

# Washington Apple Pi

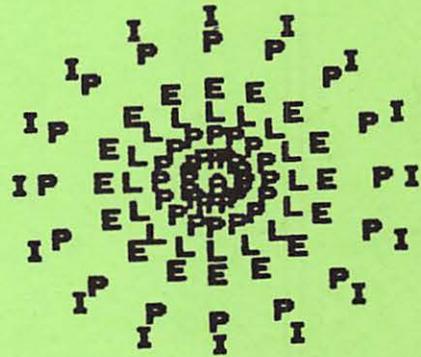


Volume 1

May 1983

Number 1

## New Member Reference Book



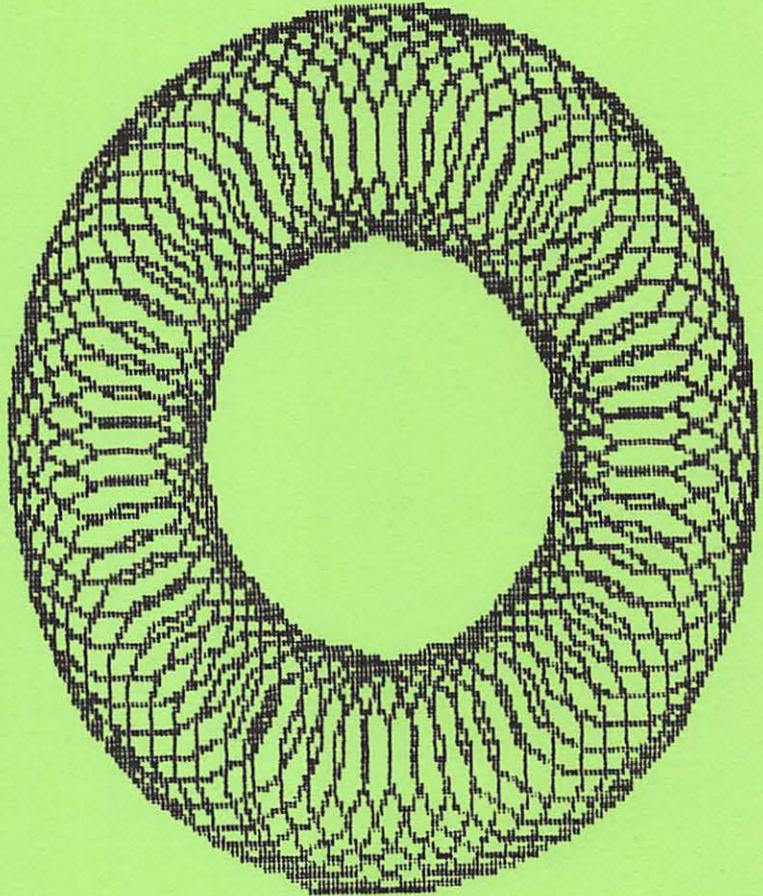
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## Publication

This booklet was compiled by Betsy Harriman with extensive assistance from Robert Platt. Other members contributing to the effort were: Gena Urban, Tom Warrick, and Bernie Urban.

Send your suggestions for inclusion in the next revision to the WAP business address, marked

ATIN: NEW MEMBER REFERENCE BOOK

Apple user groups may reprint without prior permission any portion of the contents herein, provided proper credits are given.

## Membership Dues

Membership dues for Washington Apple Pi are \$25.00 for the first year; annual dues thereafter are \$18.00. Membership begins with the month in which you join. If you would like to join, please call the club office or write to the office address. A membership application will be mailed to you. Subscriptions to the monthly Washington Apple Pi Journal are not available; it is distributed as a benefit of membership.

## Current Office Hours

Mon, Wed, Thu, Fri 10 AM - 2:30 PM  
 Tue 12:30 - 2:30 & 7 - 9:30 PM  
 Sat 12 -4 PM (meeting Sat only)

(Changes will be published in the monthly journal.)

# History of the Washington Apple Pi

by David Morganstein and Bernie Urban

The WAP began in December of 1978 when a few recent purchasers of the Apple II microcomputer decided to sit down together to discuss how little they knew about the machine. While some of these individuals knew a fair amount about computers in general, none were or could be experienced in equipment which was so new. Yet, there was an understanding that a users group could help all participants to meet their varied goals.

The first few meetings were held in computer stores and libraries and culminated in a decision to collect useful facts into a newsletter. It was first published in February of 1979. Good fortune resulted in an opportunity to meet at the George Washington University. GWU has a fairly central location, and a laboratory containing more than a half a dozen Apples, made available in a limited capacity to the group.

By the end of 1979, the group had grown to 110 members and continued to meet at the GWU location. The monthly meeting featured club business issues followed by a formal talk and a general question and answer session. A small library of public domain software was assembled. Copies of the library were distributed to members at the meetings for a nominal fee.

During 1980 increasing numbers of Apple purchasers contributed to growth. The club accepted its 500th member at the January 1981 meeting. Additional activities included a

computerized bulletin board using one Apple through which club and individual announcements could be made. Other services included a group purchase arrangement allowing members to obtain computer items at a low cost. The opportunity of low prices carried with it an understanding that the usual support expected from a store could not be provided by the club. A "hot-line" list of members willing to respond to pleas for help was added to the newsletter.

At the end of 1981 the first formal tutorial was given. This program consisted of two 3-hour sessions for Apple owners with a good familiarity about the use of the machine but lacking in understanding of micro-processor fundamentals.

By December of 1981, the club had grown past the 1,000 member mark and the GWU began requesting a rental fee for the use of an auditorium. Limited parking for the now 250 or so regular members further decreased the desirability of that location. A new sponsor, the Uniformed Services University for the Health Sciences (USUHS), was found.

The USUHS is located near the Beltway and offers free parking! (Unheard of in the D.C. area...) Also, several auditoriums feature overhead tvs on which displays can be projected.

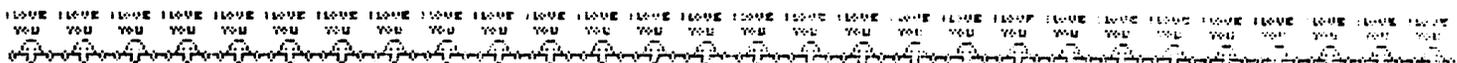
During 1982 additional tutorials were given on Pascal, Machine Language, VisiCalc and Personal Finance

Programs. The club public domain software library expanded to almost 100 disks and mail orders were accepted. By the summer, member 2,000 joined the WAP. The organization incorporated, rewrote its by-laws to meet incorporation requirements and obtained a non-profit status from the Federal Government.

At most meetings over 400 attendees can be expected. A one hour question and answer session and an informal demonstrations of new products are part of the usual monthly meeting program.

To provide a smaller group atmosphere, the WAP has organized Apple Teas to be held around the area. These sessions, held on weeknights or weekends, usually attract from 3-8 people, most of whom are newcomers to the Apple. The purpose of the teas is to allow an informal discussion of hardware and software questions. At least one experienced user is sought to attend each session.

The WAP has opened an office (8227 Woodmont Ave., Bethesda, Md. 20814, 301-654-8060) to serve its now over 3000 members. Our office is maintained with some paid and some volunteer staff. It is accessible about 20 hours a week and contains a growing library of books and periodicals for members use. The WAP public domain software disks can be purchased there and items bought through the group purchase program can be picked up there.

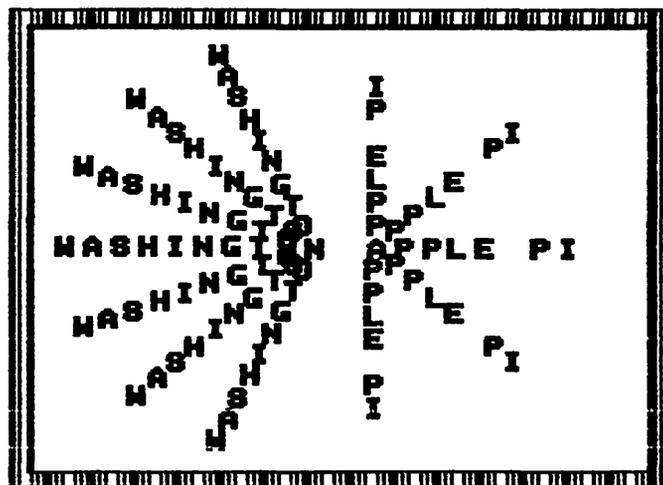


## Apple Teas

WAP is sponsoring small discussion groups around the D.C. area to help members meet in an informal setting. Check the WAP Journal for the Apple Tea nearest to you and call the host to reserve a place.

## The WAP Journal

The next time you visit your favorite computer or book store, see if they have our magazine on their shelves. If they don't, show them a copy and ask if they are interested in making it available to their customers. If so, contact Bill Hershey or the Urbans with the store's name and phone number.



## Hints for Newcomers

Welcome to the Washington Apple Pi, a non-profit corporation dedicated to microcomputer uses. We maintain an office at 8227 Woodmont Ave., Suite 201, in Bethesda. We normally are open for a few hours every day, one evening a week and one Saturday afternoon a month. Current office hours are: 10-2:30 weekdays except Tuesday, when the hours are 12:30-2:30 and in the evening from 7-9:30. On the Saturday of the monthly meeting, the hours are Noon to 4 P.M. Changes will be listed in the WAP journal. You can visit or call (301) 654-8060 to ask questions about any of the items described in these hints.

### 1. MEETING TIME AND PLACE.

WAP meets monthly at the Uniformed Services University of the Health Sciences, Building A, on the fourth Saturday morning. The USUHS is located at 4301 Jones Bridge Road, between Wisconsin and Connecticut Avenues, about 2 miles inside the Beltway. Occasionally, due to Holidays, the meeting may be moved to the third or fifth Saturday. The journal, described below, and the telephone answering service will carry the most current information on all club functions including time and date of meeting.

The monthly meetings have several purposes: to conduct club business; to provide an educational presentation; to allow for an open exchange of comments, questions, pleas for help, etc. From 8:45 til 10:00 A.M. when the meeting begins, it is possible to purchase library disks or get your latest copy of the magazine. NOTE: If you plan to make a purchase at the meeting, please bring your checkbook!!! We prefer not to receive cash...it makes the Treasurer nervous.

WAP volunteers are available from 8:45 to 10:00 for the above purposes; please do not come earlier! Usually, there is an informal "Help" session from 9:00 - 10:00 in the main auditorium, and an "applications demo" in the cafeteria where various software and hardware products are demonstrated. The business meeting lasts approximately until 10:45, at which time a presentation is given. After this, Special Interest Groups (SIGs) meet for their own purposes.

One of the SIGs, Appleseeds, is for younger APPLE enthusiasts and gathers during the regular meeting time. So, if your household contains such WAP members, bring them along to the meeting. They may find the Appleseeds group of interest.

When attending the monthly meeting, please respect certain procedures required by the USUHS faculty. Enter the building through the below ground doors by the guards' post (visible when exiting the wonderful, FREE, covered, parking structure!!!). When traveling to meeting locations within the building, go to the below ground level and follow the corridors. Do not open the security doors and travel across the court yard. Commercial activities are strictly prohibited. If you see someone engaged in such activities, request that they take their business outside of the USUHS and not risk the WAP's use of the facility. We ask you to observe parking signs. Certain spaces are for vans and others for automobiles. Please park accordingly. We are very thankful to the USUHS for allowing us access to their excellent facilities. Our continued use depends on our willingness to respect these regulations.

### 2. SIGS.

WAP has many Special Interest Groups. Currently active are groups interested in: Pascal, Education, Business, CP/M, Games, Assembly Language, NEWSIG for new members, APPLE ///, Law, Telecommunications, LOGO, Forth, Appleseeds and Computer Uses for the Handicapped. These groups meet at various times throughout the month. Most meet after the general WAP meeting on the fourth Saturday. The chairmen of these groups are listed under Officers and Staff in the monthly magazine. If you are interested in any other special topic, feel free to write a note about it for inclusion in the magazine and/or come to a meeting and announce your interests. These SIGs provide a valuable service in educating members.

### 3. TELEPHONE ANSWERING MACHINE

WAP maintains a telephone answering machine which is attached to the office phone, (301) 654-8060, when the office is closed. This service allows members to obtain information at any hour on meeting times and places; request assistance with problems; and request a password to the club Computer Bulletin Board (ABBS), described below.

### 4. ABBS

For those people with telecommunications equipment, like the DC Hayes Micromodem, WAP has an on-line bulletin board. The service can be used to obtain meeting information, download programs, leave (and retrieve) notes to other members and make general announcements about bugs, fixes and items for sale. To obtain access to the ABBS, call the

office or leave your name and WAP number on the telephone answering system.

### 5. SOFTWARE LIBRARY

WAP maintains an ever-growing library of inexpensive, public domain software. The software is obtained from you and other members who contribute programs they have written or typed in from magazines. The library currently contains over 100 disks with 15 or more programs per disk. The cost is nominal: \$5.00 if purchased at a meeting or the office, or \$7.00 if mailed directly to you. The disks are arranged by subject, e.g. Games, Utilities, Business, Graphics, Education, etc. The journal contains an order blank indicating the subject of each disk. A complete catalog listing of each disk is sent to new members. Subject to availability, the catalog can be obtained at most meetings.

To encourage member contributions to the library we have the following policy. Send or bring in a disk with public domain programs you wish to contribute, and, if we use the programs, we return to you a library disk of your choice. Please make sure the program is as well documented as possible and that it works!! No copywritten software should be offered.

We want to emphasize several things about the library. First, since the disks are extremely inexpensive, please do not expect the kind of documentation of use and level of sophistication found in \$35.00 games and \$150.00 business packages. (Although this may seem obvious, you'd be surprised at the number of comments received about a program that costs \$.10!!) These programs are meant to have an educational benefit to the user. They do many valuable and delightful things. By listing and studying them, you can learn a great deal about the APPLE and how to use it.

Second, the effort required to maintain the library is enormous. We continue to provide the service because it is popular and does produce some revenue. If you order disks to be mailed directly to you, please allow 4 - 6 weeks for turn around. There is a long string of volunteers involved in this process and it takes that long to receipt your order, package the material and mail it back to you.

You may purchase disks at the office during regular hours (given above) or at the monthly meeting between 8:30-10:00. The library closes down at the beginning of the regular meeting and generally is not open afterwards. The library staff want

to attend the SIGs just like you and I. With your contributions and understanding, the library will continue to grow and be of service to us all.

## 6. JOURNAL

The journal is published monthly. It is available for pickup at the monthly meeting and is mailed out to the many members who cannot attend. The journal is only as good as the articles submitted. It will serve us only if we serve it by taking the time to write up the many interesting things the members are doing. We need articles of all kinds: problems solved and those needing solutions; reviews of hardware and software you have purchased and think others should obtain or avoid; humorous articles and interesting applications you have discovered. If every member submitted one article a year, we could double the size of the journal and save our Editor enormous worry.

To submit an article convey it to the Editor, preferably in machine readable copy. The Editor can handle Apple Writer, ScreenWriter, Apple Pie, Supertext, and the files of any processor that produces binary or text files. He can also handle Pascal files. But if you do not have the article in machine readable form, do not hesitate to submit it in hard copy to be typed and processed by the Editor.

The journal is also a place for short free advertisements. If you have something to sell, just mail in a brief description. We have also been encouraging local dealers to include brief announcements of special sales, discounts or other items of interest. The journal can be used to announce job offerings or availability for a position involving micromputers.

Back issues from recent months are often available for purchase. If so, they can be obtained at the regular meeting, at the office, or ordered by mail. However, they usually are sold out within a few months. A preferable solution for 1979-1980 back issues is the Inside Washington Apple Pi (see below).

## 7. INSIDE WASHINGTON APPLE PI

WAP has a compendium of some of the best articles from our first two years. There are articles on Applesoft, Machine Language, Pascal, hardware and a variety of other subjects. The collection can be purchased at the monthly meeting or at the office for \$6.00 (cheap) or mailed directly to you for \$7.50.

## 8. GROUP PURCHASE

WAP regularly surveys the membership for group purchase opportunities. When sufficient numbers want to purchase an item, especially something not found locally, a group purchase can be arranged. This usually means paying all or part of the cost in advance and often waiting some period for delivery. The purpose of this service is solely to cut costs and obtain items not readily available locally. To find out what items are currently in the program, call the phone number found in the front of the WAP journal. These items may be mailed directly to you or it may be necessary for you to pick them up at the office. The ABBS includes a listing of current group purchase items.

## 9. HOT LINE

If you need help, we have a list of folks who have volunteered to take telephone questions on a host of subjects. This list is found in the journal and includes the phone numbers of the volunteers. Several of the subjects covered are software packages. Technical questions about the products use should be asked only by those who have purchased the product or are considering purchasing it. If you believe you can help others, please notify us so that we can add your name as a resource.

## 10. TUTORIALS

From time to time WAP holds tutorial programs. These are short courses lasting from one to four 3-hour sessions providing specific instruction in subjects of interest. The format includes a lot of hands-on time with the APPLE. So far there have been tutorials on an Introduction to the Apple, Applesoft, Assembly Language and Pascal. These tutorials will be repeated from time to time. Normally, a minimal fee of \$25 to \$40 is charged to insure that those expressing interest will attend, thereby guaranteeing a certain class size. Those bringing their own APPLES are charged less than those not able to do so, a small rebate to encourage them to haul in their equipment. If you do not bring an APPLE, one will not be provided; you will have to look over someone's shoulder.

## 11. VOLUNTEERING

As we have said repeatedly above, this outfit depends almost entirely on volunteers. It only works because members come forward to stuff envelopes, write articles, copy disks, mail out whatever, and generally give what they can. You don't have

to be an old hand at the keyboard to contribute. To offer your services, just call any Board member listed in the journal. We even have a "Volunteer Coordinator" to keep track of people who want to help but don't know how. What you will get out of contributing your time may be no more than a warm feeling and some new friendships. We, the volunteers, think that's plenty.

Again, welcome...  
David Morganstein, President

## Annual Elections

by Robert C. Platt

WAP's many fine services are the result of much volunteer labor. Our Officers and Board of Directors coordinate and lead these efforts. The Board of Directors meets monthly, and all Board meetings are open to all interested members. (Since the meetings are rather informal, all WAP members present are can participate in the Board's discussions and can vote.)

Each April a Nominating Committee seeks out volunteers willing to serve on the Board. Members are also encouraged to nominate themselves. During May, a mail ballot is distributed with separate votes held for President, Vice President, Treasurer, Secretary and Directors-at-large. These ballots can be cast at the May meeting or mailed to the WAP Office by a deadline announced for early June.

A volunteer Teller Committee then opens all of the envelopes and counts the votes using (as you may guess) an Applesoft program. After all the votes have been tallied and proofread, the results are announced at the June meeting. The new Officers and Directors begin serving a one year term on July 1. (See Article IX of the Bylaws for further details.)

We hope that you will consider serving on the WAP Board, as a variety of talents and backgrounds are required to keep the organization strong. And of course, we can always use non-candidate volunteers for our Teller Committee.

## Need Topics

The presentations at our Monthly Meetings provide you with an introduction to the Apple and its applications. Topics vary from discussions of software packages to introductions to programming languages. Please suggest topics to the WAP Office for our Program Chairman.

## Attending Your First Pi Meeting

by James T. Demay, Jr.

Two of the major benefits of belonging to Washington Apple Pi, in my opinion, are the exchange of ideas and the sharing of experiences. The ARBS (Apple Bulletin Board System run by WAP) offers an acceptable forum for short messages, but the monthly club meetings are an experience in themselves. If you have not yet attended, I would like to give you an idea of what goes on and how to get the most from your Saturday morning.

I always try to arrive at USUHS by 9 o'clock. The main meeting doesn't start till 10, but if you don't get there early, you will be depriving yourself of the best part of the meeting. The hour between 9 and 10 is used to full advantage. It is at this time the WAP newsletter is distributed, club library disks are picked up, and new members sign up. This all happens in the lobby while Bruce Field, Tom Warrick and a few other knowledgeable Apple owners conduct an informal question and answer forum in the main meeting room, actually a lecture hall for the USUHS students.

If you arrive any time after 9:00, you will be met by what appears to be the serenity of a prospering beehive. Look closely toward the center, and you will see Paula and/or Bernie Benson answering some new member's questions under the information sign. To your right, there is a wall of display cases to which the club library catalog has been fastened for your perusal. Look closely at this for you will find many exciting and useful programs almost free for the asking. I say almost free because the club charges only \$5.00 per disk to club members. Along the opposite wall there are usually three tables set up, each manned by several volunteers. The closest table to the elevators is manned by Gordon Stubbs and his staff of volunteers. This is the place to order and pay for library disks, pick up back issues of the newsletter, and renew your membership. Your name and WAP membership number will be required by the receipt writer to conclude these transactions. If possible, please pay by check. Having the check made out in advance to Washington Apple Pi, including your membership number, will shorten your time in the always long lines.

The receipt writer will take your check, or cash, and give you two copies of the receipt. If you paid for library disks, you will want to move to the table to the right. Here you give one copy of the re-

ceipt to the volunteer behind the table full of disks. S/he will select the disks indicated by the receipt and give them to you.

The third table is the place to pick up your latest copy of the WAP newsletter. Here your zip code and name are required by Gena and Bernie Urban and the other volunteers behind the piles of newsletters. There are three lines divided by zip codes. You can determine which line to enter by the signs above each volunteer. When you get to the front of the line, tell the volunteer your zip code, and then your name. S/he will find your mailing label, and affix it to a copy of the newsletter. If you have not done so, examine your mailing label. It consists of four lines. The first is your name. The second line is important since it has your WAP membership number followed by a slash (/) and the expiration date of your membership. Sending a check to cover your renewal a month before this date will insure that you do not miss an issue of the newsletter and that you will receive the full benefits of the club. The last two lines of the label are your home address. The magazines which are not claimed at the meetings will be mailed to members at club expense.

If you have been reading carefully, you will have noticed the recurrence of one word in particular: VOLUNTEER. This was no accident. The people you see here (and many you don't see) are working for you for free. The joy of sharing in and being a part of this evergrowing group of dedicated individuals is all the reward they receive. I like to think that by just being near so many talented and intelligent individuals, some of those desirable qualities will "rub off" on me. If you have the time and feel the urge to help, ask anyone behind a table to direct you to David Morganstein, the club President and general overseer for these Saturday morning get-togethers. He is always looking for volunteers to help with something.

The final table is manned by Dana Schwartz, the Vice-President. He is accepting membership applications and checks from new members. This is where you will find out just how many members there are. As of the August meeting there were over 2000.

The activity in the lobby slows as the 10 o'clock meeting time nears. This is because the more experienced meeting goers know that all of the seats are taken by 9:45 or so. Unless you like standing in the

aisles, I would advise an early entry into the auditorium.

The main meeting is conducted, covering club business, and discussing relevant topics, after which there is usually a presentation about a subject of interest to the majority of members. These presentations are interesting, often humorous and always informative.

The show is not over yet. When this part of the meeting is over, the SIGs (Special Interest Groups) wander off to separate rooms of the USUHS building to conduct their own minimeetings. For a listing of the many SIGs and their chairmen see the first page in any WAP newsletter.

Do yourself a favor; attend the next meeting. You won't be disappointed. After attending a meeting or two, you may be interested in volunteering your services. If you are, we can use the help!

## Group Purchase Power

Group Purchase Phone—(703) 448-0984

Just a reminder that the Group Purchase phone operates Monday through Thursday evenings, 7:00 PM to 9:30 PM. All of your Group Purchase questions (including prices) can be answered by the volunteers who staff the phone. Please do not call the club office with questions concerning group purchases.

## New Pickup Policy

Beginning January 24, 1983, group purchase items previously purchased at monthly meetings may now be purchased at the office during regular operating hours. This includes disk drives, blank diskettes, flip-files, 16K cards, game port extenders, paddles, joysticks and the few software items that we carry. However, larger items such as monitors and printers must still be ordered through regular group purchase channels (i.e. call the group purchase phone) and they will be shipped directly to members. They will not be available at the office.

Effective with this new policy, group purchase activities at monthly meetings will no longer be available. That is, no orders, pickups, or purchases will occur at monthly meetings. These changes expand pickup hours (80 hours/month vs. 2 hours/month) and do away with those nasty lines at monthly meetings(!).

## How to Use the WAP Library Disks

by Robert C. Platt

New Apple owners will find WAP Library disks easy to use. The following tips will help you get the most out of your library disks. Library disks come in four separate formats, and different procedures must be used for each type of disk.

### DOS 3.3 DISKS

(Disks 100 through 195 and Disk ED-SIG1 are all in DOS 3.3 format.)

With the exception of Disk 133, you can use these disks by placing them in Drive 1 when turning on the machine. The first program executed is usually called HELLO. The HELLO program displays the title of the disk and usually shows the catalog of the disk as well. The HELLO program on most of the recent disks are written in Applesoft BASIC. However, earlier disks (eg up to Disk 101) have HELLO programs written in Integer BASIC. If you try to boot such disks without first loading the Integer Basic interpreter, you will get an error message.

Recent disks also contain binary files with names like INSTRUCTIONS. To read such documentation files, type "BRUN INSTRUCTIONS" and then use the arrow keys to scroll back and forth through the file.

### DOS 3.2 DISKS

(Disks 1 through 40 are written in a 13 sector per track format, which was built into Apple disk drives sold before August 1979. Most Apple disk drives are now capable of reading 16 sectors on each track, but can still read the old format disks with special adapter programs.)

Most new Apple owners cannot read DOS 3.2 disks without using the special programs distributed on their DOS System Master Disk. The MUFFIN program described in Appendix K of the DOS Manual, will read files from a DOS 3.2 disk and transfer them to a DOS 3.3 disk. If you do not want to keep a separate copy of the DOS 3.3 version of your WAP library disk, you can use the BASICS diskette. Insert BASICS in your Drive 1 when you turn on your Apple. In about 5 seconds the screen will say, INSERT YOUR 13-SECTOR DISKETTE AND PRESS RETURN. You can then boot up your DOS 3.2 WAP library disk from Drive 1.

### PASCAL DISKS

(Disks 300 through 308 use the UCSD Pascal System disk format. You must have 64K of RAM memory and the UCSD

Pascal System to run these disks.)

Each disk contains a documentation file named PIG6.DOC.TEXT (where the number is different for each disk.) To read the documentation on the screen, enter the Filer and type T and then "PIG6:PIG6.DOC.TEXT,-CONSOLE:". To print the file type "PIG6:PIG6.DOC.TEXT,PRINTER:".

Many programs include commented source code and also a separate TEXT file with documentation. To run a program when a CODE file is included, type X from the Command menu and enter the name of the file. (Do not type the .CODE suffix. If the CODE file is not included on the library disk, enter the Filer, type G and the name of the program, quit the Filer and type R from the Command menu.

### CP/M DISKS

(Disks CPMSIG1 through CPMSIG4 have programs which execute under the CP/M operating system. A special circuit board with a Z80 microprocessor chip is required to run these programs.)

Our library disks do NOT include a copy of the CP/M operating system. To use these disks you must first boot CP/M from one of your own disks which contains the operating system. When you see the A> prompt, insert the library disk. Each library disk has a file of general documentation named CPMSIG01.DOC (or whatever the disk's number is.) To list this on your screen, type "TYPE CPMSIG01.DOC" and use CTRL-S to halt the scrolling of the listing. For a printed listing, type "PIP PRN:=CPMSIG01.DOC".

The following convention is used in naming CP/M disk files. The name of documentation files end with DOC. Executable programs end with COM, and source programs end with ASM, BAS or PAS, depending upon whether they are in Assembly Language, BASIC or JRT Pascal. These endings are called "extensions."

In order to save disk space, some of the files on the CP/M Library disks have been recorded in a special compressed format. These files have a Q as the middle letter of their extension. For example, file TED.DOC is a compressed version of file TED.DOC. Before a compressed file can be used, it must be expanded into regular format by running USQ-15.COM from disk CPMSIG02.

To execute a COM file, type the name of the file (without the COM extension) at the > prompt.

## Book and Serial Holdings

The Reading Library is growing. Because of generous donations of magazines and other materials, we have nearly 90% of some titles. However, there is still need for books, manuals, and magazines pertinent to Apple and micro-computers in general. We need two things:

1. Donations of magazines, books and manuals.
2. Suggestions of books to buy and magazines to subscribe to.

For any response, please call the club office or Jess Wagstaff, 937-4215.

None of our serial holdings are complete. However, the library has the majority of all issues published for most of the following titles:

### Commercial Journals:

Byte	1977-1982
Nibble	1980-1982
Creative Computing	1977-1982
Kilobaud/Microcomputing	1977-1982
Softalk	1981-1982
Dr. Dobbs	1977-1980
Interface Age	1980-1981
Call-A.P.P.L.E.	1980-1982
Micro	1980-1981
On Computing	1980
Recreational Computing	1981
Rom	1977-1978
Softside	1980-1982
Microsystems (CP/M)	1983
Peelings II	1982
Compute!	1980-1981
Personal Computing	1978-1982

### Apple User Group Newsletter & City

Abacus II - Castro Valley, CA  
Applections - Sidney, Australia  
Apple Port Barrel - Houston, TX  
Apple Dayton - Dayton, Ohio  
Apple Pickers - Indianapolis, IN  
Apple/Sass - Honolulu, HI  
Apple Sauce - Los Angeles, CA  
Apple Slice - Salt Lake City, UT  
Baud - New York, NY  
Cider Press - Rochester, NY  
Cider Press - San Francisco, CA  
Erie Apple Crunchers Express - PA  
Grapevine - Newark, DE  
Keystone Apple Core - Mechanicsburg, PA  
Laughs - Louisville, KY  
Michigan Applegram - Detroit, MI  
Neat Notes - New England  
Northern Illinois Apple Users Group - Chicago, IL  
Pascal News - Allentown, PA  
Washington Apple Pi Journal

The library is located at the WAP Office. Photocopying is available at 5 cents per page.

## Disk Library Information

### I. DISK SALES

The Washington Apple Pi, Ltd. currently has two different methods of selling diskettes of contributed and public domain programs:

- a. Direct purchase and pickup at the monthly club meeting.
- b. Mail order purchase with mail delivery (Mail Order).

There are two receipt writers for disk sales (in addition to the receipt writers for membership, etc.) and the club now stocks the library disks in large quantities. At least 20 copies of each volume are available for each meeting and "best sellers" may be stocked 35 to 45 deep.

### II. DOS 3.2 TO DOS 3.3. CONVERSION

The Washington Apple Pi disk library currently includes 40 disks with programs that are in the DOS 3.2 (13 sector) format. Most, but not all, of the programs are unique to the DOS 3.2 library and do not appear in the DOS 3.3 library which currently includes Volumes 100 through 133.

The DOS 3.2 formatted programs may be run on any APPLE II or APPLE II Plus with the DOS 3.3 controller PROMs by first booting the BASICS disk or by running the BOOT13 program on the SYSTEM MASTER disk that came with your APPLE II, and then following the prompts. An alternative to performing this procedure each time is to convert the disk from DOS 3.2 format to DOS 3.3 (16 sector) format using the MUFFIN program on the SYSTEM MASTER. Most of the DOS 3.2 formatted programs can be successfully converted to the DOS 3.3 FORMAT. Programs that call the Read or Write to Track and Sector (RWTS) routine do not successfully convert since RWTS is not the same for the two formats. Programs that use only the BASIC Language and DOS commands should all MUFFIN successfully. The BOOT13 and MUFFIN programs are also included on Volume 101 - UTILITIES B.

There are some problems with the current DOS 3.2 library series. Some of the disks have not been INITIALIZED with the proper volume number. For this reason, the volume number displayed when a disk is CATALOGed does not match the volume number on the disk label. A more significant problem is that four of the disks do not boot because the greetings program name called from within DOS is not the same name as the program name in the Volume Table of Contents (VTOC) displayed by the DOS command CATALOG. The disks in this category are Vol-

umes 23, 28, 29 and 40. This latter problem may be overcome by first booting another DOS 3.2 disk to load DOS and then inserting the disk that does not boot. An alternative is to correct the problem when the blank target disk is INITED prior to the source disk being MUFFINED to DOS 3.3. This is accomplished by specifying the proper greetings program name and volume number. The greetings program name in most of the DOS 3.2 library series is the first program name that appears when the disk is CATALOGed. This is the case for each of the four disks that do not boot. The correct volume number can be read off the disk label. An example of the proper command string for INITIALIZING a blank disk for Volume 23 is: INIT WAP: GAMES 8, V23. Then run MUFFIN and follow the prompts using the = sign (wildcard character) for the file name, Yes in response to whether prompting is desired and RETURN to replace the greetings program with the proper one that will be converted by MUFFIN.

### III. DISK RETURNS

A question often asked by new members is: "What do I do if a club disk doesn't boot or generates I/O ERRORS?" The answer is the club has a return policy for disks that do not work. Before you bring a disk in for replacement, please check to ensure that your system is working properly and that you are following proper procedures. If the disk just spins when you turn the power on and does not boot or produce an I/O ERROR, then it is probably a DOS 3.2 disk (all Volume 1 through 40 disks and all but recent sales of the lower numbered Eamon series disks are DOS 3.2 unless you have MUFFINED them to DOS 3.3). Check by booting the BASICS disk or running BOOT 13 from your SYSTEM MASTER or Volume 101 - UTILITIES B. If the disk produces an I/O ERROR after power turn on, try booting your SYSTEM MASTER. If the SYSTEM MASTER boots without an I/O ERROR, catalog the disk that doesn't boot and try running some of the programs on the disk. If you don't get an I/O ERROR from this, then the disk is probably all right but may have a bad DOS track. If the disk is at fault, bring it back and it will be replaced. The conditions of replacement are:

1. The disk must have the original label.
2. The replacement disk will be the same volume number as the returned disk.

by Dave Weikert and Gordon Stubbs

3. The disk should not be physically damaged through misuse (the staff copiers do not copy with peanut butter sandwiches and paper clips nearby).

### IV. NEW COPY PROGRAM IN USE

Currently, about half of the disk volumes sold by Washington Apple Pi are copied commercially and half are copied by library staff members. The commercial copier is ALF Incorporated of Denver Colorado.

The library staff copiers have used a variety of copy programs in the past. Since each copier may copy from 50 to 100 disks each month and all the copies must be made within a one to two week period, the time it takes to copy a disk is important. The time taken to copy a disk (DOS 3.2) using past copy programs used by the staff ranged from about 30 to over 200 seconds and a summary test to ensure that the disk properly cataloged would add at least 15 or more seconds. The summary test was certainly not comprehensive and every once in a while, disks with copy errors could go undetected. None of the previously used copy programs have really been satisfactory since they were not designed for production copying.

The Washington Apple Pi is now using a copy program (also by ALF) that is quite satisfactory. The name of the program is ALF PENULTICOPY and we really like it. The program takes about 40 seconds to copy a 13 sector disk. However, this includes a full verification that all bits on the target disk match the image of the source disk in memory. The program also provides the capability to copy either 13 or 16 sector disks, to run up to 9 slave drives in sequence, to select between copy with verify or verify only and a number of utilities to test drive speed, delete DOS to make more memory space to receive the source disk track and sector image, etc. There is also an ominous "DESTROY POWER SUPPLY?" prompt that appears when setting the default settings for the copy program when first run. A yes response to this command will allow one slave disk drive to overlap the next drive and run simultaneously at the end and beginning points in the copy operation. ALF notes that this could overload a power supply if the computer had a lot of drives connected or had all of the slots full. We have tried the copy program with up to six drives in this default configuration without damage but all other interface cards were removed at the time. Now if we could only find a volunteer copier with 9 disk drives.....

## SIGs: Exploring the World of Apple

by Robert C. Platt

WAP's membership is remarkable in its diversity. In order to accommodate the range of our members' interests, the club has formed a number of Special Interest Groups (SIGs). Our assortment of SIGs reflects the diversity of areas which can be explored with your Apple. By spending a moment to review these different areas, you can find the SIGs which best match your interests. Remember, as you set off to explore uncharted continents in the Apple World, SIG members stand ready to guide you on your explorations.

### NEWSIG

NEWSIG provides guidance to new members. It meets immediately after the monthly meeting to explain the use of the Apple and to provide orientation to WAP services.

### MACHINES

The most fundamental difference among our members is the machine they own. The Apple /// SIG provides support to Apple /// owners. The Apple /// is a more expensive, business-oriented model which uses the same microprocessor as the Apple II and can execute many Apple II programs. However, the /// has many powerful added features which are explored at /// SIG meetings.

The Other Machine SIG (OMSIG) is designed to help owners of Apple II look-alikes such as the Franklin Ace and the Basis 108. It is still in a formative stage.

### LANGUAGES

Apple II+ and Apple //e come with Applesoft Basic built into their ROM memory. Applesoft Basic is well suited to a number of simple programming applications, but other computer programming languages are easier to use in longer programs or produce faster running programs. Most of our SIGs explore programming languages.

People learn Assembly Language to gain a fundamental understanding of how their Apple works. An assembly language program requires a problem to be broken down into such tiny steps that each instruction is described in terms that the Apple's microprocessor chip can understand. In contrast, with "high level" programming languages such as Basic, a single command might correspond to a large number of machine instructions. Assembly Language programming is particularly useful in creating graphic effects and animation. The ASMSIG focuses upon Assembly Language techniques.

LOGO is an easy to learn language which is especially appealing to children. LOGO uses graphic patterns on the screen to illustrate programming principles. Advanced LOGO programmers can also access complex data structures called "lists" to produce sophisticated programs. There are three different implementations of the LOGO language available on the Apple, so you may wish to contact a LOGOSIG member before you purchase one. The LOGOSIG conducts tutorials for new LOGO users and shares LOGO programs written by SIG members.

FORTH is a "stack oriented" language for advanced programmers. FORTH is succinct. For example, a program to print 2 plus 3 is: 2 3 +. It is useful in programming games and graphics as well as inventing your own programming languages. (It is also one of the cheapest language interpreters available from our club library for \$5.) The FORTH SIG exchanges ideas among FORTH-fanatics and supports the FIG Forth interpreter program in the WAP Library.

Some members of PIG, the Pascal Interest Group, contend that Pascal is more than a programming language, it's a way of life. Pascal is a sophisticated language invented by Niklaus Wirth, a Swiss Computer Science Professor, who believed that programs should consist of well-defined data structures and well-structured procedural steps. Pascal is one of the most popular languages in use for microcomputers and is the language used in the College Board Advanced Placement Tests. Some schools, and many colleges, teach Pascal rather than Basic as a first programming language. An Apple Pascal compiler costs \$200.

### APPLICATIONS

EDSIG explores the use of Apples in the schools, for personal education, and in other educational uses. EDSIG meetings frequently include demonstrations of the latest software and informal presentations on educational applications. (LOGOSIG is a spin-off of EDSIG.)

SIGAMES demonstrates the latest game and entertainment programs and provides hints for new game users. SIGAMES has sponsored guest lectures by noted Apple game authors.

Business SIG reviews business software packages and explores how to use Apples most effectively in an office setting.

LAWSIG provides attorneys and those not versed in the law an opportunity to discuss various aspects of computer applications to the law. The LAWSIG usually meets in downtown

Washington at noon once a month. Some broad areas of inquiry are: (1) Use of computers in law firms; (2) software packages for tax returns, litigation support, etc.; (3) substantive law governing computers, eg software piracy; (4) computers in legal education; and (5) computer-based legal research.

STOCKSIG is the special interest group for Apple owners who follow the stock and commodity markets. STOCKSIG evaluates and demonstrates software, data bases, information services and hardware used for stock market and commodity applications.

Telecommunication SIG focuses on the way that the Apple can exchange data over the phone lines. The Telecomm. SIG advises its members on the purchase of "modems" which are special circuits that transmit data from the Apple to the phone. The SIG also evaluates software packages designed to save information received from the modem on disk files. Once you own a modem you can call up other Apple owners, access commercial data base services (eg the Source and CompuServe) or leave notes on community bulletin board system. (For a description of the WAP Bulletin Board, see the article in this Manual.)

SIG/DISABLED explores the use of Apple computers in assisting the handicapped. The Apple can be used to overcome a variety of physical disabilities and can be used to teach the learning disabled. Members of this SIG actively pursue these applications and inform interested Apple users of the variety of resources available.

### OPERATING SYSTEMS

Every Apple disk drive (and most software) is sold with a special program which moves data between the Apple's memory and the disk. Such programs are called Operating Systems because they permit other programs to function without knowing in advance the specific details of the data on the disk. Operating Systems frequently also control all input-output operations including getting information from the keyboard and listing data on a printer or screen. Because programs must adopt the conventions of communicating with a particular operating system, it is not easy to transfer a program which runs under one operating system to run under a different system.

The Apple disk drive comes with an operating system called DOS. Most people take this remarkable program for granted, and there is no special SIG for DOS. However, NEWSIG will answer your DOS questions.

The most popular operating system on microcomputers today is called CP/M. CP/M was written to operate on computers with Z80 or 8080 microprocessors. If you wish to access the vast collection of CP/M programs, you must purchase a special circuit board with a Z80 microprocessor on it. Such board are ususally sold with a copy of the CP/M Operating System. The WAP library includes a number of CP/M disks, and the CP/MSIC helps new members to use CP/M.

A second operating system sold by Apple for use with its Pascal, Fortran and Pilot languages is the University of California at San Diego P-system. Because the UCSD P-system is also available on a large number of other computers (and is not limited to use on particular microprocessor chips) it is used by programmers who hope to sell their products on a variety of machines. Unlike DOS and CP/M which require you to memorize commands, the P-

system is driven by menus and is easy to learn to use. The PIC, Pascal interest group, devotes a great deal of its attention to the P-system.

As you can see, there are many areas for you to explore with your Apple. Remember that the SIGs launch continuing expeditions to share new discoveries and welcome your participation.

### Deadline for Journal Copy

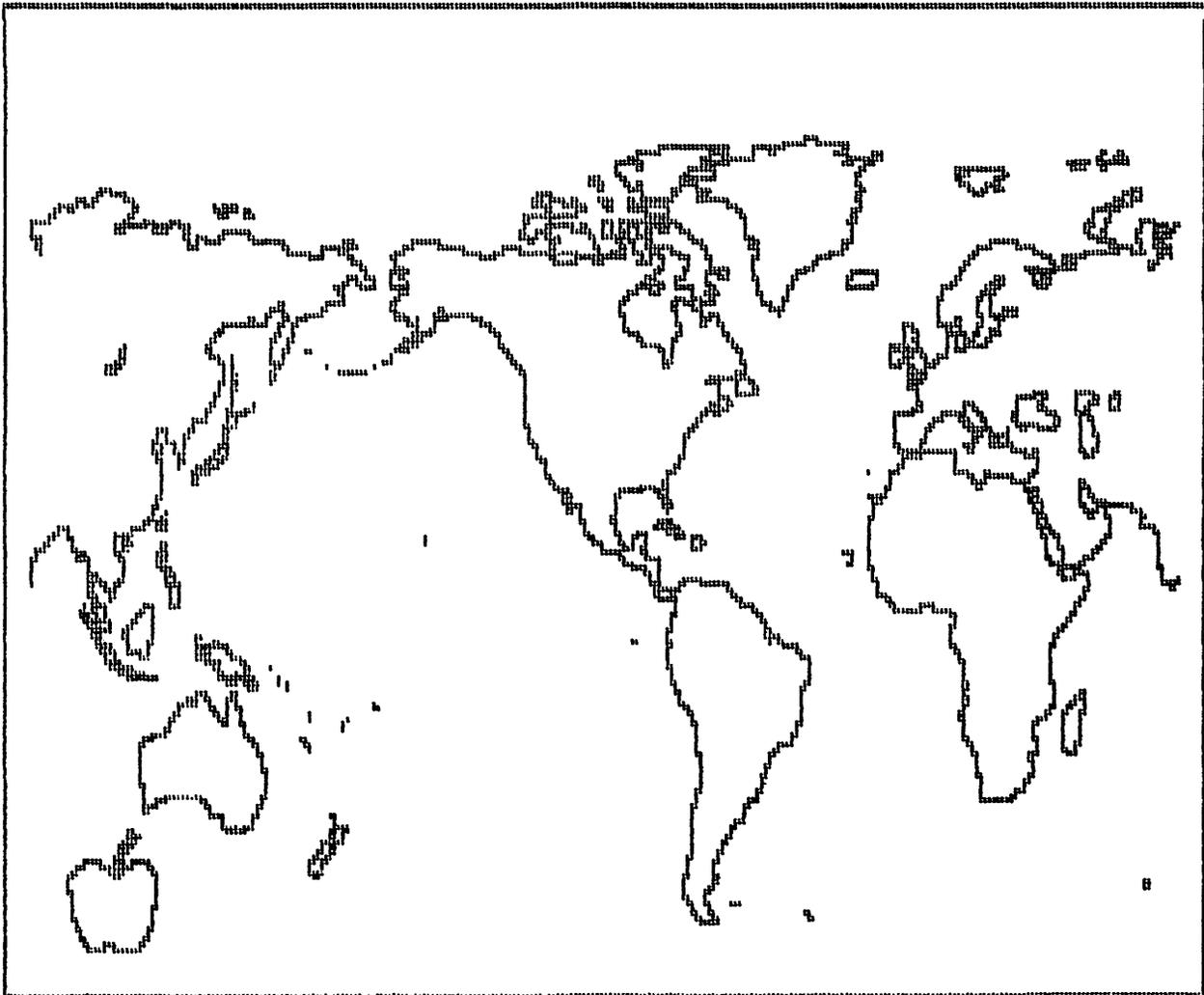
Writers and Columnists for the WAP Journal are asked to submit copy by the 5th of the month whenever possible. We need time to prepare the copy and to plan the Journal layout so that it maintains a good appearance. This is very difficult to do when material arrives at the 11th hour. We appreciate all your effort in writing Journal articles but your cooperation in this matter will improve the publication, which in turn will benefit us all.

### Call-A.P.P.L.E. Discount

Many WAP members subscribe to the Call-A.P.P.L.E. magazine. That organization was one of the first Apple users groups in the country and offers several unbeatable software and hardware items. The usual fee for membership is \$25 plus annual dues of \$20. However, WAP members may join Call-A.P.P.L.E. for \$5 plus annual dues of \$20. To join, send a check for \$25 payable to Washington Apple Pi, Ltd. to the WAP Office, 8227 Woodmont Ave., Suite 201, Bethesda, MD 20814. Please enclose the form from the back of this manual and mark your envelope "Call-A.P.P.L.E."

### Hot Line

Look at our list of Hot Line volunteers. What's missing? If you have a program or piece of hardware you need help with, let us know so we can expand our list.



## Apple Tech Notes

By prior arrangement with Apple Computer Inc., the International Apple Core has sent all member clubs a copy of the notes made available to Apple Dealers. The Apple Tech Notes will gradually be published in the Pi but if you want your own complete copy, we have \$7.50 discount coupons available to be applied toward this \$64.95 purchase from your local Apple dealer. Apple Tech Notes is a 450 page loose-leaf notebook which contains items gleaned by Apple employees in the course of responding to inquiries made on their Hotline.

Topics found in the Apple Tech Notes are: Apple III Emulation Mode, Apple III Hardware, Apple III Interfacing, Apple Adventure, Apple Bowl, Apple II Hardware, Apple II Interfacing, Apple Plot, Apple Post, Apple PROMs, Apple Stellar Invaders, Apple Writer, Apple Writer III, Applesoft, Applesoft Firmware Card, Artist Designer, Auto-Start ROM, Bulletin Board Systems, Business Basic, Business Graphics III, Business Graphics II, Centronics Printer Interface, Communications Interface, DOS, DOS Tool Kit, elementary My Dear Apple, Formulex, FORTRAN, General Information, Goodspell, Graphics Tablet, Hand Holding Basic, High Speed Serial Interface, Integer Basic, Integer Basic Firmware Card, Language Card, Microchess 2.0, Parallel Printer Interface, Pascal, Pascal III, Pascal Animation Tools, Pilot, Plan80, Profile, Programmer's Aid #1, Psort, The Shell Games, Silentype Softcard III, Spelling Strategy, Super Serial Card, Supermap, Tax Planner, Universal Parallel Card, Vendor List, Visicalc III, VT-100 Emulator.

These notes are being made available to us through IAC with the understanding that this is copywritten material and can only be reproduced one item at a time, giving full credit to Apple for allowing this. Subjects requested by phone will be reprinted first since they are of direct interest to at least one member.

If you have any particular problem or question that might be answered from the Tech Notes, don't hesitate to call me, Ed Schenker, at 977-7349. If you live in Virginia and wish to avoid a long distance charge please contact Lance Bell during the evening at 550-9064. He is also willing to answer questions via the ABBS. Lance's WAP number is 1199 and he will answer questions directed to his number.

## Washington Apple Pi Software Library

by Robert C. Platt

The purpose of the WAP Software library is to furnish WAP members with a variety of software at minimum expense. The library contains utility programs that can be used as part of larger applications, programs traded from other clubs, and most important of all, programs which members have written to serve their own needs.

As of February 1983, our DOS library contains 15 utility program disks, 19 game disks, 16 EAMON adventure games, 3 business disks, 6 math/science disks, 6 graphics/music disks, 4 education disks and 20 others. Our library also distributes 9 disks in Pascal format and 4 CP/M format disks.

You can obtain these library disks in two ways: either by purchase or by donating a disk of programs to the library. Our library has grown to its present size by the continuing contributions of our members, and we welcome your donations.

**DONATION PROCEDURE:** Prepare a disk with any programs that you wish to share with the club. Did you just write a program to keep track of your kitchen recipes? We want it! Have you computerized your jogging logbook? We need it! We will also welcome programs typed from magazines, provided that the programs are not copyrighted. (Nibble and some other magazines which are selling disks with each issue are now copyrighting their programs.) If you did not write the entire program yourself, please let us know its source. If possible, include a text file with documentation on the program's use.

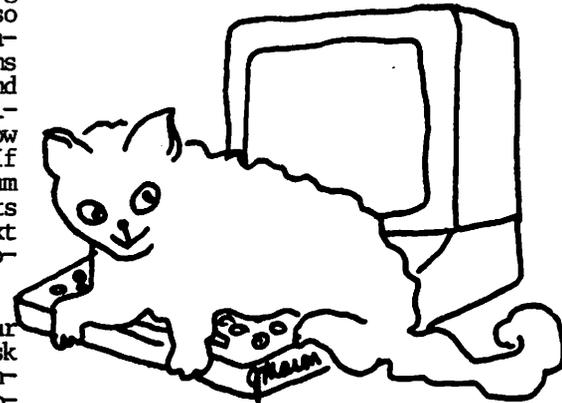
You can submit your disks at our General Meetings to the New Disk Librarian who will give you a voucher which can be traded in for a library disk of your choice. You need not "fill up" a disk before you contribute it. We are asking each contributor to complete a simple form which gives WAP the right to distribute your programs.

**PURCHASES:** You can buy library disks in person at either the WAP Office or before the General Monthly Meetings. Please pay by check. Each issue of the WAP Journal also has a mail order form (subject to a \$2.00 postage and handling charge.)

**ERRORS:** Although every programmer attempts to write perfect programs, bugs tend to turn up when the public uses a program in ways which its author did not test. In general, WAP cannot guarantee the quality of its library programs. (What did you expect for \$5?) However, we would

appreciate reports of errors and any know fixes. (Remember debugging another's program is a great way to learn new programming techniques.) Please send a note to the New Disk Librarian at the WAP Office and include the name of the program and the number of the disk and the exact nature of the bug. We will try to contact the program's author. If you propose a correct fix to an unreported program bug, we will reward you by trading your patched version for a library disk of your choice.

**FUTURE DIRECTIONS:** The WAP Library has reached its present size and quality through the efforts of a large number of members. With your support, the library staff hopes to continue to improve the software library in a number of ways. First, we hope to improve the level of documentation for each disk and to index our library by subject matter. Second, we hope to obtain more quality disks through trading with other clubs. Third, we are experimenting with distributing commercial-quality software through extra charges (See Diversi-DOS on disk # 130). Finally, we are in the process of converting our oldest disks to run under DOS 3.3. Please join us in these efforts.



## Volunteers

I welcome your help in improving the library. Of primary importance are your contributions of new programs. The library needs application programs as well as utilities. So, review your handywork and send in your programs for organizing your kitchen recipes or computerizing your jogging logbook. You will receive a free library disk in exchange for every disk you donate.

I also need help in documenting library disks. If sufficient volunteers are available, I hope that we could publish a well-indexed set of documentation for the entire library. We also need a volunteer with an Apple //e who could test programs for //e compatibility.

## Washington Apple Pi New Member Disk

by Robert C. Platt

This disk contains many useful programs for the Apple II owner. Most of the programs were either written by or heavily modified by members of the WAP. This article presents a description of each program on the disk, with a brief explanation of how to use its features. Some of these programs have more extensive documentation in separate files included on the disk. A note: these programs are not commercial products. They are not as well documented as a commercially written program but have been used by many members and can be of benefit to you.

### 1. SHAPE MENU SHAPE MAKER ASSEMBLER.

These three programs are used to create shapes, the hi-resolution images which Applesoft allows you to plot (DRAW & XDRAW), rotate, scale and change colors. The actual shapes are stored as binary files on your disk. The shape maker creates and save a single shape, the assembler puts several such shapes into a single shape table. To fully appreciate shapes, read the Applesoft manual (p. 91-99) and other references on Apple graphics. (1)

### 2. CPLOT+ CPLOT+ INFO UPPER CASE LOWER CASE CPLOT+ SAMPLE PROGRAM CPLOT+ CHAR SET EDITOR CPLOT+ SETUP AND RUN

These Applesoft programs written by Bill Schultheis allow you to create and mix text on the hi-resolution screens of your Apple display. They are easier to use for mixing text with graphics than by creating your own shapes of letters and DRAWING the letters on the hi-res screen. RUN CPLOT+ INFO to learn how CPLOT+ and the set up and run program are used. The binary files UPPER CASE and LOWER CASE are examples of text characters which can be displayed by these routines.

### 3. SUPER FILE CABINET

This Applesoft program performs data base retrieval functions on relatively small files of data (in the range of a few hundred records.) Ed Shea revised a program from Apple Computer entitled File Cabinet. The program allows you to create data bases, add or edit records and create and display reports. A word of definition: the term "header,"

used in the program refers to the names of the data fields in your records. For example, a file of names and phone numbers would have two headers (or data fields) per record: NAME and PHONE NUMBER (or whatever you want to call them).

To use, copy files SUPER FILE CABINET and AMPERSORT II onto a disk with plenty of empty sectors. Then RUN SUPER FILE CABINET. When asked for the name of a new database, pick a descriptive name which is not already used as a filename on your disk, for example, PHONENUM. You may store more than one data base on a diskette, but each one should have a different name.

Whenever you define a new data base, you will be asked for the header of each data field. The name you select will be used whenever data is retrieved or printed from the file. The program will continue to ask you for header names until you reply with just a RETURN.

Unlike some other data base systems, SUPER FILE CABINET keeps all of its data in RAM memory until you expressly tell it to write to the disk. This means that if you forget to save the file, or lose power, any changes since your last disk save will be lost. (2)

To add new records, choose option 3 from the main menu and type a value for each field when its name is displayed. You may leave a field blank by pressing RETURN.

To list all records, choose option 9 from the main menu. The entire data base will be displayed one field per line. The program will wait for you to hit RETURN between pages of data.

To search (or update) the file, choose option 2 from the main menu. You can specify a particular group of records ("the selection condition") by typing the number of a field (not its header), a comma, an operator, another comma, and a value for that field. For example, to retrieve Sam Smith's phone number, type "1,EO,SAM SMITH". You may use EO, NE, GT, and LT as operators. If you wish to specify only one search condition, type two commas and RETURN when asked for the second condition. If you specify two conditions, only records which meet BOTH conditions will be retrieved.

If you wish to print out a portion of the data base in a special format, choose option 5 from the main menu. For example, you could print

the list of phone numbers in two columns with names beginning at column 10 (the TAB value) and phone numbers printed at column 50. The program allows you to save such print formats between sessions on the disk, but each format will cost you 2 sectors of disk space.

The records of the data base can be printed out in the order in which they were entered or can be sorted on any field.

### 4. AMPERSORT II

The ampersort binary program is used by the Applesoft program SUPER FILE CABINET to perform very fast sorts of the data base. It can also be used in any Applesoft program. To read documentation on its separate use with your own BASIC program, "BRUN AMPERSORT DOC. (BRUN)": (3)

### 5. LHS DISK MAP

An improved CATALOGing procedure from the Lawrence Hall of Science which displays the amount of space on the disk and the start point and length of binary files. It also produces a low-res color display. To use, type "BRUN LHS DISK MAP".

### 6. MASTER CATALOG B.MAS.CAT.48K

These programs read the catalogs from many disks to build a single text file which contains the titles of programs from those disks. The file can be quickly sorted by title or volume number and a listing of the titles printed in one or several columns per page. This can then be used as a master index to your entire library of disks. To use, type "RUN MASTER CATALOG".

The program is setup to print on an Epson MX-80 printer using condensed (132 characters per line) mode. If you have a different printer you may have to modify the control characters PRINTED at the start of the listing.

### 7. CATALOG MANAGEMENT CATALOG MANAGEMENT - EDIT

These programs by Jim Pfeifer assist you in documenting programs on a disk. The EDIT program allows you to enter a brief description of each file found on the disk and to specify whether the program can be RUN or BRUN (as opposed to being a data file). EDIT can also print this documentation and creates a text file named PROG.LIST. The EDIT program need not be present on each

disk, but each disk should have its own PROG.LIST file. CATALOG MANAGEMENT makes a good HELLO or greeting program to be run when a disk is booted. It reads PROG.LIST and brings up a menu of those programs which can be RUN or BRUN. It allows their selection or a display of your documentation for the selected program.

These programs assume that your Apple has at least 48K of RAM. Up to 70 program files on a disk can be processed.

#### 8. SCREEN DUMP.NO NUM.CENTERED SCREEN DUMP.NO NUM SCREEN DUMP.PLAIN

Applesoft subroutines which can be merged with your program to provide a printer dump of the current text screen.

#### 9. PERPETUAL CALENDAR

Print any specified month(s) on the computer screen or printer. The program can list a consecutive range of months. It will ask you for the number of months and the first month of the range. The first month of the range is specified by a number from 1 through 12.

#### 10. INTEGER BASIC-DISK

A powerful addition to an Apple II+, this binary program gives a 48K computer owner INTEGER BASIC. The BASIC is located within the lower 48K. Therefore it may not work with very large integer programs or with machine language routines that run in the same area of memory.

#### 11. DISK ZAP

This Applesoft program allows you to read, edit or write to any sector on the standard DOS disk. The display of a sector is in HEX and ASCII. Useful for learning about DOS and repairing "hurt" disks.

#### 12. HUFFIN

A useful utility for transferring Pascal text files onto DOS 3.3 formatted disks. (4) Several application packages such as Apple PILOT use Pascal format disks. In order to access these files from Applesoft, you must either use a conversion program like Huffin or incorporate Huffin as a subroutine in your BASIC program. This program can be adapted to work with Pascal data files as well as text files. You must know the data format used by the program which created the file.

#### 13. EDITOR

This Applesoft program is a simple text editor for reading and writing standard sequential text files. It uses control characters for commands. To see a list of commands, RUN EDITOR and then type H at the > prompt. Documentation for this program appeared in the WAP Journal. (5) EDITOR produces a text file on a disk when you use the PUT command. To produce formatted printouts you will need a runoff program such as that listed in Inside Washington Apple Pi. (6)

#### 14. SUPPLEMENT SUPPLEMENT.DOC

SUPPLEMENT is a machine language program written by Steve Wozniak. It supplies features found in the original Apple ROM monitor which were left out of the current "auto-start" ROM. Features such as STEP and TRACE help in debugging machine language programs. Also performs HEX/DECIMAL conversions.

To use SUPPLEMENT, either BRUN SUPPLEMENT.DOC or BLOAD SUPPLEMENT. If you BLOAD the routine, you will have to teach the Apple its location by the following BASIC program segment:

```
100 HIMEM:-29440
110 POKE1016,76: POKE1017,0: POKE
1018,141
```

SUPPLEMENT is activated by entering the monitor (use CALL -151) and then typing a Control-Y. (7) You can tell the difference between SUPPLEMENT and the regular monitor because the monitor prompts you with an \* while SUPPLEMENT uses a ). You can return to the monitor by using any normal monitor command at a ) prompt.

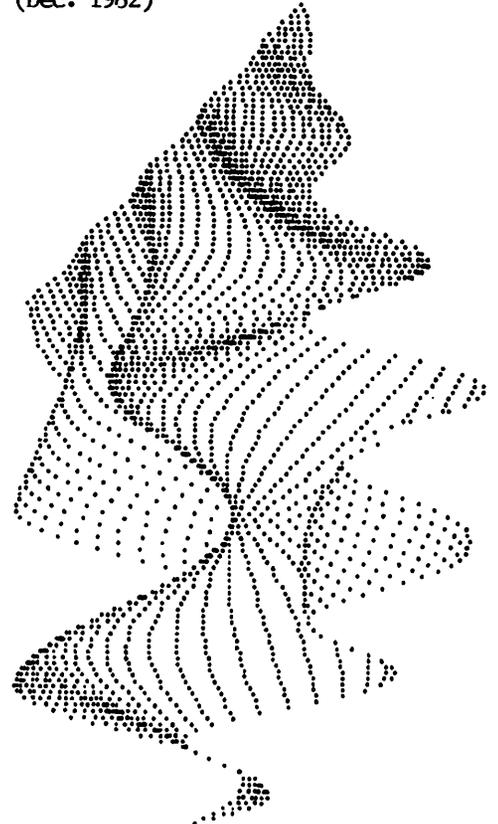
#### 15. DISC SPEED INFO DISC SPEED TEST DSPEED.OBJ

These Integer Basic programs allow you to check the speed of your disk drives. Disk drives are mechanical devices and the speed of their motors tend to vary over time. If your disk drive speed is significantly different from the speed of the drive which recorded a diskette, you may have trouble booting the diskette or get many I/O ERROR messages when reading from your drive. Most beginners take their drives to a dealer for adjustments in such cases. This program will allow you to measure the speed of your drive to see if an adjustment is necessary.

To use the program, you will need a SPARE diskette (which does not need to be initialized.) HOWEVER, the program will DESTROY information on the diskette, so be sure to REMOVE your program diskettes before telling the program which drive to test. If you do not have a 16K memory card or an Apple //e, BLOAD INTEGER BASIC-DISK before running these programs. To read the instructions for this program, type RUN DISC SPEED INFO at the > prompt.

#### REFERENCES:

- (1) Pelczarski, "Graphically Speaking", Softalk p.133 (July 1982)
- (2) DeMay, "Inspecting Text Files with a Word Processor", WAP Journal p.14 (Dec. 1982).
- (3) Rosden, "Sort Routines - A User's Guide", WAP Journal p.16 (April 1982).
- (4) Schwartz, "Huffin - Pascal to DOS Text File Conversion", WAP Journal, p. 7 (July 1981)
- (5) Lee, "A Simple Full Screen Text Editor", WAP Journal (Nov. 1981).
- (6) "Writing a Word Processor", Inside Washington Apple Pi, p.66-67 (1981).
- (7) Schultheis, "Using the Monitor Ctrl-Y Interface", WAP Journal p.38 (Dec. 1982)



## Washington Apple Pi

### Disk Library 3.2

WAP Volume 001 UTILITIES I (c)

Free Sectors = 84(21K)

(I) Hello, Improved Catalog, Disk Aide Doc., Disk Aide, Tony's Subroutine Pak, Lock Disk, Disk Program Eliminator, SuperCatalog.Doc, Disk Speed Info, Disk Speed Test, L O O P, Slow Mem Test, Fast Mem Test, Memory Spy, Cat. to Menu, Stop List Doc, Split Catalog, Free Sectors, B/BSTAT (B) Disk Aide Mac., Disk Map, SuperCatalog.O, Dspeed Obj, Symbol Table XRef, Line # XRef, Stop List, Okidata.Obj

IMPROVED CATALOG - Gives a catalog showing free space and the starting address and length of binary files. (In your choice of hex or decimal.)

DISK AIDE - An excellent package for examining any track/sector on a disk. Also allows you to modify and save back to disk. You can recover a crashed catalog with this kind of program.

DISK MAP - A colorful graphic display of tracks and sectors, indicating used, unused and bad sectors.

TONY'S SUBROUTINE PAK - An integer package for renumbering programs, appending programs, doing hex-decimal conversions, setting scrolling windows, flipping between display pages, and other goodies.

LOCK DISK - Lock all programs on a disk.

PROGRAM ELIMINATOR - Delete unlocked programs.

SUPERCATALOG - Search catalog for selected character strings.

DISC SPEED - Check and adjust your drive's speed.

LOOP - Loop through a "catalog" on many disks. (Great when used with a printer.)

MEM TEST - Like the name implies.

CAT. TO MENU - A great HELLO program. Presents a catalog and allows program selection by printing one letter.

SYMBOL TABLE XREF - Prints every variable in your program and all lines in which they are referred to.

LINE # XREF - As above with line number references (GOSUB, GOTO, and THENs.)

STOP LIST - Cheaper than an auto-start ROM.

SPLIT CATALOG - More catalog on your screen.

FREE SECTORS - Tells you how much disk space remains.

OKIDATA.OBJ - A printer driver for an Okidata 110.

B/BSTAT - Starting address and length of binary files.

WAP Volume 002 UTILITIES II (c)

Free Sectors = 157 (39.25K)

(I) Hello, Sweet 16 Disassembler, Disk Transfer, Find Text-Token, Program Trace, TED II Save/Retrieve, TED Start, TED3, Basic TED Printer, Codes for 6502, Password Key, Multi-Disk Cat (B) B.Find, B.Trace, B.Mas.Cat.48K, TED.Disk (A) Debugging Aid, Master Catalog 48K, DOS Utility #1, File Cabinet II (T) BaseNameFile

SWEET 16 DISASSEMBLER - If you are into machine code, you should try the 16-bit dream machine hidden in your APPLE. This integer program will disassemble your object code and yield the Sweet-16 opcodes.

DISK TRANSFER - From Call-A.P.P.L.E Vol. 2 No. 2 (Feb 1979) use this to do disk to disk transfers of Integer, Applesoft, or Binary programs.

DEBUGGING AID (APPLESOFT) - From the March 79 issue of the Apple Corps of Austin, Texas. Lets you list pieces of a program for use in editing.

FIND TEXT - Token and Program Trace - Both are valuable programs written by Alan Hill. They both work by appending an integer program. "Find" searches the program for a specified text string or Basic token. The trace program is described in MICRO, March 1979.

TOP-DOWN PROGRAMMING - Almost the same as in CONVENTIONS. This one has a bit more. You should review this program, at least once.

TYPING PRACTICE - Has four options: single letters, 2-letter words, 3-letter words, and words of random length. The speaker sounds different tones for correct and incorrect replies. A score is given at the end.

WAP Volume 003 GAMES I (c)

Free Sectors = 1(.25K)

(I) Intro, Towers of Hanoi, Tennis, Roulette, Midway, Color Text, Merry Christmas, Bagels, Drip, Digital Clock, Poker, Keno, Sea Chase, Nightmare #6, Slot Machine #2, Color Worm, Xmas Tree, MasterMind, Kaleidoscope, Mouse Maze, Sandys Fol-

ly, Saucer War, The Maze, Blackjack, Shooting Stars #2, A Trillion Stories, Poet, Garys Quicky, Color Life, Awari, Sevens, Othello, Mad-Lib, Biorhythm, Bananas, Andromeda Strain, Craps, Squares

TOWERS OF HANOI - The buddhists say that if you move all 64 disks the world will end ... be careful!

TENNIS - Remember the original PONG?

ROULETTE - Bet you can't play only once.

MIDWAY - Dive bomb a carrier while avoiding the ack-ack.

COLOR TEXT - A little graphics.

MERRY XMAS - Season's Greetings.

BAGELS - An old favorite.

DRIP - Visuals with sound. Get a plumber.

DIGITAL CLOCK - You don't have to wind it

POKER - It bluffs.

KENO - The reviewer doesn't know how to play.

NIGHTMARE #6 - The object of the game is to figure out the object of the game.

SLOT MACHINE #2 - Finance new APPLF peripherals.

MASTERMIND - A text version with numbers.

POET - Not my cup of iambic pentameter... and many others?

WAP Volume 004 GAMES II (c)

Free Sectors = 13(3.25K)

(I) Hello, Atom 20, Dr. Z, Quest, StarShip Attack (A) Pro Football, Civil War, Lem, Red Gnik, DeepSpace, Adventure, Eliza, Stock Market

PRO FOOTBALL - See if you can make it to the Super Bowl.

ATOM 20 - From Creative Computing, it's the end of civilization. Can you survive in the "adventure" game?

CIVIL WAR - I'll "Grant" you this may not end too happy"Lee".

LEM - Land your lunar module.

DR Z and ELIZA - A cheaper way to have your psychological ruffles soothed. Makes your APPLE seem like a person (What do you mean, it isn't!).

RED GNİK - A Hammurabi-like game.

DEEPSPACE - Also from Creative Computing. Pick your ship and go after the enemy. Not graphics.

ADVENTURE - Not the original but a good in-RAM game so it moves along more quickly.

QUEST - From Byte, another adventure-like game. (Typed in by our able President.).

STOCK MARKET - Another way to finance further APPLE purchases (If you win, of course).

STARSHIP ATTACK - From Kilobaud, a lo-res action game. Shoot the enemy before he destroys you or all your grain ships.

WAP Volume 005 GAMES III (c)

Free Sectors = 10(2.5K)

(I) Hello, Black Box, Shoot Out, Beginner Math, Spelling Bee, AppleStand, Legacy/Take It, Lo Res Football, Tognazzini Chess, Nightmare GamePak, Simple Simon, Brain Busters, CryptoGram (A) Hunt the Wumpus

BLACK BOX - Good Lo-Res color brain challenger. Shoot X-Rays into a black box and locate the atoms based on reflection/absorption of the rays.

SHOOT OUT - Cowboys of all ages will wear out your paddle buttons on this one.

HUNT THE WUMPUS - One of the original micro games in Basic. Find the wumpus before it eats you.

BEGINNER MATH - For the younger APPLE fanatics.

SPELLING BEE - Keep interest in your computer buzzing..Hmmm...

APPLESTAND - Great for teaching youngsters the tough life of the capitalist.

LEGACY/TAKE IT - Two quick-moving thought games.

LORES FOOTBALL - The Super Bowl may be behind us, but you armchair quarterbacks needn't wait a whole year for more...

TOGNAZZINI CHESS - It may be called that, but it's hard to beat Bruce at his opening gambit.

NIGHTMARE GAMEPAK - My son loves Tiger Trouble, one of four games included in this group.

SIMPLE SIMON - Test your memory with this melodious memorizer.

BRAIN BUSTERS - Vol. 1 by Paul Kayne. A series of quick brainteas-

ers for the mathematically inclined. Example: What are the last three digits of the number 7<sup>9999</sup>?

CRYPTOGRAM - A delightful substitution code program. It poses a quotation and you decode it.

WAP Volume 006 GAMES IV (c)

Free Sectors = 37(9.25K)

(I) Hello, Death Star, Hi-Res Break-Out, InterActive Baseball, Pit 2 (B) Space Adventure, Hi-Res Break-Out.MC (A) Trader, Inspector Clew-SO, Role-Playing StarWars, Trek 79

TRADER - Ply the distant stars, buying and selling the galactic necessities. Make your fortune and buy more APPLE-stuff.

EARTH STAR - Play against another or against the APPLE. Maneuver your craft to shoot down the tube of the Death Star (Rewarding display if you do!!!).

SPACE ADVENTURE - see if you can zap the invading saucer more often than he zaps you.

HI-RES BREAKOUT - As the name implies.

INTERACTIVE BASEBALL - A good Hi-Res baseball game. Watch out for the curves.

INSPECTOR CLEW-SO - Published in Creative Computing, this is an intricate version of the old favorite, Clue. Guess who did it, what room and when by asking questions of the suspect. The murderer randomly lies!

ROLE-PLAYING STARWARS - A text fantasy play game.

TREK 79 - Also in text, but cute...

PIT 2 - We received this one from San Francisco in trade for some of our software. Can you get out?

WAP Volume 007 GAMES V (c)

Free Sectors = 106(26.5K)

(I) Hello, Spelunker, Chess, BattleShip 2, Oregon Trail (B) Ch 800.FFF (A) SpaceMaze, Kingdom, StarLanes, Fur Trader

WAP Volume 008 UTILITIES III (c)

Free Sectors = 239(59.75)

(I) Copy 3.2.1, Copy/Dual Controller, Hello, Shape Generator, TED II+ (B) Amper.Obj Plus (New), Auto Number, Hi-Res EDump, HiRes, Lazarus, Line# Ref, Pack&Load, Page List, Print IDS 440, Relocate, Ren/Append, Single Drive Copy, Symbol XRef, Tape Verify (A) AmperSort Demo, IDS 440

Hi-Res Screen Dump, PIMS

LAZARUS - Written by Andy Hertzfeld. This little gem can be used to resurrect a "dead" Integer Basic program fragment. LAZARUS is fully documented in the WOZPAK II (buy it, you'll like it!). Just BLOAD it to memory and either: (1) Call 768 - for longest available program segment found; or (2) Call 772 - for last segment found. Then just LIST. Lo and behold, there is a program in memory. To test it, start by >LOADING an Integer Basic Program, then NEW it away and try LAZARUS. When you LIST, it'll be back!

TED II+ - Documentation is on 3.3 disk volume 101.

WAP Volume 009 EDUCATIONAL I (c)

Free Sectors = 86(21.5K)

(I) Apple Hello, Color Math, Conventions, Flash Card, Flash Code, Integer Instruction Set, Math Tutor, Morse Trainer, QuizBuild, Simulation-6502, Top Down Programming, Typing Practice (A) EchoCardiograph, Morse CW, Name States, Northern Constellations, States/Capitals, Titration

COLOR MATH - Lo-res multiple colored math problems are presented. Multiplication, division, addition and subtraction problems are included. A "HAPPY" face is shown if the answer is correct. A "SAD" face is shown for incorrect answers. Fault: Problem is repeated when an incorrect answer is given. This continues until the correct answer is given.

CONVENTIONS - Shows the programming conventions used on APPLE CORE submitted programs. Some good programming techniques exist here. It is a must for beginning programmers to review.

ECHOCARDIOGRAPH - Calculates factors of blood flow using TEICHHOLZ'S modifications to Dodge's formula. Text oriented. Good, if you know something about medicine.

FLASH CARD - A Morse Code training aid. Uses speakers and flashes the letter being sounded at the same time. You can change the speed. Fault: Only random letters are presented.

INTEGER INSTRUCTION SET - Displays the tokens for Integer Basic.

MATH TUTOR - Practice your addition, subtraction, multiplication and division using this program. Text oriented. Also has nice messages when you give answers.

MORSE CW - Excellent Morse Code

learning tool. Three ways to learn: one letter at a time, a complete message, or random letters.

MORSE TRAINER - Another Morse Code training aid. The advantage of this one is that it will not display the characters until the test is completed. It has three options: a message, random letters (both of which display characters as they are sounded), and a test of random letters (which are not displayed until the end).

NAME STATES - Practice naming the 50 states (spelled correctly). Text oriented. It keeps a count of the number you have named, and allows you to see the names you have correctly given.

NORTHERN CONSTELLATIONS - A good program that explains the stars briefly and also shows the Northern Constellations based on your input of a month, day, and hour. Display uses hi-res graphics.

QUIZBUILD - This program allows you to build a text file of data to be used later by a program called "QUIZ". Instructions on how to build these text files via input from keyboard are good. "QUIZ" is in Vol. 5B of the SF APPLE CORE library.)

SIMULATION-6502 - This program allows you to graphically see the data bus, registers, accumulators and the program counter. It lets you enter instructions and then watch them being executed one at a time. For learning 6502 Assembler.

STATES/CAPITALS - Do you know the capital of each state? This program can help anyone who is learning them. Fault: If you answer wrongly, it keeps asking you for the correct answer with no way to get out.

TITRATION - Chemistry, anyone? The object of this program is to normalize an acid by neutralizing it with an amount of base. Lo-res.

TOP-DOWN PROGRAMMING - Basically the same conventions are presented here as in the program "CONVENTIONS". This one does present a bit more. You should review this program at least once.

TYPING PRACTICE - It allows you to practice your typing and has four options: single letters, 2-letter words, 3-letter words, and words of random length. The speaker sounds different tones for correct and incorrect replies. A score is given at the end.

WAP Volume 010 MATH/SCIENCE (c)

Free sectors = 49(12.25K)

(I) Hello (A) Future Value of an Investment, Annuity, Regular Deposits, Regular Withdrawals, Initial Investment Min Invest for Withdrawals, Effective Interest Rate, Earned Interest Table, Depreciation Rate, Depreciation Amount, Salvage Value, Discount Commercial Paper, Principal on a Loan, Regular Payment on a Loan, Last Payment on a Loan, Remaining Balance on a Loan, Term of a Loan, Annual Interest Rate on Loan, Greatest Common Denominator, Prime Factors, Mort Amort Table, Area of Polygon, Vector Analysis, Parts of Triangle, Vector Operations, Coordinate Conversion, Coordinate Plot, Angle Conversion, Polar Equation Plot, Function Plot, Linear Interpolation, Curvilinear Interpolation, Simpson's Rule, Gaussian Quadrature, Trapezoidal Rule, Derivative, Quadratic Formula, Roots of Poly Newton, Roots/Poly/Half-Inter-Search, Trig Polynomial, Linear Programming, Simple Matrix Operations, Matrix Multiplication, Matrix Inversion, Permutations and Combinations, Mann-Whitney U Test, Mean-Var-St Deviation, Geometric Mean, Binomial Distribution, Poisson Distribution, Normal Distribution, Chi-Square Distribution, Chi-Square Test, Student's T-Distribution, Student's T-Distribution Test, F-Distribution, Linear Correlation Coefficient, Multiple Linear Regression, Linear Regression, Nth Order Regression, Geometric Regression, Exponential Regression, Alphabetize, System Reliability, Average Growth Rate, Federal Withholding Taxes, Tax Depreciation Schedule, Check Writer, Recipe Cost, Day of the Week, Days Between Two Dates, Anglo to Metric, Nominal Interest Rate, Business, Math, Stat, Map Check, Misc

This is a business, math and statistics package with many common and useful (albeit short) programs.

WAP Volume 011 GRAPHICS I (c)

Free Sectors = 194(48.5K)

(I) Hello, Cards Menu, Color Eater I, Fast Shuffle, Fifty-Two Pickup, Flag, Graphic Craps, Hidden Lines, HiRes Art, HiRes End, HiRes Lines/Function, HiRes Sketch, Lincoln, Object Drawing, Playing Cards, Washington (B) Cards, HiRes.Obj (A) Assembler, Bullet, Easter Egg, Impact, Shape Menu, Shaper, T.Circles

WAP Volume 012 GAMES VI (c)

Free Sectors = 83(20.75K)

(I) Hello, Menu, Mini Trek, Gosoem, Air Defense, Handball-Pong, Bouncing Ball, Space Navigator, Airport, TV Trivia, Go Back, DodgeBall, Flying Saucer, Scramble (B) Space Nav/AS800/L\$20 (A) Football, Super

Hockey, Lunar-500, Checkers, Gunner, Lunar-120, Poker-, Apple Kingdom, Golf-Revised

WAP Volume 013 GAMES (c)

Free Sectors = 86(21.5K)

(I) Backgammon, Bowler, Hello, Shooting Gallery, Sub Killer (B) O.M./Chargen/Tables, O.M./Tones, (A) Black Box II, Connection, Cribbage, Dog Star, Fort, Orbit Match, Super Nim

WAP Volume 014 IAC UTILITIES IV (c)

Free Sectors = 202(50.5K)

(I) Disk Helper, Disk/Disk Xfer, Improved Catalog, Master Key, Memory Check 6502 A2048 L512, Memory Test, TUBS (B) Integer Basic-Disk, Memory Check 6502, RWTS, Supplement (A) Apple II+ Mini/Asm, Contreveal, Disk Sort, IAC Apple II+ Disk, Integer @ \$6000-Tape, Integer @ \$A000-Tape

Library Disk Volume 14 contains utility programs, most of which come from the INTERNATIONAL APPLE CORE disk. These programs are particularly useful and valuable to owners of APPLE II Plus and owners of Language cards. Among other utilities are the following: A RAM Version of Integer Basic and the Mini-Assembler Trace and Step Functions. Now owners of APPLE II Plus can use all Integer programs and owners of Language Card Systems who want to use machine code can use the valuable single step and trace operations available in the original Integer Basic ROM. Another utility program in this volume is a disk to disk transfer which runs in DOS 3.2.

WAP Volume 015 GAMES VII (c)

Free sectors = 101(25.25K)

(I) Hello, Dragon Load, Madame Dupre, Laser Cannon, One Player Football, Save The World, Star Attack, Air-Sea (A) Deep Space, MadLib, Guided Missile, FizzBin, Space Maze (B) Dragon, Star Subs, Integer Hi-Res, Air-Sea Subs

AIR-SEA is a lo-res animated game where the object is to blast the airplanes or the ships (depending, of course, on whether you are air-force or navy). The more interesting parts of this program are its imaginative graphics (the bombs splash when they hit the water) and sound effects, and the fact that it can be played as a two-player game. This program should be on your list if you have kids, or if you happen to be a big kid yourself.

DEEP-SPACE is the old favorite from Creative Computing. It seems to fare a little weak against some of the

newer programs on this disk, but if you're into advanced or space games, this one's a classic and well worth the price.

**DRAGON** - Well, if you're into looking at hi-res pictures, don't miss the dragon.

**FIZZBIN** - If you're a trekkie you know how to play. If you're not a trekkie, well get this disk and prepare yourself for the wildest, most complicated card game in the galaxy. A MUST for all loyal Star Trek fans and card sharks.

**GUIDED MISSILE** - This one's a goodie, as you try to hit the target by guiding the missile with the game paddles.

**LASER CANNON** - It may look easy to hit the flying saucers as they fly over, but you could end up playing this one for hours. Interesting use of lo-res graphics.

**MADAME DUPRE** is a rather sarcastic old fortune teller. She always insults you. Great if you like being insulted by your machine.

**MADLIB** is a computerized adaptation of the semi-famous party game. Really good for teaching parts of speech to little ones who hate English.

**ONE PLAYER FOOTBALL** has a somewhat interesting lo-res display, but it wears a little thin with age. If you're a football freak, who knows?

**SAVE THE WORLD** - One of the 'can't miss' games of the year. Simple enough for even the youngest gamer but will keep everyone interested for hours. You control the trajectory of a nuclear bomb with your game paddle and try to destroy IT. IT'S great; don't miss IT.

**NOTE:** There may be a small error in your version; the corrections are:  
Line 10 should read:  
10 POKE -16302,0: GR : COLOR=7

Line 9040 should read:  
9040 PB1= PEEK (-16384): IF PB1>127  
THEN 10: GOTO 9040

**SPACE MAZE** - This one looks so easy at first, but just try to pilot your ship through the space maze. It's so easy only a child could do it.

WAP Volume 016 UTILITIES V (c)

Free Sectors = 210(52.5K)

(I) WAP, Apple Typer, Apple Typer II, UpDate DOS Fast Init (B) OldMon, Hex-ASCII.B, LoadMon, NewMon (A) Sequential Text Everything, Personify, Converter, Hex-ASCII.B Instructions, Hex-Dec Conv, Track Sector Reader, LoadMon Instructions

WAP Volume 017 GRAPHICS II (c)

Free Sectors = 303(75.75K)

(I) WAP, Ticker Tape, Expanded Dump, Vincent\* (B) Driver, Expanded Dump.B, Isometric #1, Hi-Res Low Level, SHTable Loc, Character Shtable (A) Alex's Calendar Part 1, Alex's Calendar Part 2 (T) Choice File

WAP Volume 018 EDUCATIONAL II (c)

Free Sectors = 159(39.75K)

(I) WAP, Spelling Bee, Preschool Letter Recognition, Shapes, Guess My Word, Secret Message, Musical Math Teacher, Apple Educational Pak, Photography CAI, Photography Quiz, Ing Endings, Long Division, Morse Code Instructor (A) Flash Card

**FLASH CARD** - Provides visual drill by rapidly flashing sequence of related pairs. These pairs can be alphanumeric, such as math facts or word relationships. Program is educationally valid for rote drill and suitable for grades 4-6. Flash Card does not appear to provide positive reinforcement or maintain sustained interest. (If facts are flashed too rapidly, interrupt program execution and set SPEED = 100).

**SPELLING BEE** - Tests your spelling of a list of sixteen input words, either timed or untimed. This program has a nice lo-res display which provides an overall score and an oversized spelling of the word as it is keyed in. It requires two people, one reading the words to be spelled, the other keying in the words. You have two chances to spell the word correctly, otherwise you are in an assisted letter-by-letter mode. Spelling Bee rewards the student with graphics, prints "hurray", and plays a tune. This program is educationally valid, provides positive reinforcement, and maintains student interest.

**PRESCHOOL LETTER RECOGNITION** - Tests for matching of individual letters and words at 8 different levels of complexity. Letter or word is placed on the screen in text and child simply keys in same letter or word. Educationally valid for 3-4 year-olds if they can manipulate a keyboard (and you want them fooling around with your APPLE).

**SHAPES** - Is a visual memory test for shape and color patterns. The adult controls the machine, while the child draws reproductions of flashed designs on paper. This program is not educationally valid because lo-res graphics are not accurate enough for this type of program. Designed for grades K-3, it would tend to

frustrate rather than test.

**GUESS MY WORD** - Is a computerized form of the "Word Mastermind Game" in text form. It teaches deductive reasoning in a spelling game format. The student must deduce the correct letters and then sequence them correctly to advance another challenge. This program is educationally valid for grades 4-8 and appears to sustain interest.

**SECRET MESSAGE** - Consists of three menu-selected games: Spelling, Secret Message, and Math:

**SPELLING** - The APPLE flashes the last two letters of a three-letter word. Student is challenged to key in as many words as possible. Although educationally valid for teaching spelling, this program uses no graphics and does not appear to sustain student interest. Designed for grades 1-3.

**SECRET MESSAGE** - Is a text oriented game which requires the student to solve simple math problems. As each problem is solved, APPLE prints another part of a word. Provides drill in simple math, but does not sustain interest. Designed for grades 3-4.

**MATH** - The student inputs his grade level and is provided with arithmetic problems of appropriate complexity. If enough problems are successfully answered, the student is promoted to the next grade (level of complexity) with very positive lo-res graphic display and music. Provides good arithmetic practice and appears to sustain very high interest in grades 3-8.

**MUSICAL MATH TEACHER** - This is a text math quiz with positive and negative musical sounds plus a scoring summary after 20 problems. Does not correct for errors, rather keeps repeating same problem as often as ten times and keeps printing statements like "You should know better". Requires a third grade reading capability. This educationally valid program appears to sustain interest for grades 3-4.

**APPLE EDUC. PACK** - Provides three menu-selected programs: Hammurabi, Hurkle and Multiply.

**HAMMURABI** - Is a simple version of "King". The student must rule a country without starving the population. It requires arithmetic estimation and/or computation and teaches a limited concept of economic geography. It provides both positive and negative reinforcement, sustains interest, and is suitable for grades 4-6.

**HURKLE** - Find the Hurkle is a grid game which uses directional terms (north, south, east, west). It provides practice in beginning map reading skills. This program has a major limitation in that it

does not display current position. It may sustain student interest and may be useful for grades 3-4.

**MULTIPLY** - Is a math quiz with negative reinforcement mechanisms such as a bad buzzer sound and "Wrong answer you dummy, try again" statements. While the math problems are OK, the program is destructive, not constructive.

**PHOTOGRAPHY CAI** - Is a tutorial designed to provide a short course on the effects of color filters in photography and light in general. It requires a color TV or monitor since it uses lo-res graphics as a teaching mechanism. This program provides definitions and sequential information on color filtration and follows with a scored quiz. The quiz does not provide correct answers; students must return to the tutorial and try again. Educationally valid and suitable for junior high and up.

**ING ENDINGS** - This program is designed to teach linguistic rules for adding "ing" to a root word. It has a tutorial format in text with lo-res graphics for positive reinforcement. It repeats previous words and gradually introduces new words. It is educationally valid, but does not sustain student interest. It is designed for grades 2-3.

**LONG DIVISION** - Demonstrates long division of any input problem in text. Provides a fast and slow option; however slow option is far too rapid for student trying to learn procedure. You can slow down the process further by revising line 160 to read:  
160 IF AS (1,1) = S THEN NDLY = 3000.

This program is educationally valid, sustains student interest for necessary time period, but has no game qualities. It is appropriate for grades 4-5.

**MORSE CODE INSTRUCTOR** - Provides sounds for keyed in letters. Gives code equivalent of letter keyed. This program is a good resource for teaching Morse Code to grade levels 4-6.

WAP Volume 019 COMMUNICATIONS (c)

Free Sectors = 190(47.5K)

(I) WAP, Telephone Alarm Clock Program, Dumb Terminal Program, MicroModem Self Test Program, Self Test Prog MicroModem II, Demo Prog 1 for MicroModem, Demo Prog 2 for MicroModem, MicroModem Store & Forward, TelePong (B) DataMover (A) Modem Chess, MicroModem Text Transfer, Pick Up Phone In Answer Mode, MicroModem II Auto Dialer, MicroModem Program Exchange, CBBS From Bill Hyde, Binary Transfer, Pickup,

MicroModem II Self-Test

WAP Volume 020 MUSIC (c)

Free Sectors = 153(38,25K)

(I) WAP, Johann.Sebastian.Apple, Andy's.Synthesizer, Music.For.a.-Close.Encounter, Ludwig's.Fantasy, Four Voices, Bach2, MusicPak 1, Appleodian, The Hart Piano, Ode to Joy, Apple Piano Doc, Phila Organ, Tognazzini Tutorial (B) Small.-Small.World, Score, Apple Piano

WAP Volume 021 APPLE ORCHARD (c)

Free Sectors = 297(74.25K)

(I) WAP, Apple Typer, Apple Typer II, Space Trip, EPROM Code For LowerCase Mod, To Apple-Writer. (B) LoMem, LoMem, Driver.S, Driver.B, Hex-ASCII.S, Hex-ASCII.B, ASCII \$4000 \$800, HiRes Routines (A) Menu, Flash Cards, Hex-Dec Conv

WAP Volume 022 UTILITIES VI (c)

Free Sectors = 78(19.5K)

(I) WAP, TED V5.4, Disk Full-3.2.1-(Inverse), Dana's Hex Loader, Program Development Package, Catalog to & FixaLog, DOS Command Changer, Paper Tiger Hires Dump, Fast Init, Disk Full-3.2.1(Flashing), DCC, FileMover, Scroll Down, Make Save Tape Exec, SvTp, ResTp (B) B.Mas.Cat.48K, PIHD\*, Niffum, FID, RWTS.Doc, RWTS.I, RWTS.A, FIR (A) Elec File Cabinet, Mas.Cat.48K.Revised, Capture, Ctrl-Char Reveal, Text Copy

MAS.CAT.48K.REVISED - Provides a three column list of programs.

DANA'S HEX LOADER - For easy entry of hex dumps.

NIFFUM and FID - 3.2 versions of Apple's utilities from the DOS 3.3 disks.

FID - (File developer) permits easy copying of all types of files, cataloging, locking, unlocking, deleting and disk free space.

FAST INIT - Allows initializing of DOS 3.2 disks in record time.

PROGRAM DEVELOPMENT PACKAGE - Is a set of useful Applesoft functions (from the Call-A.P.P.L.E WORKSHOP).

WAP Volume 023 GAMES VIII (c)

Free Sectors = 56(14K)

(I) WAP, Country Driver, Dodger, Golf, Jig-Saw, Juggle, StarFire, MasterMind (A) BattleShip, Four, Grocery Store, Hangman, J Mason Menu, That's Right, Twenty Questions, US Presidents, Trolls Gold,

Color Wumpus III, DogFight, Martian Invasion, Pork Barrel

WAP Volume 024 GAMES IX (c)

Free Sectors = 87(21.75K)

(I) WAP, Life, Blizzard, Save the World, One Man Pong, Pong-2-D (B) Life.Obj (A) Cipher-Text, Super Star Trek, Animals File Mover, Alien, ArtShow, MasterMind 2, Dog-Bite, Lo\*Res Life, Maze, Bisley, Super Hockey

WAP Volume 025 UTILITIES VII (c)

Free Sectors = 264(66K)

(I) WAP, Display Colors, Paper Tiger HiRes Dump, Chess Clock, HiRes Sketch (B) DP2, Dual Char Set.Bin, Hi-Res Character Generator, Persian Rug, HiRes.Sketch Bin, PIHD\* (A) GrandApple, Box 3D, Box Paddle, HiRes Big Boxes, HiRes Boxes, HiRes Char Table Generator, Char Gen Help, Superose III, Superose II

WAP Volume 026 STOCKS/INVESTMENTS (c)

Free Sectors = 31(7.75K)

(I) WAP, Transportation Cost Minimize (A) TRAC for CRT, TRAC for Printer, Cash Flow Management, Expense, Personal Finances, Financial Statement Analysis, Stock Market, Direct Reduction Loan Calc, Stock Option/Covered Hedge, Stock Portfolio Valuation, Treasury Bill Valuation, Budget, Future Value of an Investment, Regular Deposits, Regular Deposit Annuity, Finance, Regular Withdrawals (T) Cash Flow File, Household

WAP VOLUME 027 MATH (c)

Free Sectors = 180(45K)

(I) WAP, FFT.Src, Bishop Calculates Pi, Prime Numbers, Squaring Binomials Summons, Coin Tossing Simulation Summon, Heads/Binomial, Apple Pi Calculated, Elementary Math, Bar Graph Generator, Hex/Dec Conversion Chart (B) FFT (A) Fourier Spectrum Analyzer 10, FFT Test, FFT.Info, EC=ERFC(X) GoSub 8/22/80, ERFC GoSub Remarks, Disk to WAP 8/23/80, Greatest Common Denominator, Eight Queens Problem, Graph I, Histogram, Pythagorean TripleS, Demo of Speedy Math, Gauss-Jordan, Angular Distance, Universal Base Conversion, Shell Metzner Sort, Function Plot, Polynomial Regression Plot, Matrix Operations, Matrix Inversion

WAP Volume 028 PLANETFINDER (c)

Free Sectors = 19(4.75K)

(I) WAP, Hello (A) Create Array, Amend, Print Array, Append Array,

Print All Arrays, PP5 (T) VenusU, MercuryU, SunL, SunB, SunR, SunV, SunJ, SunW, MoonL, MoonB, MoonR, MoonV, MoonJ, MoonW, SaturnL, SaturnB, SaturnR, SaturnV, SaturnJ, SaturnW, PlutoL, PlutoB, PlutoR, PlutoV, PlutoJ, PlutoW, MercuryL, MercuryB, MercuryR, MercuryV, MercuryW, VenusL, VenusB, VenusR, VenusV, VenusW, MarsL, MarsB, MarsR, MarsV, MarsW, MarsJ, UranusL, UranusB, UranusR, UranusV, UranusU, UranusW, NeptuneL, NeptuneB, NeptuneR, NeptuneV, NeptuneJ, NeptuneW, JupiterL, JupiterB, JupiterR, JupiterV, JupiterR, JupiterV, JupiterU, JupiterW, AN

WAP Volume 029 UTILITIES VIII (c)

Free Sectors = 96(24K)

(I) WAP, Hello, Blackjack, Slide Show VIII, Disk Access Utility, Bold Print Demo (B) Sandy's Rem Stripper, Silentype Bold Print, Satellite, Satellitel, Orbit, Small Hole (A) Hi-Res Screen Eraser, SineWave Demo, Telephone Dialer (No Modem), Text File Reader (Revised), Menu By Davis & Freeman, Program Lister Writer, Hi-Res Graphics Display, Rem Stripper Info, Catalog Management, Catalog Management - Edit (T) Prog.List, Prog.File, Lister

WAP Volume 030 GAMES X (c)

Free Sectors = 95(23.75K)

(I) WAP, Hello, Lunar-Lander, Death Star, Hi-Res Dragon Maze, Air Force Bomber, Air Attack!, Submarine, Space-War V, Carrying-Balloon, New Fly Killer, AppleSoft (B) Alivader (A) Menu, Notes on Programs

Volume 030 is a collection of games from the Baked Apple Users Group in Japan, and was donated to the club by IAC. On the whole, the games on the disk are above average, but are probably of more interest to young people than to adults. Some of the words are misspelled, but this is because the authors do not speak native English.

ALIVADERS - Try to hit the spaceships above you without being destroyed by them. The graphics in this game are good. It is similar to Space Invaders, but different in many ways.

LUNAR-LANNDER - Try to land on the moon by using the fire button to control thrust. This game is very good, with graphics that are average. It uses two paddles, but only one controls most of the action.

DEATH STAR - Try to hit the invading death stars with lasers before they crash into your force field. This game has good graphics, but does not hold your interest because it is

almost impossible to hit the invading death star.

HI-RES DRAGON MAZE - Same idea as lo-res Dragon Maze, but has a demonstration and is in hi-res. The graphics are excellent. You may encounter an error in the very beginning before graphics start. If so, type RUN and it will work OK.

AIR FORCE BOMBER - Control an airplane from the air while looking down over the plane and try to drop bombs on the tanks below. This game will not hold your interest very long because the action is slow.

AIR ATTACK! - Try to drop a bomb on a ground base while it in turn fires at you. You control the plane with a paddle. This is a fun game with high interest.

SUBMARINE - Try to drop depth charges on the submarines below. This game is similar to U-Boat but is in hi-res.

SPACE-WAR V - Try to hit the guy on the other side of the wall by blowing holes through the wall. This is a two-player game. It is not so much fun and soon gets boring.

CARRYING BALLOON - Try to maneuver your balloon through the obstacles. Paddles or joystick can be used. This is a superb game, with excellent graphics and sounds.

NEW FLY-KILLER - Try to spray the fly. This game is based on the original Fly Killer. The graphics are great.

NOTES ON PROGRAMS - This is a note from IAC describing the origin of this disk.

WAP Volume 031 PLOT UTILITIES (c)

Free Sectors = 204(51K)

(I) WAP, CPlot Info, Hello Int, CPlot Int Into, CPlot Setup and Run, CPlot Sample Program, CPlot Sample Program PA, Char Set Editor, Char Set Editor PA (B) CPlot+, Upper Case, Lower Case, CPlot, CPlot PA, Upper Case Int, Lower Case Int, HiRes.Bin (A) Hello, Cplot+ Info, Cplot+ Sample Program, Char Set Editor+, Pie Chart (Uses CPlot+), Cplot+ Setup and Run (T) Development Data, Population Data

CPLLOT - From W. Schultheis, a marvelous donation. Contains both Applesoft and Integer versions. Allows you to plot characters on the Hires pages.

WAP Volume 032 GAMES XI (c)

Free Sectors = 96(24K)

(I) WAP, Interna-Maze, At The Track, Juggle, Jig-Saw Puzzle, HiRes Pong, Maze Maker, Spelunker II (B) Low Score.B, Character Table, Character Table 180, Hichar.Obj (A) Space Flight, Monster Chase, Christmas Tree, Low Score II, StratoLaser, Word-Doodles, RoadRunner, Space Maze II

WAP Volume 033 ACCOUNTING (c)

Free Sectors = 42(10.5K)

(I) WAP (B) Chain (A) Cras, Cras-Prs, Cras-RS, Cras-TE, Cras-CR, Cras-Bad, Cras-Pad, Cras-Soa, Cras-Car, Cras-Se, Cras-Tre, Balance Sheet (Tape/Disk), Savings Bond (Tape/Disk), Family Budget (Tape/Disk) (T) BT-Init1, BT-Lmit1, BT-Init2, BT-Acab1, BT-Acab2, Bt-Suspl, BT-Tran1, BT-Acen1, BT-Acen2

WAP Volume 034 SOLAR TUTOR (c)

Free Sectors = 321(80.25K)

(I) WAP-Solar Tutor (B) Chain, Solar Shape Header, Solar Shape Table (A) Hello, Tutorial Part 1, Tutorial Part 2, Tutorial Part 3, Tutorial Part 4, Tutorial Part 5, Solar Start

WAP Volume 035 GARDEN MANAGEMENT (c)

Free Sectors = 255(63.75K)

(I) WAP-Garden Management, AppleSoft (A) Old McDonald, Garden Planner, Garden Accounting (T) Harvest, Crop, Expense

The Computerized Garden Planner consists of a group of low-overhead programs, each satisfying a specific requirement.

TITLE PAGE - This program provides a visual animated display depicting gardening on the TV screen while an audio musical representation of "Old McDonald Had a Farm" comes from the APPLE's speaker. (This element can be selected or bypassed depending on one's mood.)

GARDEN PLANNER - This program provides a means to store and retrieve vital gardening information. The following information is stored in text files for each crop: planting dates, harvest dates, feet of row per person, seeds or plants per 100 feet, distance between rows, and distance between plants. When it's time to plant, the APPLE II provides a listing by planting date of what to plant, how to plant and how much to plant for the family.

GARDEN ACCOUNTING - This program provides a means to keep track of twelve different gardening expenses and up to thirty different crops. For each crop the unit of issue, unit value, and total harvest value

is recorded in text files. Several reports are provided to include an Expense Listing, a Crop Listing, and a Financial Summary.

WAP Volume 036 GAMES XII (c)

Free Sectors = 80 (20K)

(I) WAP, Apple-Star Bowling, Haunted Mansion, Gin Rummy, Concentration, Blaster, Road Racer Intro, Road Racer, An Apple Users Meeting (B) ICBM, Bowling-X, Pcard, CharSet, Racer Machine (A) NotorumD, Xoxo, Puzzle

WAP Volume 037 UTILITIES IX (c)

Free Sectors = 152(38K)

(I) WAP.Utilities IX, General Disk Utilities, Flaw Bits, Integer Renumber, Program Sectors Map, Restore (B) Ampersand Interpreter, AmperSort II, Dsk.Obj, Renumber Mach, Pretty-List (A) Print...Using Demo, Super File Cabinet, Catalog Management, Catalog Management - Edit, Pretty-List Info (T) Prog.List

WAP Volume 038 GAMES XIII (c)

Free Sectors = 146(36.5K)

(I) WAP.Games XIII, Color StarTrek, Le Mans for Two, Yellow Brick Road, Wipe Off, Le Mans for One, GumFighters (B) Martians, Invaders Logo, Sound (A) Journey to Center Earth, Invaders, Insults, Pig Latin, A Disk Summary, (T) Prog.List

WAP VOLUME 39 IAC VII (c)

Free Sectors = 146(36.5K)

(I) WAP,IAC VII, Heliol (A) A Disk Summary, SkyWriter, SkyWriter (Instructions), SkyWriter (OneLiner 1), SkyWriter (OneLiner 2), SkyWriter (Snoopy), Insults, Error Handler, AppleSoft Line Writer, Dpring, Gen Ledger, Print G/L (T) Z Prog List, G/L Data

APPLESOFT LINE WRITER - A programming aid for writing into a program for commonly used setup routines, such as DOS strings.

DPRING - Used for dumping Visicalc files.

ERROR HANDLING - A program trapping errors, printing the line number and reason for the error.

GENERAL LEDGER - What the name implies

SKYWRITER - Hires drawing routine, display title and allows user entered hires shapes.

VIDEOTAPE CATALOG - A mini dbms for tapes.

WAP VOLUME 40 IAC VIII (c)

Free Sectors = 3(.75K)

(I) WAP.IAC VIII, Target Shoot, Calculator Start, Calc1 (B) Mastermind Core(A\$1000/L\$11C), Talk, Numbers (A) Menu, Cat Init, Sydney Group Australia Disk 1, Hgr Demo!, Bio-rhythm, Lucy, Applesoft Shape Maker, Mastermind, Info, Bach (T) Cat, Ldata, LWords

HGR DEMO! - Simple geometric shapes from trig functions.

BIORHYTHM - An old favorite.

TARGET SHOOT - A text game.

LUCY - Formerly known as Eliza but with an expanded vocabulary.

TALKING CALCULATOR - A delightful integer math calculator with the voice of Roger Keating from Australia, coming thru your Apple speaker

MASTERMIND - Another old favorite.

Disk Library 3.3

WAP Volume 100 UTILITIES A (c)

Free Sectors = 261(65.25K)

(I) WAP Utilities A, AppleSoft (B) LHS ReCst VIOC, LHS Disk Map, FRE(X), IntBasic, Fix Sectors, LHS Catalog, FPBasic, LHS Copy, B.Mas.Cat.48K, Tape Input Speaker Rtne, Tape Loading Aid (ASCII-ROM), Amper Interpreter (A) Hello, Master Catalog (48K-Enhanced), Print Using - Amper Demo

WAP Volume 101 UTILITIES B (c)

Free Sectors = 65(16.25K)

(I) WAP Utilities B, Hello, Copy Quick 3.3, WOZBoot13, Copy, Fast Copy 3.3 (B) FPBasic, Boot13, Copy.Obj0, DOS 3.3.1, FID 3.2, FID 3.3, Cat, Maintenance, Muffin, Copy.Obj, TED II+ Documentation, Chain, Relocate DOS to Memory Card, Fast FRE(0) A8192 L505 (A) Transfer, Switch 3.2.1/3.3.1, CopyA, Fast Fre(0) Relocator, Catalog Management, Catalog Management - Edit, Huffin (T) Prog.List

CAT - A nifty menu/file manipulator.

COPY QUICK 3.3 - A faster copying routine for use with 2 controllers. Works on 3.3 Pascal or CP/M DISKS.

TED II+ DOCUMENTATION - Documentation for the TED II+ EDITOR ASSEMBLER on Disk Volume 008. Just BRUN to read.

TRANSFER - A new goody from Apple, Inc. Lets you move files between 13- and 16-sectored disks without any rebooting.

SWITCH 3.2.1/3.3.1 - A marvelous Double DOS program for quick switching between DOS'S without rebooting. Beware of possible effects on memory size or routines usually run above \$8000.

WOZBOOT13 - Modify track zero for booting by all controllers without regard to PROMs installed.

RELOCATE DOS TO MEMORY CARD - From July/August 81 Call -A.P.P.L.E. Lets you put DOS on a 16K memory card in slot zero. Works with APPLE II+ only.

FAST FRE(0) A8192 L505 - A garbage collection routine from Call -A.P.P.L.E.

FAST FRE(0) RELOCATOR - A RELOCATOR FOR FAST FRE(0) so that it will run anywhere in memory.

CATALOG MANAGEMENT - Reviews PROG.-LIST and displays description.

CATALOG MANAGEMENT - EDIT - Creates PROG.LIST modified for 16 sector DOS.

WAP Volume 102 GAMES A (c)

Free Sectors = 189(47.25K)

(I) WAP Games A, Apple-Simon, Black Hole, Concentration, Digital Clock, Magic Cave, No MIS, Reverse, Rom the Robot, Stop Watch (B) SimonShapes, Cat (A) Hello, Black Box, Caribbean Cruise, Horse Race, I am Buddha, It's a Small World, Sound Demo, Dog Fight, Fifteen Game, The Small Mar-queen, Hangman

WAP V 103 MERRY CHRISTMAS (c)

Free Sectors = 277(69.25K)

(I) WAP Merry Xmas, Merry Christmas, Xmas Tree, Christmas, Holiday Greeting Pak, Joy to the World, Deck the Halls, Run Me First (B) Apple-Music SubRoutines, Cat, Integer Basic-Disk (A) Christmas Tree, Xmas Tree & Msg

WAP Volume 104 BUSINESS A (c)

Free Sectors = 63(15.75K)

(B) B-Curve Fits, Catalog.Obj0, Driver, Hello.ll.B (A) Automatic Curve Choice, Billing #8, Business Services, Curve Fit Instructions, Curve Fits (L16), Hello, Initialize File #1, Inventory #1, Loan Cash Flows & I.R.R., World of Chu (T) CashFlow1, CatalogFile, DataFile1, ... DataFile8, File #1, CashFlow2

BUSINESS A is composed of three major programs: Automatic Curve Choice, Loan Cash Flows and I.R.R., and Business Services. Both Automatic Curve Choice and Loan Flows

have introductory material that can be obtained by running the program, then entering an "I". A carriage return will give you a list of the commands. The Business Services program consists of modules on billing and inventory, each of which can be run from the menu. The text file commands in the inventory module are in REM statements and need to be updated with your file name before running.

#### WAP Vol 105 FIG-FORTH UTILITIES (c)

Free Sectors = 72(18K)

(I) Fig-Forth Hello (B) Catalog.Obj0, Fig-Forth78, Read Forth Documentation (A) AppleSoft Search/Change, Data Statement Create, GIIR, Hello, Reminder Generator, Reminder Generator W/O Rems, RowT-ser, RowTser W/O Rems, Screen Dump.No.Num.Center, Screen Dump.-Numbered, Screen Dump.Plain (T) ForthDoc, Data.Scratch

FIG-FORTH/UTILITIES contains an implementation of FIG-FORTH78. BRUNNING FIG-FORTH78 enters the language, and BRUNNING Read FORTH Documentation gives the basic documentation for this implementation. Also included on the disk are a set of utilities, including ROWISER (a super-zap program, Reminder Generator, and others.

#### WAP Vol 106 SCIENCE/ENGINEERING (c)

Free Sectors = 90(22.5K)

(B) Catalog.Obj0 (A) Hello, DXC, Engineering Menu, Exterior Ballistics, Graph Polar Functions, Great Circle, Harmonic Analysis, Hi-Res Polynomial Plotting, Life of a Resource, Log, Log Prgm, Log Prgm.Opt, MudLog 5.1, MudLog.Opt 4, Mudlog.Opt 5.1, S/Robot Motor (T) Annulus, CatalogFile, Drill, Pumps, Variables

SCIENCE/ENGINEERING contains a variety of engineering and science programs, such as Exterior Ballistics, Great Circle, Hi-Res Polynomial Plotting and Life of a Resource. The engineering programs can be accessed through the Engineering Menu.

#### WAP Volume 107 GAMES B (c)

Free Sectors = 31(7.75K)

(I) Apple Trivia, Brain Teaser, Clue, FoolsBall, Interna-Maze, Not One, TV Trivia II (B) Hello.-Catalog.Obj0, Hires Character Generator, Hires Character Table, Shapes (A) Artillery, Collision, Connect-a-Dot, Craps, Darts, Football, Hello, Hires Blackjack, Keno II, MadLib 1, Meteor Storm, Number Guesser, Rock Scissors Paper, Who Am I, Wishing Well

The new games disk consists of games of different types, difficulties and sophistication.

#### WAP Volume 108 IAC 10 GRAPHICS (c)

Free Sectors = 273(68.25K)

(B) Bild1, Catalog.Obj0, N.Bin (A) Alien Heart, Collisions, Da Bin Ich ..., Gaby, Hello, Hello!, Kristalle, Lace, Neon, One Line, Ornato 2, Pulsator, Qqqqq, Quarry, Random, Shakalin, Star, Vasarely

This is a graphics disk from Europe. Many of the programs on this disk give spectacular displays, especially in color.

#### WAP V 109 IAC 11 APPLESOFT TUTOR (c)

Free Sectors = 72(18K)

(A) Apple Tutorial, Menu, Strt, Help, Pt.1, Pt.2, QRef (T) Washington Apple Pi, Vol 109 - IAC 11

This is a tutorial on Applesoft by Diarmuid McCarty, and has been mentioned in SOFTALK (December 81/January 82). Although it deals specifically with Applesoft and the APPLE, it can serve as a general introduction to Integer Basic as well.

#### WAP Vol 110 PERSONAL/EDUCATIONAL (c)

Free Sectors = 6(1.5K)

(B) Chain, Character ShTable, Doc.-Personal/Education, Shapes, ShTable Loc (A) Alex's Calendar Part 1, Alex's Calendar Part 2, Class Grades, Class Grades Init, FracOp1, FracOp2, Fraction Drill Program, Hello, Home Inventory, Home Message Center, Human Physiological Parameters, Improv, Life Management and Finances, Life Time, Loan Calculator, Mathematical Designs, Mini-Pilot II, Optical Illusion, Perpetual Calendar, Perpetual Julian Calendar, Reduce, Simple Text Processor, Text Organizer, Victory Drill (T) Apple Blossoms, Choice File, Victory Drill Words 1, ... Victory Drill Words 4

This disk (Personal/Education) is a collection of programs that are suitable for home and/or school use.

ALEX'S CALENDAR PART I - A perpetual calendar program using Hi-Res graphics. Options also include such things as calculating the number of days between dates.

CLASS GRADES - A gradebook program designed for teacher record-keeping. Could also be used by parents (and students) to keep track of grades. Files must first be initialized by running CLASS GRADES INIT.

FRACTION DRILL PROGRAM - An education program on (1) reducing fractions, (2) converting improper fractions to mixed numbers, and (3) doing arithmetic with fractions and mixed numbers.

HOME INVENTORY - Records and organizes a home inventory, useful for insurance purposes.

HOME MESSAGE CENTER - Saves and retrieves short messages (5 lines or less) for individuals.

HUMAN PHYSIOLOGICAL PARAMETERS - Analyzes your weight and calculates proper weight, percentage of body fat, body surface area, etc.

LIFE MANAGEMENT AND FINANCES - Keeps track of various personal/household accounts such as insurance, food, firewood, etc.

LIFE TIME - Determines life expectancy.

LOAN CALCULATOR - Calculates periodic payments for loans, and breaks the payment down into principal and interest.

MATHEMATICAL DESIGNS - ...Simply a lighter interlude...

MINI-PILOT II - A simple implementation of PILOT in Applesoft. Commands available are: RUN, EDIT, LIST, NEW, REPLACE, DSAVE, DLOAD. Sample program: APPLE BLOSSOMS.

OPTICAL ILLUSION - ...Another (briefer) interlude...

PERPETUAL CALENDAR - Displays a calendar for the year selected. (January 81 Washington Apple Pi.)

PERPETUAL JULIAN CALENDAR - SAME AS Perpetual Calendar except that it also displays the Julian date and is set up to print ONLY to a printer!

SIMPLE TEXT PROCESSOR - A simple line-based text processor for short texts. A <CR> at the beginning of a line will terminate entry mode.

TEXT ORGANIZER - Creates an outline, with either sequential or random access.

VICTORY DRILL - A spelling drill program, with timed display, and an optional typing response. Four sample lists of words are included.

#### WAP Volume 111 GAMES C (c)

Free Sectors = 47(11.75K)

(I) AppleStar 1990, Bowling, City, EarthQuest.Instr, EarthQuest.Space, InterStellar, Planet (B) Doc.-GamesEB4111 I EarthQuest (A) Caesar's Watch, Hello, Magic Square,

Ski Racer, Spencerville Manor 2

APPLESTAR 1990 - Lo-Res. Duel enemy spaceships using keyboard commands.

BOWLING - Lo-Res. Use a paddle in a game of bowling.

CAESAR'S WATCH - Lo-res display of a waterclock.

EARTHQUEST - Text. You are the captain of a starship surveying the galaxy for the lost home of mankind.

INTERSTELLAR - Text. Civilization has been destroyed and you are on a starship dueling enemies.

MAGIC SQUARE - Lo-Res. Given 9 boxes, get checks in the outside boxes while the inside boxes are empty.

SKI RACER - Lo-Res. Use a paddle to control the skier down the slope and through the Slalom gates.

SPENCERVILLE MANOR 2 - Text. Mr. Spencer has died and left his wealth to whomever finds and opens his safe.

WAP Volume 112 UTILITIES C (c)

Free Sectors = 192(48K)

(I) AppleTest, Disk Documentation, Pi, Scrunch, Slow Scroll (B) D/SCrunch.Obj1, D/SCrunch.Obj2, Dayton Menu, Field Input, File Input Mod3, Input.Line, Numerals, Screen Write/File Hex, Screen Write/File Instructions, Shapes, TxFile, Utilities C Doc. (A) AppleSoft Relocate, ASCII Disassembler, Catalog to Dir, Data Statements from Ram, Embed Assy in A'Soft, Exec Filer, Exec Writer, Fast Primes, Field Input Demo, Field Input Instructions, Field Input Tester, Floating Point Routines, Hello, Hex-Decimal-Hex Conversion, Hi-Res Sketcher, Letter Typer, Magic PaintBrush, Protect, Rem Line Formatter, Reset to Monitor, Screen Write/File Doc., Shape Omni, TxFile Info, Vertical Banner Printer (T) Field.Instr

The UTILITIES C disk contains programs contributed indirectly by Dave Juett (WAP newsletter, Dec '81) and programs from Apple-Dayton, as well as utilities contributed directly to Washington Apple Pi.

APPLESOFT RELOCATE - Locates Apple-soft programs above the page one Hires graphics memory area.

APPLETEST - Color bar test and paddle test.

ASCII DISASSEMBLER - Disassembles memory into HEX LOCATION/HEX #/MNE-MONIC/ASCII CODE in response to "start at" prompt. Enter a memory location in decimal. Successive

locations will be displayed. Ctrl-S scrolls, RESET escapes.

CATALOG TO DIR - Run this one, then type "DIR" instead of "CATALOG".

DATA STATEMENTS FROM RAM - Another POKE-writer. Generates data statements from machine code. A typical program to utilize such data statements might read:

10 FOR X = 768 TO 950

20 READ Y : POKE X,Y

30 NEXT

The program is self prompting.

DAYTON MENU - The Hello/Menu program used by Apple-Dayton for their disks.

DISK DOCUMENTATION - tells whether the disk is a master or slave, gives the volume number and free sectors.

EMBED ASSY IN A'SOFT - Explains one way to embed short machine language routines in an Applesoft program.

EXEC FILER - Allows you to create, read, write and edit EXEC files.

EXEC WRITER - Similar to EXEC FILER.

FAST PRIMES - Calculates prime numbers within a given range.

FIELD INPUT - Input routines for Applesoft programs using the ampersand (&) instruction. FIELD INPUT INSTRUCTIONS gives the syntax requirements. Examples are presented in FIELD INPUT DEMO and FIELD INPUT TESTER.

FLOATING POINT ROUTINES - Converts an input number to its floating point representation.

HEX-DECIMAL-HEX CONVERSION - Converts hex to decimal and decimal to hex.

HI-RES SKETCHER - Allows you to sketch on the Hires screen using either a paddle or the keyboard.

LETTER TYPER - Facilitates the printing of large-scale signs, documents, etc., by allowing you to type large letters on the Hires screen.

MAGIC PAINTBRUSH - Allows you to draw in Hires using paddles and buttons.

PI - Calculates pi to any length up to 32767 digits.

PROTECT - Renders programs unlistable for security, if desired.

REM LINE FORMATTER - Aids in formatting Applesoft REM statements for clear display.

RESET TO MONITOR - For APPLE II+, sends system into Monitor when RESET

is hit.

SCREEN WRITE/FILE HEX - Allows you to write a display screen that can then be loaded and displayed quickly from a Basic program. SCREEN WRITE-/FILE DOC. gives instructions.

SCRUNCH - Allows you to squeeze four Hires pictures onto a single screen.

SHAPE OMNI - Create and save shapes using the keyboard.

SLOW SCROLL - Integer Basic Subroutine that allows display of text at different scrolling speeds.

TXFILER - Allows you to use Apple Writer to write/edit text files. Documentation is in TXFILER INFO. See June '81 WAP newsletter.

VERTICAL BANNER PRINTER - Prints large vertical headings of less than 21 words.

WAP Volume 113 BUSINESS B (c)

Free Sectors = 79(19K)

(B) Chain (A) Caamm Master, Decision, Regr Data, BiVar Regr, BiVar Hires, MulVar Regr, LinProg (T) BiDemo, BiTest, BiTest2, LPDemo, Numal131, M2, MulDemo, TempFile, TF, Numal 131, LP Demo, DecDemo, TPDemo

The BUSINESS B disk is a package called "Computer Assisted Analysis for Managers". It is described as follows.

The C.A.A.M. software package is designed to meet the needs of managers and analysts for easy-to-use, time-sensitive computer support. The package does not include every analysis technique, but it does include three of the most useful: regression analysis, linear programming, and matrix decision aid.

WAP Volume 114A ADVENTURE - INIT (c)

Free Sectors = 151(37.75K)

(B) Chain (A) Adventure\*Init, Adventure\*Main, Adventure\*Rems, Hello (T) Cond, Hints, Key, LText, OBJLOC, PSpeak, Rptr, SText, Travel, Out, Dictionary

WAP Vol 114B ADVENTURE PROGRAM (c)

Free Sectors = 212(53K)

(A) Hello (T) Dictionary, Divide, OldGame, Out

This is a text adventure game written in Applesoft. As the introduction states: "Somewhere nearby is a colossal cave, where others have found fortunes in treasure and gold, though it is rumored that some who enter are never seen again. Magic

is said to work in the cave."

To run the adventure, insert Volume 114A and RUN ADVENTURE\*INIT. When the program prompts you to "Insert Text Diskette" insert Volume 114B. Note that BOTH disks are required to run the program.

WAP V 115 IAC 12/13 MISCELLANEOUS (c)

Free Sectors = 128(32K)

(I) Authorship, Concentration, Connection, Cribbage, Hoover Dam, Video Test (B) AppleSoft ListPrinter, Bin.Hello, Page Dump, SofSymRef, SofSymRef.S, TeDissembler.S (A) AppleSoft Lister Instructions, Calendar, DM II, Hello, HexCon, Johannes, Stock Trader

These two IAC disks have been combined for the WAP library since many of the programs on IAC 13 were contributed from recent WAP disks. The IAC 12 disk includes a set of programs from the Ottawa 6502 User Group. Both games and utilities are included: Cribbage, Concentration, Applesoft List-printer, (Applesoft) Softsymref, etc. From IAC 13 there are a couple of programs from the Apple User Group of Sweden, including a DOS modifier program that allows you to change the DOS error messages and command names.

WAP V 116 IAC 14 MICROMODEM II (c)

Free Sectors = 381(95.25K)

(I) Dumbo (A) Alarm, Answer on Nth Ring Modified, Auto Dial, Basic Extractor, Dial a Human, DJ Converter, Hayes Menu, Hello, Micromodem Flags, Pickup, SelfTest II, SourceOn, Store & Forward, Transfer

D.C.Hayes, Inc. has put their Micromodem II programs into the public domain and donated them to the IAC. The programs are written to work with the Micromodem II, of course, but could be modified for other uses.

WAP Vol 117 PICTURE PACKER (c)

Free Sectors = 19(4.75K)

(B) HR.Packer, HR.Unpacker, Apple Computer.Comp, Apple Pi.Comp, Baby Jane.Comp, Big Dipper.Comp, Brain.-Comp, Character Set.Comp, Chicken.Comp, Churchill.Comp, Dollar.-Comp, Donald Duck.Comp, Double Bessel.Comp, Forest Pic.Comp, Hat.Comp, Hopalong Cassidy.Comp, Lace.Comp, Leonardo.Comp, Map.Comp, Maze.Comp, Moire.Comp, Music.Comp, N.Bin.Comp, Pic1.Comp, Pic2.Comp, Schematic.-Comp, Spiral.Comp, Spock.Comp, Squeeze.Comp, The Time Machine.Comp, Uncle Sam.Comp, WorldMap 3.Comp, World Map.Comp (A) AACcompress Pict-

ure, AAShow, AASlide Show, Haley's Slide Show, Hello, Instructions

This features the hi-res picture packing programs from CREATIVE COMPUTING which allow you to conserve disk space when saving hi-res screens. Also included, of course, are a number of graphics screens in a slide show format.

WAP Volume 118 UTILITIES D (c)

Free Sectors = 24(6K)

(I) General Disk Utilities 3.3, Simulation-6502 (B) B.Mas.Cat.48K, Documentation, Dsk.Obj, Dump, Dump.-Auto, Fast.IntBasic, Fast Loader, Fast.RWTS, Hex/ASCII Dump, Integer Basic-Disk, LHS Disk Map, RVS 6502 BDH Driver.O, RVS 6502 Dvr.O, RVS 6502 Dvr.S, VIOC Report.Obj (A) Alphabetize a Directory File, Data-Soft, Disk Zap, Event Reminder, FastBoot Maker, Get A and L for a Binary File, Hello, Hex-Dec Conv, Hex/ASCII Dump Info, LAM Routine Utility, Make a Directory File, Mas.Cat.48K.Re-Revised11/22/81, Printer Dump Doc, Program Map, Real Var Study, System Configuration Checker, The Lo-Res Assembler, VIOC Report (T) Mem, RVS 6502 Dvr.O.T

The Utilities D disk contains programs from many sources. Some were used in the first WAP tutorials and have appeared on other disks. They are included again here since they were used for the tutorial and since the DOS utilities have all been upgraded to run on DOS 3.3. Note, however, that these are not tutorial programs but utilities that allow you to explore various aspects of the APPLE. In addition to these programs there are a number of new and updated utilities.

ALPHABETIZE A DIRECTORY FILE - Allows you to alphabetize a text file. Reads the file from disk and writes it back to disk for you.

DATESOFT - A hello program that can act as a simple calendar that can be set to date a disk.

DISK ZAP - Allows you to read, write, and zap a sector from a disk.

DUMP - Dumps any DOS 3.3 file to a printer in hexadecimal. Run PRINTER DUMP DOC for instructions.

EVENT REMINDER - Reminds you of birthdays, etc., for a specified time period.

FASTBOOT MAKER - A group of four programs that installs a fastbooting loader for a 16K RAM card. It requires that the target diskette contain ONLY the boot program. Also, the code is "hidden" and doesn't appear on the catalog.

GENERAL DISK UTILITIES 3.3 - Disk read/zap program that includes other general functions. Enter H for help instructions.

GET A AND L FOR A BINARY FILE - Will BLOAD a binary file then print the starting address and the length of the file.

HEX-DEC CONV - Converts hexadecimal numbers to decimal and decimal to hex.

HEX/ASCII DUMP - Displays the hex values and ASCII characters of locations in RAM. Information is in HEX/ASCII DUMP INFO.

INTEGER BASIC-DISK - For APPLE II+ owners, this is the RAM version of Integer Basic. Simply BRUN INTEGER BASIC-DISK and when you get the ">" prompt you are in Integer Basic.

LAM ROUTINE UTILITY - Allows you to EXEC machine code into your Basic program.

LHS DISK MAP - Gives a display on the low-res screen of which sectors on a disk are used, which are free, and which generate I/O errors.

MAKE A FILE DIRECTORY - Allows you to make a directory file of programs on a disk.

MAS.CAT.48K.RE-REVISED11/22/81 - Another revision of the Master Catalog program that allows you to create a catalog of your disk library.

PROGRAM MAP - Gives a map of an Applesoft program.

REAL VAR STUDY - Allows you to study how real numbers are stored and evaluated by the Applesoft floating point routines.

SIMULATION-6502 - Simulates the working of the 6502 microprocessor.

SYSTEM CONFIGURATION CHECKER - Reports what's in each slot in your Apple.

THE LO-RES ASSEMBLER - Creates machine code for lo-res graphics which could be incorporated into machine language subroutines. An invalid keypress or a <CR> when entering plot information will give you the options. Use "Q" to quit entering information.

VIOC REPORT - Displays the information other than the bit map contained in the disk Volume Table of Contents.

WAP V 119 IAC 15 MISCELLANEOUS (c)

Free Sectors = 9(2.25K)

(I) Awari, Decision, Life (LoMem, MadLib, Othello, State Capitals, Towers of Hanoi Solved (B) Menu.1, Menu.2, Computers.Decsn, Herb's Calculator Display, Inv.Input.Inst, Scr.Print.Inst, Screen Print, Scr.-Wri.Inst.1, Scr.Wri.Inst.2, Scr.-Wri.Inst.3, Screen Write 2.1, Text.-Ed.Inst (A) Tulsa Menu, Arithmetic Tac Dough, Herb's Calculator, Inverse Field Input, Screen Print Instructions, Screen Write Instructions, Screen Edit, Text Editor Instructions, Text Editor.50 (T) Life Exec, Text Editor TestFile

The IAC disk contains programs from the Apple User Group of the Tulsa Computer Society. The programs on this disk range from games to utilities, and many require Integer Basic.

WAP V 120 IAC 16 MISCELLANEOUS (c)

Free Sectors = 158(37K)

(B) DOS Pointers, H-Dice, RWDisc, Text.ApNote-B2 (A) Algebra 1, AppleWriter Reader, Dan's Option Writer, Dan's Switch, Gambler, Memory Game, Production of Light, Ruth-er, Ship Captain Crew, Simon, Spelling Test, Static Electricity, The Green Apples, Tom's Disk Modifier, Tom's Math Drill, Tom's Trash Com-pactor, Two Drive Copy (T) Spelling List

This is a miscellaneous collection of programs from The Green Apples of Cedar Falls, Iowa.

WAP Vol 121 ABBS PROGRAM (c)

Free Sectors = 72(18K)

(B) John Moon Article (A) ABBS, Editor, Hello (T) AutoLogon, BBS, Files, Info, Instructions, Meetings, Messages, SrtDir, Upload, Users

This disk contains John Moon's ABBS program, which served as WAP'S Apple Bulletin Board System until Tom War-rick made some modifications and enhancements. Note that this is not a turnkey system. It must be con-figured for your system and purpos-es. To aid anyone interested in doing this we have included on the disk John Moon's article "Write Your Own Bulletin Board System" from the May 82 Journal.

WAP V 122 IAC 17 MISCELLANEOUS (c)

Free Sectors = 94(23.5K)

(I) Automatic Bingo, Beginning, Bin-go, Bingo Card, Blackjack, Color Math, Computer Art, Cryptogram, Data Display and Save, Fast Mem Test, Hangman 2, Instructions, Las Vegas Slot Machine, Life, Moon Lander, Music, Nevada Craps, NJ Lottery, Phila. Color Organ, Phila. Pinball,

Random Lines, Skunk, Slots, SLOW Mem Test, StarWars Rescue, States and Capitals, The Hart Piano, Title Demo, Twine (Type GR First), Two Circles, Wings(Type GR First) (A) Hangman, Hello

These are contributions from various user groups.

WAP 123 FRENCH VOCABULARY (c)

Free Sectors = 31(7.75K)

(B) La Deuxieme Lime, La Premiere Lime, Les Exemples, Les Verbes (A) French Tester, French Tester In-structions, French Text Entry, French Text Entry Instructions, Hel-lo

This disk contains a program for drilling you on French vocabulary. Included are three large files of words. Also included is a program to create other files so that you can use the tester program on your own words and phrases.

WAP 124 UTILITIES E (c)

Free Sectors = 43(10.75K)

(I) Breaker Instructions, Color-wheel, Int Print Writer, NoPeek (B) A.S. Line Locator, Ampersort Doc. (Brun), Ampersort II, Breaker A\$7D00 L\$268, DiskScan 1.0, Read at.Bin, Restore, Short DOS Commands, Utili-ties E Doc. (A) A.S. Line Locator Description, Address/Length Finder, Boot Changer, Compare Capturer, Com-pare Programs Routine, Disk Veri-fier, FileHandler, Flower Comments, Flower I, Flower II, Graphic Hello, Hello, Lew's Peek and Poke, Line Draw, Paddle Pot Correction Cap, Program Packer, Program Packer--Unpacked, Read at Demo, Short DOS Instructions, Speed Loader

A.S. LINE LOCATER - This program gives you the RAM address of the beginning of a selected Applesoft line. Run A.S. LINE LOCATER DE-SCRIPTION for instructions.

ADDRESS/LENGTH FINDER - This program tells you the length and load loca-tion of a binary file on disk, and offers the option of transferring the file to another disk.

AMPERSORT II - This is a repeat of the ampersort program. It is in-cluded here to accompany the Peter Rosden article documenting the program. BRUN AMPERSORT DOC. (BRUN) for the documentation.

BOOT CHANGER - This program changes the file type that DOS will run when it is booted. A new disk must be INITed from the modified DOS in RAM.

BREAKER A\$7D00 L\$268 - This is a machine language debugging tool

which allows the insertion and de-letion of break points in a machine language program. RUN BREAKER IN-STRUCTIONS for documentation.

COLORWHEEL - This is a harmoniscope program based upon the color wheel that can aid you in choosing appro-priate colors.

COMPARE CAPTURER  
COMPARE PROGRAMS ROUTINE - These programs allow you to compare dif-ferent versions of a BASIC program. A description of how to use the pro-grams is given with each program.

DISK VERIFIER - This program allows you to change the name of the hello program on a disk, scan the disk for bad sectors, or INIT a new disk and flag any bad sectors.

DISKSCAN 1.0 -Similar to Disk Veri-fier.

FILEHANDLER - This utility allows you to modify sequential text files.

FLOWER COMMENTS - This program dis-cusses two different ways to handle plot information from BASIC pro-grams.

GRAPHIC HELLO - A graphic hello pro-gram.

INT PRINT WRITER - This is a utility to assist you in entering numerous print statements in an Integer pro-gram.

LEW'S PEEK AND POKE - This program creates Applesoft program lines con-taining PEEKS or POKES.

LINE DRAW - This is a graphics utili-ty that allows you to plot lines on the Hi-res screen. Options allow you to change line and screen color.

NOPEEK - This is a demo of Integer BASIC internals which describes a method for passing data between an Integer program and an Assembly lan-guage routine.

PADDLE POT CORRECTION CAP - For the context and use of this program see the January 1982 WAP journal.

PROGRAM PACKER - This program con-denses Applesoft programs by elim-inating REMs and combining lines. Also included is PROGRAM PACKER--UNPACKED as additional documenta-tion.

READ AT.BIN - This Applesoft utility allows you to begin reading data from whichever DATA line you choose. For a demonstration run READ AT DEMO.

SHORT DOS COMMANDS - This program shortens DOS commands to one or two letters. For instructions run SHORT

## DOS INSTRUCTIONS.

**SPEED LOADER** - This program changes the DOS sector spacing for faster disk operations.

WAP V 125 IAC 18 MISCELLANEOUS (c)

Free Sectors = 175(43.75K)

(I) Wenatchee AppleStand (Game) (B) BSound Maker, Pic. #1 (Hi-Res Pg.2), Snake Logo, Sound1(Call2921), Sound2(Call3091), Sound3(Call2571), Sound4(Call3293), Sound6(Call3631), Sound7(Call5159), Sound8(Call2230), Sound9(Call5548), Sound10(Call15472), Sound11(Call4307), Sound12(Call15334), Sound13(Call4661), Sound14(Call4827), Sound15(Call3969), Sound16(Call4993) (A) Abe Pic. Ampersand Kill-Catalog Utility, Ampersand List Utility, Ampersand Run Utility, Applesine, ASCII Screen Display, Billboard Display Demo, File Arranger Utility, Graphing Functions in Hi-Res, Greetings From W.V.A.C.C., Hello, Hi-Res Solar System Simulator, JoyStick/Paddle Tester, List This File Before it's Run, Loan Amortization Table, Music Notes With Octave Nos., Pause (Working) Routine, Play That Tone Again Sam!, Snake Arcade Game, Some Where Over The Rainbow, Sound By Wagner, Space Music+ Intro, Trick File Name Utility, Tunnel Vision, Twirling Cursor, Two 3-D Shapes, Up & Down The Scale, <<255 Hi-Res Colors Demo>>, 90 Main Program

This disk comes to the IAC from the Wenatchee Valley Apple Computer Club of Wenatchee, Washington.

WAP V 126 SIGHTS & SOUNDS (c)

Free Sectors = 76(19K)

(I) Caveat (Rnd), Contrastoscope, Cranscope III, Harmoniscope, Noisy, Random Walk (B) Banjo Instructions, Banjo Intro, Banjo Subs.Obj0, Music-ML, Simple Shapes 3 (A) Banjo Main, Banjo Tab, Bill Music, Drunken Sailor, Graphic Recursion, Kinetic String, OP-ART, Paddle Tunes, Plow, Simple Shapes Graphics, Spiro-Graph, Stan(Printer), Staten Island, Wild Line (T) Banjo Startup Name, Banjo-Avalon Quickstep (Oops), Banjo-Blackberry Blossom, Banjo-Blackberry Blossom (G1), Banjo-Blackberry Blossom (G2), Banjo-Cowboy's Dream, Banjo-Devil's Dream, Banjo-Devil's Dream+Music Box, Banjo-Ducks On The Millpond, Banjo-Frosty Morning, Banjo-Goin' Back To Kentucky 2, Banjo-Goin' Back To Kentucky, Banjo-Grasshopper Sittin', Banjo-Nancy Rowland, Banjo.Old Virginia Reel, Banjo.Puncheon Floor, Banjo.Putney's Run, Banjo.Putney's Run (Fiddle), Banjo.Rachel, Banjo-Rye Straw, Banjo.Salem Hornpipe, Banjo.Seneca Square Dance, Banjo-Sugar Babe, Banjo.Test Pattern,

Banjo.Texas Quickstep, Banjo.Turkey In The Pea Patch, Banjo.Wooden Nickel, Banjo.Zippity Doo Dah

Features a banjo tablature editor that allows you to enter tunes, edit them, play them back (with bouncing ball), and store them to disk. You can also transpose and control the tempo and pitch. A number of different tunes are included on the disk, as well as additional programs that make use of the Apple's graphics and/or sound capabilities.

WAP Vol 127 MATH/SCIENCE A (c)

Free Sectors = 53(13.25K)

(I) Calc Pi to 1000 Digits, Convert Fraction To Decimal, Division, Multiply, Number Base Converter (A) Arthropod Classification, Calculator, ConstellationS, Fast Fourier Transform, Function Plotter, Graphing Rational Functions, Hello, Insect Classification, Metrics Area, Metrics Kitchen, Metrics Length, Metrics Temperature Weight, Plant Competition, Satellite Pointing, Solar System, Solar System Simulation 2, Solar System Simulation Mod, SSS Information, Total

This disk includes programs on arthropod and insect classification and on the solar system, as well as other relevant math/science programs.

WAP Volume 128 GAMES D (c)

Free Sectors = 19(4.75K)

(I) Lit'l Red Bug (B) AWAC Shapes, Documentation, SubScan.Tab, Title, Wall, Wall Source-LIZA Assembler (A) AWACS, Black Friday, Chase, D&D Magic Items, Dive Bomber, Gold, Hello, Lost Treasure Hunt, Real Time Lander, Rest, SubScan, Wall-Instructions, Wizard's Castle (T) Wiz

AWACS - A Hires Game. You command a fleet of planes and must defend your base from enemy fighter planes.

BLACK FRIDAY - A text game for 1 to 4 players. You get to invest \$5000 then buy and sell your shares during the following years.

CHASE - A Lores game. You're chased by robots.

D&D ITEMS - A game utility for Dungeons & Dragons. This program stocks a lair with magic items for you.

DIVE BOMBER - A Hires game. You drop bombs in order to clear out a pass.

GOLF - A text game that allows you to select your club in a given situation.

LIT'L RED BUG - A driving game that lets you use a paddle to steer as you try to stay on the road.

LOST TREASURE HUNT - A text game. You have a map and try to find the treasure that's hidden on the island.

REAL TIME LANDER - A Lander game that uses Hires as you try to land a lunar lander safely.

SUBSCAN - A Hires shooting game for two players that pits a plane against a submarine.

WALL - A machine language program in Lores for two players. You try to keep your lines from crossing. Instructions are in WALL-INSTRUCTIONS.

WIZARD'S CASTLE - A game that lets you wander around a wizard's castle.

WAP Volume 129 GLAQ (c)

Free Sectors = 19(4.75K)

(A) GLAQ, GLAQDoc-Upper, GLAQHelp-Upper, GLAQHelp-Upper/Lower, Hello (T) GLAQDoc, GLAQHelp, GLAQHelp Upper Case

The GLAQ disk contains the "Global-Local Adaptive Quadrature" program. It is described as follows:

"GLAQ is an iterative, adaptive quadrature routine used for estimating the integral (I) on the interval (A to B) of a user-supplied function using the 7-point Gaussian and 15-point Kronrod rules of integration."

Also in the disk are two files of documentation in a variety of formats. All are presented as RFMs in Applesoft programs. The GLAQDOC files give the documentation for the working of the program, and the GLAQHELP files give you the introduction.

WAP V 130 Diversi-DOS (c)

Free Sectors = 357(89.25K)

(B) ASMDIV (A) Hello

The Diversi-DOS disk is a commercial offering from Diversified Software Research. The disk is unlocked and offers you a modified DOS that speeds up disk access, a keyboard buffer program, a print buffer program, and a DOS-mover that puts Diversi-DOS on a RAM card. All the documentation is on the disk and is available when you boot it.

DSR has offered this disk to all Apple computer clubs and computer stores for free distribution. The catch is that they're asking you to send them \$25 if you decide to keep

it. In other words, DSR is letting you try out the program and trusting that you'll pay them if you want the programs.

WAP has decided to add the disk to the library just as we would any other disk. Whether or not you pay DSR for it is up to you. We might, however, point out that it's nice to have a software publisher confident enough of their product to believe that you'll be willing to pay for it AFTER you've given it a good trial on your own system.

WAP V 131 PERSONAL/EDUCATION 2 (c)

Free Sectors = 58(14.5K)

(I) Life Expectancy Test, Math Practice, Music Compiler (B) Documentation (A) Arithmetic Tables, Calendar, Flash Spelling, Food Values, Geography, George's Morse Code, Grade Average, Hello, Ideal Body Weight, Recipe Box, Recipe Calorie Cost, Remember Numbers Game, Telephone Acronyms, Time Between Dates, Time Teacher, Twelve Month Reminder, Vocabulary (T) Words.S

ARITHMETIC TABLES - An arithmetic drill program.

CALENDAR - Another program to print a calendar in 80 columns.

FLASH SPELLING - A spelling drill program.

FOOD VALUES - This program shows you the food values of selected foods.

GEOGRAPHY - A game to help teach geography.

GEORGE'S MORSE CODE - Gives the morse code for what you type in.

GRADE AVERAGE - Computes number and letter averages for grades.

IDEAL BODY WEIGHT - Computes your ideal body weight.

LIFE EXPECTANCY TEST - Predicts your life expectancy.

MATH PRACTICE - Another arithmetic drill program.

MUSIC COMPILER - Allows you to compose and play tunes.

RECIPE BOX - Allows you to enter and file recipes.

RECIPE CALORIE COUNT - Counts the calories, recipe costs, and converts the quantities for different numbers of servings.

REMEMBER NUMBERS GAME - Gives you a technique for remembering numbers.

TELEPHONE ACRONYMS - Makes up acro-

nyms to help you remember phone numbers.

TIME BETWEEN DATES - Gives you the time in days, weeks and years between specified dates.

TIME TEACHER - Drills on telling time using a Hires clock.

TWELVE MONTH REMINDER - Allows you to enter and retrieve reminders.

VOCABULARY - Gives you a definition and clues while you try to guess the word.

WAP V 132 IAC 19 UTILITIES (c)

(I) Disk Sector Map (B) Display ASC Page by Page.Obj, Joystick Wiring Diagram, LC-Killer.Obj, Poke 33.Obj, Puf.Obj, Text To Applewriter.X, Text.Joystick.Info, Track 35.Obj, Un-New.Obj (A) Address Index.Instructions, Address Index.LC, Birth-/Anniversary List, Convert Apple-Writer, CRAE/APA, CRAE/APA.Instructions, Display ASC Page by Page.Inst, Hello, Huffin, Huffin.Instructions, Joystick.Instructions, LC-Killer.Instructions, Loan Program, Paddle Test, Poke 33.Instructions, Puf.Instructions, Ram Test 48K, Sector List, Text To AppleWriter, Track 35.Instructions, Un-New.Instructions (T) Joystick.Info, Memap (Exec), Poke 33.Source, Puf.Source, Track 35.Source, Un-New.Source (R) Poke 33.Obj0, Track 35.Obj0

WAP 133 IAC 20 (c) (DO NOT BOOT)

Free Sectors = 0(OK)

(B) Address Search.Obj, DiskScan.Obj1, DiskScan.Obj2, Fast.Loader, Fast.RWTS, GetFile.Obj, GetSect.Obj, Morse Code.Obj (A) Address Search.Instructions, Apprint File Maker, BenchMark, Canyon Run - Colour, Disk Free Space, DiskScan, Error Handler, FastBoot Create, GetFile Info, Hello, Hello CRAE/APA, Hybrid Huffin, LaPlace Inversion, LaPlace Inversion.Document, Menu Magic, MoonLanding, Morse Code, PrettyPrint, Shuffle, Space Canyon (T) Address Search.Source, APPRINT, GetFile, GetSect, Listing, LowerCase Assem List.Text (R) Address Search.Obj0

This is a hybrid disk which is described as follows:

"This hybrid disk is a mixture of Pascal and DOS 3.3. The first 17 tracks (from 0 to 16) contain Pascal programs, while the remaining 18 tracks (17 to 34) bear DOS 3.3 programs. Therefore you cannot boot with this disk. Instead, boot with another DOS 3.3 disk first.

"Of note are two programs on the disk: 'Hybrid Huffin' which has been modified to work with this hybrid

disk, to transfer Pascal text files to DOS; and the 'Puffin' program in Pascal to transfer files from DOS to Pascal.

"While you will want to delete files from this disk, keep its format as a handy utility to interface between DOS 3.3 and Pascal."

The Pascal programs on this disk are Dr. Wo's Puffin program for converting DOS files to Pascal, which was previously documented in the Sept. 1981 WAP Journal.

The DOS files on Disk 133 include good examples of both assembly language and Applesoft programming.

ADDRESS SEARCH - By Harry Jones, Apple-can, Toronto Canada will list all locations in a range which have a given two byte value. This routine is useful for disassembling machine language programs because you can find all locations which branch to a give address in memory. To use, type BRUN ADDRESS SEARCH.OBJ, which will load the routine and set the control-Y vector in the monitor to access the routine.

APPRINT - A utility to help capture Applesoft programs in text files for listing or editing with word processor programs.

BENCHMARK - Will calculate all prime numbers from 1 to 1000 by an inefficient method which tries all possible divisors. Although there are faster ways to find prime numbers, this program can be used to test the speed and efficiency of compilers.

CANYON RUN - COLOUR and CANYON RUN are two versions of a space ship game. Game paddles are required to steer the ship through a canyon course.

DISK FREE SPACE - Displays the free sectors on a disk in a graphic chart.

FASTBOOT CREATE - Will modify a slave 48K DOS 3.3 diskette so that it will automatically load INTBASIC if a language card is present. (Will it work on a //e?) It uses its own version of DOS called FAST.RWTS which is supposed to be faster than the normal DOS BLOAD routines.

HELLO CRAE/APA - Allows the Co-resident Applesoft Editor and the Applesoft Programmer's Assistant to be in memory at the same time. You must obtain each of these programs before you can use this utility.

HYBRFD HUFFIN - A modified version of Dana Schwartz' program for transferring Pascal files to DOS disks. This version will work on hybrid disks such as Disk 133.

**LAPLACE INVERSION** - For those WAP members who have completed four semesters of college level calculus and enjoy hi-res graphs.

**MORSE CODE** - By Bobby Deen sends randomly selected characters in Morse Code over the Apple's built in speaker. You can select code speeds from 5 to 60 words per minute.

The disk also contains several assembly language source programs compatible with the DOS TOOLKIT assembler.

WAP 134 NEW MEMBER DISK (c)

WAP 135 & 136 ABBS DISKS (c)

Disks 135 and 136 contain the latest version of Tom Warrick's Apple Bulletin Board System program. Both disks are required to operate the system. Booting Disk 136 provides full documentation for installing the system. (Booting Disk 135 will restart the ABBS, so to permit an operating Bulletin Board to recover from a power interruption.) The ABBS program is written in both Applesoft Basic and machine language and requires an Apple II+ or Apple //e with two disk drives and a UC Hayes Micromodem II. The system can also use a Mountain Computer CPS card as a system clock.

If you end up using this program to operate your own ABBS, please let us know, so that we can help publicize your system and keep you informed of program modifications. Disks 135 and 136 offer more features than John Moon's Applesoft ABBS program which is on Disk 121 (See "Write Your Own Bulletin Board System", May 1982 WAP Journal). Elsewhere in this publication is an article by Tom Warrick describing the New ABBS from the user's perspective.

## EDSIG

ELEMENTARY MATHEMATICS (c)

Free Sectors = 129(32.25)

(I) Color Math, Music Math, Long Division, Heads/Binomial, Coin Tossing, Prime Numbers, Elementary Math, Bar, Musical Math (B) Pic, Menu, Shapes, ShTable Loc, Chain, Character ShTable (A) Hello II, Bar Graph, Denominators, Fraction Drill Program, FRACOP1, FRACOP2, Fractions, Improv, Reduce, Hello

## EAMON Adventure Series

This description is taken from "The Eamon Adventures" by George Gurn in Novapple. EAMON is a public domain series in a text-oriented adventure game format which was developed by Donald Brown. The series has been widely distributed to IAC members from the Denver Apple Pi users group.

The game is sort of a cross between "Adventure" and "Wizardry", with a Dungeons & Dragons style character who must go forth into mazelike chambers or terrain, battle monsters, slay baddies, and reap the rewards and penalties (death) of adventure. Characters may be either male or female. They have three basic characteristics (hardiness, agility, and charisma) which are randomly endowed when they sign up at the Adventurer's Inn, and may learn up to four basic spells (at a cost). A weapons shop is available.

The adventures range from rather mild to nearly impossible.

The following text files appear on almost every volume:

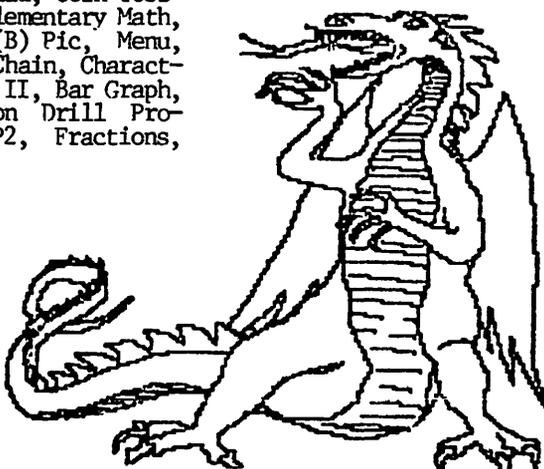
Eamon.Desc, Eamon.Name, Eamon.Rooms, Eamon.Room Names, Eamon.Monsters, Eamon.Artifacts, Fresh Meat. They have been omitted from the table of contents for each volume.

WAP V 180 DUNGEON DESIGNER

Free Sectors = 93(23.25K)

(A) Dungeon Create Menu, -> Eamon Dungeon Designer <- ,Dungeon Init, Dungeon Edit, Dungeon List, Dungeon List (Old), Base Dungeon Program, Base Dungeon Program (Old), Print Manuals (T) Players Manual.Text, DDD Manual.Text

This disk is basically for players who might wish to design their own dungeons. There is extensive player and designer documentation which can be printed. The dungeon design editor can be used to investigate and custom tailor the existing adventures.



WAP V 181 BEGINNERS CAVE

Free Sectors = 109(27.25K)

(I) Apple Pi Slice 181 (Dungeon 1)  
(B) Eamon.Pic (A) New Characters, Main Hall, Init, Edit Characters, The Beginners Cave, Beginners Cave-32K, Room SetUp, Room Names SetUp, Desc Edit/Create, Monster/Artifact SetUp, Room View1, Room View2, SetUp For 32K, The Wonderful World of Eamon (T) Characters, The Adventurer

It is necessary for you to have this master diskette if you want to travel in the World of EAMON. Every adventure requires that you start from the Adventurer's Inn, where your character is properly registered, equipped, and career tracked. Utility programs are available to allow you to review the roster of characters, delete characters, or zero the entire roster.

The Beginners Cave is a tune-up for the novice. If your character can't survive this excursion, he probably wouldn't have lasted long when the real adventures start. This is a benign exercise, with only one "drop dead" trick, one secret passage, and a special treasure item.

WAP V 182 LAIR OF THE MINOTAUR

Free Sectors = 124(31K)

(I) Apple Pi Slice 182 (Dungeon 2)  
(A) -> Eamon Adventure #2 <- , The Lair of the Minotaur, The Minotaur's Lair, Minotaur's Lair-32K, SetUp for 32K

A friend is missing and you go to explore...only to find yourself trapped in this maze. This is a well-balanced adventure where you must find the way out and fight to get there. There are a couple of items you have to pick up on the way. This adventure includes sudden death, mazes, bad jokes, and some puzzlers.

WAP V 183 CAVE OF THE MIND

Free Sectors = 327(81.75K)

(A) WAP Library Disk Volume #183, The Cave of the Mind, Main Prg

You've gotten trapped in a house in your own mind. How can you escape? Slash your way through a variety of monsters until you discover the key. This is a pure "fight it out" adventure, from which you may get a few nice weapons.

WAP V 184 ZYPHUR RIVERVENTURE

Free Sectors = 194(48.5K)

(A) WAP Library Disk Volume #184, The Zypthur RiverVenture, Main Prg

Your character is off to locate a missing person somewhere on the river. Be careful about swimming in your armor! Otherwise, a relatively mild adventure, if you don't pick on guys you really can't handle.

#### WAP V 185 CASTLE OF DOOM

Free Sectors = 164(41K)

(A) WAP Vibrary Disk Volume #185, Castle of Doom, Doom Castle, Reset Last Adventure (T) Last Adventure  
This is a circular castle run by a few old ladies to give adventurers a thrill. You can leave and return, and the castle will stay in the state that you left it. There are some friends who will help you explore, as well as bunches of bad guys. This one isn't too rough, and is a good experience builder.

#### WAP V 186 DEATH STAR

Free Sectors = 185(46.25K)

(A) WAP Library Disk Volume #186, The Death Star, Death Star2, Death Star2—32K, SetUp for 32K

Your character suffers a reality shift into the role of Luke Skywalker. Rescue your friends, destroy the tractor beam, and escape aboard the Millennium Falcon. The only reward for this adventure is weapon experience. Spells won't work, so don't get too bruised up, and avoid groups of 25 or more storm troopers.

#### WAP V 187 DEVIL'S TOMB

Free Sectors = 200(50K)

(B) ADven (A) -> Eamon Adventure #7 <-, Adventure Disk 12, The Devil's Tomb, Toms2 (T) Eamon DoomS

DEADLY! This one is rough and somewhat unfair. Your adventurer bites off more than he can chew when he goes to the lower regions to do battle. You'll lose some good characters before you successfully escape.

#### WAP V 188 CAVES OF TREASURE ISLAND

Free Sectors = 126(31.5K)

(B) Island, Adven (A) -> Eamon Adventure #7 <-, The Caves of Treasure Island, Treasure Island, Treasure Island—32K, SetUp for 32K, Adventure Disk 13

You're off to rescue a lost adventurer again, with opportunity for great tricks as a bonus. It's fair, survivable, and has some tricks

#### WAP V 189 FURIOSO

Free Sectors = 124(31K)

(B) Adven (A) -> Eamon Adventure #90 <-, Furioso, Main Program, Adventure Disk 14

You are shanghaied and awaken stripped of your arms and armor, in a pitch dark room. Oops, the boat is sinking and you've got to get out before it goes down. Without weapons, you won't make it. With weapons, you probably still won't. If you don't give up in frustration, you'll lose a boatload of characters before you survive this one. Even if you get off the boat, you're not out of the jungle (not to mention Jaws). Pick your return ship carefully, because one is a slaver.

#### WAP V 190 THE MAGIC KINGDOM

Free Sectors = 198(49.5K)

(B) Higher(Text, Old English.F, Lomem, Adven (A) -> Eamon Adventure #10 <-, The Magic Kingdom, Kingdom, Adventure Disk 17 (T) Link

You've gotten a wizard p.o.ed, and he deposits you in the Magic Kingdom. Before you get out you discover that you have to fulfill a quest. A pretty easy adventure, with one very special artifact for you to discover.

#### WAP V 191 THE TOMB OF MOLINAR

Free Sectors = 188(47K)

(B) Adven (A) -> Eamon Adventure #11 <-, The Tomb of Molinar, Molinar's Tomb, Adventure Disk 18 (T) Mirror

Got a bazooka? You may need it here. There are some really wierd characters in this one. Watch out for the worst dirty trick in any adventure.

#### WAP V 192 LOST ISLAND OF APPLE

Free Sectors = 133(33.25K)

(B) Apple Island.Pic, Apple Island.Shape, Adven (A) -> A New Eamon Adventure <-, The Lost Island of Apple, Apple Island Dungeon, Apple Island-Island, Adventure Disk 19, New Character (T) Apple Island.Data, Apple Island.Last Name, Apple Island.Location, Characters

Ever play Wilderness Adventure or Odyssey? This one uses hires graphics in much the same way, as you explore an island for a way home. Bring some cash, 'cause you'll need it. It's not really too hard, kind of cute, and there's a way to escape without your arms.

#### WAP 193 THE ABDUCTOR'S QUARTERS

Free Sectors = 168(42K)

(A) AAA Eamon 8 Abductors Quarters,

Adventure #8, Main Prg, The Abductors Quarters (T) Characters, Last Char

Someone is kidnapping adventurers. Your mission, find him and stop him before he gets you. As soon as you start to explore you run into six tough, all bigger than you are! By the way, the abductor CAN come back to life.

#### WAP V 194 THE QUEST FOR TREZORE

Free Sectors = 185(46.25K)

(A) AAA Eamon 12 Trezore Quest, Adventure #12, Combine, Main, Split, The Quest for Trezore (T) Characters, Desc0, The Adventurer

#### WAP V 195 THE UNDERGROUND CITY

Free Sectors = 179(44.75K)

(A) AAA Eamon 14 UnderGround City, Adventure #14, The UnderGround City, UnderGround City—Main Prg (T) Only for Powerful Players!

#### HINTS:

If you're in mid-adventure and you get an error that boots you out of the game:

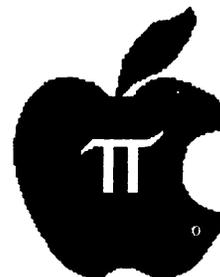
POKE 51,0 : GOTO 2040

Will get your character back to the main hall from most EAMON adventures.

From Davy Davis in The Seed, Denver Apple Pi:

Don Brown's excellent program EAMON is supposed to let a character improve in weapon and spell ability. During the course of play you can see the increase in weapon ability as the character defeats monster after monster, but the spell ability is kept a secret. ... The reason is a bug in line 7520 of the Beginners Cave and in line 11520 of most of the other adventures. The line should read:

```
7520 or
11520 RL = INT (100 * RND (1) + 1):
IF RL > S2% (S) THEN S2% (S)
= S2% (S) + 2: SA% (S) =
SA% (S) + 2
```



## The Pascal Interest Group Library Disks

by James S. Harvison

I encourage all Pascalers to share your work with us. Contributors are entitled to a disk of their choice. Please send them to James S. Harvison (PIG Librarian), 307 Lexington Drive, Silver Spring, MD 20901, or you can contact me via the club BBS (WAP455), the Source (TCD563), Micronet (70320,165) or 301-593-2993.

Following are reviews of nine PIG disks. PIG: 1-4 was compiled by Paul Sand; 6 and 7 by Howard Lefkowitz; 5, 8 and 9 by James Harvison.

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### LIBRARY DISK PIG1:

Each program is provided in source code form. The purpose of this minimal documentation is to explain the use of those programs that have no internal directions. I hope you enjoy the use of these routines and that everybody comes up with contributions to the next disk.

**DSPCHARSET** - (Bill Wurzel) This program reads the data in `SYSTEM.CHARSET`, which holds the graphics character set used by the Pascal turtlegraphics routines. It displays any of those characters on the text screen. When started, the program displays character '0' on the screen. To see another character, type '#', <cr>, <the character number>, <cr>. When done, simply type '%', <cr> and the program ends. Note that the program keeps only one block of the two in `SYSTEM.CHARSET` in memory at once, so when you type in a number greater than 64, the second block is read in. There is no provision to go back to the first block.

**DEFCHARS** - (Bill Wurzel) A logical sequel to the preceding program, `DEFCHARS` allows you to generate new graphics character sets. When the program is started, `SYSTEM.CHARSET` is read from drive #4: and copied to a file `NEW.CHARSET` on drive #5:. (Obviously, those with one drive will have to tinker with this code before using it.) All editing of the character set is done on a 7 x 8 dot matrix. Periods signify off bits, plus signs designate on bits. One creates a new character by moving the cursor through the dot matrix, turning the individual bits on or off as necessary. Single key commands are easy to master: The keys W, E, R, S, F, X, C, V form a cursor pad, moving the cursor in the direction corresponding to the location of the key in the pad. For example, E moves the cursor up, V right and down. The D, B, and M keys are mode-changing keys. D causes bits landed on by the cursor to be turned on, B causes them to be

turned off, and the M key causes no change.

Finally, when the character is finished, type '\*' (if you want to edit more characters) or '%' (if you want to exit the program). The program will ask for the number of the character you just defined, and save the new definition in `NEW.CHARSET`. Then, depending on whether you typed '\*' or '%' the program will allow you to enter another character or exit.

**CHECKBOOK** - (Tom Woteki) This checkbook program is in machine-readable form. It analyzes your checking account cashflow on a monthly basis. The program is (more or less) self explanatory; running it should pose no problem.

**MINIFILER** - (Tom Woteki) This program duplicates three functions of the UCSD Filer: L)ist Directory, K)unch, and Z)ero Directory. Unlike the Filer, however, you have the source code of this program. From perusing the program, you can learn all sorts of interesting stuff about how directories and files are maintained on your disks. I expect a lot of useful utility programs based on the ideas here.

**PEEKPOKE** - (Michael Hartman) Here are two familiar routines from Basic: `peek(addr: integer)` returns an integer with the contents of memory location `addr`. `Poke(addr, value: integer)` puts value in the memory location specified by `addr`.

Mike has written these routines in a unit so they can be incorporated into your library.

**FILEDUMP** - (Paul Sand) This is a simple program that allows you to see what is really in those files on your disks. It dumps any file in hex and ASCII, block by block. When started, it asks for a file name. If the file is found, it will display the first half of the first block. Use the arrow keys to display other blocks: backarrow displays the previous block, forward arrow displays the next block. Control-C gets you out of the program.

**TIMERSTUFF** - (Paul Sand) These routines are offered to anyone with a Mountain Hardware Apple Clock. They are meant to be used in the program development process to find out where your big, complex program is spending all its time. You can specify timing of up to twenty different portions of code and report at any point the total time recorded by each timer and the number of times each timer was turned on. Procedures included in this unit are: `inttimers` - sets everything up,

`starttimer(i)` - starts timer #i

`stoptimer(i)` - stops timer #i

`reporttimers` - outputs a table showing the cumulative times, etc.

**PRINT** - (Paul Sand) All it does is print out a series of text files on the printer, skipping over page breaks and numbering each page. When started the program will ask for a file to print. When done, it will ask for another. When done, just reply with a <cr> to this request.

`BIOSUNIT.TEXT`, `BIOSDEMO.TEXT`, `BIOSDOC.TEXT`, `BIOSSTUFF.TEXT` - (David Neumann) These files make Pascal programs do the neat things that are not obvious; inverse characters, horizontal scrolling, etc. Note that the version on this disk works for Apple Pascal version 1.0 only. The same routines for version 1.1 are on library disk PIG3:. Documentation for these routines is in `BIOSDOC.TEXT`. `BIOSDEMO.TEXT` is a nice demonstration of the things his routines allow you to do. `BIOSSTUFF.TEXT` is the real stuff - 6502 assembly language that does all those things. Finally, `BIOSUNIT.TEXT` is an example Pascal host unit that could be put in your library.

`MENU.TEXT`, `MENUDOC.TEXT` - (David Neumann) This program will detect the "runable" code files on your disks, display them, and allow you to choose which one to run by typing a single letter command. Very nice. Uses routines in `BIOSSTUFF` above. `MENU.TEXT` contains documentation.

`DIR.TEXT`, `DIRDOC.TEXT` - (David Neumann) This program essentially duplicates the extended directory command in the Filer. The program, contained in `DIR.TEXT`, is a very clear explanation of how one can access the directory from within a program. `DIRDOC.TEXT` is documentation.

`CRECHARSET.TEXT`, `CRECHARDOC.TEXT` - (David Neumann) This program, like `DEFCHARS` above, allows one to alter the graphics character set. `CRECHARSET.TEXT` is the program, `CRECHARDOC.TEXT` is the documentation.

`DOODLER.TEXT`, `SERENDIP.TEXT`, `CUBE.TEXT` - (Bill Schultheis) These are three excellent graphics programs. `DOODLER` is a fast and pretty random drawing routine. `SERENDIP` is a dot-pattern generator, and `CUBE` displays a semi-animated cube undergoing rotations, with hidden lines.

(Librarian's Note: `SERENDIP` is based

on an algorithm given in the August 1977 BYTE, in which the first advertisements for a computer called "APPLE II" appeared. A 48K machine "using the new 16K RAM chips" went for the tidy sum of \$2638. Ah, the good old days.)

INIDAT.TEXT - ( ) This file is a collection of procedures to convert strings to integers, data strings to integers, and integers back to data strings. This allows one to input data as a string, using interline editing, and then convert to numbers. Good idea!

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#### LIBRARY DISK FIG2:

CRYPTODOC.TEXT, CRYPTO.TEXT - (Bill Schultheis) The CRYPTO program does cryptanalysis on a level suitable for solving the Sunday Post's magazine puzzle or decoding any KGB transmissions that you happen to pick up on your shortwave. Just kidding. Read CRYPTODOC.TEXT before you try to compile or run CRYPTO - it requires that BIOSSTUFF (from the FIG1) be installed in your library.

FILER.LIB, MINIFILER.TEXT - (Tom Woteki) Briefly, it allows filer-like commands to be used from inside your own programs. Note that MINIFILER.TEXT is a procedure, not a complete program. FILER.LIB is a library file that can be used from another program.

PAGEDUMPER.CODE - (Tom Woteki) Dumps out successive pages of your memory in ASCII. You can move both forward and backward in memory.

IOUNITA.TEXT, IOUNITB.TEXT - These two files contain routines written as intrinsic units that allow your program to do terminal-independent screen I/O by reading terminal data from SYSTEM.MISCINFO. Most, if not all routines are from APPLE3:DISKIO.TEXT, but this is the right idea - terminal dependencies should not be written into your own programs, but put into the library.

LIFE.TURIL.TEXT, LORES.USER.TEXT, LORES.UNIT.TEXT, LIFE.LORES.TEXT, LIFE.INFO.TEXT, LORES.INFO.TEXT - (Michael Hartman) A series of programs and units that implement Conway's Life, both in turtlegraphics (LIFE.TURIL.TEXT) and lo-res graphics (the others). LIFE.TURIL.TEXT needs to have PEEKPOKE, given in FIG1: inserted in your system library. LORES.UNIT.TEXT is the Pascal host for the 6502 Assembler code in LORES.USER.TEXT, which is documented in LORES.INFO.TEXT. LIFE.LORES.TEXT is Conway's Life implemented in lo-res, which uses Mike's lo-res unit. It is documented in LIFE.INFO.TEXT.

DIS1.TEXT - (William Wurzel) This is

a P-Code disassembler. Obviously, this can be of great use in studies of how the compiler works and how you can write code that takes less space and runs faster. Use is straightforward - good luck!

PLOTPOURRI.TEXT - (Anonymous) A nifty program to do 3-D contour plotting, you might compare it to the Basic version available from the club library. It has a provision to label the plot with the equation of the function plotted, complete with super- and subscripts! As an added attraction, it also has a routine to print the whole thing on a Paper Tiger (440 or 445). Fantastic!

RNDSPIRO.TEXT - (Anonymous) A graphics program that draws spirograph-type displays. Very pretty! (Use a color TV.)

LORES.TEXT, PLOT.TEXT, ANDROMEDA.TEXT, DANMAC.TEXT - (David Neumann) Another lo-res plotting package! LORES.TEXT is the Pascal host for the 6502 code found in PLOT.TEXT and DANMAC.TEXT. Once you have that together, ANDROMEDA.TEXT is a program that uses the unit.

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#### LIBRARY DISK FIG3:

BIOSDOC.TEXT, BIOSDEMO.TEXT, BIOSSTUFF.TEXT - (David Neumann, Bill Schultheis) These programs also appear on FIG1. Bill Schultheis has modified the assembly language in BIOSSTUFF.TEXT to reflect the changes made by Apple in Pascal version 1.1. I've duplicated the unchanged files here as well. BIOSDOC.TEXT is David's original documentation. BIOSDEMO.TEXT is his demonstration of the various neat things his routines allow you to do: horizontal scrolling of the text page, inverse video characters, text window definition, and other wonders you thought you could never do in Pascal. BIOSUNIT.TEXT is the Pascal unit suitable for inclusion in the system library.

UNASM.INFO.TEXT, XUNASM.CODE - (Bill Schultheis) This is a 6502 disassembler program that will display contents of memory as 6502 instructions, if possible. Supplied in code form only - check it out. UNASM.INFO.TEXT is the file containing documentation.

X.TRACE.TEXT, X.SPY.TEXT - (Bill Schultheis) These files will show you how to figure out just where your program is taking you in memory. X.SPY.TEXT is the Pascal demo program that turns on tracing for a single Pascal writeln statement. X.TRACE.TEXT is 6502 Assembler code that contains routines needed by SPY.

SETUPMX80.TEXT - (Burt Chambers) This program is essentially a routine to output those special characters to the MX-80 to allow it to do compressed print and/or overstriking (for darker print). Recommended to all you MX-80 owners. It also poses a challenge to those of you who have other printers: can you provide us with equivalent programs for your own machine, or (better yet) can you write a more general program that would allow a user to define his own printer commands?

BURTS-DUMP.TEXT - (Burt Chambers) An improved version of Tom Woteki's memory dump program (provided on FIG2:) Check it out - it may show you where your variables have vanished to.

EIGHTQ.TEXT - (Paul Sand and Somebody Else) This program solves the famous Eight Queens Problem - How can you place eight queens on a chessboard so that no two queens attack each other? The pretty recursive algorithm used is taken from Algorithms + Data Structures = Programs by Niklaus Wirth. The exceptionally nice graphics and sound generation were in the original version.

DATE.TEXT - (Jeffery Sue, SF Apple Core) A nice routine to extract the "Last Booted" date from a disk.

MASTERCA.TEXT - (Steve Lloyd, SF Apple Core) - This program creates a "master catalog" file from many disk directories.

TIGER.UNIT.CODE, TIGER.TEXT, SCRNBYP.TEXT - (Sue, Sue, and Gustafson, SF Apple Core) These routines allow a Hires screen dump to the venerable Paper Tiger 440/445 printer. TIGER.UNIT.CODE is a unit suitable for inclusion in the system library. TIGER.TEXT is the Pascal source of the unit. SCRNBYP.TEXT is an Assembly language interface to read the hires screen.

PRINTSET.TEXT - (Paul Norris, SF Apple Core) A program to throw the software switches on the Centronics 737 printer. See comments above.

MASTERMI.TEXT - (Paul Norris, SF Apple Core) This program plays Mastermind.

PILOT.TEXT - (George Golden, SF Apple Core) This program is from the July 1980 Byte. It will take a Pilot program and translate it into a Pascal program.

TWOD.TEXT - (David Cheng, SF Apple Core) This is, despite the name, a three-d plotting program. Not quite as neat as David Neumann's on FIG2:, but still worth a look if you're interested.

PRETTYPAS.TEXT - (David Cheng, SF Apple Core) A Pascal program formatter. It converts Pascal reserved words and single letter variables into upper case, and some other stuff. See the program for more information.

BLIZZARD.CODE - (Bob Doran, SF Apple Core) No source file, but one of the prettiest graphics programs I've seen.

GROCERY.TEXT, MASTER.TEXT - (Jeff Sue, SF Apple Core) Have you ever wanted to use your computer in your everyday life? A gem of a program - techniques used here are very nice.

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#### LIBRARY DISK PIG4:

We have a random assortment of utilities, applications, games, graphics, hardware interfaces and a small kitchen sink on track 23, sector 4.

CASSETTE.TEXT, TAPERIN.TEXT - (Brian Pierce) CASSETTE.TEXT is the Pascal program, which uses the assembly language contained in TAPERIN.TEXT. The purpose of this program is to enable transfer of data and programs on cassette tape between two computers that may not be able to communicate in any other manner. Brian's explanation of the program is contained in XMITTAL.TEXT.

XREF.TEXT - (Brian Pierce) This program will generate a cross-reference listing of your Pascal source file. It will handle "included" files correctly. If the amount of input exceeds the memory available it will use a workfile on disk. It will not cross-reference Pascal keywords (but could, if you changed it.) Brian's documentation for XREF is also in XMITTAL.TEXT.

PASCALZAP.TEXT - ( ? ) This program, typed in from the Jan. '81 Call-Apple, (and modified from there), allows one to read, write, and modify individual blocks on the disk in the second drive.

TFORMAT.TEXT, STRINSTUFF.TEXT, FORMAT.DOC.TEXT - (Tom Woteki) TFORMAT.TEXT is the program itself, STRINSTUFF.TEXT is a unit containing routines used by the formatter, and his documentation is in FORMAT.DOC.TEXT. Enough said - you would do well to check this out.

FILESYS.TEXT - (Larry Johnson) This is a program from the new book "Pascal Programming for the Apple" by T. G. Lewis. It is an example of a database implemented by using "B-Trees" and an index file. It isn't really suitable for any serious use, but could offer helpful hints for anyone out there considering storing

large amounts of data. For documentation, I suggest you buy the book.

OTHELLO.TEXT - (Paul Sand) You play the game of Othello against the computer. Since the program itself has no directions, here are a few tips: When the computer asks for "look-ahead", I wouldn't recommend anything higher than two. (It is slow!) When picking your move, the forward and back arrows move the star to the locations of your possible moves. When it lands on a square you like, press the "P" key to move there. Be warned - this program will probably only beat you if you don't know the game very well. If you don't know how to play Othello at all, you should probably learn before you try this program.

PRETTY.TEXT - (Paul Sand) I typed this program in from the book "Pascal With Style" by Ledgard. It will turn a poorly-formatted Pascal source file into a nicely-formatted one. Check out the book for any documentation you might need on this.

SIERPINSKI.TEXT - (Paul Sand) This little graphics ditty is a space-filling curve, like the HILBERT program on APPLE3. The algorithm is from Wirth's "Algorithms + Data Structures = Programs" and all that had to be added was the graphics for the Apple.

COMPARE.TEXT - (USUS) This program's original source is the "Pascal News". It will find differences in two text files; I've found a program like this to be useful when I've got more than one version of a program and can't remember how they differ. And the program itself is very instructive.

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#### LIBRARY DISK PIG5:

This fifth disk in the Pascal library is composed of 17 files from two submitters. The first 13 are by David Neumann where he provides several units to allow reading and writing to DOS formatted disks. The last four files are submitted anonymously and provide for an excellent program to make use of the Epson printers enhancement capabilities.

Librarian's Note: The library copy of the file "PRINT FILE.TEXT" has a bad spot in the middle. If the submitter of these programs sees this, please contact the PIG librarian to correct this problem.

DOSIOGLO.TEXT, DOSIOGLO.CODE, DOSIOGEN.TEXT, DOSIOGEN.CODE, DOSIOIN.TEXT, DOSIOIN.CODE, DOSIOOUT.TEXT, DOSIOOUT.CODE, DOSXFER.TEXT, CAT.TEXT, CAT.CODE, DOS.DOC.TEXT -

(David Neuman) These files implement file transfer to and from DOS formatted disks. DOSXFER.TEXT and CAT.TEXT are demonstration programs to show how to use the procedures. DOS.DOC.TEXT is a brief documentation file about the procedures implemented.

MX80SAMPLE.TEXT, PRINTINFO.TEXT, PRINT.TEXT, PRINT\_FILE.TEXT - ( )  
PRINT FILE.TEXT and PRINT.TEXT are the source files for a program that makes full use of the print enhancement capabilities of the MX80 (or MX100). By including commands within your text file (such as {E} which turns on double printing) you can selectively turn on or off features of the printer. PRINTINFO.TEXT is the documentation file for the program and MX80SAMPLE.TEXT is a sample text file using the features of the program.

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#### LIBRARY DISK PIG6:

The first "GEM" on this disk is a Master File Catalog Program provided by John F. Long. It is based on the Ed. Heyman article in Byte, May 1981. John has added options for printer output and page by page screen output as well as some other improvements. This program includes "FIRSTPART.TEXT" and "MAINCAT.TEXT".

Next we have different version of the same Byte article by George Hart via Jim Harvison. This has many changes and is not compatible with the original article. It is much faster and perhaps someone will take the best of both programs and "CREATE" the SUPER master catalog. The files for this program include "CAT1, CAT2, CAT3 AND JUST PLAIN OLD CAT".

ADDRESS.TEXT is an address calculator submitted by Roger Kaufman.

Michael Hartman submitted the SPIROGRAPH program. Very relaxing and not too bad for a demonstration.

Next we have a set of HIRES units for the Paper Tiger sent in by Ed Knepley. These are based upon earlier WAP newsletter articles by the infamous Dr. Wo. The procedures (1) Dump the screen to the Paper Tiger, (2) Save the screen to disk and (3) Load a screen from disk are provided. We also have the ability to use page 2 with these units.

Finally a Pascal Memory Utility submitted by Bill Wurzel. This routine allows you to examine, disassemble and change memory. It is based upon an article by Ron DeGroat in the August issue of CALL A.P.P.L.E. Bill has made modifications to accommodate the Smarterm board.

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LIBRARY DISK PIG7:

Thanks to David Newman for the LISP and Clock routines. Dave has provided the "essence of a LISP interpreter".

The clock routines are for the CCS 7224 clock/calendar card. They allow the CCS card to function essentially the same as a Mountain Hardware card. Two extra routines are provided for setting the clock and calendar and to allow automatic setting of the date when booting.

The balance of the files are from the Dallas Apple Corps - Fort Worth Apple User Group, and are described in README.TEXT.

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LIBRARY DISK PIG8:

Contributions on this disk are from a potpourri of sources. Tom Woteki, the USUS library with modifications by Brian Pierce and Howard Lefkowitz, and via an exchange program, the Dallas Apple Corps and Fort Worth Apple Users Group.

PUFFIN.CODE, PUFFIN.TEXT, TRANSFER.TEXT - (Tom Woteki (Dr. Wo)) This program, featured and well documented in the September 1981 Washington Apple Pi, is an excellent program to move DOS files, text or binary to the Pascal system. I use it myself for moving HIRES files created under DOS to Pascal. I can then put the "pictures" together for a fast moving slide show. TRANSFER.TEXT is a part of the source file which is (\*I included) in the PUFFIN.TEXT source.

PROSE.CODE, PROSE.DOC1.TEXT, PROSE.DOC2.TEXT - (USUS Library modified by Brian Pierce) an exceptional text formatter altho somewhat slow. It is provided here in CODE form only due to some concern about whether or not the source is in the public domain. The DOC files fully explain its use. The code version has been fixed and enhanced by Brian Pierce.

HOLIDAY.TEXT, TWINKLE.TEXT, MUSIC.BOX, AULDLANG, RAUCOUS, JINGLE.BLS - (Jim Harman Fort Worth Apple User Group) Makes your Apple sing and hum (Well if you listen closely it already hums). Compile these and give them a try. Excellent demo's and use of the NOTE procedure in the APPLESTUFF UNIT of the system library.

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LIBRARY DISK PIG9:

CRT - (John Stephenson) This unit supports extensive filtering of keyboard input, screen template use and all in all should make your program

"crash" proof (at least so far as input goes). It is comparable to what is provided in commercial versions costing from \$75 on up. This is one you should definitely have a use for. Documentation is contained in READTHIS.TEXT. All files except the last two on the disc have something to do with this UNIT or a demo of it.

CPMIOPAS - (Dave Neumann) Dave has provided us owners of a Z80 card and CP/M (running UCSD on it of course) to transfer files from the CP/M system to Apple Pascal format. CPMIOPAS.TEXT is the source. Dave also has the source for a program to move files from Apple Pascal to CP/M format. This program is available thru the WAP CP/M users group.

### The CP/M SIG Library Disks

by Dave Neumann

This is a short explanation of the contents of the library disks that have been assembled by the CP/M SIG. Most of these public domain programs are usually quite well documented, and full documentation for the various programs is included on each disk. They have been collected from various sources by Jim Harvison, Charles Franklin, and me. Since bulletin boards seem to be a popular way for CP/M users to trade public domain software, we are lucky to have an especially good local Remote CP/M (RCPM) Bulletin Board System:

Laurel  
RCPM/SBBS  
Laurel, Maryland  
(301) 953-3753 (300 baud)  
Wayne Hammerly, SYSOP

We are always looking for more programs and encourage WAP members to contribute any public domain software to which they have access. We are gradually acquiring the CP/M Users Group library in Apple format, and will put the latest versions of the most useful programs into the WAP library. Anyone who has converted any Applesoft programs to run with MBASIC under CP/M is encouraged to submit the program for inclusion in the CP/M library. Send your contributions either to the WAP library committee or to me, David Neumann, CP/M SIG Chairman.

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Library disk CPMSIG01

CATALOG	TEXT	: CATALOG	DOC
FMAP	COM	: FMAP	DOC
READ	ME	: CPMSIG01	DOC
CAT	COM	: UCAT	COM
MAST	CAT	: CAT2	COM

This disk contains a group of programs to create a master catalog of

your disks. A file of the filenames is created and merged with the master file. The master file can then be searched using wildcard characters. The main part of the disk is taken up by the catalogs of the disks distributed by the CP/M USERS GROUP. The disks can be ordered in Apple format from the company advertised on the disk. However, we are attempting to get them through the local CP/M users group. Jim Nielsen is the Apple librarian for that group.

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Library disk CPMSIG02

UNSP32	DOC	: NEWSP	COM
SQUEEZER	DOC	: SQ-15	COM
ROFF	DOC	: ROFF	COM
APLXFR	DOC	: APLXFR	COM
CPMSIG02	DOC	: PASTOCPM	DOC
USQ-15	COM	: FLS-11	COM
PASTOCPM	ASM	: PASTOCPM	COM

UNSP32.DOC, NEWSP.COM - This program will allow you to print files while running other programs. Read the documentation in UNSP32.DOC for more details. NEWSP.COM is the patched version of the original UNSP32.COM.

APLXFR.COM, APLXFR.DOC - This program is the reverse of the APDOS program. It will transfer CP/M files to DOS. It was an application note by Microsoft.

PASTOCPM.ASM, PASTOCPM.COM - This program will transfer Apple Pascal files to CP/M. It requires two disk drives.

SQUEEZER.DOC, SQ-15.COM, USQ-15.COM, FLS-11.COM - This group of programs will squeeze and unsqueeze files. Reduction in size is claimed to be typically 35%. FLS-11 is used to generate lists of file names for the other two programs.

Any file that is squeezed will have a Q as the second character of the extension. These files must be unsqueezed before they can be used.

These programs are written in BDS C, and I have the source available for anyone who has the compiler.

ROFF.DOC, ROFF.COM - This is a formatter program written in BDS C.

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Library disk CPMSIG03

MLIST	COM	: MODEM	AQM
RBBS	BAS	: DCHAYES	PAT
MDMPROTO	DOC	: APPLHALT	ASM
MLIST	DOC	: TAG	DOC
BYE	AQM	: XMODEM	AQM
TURNKEY	ASM	: BOOT	COM
HALT	ASM	: TAG	ASM
CPMSIG03	DOC		

APPLHALT.ASM, BOOT.COM, HALT.ASM - These programs provide three different ways to boot another system from CP/M without having to turn off the machine. The only major difference is with BOOT.COM which allows you to boot 13 or 16 sector disks. The other two show examples of calling 6502 routines from CP/M and how to code 6502 routines for the CP/M assembler ASM.

TURNKEY.ASM - This program allows you to modify your disk so that any command can be executed when the disk is cold booted. This will only work with the new version 2.20B of the system. Read the comments at the beginning of the file for more instructions. This was originally a hex listing in the Microsoft Application Notes, but I disassembled the Z-80 code and changed it to 8080 ASM source.

TAG.ASM, TAG.DOC - This program is intended to be used with the XMODEM program. It will mark files that you do not want to be sent by XMODEM.

MLIST.ASM, MLIST.DOC - This program is a multiple file lister. It is fast because it buffers a large part of the file in memory before starting to list. It will accept the standard \* and ? wildcard characters in filenames.

DCHAYES.PAT - This is a patch to install as a driver in your BIOS. It will allow use of the ROM routines on the Micromodem II.

MDMPROTO.DOC - This is an explanation of the Ward Christensen protocol used by the MODEM and XMODEM programs. This is the standard protocol used by all CP/M bulletin boards.

BYE.AQM, RBBS.BAS, XMODEM.AQM, MODEM.AQM - These programs provide a complete communications package. They allow you to start your own bulletin board system and to communicate and transfer programs with other systems.

BYE will answer the phone and then allow the remote user to run your system as if he were at the local keyboard. There are options such as ringback, passwords, number of disk drives, etc.; so be sure to set this up properly before assembling. There is an intentional assembly error so that you can tell how big the program is after you have selected the different options. Make sure this address is not greater than 0C400H, so that the CCP is not clobbered. BYE relocates itself into high memory, and it is the starting relocation address near the beginning of the program that must be set low enough to allow BYE to fit under

the CCP.

RBBS is a BASIC program that allows all the normal bulletin board functions of saving and reading messages. It also has some parameters and passwords that you might want to change before using. Since it is a BASIC program, MBASIC has to be present on one of your disks for the remote user to use the program. If anyone has a compiled version of this program, or an equivalent assembly language version, I would like to get a copy. The BYE program can automatically load a COM file when the user signs on, and this is usually the bulletin board program.

XMODEM is the program you run on your remote bulletin board system (RBBS) to allow the user to send files to or from your system. He would use MODEM or its equivalent. The XMODEM program has some special checks (see TAG above) to prevent certain files from being sent that may cause problems.

MODEM is the standard CP/M communication program that uses the Ward Christensen protocol. This is version 5 and the latest version that I could find that had already been modified for the Apple. It is set up to run with the DC Hayes MMII, but has conditional assembly parameters for other boards. If anyone has modified a later version to run with any Apple modem, pass it on to be included in the library.

There is no separate documentation for MODEM, but it has two options that supply some help:

MODEM H will give help on the possible options

MODEM X will give examples of use

Note that the unsqueezed program USQ from volume CPMSIG02 is needed for some programs on this volume.

#### Library disk CPMSIG04

/	COM :	BITMAP	COM
DISPLAY	COM :	GO	COM
INUSE	COM :	MENU	COM
PIP	COM :	SD	COM
TYPESQ	COM :	U	COM
/	DOC :	DISPLAY	DOC
SWEEP	HOP :	SWEEP	DOC
CPMSIG#4	DOC :	D	COM
HALT	COM :	INDEX	COM
MOVE	COM :	NEWLIST	COM
STATUS	COM :	SWEEP	COM
UNERA	COM :	TED	DOC
NEWINDEX	DOC :	NEWLIST	DOC
UNERALL	HOP :	UNERA	DOC
TED	COM :		

This disk provides many of the utility programs available in the public

domain that are useful in the creation of a "SYSTEM MASTER" for an Apple CP/M system.

Specifically, files of common, day-to-day usefulness or utility in the areas of SYSTEM OPERATION, FILE INDEXING, FILE MAINTENANCE, and FILE MANAGEMENT.

Documentation for most of the programs may be found on the disk (Apple CP/M's 126K space permitting) in one of several formats:

1 - with the inclusion (in the squeezed format) of the documentation files available in the public domain library;

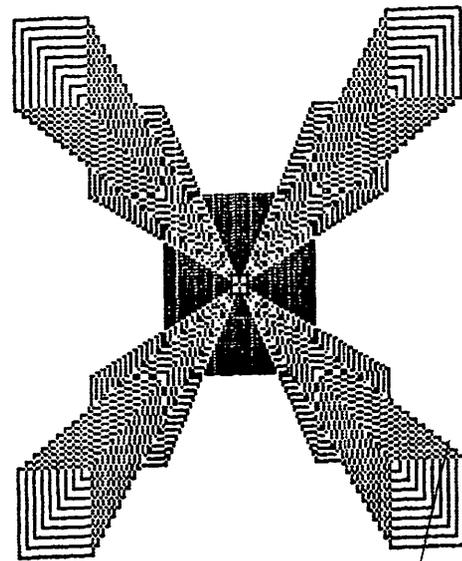
2 - as help files included within the \*.COM file;

3 - by the "user friendliness" of the program.

As provided, hereon, the built-in help file "INDEX /H" outputs garbage via the Apple's 80 column cards.

Several of the utilities (D.COM, /.COM, and NEWLIST.COM) create a disk output file in their operation, and therefore will not run on this distribution as provided ... there's no space!!!

To read the documentation files provided hereon in the squeezed format, it will be necessary to either unsqueeze using the USQ.COM utility program provided on WAP CPMSIG02 and available in the public domain, or to use the TYPESQ.COM utility provided on this disk. syntax: TYPESQ FILENAME.EXT (use only for squeezed ASCII files having a "Q" as the second letter of the .EXT portion of the filename).



## FORTH Library Disks

FORTH is a "stack oriented" language which many experienced programmers enjoy using due to its conciseness and mental discipline. Bill Wurzel's series on FORTH, which began in the December 1982 WAP Journal, describes the language and its implementation on the Apple. Not only is FORTH the most elegant language you can add to your Apple, it is the cheapest. All you need is WAP Library Disk 105 to get started. That disk has a FIG-FORTH interpreter program that has been adapted by Bill Wurzel to run on the Apple. The disk also includes extensive documentation of the commands (called "words") which are built into the system. Among those words are commands to operate a simple line editor.

Like Basic, you can execute FORTH commands immediately, or save them on disk for future use. Disks which contain FORTH programs are organized into screens, with each screen having 16 lines of 64 characters. Screens are assigned numbers 0 to 99 for the disk in Drive 1 and 100 to 199 for the disk in Drive 2. These FORTH disks do not leave room for DOS or the disk's table of contents. As a result, you cannot boot your Apple with a FORTH program disk, or CATALOG such a disk.

The WAP library will distribute FORTH program disks using volume numbers in the 700's. The first two FORTH disks in this series contain important utility programs which make FORTH programming easier.

### WAP 700: ASSEMBLER/DISASSEMBLER

Screens 14 to 19 contain a FORTH assembler. Ordinarily, new FORTH words are defined in terms of other FORTH words. However, programs will execute faster if machine language routines are incorporated into FORTH programs. The FORTH assembler allows you to define FORTH words in terms of 6502 machine language instructions. These instructions are then stored in the FORTH dictionary and executed whenever the word being defined is used.

Screens 21-30 contain a FORTH disassembler or decompiler. This FORTH program analyzes a FORTH dictionary entry into its component parts. For example, to analyze the FORTH word L enter "DIS L".

Screens 61-77 contain sample FORTH utility programs from Bill Wurzel's series in the WAP Journal. Screen 61 has the dump RAM memory routine from the March 1983 WAP Journal. Screen 76 contains a modified version of this routine for use with the Smarterm and 6809.

Screen 72 contains the CRYPTO program. Screen 73 has the routines

for saving an updated FORTH dictionary from the January WAP Journal. Screen 74 will automatically load the current version of the FORTH directory, and Screen 75 has CHAR which builds an ASCII literal (See February '83 WAP Journal p.24).

### WAP 701: FULL SCREEN EDITOR

The FORTH system on Disk 105 contains a line-oriented editor which complex commands to move the cursor between lines and which displays only the line being edited. This disk features a "full screen" editor which displays an entire screen of text and allows you to move the cursor around the screen using control characters (CTRL-S, CTRL-D, CTRL-X and CTRL-E). The Editor also supports the Smarterm 80-column board and the Perkin Elmer Bantam and Lear Ziegler Adm 3 terminals. (Anyone want to add a driver for the //e?) If you do not have an 80-column board for your Apple II, do not enter FORTH programs with more than 40 columns per line, because this editor does not use horizontal scrolling!

The editor is much easier to use than the line editor, and I recommend this disk for anyone who intends to spend any amount of time typing in FORTH programs. The companion article explains how to install this editor into your FORTH system. The article also explains that the full screen editor comes in two versions, a version which is entirely coded in FORTH, and a faster version which uses the Assembler on Disk 700 to speed up execution. If you purchase Disk 700, by all means build the faster version of the editor.

When you enter the editor, you will be asked to enter a 10 character ID, with two digits for the day, three for the month, two for the year, and three programmer's initials. (For example, 03APR83RCP) This ID will be stored automatically on each screen which you edit.

Here is a summary of Full Screen Editor Commands:

#### 1. CURSOR MOVING

KEY ACTION  
CTRL-E Moves cursor up one line.  
CTRL-X Moves cursor down one line.  
CTRL-R Moves cursor up 4 lines or to top of screen.  
CTRL-C Moves cursor down 4 lines or to bottom of screen.  
CTRL-S Moves cursor left one column.  
CTRL-D Moves cursor right one column.  
CTRL-F Moves cursor right to the first letter of next word or to the beginning of the next line.  
CTRL-I Moves cursor to the next tab stop.

by Robert C. Platt

CTRL-A Moves cursor left to the first letter of the previous word or to the end of the previous line if at the start of a line.

#### 2. INSERTION COMMANDS

KEY ACTION  
CTRL-V Toggles insert mode on and off. (INSERT ON is displayed on the status line when in insert mode.)  
CTRL-N Inserts a carriage return at current cursor position. All text to the right of the cursor and below it are moved down one line. But if the last line has text on it, CTRL-N will be disabled.

#### 3. DELETION COMMANDS

KEY ACTION  
CTRL-G Delete character at current cursor position.  
CTRL-T Delete entire word at current cursor position.  
CTRL-B Make line at current cursor position all blanks.  
CTRL-Y Delete line at current cursor position and move all lines below it up.  
CTRL-K Delete entire screen.

#### 4. LEAVING THE EDITOR

KEY ACTION  
CTRL-Z Abandon the screen and leave editor.  
ESC Exit the editor and update the screen on disk. The User ID is automatically inserted at the end of line 0 with a right parenthesis, so be sure that line 0 has a left parenthesis to start a comment.

## WAP Journal Pickup Policy

1. Magazines may be obtained at monthly meetings up until the start of the main meeting.
2. They may also be picked up at the WAP Office on the Monday and Tuesday following the main meeting during normal office hours.
3. You may arrange for a friend or neighbor to pick up your copy at your own risk using either procedure 1 or 2 above.
4. If you have not picked up your journal by Tuesday it will be processed for bulk mailing. Once the mail processing has started, there can be no further pickups.
5. Current and back issues will be available for sale (at cover price) at the main meeting and at the office for as long as the supply lasts.
6. A new member joining at the main meeting or at the office will receive the current issue unless s(he) has purchased one elsewhere. In that event the membership and accompanying subscription to the journal will start with the following issue of the journal.

# A Beginner's Guide to the DOS System Master

by Robert C. Platt

We are frequently asked at NEWSIG meetings about the programs on the Disk Operating System (DOS) System Master Disk and their apparent lack of documentation. In order to unveil the mystery from these valuable programs, this article will provide a step by step guide to their use.

The DOS System Master disk is distributed free with the purchase of every Apple disk control card. Unlike most diskettes, it does not have a notch cut on its side, which makes it "write protected." This means that the computer can read or copy files from this disk but cannot erase or modify the files on the disk. (see p. 36-37 of DOS Manual) Although you cannot accidentally erase files on this disk, you should still make a back-up copy of the disk to avoid losing programs due to physical disk damage.

The programs on the System Master Disk not only perform valuable functions, they are provided to serve as programming models. You should not only practice using them, but you should also list them and study how they use DOS commands in print statements as well as Basic programming techniques.

Apple has distributed two different versions of the System Master Disk. Prior to February 1983, all disk control cards were sold with a single System Master Disk which contains the programs described in this article. Since February 1983, the programs have been divided between a System Master Disk and a separate "Sample Program Disk." I will call these new disks the '83 disks. Most of the programs are the same on both the old and '83 versions. By discussing the files from both versions in alphabetical order, you can use this article regardless of which version you have.

One difference between the old version and the '83 version should be noted. Because the Sample Program Disk in the '83 version is not copy-protected, you do not have to copy its programs onto another disk before using them. Also, this article refers to the 1981 Edition of the DOS Manual. If Apple writes a new Manual, page references might change. With these points in mind, let's begin our tour of the System Master Disk.

## BOOTING THE MASTER DISK

When you first turn on your Apple, its RAM memory is empty. On an Apple II+ or Apple IIe, a program which is built in (the Autostart ROM) automatically starts reading from the disk in slot 6, drive 1.

This process is called "booting" DOS. If the DOS System Master Disk is in this drive, then a special version of the DOS is read into memory, from the disk. This version is special because it does not assume that your Apple has any given amount of RAM memory. The program first checks to see how much RAM is contained in your Apple, and then reads in the DOS program into the uppermost part of RAM memory (to leave you the most room for your Basic programs.) DOS remains there until you turn off your computer or use the "PR#6" command to repeat the boot process.

After DOS is read from the System Master Disk, an Applesoft Basic program named HELLO is read from the System Master Disk. This program prints out the message, "DOS VERSION 3.3 04/15/80 APPLE II STANDARD SYSTEM MASTER" at the top of the screen and then checks to see if your Apple has a 16K memory card installed in slot 0. If you have such a card (or if you have an Apple IIe), then the HELLO program will read the file named INTRBASIC from the System Master Disk into the 16K card. This will allow you to use both Applesoft Basic and Integer Basic programs. You will see the message, "(LOADING INTEGER INTO LANGUAGE CARD)." If you do not have a 16K card or do not have an Apple IIe, no message will appear. (1)

## ADDRESS

This program is distributed on the Sample Program Disk of the '83 version only. It uses a powerful programming technique called "random access files" to record and maintain an address book. The names and addresses stored by the program are kept in a file called BLACKBOOK. When you start using the program the only entry is for Apple Computer. You may add any number of additional entries so long as there is space on your disk. (Copy both ADDRESS and BLACKBOOK onto a new disk if you plan to store a large number of names.)

## ANIMALS

This game program illustrates the use of random access files and a programming technique called "binary tree searches." (See p. 37 of DOS Manual) In order to use ANIMALS, it must be first copied onto another disk which is NOT write protected.

The object of the game is to pick an animal for the Apple to identify. The program will ask a series of yes/no questions about the animal, and based upon your answers, it will guess which animal you picked. If

it guesses wrong, it will ask you to teach it a question which it can use to distinguish the animal it guessed from the one you had in mind. The program grows smarter with each game. Its knowledge is saved between sessions on disk, but you have the option of erasing its acquired knowledge with the NEWFILE command.

Behind the scenes, the ANIMAL program is building a random access disk file named ANIMALSFILE. This file contains the series of questions with information on what to do with a yes or no answer. Based upon a yes or no answer, the file either contains another question or an animal name to guess. Whenever a guess is wrong, the program replaces the animal name with a new question in the file. One branch of the new question then points to the name of the animal which the user had in mind, and the other branch points to the name of the animal which the computer had guessed. The process of adding new questions can be repeated until you run out of space on the disk or until the file is deleted by the user typing in NEWFILE.

APPLE PROMS - data file used by RAN-  
DOM

APPLESOFT

This program performs the same function as the HELLO program on Apple II computers which have Integer Basic in ROM instead of Applesoft Basic. Although the program is called Applesoft, it is written in Integer Basic and will read Applesoft Basic onto a 16K memory card, if one is present in slot 0. Owners of Apple II's can copy this program onto other disks and specify that it is the first program to be run. This program is not useful on an Apple II+ which has Applesoft Basic in ROM memory.

## APPLEVISION

APPLEVISION is a sample Integer Basic program illustrating Hi-res graphics, animation and music.

## BIORHYTHM

BIORHYTHM is an Integer Basic program which uses Lo-res color graphics to plot three biorhythm curves for a given month. The program asks your name and birthdate. It repeatedly asks for a projection date and gives the curves for the 30 day period following that date. The plots are hard to distinguish in the absence of a color TV or monitor. The date input routine is a good example of protecting a program by carefully testing input ("bomb-proofing"). BIORHYTHM is not included on the '83 version.

## BLACK BOOK

This datafile is used by the ADDRESS program on the '83 version.

## BOOT13

The Apple can write disks in two different formats. Disk control cards sold after August 1980 usually write to disk with 16 sectors on each track (DOS version 3.3), while older disks wrote only 13 sectors per track (DOS version 3.2). Even though the new DOS 3.3 can write more information on a disk, many older disk (such as WAP library disk volumes 1-40) were recorded with a 13 sector format. Chances are that your disk expects the 16 sector format, and you must take special measures to use a 13 sector disk. The easiest way to handle a 13 sector disk is to copy its contents onto a 16 sector disk using the MUFFIN program described below. Once you convert the disk using MUFFIN, you never have to use the 13 sector disk again. However, certain copyprotected disks cannot be converted using MUFFIN, or perhaps you don't want to bother keeping a 16 sector version of a disk. For these cases, the BOOT13 program allows you to boot a 13 sector disk.

To use this program, put a disk with a copy of BOOT13 in your drive and enter "BRUN BOOT13". You will then be asked which slot to boot from. At this point, put your 13 sector disk in drive 1, and press return for slot 6 or type a different slot number. A new version of DOS will be read from your 13 sector disk, which overwrites the DOS 3.3 which you have in memory. As a result, even if you have two disk drives, the Apple will expect 13 sector disks in both drives. You will not be able to use a 16 sector disk until you use the "PR#6" command to boot a version of DOS 3.3 from a 16 sector disk.

The BASICS disk which came with your disk control card performs the same function as BOOT13. (See DOS Manual at p. 182.)

## BRIAN'S THEME

This Applesoft Basic program illustrates the use of the H\$PLOT command to draw lines on the Hi-res screen. The program draws a series of lines from a point chosen at random near the center of the screen to evenly spaced points along the screen's edge. By plotting both black and white lines closely together, BRIAN'S THEME creates interesting interference patterns. These patterns appear blue and green on color monitors as a result of the placement of colored phosphors on the TV screen. To end the program, press the escape key. BRIAN'S THEME is

not available on the '83 version.

## CHAIN

This machine language program allows an Applesoft Basic program to load a second Applesoft Basic program from disk without erasing the values stored in the first program's variables. This allows you to break up a program which is too large to fit into RAM memory at one time. Detailed instructions on using CHAIN are on p. 106-107 of the DOS Manual.

## COLOR DEMO

This Integer Basic program illustrates the 15 colors available through the Apple's low resolution graphics. The program can be used to adjust the color setting on your TV or color monitor, before running more dramatic programs. (Who can tell whether a space invader is supposed to have a green face?) The Applesoft Basic version is called COLOR DEMOSOFT on the old version and COLOR TEST on the '83 version. (See p. 18-19 of Applesoft Tutorial.)

## COPY - COPYA

This program is a fast way to make a backup copy of an entire disk. (See DOS Manual p. 38-39.) To use it, type "RUN COPY" if you have Integer Basic, or "RUN COPYA" if you have Applesoft Basic. (Both versions call in a machine language program called COPY.OBJO to do the job.) You will be asked which slot and drive to use for the source and destination disk. (If you only have one disk drive, specify slot 6, drive 1 as the answer to both sets of questions and the program will tell you when to insert or change disks.) As a safety precaution, put a write-protect tab on your source disk before using the program. Your destination disk (the one receiving the information) need not be initialized before using the program. All of the information previously stored on the destination disk is lost.

If you have RUN the program, but want to stop without copying a disk, type Ctrl-C when asked for a slot and drive and then type "POKE 34,0" when you return to Basic.

## EXEC DEMO

EXEC files are a valuable tool for storing a series of DOS commands (e.g. LOAD, RUN, etc.) for later automatic execution. EXEC files can also be used to edit Basic programs on a text editor and then reenter them into Basic. The EXEC DEMO builds a text file named DO\$ER and then uses it to create, save, list and run an Applesoft Basic program.

(See p. 74-75 of DOS Manual.)

## FID (FILE DEVELOPER)

This is the most important utility included on the DOS System Master Disk. You may want to have copies of FID on several of your other disks for convenience. FID allows you to copy selected files from one disk to another, find out how much space is left on a disk or delete groups of files.

Detailed instructions on using FID are on p. 183-189 of the DOS Manual. FID has one tricky feature for Apples with more than one disk drive. When you first perform an operation, such as cataloging a disk, FID will ask for a slot and drive so that it will know which disk drive to use. FID will continue to use that drive until you select option 7 RESET SLOT AND DRIVE. After using this option, you will be asked for a new slot and drive when performing your next operation.

## FILEM

This Applesoft program has been added to the '83 version to BRUN FID. So users of the '83 version can either RUN FILEM or BRUN FID.

## LITTLE BRICKOUT

This Applesoft Basic game uses the game control paddle to move a paddle in a classic "Breakout" game. The game can be played on either a black and white or color screen (although the color effects are nicer.) The program's speed is due to its extensive use of peeks and pokes, so it is a difficult program for a beginner to decipher. Bonus points (accompanied by interesting sound effects) are awarded for removing all the bricks before using up all of the balls.

This file is called BRICKOUT on the Sample Program Disk in the '83 version.

## LOCKED.UP.1

The Sample Program Disk in the '83 version has a number of one line Applesoft programs which perform no function. These are included on the disk to practice using the DOS commands, LOCK, DELETE, UNLOCK and VERIFY. To practice, enter the following commands:

```
UNLOCK LOCKED.UP.1
LOCK LOCK.ME.1
DELETE DELETE.ME.1
VERIFY VERIFY.ME.1
```

I hope that some future version of the DOS manual will incorporate these files in a tutorial.

## MAKE TEXT

This sample Applesoft Basic program illustrates the creation of a sequential text file. Its listing is on p. 64-65 of the DOS Manual. You should put a non-write protected disk in your disk drive before responding to the "WHAT FILE NAME?" prompt. Pick a file name which has not yet been used on the disk (or the file with that name will be deleted.)

#### MASTER

This Applesoft program is included in the '83 version to BRUN MASTER CREATE.

#### MASTER CREATE

Every disk which you initialize has its own copy of the DOS. When you boot a disk, the copy of DOS is read from the disk into RAM memory. The copy of DOS which is recorded at the time you use an INIT command is called the "slave" version, because it is customized to run on a machine with at least the same amount of RAM. These days, most Apples have at least 48K of RAM, so "slave" DOS disks do not pose a problem. However, if you ever want to give a disk to someone who may not have 48K of RAM, you can use the MASTER CREATE program to put a version of DOS on a disk which will work on smaller RAM Apples. (See p. 44-46 for instructions.) MASTER CREATE can also be used to change the name of the disk's greeting program.

#### MUFFIN

This machine language program is used to copy files from a 13 sector disk to a 16 sector disk. (See BOOT13 above.) You need to have an initialized 16 sector disk to serve as a destination ready before using MUFFIN. To use it, type "BRUN MUFFIN" and then give the slot and drive of the source and destination disks. You may designate one or more files to be copied. See p. 192-194 of DOS Manual for details.

#### ONERR DEMO

This Applesoft program illustrates the use of the ONERR statement. It is available only on the '83 version Sample Program Disk. This program will change the name of files on you disk using the DOS command called RENAME. Ordinarily, if you use the RENAME command in a DOS program and then ask DOS to rename a file which does not exist, the program will stop with an error message. However, because ONERR DEMO uses a ONERR statement to tell the Apple how to handle this problem, the program will print a message and continue executing. Using ONERR in your programs will make them more

"user friendly."

#### PHONE LIST

This Applesoft Basic program allows you to store, retrieve and print up to 150 names and phone numbers. The program illustrates a technique of using POKE statements to store data in the program itself. Before using the program, copy it to a non-write protected disk. As you create new entries, they will automatically appear in the DATA statements at the start of the program. You may wish to enter your phone numbers in alphabetical order, as they will be displayed in the order entered. When you select the menu option for exiting the program, a SAVE PHONE LIST command is executed to store your updated list. (The program will also work with a tape cassette by issuing a CSAVE command.)

The program assumes that your printer is in slot 1. To use a different slot, change program line 410.

#### POKER

The Sample Program Disk in the '83 version includes an Applesoft program to convert short machine language routines into Applesoft POKE instructions. It is listed on p. 77 of the DOS Manual.

#### RANDOM

Perhaps the most powerful data storage method on the Apple is Random Access Disk files. RANDOM, an Applesoft Basic program, uses this method in a sample inventory program. Instructions for using RANDOM are on p. 86-88 of the DOS Manual. RANDOM requires a non-write protected disk to operate, so it gives you the option at the start of the program to insert an initialized disk to which it will copy itself and its data file.

#### RENUMBER

Applesoft Basic programs use line numbers assigned by the programmer. Usually, programmers will number by 5's or 10's to allow new lines to be inserted in between old ones. If you didn't leave enough line numbers for your inserts, or if you wish to combine two Applesoft Basic programs together into a single program, RENUMBER can help.

RENUMBER will assign new line numbers according to your specifications. It will also read through your program and revise all the line number references found in LIST, GOTO, GOSUB and IF statements. Line numbers in REM statements are not changed.

RENUMBER assumes that you want to

renumber the entire program and that the new line numbers should increase by 10's, unless you tell it otherwise. So typing "&" followed by a carriage return will assign new line numbers 10, 20, 30 etc. to your entire program. To change RENUMBER's actions, you can set a number of parameters:

F - first new line number to be assigned.

I - increment between new line numbers.

S - the first line of the range of lines

to be renumbered.

E - the last line of the range to be

renumbered.

In addition, RENUMBER has commands to combine two Basic programs (Hold and Merge) and to convert ROM Applesoft programs to RAM and visa versa (Convert.)

To use RENUMBER, type "RUN RENUMBER". This will load a special machine language program into memory, but will also set Basic pointers so that typing or loading Basic programs will not overwrite RENUMBER. RENUMBER will remain in memory until you boot a new disk or perform some other special operation. RENUMBER commands can then be executed while editing Basic programs by typing a & followed by the RENUMBER command in response to a ] Applesoft Basic prompt.

To test whether RENUMBER is still in memory, type "& I 0" from Basic. If you get the message "INCREMENT = 0", then RENUMBER is probably still in memory. If not, then RUN RENUMBER again.

Specific instructions on using RENUMBER can be reviewed by RUNNING RENUMBER INSTRUCTIONS. (2)

Two cautions about using RENUMBER. Do not press Reset during a renumbering operation, or you Basic program may be left half done and unusable. Also, RENUMBER has its machine language subroutine hidden on the last line of its program, so don't edit the last line in Applesoft.

#### RETRIEVE TEXT

This Applesoft Basic program illustrates reading sequential text files from disk. The program reads the file created by MAKE TEXT. See p. 65 of DOS Manual for a listing.

#### SLOT#

This Applesoft program is included in the '83 version. It finds the slot and drive number of the disk drive that was used last.

## START13

This Applesoft program can be used to BRUN BOOT13. It is available only in the '83 version.

That concludes our tour. Try out these program and bring any questions that you may have on DOS to our pre-meeting question session or to our NEWSIG meetings.

## The New ABBS

by Thomas S. Warrick

The Washington Apple Pi Apple Bulletin Board System (ABBS), telephone number (301) 657-4507, is an electronic mail and public bulletin board system for WAP members. The ABBS also has informational files about WAP activities and offerings. It is located in Chevy Chase, Maryland, and is available twenty-four hours a day, seven days a week, except during file and program maintenance.

Any member of Washington Apple Pi with access to a modem (a contraction of "modulator-demodulator") can obtain a password for the ABBS by calling the the ABBS and leaving a message for the System Operator (SYSOP) or by calling the WAP office at the telephone number listed in the Washington Apple Pi magazine. A member desiring a password may call the ABBS via modem and leave a message with his name, WAP membership number and day and evening phone numbers. A caller to the club phone, which is answered by either WAP office staff or an answering machine, should also leave his name, WAP number and day and evening telephone numbers. Members may also contact the System Operator (SYSOP, pronounced "SIS-op"), Tom Warrick, directly at any Washington Apple Pi meeting or at the NEWSIG meeting following the main meeting.

The ABBS program has a number of special features and commands, and even those users who are experienced with other BBS programs should use the "H" (Help) command to learn about them.

To Use the ABBS:

1. After you have obtained a password, set up your modem to send and receive at 300 baud (30 characters a second) in full duplex, so that you do not see characters until they are echoed back to you. The character format is 1 start bit, 8 character bits, no parity, and 1 stop bit. This is the standard full duplex setting on most modems, including the D.C. Hayes Micromodem II, and can be activated without a terminal program by doing:

```
IN#/slot of modem  
{ctrl-A} {ctrl-F}
```

2. Dial the ABBS at 657-4507. When you are connected, the ABBS will respond:

```
ENTER A CARRIAGE RETURN:
```

Your particular configuration may require linefeeds or delays after carriage return, both of which are needed by CP/M systems and by some printers. If so, enter a linefeed

(ctrl-J). At this point you can also enter a number, which will be used as the delay (in hundredths of a second) that will occur after each carriage return whenever linefeed insertion is enabled. The easiest way to enter this is:

```
{ctrl-J}XXX
```

where XXX is a number between 0 and 255, you will enable linefeed insertion and set up delays of XXX—hundredths of a second. Thus "{ctrl-J}255" would insert linefeeds after each carriage return and will wait the maximum 2.55 seconds before beginning the next line. This delay should be enough for even the slowest of printers.

3. The ABBS will then say:

```
ENTER WAPNNN.PSWD OR WPNNNN.PSWD:
```

You should enter "WAP" if your Washington Apple Pi number is less than 1000, and "WP" if it is 1000 or greater. After the second incorrect try, you will be asked whether you want assistance in signing on. You have three tries before the ABBS stops you on the assumption that you are a guest without a password. If you have not logged on successfully after three tries, a brief message will be printed, and you will be allowed to leave a 238-character message for the SYSOP. In entering this message, use the carriage return only at the end of the message.

4. Once your password has been verified, the machine will then log you on and proceed to tell you the current date, the date of the most recent bulletin, and the date you last signed on:

```
SYSDATE: 830626.080330  
LAST BULLETIN UPDATE: 0624  
YOU LAST CALLED ON 830531.151
```

In this example, "830626.080330" means June 26, 1983, at 8:03:30 a.m. The last bulletin was entered on June 24, and you last called at about 3:06 p.m. on May 31, 1983. Of course, the first time you sign on the system, the date you "last" signed on will be incorrect. The bulletin is a short message from the SYSOP on matters of general interest that all users should read.

5. You will then be told the message numbers of all messages for you:

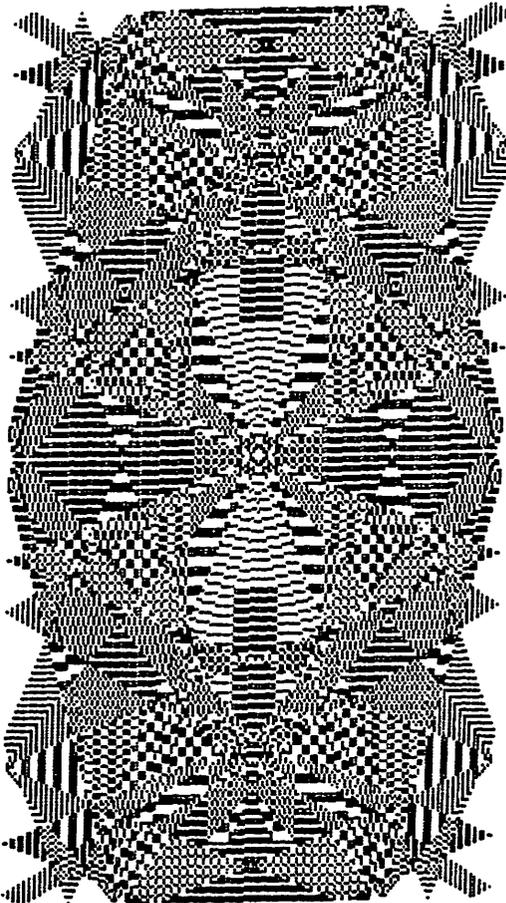
```
THE FOLLOWING MESSAGES ARE FOR YOU:  
10 30 73
```

6. The ABBS will next give you the "COMMAND?" prompt, which allows the user to enter any of the ABBS commands. These commands, in more or less alphabetical order, are:

A number from 1 to 138 - To retrieve

## REFERENCES

- (1) Creative Computing, Vol 7, No. 5, p. 200 (May 1981)
- (2) Softalk, Vol. 2, No. 11, p. 152-56 (July 1982)



## International Apple Core

WAP is a member of the International Apple Core, the federation of Apple User Groups. The IAC offers many benefits, including computer insurance and publications. To learn more, read the "IAC Corner" in the WAP Journal. It's authored by our own Bernie Urban, the 1982-83 Chairman of the IAC Board.

a specific message, enter the number of that message. You will then see a two-line summary with the message number, the WAP number of the sender, the WAP number of the recipient, the date the message was entered, and the subject of the message. After a short pause, the ABBS will then list the message. If the message is addressed specifically to you, you will be asked whether you wish to delete it.

**A - (Amend a message in memory)** After a message has been entered using the "E" command (see below), portions of it may be changed using the "A" command. The "A" command gives you access to all of the editing features of the "E" command's Edit mode. After you enter the message number, you will be given a chance to list the message prior to editing it.

**B - (Bulletin boards)** This command lists the telephone numbers and locations of other computer bulletin board systems, principally in the Washington, D.C. area. This list is kept as current as possible, but computer bulletin boards — particularly private ones — are often ephemeral. Please let the SYSOP know of any changes that should be made.

**C - (Chat with the SYSOP)** Occasionally the SYSOP will be available to come to the ABBS to give help, advice, opinions, or just to chat. When you use this command, you will be told whether the SYSOP is "available" or "not available." These do not necessarily correspond with the SYSOP's physical presence, because often he may be in but unable to come to the keyboard. If the SYSOP is in, you can "call" him by causing the ABBS Apple speaker to sound. Continue using the ABBS, and the SYSOP will come to the keyboard and cut in. Chat mode can be exited at your command by entering ctrl-C or ctrl-K.

**D - (Delete a message)** Once you have read a message directed specifically to you, you will be asked if you wish to delete it. Deleting messages frees up the space for yourself and other users. Also, if a message of yours has gone unanswered for a month, delete it yourself. Only the sender of a message, the recipient (in the case of a private message), and the SYSOP can delete messages. Periodically the SYSOP deletes all messages over 30 days old.

**E - (Enter a message)** When entering a message, you will first have to designate the recipient. You can send it to the SYSOP, in which case the ABBS will convert it to the SYSOP's WAP number (currently

WAP538), to a particular individual, using the standard form WAPnmn or WPrnmn (for WAP numbers 1000 or higher), to ALL, or to cancel the entry of the message (C). If you sent a message to an individual, you will then be asked whether you want the message to be open to all users to read. If you respond "O", all other users can read the message; otherwise, only the recipient will be able to read it. You then enter a short summary of the message, not exceeding twenty characters. This summary may be entered using lower case characters (see ctrl-L, below).

You then enter the text of the message, which may be up to 10 lines of up to 39 characters per line. You will be prompted with the line number before each line. To end the message before the 10th line, just enter a return. After you have entered the message, you will be given a chance to start over or edit the message if you respond "N" to the question "SAVE TO DISK?"

If you decline to save the message to disk, you will then be asked if you wish to edit it, re-enter it from scratch, or cancel the entry. If you select "E", you will be asked whether you wish to edit the name of the recipient, the summary, or a item selected of the message. The line will be listed in its current form, and if the cursor will return to the first character of the line. Use the right-arrow to copy any characters you do not wish to change. You may also add a line to the message, up to a total of 10 lines.

After you have edited the line, you will be asked whether you wish to edit another line or save the message. Note that if you are using the "A" command, re-entering or cancelling the message both have the effect of deleting the message.

**G - (Goodbye)** "G" will disconnect you from the system. If you fail to enter a character for 7 minutes and 6 seconds when the ABBS expects you to enter a character, you will be automatically disconnected.

**H - (Help)** Enter "H" to see a short list of available commands and control characters. This list is also printed in response to any non-legal command. Like other messages, it can be terminated with ctrl-C or ctrl-K.

**I - (Instructions)** The "I" command gives explanations of available commands much like this listing, but with more detail than does the "H" command listing.

**K - (Knowledgable user)** Users who are familiar with the system can use the "K" command to shorten the printing of many prompting messages.

Thus, for example, "COMMAND?" becomes "?".

**L - (List messages)** Use this command to review all messages sent to you or to ALL (whether with "ALL" or as open private messages) without having to write down the message numbers from the "S" or "Q" command. You may use the "L" command to list all messages within a certain number of days of SYSDATE, all messages, or all messages entered since the last time you signed on. Zero days would retrieve messages entered on the same date only. After each message is listed, if the messages file is not full, you will be given the opportunity of responding to the message, finding out who sent the message. If the message is to you alone, you will be asked to delete it.

**M - (Meeting notices)** "M" lists all meeting dates, times and places for Washington Apple Pi and the Special Interest Groups. Tutorials are also listed.

**N - (Nulls)** As discussed above, some systems require the insertion of linefeeds, which move the cursor down a line without returning to the left margin. Some systems also require "nulls," which are delays after carriage returns in order, for example, to allow the printer head to return to the left margin. Insertion of linefeeds and the number of nulls may be examined and set by the "N" command. You must have linefeed insertion "on" in order to have delays after carriage returns. You may also set a delay factor to slow up transmission of each character using a "SPEED=" command. Note that entering a linefeed (ctrl-J) at any time also automatically begins sending you linefeeds. Linefeeds can be turned off only with the "N" command.

**O - (Opinion poll)** Because Washington Apple Pi is a users' group, the opinions of members are of importance to the group. The Opinion poll is intended to sound out users' opinions on questions of interest to the officers of W.A.P. It also serves as a survey of members' interests and experiences with computer hardware and software. The question is usually changed weekly. Results are discussed in the Bulletin file.

**P - (Print bulletin)** The "P" command prints the initial signon messages that give SYSDATE, last bulletin date, and the last time you signed on. (See step 4 of the signon procedure.) You will also be asked if you wish to "REQUEST BULLETIN?" "P" also prints the numbers of all messages for you.

Q - (Quick summary of messages) "Q" lists only the numbers of messages to you, to all, or from you, all in chronological order, and gives the total number of messages currently in use. The maximum number of messages currently allowed is 138.

S - (Summary of messages) "S", perhaps the most useful command, will first ask you how far back you wish to search for messages. The choices are the same as in the "L" command. You will then be asked if you wish to FLAG MESSAGES for reading in full. The ABBS will list the two line summary of all messages within the specified number of days. Entering "0" will retrieve messages from "today" only. The summary lists the message number, the WAP number of the sender, the recipient, the date, and a 20-character summary of the subject. If by the end you have flagged a message for reading in full, you will be asked to hit return, and the entire text of the flagged messages will be listed using the "L" command.

W - (Who is on the ABBS) To find out the name that belongs to a WAP number or the WAP number associated with a name, use the "W" command. After choosing which type of search you want, enter either the first two letters of the name or the WAP number. A search of a match for a name can take up to two minutes or so.

X - (Xfer [Transfer] files) The file transfer subsystem has its own set of instructions, listed in response to an "I" command once inside the file transfer subsystem. Downloading files, i.e., loading files off of the ABBS onto your own computer, is done using the standard D.C. Hayes Micromodem II commands. You will first be given the menu of files available for downloading, along with a short remark about each file, which will usually say how long it takes to download the program. After you select a file, the ABBS will send your Apple a ctrl-R, which if you have a Micromodem not operating with any special terminal program should force the modem to exit its internal terminal program so that the file will be loaded directly into your Apple's memory. If the file to be downloaded is a program, the ABBS then does an "FP" or an "TNT" and waits in case your Apple needs to load the proper BASIC from disk. It then lists the file and, when the listing is complete, returns you to the terminal program by poking the appropriate value in the FLAGS byte of your Micromodem:

POKE PEEK(1784)/16+1912,133

PEEK(1784)/16 is the slot number in

which the modem is located, and slot+1912 is the location of the FLAGS byte. One hundred thirty-eight means that the micromodem will send in full duplex (128), with the terminal program on (8), and your keyboard operative (2). The ABBS will then give you final instructions on how to save the program to disk. If you have asked to receive a text file and wish to save it to disk, you must have a program such as REMEMBER II or ASCII Express available to receive the file. (REMEMBER II is available for downloading from this ABBS.)

Uploading files is more complex. Users desiring to send a file to the ABBS should contact the SYSOP.

\$ - (Prices and products at the club store) "\$" will list the current products available to members through the club store, and the latest available price information. The ABBS and the store are not directly related, and no guarantee of accuracy is made. Requests for items should not be made through the ABBS. Contact the appropriate club store officials.

+ - "+" toggles an 80-column mode for users with 80-column boards or printers. If your system has 80-column capability, you can use this command to display some text on one line that would normally take up to two lines. Entry of material is not affected, and is always in 40-column mode. Note that what the "+" command actually does is to change every other carriage return in most file listings into a space.

? - "?" lists the letters of all available commands. Use it when you don't need to see the short description listed in response to the "H" command.

These control characters are also supported:

Ctrl-C or ctrl-K act as ctrl-C normally does in BASIC: to stop whatever is going on. Ctrl-C and ctrl-K will return to the COMMAND? prompt. They are enabled once your password is accepted, so that you need not wait to see if you have any messages. On some occasions, such as during downloading, ctrl-C is temporarily disabled.

Backspace (ctrl-H) erases the last character from your screen.

Ctrl-J (linefeed) enables linefeed insertion. In this respect, it serves the same function as the "N" command, although it does not set or change the delay following carriage returns. Ctrl-J may be entered anytime the ABBS expects input from you. If linefeed insertion is off,

there will be no delay following carriage returns. Ctrl-J may first be entered when the ABBS asks you to "ENTER A CARRIAGE RETURN:". To see whether linefeed insertion is active, use the "N" command.

Ctrl-L toggles lower case translation. If you wish to send and receive lower case, you must enter ctrl-L at some point. (As with ctrl-J, no carriage return is required. Thus, you may enter ctrl-L and another command on the same line. Lower case is only allowed in message text and subject summaries. At all other times, lower case will automatically be translated into upper case before it is echoed back to you.

Ctrl-S temporarily suspends listing, almost exactly as it does during normal execution with the Autostart ROM. Type any other character to resume. The ABBS expects you to decide when you want to suspend a listing. The ABBS program is much faster than its predecessor version in retrieving certain information, and you must keep aware of what is flying past you.

Right arrow (ctrl-I) retrieves previously-erased characters.

Ctrl-X behaves exactly as it does in normal Apple line input: it cancels the line being entered and allows you to retype the entire line.

A copy of the WAPABBS software is available from the club as Disks 135-136. You must have both disks. (A previous version of the Washington Apple Pi ABBS was made available on one disk. That system is not as sophisticated as the current one.) To run the system, you will need the two disks with the WAPABBS software on them and an Apple II+ or an Apple II with either an Applesoft ROM card or a 16K card (no one has as yet tested the program on an Apple //e, but it should work). You will also need two disk drives (you may be able to get by with one but you will not be able to use many of the informational files), a D.C. Hayes Micromodem II, and, optionally, a printer and a CPS Multifunction card. This is not a simple program, and will require extensive knowledge of BASIC and at least a limited knowledge of assembly language in order to use the program effectively. The disk is fully documented with line-by-line explanations of both the BASIC and Assembly Language code.



# Apple Word Processor Survey

by Jack Warner

At the October meeting, I circulated a survey form to collect information for a forthcoming primer article for the Apple Pi Beginners Guide. You may not be a beginner, but may need a word processor if you are working your way up in the world, preparing your homework, or just dashing off a note to tell Mom what just happened to Garfield, your cat.

Thanks goes out to 115 WAPers who participated in this survey. Some own more than one word processing package.

Here are the results to help you in making that crucial decision... to write or not to write, and with what! The decision is as complex as visiting a pen store and trying to decide with which of their 15,000 pens to write your first novel.

The survey form listed 41 word processing and related software e.g., spelling and merging programs, that Apple had listed in one of their ads. Interestingly, WAP respondents listed only 21 (some not on the Apple list). The survey results are tallied by the information given on the form. I chose the evaluation categories used in INFOWORLD evaluations.

Let the buyer beware! The August and September issues of PEELINGS and the August PERSONAL COMPUTING contain extensive word processing reviews. These are good, like the consumer magazines that rate by features and include chatty remarks by the reviewer. They give you an idea of all the bells and whistles available and which ones have what. However, like most articles they reflect limited opinions and are not always correct (what do you want from a person that reviews 50 or more WP programs!)

This survey reflects WAP users baring their happiness and woes! The comments are unexpurgated from the forms.

## Survey Results

(30) APPLE WRITER II(INCL.5-1.1VER)  
REPLIES(P)OOR (F)AIR (G)OOD (E)XCEL

PERFORMANCE	3	15	12
DOCUMENTATION	1	6	15
EASE OF USE	1	2	12
ERROR HANDLING	8	12	6
SUPPORT	2	3	10

COMMENTS: Easy to learn. Not copy protected. WPL not well explained for beginning user, i.e. Help!. Lacks many features but several available packages (AW Extended,

Graftrix) provide them. AWE provides screen formatting and printing. Best part is that is unprotected and we have modified it. Especially flexible & easy for novice to use quickly. I can't get it to scroll smoothly. Not well adapted to writing text of any length or complexity. After printing a file the program must be rebooted to edit correctly—a serious flaw (we have Videx enhancer + 80 col board.) O.K. Good first word processor. For newcomers; user must learn the arbitrary instructions which aren't user friendly due to limited capability of Apple keyboard. Not too good for extensive tabular work; very good otherwise. No tabbing. Weak on editing options for deletion (lines etc.); 80 column board makes this an excellent WP...A must! How about two windows into a delete buffer?

(1) LEXICOM-WP TO OTHER FORMATS  
REPLY (P)OOR (F)AIR (G)OOD (E)XCEL

PERFORMANCE			1
DOCUMENTATION	1		
EASE OF USE	1		
ERROR HANDLING		1	
SUPPORT	1		

COMMENTS: Flaw is that its data disks are DOS 3.2. copy protected software. I use it to convert AW files to other formats for other WP. With DOS 3.3 I have to Muffin and Niffum files...a pain! Documentation from Micro-Sparc is typed sheets.

(3) EASY WRITER WORD PROCESSOR  
REPLIES(P)OOR (F)AIR (G)OOD (E)XCEL

PERFORMANCE	2		1
DOCUMENTATION	1	2	
EASE OF USE	1	1	1
ERROR HANDLING	1	1	1
SUPPORT	1	1	

COMMENTS: Expect new version mid-83 per mfg. telecon. Had trouble with the u/l case display...did not use enough to figure it out yet.

(1) FORMULEX BUS. FORM DESIGN  
REPLY (P)OOR (F)AIR (G)OOD (E)XCEL

PERFORMANCE			1
DOCUMENTATION	1		
EASE OF USE		1	
ERROR HANDLING		1	
SUPPORT	1		

COMMENTS: I only use this because its in Apple Pascal...it could rank amongst the best if Apple or someone would support.

(2) GOODSPELL  
REPLIES(P)OOR (F)AIR (G)OOD (E)XCEL

PERFORMANCE	1		1
DOCUMENTATION	2		
EASE OF USE		1	1

ERROR HANDLING 2  
SUPPORT 1

COMMENTS: The only spelling checker I have on Apple DOS. Lacks convenience and power; doesn't compare to CP/M world. Wish it could be modified to work with text files.

(4) LETTER PERFECT  
REPLIES(P)OOR (F)AIR (G)OOD (E)XCEL

PERFORMANCE	1		3
DOCUMENTATION	3		1
EASE OF USE			4
ERROR HANDLING	2		1
SUPPORT	1		2

COMMENTS: Easy to use, Doesn't try to do everything. Works well with Epson/Nec I, Ver. 5.01. Built-in ctrl codes for Diablo are wrong. Very versatile - 40 or 80 column; excellent data base merge with any Apple text file. Stores files either as text or binary - your choice. My spouse found this much easier to use than Superscribe II.

(1) MAGIC WAND WORD PROCESSOR  
REPLY (P)OOR (F)AIR (G)OOD (E)XCEL

PERFORMANCE			1
DOCUMENTATION			1
EASE OF USE			1
ERROR HANDLING	1		
SUPPORT	1		

COMMENTS: I am a new user and repeatedly received wrong info from the store. My rating reflects this.

(4) MAGIC WINDOW WORD PROCESSOR  
REPLIES(P)OOR (F)AIR (G)OOD (E)XCEL

PERFORMANCE	2		2
DOCUMENTATION	1	2	1
EASE OF USE	1	1	2
ERROR HANDLING	2	1	1
SUPPORT	1	1	

COMMENTS: Easy to use, extremely reliable (New Version) Will support 160 columns. Would like to see an 80 column version. Menu driven allows kids to do homework project easily. Didn't like it at all. Ctrl codes match functions generally.

(2) MAIL MERGE ENHANCEMENT WORDSTAR  
REPLIES(P)OOR (F)AIR (G)OOD (E)XCEL

PERFORMANCE			2
DOCUMENTATION		2	
EASE OF USE		1	1
ERROR HANDLING		2	
SUPPORT			2

COMMENTS: A must for form mailing. Very easy to personalize "boilerplate" text. Powerful...has many uses... wish it displayed file format (like Format I) and had logic capabilities (like Supertext's mailer).

(2) PASCAL EDITOR

REPLIES(P)OOR (F)AIR (G)OOD (E)XCEL

PERFORMANCE	1	1
DOCUMENTATION	1	1
EASE OF USE	1	1
ERROR HANDLING	1	1
SUPPORT		1

COMMENTS: Can see on screen what document contains. Easy to enter. Requires a text formatter for pagination, etc.

( 2 ) PIE WRITER  
REPLIES(P)OOR (F)AIR (G)OOD (E)XCEL

PERFORMANCE		1	1
DOCUMENTATION	1		1
EASE OF USE		1	1
ERROR HANDLING	1		1
SUPPORT	1		1

COMMENTS: I ordered Pie Writer & got Pie! Pie would not save a file after editing. Best one yet. Complicated to learn. Most flexible and versatile of all. For 80 col. Written by a programmer.

( 1 ) SANDY WORD PROCESSOR  
REPLY (P)OOR (F)AIR (G)OOD (E)XCEL

PERFORMANCE			1
DOCUMENTATION			1
EASE OF USE			1
ERROR HANDLING		1	
SUPPORT		1	

COMMENTS: Uses standard text files. Has bug concerning underlining.

(20) SCREENWRITER  
REPLIES(P)OOR (F)AIR (G)OOD (E)XCEL

PERFORMANCE		8	12
DOCUMENTATION	4	14	2
EASE OF USE	3	14	3
ERROR HANDLING	4	11	5
SUPPORT	2	5	8

COMMENTS: Original Superscribe written in Sanscrit: On-Line's 2 updates: 1st free, 2nd \$10, made it workable, then super. I received Screenwriter II as a replacement for Superscribe II. I like using the program very much. Had many questions concerning interfacing with my NEC 8023 Printer. Apple Writer is easier to learn but SW has much greater capability. Unusable by a fast typist (>60wpm). Only difficulty is scrolling backwards in edit mode. To do a hardware mod is required. Needs 80 column interface. Documentation for Superscribe has, for some features, better explanation. Essential for anyone using footnotes. Cursor movement awkward as is shift/ctrl+key. On-Line's policy of trading up to new versions is great. A few annoying bugs, but limited to highly specific applications.e.g. spooling, Centronic driver. The 70 chrs display is unsatisfactory. Index could be better. This is one of the two or three best

WPs available. For u/l case and 70 columns it's a best buy.

(2) SECRETARY, THE WORD PROCESSOR  
REPLIES(P)OOR (F)AIR (G)OOD (E)XCEL

PERFORMANCE	1	1	
DOCUMENTATION		1	1
EASE OF USE	1	1	
ERROR HANDLING		2	
SUPPORT			

COMMENTS: Good features but slow menus. 40 or 80 column. Has built in simple data base & electronic mail capability.

( 3 ) SENSIBLE SPELLER  
REPLIES(P)OOR (F)AIR (G)OOD (E)XCEL

PERFORMANCE		1	2
DOCUMENTATION		1	2
EASE OF USE		1	2
ERROR HANDLING	1	1	1
SUPPORT			2

COMMENTS: Most flexible Spelling program Has a 80,000 word dictionary. A must if you can't spel.

( 1 ) SPELLSTAR  
REPLY (P)OOR (F)AIR (G)OOD (E)XCEL

PERFORMANCE			1
DOCUMENTATION		1	
EASE OF USE			1
ERROR HANDLING		1	
SUPPORT		1	

COMMENTS: Easy to run and correct problems in text.

(13) SUPERSCRIBE  
REPLIES(P)OOR (F)AIR (G)OOD (E)XCEL

PERFORMANCE	1	4	8
DOCUMENTATION	2	3	6
EASE OF USE	2	6	3
ERROR HANDLING			5
SUPPORT	1	5	2

COMMENTS: Too many commands! Some problems with 80 col. board. Like the appearance of u/l chip better than graphic generated characters. Has index, superscript features. Page formatting has been a problem for me. Having to reboot editor after run-off & vice versa is irritating... otherwise very good. Super program. Best buy for the price. Sequences are rigid; not easy to change mind.

( 2 ) SUPER-TEXT WORD PROCESSOR  
REPLIES(P)OOR (F)AIR (G)OOD (E)XCEL

PERFORMANCE		1	1
DOCUMENTATION		1	1
EASE OF USE	1		1
ERROR HANDLING		2	
SUPPORT		2	

COMMENTS: Control codes bear no relationship to the functions they perform.

(10) SUPERTEXT II  
REPLIES(P)OOR (F)AIR (G)OOD (E)XCEL

PERFORMANCE	1	4	5
DOCUMENTATION	2	7	1
EASE OF USE	2	5	3
ERROR HANDLING		9	1
SUPPORT	1	4	2

COMMENTS: Very good program for the price. No Index. Has math mode, split screen. Documentation has no index. Uses printer ctrl. Lines over 40 col. go to next line. Has 80 columns but margins are not displayed. New 40/80 version has good features, but hard to learn. Have been using two years for extensive writing.

( 2 ) WORDHANDLER  
REPLIES(P)OOR (F)AIR (G)OOD (E)XCEL

PERFORMANCE		1	1
DOCUMENTATION	1	1	
EASE OF USE			2
ERROR HANDLING		1	1
SUPPORT		2	

COMMENTS: Generates u/l case. Can print two page layouts for booklets, picking & placing the matching pages properly.

(17) WORDSTAR  
REPLIES(P)OOR (F)AIR (G)OOD (E)XCEL

PERFORMANCE		7	10
DOCUMENTATION	3	6	8
EASE OF USE		12	5
ERROR HANDLING		10	7
SUPPORT	2	7	2

COMMENTS: The best of six WP programs used. A very friendly program. Extremely easy to use—on screen menus—Mailmerge and Spellstar available. No occasion to seek help in application. Good as a first draft text editor, but editing a file is more troublesome due to 64K Apple memory. WS goes down when too many changes are made. One day of hard work=competence. Spellstar hard to figure out at first. Using 2 ctrl character commands and being able to print only after saved to disk is a pain. None of the others come even close. If WS doesn't have it you don't need it...except footnotes! Excellent, selectable levels of prompts. Easy to learn by a novice. Super program—tough to install, easy to use. Meets our needs, but poor font selection. No graphics.

IAC Insurance

The International Apple Core's insurance program is available to members of member clubs. This NO DEDUCTIBLE policy offers coverage for theft, power surge, earthquake, flood, business interruptions, and coverage while in transit. See our IAC liason for application forms.

Superscribe and its reincarnation, ScreenWriter ][, have a lot of users in Apple Pi, and callers on the Hot Line average two or three a week. Superscribe was the word processor that surprised everybody by providing upper and lower case on the Apple without hardware modification. For anybody who has struggled through proofreading with the old Apple Writer - all in capitals, with upper case indicated by inverse letters - this is a transformation. Now that lower case adaptors for the Apple are so cheap - I have seen \$21 quoted - this feature is less important than it used to be. For example, Supertext and Apple Writer ][ will both accept lower case adaptors and use them to make very adequate screen displays.

If you have a good monitor, ScreenWriter has a further party trick - it can display in 70 columns, again without hardware. Hardware in this case is an expensive alternative - 80 column boards cost some \$300.

Opinions vary as to the readability of ScreenWriter's 70 column display. Many find it unusable except for layout work; others, with good monitors, seem to be able to work with it all day without difficulty. The typing input on the 70 column screen is painfully slow, except at the bottom of the screen, so many users type only on the 40 column display, viewing the result in 70 columns when needed.

## Text Files

ScreenWriter ][ makes standard text files. These files are easy to move from disk to disk, using FID. They can be transferred via modems, using programs such as ASCII Express, and can be used with a variety of automatic checking programs. If you have a program, such as a database program, that makes text files, then ScreenWriter ][ can work on them, and/or merge them into other text files. One of the programs quoted in this article was loaded into the Apple, "captured" into a text file by means of the CAPTURE program suggested in the DOS Manual, and then merged into this text. The new Apple Writer ][ also makes standard text files, but several of ScreenWriter ]['s other competitors do not.

(In the following instructions, the name of keys to be typed are enclosed in brackets. <ESC> means press the escape key; do not type ESC.)

## Redefining Keys

The third major advantage of ScreenWriter ][ is its flexibility. Keys can be redefined, the screen display

can be modified, all the default parameters changed and kept ready for "next time". You can have a try at converting ScreenWriter ][ into your ideal word processor! One Apple Pi member recently made a heroic attempt at converting ScreenWriter ][ into a "children's word processor" by redefining the commands until the COMMAND line was never used at all. Redefining keys is easy, and well explained in the manual. It can be done on a temporary or permanent basis. For example, in writing this article, it was obvious that I was going to use the word ScreenWriter ][ a lot, and it was going to be tedious to write it out each time. I redefined <CTRL-S> to be "ScreenWriter ][", and now need only one key stroke each time it appears. This is in temporary memory, and will be cancelled when I leave EDITOR. I have used a more permanent arrangement for redefining the keys for cursor movement. Cursor movement is a problem for every designer of word processors for the Apple - there just aren't enough keys on the keyboard. In "Insert" mode, ScreenWriter ][ uses the right and left arrow keys for moving the cursor left and right, but has the <CTRL-J> and even <ESC> <CTRL-J> for moving the cursor down and up. With the amount of cursor moves that I do, I find these arrangements intolerably clumsy, so I redefine "<" as <ESC> <CTRL-J> and ">" as <CTRL-J>. This gives me the equivalent of four cursor keys. Since I use this all the time, I have it recorded as a "macro", which I have called "cursor", on the master disk. This can be called up by typing "cursor" when in Command mode, or can be loaded automatically when booting.

## Technical Note

To have a macro, say "cursor", loaded automatically when booting, do the following:

(From BASIC)

1. LOAD APP2 <CR>
2. Type 7810 PRINT D\$"BLOAD CURSOR" <CR>  
8810 PRINT D\$"BLOAD CURSOR" <CR>

(On-Line suggest 9919 also, but I have not found this necessary)

3. SAVE APP2 <CR>
4. PR#6 <CR>
5. Select Customize option, and run it.

The macro "cursor" is now automatically loaded on booting.

Now that I have "<" automatically replaced by "up cursor", how do I type "<"? Just type <CTRL-X>, and the

original key function is restored (for one stroke only).

<CTRL-X> is also useful for "embedding" control characters into the text. Suppose you want the printer to backspace. Type <CTRL-X> <CTRL-H>, and <CTRL-H> will be embedded in the text file, and will be sent to the printer at printing time. Not all printers will respond to this - my Anadex printer is quite immune to <CTRL-H> characters, but my Anderson Jacobson printer, and the Qume used for typing this magazine, will dutifully backspace when they receive this character. This enables me to type in Spanish. Señor is typed as Sen<CTRL-X> <CTRL-H> (this is Shift N)or, and Bogotá is typed as Bogot<CTRL-X><CTRL-H>. A little clumsy, perhaps, but you can always define an appropriate macro if you do it a lot. A disadvantage is that this messes up full justification if that is being used. Some users with Epson printers have reported unreliable results with <CTRL> characters in the text itself, but use the "replacement" embedded command ".re" in the text for satisfactory results. Incidentally, it is not necessary to go through any of this for underscore and boldface printing, as Screenwriter ][ will do it all automatically. However, "expanded" printing does mess up the justification.

## Changing the Screen Display

Printing French and Spanish is easy, and printing in other languages is possible. You can modify the character set that ScreenWriter ][ uses to display the text on the screen. Some brave Apple Pi members have gone into the machine code to do this. More ordinary mortals can use the character sets from the Apple Tool Kit disk.

## Technical Note

To have the ScreenWriter ][ display in Russian, go through the following:

1. Use FID (from the DOS 3.3 Master Disk) to delete TUTORIAL from the ScreenWriter ][ disk.
2. Copy "CYRILLIC.SET" from the DOS Tool Kit disk to the ScreenWriter ][ disk.
3. Run UPSIDE DOWN (on the ScreenWriter ][ disk).
4. When asked for "Input Table Name", type in "CYRILLIC.SET".
5. When asked for "Output Table Name", type in "RUSSIAN".
6. LOAD APP2 <CR>.

7. Type 7820 PRINT D\$"BLOAD  
RUSSIAN, ASD00" <CR>  
  
(On-Line gives the address as \$C00, but this does not work in this situation. The confusion seems to arise from the fact that the character table does start at \$C00, but with control characters. Printing characters start at \$D00.)
8. Type 8820 PRINT D\$"BLOAD  
RUSSIAN, ASD00" <CR>  
9820 PRINT D\$"BLOAD  
RUSSIAN, ASD00" <CR>
9. Type 7830 PRINT D\$"BLOAD RUSS2,  
A\$1000" <CR>  
8830 PRINT D\$"BLOAD RUSS2,  
A\$1000" <CR>  
9830 PRINT D\$"BLOAD RUSS2,  
A\$1000" <CR>
10. SAVE APP2 <CR>.
11. RUN UPSIDE DOWN (yes - again!)  
OUTPUT: RUSS2  
INPUT : RUSSIAN
12. PR/#6 <CR> to ScreenWriter
13. Go back through Option 7,  
"Customize" off the main menu.

ScreenWriter ][ will now print on the screen in Cyrillic characters.

#### Printing the New Characters

Once all this tedious work is done, it is fun to see ScreenWriter ][ operating in the new characters. However, this does not affect what is sent to the printer. The printer goes on getting the same old ASCII codes, and will print out the same old characters, regardless of what ScreenWriter ][ may be putting on the screen. There are various ways of dealing with this.

1. If you have a super new dot-matrix that will print in various character sets in response to <CTRL> codes, send these codes to the printer (see above). I must confess that I have heard about such printers but never met one.
2. Print the new language version on the screen, then use a screen dump program to print out what is on the screen.
3. Buy the new program "Combines Graphics Writer". This will print out using a Tool Kit character.

These last two alternatives require what is known as a "formatted text file". To make this, the ScreenWriter ][ sends to disk the same codes that it would send to the printer - the right number of spaces in the right places for justification, and a carriage return each time it starts a new page line. (In a normal text file, there is only a carriage return at the end of each paragraph.)

#### Technical Note

To make a formatted file, called "FORMATTED":

1. Boot ScreenWriter ][, and select RUNOFF.
2. Select option 1. Select the textfile you want.
3. Select option 4. If you are using a screen dump option, set left margin at 0, right margin at 38, top at 1, bottom at 23.
4. Select option 5. For "Slot number or driver address" type \$9EBD (not \$FDED).
5. Select option 2.
6. Type <CTRL-D> OPEN FORMATTED <CR> (on a 2-disk system, type ",D2" after FORMATTED).
7. Type <CTRL-D> WRITE FORMATTED <CR>.
8. Type B <CR>.  
  
The file will now be saved into a new file called "FORMATTED".
9. Type <CTRL-D> CLOSE FORMATTED <CR>.

You now have a new file called "FORMATTED". You can use this with Combined Graphics Writer to print in a Tool Kit character set.

#### Features That Were There All the Time

Although the manual for ScreenWriter ][ is much better than its predecessor for Superscribe, it is still a formidable document. My six months on the Hot Line for ScreenWriter ][/Superscribe has given me plenty of practice with the following - they are in the manual, but easy to miss.

1. Changing case. Did you leave <ESC> <ESC> on, and type a whole section in upper case? Or do you want to change a section into capitals for emphasis? Move the cursor over the required section, using <CTRL-L>.
2. Fast printing. Do you want a rough printout of something that you are typing, without going through all the RUNOFF procedures? Type L40,1,1,1 when in Command mode. This will give a 40 column print out, single spaces, visible control characters, and prints through slot 1. Other possibilities are explained on page 99 of the manual.
3. Look at a file, while in RUNOFF? This is the opposite. You want to see what is in a file, but you are in RUNOFF and can't be bothered to

go back to the EDITOR. From the OUTPUT page type T <CR> and then B <CR>, and the file will be printed onto the screen. However, if the right margin is greater than 70, some of it will be off the screen.

4. Want a word count? Type # in Command mode of EDITOR. Very useful for authors.
5. Want to line up columns? There are three ways, but you must switch off the justification for printing, either by a RUNOFF command or an embedded command.
  - a. Use the 70 column display and the space bar.
  - b. Use <CTRL-T> in Insert mode. You can change the supplied tabs by typing T and the new numbers in Command mode.
  - c. Use the column stops. These are explained on page 87 of the manual. They are powerful, but need practice to get them right. Notice that they line up the preceding word.
6. Want more space on your text file disks? Run FIX SECTOR COUNT on them, but promise not to use these disks for booting! (FIX SECTOR COUNT allows DOS to be overwritten).

7. Tired of typing long file names? When you are asked for Output File by EDITOR, type "C" <CR>. Up will come a numbered catalog, and a repeated request for the file name. Just type the file number, and <CR>. This will also work for the Input File, and on the Text File page of RUNOFF.

8. Want to use a 70 column display mode in Editor? Type "70c". If you wish, you can have a display 43 characters wide, or 52 characters, by typing "43c" or "52c". The same character set is used for all displays between 41 and 70 characters wide. In the manual this is explained under "Screen Tabs" on page 51.

Two points are not in the manual:

1. Having trouble sending text files by Data Capture? Data Capture does not like long strings. Solve the problem by sending formatted files (see the section of this article on languages).
2. Having trouble sending files by ASCII Express? Screenwriter ][ can make files longer than ASCII Express can handle. Split the file into manageable sections - say 30 sectors long.

Memory and ScreenWriter ][ - or Biting Off More Than You Can Chew

Unlike many other Apple word processors, Screenwriter ][ can make very

large text files - up to 64K. This is good news for an author, but it is done in a rather dangerous way. When it has run out of space in the computer, ScreenWriter ][ will use the disk being used for the output file as "virtual memory". Unfortunately, it appears to scramble the disk while it is doing this. Follow all the instructions exactly, and, above all, never change disks "when the program is not looking" and you may never have any trouble, but be careless (who isn't careless under pressure?) and you may find that not only your original file is badly damaged or destroyed, but other files are also affected. Professionally, this sort of risk is intolerable. How can it be avoided?

For a two disk system, On-Line suggests keeping the Input files on one disk and keeping a disk just for virtual memory on the other. The input files are thus kept intact until the final save. This works well, but at the end of working on a file you must remember to specify the original file on the original drive. If, under pressure, you simply type "s", ScreenWriter ][ will solemnly save the result onto the "virtual memory" disk where it will get wiped when you work on the next file. A new "default" mode that would save to the original disk is urgently needed.

The biggest change between Super-scribe and ScreenWriter ][ was the use of extra memory cards (or the 64K available on the //e). Screenwriter ][ will still work without extra memory, but, as in Super-scribe, you wipe EDITOR from memory when you load RUNOFF for printing. Going backwards and forwards between EDITOR and RUNOFF is time consuming, wears the master disk, but is inevitable when you spot mistakes during the printout. If you have a 16K card, Screenwriter ][ can load both EDITOR and RUNOFF into memory, so that you can quickly switch between one and the other. RUNOFF will remember which files you were printing, but it does not transfer this information to EDITOR. Neither does RUNOFF remember what file you were working on in EDITOR (though it does remember what it printed last). In other words, RUNOFF will not print out of editing memory, as will, say Apple Writer ][, or, for that matter the "L" command in EDITOR. All this slows things down a bit, but is still a great advance over having to load EDITOR and RUNOFF from disk each time they are needed.

#### On-Line's List of Bugs

Sam Swersky obtained the following interesting list of ScreenWriter bugs from On-Line:

For each of these pokes, boot ScreenWriter, and exit to Basic from the main menu. After having

entered these pokes, type PR#6 to reenter ScreenWriter and then go through Customize again.

#### .SP (Setting the Paragraph Token)

If you are having problems with the .SP embedded command:

```
LOAD APP2
9411 POKE 25656,151
9412 POKE 25659,98
SAVE APP2
```

#### Initialization

If you are encountering difficulties properly initializing your printer in Customize:

```
LOAD CUSTOMIZEA
3330
SAVE CUSTOMIZEA
```

#### List

If you are encountering problems in trying to change the margin on the list command by changing default parameters in Customize:

```
LOAD CUSTOMIZEA
LIST 3820-3840
3820 PRINT "8510 POKE 8190,";
NL
3840 PRINT "8520 POKE 8191,";
LM
SAVE CUSTOMIZEA
```

Go through Customize again, changing the left margin to the new parameter.

#### Spooling

If you are encountering problems with spooling:

```
LOAD APP2
6998 POKE 36933,30
SAVE APP2
```

Make sure you have answered "yes" to spooling on your Printer Hardware Specifications Page, and that you have "Saved Default Parameters" (#7 on the Runoff Menu). Once these steps have been completed, and given that your interface is capable of spooling, and is properly initialized, ScreenWriter's spooling function should now work properly.

#### .TP & .FG (Footnote Commands)

If you are encountering difficulties with the .TP or .FG embedded commands:

```
LOAD APP2
9401 POKE 28394,24
SAVE APP2
```

Mark Crosby reports that a Foreign Character Flag was intended to be able to put foreign characters into ScreenWriter text. However, this was never implemented, and a (partial)

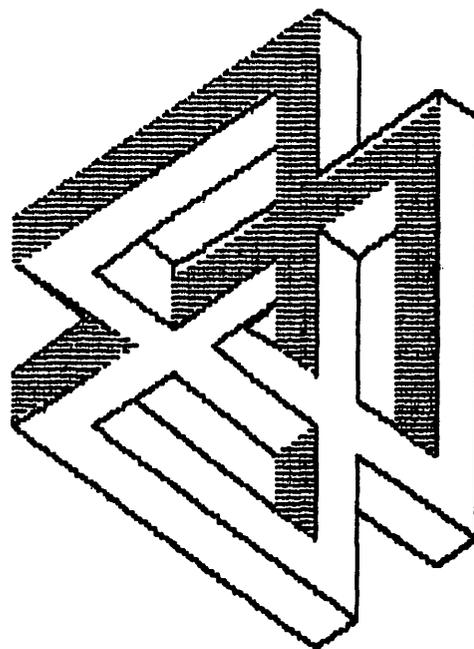
note in the Help section and the Flag Indicator in Command are all that remain. Other commands that went the same way were

```
.li (line increment)
.ld (line decrement)
```

- even though they are listed in the manual.

## Softalk

Softalk is a monthly magazine devoted exclusively to Apples. Each Apple owner can receive a year's free subscription by sending your name, address and Apple's serial number to: Softalk Circulation, P.O. Box 60, North Hollywood, CA 91603. Renewal subscriptions cost \$18 per year if you renew through the WAP.



## Error Reports

In an effort to improve the quality of our existing library disks, we seek error reports from our users. Two types of errors can arise. First, bugs can creep into our disks during the copying process, so that in some cases a BASIC program might not be able to be listed. These can be fixed by correcting the master disks which are used to generate copies. The second errors are programming mistakes which are not caught at the time the programs are originally placed in the library. If you have debugged or improved a library program, please contribute it (and receive a library disk in exchange.) We will then reissue the library disk with a new version number. Error report forms will be available at our monthly meetings and at the Club Office to help us share information on known bugs and fixes.

# Bylaws of Washington Apple Pi, Ltd.

## ARTICLE I - NAME

The name of the corporation is Washington Apple Pi, Ltd. (hereinafter referred to as "WAP" or the "Corporation").

## ARTICLE II - PURPOSES

WAP is organized for such charitable and educational purposes as may qualify it for exemption from federal income tax under Section 501(c)(3) of the Internal Revenue Code of 1954, as amended (or the corresponding provision of any future United States internal revenue law). More specifically, such purposes include, but are not limited to, mutual learning and education of members of the public who share an interest in computers.

## ARTICLE III - PROHIBITED ACTIVITIES

No part of the net earning of the Corporation shall inure to the benefit of or be distributable to its members, directors, officers, or other private persons, except that the Corporation shall be authorized and empowered to pay reasonable compensation for services rendered and to make payments and distributions in furtherance of the purposes set forth in Article II hereof. No substantial part of the activities of the Corporation shall be the carrying on of propaganda, or otherwise attempting to influence legislation, and the Corporation shall not participate in, or intervene in (including the publication or distribution of statements), any political campaign on behalf of any candidate for public office. The Corporation shall not carry on any other activities not permitted to be carried on (a) by a corporation exempt from federal income tax under Section 501(c)(3) of the Internal Revenue Code of 1954, as amended (or the corresponding provision of any future United States internal revenue law) or (b) by a corporation, contributions to which are deductible under Section 170 of the Internal Revenue Code of 1954, as amended (or the corresponding provision of any future United States internal revenue law).

No member, director, or officer of the Corporation shall be financially interested, directly or indirectly, in any agreement relating to the operations conducted by the Corporation, nor in any transaction for furnishing services, facilities, or supplies to the Corporation for compensation, unless the fact of such interest be known to the Board of Directors and unless such agreement or transaction shall be authorized

by the Directors who have no interest, direct or indirect, in such agreement or transaction.

## ARTICLE IV - OFFICES

The address of the principal office of the Corporation is 8227 Woodmont Avenue, Suite 201, Bethesda Maryland 20814. The Corporation may maintain additional offices at other places as the Board of Directors chooses to designate.

## ARTICLE V - MEMBERSHIP

**SECTION 1. CLASSES OF MEMBERSHIP.** There shall be three classes of membership: individual, family and educational institution. Members of each class shall have equal voting powers. Any member of the immediate household holding a family membership shall be entitled to all privileges of membership, except that the family membership is entitled to a single WAP Journal and a single vote. Institutional members shall exercise the privileges of membership through a single individual.

**SECTION 2. ELIGIBILITY.** Membership in the Corporation is open to any person or nonprofit educational institution interested in computers. New members may be required to pay an initiation fee if prescribed by the Board of Directors.

**SECTION 3. DUES.** The annual dues for each class of membership shall be determined by the Board of Directors.

**SECTION 4. LIMITATION OF AUTHORITY.** Except as otherwise specified in these Bylaws, no member shall act in the name of the Corporation or take any action which would bind the Corporation.

**SECTION 5. RESIGNATION.** Any member may resign from membership in the Corporation by submitting a written resignation to the Secretary of the Corporation, but members shall not be entitled to a refund of any portion of the annual dues paid prior to such resignation.

**SECTION 6. EXPULSION.** A member may be expelled from membership in the Corporation for (a) failure to pay the annual dues for more than thirty (30) 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. 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 and he shall be given the opportunity to correct such conduct. If such member con-

tinues to engage in prohibited activities, he may be expelled at any meeting of the Board of Directors at which there is a quorum by the affirmative vote of two-thirds of those present and voting.

## ARTICLE VI - MEMBERSHIP MEETINGS

**SECTION 1. REGULAR MEETINGS.** Regular Membership Meetings shall be held on the fourth Saturday of each month, unless otherwise determined by the Board of Directors. Notice of these meetings, stating the date and hour of the meeting and the place where it is to be held, shall be by publication in the WAP Journal.

**SECTION 2. SPECIAL MEETINGS.** Special Membership Meetings may be called by: the President, the Board of Directors, or a signed petition of fifty (50) members. Notice of a Special Membership Meeting, stating the date and hour of the meeting and the place where it is to be held, shall be given by publication in the WAP Journal or by a mailing to all members and shall state the purpose of the meeting. No business other than that stated in the notice shall be transacted.

**SECTION 3. QUORUM.** One hundred members in good standing must be present at a Regular or Special Membership Meeting in order to conduct business.

**SECTION 4. PROXIES.** No member may vote by proxy at a Regular or Special Membership Meeting.

## ARTICLE VII - BOARD OF DIRECTORS

**SECTION 1. POWERS.** The business and affairs of WAP shall be managed by its Board of Directors, which may exercise all powers of the Corporation and perform all lawful acts and things which not by law, the Article of Incorporation, or these Bylaws directed or required to be exercised or performed by or are conferred upon or reserved to the members.

**SECTION 2. COMPOSITION.** The Board of Directors shall consist of 13 members: the President, the Vice-President, the Secretary, the Treasurer, the Past-President, the Editor of the WAP Journal, the Head Librarian, and six Directors-at-Large. The Directors-at-Large shall be elected annually pursuant to Article IX hereof. The Past-President shall be the individual who last served as the President; provided, however, that if an individual is entitled to serve on the Board of Directors as an Officer or Director-at-Large, he shall not also serve as Past-President. In that case, the Past-President shall be the predecessor to the individual who last served as the President. If an individual is en-

titled to serve on the Board of Directors by virtue of election or appointment to more than one position, then such individual shall be entitled to only one vote and the second Director position shall remain vacant.

**SECTION 3. TERM.** Directors shall serve for a one year term beginning on July 1.

**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 called for such purpose.

**SECTION 5. VACANCIES.** Upon the resignation or removal of a Director-at-Large, the Board of Directors may, by majority vote, appoint a member to serve for the remainder of the Director's term.

**SECTION 6. REGULAR MEETINGS.** Regular meetings of the Board of Directors shall be held monthly, unless otherwise determined by the Board of Directors. Regular meetings shall be held, at such time and place as may be determined by the Board of Directors, without further notice.

**SECTION 7. SPECIAL MEETINGS.** Special meetings of the Board of Directors may be called by the President, the 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.

**SECTION 8. CONDUCT OF MEETINGS.** The President, or in his absence the Vice-President, shall preside at meetings of the Board of Directors. The Secretary of the Corporation, or such other person as the presiding officer may appoint, shall act as Secretary of the meetings. A majority of the Directors currently in office (not counting vacancies) shall constitute a quorum. Meetings of the Board of Directors shall be open to all the Corporation's members, except that upon majority vote, the Board of Directors may enter executive session to transact business which the Board determines to be confidential.

**SECTION 9. ACTION BY CONSENT OR BY TELEPHONE.** Any action required or permitted to be taken at any meeting of the Board of Directors may be taken without a meeting if a written consent to such action is signed by all members of the Board of Directors and such written consent is filed with the minutes of the proceedings of the Board. The Board of Directors may participate in a meet-

ing by means of a conference telephone or similar communications equipment by means of which all Directors participating in the meeting can hear each other at the same time. Participation by such means shall constitute presence at such meeting.

#### ARTICLE VIII - OFFICERS

**SECTION 1. DESIGNATION.** The officers of the Corporation shall be the President, Vice-President, Secretary, Treasurer, Editor of the Journal, Head Librarian, Bulletin Board Operator, and Director of Group Purchases. The President, Vice-President, Secretary and Treasurer shall be elected annually by the members pursuant to Article IX hereof.

**SECTION 2. PRESIDENT.** The President shall be the chief executive officer of the Corporation, and shall have general charge of the business, affairs and property of the Corporation with general supervision over its other officers and agents. The President shall preside at all Membership and Board of Directors meetings and shall see that all resolutions of the Board of Directors are carried into effect. The President shall have the general powers and duties of supervision and management usually vested in the office of president of a corporation. The President shall submit an annual report describing the past year's activities of the Corporation to the membership, either in person or through the WAP Journal.

**SECTION 3. VICE-PRESIDENT.** The Vice-President shall, in the absence of the President, or in the event of the President's disability, perform the duties and exercise the powers of the President. The Vice-President shall also serve as the administrative assistant, oversee and coordinate the efforts of all committees and special interest groups, and perform other duties designated by the President or the Board of Directors.

**SECTION 4. SECRETARY.** The Secretary shall give, or cause to be given, notice of Special Membership Meetings and of Special Board of Directors meetings. The Secretary shall keep the minutes of the meetings of the members and the Board of Directors. The Secretary shall send copies of the minutes of all meetings to the Board of Directors and shall also see that the books, reports, statements, and all other documents required by law are properly kept and filed. The Secretary shall perform such other duties as may be designated by the President or the Board of Directors. The Secretary may appoint one or more assistants.

**SECTION 5. TREASURER.** The Treasurer shall have custody of the corporate funds and other valuable effects, shall keep full and accurate accounts of receipts and disbursements in books belonging to the Corporation and shall deposit all monies and other valuable effects in the name and to the credit of the Corporation in such depositories as may be designated by the Board of Directors. The Treasurer shall have the authority to disburse checks as provided in Article XII hereof. The Treasurer shall maintain a system of internal fiscal control and shall report regularly to the Board of Directors on the expenses and financial condition of the Corporation. The Treasurer shall perform such other duties as may be designated by the President or the Board of Directors. The Treasurer may appoint one or more assistants.

**SECTION 6. EDITOR OF THE JOURNAL.** The President shall appoint an Editor of the WAP Journal, who, subject to the general policy direction of the Board of Directors, shall be responsible for its editorial and advertising content and publication on a regular basis. The editor may appoint one or more assistants.

**SECTION 7. HEAD LIBRARIAN.** The President shall appoint a Head Librarian, who shall organize the Corporation's collection of programs, computer media, books and periodical collections, subject to the general policy direction of the Board of Directors. The Head Librarian may appoint one or more assistants.

**SECTION 8. DIRECTOR OF GROUP PURCHASES.** The President shall appoint a Director of Group Purchases who shall maintain a close and continuing interest in computer products and accessories. The Director of Group Purchases, subject to the general policy direction of the Board of Directors, shall negotiate arrangements for the purchase of such equipment 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.

**SECTION 9. BULLETIN BOARD OPERATOR.** The President shall appoint a Bulletin Board Operator who shall maintain the Corporation's community bulletin board system, subject to the general policy direction of the Board of Directors. The Bulletin Board Operator may appoint one or more assistants.

**SECTION 10. VACANCIES.** If the office of President, Vice-President, Secretary or Treasurer becomes vacant for any reason, the vacancy shall be filled by the Board of Directors. If

the office of Editor of the Journal, Head Librarian, Bulletin Board Operator or Director of Group Purchases becomes vacant for any reason, the vacancy shall be filled by the President. Any officer elected or appointed to fill a vacancy shall hold office until the election and qualification or appointment of his successor.

#### ARTICLE IX - ELECTIONS

**SECTION 1. NOMINATIONS.** Nominations for President, Vice-President, Secretary, Treasurer, and Director-at-Large shall be submitted during the month of April. The nominations may be made at the April Regular Membership Meeting or sent by mail to the Secretary through the the Corporation's office.

**SECTION 2. ELIGIBILITY.** Only members in good standing may be candidates for elective office. An individual may be a candidate for more than one office, except that no one person may be a candidate for President and Secretary. Any dispute regarding the eligibility of a candidate shall be resolved by the Board of Directors.

**SECTION 3. BALLOTING.** An election shall be completed during the month of June. Only members in good standing as of May 2 may vote in the election. A ballot shall be mailed or hand-delivered to each member in good standing. Each ballot may cast one vote for each office, except that up to six votes (noncumulative) may be cast for Director-at-Large. Prior to each annual election, the Board of Directors shall establish a deadline for the receipt of ballots.

**SECTION 4. RESULTS.** In the event that any candidate for Director-at-Large is also elected as an officer, such candidate shall not be eligible for election as a Director-at-Large. The six eligible candidates for Director-at-Large with the greatest number of votes shall be elected. The election tellers shall certify the results of the election to the membership prior to July 1 of each year.

**SECTION 5. INTERIM OFFICERS AND DIRECTORS-AT-LARGE.** Effective as of the date of the adoption of these Bylaws, the President, Vice-President, Secretary, Treasurer, Past-President, Editor of the Journal, Head Librarian, Bulletin Board Operator, Director of Group Purchases and Directors-at-Large of the Corporation shall be those presently serving as such officers and directors of Washington Apple Pi, an unincorporated association. Such officers and directors shall serve until elections are held in 1983 or until their successors have been

chosen and shall qualify.

#### ARTICLE X - SPECIAL INTEREST GROUPS

**SECTION 1. FORMATION.** The Board of Directors may establish special interest groups (SIGS) to provide a forum for exploring topics of special concern to a portion of the membership. Among the factors to be considered by the Board of Directors in recognizing a new special interest group are: whether the group conducts regularly scheduled meetings which it announces in the WAP Journal and whether it has at least five members.

**SECTION 2. ORGANIZATION.** Each special interest group shall elect its own Chairman from among its members and shall publish an account of its activities in the WAP Journal.

**SECTION 3. LIMITATION OF AUTHORITY.** No special interest group shall act in the name of or take any action which would bind the Corporation.

**SECTION 4. DUES.** No special interest group shall collect dues or contributions without the permission of the Board of Directors. (This section added and approved November 10, 1982.)

#### 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 other officer receiving or disbursing funds of the Corporation may not serve as a member of the Audit Committee.

**SECTION 2. OTHER COMMITTEES.** The Board of Directors may appoint other standing or special committees.

#### 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 the Vice-President. However, the Director of Group Purchases shall have authority to sign checks in an amount not to exceed \$500.00, and the Treasurer shall have authority to sign checks in an amount not to exceed \$5,000.00. (This section amended and approved February 9, 1983.)

**SECTION 2. ANNUAL BUDGET.** Prior to the commencement of each fiscal

year, The Board of Directors shall prepare an estimated budget for the following fiscal year for the approval of a majority of those present and voting at a Membership Meeting.

**SECTION 3. FISCAL YEAR.** The fiscal year of WAP shall be from July 1 to June 30.

**SECTION 4. CAPITAL EXPENDITURES.** Capital expenditures in excess of \$1,000.00 must be approved by a majority of those present and voting at a Membership Meeting. Approval of a line item in the annual budget shall constitute membership approval of a capital expenditure.

#### ARTICLE XIII - NOTICE

**SECTION 1. FORM OF NOTICE.** Whenever under the provision of law, the Articles of Incorporation or these Bylaws, notice is required to be given to any Director or member, such notice may be given by publication in the WAP Journal or in writing, by mail addressed to such Director, officer or member, at his post office address as it appears on the records of the Corporation. Such notice shall be deemed to be given at the time it is deposited in the United States mail. Notice may also be given personally, or by telephone or telegram.

**SECTION 2. WAIVER.** Whenever notice is required under the provision of law, the Articles of Incorporation, or these Bylaws, a written waiver of the notice, signed by the person entitled to the notice, whether before or after the fact, shall be deemed to be the equivalent of such notice. Any member or Director who attends a meeting, without protesting the commencement of the meeting or the lack of notice shall be conclusively deemed to have waived notice of such meeting.

#### ARTICLE XIV - INDEMNIFICATION

The Corporation shall, to the extent legally permissible, indemnify and hold harmless any person serving or who has served as a director, officer, or duly authorized agent of the Corporation against all liabilities and expenses, including amounts paid in satisfaction of judgments, in compromise or as fines and penalties, and counsel fees, reasonably incurred by him in connection with the defense or disposition of any claim, action, suit or other proceeding whether civil or criminal, in which he may be involved or with which he may be threatened, while serving or thereafter, by reason of his being or having been such a director, officer or agent, except with respect to any matter as to which he shall have been adjudicated

in any proceeding not to have acted in good faith in the reasonable belief that his action was in the best interests of the Corporation.

Expenses, including counsel fees, reasonably incurred by any such director, officer, or agent in connection with the defense or disposition of any such claim, action, suit or other proceeding may be paid from time to time by the Corporation in advance of the final disposition thereof upon receipt of an undertaking by such individual to repay the Corporation the amounts so paid if it ultimately determined that indemnification of such expenses is

not authorized herein. The right of indemnification hereby provided shall not be exclusive of or affect any other rights to which any such director, officer, or agent may be entitled. As used in this Article, the terms "director", "officer", and "agent" include their respective heirs, executors and administrators.

The Corporation may, at the election of the Board of Directors, purchase and maintain insurance on behalf of any person who is or was a director, officer, employee or agent of the Corporation or who is or was serving at the request of the Corporation as a director, officer, or agent of

another corporation, partnership, joint venture, trust, or other enterprise against any liability asserted against him and incurred by him in or arising out of his position, whether or not the Corporation would be obligated or empowered to indemnify him against such liability under this Article XIV.

ARTICLE XV - AMENDMENT

The Board of Directors or the membership may amend these Bylaws at any Regular Meeting by an affirmative two-thirds majority of those present and voting. Notice of all Bylaw amendments shall be published in the WAP Journal.

WASHINGTON APPLE PI, LTD.

LIBRARY DISK PROBLEM/ERROR REPORT

Your Name: \_\_\_\_\_

Home Phone: \_\_\_\_\_

Library Disk #: \_\_\_\_\_ Program File Name: \_\_\_\_\_

Nature of problem: (What did you do just before the error?)

\_\_\_\_\_  
\_\_\_\_\_

Can you repeat the error? yes \_\_\_ no \_\_\_

Did you get an error message? Go into monitor mode? Keyboard locked up?

Do you know of a solution to this problem?

\_\_\_\_\_

(Return this form to the WAP office or to the New Disk Librarian at the monthly meeting.)

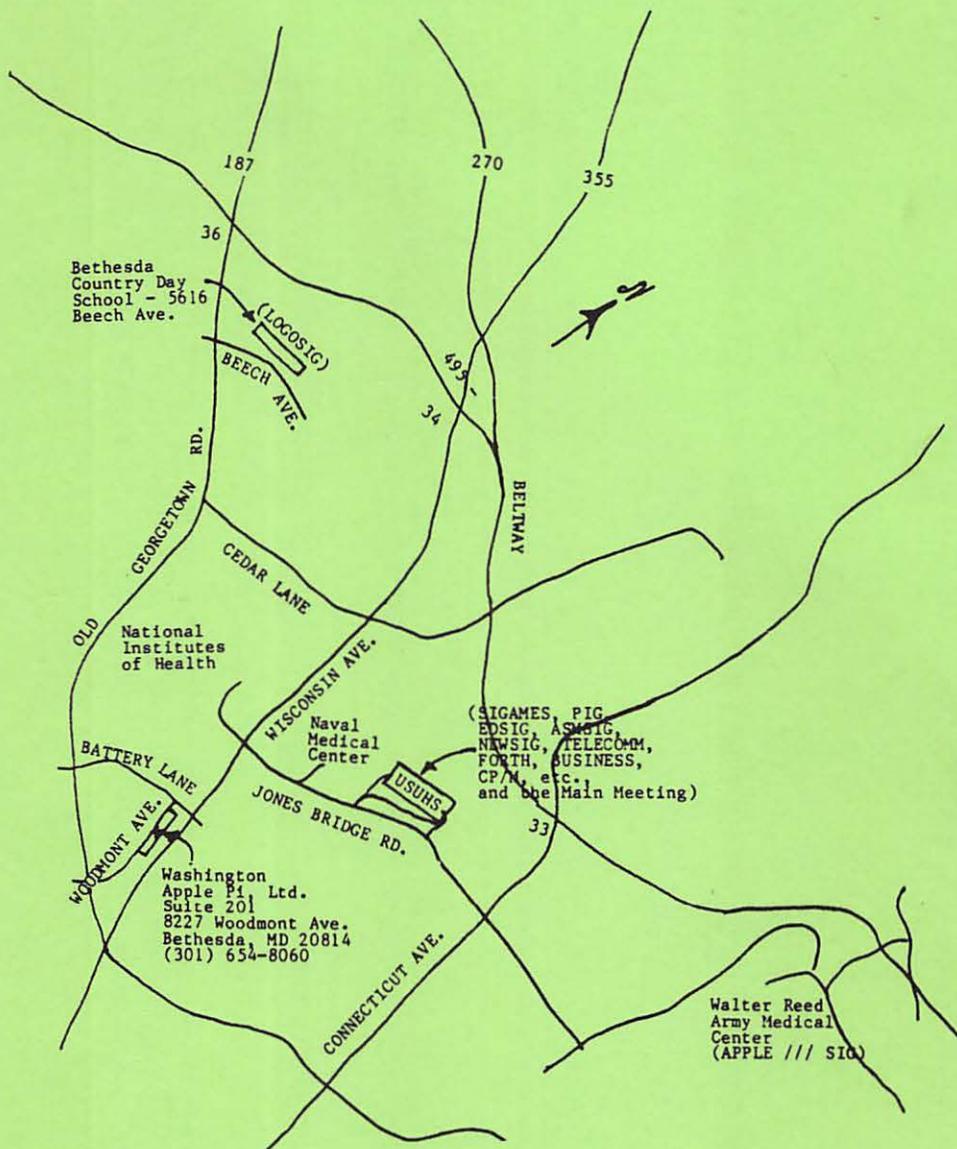
TROUBLESHOOTING GUIDE FOR THE APPLE II AND APPLE II PLUS SYSTEM

(Editor's Note: The following guide and map was left with us at the October meeting, and we don't remember who gave it to us. We thank you, Anonymous, and if you will identify yourself we will publish credit for this in the next issue.)

FAILURE:	PROBABLE CAUSE:
Dead APPLE System (Power Light Off)	Defective Power Supply
Dead APPLE System (Power Light On)	Replace the following ICs B2-74S86      B1-74S175      C2-74S195 A2-74LS00      C1-74LS153      B13-74LS02
No RESET or No Response	Replace the following ICs System RAM Rows C, D and E System ROM Row F3 through F11 F12-74LS138      H1-74LS08      B5-74LS174 B8-74LS174      B6-74LS257      B7-74LS257 H3-H4-H5-8T97      H14-74LS251      H10-H11-8T28 H8-6502      B11-74LS08      C14-74LS32 F13-74LS138      F14-9334 E11-E12-E13-74LS153
No Video (Speaker Does Beep)	Replace the following ICs C2-74S195      B13-74LS02      A2-74LS00 C11-74LS04      D11-D12-D13-D14-74LS161 B10-74LS74      A9-74LS151      A10-74LS194 A8-74LS257      B2-74S86
No Text Mode	Replace the following ICs A9-74LS151      B2-74S86      A3-74166 A5-2513      A10-74LS194      A8-74LS257 F14-9334      F13-74LS138
Hires or Lores Problem	Replace the following ICs F14-9334      A9-74LS151      A10-74LS194 A8-74LS257      B4-B9-74LS194 A11-74LS74      B10-74LS74      C12-74LS257 J1-74LS257      H1-74LS08      C11-74LS04
RAM Problems	Replace the following ICs System RAM Rows C, D and E E11-E12-E13-74LS153 E2-74LS139      F2-74LS139      H1-74LS08 D2-74LS20      A2-74LS00      C14-74LS32 B5-B8-74LS174
ROM Problems	Replace the following ICs System ROM F3-F11 F12-74LS138      H1-74LS08
Vertical or Horizontal Sync Problems	Replace the following ICs C13-74LS51      C14-74LS32      B11-74LS08 B14-74LS02      A12-74LS02      C11-74LS04 D11-D12-D13-D14-74LS161 A2-74LS00      B13-74LS02
Game Paddles Problem	Replace the following ICs H13-558      H14-74LS251      F13-74LS138
Cassette Loading Problem	Replace the following ICs K12-741 OP AMP H14-74LS251      F13-74LS138
Cassette Saving Problem	Replace the following ICs K13-74LS74      F13-74LS138
Speaker Problem	Replace the following ICs K13-74LS74      F13-74LS138
Keyboard Problem	Replace the following ICs B6-B7-74LS257      B10-74LS74      A12-74LS02 C11-74LS04      F13-74LS138
Peripheral Card in Slot Won't Work	Replace the following ICs H2-H12-74LS138

contd.





Bethesda  
Country Day  
School - 5616  
Beech Ave.

187

270

355

36

(LOCOSIG)  
BEECH AVE.

49

34

BELTMAY

OLD GEORGETOWN RD.

CEDAR LANE

National  
Institutes  
of Health

WISCONSIN AVE.

Naval  
Medical  
Center

(SIGAMES, PIG,  
EOSIG, ASMSIG,  
NEWSIG, TELECOMM,  
FORTH, BUSINESS,  
CP/M, etc.,  
and the Main Meeting)

USUHS

33

BATTERY LANE

JONES BRIDGE RD.

WOODMONT AVE.

Washington  
Apple Pi Ltd.  
Suite 201  
8227 Woodmont Ave.  
Bethesda, MD 20814  
(301) 654-8060

CONNECTICUT AVE.

Walter Reed  
Army Medical  
Center  
(APPLE /// SID)