted by number of times



downloaded.

## File Area 19: Apple System Software

**NETWORK1.3.DRT:** Version 1.3 of Apple's Network Product Installer.  
**BCS111.IMAGE.SI:** Basic Connectivity Set for Communications Toolbox.  
**CDSETUP.4.02CPT:** new version of Apple's CD-ROM Setup Disk, v.4.02. Includes CD-ROM driver, Apple Photo Access, other files.  
**LASERUTIL.SIT:** version 7.4 of Apple's LaserWriter Utility.  
**LASERWRITER.SIT:** version 7.2 of Apple's LaserWriter driver.

## File Area 20: Macintosh DA/INIT/CDEV

**RESETSOUND.CPT:** FKEY to help IIsi owners cope with the 'disappearing sound' syndrome.  
**AD.THEATER.SIT:** After Dark module for playing QuickTime movies in "theaters," and as such requires TheaterMaker.  
**FAR.SIDE.CLOCK:** Desk Accessory clock with a Far Side theme. In color.  
**HELIUM21.CPT:** Control Panel that lets you assign a key combination to activate Balloon help.  
**RAMDISK.3.2.SIT:** latest version of Roger Bates (of Silver Lining fame) control panel-based RAM disk. This will use memory above 8 MB in 24-bit mode as a RAM disk, will use 32-bit memory, has several user-configurable options on what should be placed in it at startup — is an all-around superb RAMDisk.  
**SHHH..SIT:** extension to stop the annoying sound "click" caused by the power manager on the PowerBook.  
**RADIUSMATH.CPT:** an extension when installed on a IIsi and other 68030 machines with 68882 math chips, and running System 7.1, will improve math performance about 50 percent.  
**CARPETBAG.1.3.4:** allows you to store fonts and sounds outside of the System file, yet still have them appear to be installed.  
**PC.SOUNDS.FOR:** just what you've always wanted: a PC clone startup sound and beep sound.  
**SCSIPROBE.3.5:** utility allows you to scan the SCSI bus for devices, mount devices that are shy, and generally

just do useful and non-harmful things with your SCSI bus.  
**SPEAK2ME.SIT:** utility works in conjunction with Macintosh to "speak" the names of files and folders at the Finder level.  
**GREG.S.BTNS.CPT:** update to Greg's Buttons lets you choose your menu background color as well as the background colors or Finder windows and (most, but not all) alerts and dialog boxes.  
**APOLLO.1.0.CPT:** similar to the old OnCue but with many enhancements, including the ability to associate with an application a screen depth, sound level, default file, default folder, and other characteristics. Ability to group apps, DA's, Control panels, docs.  
**AUTOGUEST.SIT:** extension written by an Apple bit jockey allows background tasks to send AppleEvents to remote machines.  
**CLOCKSND.SIT:** three System 7 style beep sounds of clocks: Big Ben, Cuckoo, and a chime.  
**FUNCT..KEYS.ARC:** extension allows Macs without function keys to fake it.  
**MOUNTIMAGE1.2B2:** extension allows you to "mount" a DiskCopy image file as if it were a floppy disk, which among other things means that a Mac with 800K (only) drives can install software distributed (only) on 1.4 MB floppies.  
**PWRSTP15.SIT:** displays elapsed time of battery, available hard drive space, on or off state of AppleTalk, and on or off state of modem.  
**ADHAVEABLAST.CP:** sick After Dark module: various machine gun, shot gun, and large calibre pistols are shot at the Mac screen, blowing holes in it.  
**STRETCH2.SIT:** puts a border around any window which you may use to stretch or option-drag the window in any direction.  
**APPLEDRAW.CPT:** great object-oriented drawing package that's a desk accessory. An amazing collection of features for such a small program, with a very simple interface.  
**LITTLEBLKBK.CPT:** another address book utility. Very easy to use.  
**MOIRE3.22.SIT:** classic Macintosh screensaver updated to 3.22. Also

includes a Moire After Dark Module.  
**STFNTMGR111.SIT:** select which fonts you want loaded in at startup under System 7.1 *only*.  
**GATEKEEPER.126:** control panel and extension driven anti-virus package that can be configured and customized in an almost endless number of ways.  
**ADSOFA.SIT:** Sofa-in-the-staircase After Dark Module.  
**VIRUSDETECTIVE5:** anti-virus program that runs as a DA.  
**KERMIT.TOOL.GH:** Kermit tool for the Communications Toolbox (Works 3, ClarisWorks, MP II, etc).  
**MODEM.TOOL.GH:** Ymodem (and Ymodem-G) tool for the Communications Toolbox.  
**SUPERCLOCK.4.0:** latest version of a classic Macintosh application. If you want a clock in your menu bar, SuperClock is about the only choice, and SuperClock is free!

## File Area 27: Music and MIDI

**MAJORTOM.LZH** (hit pop rock song);  
**MASH.LZH** (theme from MASH);  
**UVOLGA.LHA** (Russian folk song);  
**MOD files.** MOD files are digitized music files, often containing voices and other surprises, usually created on Amiga computers, playable on the Macintosh through Sound-Trecker. Most of these files are LZH and LHA archives, so they can be decompressed by both Macs (using MacLHA) and Apple IIs users.

## File Area 28: GIF Images

**BIG.GIF.GIF:** screen shot from the new TCS  
**ELVIS.GIF:** new 29 cent Elvis stamp in GIF format. Very nice.

## File Area 29: TCS Essentials

**STUFFIT.EXPANDE:** Stuffit Expander 3.0.1, a minor upgrade to the "de facto standard" Macintosh utility for decompressing archives on the TCS. This will decompress Stuffit 1.51, Stuffit Classic, Stuffit Deluxe (all flavors), Stuffit Lite, AppleLink, Compact Pro and Binhex formats.



# APPLE II BYTS AND PYCES

by Gary Hayman

This is a regular monthly column which includes Apple II information of the hints, techniques, suggestions, helps, information, news, etc., genre. Information which may not, in itself, warrant a separate article in the Journal but would, nevertheless, be of interest to Apple II readers. You are asked to submit your hints, ideas and suggestions to me for monthly organization and publishing. You may do it via the TCS or direct mail to me at 8255 Canning Terrace, Greenbelt, Maryland 20770. Telephone calls to (301)345-3230. Please note that this column is often submitted for publication 45 to 75 days

## Careful, It May be a Cruel World

Ken DeVito, one of the other "Hot Line" volunteers who helps Apple II people, and I were having an electronic "tete-a-tete" about how advantage is being taken of unsuspecting computer users. One of my writings was as follows:

Let me give you an example that happened only YESTERDAY and shows how some of our members are "babes in the woods" when it comes to computer knowledge and really need ALL the help and support that the Pi can give them - they should not be left out there to flounder with the sharks. Some of them don't even know there are sharks in the water.

Joyce (name changed) came over yesterday desperately needing help. She is writing an involved paper on

which she has been doing research for many years. She had been using an Apple IIe equipped with AppleWriter and has many many 5.25 disks filled with information for her research and a book which she will later publish. She said that her printer was going bad and the paper was due, and she was going desperate. [BTW - she doesn't remember ever changing the ribbon or cleaning the print head of the printer]

Joyce was first informed by a local store, that the IIe was "no good" and that if she was going to replace the printer, she should get an entirely new system - either IBM or Macintosh. Her son, who is up at an ivy league college told her to send the Apple II disks and he would print her paper on his IBM. However, she wanted closer control of the printing so she could see the result and make necessary "instant" changes. [I don't know how her son's IBM was going to read the AppleWriter files anyway - but I'll leave that for him.]

I showed her, the previous week, how I could take her AppleWriter files, convert them to AppleWorks (removing dot commands and inserting appropriate printer options) and print the documents on my Laser printer, or if she wanted drafts, to my ImageWriter. We did a sample document and I also prepared an ASCII text file of the document.

She came back yesterday, in a panic. She went to "the store" and they talked her into buying a Mac LC

II [no IIe board] with a HP Laser Jet. A very good combination, but after the purchase, she learned that she could not print her 5.25 AppleWriter disks [unless she folded them in half first and shoved them in the 3.5 slot <grin>.] I was able to print out 40 pages of material for her which she had to turn in within the next couple of days.

The point to this is that this is not an uncommon experience. As you know, it happens all the time. Many of our members are not "teckies" and are confused. They do not know how to research, what magazines to read to learn information, or even what questions to ask. I get these calls frequently. I shudder to think of the people who don't know to call Hot Line volunteers or ask questions on the TCS.

Anything that we can do to help these members and make their life a little easier, is RIGHT, IMHO. By the way, I asked her what she paid for the new Mac etc. Later, picking up the first ad I saw in the newspaper, the exact advertised combination was more than \$300 less at another local store.

Someone might argue that "she should have enough sense to shop around", but here is a desperate person, without knowledge, pressured by time, reacting. If she only just had a little knowledge of the prices beforehand, she may not have made the "\$300 mistake."

## The Chicken and Egg Quandary Again

The question is presented again and again by new TCS users who suddenly realize the files that they plan to download are "Shrunk." That is to say that they are compressed to reduce their size to save space on the hard drive and to reduce transmission time, via modem. They are also surprised that the utility to un-shrink these files is itself in a Shrunk for-



mat. How can they un-shrink the un-shrinker if they don't have the un-shrinker un-shrunk in the first place?

Well a special shrunk version of SHRINKIT that un-shrinks itself is now posted in the Essentials board of the Files Download Area on the TCS. Even this Self-Extracting compressed version is a little confusing to activate by the new user and causes questions. The individual most likely to graciously answer these questions is Dale Smith, one of the noted TCS Committee gurus.

Now to make matters worse, many users want to transfer files from one platform to another, downloading the shrunk file on an Apple II or a Mac and using the file on the other platform. Questions abound. Let's listen in on a recent reply by Dale to a question from Steve Satre who wanted to be able to give some files to a friend with a different platform...

"..No, GS-SHRINKIT is not part of Apple's system software. It's a separate application developed by the programmer who was hired by Apple to do the GS Finder revision for GS System Software v6.0 and is now working on the Mac Finders downstream of Mac System Software v7.1.

"The file GSHK11.BSE will give that program to your friend when it's on his machine and has been converted by regular SHRINKIT from its BinaryII format into a Self-Extracting Archive application that can just be launched by double clicking on it in the GS's Finder.

"To get regular (8-bit) SHRINKIT, you need the file SHRKINKIT3.4.XTX to be copied over to a ProDOS disk for your friend to use. He then has to boot the GS, and launch BASIC.SYSTEM. This application should be in the root level of the boot volume and he can just double click on it and he'll have the AppleSoft BASIC prompt ']' at the left column of his screen.

"Now, it gets a little tricky. Maybe

the simplest way to get AppleSoft to be looking at the disk on which SHRINKIT3.4.XTX resides is for you to give him the volume name you used for the disk; next simplest is for him to use the PREFIX command with Slot/Drive parameters.

"First (and simplest) method: At the BASIC prompt have him enter: PREFIX/<volume\_name> followed by a <return>...where '<volume\_name>' is the name you gave him for the disk.

"Now if he enters: CATALOG he should see a list of files on the disk including SHRINKIT3.4.XTX. If he does, everything has gone well."

"Now he can enter: EXEC SHRINKIT3.4.XTX followed by <return> Several files will be extracted from the file SHRINKIT3.4.XTX - SHRINKIT, SHRINKIT.SYSTEM, SHK3.DOCS, and README.

"He can run SHRINKIT by entering -SHRINKIT.SYSTEM <return> at the BASIC prompt (']) and the program will run and bring up its main menu."

"From this point, he should OPEN the GSHK11.BSE archive and select GSHK11.SEA inside to be extracted.

"When this finishes, he should enter: BYE to quit from BASIC back to the Finder.

"Now he can open the disk with GSHK11.SEA on it and double click on its icon. The application GSHK will be extracted onto the destination disk he specifies with the StandardFile selection dialog that comes up.

"The second (more complicated) method differs only in how the initial PREFIX setting gets done and should be used only if the volume name isn't known. Enter the command: PREFIX,S5,D1 at the BASIC prompt and watch to see if the drive light for the drive holding the disk with SHRINKIT3.4.XTX lights. If it does all is well and you proceed with the next steps as outlined before. If it doesn't, you may have to enter the

command: PREFIX,S5,D2 instead ... this second command should only be needed if he has TWO 3.5 drives on his GS. If he's got only one, the first form should have done the job or there may be a hardware problem to check.

"Save this and print it out, since it's a lot to remember if you're not familiar with ProDOS and AppleSoft BASIC."

### Is it Getting Hot in Here?

Over on Pro-Line, Tom Geer was talking about a "Hot" IIGS. Suppose we grab a cool drink and keep our ears open.

[Tom] I have a Rom 01 GS which is pretty loaded down with peripheral cards, including a 9/64 ZipGS. Although I have never had any problems with excess heat (System Saver installed), I just recently began getting the dreaded 'Fatal System Error -> 09xx', which I traced to an overheating problem. The first thing that I did was to check the fan on my System Saver. The fan still spun but was very sluggish and did not appear to be putting out more than about 10 cfm. {ED Note CFM means Cubic Feet Per Minute} I went down to Radio Shack and bought a new muffin fan, Catalog #273-242 (\$16.95). I know that's too much money but, after all, it was 8:00 on Sunday evening. This is a 32 cfm unit which will bolt right up in place of the original. I then noticed that the foam insulation around the bottom perimeter of the System Saver had become compressed with age and was not sealing properly (unit is over 5 years old). I added another layer of sponge and, before trying it out I checked the top case of my GS. Sure enough, the cooling slots were better than 50% clogged with dust, cigarette smoke, [GH: Not smoking near computer would help - in fact Not smoking would help] etc. I gave it a bath, put everything back together and fired it



up. The system has been running as cool as a cucumber ever since. Total cost of the repair - \$18.31. I dread to think what this would have cost if I had brought it in for repairs. So if you have a System Saver and are experiencing heat problems, do what I did: replace the fan with a higher cfm unit, check the sealing foam on the bottom of the System Saver and clean the cooling slots on your GS case. Hmmm... now what am I gonna do with all that money I just saved?

[To which David Green asked] How does the new fan compare noisewise? Is it quieter or louder?

[Tom] The fan motor itself is at least as quiet as the original. There is a little bit more 'air' noise due to the higher cfm but it is not noticeable in comparison to the two external HDs and two other fans I have on my system. One of the other fans on my system is a 4" muffin sitting on top of my Apple RGB monitor. I highly recommend this. That monitor used to get hot enough to cook an egg on but even a low cfm fan will keep it quite cool. It's six years old now and sees quite a bit of use. I'd like to think that keeping it cool has/will prolong its lifespan. The last of my fans is a 2.5" muffin in a sort of 'homebrew' HD unit. I took an old Techmar MacDrive external case and managed to fit two 5.25" half height drives in it (one 80mb Quantum and one 60mb Seagate). Popped in a power supply and the fan and it hums along nicely. The 60mb unit is dedicated solely to pro-gumbo. I figured that if I was gonna beat on one of my drives, it might as well be the [deleted] Seagate.

[Later David wrote] Well, I went out to Radio Shack and bought one of those fans myself. The one in my System Saver has always been real quiet, but every time I thumped the table [GH: Did What?] that holds the computer, it always jarred the fan out of line a little and made it rattle. Then I'd always have to shut down

the system, move the System Saver off to one side a bit, then reach underneath and spin the fan a little several times. For some reason, when I then put the System Saver back in place, I could reboot the system and the fan would be back to its quiet self again. Wednesday night, however, I again dropped something on the table. This time the fan turned loud and no amount of stopping and spinning could get the fan back to its quiet groove. So Christmas Eve I headed to Radio Shack for one of the fans Tom suggested. It was almost as easy to install as he said. I was considering cutting the wires on the old fan, when I noticed a tiny screw near the fan-end of them. I undid that, then pulled the wires away from the fan. I then used wire nuts to connect the old wires to the ones on the new fan. Tom said the fan would bolt right in, and it did, except I couldn't use the screws from the old fan, because the new fan didn't have any threads. Luckily I had a little package of some nuts and bolts that were exactly the size needed. I put the unit back together, then set everything back in place and fired it up. The new fan is a tad louder, but it has a very smooth sound, which is what I like. I HATE it when a sound keeps going VOO-BAH VOO-BAH rather than a nice Huuummmmmmm. All in all, I'm pleased with the new fan. I might get another one for my other GS's System Saver after the holidays.

#### More on Heat

[Gary Utter via Pro-line] Time for a lecture on heat. Chips get hot. They heat the air at their surface. If that air remains at the surface of the chip, then the chip just gets hotter and hotter. If you can move the hot air away from the surface of the chip, and replace it with air that is not so hot, then the chip can heat that air. Heat that is transferred to the air in this fashion is heat that is not giving

the chip itself a problem. Without a fan, the only way that air moves is by convection. (Hot air rises, remember that from high school science?) Generally speaking, convection is not going to move enough air to keep the chip cooled to within its normal operating temperature range if the ambient air temperature is much above 75 degrees, especially if you have a lid on the machine. This is why God made fans.

A fan will move the hot air off the chip, and allow it to be replaced with air that is less hot, thus allowing the chip to be cooled. So long as the air that is moving across the chip is cooler than the chip itself, this will keep the chip within its operating temperature range. The variables here are how hot the outside air is, and how fast it moves across the chip. If you move enough air, then the chip will have no problems until the ambient air temperature is higher than the operating temperature of the chip. The operating temperature of the chip is certainly a lot higher than YOURS. Which is to say, when the outside air becomes hot enough that it cannot cool the chip with a good fan, it is so hot that you will have NO interest in computing, or anything else except escape, if you aren't already cooked, literally. (Wordy tonight ain't I? :)

Anyway, the answer to your problem (assuming you are correct in it being heat related) is a FAN, or several fans. I myself have three high capacity fans sitting on top of my CPU (with the lid on). They are mounted in a board (actually a sheet of plexiglass that I happened to have on hand), and the board is cut to the size of the top of the GS and has a gasket of weatherstripping around the bottom edge, so it sits nice and airtight on the GS. This thing sucks so much air that I need both hands to lift it off the case when the fans are running.



I do NOT have heat related crashes. Period.

A Kensington System Saver or AE Conserver is the minimum level of "fannage" you should have on your machine, and if you have a serious problem with high temperatures in the area in which you must run your GS, you need MORE "fannage." The absolute minimum I would suggest in a high temperature environment is a System Saver or Conserver in which the fan has been replaced by a higher capacity fan from Radio Shack. A lot of people here have made that particular modification with good results.

However, if you do not have to have your monitor sitting on top of the CPU, I would recommend several fans in some type of enclosure like I built. I was at a local electronics surplus house this afternoon, and saw a whole big box of these "muffin fans" at \$5/each.

### He's in the Dog..., er, Cathouse

Kim Brennan, one of our very helpful IIGS experts, has been running a popular Bulletin Board System in this area that may be of interest to you. He left a note on the TCS which bears repeating here.

"Just a note, that my BBS, The Cathouse, is available to all. No cost, free downloading and high speed (up to 9600).

"I've nearly completed my installation of TrueType fonts for the GS (I've lost count after 400) and as I get new ones they are available immediately.

"Note: The Cathouse was originally set up as an auxiliary to the TCS due to the lack of disk space on the TCS for huge files. It runs on an Apple IIGS, with a 40Meg hard drive for messages and networking and a 43Meg Syquest drive for files. I currently have 3 cartridges devoted to files for the BBS, a TrueType cartridge, a BitMapped Font cartridge

and a MOD cartridge. Any of these can be swapped and put on line by request. I usually leave the TrueType Font cartridge online, but the MOD cartridge is a popular one.

"The number is 301-840-8567 a Gaithersburg (Metro) line, which is local to much of No. Virginia, DC, Montgomery and P.G. County (but not to Laurel or Herndon, sigh)."

### Mike Speaks into the Mike

Mike Ungerman, formally of this area but now in Florida, still keeps in touch through various on-line systems. In response to some Apple Storm comments and the announcement of the demise of the Apple IIGS, Mike writes,

"I had a 1955 Studebaker Commander V-8. It was a great car, but is no longer being made today.

"I had a 1972 Volvo P-1800e sports car. It, too, was a great car, but is no longer in production.

"I had a wonderful first computer. It was a Compucolor II, RGB graphics and monitor, built-in 5.25 floppy drive, 64K ROM in the detachable keyboard for graphics and 64K in the computer. I purchased it in 1978. It died in 1980 with no support from the factory that dropped the line for 'lack of market interest.'

"I have a wonderful 'second' computer in my home. It's an Apple IIe running Proline 2.0 as a bbs for our user group. In what it does, it's more powerful than the 486 sitting next to it, since I'd have to get a full blown Unix package to do everything that I'm doing with the IIe, and I don't want to have to do that. But...

"It's just a matter of time until Apple really does drop all support for the Apple II series. The company's policy is not going to change no matter what a concerned group of owners and enthusiasts do. There's just no money in it and that's what being a corporation is all about; if you don't make money, you go under.

"It will be up to the user groups and third party software and hardware vendors to keep the Apple II alive. Companies like Shrieve Systems and Pre-Owned Hardware along with Sun Remarketing keep the hardware alive. Let's hope that continues for the foreseeable future, and quit going to 'Mecca' on a periodic pilgrimage that will be for naught."

### AppleWorks to the Laserprinter

It all started when I attempted to do a mail merge from AppleWorks, printing on my GCC BLP Elite Laser printer. Up until this time, I was always able to print a one or two page AppleWorks letter which sported beautiful PostScript text. All I had to do was to send the ImageWriter emulator (IWEM) to the printer and print my AppleWorks file through a "selected" printer that went through AppleTalk.

Well, with the mail merge, and later while experimenting with larger multi-page AppleWorks documents; along about the fourth or fifth page, things went haywire. Parts of the document were missing, strange pieces from other pages appeared in the wrong area of the page and the top and bottom margins lost control (Incontinence, I would suspect.) In order to finish my project, I had to limit my database to only five records at a time. Now this was fairly easy to do, but required much operator attention. I didn't know what was wrong, but suspected a printer memory problem. But I had 2MB of memory in the printer and this didn't make sense. Besides, I have always printed long Publish.It! documents to my BLP without any difficulty. Publish.It! just waits until the printer calls for more information and then sends it. What was going on? I did notice, however, that when AppleWorks sent its flow to the printer, it sent it all, not stopping and waiting for the printer to move on to



the next page. Could this be significant? Surely I had enough memory in my printer to handle this, didn't I?

Well I posted my concerns on the TCS and Kim Brennen came back with these thoughts...

"Your printer always uses 1 MB of ITS memory to set up the page it is printing (regardless of just what is getting put on the page). Plus for internal bookkeeping the PostScript interpreter makes use of a significant portion of memory where it sets up various stuff (the more complex the page the more room taken up). That is why a 1.5MB printer is the minimum amount for a PostScript printer in almost every case. Your 2.5 MB printer only has 1 MB free in which to make use of extra features (buffering other pages for example). While that sounds like a lot, it isn't because that memory is more quickly grabbed by the PostScript interpreter for calculations, dictionaries and other miscellaneous, than it is by any page buffer.

"You are correct about Publish.It! and it's pausing having an effect on your printing. That pause can give the printer time enough to manage its own memory so that it HAS enough memory to set up the next page. Somehow, when the printer is just getting data sent to it at light speed, the printer doesn't have time to clean up memory and simply begins to trash your documents.

"It's frustrating, I'll admit."

### Which Modem to Get

"The SupraFAXModem is priced right," writes Dale Smith while answering Dennis Dimick's question about choosing a high speed modem, "but there are problems that hit Apple IIs and the IIGS in particular and affect receiving calls with the modem more than originating (making) calls with it. Supra is working on the ROMs to fix the problems, but the most recent attempt may have brought in

as many problems as it fixed - breaking some things that weren't broken before the 'fix.' They're gonna have to try harder. Fortunately, I'm not in a position to buy one now and maybe by the time I am, they'll have the problems fixed.

"Since you have both Apple lines on your desk(s), you may have seen my posts on Mac Telecomm concerning the Supra. If not check them out. Remember, Morgan Davis is running a BBS (he's the author too) and these problems really make themselves felt in that application.

"Problems aside, there is absolutely no reason the modem won't work with the GS, BUT!!! make sure you DO NOT use a Mac Hardware Handshake cable on the GS. These cables generally DO NOT connect one signal that is vitally necessary for hardware handshaking on the GS... this signal isn't used on the Mac, so they don't see the need to connect it. Note, that the converse - a GS Hardware Handshake cable WILL work on a Mac - the Mac politely ignores the extra signal..."

### AppleWorks with Memory but no Hard Drive

There was a recent thread of conversation where I was reporting on a memory board that I had purchased for Betsy's office IIGS (no hard drive) and how I managed AppleWorks with one 3.5 drive. I was writing to Neil Laubenthal.

"It seems to be a good board. It's the RAM GS. I bought it for \$129 at the show [the October Apple Expo East.] The Roger Wagner price was the highest and there are other places where you can get it for only a few bucks more than I paid for it. It comes with testing software. I installed it in on of Betsy's IIGSs at her office and now we have an almost four meg AppleWorks desktop.

"Actually, I set up an 800K RAM disk for her and using Companion

Plus to alter her AppleWorks disk, it, upon booting, sends the Main and Custom Dictionary to the RAM disk and loads all modules of AppleWorks into memory. Since she has only one drive, this speeds up using AppleWorks tremendously."

### PC Mail on a IIGS

"Joan and I," writes David Jernigan, "tried to do the right (pc) thing and remove some of her mail from her UN\*X-based VA.PEN account and save it to our GS. We transferred the files under XModem-1k and specified text. For reasons best known to VA.PEN and/or UN\*X, they arrived as BIN type files and we can't seem to get them to convert. This happened once before but somehow, one of the editors managed to read them or one of our programs converted them magically. Suggestions?

"We have ProTerm 3.0, System 6, EGOed and Sneezee available in addition to Appleworks, Beagle Write etc."

"OH, YES, this is an easy one," typed Dale Smith. "In ProTERM 3.0 Misc:Preferences:Xfer window, you have Default Filetype set to BIN (the way it ships - and there are reasons why that is good usually). So when these files were received, that default filetype was applied to them.

"Now what? Within PT3 there are two things you can do - use the File:Set File Info command to change the filetypes of the received files to TXT, which will let any of your editors get to them; or go into the Editor, use File:Open, then at the dialog hit Control-Z to display all files, and choose the file you want to load; or [so there's more than two] use File:View File command, then at the selection dialog hit Control-Z to show all files, and pick the one you want to view. I would use the Editor load approach when the file is small enough to fit the editor and the File View approach when the file is too big for the editor



(greater than 45K in my case)

"I believe also that loading a file into the Editor (from a show all files selection dialog) and saving it back as TXT will also make the filetype change. I haven't tried this particular approach, but it seems logical if you choose Overwrite/Replace.

"You will probably find one other problem in your received file. PT3's XModem and YModem do not support a text conversion mode; it's ZModem (as all should) does have a text conversion mode. As a result, you may find that the files you receive are loaded with LineFeeds (Control-J's) and no Carriage Returns (Control-M's)—this is the standard UNIX format for text files and is one of the two ANSI Standard ASCII Text formats: lines end with LF or lines end with CR/LF. The ANSI Standard in its framers infinite wisdom did not include lines ending with CR only. The text mode of the protocols is supposed to convert the outgoing text to one of the ANSI Standard forms and the receiving system converts the incoming text to the form that it uses so the text displays properly.

"So this means you will have to load the text into the PT3 Editor and do a global replace of the NewLine markers with CR (^M). I have found that I cannot do this in other editors, because I cannot get a Control-M into the replacement box - except in PT3."

*[The author is currently Chairman of the AppleWorks and Apple IIGS Special Interests Groups and is the organizer of the new UltraMacros SIG. He is published frequently in the Journal of the Washington Apple Pi. He is also a Beagle-Quality "Buddy," a Seven Hills "Partner" and a TimeWorks "Ambassador" for the WAP. Professionally, he is a Certified Hypnotherapist in private practice in McLean, Virginia and does part-time Apple II family computer application programs consulting and teaching. His latest software programs, THE MAGIC FILE CABINET and MAGICAL MACROS - THE ABRACADABRA COLLECTION are presently selling internationally.]*

## Profile of Ellen Rosenberg, Editor-in-Chief of the A2-Central Newsletter

1) Ellen, can you tell us a little about how you first became involved with Apple II computers?

My life as a computer-obsessed person started only about four years ago with a Laser 128. My son started pestering his dad for a computer (I didn't need convincing) when he was about four and won the battle when he was ten. It took us that long to convince the major breadwinner that a computer was more than just another screen to sit in front of. Actually, I don't think that we ever did convince him but he got tired of fighting the war. We couldn't talk him into a genuine Apple and didn't mind starting with a clone. I was hooked from day one, so much so that a few months later, I asked for a printer for Mother's Day and a modem for our anniversary one month later.

The modem opened up worlds unknown. I lost neighborhood friends but gained online ones. My phone was constantly busy, the common things that a stay-at-home mom normally did, suddenly didn't get done. I got active in my local user group and took on the editorship of the user group newsletter. I had taught school full time before I had children and part time afterward but I must admit that doing the editing thing grabbed me in a way that I hadn't been grabbed before. I'd found myself.

Well, I'd found myself but my

husband felt like he was losing me. If you're going to "fool around" on the computer all day long, he said, why don't you find a way to be paid for it. This was getting serious, he meant it. So my brain went into gear.

2) When and how did you come to work for Resource Central?

A fitting second question. <grin>

When we first got that Laser 128, I started reading InCider and A+. I believe that was the time that InCider (or was it A+?) cited A2-Central as the best Apple II publication around and noted that its publisher and founder Tom Weishaar, lived in Overland Park, KS. Incredible, I thought. I'm living in the same town as this famous newsletter publisher! I called and asked for the two-issue free trial but decided that it was "too technical" for me. I passed on paying for a subscription. Well, I guess that A2-Central and I were meant to be, because a few months after my free trial ended, I won a year's subscription at our user group's summer picnic. The more I read, the more IT made sense. While I might not have understood everything in every issue, it was beginning to seem less daunting.

This was all about the time that laundry was piling up at home, home-cooked, full course meals were



scarce and my family was becoming more jealous of the time I spent with my computer. We traded in the Laser 128 for a used Apple IIgs that a neighbor was selling. Had it been left up to me, we would've kept the clone but selling it was conditional to getting the IIgs.

My husband continued to complain about my hours on the computer and I knew that I'd have to find a way to make a living at this or else. It seemed more than ironic that A2-Central's office was a few miles from my house. Kansas Fest was a few months away, I was drooling to go but knew it wasn't in the budget.

There had to be a way. I knew a couple of the guys from the user group who worked at A2-Central, but had never met Tom Weishaar. I decided to write a letter to him and for months composed clever letters in my head. Finally, one day I took a deep breathe, sat down and wrote (actually typed) an unsolicited plea for employment. I didn't know the guy and if he read my letter and laughed cruelly as he threw it in the trash, I'd never know it and he'd never know me.

To my surprise, a few days after I wrote that letter, he called, we met for lunch at KC Masterpiece and the rest is history. I started work at the end of April, 1991 as a "front end" type person doing, among other things, low-level customer support. After six or seven months, Tom asked me to take over the editorship of A2-Central due to some internal reorganization. Big city girl makes good in small town. I still say that the unedited version of this story would be a great article for one of those Good Housekeeping success stories.

3) Many admirers of A2-Central would be keen on hearing how

the publication is put together each month. Can you tell us briefly about what goes into assembling the publication each month? What are the parts of the work you like best?

I get submissions from various people or Dennis writes an article. I decide what I'm going to use each month, I get the text and usually edit it in Classic AppleWorks on the IIgs. I write Miscellanea, the Ask (or Tell) Uncle Dos section that way as well. When the text is pretty much edited, I dump it all into QuarkExpress on the Mac and do the fine print stuff like bold-facing and other style details. I try to remember to change the page numbers and the issue dates on the templates and only have slipped twice in the year that I've been doing this. (That's a record, I think, or I may be tied with Tom but he'd done it for a longer period of time). Tom always give it the final once over, then it goes to a commercial art service to be readied for the printer.

4) Any amusing anecdotes about office life at Resource Central?

Lots of amusing anecdotes really, but I wouldn't want to spoil our image! I have the pleasure of working with an exceptional bunch of people and most days don't seem like work at all.

5) Most unusual phone call? Most extraordinary letter? Most distant Apple II user? (i.e., Tibet? Nepal?)

We get a variety of unusual phone calls and letters. Mostly from people who want technical help and want it now. One person who called re-

cently was indignant because I couldn't tell her which version of the system software she was using without her reading the label on the disk which she didn't have with her. We have subscribers literally all over the world. Australia is probably the furthest away but we've got customers in lots of little countries in Europe, South America, Africa and Asia as well.

6) Which person do you think had the greatest influence on your choosing to pursue a career in computers?

I can't really say that anyone really influenced me to pursue this career, except for maybe my husband who threatened to divorce me if I didn't start getting paid for what was becoming an all-consuming hobby. Of course, if it hadn't been for Tom Weishaar, I wouldn't be answering these questions, either. <grin>

7) Your role as editor of A2-Central, the leading national publication for Apple II programmers, places you with one foot in the "humanities" and one foot in the "hard sciences." Do you have any thoughts about whether these two intellectual "modes of thought" are reconcilable or not?

First of all, we don't consider A2-Central to be a publication for programmers. We feel that it's a newsletter aimed at all Apple II users who want to get the most from their computer. This includes everyone from the novice to the power user. Our slogan, so to speak, is that we're a "journal and exchange of Apple II discoveries." An international clearinghouse of ideas and innovations.



Humanities and hard sciences are indeed reconcilable. Technology has, and is, giving the arts new means of expression. It's hard to even envision how far and how wide, computers can take us into previously unrelated fields.

8) In the computer field, both hardware and software companies are overwhelmingly populated by men. Even Apple Computer itself has just a handful of women in the company's upper echelon. What are your ideas for helping bring greater gender equity in the profession? What can schools do to help?

The role of women in computing fields is probably changing for the better, as it is in all fields of business. I read recently that the majority of small businesses today are owned by women. We bought an expensive computer software program to run the business earlier in the year from a local company owned by a woman. Things are looking up.

Schools should reinforce positive feelings about computers and the computer field in general as well as other non-traditional areas for women. Positive role models and mentorships are essential.

9) Soon you'll be editing A2-Central from your new home in Texas. Do you have any comments to share about how telecommunications has had a liberating effect on the workplace? What are the downsides to working from your home, do you think?

I feel incredibly lucky that I'll be able to take my job with me when my family moves to Dallas sometime early in 1993. It's one of the things that will make the move more

bearable. Naturally, without telecommunications, I probably wouldn't be afforded this luxury.

This opportunity will probably have some good and some bad points. It will be great to work from home, to be there for the kids when they get home from school or when they're sick and have to stay home. It probably will require a good deal more discipline than comes naturally for me though. I'll miss going into the office everyday and I'll definitely miss the interaction with my coworkers. I'll miss answering the phone and chatting with customers. I'll miss the office birthday parties, too.

I will have more time to explore my computer again, the way I did before I started working. This may end up being the best of both worlds.

10) Favorite authors? (Any good books you've read recently?)

Read? Read? Who has time to read anymore? I used to read voraciously but now feel like I'm ahead of the game if I get to read the headlines. Maybe when I get to Dallas...

I do listen to National Public Radio almost exclusively these days, though. Unless I'm in the car with my daughter who has to listen to the local rock stations.

11) How about a few words on what GENie has offered to A2-Central, and vice-versa?

I think the A2 RoundTable on GENie does an extraordinary job of supporting Apple II computers and the people who use them. The technical level of expertise there is as good and solid as it can possibly be. As the support from developers and mail order houses diminish, the

online services (and user groups) become all the more important. More and more, we're recommending that our customers get hold of a modem and telecommunications software in an effort to get quick answers to their questions.

A2-Central will be around as long as we're supported by the users. We have to face the fact that many Apple II users are either moving on to, or adding another platform to their computer desks. Tom is starting a new publication, Fishhead's Children, to address the needs of our subscribers as they learn other systems. But we're not about to give up on the Apple II until our subscribers tell us that it is financially ridiculous to do so.

*Reprinted with permission from GENieLamp, the new free online publication on GENie. Volume 2, Issue 1 (c) Copyright 1992 T/TalkNET Online Publishing, GENie, and the GENie Computing Roundtables. To sign up for GENie service, call (with modem) 1-800-638-83690. Upon connection type HHH.*

*Wait for the U# prompt. Then type: XTX99368,GENIE and press <return>. The system will then prompt you for registration information. A free booklet about GENie is available on request by calling (by voice): 1-800-638-9636.*



# Apple II Walkabout: Taglines

by Seth Mize,  
WAP Contributing Editor

"Other people are long-winded. I am eloquent."

A great many open minds should be closed for repair!!

Sin lies only in hurting other people unnecessarily. All other "sins" are invented nonsense. (Hurting yourself is not sinful - just stupid).

"Diplomacy is saying and doing the nastiest things in the nicest possible way."

In response to your request to increase access: You have called 10 times, downloaded 24000 bytes, uploaded 0 bytes, posted 124 bytes, hahahahahaha!- Excerpt from the diary of a battered sysop.

"That is really incredible. That is truly incredible. That is so incredibly incredible that I think I'd like to steal it."

alien: n. a being who travels great distances to molest our cattle and trample our grain.

"Don't edit reality for the sake of simplicity"

"Happiness is being able to tell the truth without hurting anyone." - 8 1/2

The LAUG Apple II Development Group - A SIG of the Lawrence Apple Users Group and Lawrence S.P.A.M. Society - Serious (Silly) Programmers of Apple Machines

"The guardian of the realm raced about in happy puppy circles."

Programmers' Tip #1: When in doubt, rewrite from scratch!

Maybe the people with the most answers have solved the most problems.

The opinions expressed here belong to no person(s), living or dead!

Organization: Greater Montrose UFO Appreciation Society & Data Haven

Magistere Informatique et Modelisation Institut Joseph Fourier - Grenoble (France)

I used to be indecisive, but now I'm not so sure!

Organization: INCOM, Interessengemeinschaft Computer, Offenbach

"Programming is an art form that fights back."

Apple IIGS Forever!

Opinions? Everything seems so easy this way but I'm going under fast,

I'm slipping away, am I so crazy?

"For life is but a dream, whose shapes return, some frequently, some seldom, some by night, and some by day." -James Thomson

"Live long and prosper!"

"If Satan ever loses his hair, there'll be hell toupee."

A warranty is only as good as the person doing the job.

Get it done right the first time.

"...you really should know that it's never too late to get up and go."

"Never trust a machine you can't toss out the window!"—Steve Wozniak

"I am not goofing off. I am driving myself mercilessly in the pursuit

of relaxation."

Meditate on emptiness, 'cause that's where you're going - and how.

"I am the terror that flaps in the night! I am the chill that runs

down your spine."-Darkwing Duck

I solved the problem of getting this error by getting a fan. I would not recommend giving your computer a "whack" in any circumstances.

I think an answer to this question ought to be in the FAQ.. (Frequently

Asked Questions). We could refer to it as "the anti-whack faq."

Organization: California Institute of Technology, Pasadena

Organization: AUSOM - The Apple Users Society of Melbourne

"On a clear disk you can seek forever!"

Organization: MIND LINK! - British Columbia, Canada Land of the rising snow.

Organization: Univ. of Calif., Irvine, Info. & Computer Sci. Dept.

Organization: FrEdMail Foundation; San Diego, CA

Apple // & Van Halen Forever!

"Hard work doesn't make miracles, Miracles just make hard work!"

"II the future! II 1993!"

Organization: MIT Laboratory for Computer Science

Its not impossible, just improbable

Being a Ham is so grand!

Apple II Forever! These opinions are mine, not Apple's.

Organization: Apple Computer Inc, Cupertino, CA

Organization: Actrix Information Exchange Wellington, New Zealand

Organization: AT&T

To know, and not to do, is not yet to know

"See, when the GOVERNMENT spends money, it creates jobs; whereas when the money is left in the hands of TAXPAYERS, God



only knows what they do with it. Bake it into pies, probably. Anything to avoid creating jobs."—Dave Barry

Organization: Dept of Computer Science, Wollongong University, Australia

Organization: University of Toronto, Dept. of Statistics

What rolls down stairs alone or in pairs? Rolls over your neighbor's dog?

What's great for a snack and fits on your back?

It's Log, Log, Log!—"The Log Song," from Ren & Stimpy

Math is tough!—Barbie

Organization: ProLine [pro-freedom] AppleVan (Apple UG of Vancouver, WA)

"The more we try to control, the less we are really in control."—Robert J. Oppenheimer

"Microwaves: They're not just for cooking anymore."

Organization: The University of Texas at Austin, Austin TX

Organization: Whole Earth Lectronic Link

"Computers aren't intelligent, they just think they are."

"The Lord may be subtle, but he is not mean."—A. Einstein

Organization: Case Western Reserve University, Cleveland, Ohio (USA)

"Don't worry about the world ending today, it's already tomorrow in Australia..."

A closed mouth gathers no feet.

You don't need a weatherman to know which way the wind blows.

Organization: National University of Singapore

*[Seth Mize is a IIGS owner with a basement full of Apple III's and an Apple II Plus. His son is a Mac SE/30 owner. He is one of our Apple II Editors, member of the WAP Election Committee '93 and is the Annapolis Slice Apple II Programs Chairman.]*

## Connecting an Apple IIGS and a Mac Together

by Russ Messana

**S**o you want to connect your IIGS to an Apple laser printer or a Mac and need to know how to do it? The connection can be broken up into two parts, hardware and software. The hardware part is simple, but the software setup is a bit confusing. First I will start with the hardware.

### Connecting the Apple IIGS to a LaserWriter Printer

Unplug your ImageWriter printer, both power and data cable. Place the LaserWriter IInt, IIntx, Personal NT, IIf, or IIg printer in the same location that the ImageWriter was. Plug in the power cable. Plug in the data cable. Move the SCSI (Small Computer System Interface) card from slot 7 to slot 2 in your Apple IIGS. Hardware installation complete.

### Connecting the Apple IIGS to a Mac

Connect a Null modem cable to the Mac printer port. Connect the other end of the cable to the GS printer port. Move the SCSI card from slot 7 to slot 2. Hardware installation complete.

### Setting Up a Network

For those of you who have a Mac connected to a laser printer and don't want to disturb that connection, you can network, or connect all three items together at the same time. It will be a little bit of money,

about \$60 for the entire setup, but you will no longer need to connect and disconnect cables. Another benefit is that if the GS is using the printer, the Mac will wait till it is done and then start printing. The same will happen when the Mac is printing and the GS needs to print. To network, you will need to purchase three AppleTalk boxes from some place like MacWarehouse for \$18.00 each. The phone number is: 800-255-6227.

When you receive the AppleTalk boxes, connect one to each of the printer ports of the computers, and the input of the printer. A two connector phone cord is connected between each of the boxes. The first box and the last box will have a vacant plug connection; fill it with the 75= plug provided. One last hardware change will be to change your SCSI card from slot 7 to another slot if you are using a ROM 01 IIGS. Nothing can be in slot 7 on a ROM 01 GS connected to an AppleTalk network or an AppleTalk printer.

The hardware portion of the NETWORK is now complete. For all the connecting you have done, the GS to laser printer, or the Mac to GS, communicating still won't happen. You now need to set up your software. We will set up the software for the GS to talk to the Printer first. We will then set up the Mac software to let you share information with the GS.



### Software Requirements for Connecting an Apple IIGS to a Laser Printer

To print to a laser printer, you need system 5.0 or greater, AND a hard drive. The system software with LaserWriter printer drivers won't fit on a System 5.0 800K floppy disk. System 6.0 won't work at all using an 800K disk and any printer. For the remainder of this instruction, I will assume you are using System 6.0 or 6.1.

Go to the control panel of the GS and select slots. Change the function of slot 7 from "Your Card" to "AppleTalk." Change the function of slot 1 from "Printer" to "Your Card." If you are using a ROM 03 GS, just change the slot function of slot #1 to "AppleTalk." The SCSI card can stay in slot 7.

With the IIGS up and running at the Finder, install the System 6 Install disk. Run the Installer and scroll down to the "Printer: LaserWriter." On the right side of the screen, select your hard drive to install the LaserWriter driver, and install. Next scroll up to "Network:AppleTalk." Pick it and then install it. When done, return to the Finder to reboot the computer. During reboot, it will ask for an AppleTalk name. Type in your name or handle.

At this point, the GS can almost print to any PostScript AppleTalk printer. Using the Finder in the GSOS control panel, scroll down to the LaserWriter printer. Double click it and it will ask which printer you want to talk to. (If you had five printers on a network, you could pick any of them at this time. Only printers turned on and ready will show.) Select one of the printers. Close the Control Panel window. Now open up your favorite GSOS program and tell it to print. You may get a warning that the printer setup settings have changed. That's

alright. They have. Choose Print Setup from the File Menu and learn the new printer dialog box for a LaserWriter.

Now that you are printing to the LaserWriter, what about talking to that lonely Mac sitting over there?

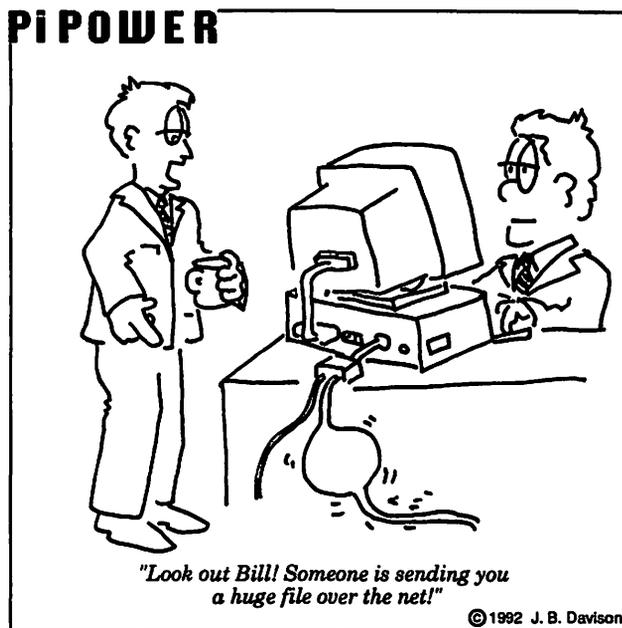
Software requirements for the Mac: System 6.5+ or System 7. I will assume you are using system 7. The Mac has the ability to become a File Server. In other words, a hard drive for many other computers. We will tell the Mac to turn on "file sharing," and the GS will be able to talk to the Mac. The Mac will NOT be able to talk to the GS. Any files transferred from the Mac to the GS and back will have to be done by the GS.

On the Mac, you will need to open up the Control Panel. You will find a panel called "Users." Double click it. There will be one icon in the folder labeled "guest." Highlight it and from the FILE command duplicate it. Now double click on the new icon. It will ask for information, like a name. Enter the name you gave yourself on the GS. DO NOT ENTER A PASSWORD unless you are on a big network. Close the box. Now in the control panel open a file called "File Sharing." Type in your name again when it asks for users. There are two boxes that both say "START." Click on both of them close the box and go to the GS.

Open up the GSOS Control Panel and at the very top is

AppleTalk. Double click on it. You will see the name of the Mac computer showing. Click on it. It will ask a password since you didn't type one in, just carriage return past it. If you entered a password on the Mac, type it in now. Close the box. On the finder, you will now see a new icon. The new icon is an AppleShare file server icon from the Mac. Double click it just like your hard drive. You can now copy, move, even trash the files in the Mac hard drive. Just treat it like an extra drive during your normal use because that is what it is. If there were more than one hard drive connected to the Mac, you would be able to choose which hard drive to run from back at the control panel selection.

*[This article first appeared in the Oct. 1992, issue of the GravenStein Apple IIGS Users Group Newsletter. Re-printed with permission. GravenStein Apple IIGS Users Group, P.O. Box 964, Petaluma, CA 94953-0964. Janet Mobley, Editor.]*





## Your Money Matters

by Mark Ballard

**Y**our Money Matters is a home and small business financial package for the Apple IIGS computer. In function, it is similar to Dollars and Sense. But in look, feel, and usability it is worlds apart.

When you start up Your Money Matters (YMM for short) for the first time, you are greeted with the familiar desktop interface. Before you can use YMM for your own data, you will need to create a Chart of Accounts. You can create one from scratch or you can start with one of the two provided with the program. There is one provided for home use and another for business use. Also provided with the program is a demo file with a full year's worth of transactions to experiment with so you can get some practice with the program before you jump in and enter your own data.

Since I am using YMM for my home finances, I will discuss it from that angle. The best way to start is to use the Home Accounts provided and then modify them to your own liking. You need to set up Asset Accounts for things like your home, car, or anything else that you own. You'll need Checkbook accounts for your checking accounts. You'll need Liability accounts for the money that you owe such as your mortgage, credit cards, car loan, etc. You'll need income accounts for your income. And, finally, Expense Accounts for all the money that you spend.

Once you have the accounts set up you are ready to start entering your transactions. Most of the time transactions are in the form of checks that you write from your checking ac-

count or deposit into your checking or savings accounts. This is extremely fast because YMM allows you to have up to 4000 recurring transactions for checks that you write every month. In my case that is most of the checks that I write. This allows me to enter many of the transactions in as little as eight key strokes.

One of my favorite features is that you can add to the Accounts file on the fly. If you are right in the middle of entering a check transaction and you discover that you need to post it to a new expense account that is not in the chart of accounts that you set up, you simply open the Accounts window if it is not already open. Enter the new expense account, go back to the Transaction window and finish entering the check. In Dollars and Sense you have to save the Transaction file, open the Accounts file, enter the new Expense Account, close the Account file, reopen the Transaction file, and reenter the check!

YMM has thirteen different reports and three different graphs to allow you to see your data in different formats. YMM allows you to set up budgets for each account so you can compare the budget amount to the actual amount to see if you are staying within your means. You can budget accounts weekly, biweekly, monthly, semimonthly, bimonthly, annually, or semiannually. Once you have been using YMM for more than a year you can compare this year to last year. You can balance or reconcile any account including chargecards, loans, IRA, savings account, checkbooks, etc., and balanc-

ing an account is as easy as clicking the mouse on your cleared transactions. If your checking account does not balance YMM even tells you the dollar amount and number of cleared deposits and checks so you can easily find the error. You can have up to 255 different tax indicators not just "yes" or "no" like most other programs. You can set up payee addresses. Which means that when you are printing continuous form checks (another feature), YMM will automatically print the address of the payee on the check so you can use window envelopes. YMM will also print on your own bank checks.

By far the best thing about this program is the ease of use. It has complete online help screens. I used this program for about two months without the manual and had very few problems. The manual is quite well written. It has lots of screen shots and examples that make it easy to understand.

I would recommend this program strongly to anyone thinking about keeping track of household or small business expenses. I would recommend it even more strongly to someone who tried one of the other home financial packages and could not get past the learning curve.

*Mark Ballard can be reached at GENie Address: M.Ballard2. He is a member of GravenStein Apple Users Group. Article first printed in the GSAUG Newsletter, Aug. 1992.*

**Title:** Your Money Matters

**Programer:** Steve Peterson

**Publisher:** Software Solutions,  
5516 Merritt Circle, Edina, MN  
55436

**Requirements:** Apple IIGS,  
System 5.0.4 or later.

**Price:** \$79.95 at Quality Computers



# On the Trail of the Apple III

by David Ottalini  
Apple III SIG Co-Chairman

## Software Development Project

Due to the Journal deadline, I won't be able to report to you this month about what decisions were made at the February SIG meeting regarding the SDP (It will be on the TCS though). But I can bring you up to date about what On Three's Bob Consorti reported to me as we started discussing possible software projects. Messaging on CompuServe in early January,

[Bob] I would love to do another project or two for the III before my time becomes scarce later this year when I go to graduate school. I've thought of a number of projects that you might find interesting and I'll list them here. One involves a three way Mac-PC-Apple III file transfer utility that requires the new 3.5 drive. This might be difficult because I haven't been able to get the info from Apple on how to read MFM disks from the SuperDrive controller card. Another possible project involves a SOS speed up by using the 65802 chip. This could be separate from or augmented with a SOS speed up by allowing automatic disk caching. A new one megabyte floptical 3.5" disk is available that also read/writes the 1.4 meg formats. It would attach daisy-chained to machines with Siders (or other ON THREE hard disks), or with our SCSI interface card. It's reasonably priced, \$359 for the drive and about \$25 for the disks. I think that would be a neat primary storage or backup device. An updated Comm

Manager to support Y and Z modem could be difficult because Tim didn't leave a whole lot of room in the program for expansion. Those protocols don't really buy you much since with turbo downloading on, you get similar performance characteristics as those larger block protocols. An update to Comm Manager to support higher speeds is possible. Right now it's limited to about 4800 baud due to SOS overhead. Talking directly to the hardware I should be able to push it at least to 9600 baud if not the newer 14,400 in the ultra-high speed modems. I think people may be a little misled on the Quickie scanner thing. On the Mac and Apple II the software s available that scans in images and to even read documents into usable text format. I could do the image scanning into an normal Apple III fofile format but text creation from the scanned image is very difficult and would involve a project cost far in excess of what I think people would want to pay. I would personally like to do one other project for the III but I don't know if time or money would permit it. I would like to do a WYSIWYG word processor for the Apple III. The hardware could support it with reasonable speed as long as I bypass the drivers. The only problems would be in printer support but I know how to handle printers pretty well. I could even support True-Type fonts so Apple III owners could always be current as new fonts are released. I've thought about it for

some time and feel that it's a doable project, although a big one.

[Later, he added] I forgot to mention a couple of things. I also had some thought about doing a Finder type utility for the Apple III. It would basically be a system utilities and program launcher. Also, to do a word processor, I would find it favorable for the final look of the program to require III's with interlace kits. 560 by 384 resolution would work out nicely for screen and printer output as it's much closer to the Mac's 1:1 screen ratio. 560 by 192 looks pretty bad. The Apple IIGS shows this limitation by having very large vertical features due to the poor screen resolution. I could do it without the interlace kit, but the word processor would look much better with it.

I hate to say it, but all Bob's ideas sound pretty good to me. The questions which all of us need to consider remain, however. They are the following: 1) Are you willing to back up one or two choices with a donation to develop the software; and 2) Are you willing to purchase it afterwards? Perhaps we'll have some of the answers in next month's column, so stay tuned!

## The Printer Wheel Goes Round And ....

Our friends the Jernigans are again at the top of the "I need help" heap this month. This time around, their daisy wheel printer was having some major problems:

Our Comrex ComWriter IV printer works with some print wheels but not others. Wheels which used to work now seem to print random characters, generally many of the same character in a row.

As always, SIG members on the TCS charged to the rescue.

[Steve Truax:] Our Brother printer at work had problems similar to those you describe for your printer, and it turned out that the print wheel had



to be seated *\_exactly\_* right or it did not turn correctly and spun freely or stuck which either produced non-sense or, more often produced the same character one billion times. Seating the print wheel turned out to be much more exacting than met the eye and *\_much\_* touchier than the manual stated. See if that could be the problem.

[And from Detroit, Paul Campbell asked:] Do the printwheels have optical code markings? These usually take the form of silver or white markings on the printwheel between the hub and the print fingers. If they do, the printer uses these markings to tell what kind of printwheel is installed via an optical sensor. When the sensor gets dirty (paper dust, etc.), it will sometimes read the printwheel incorrectly and cause the kind of error you mentioned. If your printer does not use an optical printwheel sensor, then it either has a mechanical sensor instead, or the printer has switches to tell it what printwheel is installed. Regardless of what method the printer uses, the problem is caused by: A) the printer is unable to tell which printwheel is installed; B) the printer has a logic problem with the printwheel position locator motor; or C) the printer is receiving incorrect print data from the computer.

### Pascal Problems

[Paul also offered some help with the Jernigan's problems getting Pascal to work on a hard drive] I'm assuming that you want to install the Pascal programming language, so I'll bring all the Pascal HD files you need to the meeting under Goback III. Do you want that on 5.25 or 3.5 (800k)? Note; Pascal must be installed in the ROOT directory. Can't find volume / hard4 or .profile4 with system utilities:

Too many active volumes for Pascal, OR too many active devices. Our

Pascal seems like it was written for the II+ instead of the III, it will only recognize five open volumes at the same time. S/OS and other program languages have no such problem, which is why System Utilities (written in Pascal) has the trouble but EZP, Basic, and Desktop Manager do not. How to get around this? Fortunately, S/OS keeps track of which volumes have been accessed or "opened," so you may be able to find it with System Utilities if you go right to .profile4 without digging around the other volumes.

My solution to this problem came by re-organizing my SOS.DRIVER file and putting the device drivers that were really mandatory for my Pascal programs last in the SOS.DRIVER file. S/OS loads the driver file in REVERSE order, so if your driver for ".profile4" is one of the first listed in your SOS.DRIVER file, it will be in the back of the pack and maybe out of reach for Pascal, as ANY block device can and will be counted as a "volume" under Pascal. Think of it as being like dealing cards. The first card dealt ends up on the bottom of the stack! You can upload your SOS.DRIVER file if you want me to take a look at it, but use the filename JERN.DRIVER or something like that. Disappearing files: I'm assuming that you tried DDFF3 and also the "Bad Block scan" option. To guarantee the SOS.MENU file, use the Selector Menu Editor to load it, check it out (maybe print it just in case it gets lost), then save it. I'm not sure about the other 'not found' files, I'd definitely side with Dave O., it may be file corruptions. If it only happens when quitting one particular program, I would suspect that program's files also.

### Free At Last...

I read excitedly in the February issue of InCider/A+ about Tim Tobin and his "Lost Classics" project for the

Apple II. He has been doing what I have been trying to do—find the developers of old software titles—and get their programs placed into the Public Domain. Tobin has had some great successes. So I wrote to him, asking that he also mention the III when working with software authors because many times they wrote versions for SARA in the early days. I have NOT received a reply from him as of this writing, but there is some evidence that it may have born some fruit. WAPer Dale Smith messaged me in mid January that:

I have uploaded to Area #23 a Shrinkit disk archive of Paul Lutus' AppleWriter III v4 which Paul has released as FreeWare through the GENIE Lost Classics program. You will need a II running ShrinkIt, IIGS with GSHK, or a III in II-emulation mode running IIPlus-Unshrink to extract the disk image to a 5.25 disk. The disk image contains the boot block but not the SOS kernel which has to be added to make it bootable (along with your SOS.Driver file).

I'm thrilled that something we had gotten through the back door many years ago has now returned to come out through the front. You can actually get the updated 4.1 version of AppleWriter with tutorials and other information on our PD disk 3WDP-01. There's also an AppleWriter Demo disk—3WDP.05. But Sun Remarketing remains the best (and only) source for manuals for the last official release of AppleWriter for the III, version 2.0. Call Sun at 1-800-821-3221 for the latest price. Thank you Paul Lutus and Tim Tobin for making this possible! I also hope that we may reap some additional benefits over time as well. Interested in providing some support to Tim? Write him in care of the "Lost Classics Project," 23002 Caroldale Ave., Carson, California 90745-4606. His phone number is (310)-813-5697.



### Micro Terminal

Steve Truax has become a MICRO/Terminal fan—it's a telecommunications program still available from Sun Remarketing:

The more I play with this MICRO/ Terminal program the more impressed I am with it. It has some nice features, including macros. Its sending and receiving capabilities seem limited to text, although I'm not certain about that. It took me a little while to get it up to 1200 bps, but now it's humming along quite nicely.

The main problems with it are related to security and the fact that I can't get it to move over to my hard drive—it insists on looking for every file (except for the boot file, which I was able to move to my Corvus under Selector) on .D1, and it keeps telling me that I have an illegal copy (it's the original) and tends to crash if you even try to send it to .D2 or .PRO-FILE.

I do think it has several features over XModemIII (such as autodial) and several over AccessIII (autodial and macros).

Paul Campbell suggested one solution to the hard drive problem:

On Three also sells something which may take care of your "illegal copy" message for MICRO/ Terminal. The driver that goes in your SOS.DRIVER file is not copy protected and, therefore, it fools a lot of programs like Advanced VisiCalc and some others. Some programs don't like it, and some programs were hard-coded (programmed) to use drive 1.

### Gary Miller Likes His III

Ahh.. another testimonial for our SARA. You're on Gary:

This is my machine of choice. I'd rather spend 50-100 or up to get new software than to go buy another machine. I want my III's to last until 12/31/99 or until someone can figure out how to get the clock to extend into the new century.

All we need is the source code, Gary!

### More On Telecommunications

On Three's Communications Manager has been the subject of some discussion recently on CompuServe. WAP III SIGer Al Bloom had these comments about the program's "Turbo Download" feature that speeds up transmission rates:

Turbo downloading is great if you don't get any transmission errors. When you enable it, you are using an error-free file transfer protocol without the bother of ensuring that the file transfer is error free.

I've never much seen the value in that. Seems somehow akin to bungee jumping without the rubber band.

Actually it isn't quite that bad. XModem is the only way you can transfer a binary file to a III. If your various comm pieces are in good shape, you might well be able to gamble that the transfer will be error free.

What scares me about it is that you may not be able to tell you got a bum download until well after you downloaded the file. I envision a mis-sent block that isn't invoked all that often. So the download works almost all the time. Then the program goes to Lalaland apparently randomly. I'm not all that smart about computers. I don't know that the above scenario can actually happen. But I don't know that it can't, either. As a rule of thumb, I'd never cripple an error free file transfer protocol.

[Bob Consorti replied] It doesn't work quite that way. If an error occurs you don't get a file with a bad bit/byte in it. The XModem protocol causes the transfer to abort and you don't get a bad file, you just have to redo the transfer.

### Finally

We've been talking with a number of interesting folks of late—looking for

information about their new III's. The most interesting? Harvey Hurst of Inuvik, Northwest Territories, Canada. He called with lots of questions. I tried to answer them all—quickly! Hopefully I also convinced him to become a member. I think the one real reason I continue working with the III is not so much our SARA as the people who continue to use her. In some ways, you are all pioneers still striving to get the most out of what you have. Thanks for letting me come along for the ride.

## Apple III PD Library

by David Ottalini

Our PD software development continues—though at a slower pace than I would like. I can report that progress is being made on my project to update our current PD offerings while preparing a disk containing all the ReadMe files from those disks. But it is slow going, I'm afraid. In the meantime, I have been able to finish disk 3INF-38, which is the second of 1992's "Best of Ottalini" disks. There was so much material available this past year, that I filled another 5.25" disk for you. On Side One you'll find all the articles about our PD offerings. On Side Two are articles from our good friends Paul Campbell, Tom Linders and John Lomartire. There's the Apple III graphic Rick Gast pulled from one of the DOS 3.3 Apple III Diagnostics disk. Rounding things out - my two articles comparing prices of various Apple family computers. 3INF-29 should also be available by the time you read this. It was compiled by Apple // Librarian John Ruffatto and includes in text-file form the names and addresses of all WAP members who have agreed to



make that information available. It includes many but not all of those who make up the III SIG as well. As for the future: be on the lookout for disk 3WDP-07, "Write On III" and 3WDP-08, Stemwriter III. They are both formerly commercial programs now in the Public Domain since their

developers have long since gone out of business. There are more Al Bloom disks waiting in the wings, and I hope to update the TCS disk with the latest information downloaded from that wonderful resource. As always, I am looking for any and all contributions for additional disks.

Our Canadian friend C.M. Davidson recently sent some interesting programs. And I've gotten some help on my request for recipes to include on another disk but could always use more. So please take a couple minutes to see if you don't have something you'd like to share!

---

---

## Software Review

---

---

# Go Back III

by Paul Campbell

I have always gone out of my way in regards to protecting the information on my computer. As much as I adore my Apple III, the data she contains has become more valuable than the computer itself.

This has led me to take certain precautions with my system. These included turning off the hard drive when testing questionable software, and keeping programs and data on different hard drive partitions.

My data should have been safe under any circumstances. Alas, a great variable called "The User" stepped in and made himself known to the powerful System Utilities command known as "Format."

What led to this event? I was working on an article late at night and needed to know how large a certain subdirectory had grown. It seemed that the easiest way to check this was to format an un-used hard drive partition and copy the subdirectory to that partition.

Partitions are separate data storage areas on the hard disk which make the computer think that each partition is a different disk.

Going to System Utilities, the command was given to format hard drive partition number five.... I thought! With the time being late at night and sleep speaking louder than my common sense, I typed the wrong partition name and pressed Return.

If this had been MS-DOS, I would have been a dead dog at this point. Fortunately, System Utilities is much more advanced, but when "The User" is half asleep, it makes up for the difference.

Twice my Apple tried to stop me, get in my way, hinder my task, impede my progress. Despite all of this, I got through, I reached my goal, I destroyed all my programs. Yes, I was wide awake now!

It took better than ten hours to reload my programs and re-create my custom Selector III menus (a software selector from On Three) to my liking again. Most of my time was spent looking for all the original floppies and remembering where the programs went. This event would have been a total disaster if I had formatted my data partition.

## Why No Backup?

Well, there were several reasons, the first reason being Backup III. Now Backup III was not a bad program in it's own right, but it had some fatal flaws; it was slow and unreliable.

The last time I tried Backup III, I had about 3000 files on my hard drive, but no more than 1000 files on any one partition.

Nothing frustrated me more than getting 90% through a backup, with floppies stacked up like Mount Everest, and having Backup III die for no apparent reason.

Eventually, I began using System Utilities to copy the critical data to floppies and other hard drive partitions. This worked despite difficulties keeping track of all the copies.

## No More Reasons

Then I heard rumors in the air that a new program called *Goback III* by Bob Consorti was finally nearing completion. At last! An alternative!

Needless to say, I wasted little time in getting *Goback III* when it was released. I was not sure what to expect, but it had to be better than my past methods.

As destiny would have it, my first glimpse of *Goback III* was at the National Apple III Conference. This was hosted by W.A.P. and our fearless leader, David Ottalini.

I had ordered *Goback* in the hopes that I could do a demo at the conference but had to leave for the trip to Washington before the package got



to my house. Because I had purchased the program, the leaders at the conference allowed me to install it right there to do a demonstration for the other users.

The installation went smoothly despite problems caused by my own floppy drives. The total installation time for *Goback III* and another software package, including the changes to my Selector III menus, took less than ten minutes.

After the conference was over and we were back in Detroit (my copy of *Goback* was waiting in the mailbox), we hurriedly setup the Apple III then proceeded to do what had never been done before,... a full backup!

I actually read the instructions (honest!) and set the *Goback III* options. These options allow you flexibility for your backups, restores, and also when printing a list of your backup files.

For the really paranoid, you can set the *Goback III* options so that it will format the disk whether it needs it or not, verify the disk, perform the backup, then verify the disk *again* before asking for the next disk. This is all automatic.

For my first full backup, *Goback III* was set to verify the backup disk before backup and to format the disk only when needed.

*Goback III* has the file selection features that you've been dreaming about. Super-fast scrolling and the ability to select or de-select files or entire subdirectories at a keystroke. This should be the standard for all future programs in regards to file handling.

Once the backup was started, the only thing for me to do was to keep stuffing floppies into my computer. The whole procedure went smooth as silk (polished silk even), and it was done.

Sorry to be anti-climatic, but that's it, end of job. You can go to bed

knowing that, even if someone drops your hard drive off a second story balcony, your data is safe.

### Other Benefits

The next task was to do a restore, this also was uneventful but yielded an unexpected surprise. When *Goback III* performs a restore, it optimizes your hard drive by organizing your directory structure and defragmenting your files.

Resulting from this optimization was a speed increase in all file access and loading times. You don't need a stop watch to verify this, it's obvious from the first time the system is rebooted after the restore.

One advantage that Backup III had over *Goback III* showed up during testing. With Backup III saving to 5.25 inch floppies, I had time to get a drink or use the restroom. *Goback III* does not give me that freedom; put in a floppy and *Goback III* will fill it and ask for the next one before you can get your arm out of the fridge!

*Goback III's* transfer time for backing up to 5.25 inch floppy is about 27 seconds per floppy. The 3.5 floppy time was 5 minutes and 45 seconds to fill each 800K disk.

### To The Grindstone

Now that everything was safely backed-up, it was time to slap *Goback III* in the face a few times and see what would happen.

The first test was giving it a few bad floppies. Even with the options set to NOT verify, *Goback III* would reject the disk and ask for another.

Accidentally pressing escape caused *Goback III* to respond with a question asking you if you really wanted to exit. Sitting on the keyboard only made the Apple III beep angrily unless you happened to sit on only the "Escape" key and the "Y" key. You have to very skinny to do this.

If your floppy that you are restoring from has developed problems while sitting in the drawer, *Goback III* will tell you which files cannot be restored. The wonderful thing is that, unlike Backup III, *Goback* will restore all the other files.

I could only find two methods that would cause problems. The first way is to remove the floppy disk while *Goback III* is writing to the floppy.

*Goback III* sees this as a serious hardware failure and naturally aborts. This response is better than producing a faulty backup. The second way is to feed backup volume number one into the computer when *Goback III* asks for a blank disk.

This does not cause any problems on its own, because *Goback III* will check the disk first and ask if you want to destroy it. But it will cause problems if you tell *Goback III* to go ahead and destroy volume number one.

Destroying this volume will render your backup useless because your backup disk with all the file information will be gone. It will also leave you in a bind when you abort the backup; *Goback III* will ask for the volume that *you* just destroyed!

Sound reasoning is behind *Goback III's* response to these two situations. Further details can be found in the owner's manual.

### Conclusion

I really can't think of anything else that would enhance *Goback III's* abilities. It is super easy to use, the file selection features are state of the art, it has all the options I need, and it's fast. The only thing it needs is a "beep" when each disk is done.

Above all else, it is reliable. When you have years worth of work on a hard drive that just suffered a head crash,.. nothing else matters.



# Macintosh Disketeria: New Disks—Final Stretch

by Dave Weikert

**T**here are 14 disks this month including a Macintosh Disketeria Catalog. See the individual headings for the list of revised and new disks. We also revised Mac Disk #00.01, the Mac Files Listing. Descriptions of the files on the new and revised disks are included below.

## New Disketeria Catalog

By the time you read this, the long promised Macintosh Disketeria Catalog will be available. However, this time it will be on disk instead of in printed form. The disk-based Catalog will include descriptions of all files in the current Disketeria collection. You will be able to display the disk descriptions on screen and search for specific file titles or text strings. Now that we have moved the Disketeria Catalog to disk instead of a printed catalog, we expect to revise it monthly just as we do with the list of files.

We are still evaluating the best method to display the Disketeria Catalog. Possibilities include an evaluation copy of QuickDex, a text editor, a HyperCard player and EasyView. We are trying to find something that will run on most Macs and that is relatively easy to update and keep current.

If we can create a file small enough to fit on an 800K disk, we will also create a PostScript file of a printed Macintosh Disketeria Catalog. This will permit those of you with a PostScript printer to print your own

Macintosh Disketeria Catalog if you prefer a printed catalog over a disk-based version. If size permits, we would expect to revise the PostScript Macintosh Disketeria Catalog on a quarterly schedule.

## For PowerBooks

For some time I have promised myself that I would assemble a disk dedicated to Apple's Portable, PowerBook and Duo computer series. I finally fulfilled that promise but there was enough material for two disks. The content of the disks spans much of the functional series of disks: DAs, FKeys, Extensions (INITs and CDevs), and System Utilities. For this reason, and the lack of a better place to put them, they ended up in the Miscellaneous category as Mac Disks #10.01A and #10.02A.

## Revised Sounds Series

The Sounds series of disks was extensively revised this month and now consists of nine disks. Mac Disks #12.01B and 12.02B include sound players and other sound utilities. Mac Disks #12.03B through 12.09B include the sounds of HAL from the movie 2001, Star Wars, Star Trek including the original (TOS) and Star Trek—The Next Generation (TNG) and miscellaneous beeps, birds and beasts. All of the sounds have been converted to System 7 sound format. If you are using System 7, you may install them directly into your system by dragging them on top of the

closed system folder. You may also play them from the desktop by double clicking on their icon.

If you are running Systems earlier than System 7, you may convert the sounds to earlier sound formats. The utilities sndConverter, SndConverter Lite and SoundMaster may all be used for sound file conversion.

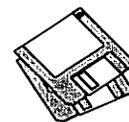
I expect to review the previous 31 sound disks more extensively in the next few months and convert some of the more interesting sounds to the System 7 format. That will likely include the SoundMaster beeps and perhaps others as well. The remaining sounds will be archived in their current format.

## Programmer/Hacker

The Programmer/Hacker disk series has been reduced to two disks, Mac Disks #14.01B and #14.02B. It now includes ResEdit and ResEdit Primer and is designed for the more experienced or adventurous Mac user. Although the current version of ResEdit is a lot easier to use and understand than earlier versions, you can still do considerable damage if you do not know what you are doing. Remember to make any changes to a copy of the file rather than the original and never throw the original away until you are sure that the edited copy is working properly.

The previous disks in the series will be reviewed for retention in the current Disketeria in the near future. Current programs will be retained and the remainder of the series will be archived.

Tim Buerher assembled the original Programmer/Hacker series. Tim resides in Sommerville, Massachusetts and is the most remotely located of our Disketeria helpers. Tim no longer has the time to continue updating the Programmer/Hacker series. Please join me in thanking Tim for his contribution to the Disketeria. Many who purchased disks from



this series over the past three years have benefited from Tim's efforts. If anybody is interested in helping with the series, please give me a call.

### Looking Ahead

The Mac Disketeria reorganization is almost completed; just a few strays to round up next month. After that, we will start working on the archive library. Upon completion of the archive library, we will develop a similar catalog for it.

### 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 #00.01 — C 1 THE MAC FILE LIST

**Files.txt**, By Dave Weikert. A delimited text file of all of the files included in our Mac Disketeria. It includes File Name, File Size, File Type, File Creator, Creation Date, Revision Date, and Folder and Disk Names. You should be able to import this list into your favorite database for sorting and selection and printing. You could also import the list into any word processor that accepts large text files.

#### DISK #00.04 — C 4 DISKETERIA CATALOG

**Read.me.first**: The statement of copyright and conditions of use that apply to the Mac Disketeria Catalog on this disk.

**MacDisketeriaIntro** By Dave Weikert. A file introducing the Macintosh Disketeria Catalog, listing our Rules of the Road and describing the Disketeria organization.

**MacDisketeriaCat**: By Dave Weikert. Descriptions of all of the Disks in our Disketeria along with program descriptions. The descriptions in the catalog are similar to the descriptions provided in this Disketeria column.

#### DISK #10.01A — M 1 MISC-POWERBOOK 1

**ARAClient 2.0.3.f**: By Ron Duritsch. Provides one-step connection for Macs configured with

Apple's AppleTalk Remote Access software. You initially create and save 'connectors' in the desired configuration for each of the remote networks that you log in on. Then just double click the 'connector' each subsequent time to establish your network connection. **ReadMe/ARAC2.0.3** is in Word format. **ConnectNot** is a one-step way to disconnect from the network. *ShareWare* — \$20.

**Backlight Control 1.0.f**: By Ricardo Batista, Apple Computer. This Control Panel monitors the mouse activity and turns off the backlight after a user specified time to conserve the battery on your PowerBook. **About Backlight** is in text format.

**Battery Tips**: By Tim Oey. A collection of useful tips for extending battery life on PowerBooks.

**ExtendIt! 1.0.f**: By Andreas Atkins. FKeys for home, end, page up and page down keyboard functions. **ExtendIt! Read Me** is in text format.

**Function Keys.f**: By Berrie Kremers. Permits you to emulate extended keyboard Functions Keys 1 through 10 on your PowerBook. **Read Me** is in text format.

**GunShy Powerbook 1.3.f**: By E. C. Horvath, modifications for PBs by Michael Wechsler. A reduced size version of the game Gunshy optimized for PBs. You have to collect marching icons until they are all removed. **Read Me** is in TeachText format.

**MacUpdate 2.1.f**: By Richard E. Fiegle. Synchronize the files on your PB and other Mac. Compares modification dates of files in a local folder with another mounted volume and updates the local folder files to the same date. **MacUpdate Documentation** is in text format. *ShareWare* — \$5.

**MenuChoice 1.5.f**: By Kerry Clendinning. Enables hierarchical menus under the Apple menu. Every folder stored in your "Apple Menu Items" folder will show up as a sub-menu under the Apple menu. **Read Me** is in DOCMaker application format. *ShareWare* — \$15.

**MyBattery 1.21.f**: By Jeremy Kezer. Provides Mac Portable, PowerBook and Duo users with battery voltage, current and estimated useful time and battery charger status. **MyBattery 1.21 manual (Word 4)** is as indicated; **MyBattery registration form** is in text format. For System 6.0.8 and later. *ShareWare* — \$10.

**PB Numeric Keypad.f**: By David Kreindler. Drag the appropriate keyboard resource into your System file and then use the Keyboard control panel to activate the one you want. By holding down the option and ctrl keys, you will have a numeric keypad on your PowerBook. **Read Me** is in text format.

**PB100-disassembly.txt**: By Tim Steele. Instructions for disassembly and reassembly of PB 100s. Install memory and hard drives yourself. The file is in text format.

**PB170 Modem Commands**: Based on DisplayDA by Bill Steinberg. An extensive summary of commands for the PowerBook 170 modem. This DA is provided in application format since it is only expected to be used with PowerBooks running System 7 or later.

**PBTools 1.2.f**: **SafeSleep** and **SpinD.FKey**. By Bill Steinberg. **SafeSleep** blanks the screen and requests a password whenever a sleeping Mac PowerBook is awakened. **SpinD** spins down the internal hard drive in Macs (like PowerBooks) that support that function. **SafeSleep Read Me** and **SpinD Read Me** are in text format.

**Portable 1.3.f**: By Apple Computer, Inc. Control the screen brightness of any Mac Portable equipped with a backlighted screen. Yes folks, this is for a *Portable*, not a PB. **Read Me** is in TeachText format.

**PowerAlias 1.0.f**: By Andrew Anker. Consolidates up to five application aliases into a single icon. Use drag and drop along with a keyboard key to launch the specific one. **Read Me** is in TeachText format. For System 7 and later. *ShareWare* — \$5.

**PowerBook Dial Fix**: By BungDabba Productions. An XCMD that lets you dial a PB modem from a HyperCard stack.

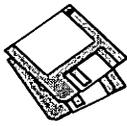
**Powerbook Rest.f**: **Powerbook OK to Rest** and **Powerbook Don't Rest**: By Insignia software. For SoftPC users. Keeps the PBs from going into rest mode while running SoftPC thereby slowing the clock. **Powerbk Don't Rest Utility doc** and **Powerbk OK To Rest Utility doc** are in text format.

**powerbook-tips.txt**: By Bernard Khoo. A fairly comprehensive collection of real world PB tips on memory, disk storage and battery care and feeding. The file is in text format.

**PowerBreak 1.0.f**: By Scott Johnson. A tiny extension that allows Macsbug users to drop into the debugger from the keyboard. **PowerBreak Notes** is in TeachText format.

**PowerPort Gold Ref Card**: By Global Village Communication. Based on DisplayDA by Bill Steinberg. An extensive summary of commands for the Global Village PowerPort Gold modem. In DA suitcase format.

**PowerSleep Fkey.f**: By Urs Calibran, Stefan Frey and Alexis Gehrt. An FKey to immediately put your PB to sleep (after closing AppleTalk) without any annoying dialog boxes or other interruptions. **PowerSleep Read Me** is in text format.



**PowerStrip 1.5 f:** By Michael Caputo. Counts the elapsed time of battery and AC-charging sessions for Portables, PowerBooks and Duos. It also displays available space on the internal hard drive, available RAM, and whether the modem is turned on or not. *READ\_ME* is in text format. *ShareWare* – see the *About* item.

**RAM Disk Namer 1.0 f:** By Craig Prouse. Permits you to conveniently and automatically rename the RAM Disk created on Mac PBs and Quadras at boot time. *RAM Disk Namer Doc* is in TeachText format. *ShareWare* – \$10.

## **DISK #10.02A — M 2 MISC-POWERBOOK 2**

**PowerBook Guide, 3rd edition:** By Apple Computer. A listing of commercial 'solutions' available to PB users. It covers software and hardware solutions to problems and situations that you probably never knew you had. The file is in Word format.

**Ram Preserves 1.0.1 f:** By Richard McLeod. Copies a desired hard disk file structure to a PowerBook RAM disk at startup. Future plans include copying modified files back to the hard disk at shutdown. *Ram Preserves.doc* is in Word format. *ShareWare* – \$5.

**Saver! 1.4 f:** By David Peck. A tiny screen saver for the Mac which has 10 different screen saver modules. It permits background processing to be active or suspended during sleep mode. *Saver! Docs* is in text format.

**Shhh! f:** By Patrick C. Beard. Disables the software that make the PB go 'click' whenever sound is used. *Shhh! Readme* is in text format.

**Siesta 1.0:** By Andrew Welch. A control panel that activates a changeable hot key that puts a Mac Portable to sleep. *ShareWare* – \$5.

**StickyClick 1.2 f:** By Steve Zellers. Simulate having a 'lock' button on your mouse; click in the Menu bar to lock, click again to release. *readme* is in text format.

**SuperClock! 4.0.2 f:** By Steve Christensen. The classic full-featured menu clock; with timer and other features. Perhaps the best free software value available for the Macintosh. *SuperClock! README* and *SuperClock! 4.0.2 relea* are in JTeachText format. Free, but if you really want to send something, send it to Stanford Children's Hospital.

**System 7 Pack! 3.2 f:** By Adam Stein. Allows command key combinations to be changed, added, and deleted, permits the rename delay which built into System 7 to be adjusted and allows the default by which TeachText is used to open text and PICT documents for which applications are not available to be changed.

You can create new links between documents and applications; for example, MacWrite documents can be linked to open under MS-Word. Note *From Adam Stein* is in text format; *System 7 Pack! 3.0 Read Me*, *IGS Holiday Gift Offer* and others are in MacWrite format. *ShareWare* – \$29.95.

**Tiny Saver 1.1 f:** By Chris Owen. a very tiny screen saver; it takes less than 6K of disk space and less than 30K of RAM when running. Perfect for PBs. *About Tiny Saver* is in text format. *ShareWare* – \$2 to \$5.

**ToggleAT FKEY 3.0 f:** By John Pugh. Turns AppleTalk on and off from an FKey to reduce power use when not connected to AppleTalk or not using AppleTalk. *ToggleAT FKEY ReadMe* is in TeachText format.

**Volts 1.1.1 f:** By Lawrence Anthony. Provides a digital readout of the battery voltage of a Mac Portable, Duo or PB. *Volts Manual (Word)* is in Word format. *ShareWare* – \$5.

**WindowShade 1.2 f:** By Robert Johnston. Double click anywhere on the title bar of the window and the lower part of the window will 'roll up' underneath the title bar. Double click on the title bar again and the window will lower to its original size. *WindowShade Doc* is in TeachText format.

**ZoomBar 2.1 f:** 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. *ReadMe ZoomBar 2.1* is in text format. *ShareWare* – \$5.

**Zoomin' 1.0 f:** Speeds up window opening and closing of your Mac. -> *Zoomin' Read Me* <- is in text format.

**ZoomSwitch 1.1 f:** By Kristofer H. Cruz. Speed up your Mac's screen operation by turning off the zooming of windows as they are opened and closed. *ZoomSwitch Docs* is in Word format.

**Zync 1.0a3 f:** By Ricardo Batista. Synchronize files between your PB and your other Mac. Compares modification dates of files in a 'local' folder with 'remote' folder and updates files in both folders to the latest date. *About Zync 1.0a3* is in text format.

## **DISK #12.01B — S 1 SOUNDS**

**Chime 4.0.4 f:** By Robert Flickinger. Plays up to 4 "snd" resources on the hour, half-hour, and quarter hours. A grandfather clock chime sound digitized by David Rakowski is included. *Read Me* is in MacWrite format. For System 6.0.4 or later. *ShareWare* – \$10.

**Finder Sounds 1.3.1 f.sea:** 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. For Systems 6.0.4 through 6.0.8. *Finder Sounds.teach* is in text format.

**Sample Editor f.sea:** By Garrick McFerlane. Permits you to edit and manipulate sampled sounds. Sounds may be input as Audio Interchange Files (AIFF), 'snd' resources or on the Clipboard. *Read Me—Sample Editor 1.0.3* and *User Guide* are in PrintToPic double clickable application format. Requires System 7.0 or later, 68020 CPU or later and 13 inch 8-bit monitor or better.

**sndConverter 1.2.1 f:** By Joe Zobkiw. Converts or extracts 'snd' resources to a format that may be used with System 7.0 and higher. Includes two sound files; *Razz SysBark* (to be converted) and *Triangle* (7.0 compatible). *sndConverter 1.2.1 Read Me!* is in text format.

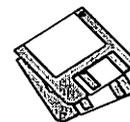
**SndConverter Lite 1.0.sea:** By David Lambert. Convert between SoundEdit files, SoundMover suitcases, System 7 sounds and System 7 suitcases. *About SndConverter Lite* and other documentation are in TeachText format. Compatible with System 6.0 and later and Mac 512KE and later. *ShareWare* – \$9.95.

**Sound Mover Package 1.75 f.sea:** By Riccardo Ettore. A package of four sound programs for different versions of the Mac and System Software. *SoundMover 1.75* moves sounds into and out of the System file and automatically converts between several different (and incompatible) sound formats. *IBeep2* lets you pick an alternative to the standard sound of the Macintosh beep and works with Mac Plus and SE users running System 4.1 and later. *SndControl* contains two complementary cdevs to Apple's Sound control panel, one for System 6 and one for System 7. *StartupSndInit* plays compatible sounds placed in the System Folder. *SMP Read Me* is in TeachText format and *SndControl Manual and Format 1 vs. Format 2 snds...* are in text format. *ShareWare* – \$25.

## **DISK #12.02B — S 2 SOUNDS**

**Corazon-mod f.sea:** A mod soundtrack file for The Sound-Trecker player included on this disk. *share.doc* is in text format. *ShareWare* – a small donation or letter.

**mod.greensleeves:** Another mod soundtrack file for Sound-Trecker player included on this disk.



**SoundReverser 1.0 f:** By David Wagner. Reverses format 1 sounds, just drag the sound onto the icon and let go. **Sound Reverser Docs** is in TeachText format. For System 7.0 and later.

**SoundExtractor 1.31 f:** By Alberto Ricci. Extracts sound resources from SoundMover and SoundEdit suitcases and creates a folder with sounds that can be played from within System 7 by double clicking them. Also extracts any contained sound resources from applications, stacks and other files. For System 7.0 and later. **SoundExtractor Doc** is in text format. **ShareWare** - \$5.

**SoundDisk 1.3:** By Alex Benenson. A direct to disk sound recording and playing application. This eliminates the requirement for lots of RAM for long files; now you just need lots of hard disk space. Not tested. Requires System 6.0.7 and later; System 7.0 and later for full functionality.

**SoundMaster 1.7.3 f:** 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 6.0.2 or higher. System 6 and 7 compatible. **SoundMaster.doc** and **SoundMaster changes** are in text format. **ShareWare** - \$15.

**TappyType 1.3 f:** By Colin Klipsch. This cdev makes typewriter noises in response to your keypresses; different sounds for printable characters, tab/space/delete and carriage returns. **TappyType.doc** is in text format; note the modification needed to work with Suitcase. For System 6.0 and later.

**The Sound-Trecker V1.0 f.sea:** By Frank Seide. An application to play mod soundtracks; these relatively small size files may play in the background while you do other things on your Mac. You may control the order in which the soundtracks are played, the volume of each of the four tracks and the overall volume. You also have many of the same controls as an audio CD or tape player including repeat and shuffle play. Documentation is in Word format. **ShareWare** - \$30.

**Wavicle 1.0 f:** By Lee Fyock. Manipulate Macintosh sound files including downsamples, face, filter, level correct, reverb, reverse and scope. **ShareWare** - \$20.

**DISK #12.03B — S 3  
SOUNDS—HAL**

**CptExpand 1.0 f:** CptExpand 1.0: By Bill Goodman. A utility for extracting files from archives created by Compact Pro (previously Compactor). CptExpand creates a folder which has the same name as the archive with an "f"

appended. CptExpand Doc is in text format.

**HAL f:** These sounds are some of the more memorable sounds from HAL, the berserk computer, in Stanley Kubrick movie based on Arthur C. Clark's space novel, 2001.

**Answer (HAL):** "Dave, I really think that I'm entitled to an answer to that question."

**Completely operational (HAL)** "I'm completely operational and all my circuits are functioning perfectly." An assuring statement prior to a heavy computer session.

**Dave, stop (HAL)** "Dave, stop ..."

**Decisions (HAL):** "I know that I've made some very poor decisions recently."

**Difficult (HAL):** "Without your space helmet, Dave, you're going to find that rather difficult."

**DoYouWantMeToRepeat (HAL):** "Do you want me to repeat the last response?"

**Enjoy working (HAL):** "I enjoy working with people."

**Fault in AE35** "I've just picked up a fault in the AE35 unit. It's going to go 100 percent failure within 72 hours."

**Human error (HAL):** "Human error."

**Much better (HAL):** "I feel much better now."

**Sorry Dave (HAL)** "I'm sorry Dave, I'm afraid I can't do that!"

**Stress pill (HAL):** "Take a stress pill and think things over."

**DISK #12.04B — S 4  
SOUNDS—STAR WARS**

This disk features some of the sounds from the Star Wars trilogy by George Lukas.

Chewbacca, Force/You 1, Force/You 2, I Have You Now, Resistance is futile, Star Wars-Opening Fanfare#2.sea, The Force, Use the Force, Wookie and Wookie again.

R2D2 Sounds f.cpt: another R2, R2 scream, R2-D2 Beep, R2D2 A, R2D2 A1, R2D2 B, R2D2 C and R2D2 D.

**DISK #12.05B — S 5  
SOUNDS—STAR TREK 1**

**TOS Beeps f:** These are some sounds from NetTrek, a network game loosely based on Star Trek.

**Beam Up** is a transporter sound.

**Boom:** A very anemic boom.

**KBEEP, KCom, KPhasors and KTorps:** Sounds made by communicators, phasors and photon torpedoes belonging to those nasty Klingons.

**RBEEP, RCom, RPhasors and RTorps:** The same thing for the equipment of the Romulans.

**TBEEP, TCom, TPhasors and TTorps:** The equipment sounds of the Terran good guys.

**Transporter** The only thing missing is the "Beam me up, Scotty" that usually precedes this sound.

**TOS/TNG Beeps #1 f:** StarTrek I and StarTrek II.

**TOS/TNG Beeps #2 f:** Part of a collection by Mike Scudamore; sounds include TNG Beep, TNG Bleep 1 through 5, TNG Bridge Beep, TNG Combadge, TNG CommBleep, TNG Doorbell, TNG Error, TNG Hailing Open, TNG KrelIKu, TNG SynBleep 1 through 5, TOS Alert, TOS Belt Beep, TOS Bridge Button 1 through 5, TOS Cell Lock, TOS Communications closed, TOS Communicator Beep, TOS Disrupter Fire, TOS Door, TOS Hand sensor activation, TOS Heart beats, TOS Kirk's face slapped, TOSMedical computer, TOSMedical report display, TOSOriginal phaser fire, TOSPenal colony doorbell, TOS Phaser stun, TOS Photon Torpedo Fire, TOS Pulse indicator, TOS Ruk's machine, TOS Seven's Pen, TOS Shackles Unlocked, TOS The Cage transparency, TOS Transporter Console, TOS Tribble, TOS Upset Tribble and TOS Whistle.

**DISK #12.06B — S 6  
SOUNDS—STAR TREK 2**

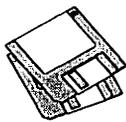
**StarTrek Sounds #1:** Bones Beep, bridge to capt kirk, Captain, We're Losing Power, Computer!, computer...analyze and reply, Curiously Refreshing, data insufficient, Don't Do It, Captain, Door sound, I understand, I'm not Joking, It doesn't work, It should work, It's ready now capt, Kirk to Enterprise, Live long and prosper, Pitchforks and Pointed Ears, ST\_All\_Decks\_Alert, ST\_Illogical, ST\_Kirk\_Here, ST\_Logical\_Mind, ST\_Mr\_Spock, ST\_Mult-leg\_Creat, ST\_This\_Is\_Captain, Trek Doorbell, vulcan mind, You are wise capt and You don't understand.

**StarTrek Sounds #2:** By Eric Trueheart. Alert Klaxon, Alert Klaxon X3, Trek Door, Trek Whistle are some mechanical sounds from Star Trek. Read Me Please is the Guitware request in MacWrite format. **BeepSound (Hail):** "Whoo-eee, whoo-eee! Bridge to Captain Kirk!" Atta-boy Mister Chekhov. **Beam Up** is a transporter sound.

**DISK #12.07B — S 7  
SOUNDS—STAR TREK 3**

**Data f:** Accessing, Insufficient Information, Sadism and Cruelty and Say Goodbye, Data.

**Enterprise Bleeps f:** SynBleep 1 through



SynBleep 5 & Bleep 2, Bleep 4 and Bleep 5.  
**Picard f:** No, over there! "Bend over to the left. Yeah, back. No. No, back. Yes back. Right there." Permission granted "Permission granted." "What is Your Purpose?" "What is your purpose?"

**Riker Asks DataCapacity&Speed:**  
**Trek Sounds f:** Bleep boop, Bridge Beep, Commbadge, CommBleep, Communicator Beep, Doorbell, Fire Klaxon, Hail, Hailing Open, Klingon Phasers, KrelIKu, Shuttle Bay Klaxon and Shuttle Sparks.

**Worf Sounds f:** i like my species, KlingonsDon'tAllowThemselves, No Response and Yes Sir by the character Worf in the TV series Star Trek, The New Generation.

**DISK #12.08B — S 8**  
**SOUNDS-BEEPS**

This eclectic collection of beep sounds includes: Aooa, Bink, Burp, Cannon, Caught In The Bathroom!, Coconut Info® Beep, CreakingGate, cuckoo, diamond, DiveDive, Door bell, Dragonshutdown, empty trash (flush), Hello, Baaaby, Loud Zen, Sailor man whistle, Samantha, Ships dinner bell, Shucks!, The "Clean" BEEP!, The Serious BEEP and Weird.

**Clocks f:** BigBen, Clock chime and cuckoo.  
**SysZ-Sounds-3 f:** "Oops", Fizzer 1, Fizzer 2 and Tree Frog. Read Me Please is in text format.

**DISK #12.08B — S 8**  
**SOUNDS-BIRDS & BEASTS**

**Bird Calls f:** Bird 1, Bird 2 and Bird 3.  
**Bird Sounds Vol.II f:** Bird 1/b - Bird 6/b.  
**Bullfrog, Cow, Cows.sea, Dog#1, Dog#2, Dogs,**

**Eagle, Frog!, HogSound, Horse whinnying, Leopards roar, Meow, Moof Sound, RealMonkey, Rooster, Rottweiler, Super Meow and Tree Frog.**

**DISK #14.01B — P/H 1**  
**RESEDIT 2.1.1**

**ResEdit 2.1.1 f.sea:** Apple Computer. The latest version of the resource editor produced by Apple Computer now includes resource templates fro System 7.0. With ResEdit you can make changes to icons, dialog boxes, fonts, menus and other resources. It is a very powerful tool, so powerful that unless you know what you are doing, you can cause edited programs to not operate properly. Only modify a copy of any application or file. For instructions on the use of ResEdit see the HMG™ ResEdit Primer on another disk in this series and ResEdit™ Reference, by Apple Computer (\$12.95) distributed by Addison-Wesley Publishing Company, Inc. (APDA #M0015LL/C). Release Note is in text format. Also included are an Examples folder for uses with MPW 3.2 and an Extensions folder with two additional editors that may be added to ResEdit. Requires System 6.0.2 or later.

**ResMaster DA f (v1.0):** ResMaster DA: By Mike Calbaum. Allows the user to move, remove, rename, renumber, display as a hex dump and change the attributes of the resources in a file. Copy and paste resources to and from the clipboard, create new resource files, display some types of resources, play beep type 'SND' resources and remember and repeat the last resource move the user performed. SW-\$10.

**Resourceror f:** Resourceror. By Michael Ogawa.

A plug in menu command for SuperPaint which when invoked permits you to create several types of Mac bit-image resources. Resources may be placed in the clipboard or saved directly to a file. READ ME and READ ME (MacWrite) are in TeachText and MacWrite format respectively. Not Tested

**DISK #14.02B — P/H 2**  
**RESEDIT PRIMER**

**HMG™ ResEdit Primer 6.0:** By Herb Goodman. The newest version of HMG ResEdit Primer explains the use of the mysterious ResEdit 2.1 to non-programmers. This is the definitive FreeWare tome for using ResEdit 2.1 to modify and or install resources into files. Topics included include resources, adding program icons, animated cursors, desktop alterations, Get Info comments, file info window and menu editing. This manual is in DocMaker (previously named the DOctor) format, just double-click the icon and read away.

**HMG™ ResEdit Primer 3.2.sea.** By Herb Goodman. An earlier version of the same reference source but designed around version 1.X of ResEdit. Because of space limitations on the disk, this document has been compressed with Compactor. Just move this file to a blank disk and double click the icon; it will automatically unstuff itself. Then double-click the resulting icon to read the Primer.

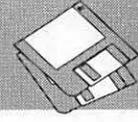
Another useful source for using ResEdit is ResEdit™ Reference, by Apple Computer (\$12.95) distributed by Addison-Wesley Publishing Company, Inc. (APDA #M0015LL/C).

HyperCard Upgrade requires HyperCard proof of purchase; any of original disk, first page of manual, receipt or previous HyperCard Upgrade disk.

|   |  |  |   |   |  |
|---|--|--|---|---|--|
| <b>Mail this form with your check to :</b><br>Disk Library<br>Washington Apple Pi<br>7910 Woodmont Avenue, Suite 910<br>Bethesda, Maryland 20814  |  |  | Are you a member of Washington Apple Pi, Ltd.? Y/N ___ If Yes, Member Number _____.<br>All payments must be in U.S. funds drawn against U.S. banking institutions.<br>Non-members add \$3.00 per disk to listed prices. |   |  |
| <b>Number of</b><br><b>Disks</b><br>Singles<br>___ 4 or less @<br>___ 5 or more @<br>___ Sets (marked above)<br>+ postage \$1.00/disk,<br>maximum \$5.00.<br>___ Disk Catalogs<br>+ \$1.50 postage<br><b>TOTAL AMOUNT DUE</b> | <b>Member</b><br><b>Price @</b><br>\$4.00=<br>\$3.50=<br>\$ (above)<br>\$4.50<br><b>\$</b> | <b>Extended</b><br>_____<br>_____<br>_____<br>_____<br>_____ | <b>Name</b><br>_____<br><b>Box Number, Apartment, Suite, etc.</b><br>_____<br><b>Street Address</b><br>_____<br><b>City</b>   | <b>State</b><br>_____<br><b>Zip Code</b><br>_____ | <b>Day Telephone</b><br>_____<br><b>Evening Telephone</b><br>_____ |



# Macintosh Library Order Form



## PI Library

- \_\_\_ 0.01 - C 01 Files
- \_\_\_ 0.02 - C 02 Sampler
- \_\_\_ 0.03 - C 03 MemDir
- \_\_\_ 0.04 - C 04 Catalog

## Anti-Virus Utilities\*

- \_\_\_ 1.01G - AV 1
- \_\_\_ 1.02G - AV 2
- \_\_\_ 1.03G - AV 3

## Desk Accessories\*

- \_\_\_ 10 disk set; \$30
- \_\_\_ 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

## 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\*

- \_\_\_ 16 disk set; \$48
- \_\_\_ 6.01A - PS 1
- \_\_\_ 6.02A - PS 2
- \_\_\_ 6.03A - PS 3
- \_\_\_ 6.04A - PS 4
- \_\_\_ 6.05A - PS 5
- \_\_\_ 6.06A - PS 6
- \_\_\_ 6.07A - PS 7
- \_\_\_ 6.08A - PS 8
- \_\_\_ 6.09A - PS 9
- \_\_\_ 6.10A - PS 10
- \_\_\_ 6.11A - PS 11
- \_\_\_ 6.12A - PS 12
- \_\_\_ 6.13A - PS 13
- \_\_\_ 6.14A - PS 14
- \_\_\_ 6.15A - PS 15
- \_\_\_ 6.16A - PS 16

## TrueType Fonts

- \_\_\_ 11 disk set; \$33
- \_\_\_ 7.01 - TT 1
- \_\_\_ 7.02 - TT 2
- \_\_\_ 7.03 - TT 3
- \_\_\_ 7.04 - TT 4
- \_\_\_ 7.05 - TT 5
- \_\_\_ 7.06 - TT 6
- \_\_\_ 7.07 - TT 7
- \_\_\_ 7.08 - TT 8
- \_\_\_ 7.09 - TT 9

- \_\_\_ 7.10 - TT 10
- \_\_\_ 7.11 - TT 11

## INITs & CDevs\*

- \_\_\_ 17 disk set; \$51
- \_\_\_ 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

## 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 Utilis\*

- \_\_\_ 9 disk set; \$27
- \_\_\_ 15.01B - MU 1
- \_\_\_ 15.02B - MU 2
- \_\_\_ 15.03B - MU 3
- \_\_\_ 15.04B - MU 4
- \_\_\_ 15.05B - MU 5
- \_\_\_ 15.06B - MU 6
- \_\_\_ 15.07B - MU 7

- \_\_\_ 15.08B - MU 8
- \_\_\_ 15.09B - MU 9

## System Utilities\*

- \_\_\_ 19 disk set; \$57
- \_\_\_ 16.01D - SU 1
- \_\_\_ 16.02D - SU 2
- \_\_\_ 16.03D - SU 3
- \_\_\_ 16.04D - SU 4
- \_\_\_ 16.05D - SU 5
- \_\_\_ 16.06D - SU 6
- \_\_\_ 16.07D - SU 7
- \_\_\_ 16.08D - SU 8
- \_\_\_ 16.09D - SU 9
- \_\_\_ 16.10D - SU 10
- \_\_\_ 16.11D - SU 11
- \_\_\_ 16.12D - SU 12
- \_\_\_ 16.13D - SU 13
- \_\_\_ 16.14D - SU 14
- \_\_\_ 16.15D - SU 15
- \_\_\_ 16.16D - SU 16
- \_\_\_ 16.17D - SU 17
- \_\_\_ 16.18D - SU 18
- \_\_\_ 16.19D - SU 19

## Word Processing Utilis\*

- \_\_\_ 5 disk set; \$15
- \_\_\_ 17.01B - WP 1
- \_\_\_ 17.02B - WP 2
- \_\_\_ 17.03B - WP 3
- \_\_\_ 17.04B - WP 4
- \_\_\_ 17.05B - WP 5

## Adobe Screen Fonts\*

- \_\_\_ 18.01A - AF 1
- \_\_\_ 18.02A - AF 2

## HyperCard StackWare

- \_\_\_ 44 disk set; \$132
- \_\_\_ 19.01A - SW 1
- \_\_\_ 19.02A - SW 2
- \_\_\_ 19.03 - SW 3
- \_\_\_ 19.04 - SW 4
- \_\_\_ 19.05 - SW 5
- \_\_\_ 19.06 - SW 6
- \_\_\_ 19.07 - SW 7
- \_\_\_ 19.08 - SW 8
- \_\_\_ 19.09 - SW 9
- \_\_\_ 19.10 - SW 10
- \_\_\_ 19.11 - SW 11
- \_\_\_ 19.12 - SW 12
- \_\_\_ 19.13 - SW 13
- \_\_\_ 19.14 - SW 14
- \_\_\_ 19.15 - SW 15
- \_\_\_ 19.16 - SW 16
- \_\_\_ 19.17 - SW 17
- \_\_\_ 19.18 - SW 18
- \_\_\_ 19.19 - SW 19
- \_\_\_ 19.20 - SW 20
- \_\_\_ 19.21 - SW 21
- \_\_\_ 19.22 - SW 22
- \_\_\_ 19.23 - SW 23
- \_\_\_ 19.24 - SW 24
- \_\_\_ 19.25 - SW 25

- \_\_\_ 19.26 - SW 26
- \_\_\_ 19.27 - SW 27
- \_\_\_ 19.28 - SW 28
- \_\_\_ 19.29 - SW 29
- \_\_\_ 19.30 - SW 30
- \_\_\_ 19.31 - SW 31
- \_\_\_ 19.32 - SW 32
- \_\_\_ 19.33 - SW 33
- \_\_\_ 19.34 - SW 34
- \_\_\_ 19.35 - SW 35 †
- \_\_\_ 19.36 - SW 36 †
- \_\_\_ 19.37 - SW 37
- \_\_\_ 19.38 - SW 38

## Mac II Series

- \_\_\_ 11 disk set; \$33
- \_\_\_ 20.01 A - M II 1
- \_\_\_ 20.02 A - M II 2
- \_\_\_ 20.03 A - M II 3
- \_\_\_ 20.04 A - M II 4
- \_\_\_ 20.05 A - M II 5
- \_\_\_ 20.06 A - M II 6
- \_\_\_ 20.07 A - M II 7
- \_\_\_ 20.10 A - M II 10
- \_\_\_ 20.11 A - M II 11
- \_\_\_ 20.12 A - M II 12
- \_\_\_ 20.13 A - M II 13

## Fun & Games Series

- \_\_\_ 22.01 - F/G 1
- \_\_\_ 22.02 - F/G 2
- \_\_\_ 22.03 - F/G 3

## HyperCard Externals

- \_\_\_ 5 disk set; \$15
- \_\_\_ 21.01 - HE 1
- \_\_\_ 21.02 - HE 2
- \_\_\_ 21.03 - HE 3
- \_\_\_ 21.04 - HE 4
- \_\_\_ 21.05 - HE 5

## Best of PI Series

- \_\_\_ 10 disk complete set; \$25
- \_\_\_ 5 disk revised set; \$17.50

## System Software

- \_\_\_ 6.0.3 - 4 disk set; \$12
- \_\_\_ 6.0.5 - 4 disk set; \$12
- \_\_\_ 6.0.7 - 4 disk set; \$12
- \_\_\_ 6.0.8 - 4 disk set; \$12
- \_\_\_ 7.0 - 9 disk set; \$20
- \_\_\_ 7.0.1 - 6 disk set; \$20 (‡)
- \_\_\_ Sys 7/7.0.1 Tune-Up \$3
- \_\_\_ QuickTime 1.5, 1 disk; \$3
- \_\_\_ TrueType - 2 disk set; \$6

## HyperCard Update

- \_\_\_ 1.2.5 - 3 disk set; \$9
- \_\_\_ 2.0 - 5 disk set; \$15

- 19.35† 6 disk set; \$15
- 19.36† 2 disk set; \$7

(‡) on 1.44 Meg diskette  
# Revised disk series



# Apple Disk Library

compiled by John Ruffatto

The Apple Disk Library has been updated and reformatted to enable you to more easily locate those disks in which you are interested. 3.5" disks are listed first, followed by 5.25" disks. Look for the and icons which distinguish them. For your reference - the numbers shown in parentheses ( ) after the disk names are the old disk numbers. SW after the disk description indicates that it is ShareWare.

## Eamon Adventure Listing:

Codes:-D = DOS 3.3 P = ProDOS PLC = ProDOS Lower Case

- 1. Main Hall & Beginners Cave - D
- 2. The Lair of the Minotaur - D
- 3. The Cave of the Mind - D
- 4. The Zephyr Riverventure - D
- 5. Castle of Doom -D - P
- 6. The Death Star -D
- 7. The Devil's Tomb -D
- 8. The Abductor's Quarters - D - P
- 10. The Magic Kingdom - D
- 11. The Tomb of Molinar - D
- 12. The Quest for Trezure -D - P
- 13. Caves of Treasure Island - D
- 14. Furioso - D
- 15. Heroes Castle - D
- 16. The Caves of Mondamen -D - P
- 17. Merlin's Castle - D
- 18. Hogarth Castle - D
- 19. Death Trap - D - P
- 20. The Black Death - D - P
- 21. The Quest for Marron - P
- 22. The Senator's Chambers - P
- 23. The Temple of Ngurct -D - P
- 24. Black Mountain - D - P - PLC
- 25. Nuclear Nightmare - D - P
- 26. Assault on the Mole Man - P
- 27. Revenge of the Mole Man - P
- 28. The Tower of London - P
- 29. The Lost Island of Apple - D
- 30. The Underground City - D
- 31. The Gauntlet - D
- 33. The Orb of Polaris - D - PLC
- 34. Death's Gateway - D - PLC
- 35. The Lair of Mutants - P
- 36. The Citadel of Blood - P
- 37. Quest for the Holy Grail - D - P
- 38. City in the Clouds - D - P
- 39. Museum of Unnatural History - P
- 41. Caverns of Lanst - D - P
- 42. Alternate Beginners Cave - D
- 43. Priests of Xim! - D
- 44. Escape from the Orc Lair - D
- 45. SwordQuest - D - P
- 46. Lifequest - D
- 47. FutureQuest - D - P
- 48. Picnic in Paradise - P
- 49. The Castle Kophinos - P
- 51. The Caves of Eamon Bluff - P
- 53. Feast of Carroll - D - P
- 54. Crystal Mountain - D
- 55. The Master's Dungeon - D - P
- 56. The Lost Adventure - D - P
- 57. The Manxome Foe - D
- 58. The Land of Death - P
- 60. The Sewers of Chicago - D
- 64. Modern Problems - P
- 68. The Smith's Stronghold - P
- 69. The Black Castle of NaGog - PLC
- 73. The Deep Canyon - P
- 74. DharmaQuest - P
- 75. Temple of the Guild - P
- 76. The Search for Yourself - P
- 77. Temple of the Trolls - PLC
- 78. The Prince's Tavern - PLC
- 80. The Search for the Key(80a) - P
- 81. The Rescue Mission (80b) - P
- 86. Castle Mantru - P
- 87. Caves of Hollow Mountain - P
- 90. The Doomsday Clock - P
- 91. FutureQuest II - PLC
- 92. The Fugitive - P
- 93. Flying Circus - P
- 97. The House of Secrets - D - P
- 98. Slave Pits of Kzorland - D
- 99. In the Clutches of Torrik - P
- 100. Sorceror's Spire - P
- 106. Camp Eamon - P
- 107. The Last Dragon - PLC
- 108. The Mines of Moria - PLC
- 109. The Forest of Fear - P
- 112. Hills of History - P
- 113. The Life-Orb of Mvtrelek - P
- 114. Thror's Ring - PLC
- 117. Dungeon of Doom - P
- 118. Pittfall - PLC
- 119. Grunewalde - P
- 120. Orb of My Life - PLC
- 121. Wrenhold's Secret Vigil - P
- 124. Assault on Dolni Keep - PLC
- 126. The Pyramid of Anharos - P - PLC
- 127. The Hunt for the Ring - P
- 128. Quest of Erebor - P
- 129. Return to Moria - P - PLC
- 130. Haradwaith - P
- 131. Nucleus of the Ruby - PLC
- 132. Rhadshur Warrior - P
- 137. The Ruins of Ivory Castle - P
- 138. Starfire - PLC
- 139. Peg's Place - P
- 142. The Beermeister's Brewery - P
- 143. The Alternate Zone - P
- 145. Buccaneer! - P
- 146. The House of Horrors - P
- 147. The Dark Brotherhood - PLC
- 148. Journey to Jotunheim - P - PLC
- 149. Elemental Apocalypse - P
- 150. Walled City of Darkness - P - PLC
- 154. A Trip to Fort Scott - P
- 155. Tomb of the Vampire - P
- 158. The Lair of Mr. Ed - P
- 159. The Bridge of Catzad-Dum - P
- 160. Monty Python & Holy Grail - P
- 161. Operation Endgame - PLC
- 162. Eamon 7.0 Demo Adventure - P
- 163. The Sands of Mars - P
- 164. A Real Cliffhanger - P
- 165. Animal Farm - P
- 166. Storm Breaker - P
- 169. The Black Phoenix - PLC
- 170. Ragnarok Revisited - P
- 183. The Boy and the Bard - P
- 188. Encounter: The Bookworm - P
- 191. Enhanced Beginners Cave - P
- 194. Attack of the Kretons - PLC
- 195. The Training Ground - P
- 198. Revenge of the Bookworm - P
- 204. Sanctuary - P - PLC
- 205. Utterly Outrageous - P
- 206. Curse of the Hellsblade - PLC
- 208. Assault on Helstar - P
- 211. Lair of the Marauders - P
- 213. Demongate - P
- 214. Deathstalker's Castle - P
- 215. Treasure Island - P
- Unk. Temple of the Undead - D
- Beginners Cave - P (Pro.Eamon.01)
- Dungeon Designer - D
- Dungeon Designer Diskette, V.7.0 - P
- Eamon Utilities Diskette - P
- Eamon Utilities 2 & 3 - D
- Graphics Main Hall - All P & PLC Disks

## 3.5" DISKS

### Apple II GS

#### IIGS SYSTEM DISKS

- \_\_\_ GSAS-01 System 5.04 - 2 Disk Set - \$6
- \_\_\_ GSAS-02 Hyper Mover v. 1.1 (Mac/GS)-2 Disk Set - \$6
- \_\_\_ GSAS-03 GS Bug & Debugging Tools - V. 1.6 - \$3
- \_\_\_ GSAS-04 System 6.0 - 6 Disk Set - \$18

#### IIGS COMMUNICATIONS (4 DISK SET-\$12)

- \_\_\_ GSCM-01C FreeTerm - (2003)
- \_\_\_ GSCM-02B SnowTerm - (SW)
- \_\_\_ GSCM-03 Mega Term V. 1.3
- \_\_\_ GSCM-04 Generic Term V. 3.2 / Telecom V. 0.28

#### IIGS DEMO (23 DISK SET-\$69.00)

- \_\_\_ GSDM-01 Cartooner's Demo
- \_\_\_ GSDM-02 Deluxe Paint II Demo
- \_\_\_ GSDM-03 Music Studio Demo
- \_\_\_ GSDM-04 Beagle Write GS Demo
- \_\_\_ GSDM-05 Calendar Crafter Demo
- \_\_\_ GSDM-06 G.A.T.E. Demo
- \_\_\_ GSDM-07 Crystal Quest, Dragon Wars, Pyramid GS
- \_\_\_ GSDM-08 Diversi-Tune, Nexus, ProSel 16, Salvation
- \_\_\_ GSDM-09 Shanghai Demo & Extra Tile Sets
- \_\_\_ GSDM-10 Medley V. 2.0 Demo
- \_\_\_ GSDM-11 Battle Chess Demo
- \_\_\_ GSDM-12 Task Force Demo
- \_\_\_ GSDM-13 Genesys, ProTerm 2.2, TIC
- \_\_\_ GSDM-14 Space Harrier Demo
- \_\_\_ GSDM-15 HCGS Screens, MasterTracks Jr., SysEx MIDI
- \_\_\_ GSDM-16 AC Basic, Design Master, GS16 Forth, Micol, MicroDor
- \_\_\_ GSDM-17 GeNav, ProTerm 3.0, Viad Promo
- \_\_\_ GSDM-18 World Geography Program - Disk 1
- \_\_\_ GSDM-19 World Geography Information - Disk 2
- \_\_\_ GSDM-20 ABC Zoo, AnsiTerm, Dream Graphics. Math Blaster Plus
- \_\_\_ GSDM-21 Battle Axe, Deluxe Tetris
- \_\_\_ GSDM-22 Castle, Music Writer, Reddy, Twilight II
- \_\_\_ GSDM-23 TimeLord Demo

#### IIGS DESK ACCESSORIES (17 DISK SET - \$51)

- \_\_\_ GSDA-01 Desk Accessories 1 - (2020) - (SW)
- \_\_\_ GSDA-02 Desk Accessories 2 - (SW)
- \_\_\_ GSDA-03 Desk Accessories 3 - (SW)
- \_\_\_ GSDA-04 Desk Accessories 4 - (SW)
- \_\_\_ GSDA-05 Desk Accessories 5 - (SW)
- \_\_\_ GSDA-06 Desk Accessories 6 - (SW)
- \_\_\_ GSDA-07 Desk Accessories 7 - (SW)
- \_\_\_ GSDA-08 Desk Accessories 8 - (SW)
- \_\_\_ GSDA-09 Desk Accessories 9 - (SW)
- \_\_\_ GSDA-10 Desk Accessories 10 - (SW)
- \_\_\_ GSDA-11 Desk Accessories 11 - (SW)
- \_\_\_ GSDA-12 Desk Accessories 12
- \_\_\_ GSDA-13 Desk Accessories 13
- \_\_\_ GSDA-14 Desk Accessories 14
- \_\_\_ GSDA-15 Desk Accessories 15
- \_\_\_ GSDA-16 Desk Accessories 16 (SW)
- \_\_\_ GSDA-17 Desk Accessories 17 (SW)

#### IIGS DEVELOPER 13 DISK SET - \$39)

- \_\_\_ GSDV-01 Demo Source Code 1 - (2005)
- \_\_\_ GSDV-02 Demo Source Code 2 - (2006)
- \_\_\_ GSDV-03 Shell Applications (EXE) 1 - (SW)
- \_\_\_ GSDV-04 Shell Applications (EXE) 2 - (SW)
- \_\_\_ GSDV-05 Miscellaneous Developer Files 1 - (SW)
- \_\_\_ GSDV-06 Miscellaneous Developer Files 2
- \_\_\_ GSDV-07 Miscellaneous Developer Files 3
- \_\_\_ GSDV-08 Miscellaneous Developer Files 4



- \_\_\_ GSDV-09 Miscellaneous Developer Files 5
- \_\_\_ GSDV-10 Miscellaneous Developer Files 6
- \_\_\_ GSDV-11 Miscellaneous Developer Files 7
- \_\_\_ GSDV-12 Misc. Developer Files 8
- \_\_\_ GSDV-13 Misc. Developer Files 9

IIGS EDUCATION (7 DISK SET-\$21)

- \_\_\_ GSED-01 Astr. GS: Astronomer - Disk 1 - (SW)
- \_\_\_ GSED-02 Astr. GS: Moon 1 - Disk 2 - (SW)
- \_\_\_ GSED-03 Astr. GS: Planets 1 - Disk 3 - (SW)
- \_\_\_ GSED-04 Astr. GS: Planets 2 - Disk 4 - (SW)
- \_\_\_ GSED-05 Astr. GS: sTools - Disk 5 - (SW)
- \_\_\_ GSED-06 Astr. GS: Sun - Disk 6 - (SW)
- \_\_\_ GSED-07 Astr. GS: Utilities 1 - Disk 7 - (SW)

IIGS FONTS (27 DISK SET-\$81)

- \_\_\_ GSFT-01 A-Plain
- \_\_\_ GSFT-02 A-Fancy, Foreign, Graphic
- \_\_\_ GSFT-03 B-Plain, Foreign, Graphic
- \_\_\_ GSFT-04 B-Plain, Fancy
- \_\_\_ GSFT-05 C-Plain
- \_\_\_ GSFT-06 C-Plain
- \_\_\_ GSFT-07 C-Graphic, Foreign
- \_\_\_ GSFT-08 C-Fancy
- \_\_\_ GSFT-09 D-Plain, Fancy, Foreign, Graphic
- \_\_\_ GSFT-10 E-Plain, Fancy, Foreign, Graphic
- \_\_\_ GSFT-11 F-Plain, Fancy, Graphic
- \_\_\_ GSFT-12 G-Foreign, Fancy
- \_\_\_ GSFT-13 G-Plain, Graphic
- \_\_\_ GSFT-14 H-Fancy, Foreign
- \_\_\_ GSFT-15 I
- \_\_\_ GSFT-16 H-Graphic, Plain
- \_\_\_ GSFT-17 J
- \_\_\_ GSFT-18 K
- \_\_\_ GSFT-19 M-Fancy
- \_\_\_ GSFT-20 L
- \_\_\_ GSFT-21 M-Foreign
- \_\_\_ GSFT-22 M-Plain
- \_\_\_ GSFT-23 M-Graphic
- \_\_\_ GSFT-24 N-Plain, Fancy
- \_\_\_ GSFT-25 N-Foreign, Graphic
- \_\_\_ GSFT-26 O
- \_\_\_ GSFT-27 P-Foreign, Graphic
- \_\_\_ GSFT-28 P-Plain, Fancy
- \_\_\_ GSFT-29 Q
- \_\_\_ GSFT-30 R
- \_\_\_ GSFT-31 S-Fancy
- \_\_\_ GSFT-32 T-Fancy
- \_\_\_ GSFT-33 S-Plain, Graphic
- \_\_\_ GSFT-34 S-Foreign
- \_\_\_ GSFT-35 T-Plain
- \_\_\_ GSFT-36 T-Foreign, Graphic
- \_\_\_ GSFT-37 U
- \_\_\_ GSFT-38 V
- \_\_\_ GSFT-39 W
- \_\_\_ GSFT-40 Y
- \_\_\_ GSFT-41 Z

IIGS GAMES (36 DISK SET - \$108)

- \_\_\_ GSGM-01A Mean 18 Golf Courses - (2007)
- \_\_\_ GSGM-02A Mean 18 Golf Courses 2 - (2018)
- \_\_\_ GSGM-03 Bouncing Bluster Boot Disk - (SW)
- \_\_\_ GSGM-04 Bouncing Bluster Data & Docs - (SW)
- \_\_\_ GSGM-05 Bouncing Bluster Consn. Set - (SW)
- \_\_\_ GSGM-06 Games 1 - (SW)
- \_\_\_ GSGM-07 Games 2 - (SW)
- \_\_\_ GSGM-08 Games 3 - (SW)
- \_\_\_ GSGM-09 Games 4 - (SW)
- \_\_\_ GSGM-10 Games 5 - (SW)
- \_\_\_ GSGM-11 Games 6 - (SW)
- \_\_\_ GSGM-12 Games 7 - (SW)
- \_\_\_ GSGM-13 Games 8 - (SW)
- \_\_\_ GSGM-14 Games 9 - (SW)
- \_\_\_ GSGM-15 Games 10 - (SW)
- \_\_\_ GSGM-16 Games 11 - (SW)
- \_\_\_ GSGM-17 Mean 18 Golf Courses 3
- \_\_\_ GSGM-18 Games 12 - (SW)
- \_\_\_ GSGM-19 Games 13 - (SW)
- \_\_\_ GSGM-20 Games 14

- \_\_\_ GSGM-21 Columns GS V. 2.0 - (SW)
- \_\_\_ GSGM-22 Lode Runner GS
- \_\_\_ GSGM-23 Games 15
- \_\_\_ GSGM-24 Games 16
- \_\_\_ GSGM-25 Games 17
- \_\_\_ GSGM-26 Games 18
- \_\_\_ GSGM-27 Games 19
- \_\_\_ GSGM-28 Sensei
- \_\_\_ GSGM-29 Easy Dead
- \_\_\_ GSGM-30 Space Cluster
- \_\_\_ GSGM-31 Games 20 (SW)
- \_\_\_ GSGM-32 Explorer GS
- \_\_\_ GSGM-33 FTA's Bouncin' Ferno
- \_\_\_ GSGM-34 Games 21 (SW)
- \_\_\_ GSGM-35 Games 22 (SW)
- \_\_\_ GSGM-36 FTA's Blue Helmit

IIGS GRAPHICS (33 DISK SET - \$99)

- \_\_\_ GSGX-01 Demo Disk A - (2002)
- \_\_\_ GSGX-02 Slide Show 1 - (2004)
- \_\_\_ GSGX-03 Slide Show 2 - (2016)
- \_\_\_ GSGX-04 Slide Show 3 - (2017)
- \_\_\_ GSGX-05 Nucleus Demo-ROM 3
- \_\_\_ GSGX-06 GIF Graphics 1 - (SW)
- \_\_\_ GSGX-07 Pics and Utilities 1 - (SW)
- \_\_\_ GSGX-08 Pics and Utilities 2
- \_\_\_ GSGX-09A Pics and Utilities 3
- \_\_\_ GSGX-10 Pics and Utilities 4 - (SW)
- \_\_\_ GSGX-11 Modulæ
- \_\_\_ GSGX-12 Paula Abdul Demo
- \_\_\_ GSGX-13A Pics and Utilities 5 - (SW)
- \_\_\_ GSGX-14 Slide Show 4
- \_\_\_ GSGX-15 Slide Show 5
- \_\_\_ GSGX-16 Nucleus Demo-ROM 1 - (2024)
- \_\_\_ GSGX-17 PSGS Graphics 1-Color
- \_\_\_ GSGX-18 PSGS Graphics 2-Mono
- \_\_\_ GSGX-19 PSGS Graphics 3-Mono
- \_\_\_ GSGX-20 Marilyn Monroe Slide Show
- \_\_\_ GSGX-21 Pics and Utilities 6 - (SW)
- \_\_\_ GSGX-22 Pics and Utilities 7
- \_\_\_ GSGX-23 3200 Pics 1
- \_\_\_ GSGX-24 3200 Pics 2
- \_\_\_ GSGX-25 FTA Xmas Demo
- \_\_\_ GSGX-26 FTA Delta Demo
- \_\_\_ GSGX-27 Animaga
- \_\_\_ GSGX-28 Sap V. 0.5
- \_\_\_ GSGX-29 II Infinitum 92 Slide Show (SW)
- \_\_\_ GSGX-30 Sap Spin
- \_\_\_ GSGX-31 Pics and Utilities 8
- \_\_\_ GSGX-32 Pics and Utilities 9
- \_\_\_ GSGX-34 Fly Demo

IIGS HYPERCARD (6 DISK SET-\$18)

- \_\_\_ GSHC-01 HyperCard Utilities 1 - (SW)
- \_\_\_ GSHC-02 HyperCard Utilities 2 - (SW)
- \_\_\_ GSHC-03 HyperCard Utilities 3 - (SW)
- \_\_\_ GSHC-04 Utilities: General 1 - (SW)
- \_\_\_ GSHC-05 Fun & Games: General 1 - (SW)
- \_\_\_ GSHC-06 Fun & Games: Eamon 1

IIGS HYPERSTUDIO- DEMO ( 10 DISK SET- \$30)

- \_\_\_ GSHS-01 HS System-Demo Version
- \_\_\_ GSHS-02 HS Demo-Demo Version
- \_\_\_ GSHS-03 HS Sounds-Demo Version
- \_\_\_ GSHS-04 More Stacks-Demo Version
- \_\_\_ GSHS-05 More Stacks 2-Demo Version
- \_\_\_ GSHS-06 Video Demo-Demo Version
- \_\_\_ GSHS-07 Comm Stack-Demo Version
- \_\_\_ GSHS-08 MUG 087-Demo Version
- \_\_\_ GSHS-09 USA-Demo Version
- \_\_\_ GSHS-10 HS Art 2-Demo Version

IIGS HYPERSTUDIO (13 DISK SET - \$39)

- \_\_\_ GSHS-11 Miscellaneous HS Stacks 1
- \_\_\_ GSHS-12 Miscellaneous HS Stacks 2 - (SW)
- \_\_\_ GSHS-13 Arizona Stack Disk 1
- \_\_\_ GSHS-14 Arizona Stack Disk 2
- \_\_\_ GSHS-15 Photography Stack Disk 1
- \_\_\_ GSHS-16 Photography Stack Disk 2

- \_\_\_ GSHS-17 1906 SF Earthquake & Fire Disk 1
- \_\_\_ GSHS-18 1906 SF Earthquake & Fire Disk 2
- \_\_\_ GSHS-19 Miscellaneous HS Stacks 3
- \_\_\_ GSHS-20 Miscellaneous HS Stacks 4
- \_\_\_ GSHS-21 Miscellaneous HS Stacks 5 - (SW)
- \_\_\_ GSHS-22 Miscellaneous HS Stacks 6
- \_\_\_ GSHS-23 SoundSmith Song Player XCmd

IIGS ICONS (13 DISK SET - \$39)

- \_\_\_ GSIC-01A Finder Icons 1 - (2022) - (SW)
- \_\_\_ GSIC-02A Finder Icons 2 - (SW)
- \_\_\_ GSIC-03A Finder Icons 3 - (SW)
- \_\_\_ GSIC-04A Finder Icons 4 - (SW)
- \_\_\_ GSIC-05A Finder Icons 5 - (SW)
- \_\_\_ GSIC-06A Finder Icons 6 - (SW)
- \_\_\_ GSIC-07A Finder Icons 7 - (SW)
- \_\_\_ GSIC-08 Finder Icons 8 - (SW)
- \_\_\_ GSIC-09 Finder Icons 9 - (SW)
- \_\_\_ GSIC-10 Finder Icons 10 - (SW)
- \_\_\_ GSIC-11 Finder Icons 11 - (SW)
- \_\_\_ GSIC-12 Finder Icons 12 (SW)
- \_\_\_ GSIC-13 Finder Icons 13 (SW)

IIGS MEMBERSHIP DIRECTORY

- \_\_\_ GSMD-01 WAP Member Directory

IIGS MISCELLANEOUS

- \_\_\_ GSMS-01 New Member's Disk - (2000) - (SW)
- \_\_\_ GSMS-02C Disk Library Catalog 1
- \_\_\_ GSMS-03C Disk Library Catalog 2

IIGS MUSIC ( 61 DISK SET - \$183)

- \_\_\_ GSMU-01B SoundSmith and Songs - (SW)
- \_\_\_ GSMU-02 SoundSmith Songs 1
- \_\_\_ GSMU-03 SoundSmith Songs 2
- \_\_\_ GSMU-04 SoundSmith Songs 3
- \_\_\_ GSMU-05 SoundSmith Songs 4
- \_\_\_ GSMU-06 SoundSmith Songs 5
- \_\_\_ GSMU-07 Diversi-Tune (C) Songs 1
- \_\_\_ GSMU-08 Music Studio Songs 1
- \_\_\_ GSMU-09 MS Songs 2 (Golden Album Rock 2)
- \_\_\_ GSMU-10 A Variety Pack of Songs
- \_\_\_ GSMU-11 SoundSmith Songs 6
- \_\_\_ GSMU-12 MCS Song "Slide Show"
- \_\_\_ GSMU-13 Noisetrapper V. 1.0
- \_\_\_ GSMU-14 SoundSmith Songs 7
- \_\_\_ GSMU-15 SoundSmith Songs 8
- \_\_\_ GSMU-16 Music & Speech
- \_\_\_ GSMU-17 Misc. Music Files 1 (SW)
- \_\_\_ GSMU-18 Noisetrapper Songs 1
- \_\_\_ GSMU-19 Noisetrapper Songs 2
- \_\_\_ GSMU-20 Noisetrapper Songs 3
- \_\_\_ GSMU-21 Noisetrapper Songs 4
- \_\_\_ GSMU-22 GS-IRC Music Disk 1
- \_\_\_ GSMU-23 Noisetrapper Songs 5
- \_\_\_ GSMU-24 Noisetrapper Songs 6
- \_\_\_ GSMU-25 Noisetrapper Songs 7
- \_\_\_ GSMU-26 Noisetrapper Songs 8
- \_\_\_ GSMU-27 Noisetrapper Songs 9
- \_\_\_ GSMU-28 Noisetrapper Songs 10
- \_\_\_ GSMU-29 Noisetrapper Songs 11
- \_\_\_ GSMU-30 Noisetrapper Songs 12
- \_\_\_ GSMU-31 Noisetrapper Songs 13
- \_\_\_ GSMU-32 Noisetrapper Songs 14
- \_\_\_ GSMU-33 Noisetrapper Songs 15
- \_\_\_ GSMU-34 Noisetrapper Songs 16
- \_\_\_ GSMU-35 Noisetrapper Songs 17
- \_\_\_ GSMU-36 Noisetrapper Songs 18
- \_\_\_ GSMU-37 Noisetrapper Songs 19
- \_\_\_ GSMU-38 Noisetrapper Songs 20
- \_\_\_ GSMU-39 Noisetrapper Songs 21
- \_\_\_ GSMU-40 Noisetrapper Songs 22
- \_\_\_ GSMU-41 NoiseTracker Songs 23
- \_\_\_ GSMU-42 NoiseTracker Songs 24
- \_\_\_ GSMU-43 NoiseTracker Songs 25
- \_\_\_ GSMU-44 NoiseTracker Songs 26
- \_\_\_ GSMU-45 Music Studio Songs 3
- \_\_\_ GSMU-46 Music Studio Songs 4
- \_\_\_ GSMU-47 Music Studio Songs 5



- \_\_\_ GSMU-48 Diversi-Tune (C) Songs 2
- \_\_\_ GSMU-49 Music Construction Set Songs 2
- \_\_\_ GSMU-50 Misc. Music Files 2
- \_\_\_ GSMU-51 Misc. Music Files 3
- \_\_\_ GSMU-52 NoiseTracker Songs 27
- \_\_\_ GSMU-53 NoiseTracker Songs 28
- \_\_\_ GSMU-54 NoiseTracker Songs 29
- \_\_\_ GSMU-55 NoiseTracker Songs 30
- \_\_\_ GSMU-56 NoiseTracker Songs 31
- \_\_\_ GSMU-57 NoiseTracker Songs 32
- \_\_\_ GSMU-58 NoiseTracker Songs 33
- \_\_\_ GSMU-59 SoundSmith Songs 9
- \_\_\_ GSMU-60 SoundSmith Songs 10
- \_\_\_ GSMU-61 SoundSmith Songs 11

- IIGS SOUNDS (21 DISK SET - \$63)**
- \_\_\_ GSSN-01A Sounds 1 - (2014)
  - \_\_\_ GSSN-02A Sounds 2-Nostalgia - (2015)
  - \_\_\_ GSSN-03 Sounds 3
  - \_\_\_ GSSN-04 Sounds 4
  - \_\_\_ GSSN-05 Sounds 5-Simpsons 1
  - \_\_\_ GSSN-06 Sounds 6-Simpsons 2
  - \_\_\_ GSSN-07 Sounds 7
  - \_\_\_ GSSN-08 Sounds 8
  - \_\_\_ GSSN-09 Sounds 9
  - \_\_\_ GSSN-10 Sounds 10
  - \_\_\_ GSSN-11 Sounds 11
  - \_\_\_ GSSN-12 Sounds 12-Cartoons 1
  - \_\_\_ GSSN-13 Sounds 13-Cartoons 2
  - \_\_\_ GSSN-14 Sounds 14-Cartoons 3
  - \_\_\_ GSSN-15 Sounds 15-Cartoons 4
  - \_\_\_ GSSN-16 Sounds 16-Cartoons 5
  - \_\_\_ GSSN-17 Sound CDev rSounds 1 (SW)
  - \_\_\_ GSSN-18 Sound CDev rSounds 2
  - \_\_\_ GSSN-19 Sound CDev rSounds 3
  - \_\_\_ GSSN-20 Sound CDev rSounds 4
  - \_\_\_ GSSN-21 Sound CDev rSounds 5

- IIGS UTILITIES (14 DISK SET-\$42)**
- \_\_\_ GSUT-01B Utilities 1 - (2001) - (SW)
  - \_\_\_ GSUT-02 JumpStart Prog Sel V. 3 - (2021)
  - \_\_\_ GSUT-03A Utilities 2 - (2028) (SW)
  - \_\_\_ GSUT-04A Utilities 3 - (2029) (SW)
  - \_\_\_ GSUT-05A Utilities 4 - (SW)
  - \_\_\_ GSUT-06A ZZ Copy-V. 2.21 Disk Copier
  - \_\_\_ GSUT-07A Utilities 5 - (SW)
  - \_\_\_ GSUT-08D Utility Works GS V. 2.01 (SW)
  - \_\_\_ GSUT-09 Utilities 6 - (SW)
  - \_\_\_ GSUT-10 Utilities 7 - (SW)
  - \_\_\_ GSUT-11B Utility Works Launcher v. 2.3.1-(SW)
  - \_\_\_ GSUT-12 Utilities 8
  - \_\_\_ GSUT-13 Utilities 9
  - \_\_\_ GSUT-14 Desktop Utilities V. 3.3

**3.5" DISKS**

**APPLE II**

- APPLE SYSTEM DISKS**
- \_\_\_ 2APS-01 System Disk - Utilities v. 3.2- \$3 
- APPLEWORKS**
- \_\_\_ 2AWK-01 Claris Tech Support for AW / AW-GS
- COMMUNICATIONS**
- \_\_\_ 2COM-01 TCS Instructions 1.05
  - \_\_\_ 2COM-02 Applenet V. 1.3
  - \_\_\_ 2COM-03 Comm. Sys. 2.5/Z.Link 12.15 /Utilities
- EAMON (ProDOS): (17 DISK SET ( \$51)**
- \_\_\_ 2EAM-01A Dungeon Designer, Utilities, Etc.
  - \_\_\_ 2EAM-02 Advs 1, 5, 8, 12, 16, 19, 20, 21
  - \_\_\_ 2EAM-03 Advs 22, 23, 24, 25, 26, 27, 28
  - \_\_\_ 2EAM-04 Advs 35, 36, 37, 38, 39, 41, 45
  - \_\_\_ 2EAM-05 Advs 47, 48, 49, 51, 53, 55, 56
  - \_\_\_ 2EAM-06 Advs 58, 64, 68, 73, 74, 75, 76, 86
  - \_\_\_ 2EAM-07 Advs 80, 81, 87, 90, 92, 93, 97
  - \_\_\_ 2EAM-08 Advs 99, 100, 106, 109, 112, 113

- \_\_\_ 2EAM-09 Advs 117, 119, 121, 126, 155
- \_\_\_ 2EAM-10 Advs 127, 128, 129, 130, 132
- \_\_\_ 2EAM-11 Advs 139, 145, 148, 150, 154
- \_\_\_ 2EAM-12 Advs 149, A, B, C, D
- \_\_\_ 2EAM-13 Advs 158, 160, 166, 166A, 166B
- \_\_\_ 2EAM-14 Advs 170, 183, 191, 195, 204
- \_\_\_ 2EAM-21 Advs 137,142,143,188,208,215
- \_\_\_ 2EAM-22 Advs 146,164,198,205,211,213
- \_\_\_ 2EAM-23 Advs 159,163,165,214

- EAMON (ProDOS) (LOWER CASE) (7 DISK SET \$21)\*\*\***
- \_\_\_ 2EAM-15 Advs 33, 69, 77, 118, 124, 150
  - \_\_\_ 2EAM-16 Advs 34, 120, 138, 161
  - \_\_\_ 2EAM-17 Advs 78, 107, 108, 114, 147
  - \_\_\_ 2EAM-18 Advs 91, 129, 169, 194, 206
  - \_\_\_ 2EAM-19 Advs 124,131,148
  - \_\_\_ 2EAM-20 Advs 126,204
- \*\*\* includes 2EAM-01A  
Note: (23 Eamon Disk Set-\$69.00)

**EDUCATION**

- \_\_\_ 2EDU-01 Newton's Apple/Cocaine & Teeth

**MEMBERSHIP DIRECTORY**

- \_\_\_ 2MPD-01 WAP Member Directory

**TECH NOTES ( 5 DISK SET \$15)**

- \_\_\_ 2TEN-01B II GS Parts 1 & 2
- \_\_\_ 2TEN-02B II GS Parts 3, 4, & 5
- \_\_\_ 2TEN-03B File Types
- \_\_\_ 2TEN-04B More Tech Notes 1
- \_\_\_ 2TEN-05B More Tech Notes 2

**UTILITIES**

- \_\_\_ 2UTL-01 New Member Disk 2.01
- \_\_\_ 2UTL-02A DB Master V. 1.01 (SW)

**5.25" DISKS**

**APPLE II**

**APPLE SYSTEM DISKS**

- \_\_\_ APSD-01 System Disk-Util V. 3.2-\$1.50 
- \_\_\_ APSD-02 DOS 3.3 Sys. Mast./DOS 3.3 Tut. \$1.50

**APPLEWORKS**

- \_\_\_ APWK-01 Desk, Printer & \$Helpers-(813/814)
- \_\_\_ APWK-02 Food. Lists, etc.-(815/816)

**COMMUNICATIONS (10 DISK SET \$15.00)**

- \_\_\_ COMM-01 TCS Inst. 1.05 A & B-1 of 2-(825)
- \_\_\_ COMM-02 TCS Inst. 1.05 A & B-2 of 2-(826)
- \_\_\_ COMM-03\*\* WAPABBS.1 Docs-(121)
- \_\_\_ COMM-04 WAPABBS.1-(135/136)
- \_\_\_ COMM-05 DI COMM-(SW)-(503)
- \_\_\_ COMM-06 Kermit 3.78-Kermit File Transfer (516/820)
- \_\_\_ COMM-07 CommTerm & Telecom -(808/817)
- \_\_\_ COMM-08 MicroModem II (SW)-Hayes Term-(116/169)
- \_\_\_ COMM-09 Comm. System 2.5 / Z.Link 12.15
- \_\_\_ COMM-10 Kermit 3.87 & Docs

**CP/M (11 DISK SET \$16.50)**

- \_\_\_ CP/M-01\*\* Master Catalog-(401)
- \_\_\_ CP/M-02 Utilities I and II-(402/404)
- \_\_\_ CP/M-03 Communications-(403/409)
- \_\_\_ CP/M-04 ZCPR2 Install and Utils-(406/408)
- \_\_\_ CP/M-05 ZCPR2 Doc/Essential Util(407/410)
- \_\_\_ CP/M-06 Text Editor/ Spreadsheet-(411/412)
- \_\_\_ CP/M-07 MDM740 (SSC. Comm, 7710, & A-CAT- (413/414)
- \_\_\_ CP/M-08 Kermit Source/Running Code-(416/418)
- \_\_\_ CP/M-09\*\* Kermit Documentation-(417)
- \_\_\_ CP/M-10 Utilities-(419)
- \_\_\_ CP/M-11 Small C. Compiler-(420)

**EAMON ADVENTURES (24 DISK SET \$36.00)**

- \_\_\_ EAMN-01 Utilities II and III -(220/221)
  - \_\_\_ EAMN-02\* Dungeon Des/ Adv 38-(180/229)
  - \_\_\_ EAMN-03 EAMON MASTER /Adv 42-(181/214)
  - \_\_\_ EAMN-04\* Adventures 2 & 3 -(182/183)
  - \_\_\_ EAMN-05\* Adventures 4 & 5- (184/185)
  - \_\_\_ EAMN-06\* Adventures 6 & 7- (186/187)
  - \_\_\_ EAMN-07\* Adventures 13 & 14-(188/189)
  - \_\_\_ EAMN-08\* Adventures 10 & 11-(190/191)
  - \_\_\_ EAMN-09\* Adventures 29 & 8- (192/193)
  - \_\_\_ EAMN-10\* Adventures 12 & 30-(194/195)
  - \_\_\_ EAMN-11\* Adventures 17 & 18-(196/197)
  - \_\_\_ EAMN-12\* Adventures 19 & 20-(198/199)
  - \_\_\_ EAMN-13\* Adventures 23 & 24-(200/201)
  - \_\_\_ EAMN-14\* Adventures 25 & 53-(202/203)
  - \_\_\_ EAMN-15\* Adventures 55 & 54-(204/205)
  - \_\_\_ EAMN-16# Adventures 56 & 57-(206/207)
  - \_\_\_ EAMN-17\* Adventures 31 & 41-(208/209)
  - \_\_\_ EAMN-18\* Adventures 47 & 97-(210/211)
  - \_\_\_ EAMN-19\* Adventures 60 & 98-(212/213)
  - \_\_\_ EAMN-20\* Adventures 46 & 45-(215/216)
  - \_\_\_ EAMN-21\* Adventures 43 & 15-(217/218)
  - \_\_\_ EAMN-22\* Adventures Unk. & 37-(223/224)
  - \_\_\_ EAMN-23\* Adventures 16 & 33-(225/226)
  - \_\_\_ EAMN-24\* Adventures 34 & 44-(227/228)
- \*-Requires EAMN-03

**EDUCATION (20 DISK SET \$30.00)**

- \_\_\_ EDUC-01 Ed. and Personal Ed.-(76/110)
- \_\_\_ EDUC-02 Personal Ed. 2 and Ed. 3-(131/139)
- \_\_\_ EDUC-03 Math / Science and Ed. 4-(127/140)
- \_\_\_ EDUC-04 Adv. Math / Vectors / Mot.-(510/513)
- \_\_\_ EDUC-05 Albert Camus Int/ El. Math (53/150)
- \_\_\_ EDUC-06 French Vocab/ Tutorial-(46/123)
- \_\_\_ EDUC-07 Boot for L'Hote and L'Hote -(48/49)
- \_\_\_ EDUC-08 Tic-Tac-Toe ,Fr /L'Hote Quiz-(47/50)
- \_\_\_ EDUC-09 Fr. Poetry Tut /Appollinaire-(51/52)
- \_\_\_ EDUC-10 Rafel Boot Disk and Rafel-(55/56)
- \_\_\_ EDUC-11 Tic-Tac-Toe in Sp. /Rafel Quiz-(54/57)
- \_\_\_ EDUC-12 Matute and Lo Fatal -(58/59)
- \_\_\_ EDUC-13 Reading Fun (SW)-(505)
- \_\_\_ EDUC-14 Language Arts Treasures
- \_\_\_ EDUC-15 Floppy Book 1
- \_\_\_ EDUC-16 Computation Game /AW Temp
- \_\_\_ EDUC-17 Algebra Tutorial and Bagels Disk
- \_\_\_ EDUC-18 Newton's Apple (Cocaine)
- \_\_\_ EDUC-19 Newton's Apple (Teeth)
- \_\_\_ EDUC-20 WAP Stack and Tutorial Demo

**FORTH**

- \_\_\_ FRTH-01 Assem/Disassem/Screen Edtr-(700/701)
- \_\_\_ FRTH-02 Go Forth Tut./Fig/Forth 78-(702/703)
- \_\_\_ FRTH-03 Forth/Floating Point Math-(704)

**GAMES (13 DISK SET \$19.50)**

- \_\_\_ GAME-01 Games A and B-(102/107)
- \_\_\_ GAME-02 Games C and D-(111/128)
- \_\_\_ GAME-03 Games E and F-(162/164)
- \_\_\_ GAME-04 Keyboard and Paddle Games-(72/74)
- \_\_\_ GAME-05 Pinball and Arcade Games-(142/157)
- \_\_\_ GAME-06 Text Adv/Mys. House (Sierra)-(73/517)
- \_\_\_ GAME-07 Ed. Games G and H-(508/509)
- \_\_\_ GAME-08 Sports and Utils / Games-(143/160)
- \_\_\_ GAME-09 Adventures /Game Room-(811/812)
- \_\_\_ GAME-10 Haunted House-(176/810)
- \_\_\_ GAME-11 Mostly Games/Wizard Wkr I -(122/161)
- \_\_\_ GAME-12 # Games 1 / WAP Math Games
- \_\_\_ GAME-13 Smart Dice

**LOGO**

- \_\_\_ LOGO-01 Logo Tool Kit \ Docs-(145/146)
- \_\_\_ LOGO-02 Sam. Disk/Dallas Apple Logo-(147/158)



MEMBERSHIP DIRECTORY

MEMD-01 WAP Member Directory

MISCELLANEOUS (25 DISK SET \$37.50)

- MISC-01 SS (Coin Collect) /Misc.-(93/115)
MISC-02 Miscellaneous-(119/120)
MISC-03 Misc. and Recipe Files-(125/159)
MISC-04 Glaq and No Name Yet-(129/175)
MISC-05 Spec. DBs/Jim's DB (SW)-(141/504)
MISC-06 Misc/Aplesft/AppleWriterII-E-(152/156)
MISC-07 Astronomy Short Programs-(506)
MISC-08 Griffith and Weise Astronomy -(507)
MISC-09 Aviation-General (Disk 1 of 2)-(514)
MISC-10 Aviation-Navigation (2 of 2)-515)
MISC-11 Gardner's Assistant-(518)
MISC-12 Music and Sights / Sounds-(71/126)
MISC-13 Merry Xmas/Happy Holidays-(103/165)
MISC-14 Graphics and Cat Graphix-(108/171)
MISC-15 Print Shop Graphics-(172)
MISC-16 Clr Gr. for Fun/Science /Engi-(75/106)
MISC-17 Plots/Graphs/Charts/Graphs-(163/166)
MISC-18 Business/Math Stat and SS-70/90)
MISC-19 SS (Invest.) and SS (Bus.)-(91/92)
MISC-20 Business A and B-(104/113)
MISC-21 Investments A and B-(153/154)
MISC-22 Spreadsheet A and Misc.-(137/155)
MISC-23 Riley's Personal Instrumentation-(173)
MISC-24 ProDos Gr. Packer / DHR Convert
MISC-25 PSL Dual Dos

NEW PRINT SHOP (31 DISK SET \$46.50)

- NWPS-01 Graphics 01
NWPS-02 Graphics 02
NWPS-03 Graphics 03
NWPS-04 Graphics 04
NWPS-05 Graphics 05
NWPS-06 Graphics 06
NWPS-07 Graphics 07
NWPS-08 Graphics 08
NWPS-09 Graphics 09
NWPS-10 Graphics 10
NWPS-11 Graphics 11
NWPS-12 Graphics 12
NWPS-13 Graphics 13
NWPS-14 Graphics 14
NWPS-15 Graphics 15
NWPS-16 Graphics 16
NWPS-17 Graphics 17
NWPS-18 Graphics 18
NWPS-19 Graphics 19
NWPS-20 Graphics 20
NWPS-21 Graphics 21
NWPS-22 Graphics 22
NWPS-23 Graphics 23
NWPS-24 Graphics 24
NWPS-25 Graphics 25
NWPS-26 Graphics 26
NWPS-27 Graphics 27
NWPS-28 Graphics 28
NWPS-29 Borders 01
NWPS-30 Borders 02
NWPS-31 Fonts 01

PASCAL (8 DISK SET \$12.00)

- PASC-01 AttachBios for Pascal 1.1,Utils(300/301)
PASC-02 Crypto/Gr.& Bios/Printers-(302/303)
PASC-03 Misc.,Read/WriteDOS/Prters(304/305)
PASC-04 Cataloger/Hires Prting /Lisp-(306/307)
PASC-05 Puffin/Hol.Mus.-CPM-Pascal(308-309)
PASC-06 3D Ed./Drill /Hackers Stuff-(310/311)
PASC-07 Stocks/Wtwatch/Guerrilla Guide-(312/313)
PASC-08 Pascal / To & From DOS-(133/314)

PILOT

PILT-01\*\* Pilot Language-(167)

UTILITIES (24 DISK SET \$36.00)

- UTIL-01 New Member's Disk-2.01 A/ B- (821)
UTIL-02 New Member's Disk-2.01 C/ D- (822)
UTIL-03 Utilities A and B-(100/101)
UTIL-04 Utilities C and D-(112/118)
UTIL-05 Utilities E and F-(124/132)
UTIL-06 Utilities G and H-(138/43)
UTIL-07 Utilities I and J-(44/77)
UTIL-08 Mach. Lang. Util/One-Key DOS-(41/42)
UTIL-09 Beg.Choice /Int. Utils.-(501/502)
UTIL-10 Diversi Copy & Diversi DOS-(45/130)
UTIL-11 Add. to ProDOS/Zap Utility-(804/806)
UTIL-12 Utis A(ProDOS)/File Cabinet-(802/803)
UTIL-13 Imageworks-(174/807)
UTIL-14 Auto Unshrinkit 1.1/ II Plus Shrinkit, Shrinkit 3.4
UTIL-15 Visi-Trend/Visi-Plot/Calculink-(93/94)
UTIL-16 AppleSoft Tut/Picture Packer-(109/117)
UTIL-17 AppleWriter Utilities-(168)
UTIL-18 AppleSoft Prog/Love's Follies-(144/170)
UTIL-19 "Old" New Member's Disk-(134)
UTIL-20 JoyReader (SW)-(819)
UTIL-21 Large Type Joy Reader (SW)-(823)
UTIL-22 DB Master V. 1.01-Prog. Disk 1/Sample Files (SW)
UTIL-23 DB Mstr v. 1.01-Prog. Disk 2/Docs (SW)
UTIL-24 Tutorial Maker

5.25" DISKS

APPLE III

\*\* indicates single sided disks

ACCOUNTING (3 DISK SET-\$4.50)

- 3ACT-01A Easy Accounting
3ACT-02 Easy System and Accounts Rec.
3ACT-03 Easy System, Accounts Pay & Gen. Ledger

III 3E2P & AW TEMPLATES (11 DISK SET \$16.50)

- 3AWZ-01 AW-EZP Bus Templates-(1060)
3AWZ-02 Checkbook Plus by Lomartire
3AWZ-03 Accounting/Finance Templates
3AWZ-04 Mortgage Templates
3AWZ-05 Checkbook Templates
3AWZ-06 Contributions-Disk 1
3AWZ-07 BankCalc-Disk 1
3AWZ-08 BankCalc-Disk 2
3AWZ-09 BankCalc-Disk 3
3AWZ-10 Video Catalog-Disk 1
3AWZ-11 Video Catalog-Disk 2

III BUSINESS BASIC (9 DISK SET \$13.50)

- 3BSB-01 Pohlman Disk 01-(1017)
3BSB-02 Pohlman Disk 02-(1018)
3BSB-03 Pohlman Disk 03-(1019)
3BSB-04 Pohlman Disk 04-(1020)
3BSB-05 Pohlman Disk 05-(1021)
3BSB-06 PPT Demo / BASIC Helps-(1098)
3BSB-07 BASIC 1.23 & Utilities / Auto Basic by Boston
3BSB-08 Best of On Three-Basic Programs
3BSB-09A Menu Maker 6.1

III GAMES (5 DISK SET \$7.50)

- 3GAM-01 Games 01-(1001)
3GAM-02 Games for Kids-(1007)
3GAM-03 Cap'n Magneto-Revised 1/89-(1041)
3GAM-04 Games 02
3GAM-05 Star Trek

III GRAPHICS (43 DISK SET-\$64.50)

- 3GRX-01 Sketchpad and Slideshow-(1012)
3GRX-02 Fig Factory Manual -(1069)
3GRX-03 Fig Factory-B&- (1070)

- 3GRX-04 Fig Factory-Color-(1071)
3GRX-05 Raster Graphics Tool Kit-(1072)
3GRX-06 3-D Modeling Tool Kit-(1073)
3GRX-07 Chartmaker III-(1074)
3GRX-08 Graphics Utilities-(1075)
3GRX-09 Graphics Disk 01-(1062)
3GRX-10 Graphics Disk 02-(1076)
3GRX-11 Graphics Disk 03-(1077)
3GRX-12 Graphics Disk 04-(1078)
3GRX-13 Graphics Disk 05-(1079)
3GRX-14 Graphics Disk 06-(1080)
3GRX-15 Calendar by Bloom-(1081)
3GRX-16 Typewriter Art Disk 01-(1082)
3GRX-17 Typewriter Art Disk 02 -(1083)
3GRX-18 Poster by Bloom-(1084)
3GRX-19 Raster Demo / Tmapio
3GRX-20 Icon Demo / Tfont
3GRX-21 Trixelmap Demo / Mask Demo
3GRX-22 Tmem Demo / Trects Demo
3GRX-23 GIF Graphics 01
3GRX-24 GIF Graphics 02
3GRX-25 GIF Graphics 03
3GRX-26 GIF Graphics 04
3GRX-27 Grafixworks 1 and 2 (SW)
3GRX-28 Grafixworks 3 and 4 (SW)
3GRX-29A Sign by Bloom
3GRX-30 Scanned Graphics #1
3GRX-31 FOTOView by Lomartine
3GRX-32 A2/A3 Graphics
3GRX-33 Floppy Coloring Book 1
3GRX-34 Floppy Coloring Book 2 (Trains)
3GRX-35 Floppy Coloring Book 3 (More Trains)

- 3GRX-36 Floppy Coloring Book 4 (Winter Olympics)
3GRX-37 GIF Graphics 05
3GRX-38 Dino Graphics
3GRX-39 Book Plate Graphics
3GRX-40 Animals #1
3GRX-41 ArtWorks
3GRX-42 3D Graphics
3GRX-43 Summer Olympics

III INFORMATION (37 DISK SET-\$55.50)

- 3INF-01C WAP /// SIG PD Catalog
3INF-02D New Member's Disk-(1005)
3INF-03 Best of MAUG-(1008)
3INF-04 Best of The Source-(1009)
3INF-05 Best of TAU-(1010)
3INF-06 Best of ATUNC-(1055)
3INF-07 Best of III's Company-01 (1015)
3INF-08 Best of III's Company-02 (1057)
3INF-09 The Best of Bloom-Disk 01 (1035)
3INF-10 Impert's Corner by Bloom-(1096)
3INF-11 Phase III Conference Plus!-(1047)
3INF-12 Best of Ottalini-Disk 01-(1040)
3INF-13 Best of Ottalini-Disk 02-(1058)
3INF-14 Best of Ottalini-Disk 03-(1059)
3INF-15 Best of Ottalini-Disk 04-(1087)
3INF-16 Best of Pair BBS
3INF-17 Reviews by Bloom
3INF-18 III Cheers (Boot and Program)
3INF-19 III Cheers (Volumes 1 and 2)
3INF-20 Best of Ottalini-Disk 05
3INF-21 Three's Company BBS
3INF-22 Best of Bloom-Disk 02
3INF-23C WAP 3 SIG PD Catalog (3E2P)
3INF-24 Best of ATUNC-Disk 02
3INF-25 Best of ATUNC-Disk 03
3INF-26 Best of ATUNC-Disk 04
3INF-27 Best of ATUNC-Disk 05
3INF-28 Best of ATUNC-Disk 06
3INF-29 How Do I?
3INF-30 Pair/DA Data System Catalogs
3INF-31 ThreeWorks for A3-Disks 1&2-(SW)
3INF-32 ThreeWorks for A3-Disks 3&4-(SW)
3INF-33 ThreeWorks for A3-Disks 5&6-(SW)
3INF-34 ThreeWorks for A3-Disks 7&8-(SW)
3INF-35 Best of Ottalini-Disk 06



- \_\_\_ 3INF-36 Omnis 3 Technotes
- \_\_\_ 3INF-37 Best of Ortallini-Disk 07

**MEMBERSHIP DIRECTORY**  
\_\_\_ 3MPD-01 WAP Member Directory

- III MISCELLANEOUS (20 DISK SET \$30.00)**
- \_\_\_ 3MSC-01 File Cabinet / Sort Directory-(1046)
  - \_\_\_ 3MSC-02 Contributions-Disk 01-(1053)
  - \_\_\_ 3MSC-03 Contributions-Disk 02-(1061)
  - \_\_\_ 3MSC-04 Contributions-Disk 03-(1086)
  - \_\_\_ 3MSC-05 Le Grayhaven Cookbook Plus!-(1097)
  - \_\_\_ 3MSC-06 Dble Boot (SOS & ProDOS)-(1099)
  - \_\_\_ 3MSC-07 Apple III Demo Disk 01-(1100)
  - \_\_\_ 3MSC-08 Apple III Demo Disk 02-(1101)
  - \_\_\_ 3MSC-09 Apple III Demo Disk 03-(1102)
  - \_\_\_ 3MSC-10 Apple III+ Keyboard Demo
  - \_\_\_ 3MSC-11 Best of Salerno
  - \_\_\_ 3MSC-12 Apple II Boot Disk
  - \_\_\_ 3MSC-13 French Tutor
  - \_\_\_ 3MSC-14 Italian Tutor
  - \_\_\_ 3MSC-15 Contributions-Disk 04
  - \_\_\_ 3MSC-16 Bowling List /Grid Grade
  - \_\_\_ 3MSC-17 Floppy Book
  - \_\_\_ 3MSC-18 Music-Music-Music
  - \_\_\_ 3MSC-19A Adv. Visi Calc (HD Ver.) & Mail List Manager (HD Ver.)
  - \_\_\_ 3MSC-20 BBQ Recipes and More

- III PASCAL (20 DISK SET \$30.00)**
- \_\_\_ 3PCL-01 Pascal 1.2
  - \_\_\_ 3PCL-02 2.0 Compiler/ToolKit V. 1
  - \_\_\_ 3PCL-03 ToolKit V. 2/V. 3
  - \_\_\_ 3PCL-04 Pronto Debugger/SANE 1
  - \_\_\_ 3PCL-05 SANE 2/ SANE 3
  - \_\_\_ 3PCL-06 SOS IOUs/ExerSOS
  - \_\_\_ 3PCL-07 Utilities: PutDemo/PutLib
  - \_\_\_ 3PCL-08 Cisar's Pascal 1.2
  - \_\_\_ 3PCL-09 Chaos Pascal Programs
  - \_\_\_ 3PCL-10 Power Keys DM & Source Code
  - \_\_\_ 3PCL-11 Power Keys DM-Disk 2
  - \_\_\_ 3PCL-12 MacStuff
  - \_\_\_ 3PCL-13 David Craig-Disk 1

- \_\_\_ 3PCL-14 David Craig-Disk 2
- \_\_\_ 3PCL-15 David Craig-Disk 3
- \_\_\_ 3PCL-16 IEEE Files for Apple II & Apple III
- \_\_\_ 3PCL-17 Modified Pascal Menu Maker
- \_\_\_ 3PCL-18 Fortran Manual-Disk 1
- \_\_\_ 3PCL-19 Fortran Manual-Disk 2
- \_\_\_ 3PCL-20 Fortran

- III REPAIRS (9 DISK SET \$13.50)**
- \_\_\_ 3REP-01 Apple 3 Diagn.-Disk 01-(1013)
  - \_\_\_ 3REP-02 Apple 3 Diagn.- Disk 02/Block Edit by Mensh -(1094)
  - \_\_\_ 3REP-03 Repairing your Apple III-(1088)
  - \_\_\_ 3REP-04 Brain Surgeon-(1089)
  - \_\_\_ 3REP-05 Disk Map-(1090)
  - \_\_\_ 3REP-06 Disk Check and Pro Health-(1091)
  - \_\_\_ 3REP-07 Vindicator & Catalyst Fixer-(1092)
  - \_\_\_ 3REP-08 Block Editor & Block Byter-(1093)
  - \_\_\_ 3REP-09 Jeppson Disassembler-(1095)

- III TELECOMMUNICATIONS (9 DISK SET \$13.50)**
- \_\_\_ 3TEL-01 Telecom-Disk 01-(1063)
  - \_\_\_ 3TEL-02 Telecom-Disk 02/Access III-(1064)
  - \_\_\_ 3TEL-03 Telecom-Disk 03-(1065)
  - \_\_\_ 3TEL-04 Kermit III-(1066)
  - \_\_\_ 3TEL-05 XModem III-(1067)
  - \_\_\_ 3TEL-06 TerminALL Manual-(1032)
  - \_\_\_ 3TEL-07 TerminALL Program-(1033)
  - \_\_\_ 3TEL-08 WAP TCS Disk
  - \_\_\_ 3TEL-09 InfoNet (Source, Docs, & Prog.)

- III UTILITIES (41 DISK SET \$61.50)**
- \_\_\_ 3UTL-01 System Utilities and Data-(1004)
  - \_\_\_ 3UTL-02 Apple II Emulation-Disk 01-(1043)
  - \_\_\_ 3UTL-03 Apple II Emulation-Disk 02-(1044)
  - \_\_\_ 3UTL-04 SOS Drivers-(1052)
  - \_\_\_ 3UTL-05 Basic Boot Disk-(1014)
  - \_\_\_ 3UTL-06 Basic Utilities-Disk 01-(1002)
  - \_\_\_ 3UTL-07 Programmers Power Tools-(1056)
  - \_\_\_ 3UTL-08 Applecon-(1016)
  - \_\_\_ 3UTL-09 Diskmaker and Appleseeds-(1045)
  - \_\_\_ 3UTL-10 Basic XT & Basic Utilities-(1022)

- \_\_\_ 3UTL-11 The Retriever-(1023)
- \_\_\_ 3UTL-12 Power Print III-(1024)
- \_\_\_ 3UTL-13 Disk Window III Plus-(1025)
- \_\_\_ 3UTL-14 Source Window/Data Window-(1026)
- \_\_\_ 3UTL-15 Powercat and Basic XRF-(1027)
- \_\_\_ 3UTL-16 Basic Extension-(1031)
- \_\_\_ 3UTL-17 Power Keys DM Plus-(1034)
- \_\_\_ 3UTL-18 RAM+3/Two-n-Fro III /128K-(1036)
- \_\_\_ 3UTL-19 Basic GTO-(1051)
- \_\_\_ 3UTL-20 Custom Font Manual-(1037)
- \_\_\_ 3UTL-21 Custom Font-(1038)
- \_\_\_ 3UTL-22 Fonts-Disk 01-(1039)
- \_\_\_ 3UTL-23 Disk III Backup by Bloom-(1011)
- \_\_\_ 3UTL-24 Gucspar by Bloom-(1042)
- \_\_\_ 3UTL-25 ACCIDIF by Bloom-(1028)
- \_\_\_ 3UTL-26 Mail List Manager Manual by Bloom -(1068)
- \_\_\_ 3UTL-27 MLM Utils by Bloom-Disk 01-(1048)
- \_\_\_ 3UTL-28 MLM Utils by Bloom-Disk 02 (1049)
- \_\_\_ 3UTL-29 MLM Utils by Bloom-Disk 03-(1050)
- \_\_\_ 3UTL-30 AppleWriter to 3 EZP by Bloom -(1085)
- \_\_\_ 3UTL-31 Pascal Menu Maker-(1054)
- \_\_\_ 3UTL-32 Catalyst Release
- \_\_\_ 3UTL-33 Reformatter III
- \_\_\_ 3UTL-34 Custom Font Demo & Font Bib PD
- \_\_\_ 3UTL-35 Apple 3-IBM by Bloom
- \_\_\_ 3UTL-36 ASCIIUPLD by Bloom
- \_\_\_ 3UTL-37 Font Generator 3
- \_\_\_ 3UTL-38 Apple 3 Reboot
- \_\_\_ 3UTL-39 Conpath by Bloom
- \_\_\_ 3UTL-40 BlocRead by Bloom
- \_\_\_ 3UTL-41 Nvaci By Bloom

- III WORD PROCESSING (6 DISK SET \$9.00)**
- \_\_\_ 3WDP-01A AppleWriter-(1006)
  - \_\_\_ 3WDP-02 Footnote III-(1003)
  - \_\_\_ 3WDP-03 InkWell Manual-(1029)
  - \_\_\_ 3WDP-04 InkWell Program-(1030)
  - \_\_\_ 3WDP-05 AppleWriter Demo
  - \_\_\_ 3WDP-06 Script 3 & Pascal Text Editor

| Mail this form with your check to :<br><b>Disketeria</b><br>Washington Apple Pi<br>7910 Woodmont Avenue, Suite 910<br>Bethesda, Maryland 20814   |                    |                   | Are you a member of Washington Apple Pi, Ltd? Y/N __. If Yes, Member Number _____.<br>All payments must be in U.S. funds drawn against U.S. banking institutions.<br>Non-members add \$3.00 per disk to listed prices for 3.5" and \$1.50 per disk for 5.25" disks. |              |  |  |                 |        |          |                 |        |          |                      |           |          |               |  |  |                 |        |          |                 |        |          |                      |           |          |  |  |  |                  |  |          |  |  |  |      |  |  |                                    |  |  |                |  |  |      |       |          |               |                   |  |
|--|--------------------|-------------------|---|--------------|--|--|-----------------|--------|----------|-----------------|--------|----------|----------------------|-----------|----------|---------------|--|--|-----------------|--------|----------|-----------------|--------|----------|----------------------|-----------|----------|--|--|--|------------------|--|----------|--|--|--|------|--|--|------------------------------------|--|--|----------------|--|--|------|-------|----------|---------------|-------------------|--|
| <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">Number of<br/>Disks</th> <th style="text-align: left;">Member<br/>Price @</th> <th style="text-align: left;">Extended</th> </tr> </thead> <tbody> <tr> <td colspan="3">3.5" Singles</td> </tr> <tr> <td>___ 4 or less @</td> <td>\$4.00</td> <td>\$ _____</td> </tr> <tr> <td>___ 5 or more @</td> <td>\$3.50</td> <td>\$ _____</td> </tr> <tr> <td>___ Sets (as marked)</td> <td>\$(above)</td> <td>\$ _____</td> </tr> <tr> <td colspan="3">5.25" Singles</td> </tr> <tr> <td>___ 4 or less @</td> <td>\$2.00</td> <td>\$ _____</td> </tr> <tr> <td>___ 5 or more @</td> <td>\$1.75</td> <td>\$ _____</td> </tr> <tr> <td>___ Sets (as marked)</td> <td>\$(above)</td> <td>\$ _____</td> </tr> <tr> <td colspan="3">+ postage \$1.00/disk,<br/>max. \$5.00.</td> </tr> <tr> <td colspan="2">TOTAL AMOUNT DUE</td> <td>\$ _____</td> </tr> </tbody> </table> | Number of<br>Disks | Member<br>Price @ | Extended  | 3.5" Singles |  |  | ___ 4 or less @ | \$4.00 | \$ _____ | ___ 5 or more @ | \$3.50 | \$ _____ | ___ Sets (as marked) | \$(above) | \$ _____ | 5.25" Singles |  |  | ___ 4 or less @ | \$2.00 | \$ _____ | ___ 5 or more @ | \$1.75 | \$ _____ | ___ Sets (as marked) | \$(above) | \$ _____ | + postage \$1.00/disk,<br>max. \$5.00. |  |  | TOTAL AMOUNT DUE |  | \$ _____ | <table style="width: 100%; border-collapse: collapse;"> <tr> <td colspan="3" style="border-bottom: 1px solid black;">Name</td> </tr> <tr> <td colspan="3" style="border-bottom: 1px solid black;">Box Number, Apartment, Suite, etc.</td> </tr> <tr> <td colspan="3" style="border-bottom: 1px solid black;">Street Address</td> </tr> <tr> <td style="width: 30%; border-bottom: 1px solid black;">City</td> <td style="width: 30%; border-bottom: 1px solid black;">State</td> <td style="width: 40%; border-bottom: 1px solid black;">Zip Code</td> </tr> <tr> <td style="border-bottom: 1px solid black;">Day Telephone</td> <td colspan="2" style="border-bottom: 1px solid black;">Evening Telephone</td> </tr> </table> |  |  | Name |  |  | Box Number, Apartment, Suite, etc. |  |  | Street Address |  |  | City | State | Zip Code | Day Telephone | Evening Telephone |  |
| Number of<br>Disks   | Member<br>Price @  | Extended          |   |              |  |  |                 |        |          |                 |        |          |                      |           |          |               |  |  |                 |        |          |                 |        |          |                      |           |          |  |  |  |                  |  |          |  |  |  |      |  |  |                                    |  |  |                |  |  |      |       |          |               |                   |  |
| 3.5" Singles   |                    |                   |   |              |  |  |                 |        |          |                 |        |          |                      |           |          |               |  |  |                 |        |          |                 |        |          |                      |           |          |  |  |  |                  |  |          |  |  |  |      |  |  |                                    |  |  |                |  |  |      |       |          |               |                   |  |
| ___ 4 or less @  | \$4.00             | \$ _____          |   |              |  |  |                 |        |          |                 |        |          |                      |           |          |               |  |  |                 |        |          |                 |        |          |                      |           |          |  |  |  |                  |  |          |  |  |  |      |  |  |                                    |  |  |                |  |  |      |       |          |               |                   |  |
| ___ 5 or more @  | \$3.50             | \$ _____          |   |              |  |  |                 |        |          |                 |        |          |                      |           |          |               |  |  |                 |        |          |                 |        |          |                      |           |          |  |  |  |                  |  |          |  |  |  |      |  |  |                                    |  |  |                |  |  |      |       |          |               |                   |  |
| ___ Sets (as marked)   | \$(above)          | \$ _____          |   |              |  |  |                 |        |          |                 |        |          |                      |           |          |               |  |  |                 |        |          |                 |        |          |                      |           |          |  |  |  |                  |  |          |  |  |  |      |  |  |                                    |  |  |                |  |  |      |       |          |               |                   |  |
| 5.25" Singles  |                    |                   |   |              |  |  |                 |        |          |                 |        |          |                      |           |          |               |  |  |                 |        |          |                 |        |          |                      |           |          |  |  |  |                  |  |          |  |  |  |      |  |  |                                    |  |  |                |  |  |      |       |          |               |                   |  |
| ___ 4 or less @  | \$2.00             | \$ _____          |   |              |  |  |                 |        |          |                 |        |          |                      |           |          |               |  |  |                 |        |          |                 |        |          |                      |           |          |  |  |  |                  |  |          |  |  |  |      |  |  |                                    |  |  |                |  |  |      |       |          |               |                   |  |
| ___ 5 or more @  | \$1.75             | \$ _____          |   |              |  |  |                 |        |          |                 |        |          |                      |           |          |               |  |  |                 |        |          |                 |        |          |                      |           |          |  |  |  |                  |  |          |  |  |  |      |  |  |                                    |  |  |                |  |  |      |       |          |               |                   |  |
| ___ Sets (as marked)   | \$(above)          | \$ _____          |   |              |  |  |                 |        |          |                 |        |          |                      |           |          |               |  |  |                 |        |          |                 |        |          |                      |           |          |  |  |  |                  |  |          |  |  |  |      |  |  |                                    |  |  |                |  |  |      |       |          |               |                   |  |
| + postage \$1.00/disk,<br>max. \$5.00.   |                    |                   |   |              |  |  |                 |        |          |                 |        |          |                      |           |          |               |  |  |                 |        |          |                 |        |          |                      |           |          |  |  |  |                  |  |          |  |  |  |      |  |  |                                    |  |  |                |  |  |      |       |          |               |                   |  |
| TOTAL AMOUNT DUE   |                    | \$ _____          |   |              |  |  |                 |        |          |                 |        |          |                      |           |          |               |  |  |                 |        |          |                 |        |          |                      |           |          |  |  |  |                  |  |          |  |  |  |      |  |  |                                    |  |  |                |  |  |      |       |          |               |                   |  |
| Name   |                    |                   |   |              |  |  |                 |        |          |                 |        |          |                      |           |          |               |  |  |                 |        |          |                 |        |          |                      |           |          |  |  |  |                  |  |          |  |  |  |      |  |  |                                    |  |  |                |  |  |      |       |          |               |                   |  |
| Box Number, Apartment, Suite, etc.   |                    |                   |   |              |  |  |                 |        |          |                 |        |          |                      |           |          |               |  |  |                 |        |          |                 |        |          |                      |           |          |  |  |  |                  |  |          |  |  |  |      |  |  |                                    |  |  |                |  |  |      |       |          |               |                   |  |
| Street Address   |                    |                   |   |              |  |  |                 |        |          |                 |        |          |                      |           |          |               |  |  |                 |        |          |                 |        |          |                      |           |          |  |  |  |                  |  |          |  |  |  |      |  |  |                                    |  |  |                |  |  |      |       |          |               |                   |  |
| City   | State              | Zip Code          |   |              |  |  |                 |        |          |                 |        |          |                      |           |          |               |  |  |                 |        |          |                 |        |          |                      |           |          |  |  |  |                  |  |          |  |  |  |      |  |  |                                    |  |  |                |  |  |      |       |          |               |                   |  |
| Day Telephone  | Evening Telephone  |                   |   |              |  |  |                 |        |          |                 |        |          |                      |           |          |               |  |  |                 |        |          |                 |        |          |                      |           |          |  |  |  |                  |  |          |  |  |  |      |  |  |                                    |  |  |                |  |  |      |       |          |               |                   |  |

Please write disk numbers on a separate sheet of paper and include them with your order.

# Classified Advertisements

Classified advertisements can be placed by mailing copy to the business office of Washington Apple Pi, Ltd., 7910 Woodmont Avenue, Suite 910, Bethesda, MD 20814. Be sure to include your WAP membership number and indicate area codes with your phone numbers. Ads must be received by the ad copy due date listed in the Calendar pages for that month in order to be included in the appropriate issue. Any ads postmarked after that time will be included at the discretion of the Editor. Cost is \$2.00/line (40 characters per line), maximum 12 lines. Members of Washington Apple Pi, Ltd., may place ads up to three lines at no charge. The editor reserves the right to refuse any ads deemed inappropriate.

## Services Offered

### Law Offices of

**Richard S. Sternberg**

A General Practice of Law since 1984

General Civil & Criminal Litigation

Employment, Labor & Civil Rights

Personal Injury & Auto Accidents

Business and Corporate Practice

Domestic Relations

Wills & Probate

Admitted DC, MD, VA, &

Fed. Courts

First consultation free and discount

rates with valid Pi membership

202-638-2300

## Wanted

800K ext. floppy drive for Mac wanted.  
Wk:(410) 268-9373. Hm:(410) 267-9666.

GCC Printer driver PLP 4.0 wanted. Call  
John at: 703-636-2487 before 10 PM.

Wanted: PowerBooks 100/145/170...in good  
condition. Call Stephen J. Schoen, 202-383-  
1370.

## For Sale

20 MB int. SE HD, orig. equipment, \$20  
Grappler (to use 9-pin IBM printers w/Mac, IIc,  
or IIGS), \$30. Call Deidra, 804/750-1338.

19" Macintosh grey scale monitor. Rasterops

Clear Vue/GS with video card. \$725. Call Maria  
410-757-8873.

Apple IIG SW: Hardly used! Mint Condi-  
tion! 512K RAM, RGB color monitor, mouse,  
keyboard, 5.25" & 3.5" floppy drives,  
WordPerfect, MathBlaster, Print Shop, Word  
Attack, assorted games, Desktop Publishing &  
system software. \$1500 OBO. Call De Von 410-  
381-8673.

HP toner for old LaserWriter/LaserJet Exp.  
data 10/92, 2 for \$30. Call N. Schmuff @301-  
4439620.

Lotus 1-2-3. Never registered. Best current  
mail order price \$330-\$350; asking \$250. Larry  
301-948-6647.

## ALLNET SERVICE CENTER

*Apple and Macintosh Specialists*

Mac Plus/512 Power Supply \$95

One MB Memory Upgrade Installed \$48

Upgrade Mac 512 KE to Mac Plus w/ 1 MB RAM \$335

Laser Printer, Hard Drive, Floppy Drive Repair

Call for our low rates • Pickup/Delivery

On-site/Walk-in • Service Agreements

**3020 Wilson Blvd., Arlington, VA, Tel: 703-527-4300**



# Look What We Can Offer You:

- ✓ **4 Imagesetters:**
  - ☆ L330, RIP 40
  - ☆ Agfa 9800, Emerald RIP
  - ☆ L230
  - ☆ L200
- ✓ **Color Proofing Systems:**
  - ☆ 3M Thermal-Sublimation
  - ☆ Canon CLC-300
  - ☆ DuPont Chromacheck
- ✓ **Scanning:**
  - ☆ Color (Flatbed & Slide)
  - ☆ Grayscale/Line/OCR
- ✓ **Turnaround to Suit Your Needs**
- ✓ **Delivery at Cost**
- ✓ **24-Hour Bulletin Board System**
- ✓ **Qualified Technical Support**



## *Imaging at its Best!*

4300 King Street, Suite 105, Alexandria, Virginia 22302

Phone: (703) 824-8022 • Fax: (703) 824-8023 • BBS: (703) 824-8024

Washington Apple Pi, Ltd.  
 7910 Woodmont Ave., Suite 910  
 Bethesda, MD 20814  
 March 1993

Second Class  
 postage rates  
 paid  
 at Bethesda, MD

|  |   |  |
|--|---|--|
| <h3>Memory Upgrades</h3> <p>1 Meg SIMMS .....\$39<br/>       1 Meg FX SIMMS .....\$39<br/>       2 Meg SIMMS .....\$85<br/>       4 Meg SIMMS .....\$149<br/>       16 Meg SIMMS .....CALL<br/>       LC 512K VRAM .....\$69<br/>       Quadra 256K VRAM .....\$49</p>   | <h3>PowerBook Upgrades</h3> <p>2 Meg Memory Module .....\$99<br/>       4 Meg Memory Module .....\$259<br/>       6 Meg Memory Module .....\$319<br/> <i>Memory for PowerBook 160 &amp; 180</i><br/>       4 Meg Memory Module .....\$300<br/>       6 Meg Memory Module) .....\$349<br/>       10 Meg Memory Module .....599<br/> <i>PowerBook Peripherals:</i><br/>       Lind Battery Conditioner .....\$179<br/>       Kensington Case - Deluxe .....\$79<br/>       Kensington Case - Standard .....\$60<br/>       GCC WriteMove II Printer .....\$549<br/>       Quantum Go•80 MB Internal .....\$429<br/>       Quantum Go•120 MB Internal ....\$599</p>  | <h3>Printers</h3> <p>GCC PLP II .....\$849<br/>       GCC BLP Elite .....\$1095<br/>       GCC Wide Writer 360 .....\$1649<br/>       Dataproducts LZR-960 .....\$1725<br/>       Dataproducts LZR-1560 .....CALL<br/>       CoStar LabelWriter II .....\$199<br/>       CoStar AddressWriter .....\$425<br/>       QMS PS-410 .....\$1599</p>   |
| <h3>Video Equipment</h3> <p>Amdek Mac Color Monitor 14" .....\$399<br/>       Sony Trinitron (LC/Quad) 14" .....\$429<br/>       Sony Multi-Mode Two Page .....\$2150<br/>       Sony CPD-1604 17" .....\$1199<br/>       Sony Trinitron 14" 1304 .....\$649<br/>       SuperMac SuperMATCH 17 .....\$1099<br/>       Radius 24X Video Adapter .....\$995<br/>       Demo RasterOps 24L w/Accel .....\$899<br/>       RasterOps 24STV .....\$849<br/>       SuperMac Video Spigot .....from \$349<br/>       NEC 3FGx 15" .....\$699</p> | <h3>Software Specials</h3> <p>Lotus 123 Mac .....\$249<br/>       Norton Utilities 2.0 w/SUM .....\$99<br/>       Salient Auto Doubler .....\$55<br/>       Suitcase II .....\$45<br/>       Maxis Snooper Nubus .....\$169<br/>       Cathy Daily Planner .....\$43<br/>       System 7 Upgrade .....\$95<br/>       Apple QuickTime Starter Kit .....\$159<br/>       Daymaker .....\$69<br/>       Now Utilites .....\$90<br/>       CE Software QuickKeys .....\$99<br/>       Fractal Designs Painter .....\$239<br/>       Microsoft Flight Simulator .....\$48<br/>       Glider .....\$35<br/>       Spectre .....\$37<br/>       Kid Pix .....\$36<br/>       Grandma &amp; Me CDR0M .....\$45</p> | <h3>Modems</h3> <p>Zoom 24/96 Fax Modem .....\$99<br/>       Global Village TelePort Fax .....\$199<br/>       Supra 2400 v.42bis Fax .....\$199<br/>       Supra v.32bis Modem 14400 .....\$399</p> <h3>Mice Etc</h3> <p>Kensington TurboMouse 4.0 .....\$129<br/>       Logitech MouseMan .....\$95<br/>       Logitech TrackMan .....\$99<br/>       WACOM 6x9 Tablet .....\$475<br/>       CoStar Stingray .....\$89<br/>       UnMouse .....\$149</p> |
| <h3>Hard Drives</h3> <p>Quantum 42 Internal .....\$239<br/>       Quantum 42 External .....\$289<br/>       Quantum 85 Internal .....\$299<br/>       Quantum 85 External .....\$399<br/>       Quantum 120 Internal .....\$349<br/>       Quantum 120 External .....\$449<br/>       Fujitsu 525 Internal .....\$1049<br/>       Fujitsu 525 External .....\$1149<br/>       Ocean 128 Meg Optical Ext .....\$1495<br/>       PLI45 Meg Removable .....\$569</p>  | <div style="text-align: center;">  <p>6931 Arlington Road, Bethesda MD 20814<br/>         Less than 1 Mile from the WAP Office<br/>         At the corner of Arlington Road and Bradley<br/>         Boulevard, behind Peoples.<br/>         Unlimited Validated Free Parking in Garage<br/>         Weekdays 10-6, Saturday 11-4<br/>         MasterCard/Visa Accepted</p> <h2>301 • 907 • 0300</h2> </div>   |  |