



D.A.U.G.

Newsletter

DuPage Apple Users Group

JULY 1985

JULY MEETING

When: 7:30 pm, July 9, 1985

Where: Faith United Methodist Church
59th & Fairview, Downers Grove

Topic: Mind Probe Story and Apple Documentation
Other Dates to Remember

- July 9: Regular meeting; Marketing your program
- 17: DAUG Board Meeting (7 pm, Downers Grove Library)
- Aug 5: Applesoft SIG (Call 968-3897 for details)
- 13: Regular meeting; Software for Macintosh
- 28: DAUG Board meeting (7 pm, Downers Grove Library)
- Sept 9: Applesoft SIG (Call 968-3897 for details)
- 10: Regular meeting; ProDOS tutorial
- 18: DAUG Board meeting (7 pm, Downers Grove Library)
- Oct 1: Applesoft SIG (Call 968-3897 for details)
- 8: Regular meeting; Laser Writer demo
- 16: DAUG Board meeting (7 pm, Downers Grove Library)

OFFICERS

President: Bob Konikow, 968-3897
 VP/Membership: Jim Cormack, 960-5691
 Secretary: Bruce Mansfield, 420-1608
 Treasurer: John Sandora, 352-3059
 Librarian: Detlef Adolff, 766-7741
 Program Ch: Ed Danley, 969-4433
 Editor: Dave Dohmeier, 941-1645
 Directors: Chuck Jonah, 985-5497
 Priscilla Walling, 964-4894

Treasurers Report for June

PREVIOUS BALANCE	980.41
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REVENUE	
MEMBERSHIP	84.00
MONTHLY DOM'S	85.50

TOTAL REVENUE	169.50
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EXPENSES	
REFRESHMENTS	5.00
CAPITAL EXPENSES	51.36
OPERATIONAL EXPENSES	69.60
NEWSLETTER+STAMPS	162.90
DISKETTES	92.95
PRIZE FUND	45.00

TOTAL EXPENSES	426.81
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NET INCOME	-257.31
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ENDING BALANCE	723.10
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John Sandora

HELP LINE

The following members have volunteered to answer questions by phone on the subjects listed. Please be considerate when calling for help. Think through your question; collect all the information; and don't call later than 10 p.m. If you'd like to help, let us know.

Applesoft: Chuck Jonah, 985-5497
 DOS: Chuck Jonah, 985-5497
 Interface: Rufus Teesdale, 469-8836
 Mach Lang: Chuck Jonah, 985-5497
 Modems: Rufus Teesdale, 469-8836

SOFTWARE REVIEW

A COMPARISON OF TWO NOTE-TAKING CALENDAR PROGRAMS

Have you ever written notes on a calendar where each day has its own one inch square? Each sheet is typically letter-size (8 1/2 x 11"), and shows one month per page. I used to photocopy a few months at a time, and write on the copies. Now I type out the notes, and have my Apple generate the calendar automatically. There are (at least) two very similar programs that can do this: Apple Cal by Glenn Teaman (Nibble Express Vol. III, 1983, page 40), and Activity Management System (AMS) by Kathleen Horvath (Disk Enterprises, 1984).

<< COMMON FEATURES >> ... Each program ... -> Prints one month at a time on a letter-size sheet, with 42 squares (one inch on a side); -> Prints a header at the top of each page, showing the days of the week, the name of the month, and the year; -> Prints dates within the squares of the month; -> Prints out last month and next month (dates only, no squares) at the bottom of each page; -> Saves, edits and prints several lines of notes (each 10 characters long) in each square of your choice; -> saves a year's calendar, notes and all, in a text file; -> can list all the notes in a list form; -> is written in Applesoft Basic; and -> is not protected!

<< TRIVIA >> ... With a moment's thought, you can see that such programs require some nontrivial formulas (e.g. what day of the week does Feb 25, 1987 fall on?). Formatting the grid of squares requires some very fussy programming with carefully-written nested loops. The note-taking simply amounts to maintaining a sequential text file of 365 entries, most of them blank. The trick is pairing up the nonblank entries with their proper date (month, date, and day of week).

Some time ago, I tore apart Glenn Teaman's Apple Cal program, line by line, to test my knowledge of Applesoft, and to see if I could analyze a fairly complex program (over 3 pages of printed code). At first it was another experiment in programming, and I rewrote (fussed over) most of the program during the next several months (a very rewarding, but time-consuming process). I never dreamed I would come to value the program itself, but now, I wouldn't be without it. Then too, I wouldn't run out and buy a computer just to run this kind of program. But it's awfully handy, if for some other reason, you already have a computer at your disposal.

<< DIFFERENCES BETWEEN PROGRAMS >> -- I like both programs, and wouldn't be without one or the other. But, (referring to both programs in their "stock" form) I prefer AMS, mostly because it allows greater flexibility in inputting notes. For example you could put the same note in every second Tuesday of the month (Daug 7:30 pm), or every 15th day of the month, or in a range of dates (June 20 - September 29 ("vacation" -- I wish!). Apple Cal, on the other hand, requires all entries on a date-by-date basis.

<< OTHER DIFFERENCES >> ... -> Apple Cal is DOS 3.3 based, whereas AMS is PRODOS based, complete with subdirectories and a 2 routine for generating a "catalog" of the subdirectory; -> To edit dates, Apple Cal requires "MAR" or "APR", whereas AMS starts with a seemingly random month which you scroll with the arrow

keys (same thing for AMS dates); -> Only TWO lines of notes for Apple Cal, but FIVE (the max) for AMS; -> Also, Apple Cal has only one calendar per year, but with AMS, you can have as many as you want (Boy Scouts, Little League, Swim Meet, etc); -> Apple Cal is an all-in-one program, whereas AMS keeps loading in modules (subprograms) when you switch between functions. For this reason, you cannot have a "data disk" with AMS (no problem, though, just run off multiple copies of the unprotected program disk for each group of calendars you may want).

Bruce R. Mansfield

Another use for your Data Base Manager

If you have a data base management program, you might not think of it as a way of keeping track of appointments, important dates, and so on, but it is a very simple use of the program. We wanted to keep a record of family birthdays, anniversaries, and so on, and at the same time list business and social appointments. This was important for us, since we now have only one car, and we had to avoid conflicting appointments.

My data base program is Data Reporter, but I believe that most data base management programs can work the same way. I set up Data Reporter so that each record has five files. The first, using 6 digits, is for the date, expressed as MMDDYY. This permits me to use the program to sort entries by date. The next entry, two characters, is for day of the week. This is followed by time of the day, expressing time in the 24-hour notation and thus using four characters. A description follows next, in a field whose length is long enough to serve your needs (I use 20 bytes for this). Finally, there is a place to put either my wife's initial or mine, to identify whose appointment it is. If it's a joint appointment we leave this blank; the printed output is neater that way. After adding new entries, we simply have the program sort on the date and time. Then we produce a hard copy of the list, starting with any entry we want. Additions, deletions, and changes can be made at any time, of course, and we can produce lists whenever we feel we need a new one.

Since I work at home, I need a list of my appointments for my business records, so at the end of each month, I simply run off a copy of all entries for that month and file it with my business records. After that, I delete all temporary entries for the month, leaving entries like birthdays. To make it simpler, I use caps and lower case for all non-recurring entries, and all caps for those that I want to retain permanently. This makes it easy to look through my monthly print-out and quickly delete the entries that do not need to be saved.

On Data Reporter, when I want to delete an entry on the screen, the program asks me "Delete how many?" and with a single touch of a number key (or sometimes two) I can delete all until the next one I want to save. There are, I know, specialized programs that list appointments or present calendars, but this is as easy as others and it has the advantage of minimizing the number of commands and procedures I must memorize.

Bob Konikow

SOFTWARE REVIEW

ONE ON ONE

I was given the chance to play basketball the other day. I learned it is not that easy to play, especially when the other player is a computer. No, I didn't take my Apple to the court; it was done by using a software package called One On One by ELECTRONIC ARTS.

My friends booted the disk and used the joystick to choose the game type and who would play, while I finished the dishes. The graphics are kind of neat. Though I do not have a color monitor I could easily tell the difference between the players. The game board has one basket and a free throw circle.

The game started and suddenly the computer's player started bouncing the ball (dribbling) towards the basket. Stunned, I just watched as he tossed the ball through the hoop. The roar of the pleased crowd sounded in the background. The players then returned to the line, and again the computer player took off. This time I moved. I found by pressing the button I could make my player jump and steal the ball. I discovered it looks pretty strange when you're next to the line jumping up and down and the other player is next to the basket making a layup. After watching the score for the computer's side go up and up, I finally managed to get the ball away from the computer player.

Now what to do with the ball? I started to move; I went one way then another. The whistle blew; I had been holding the ball too long, or running when I was holding the ball or something. Back to the line. Later, I had the ball once more. I started to move, and heard that dang whistle again and then a referee came running out and said offensive charging.

I was ready to call it quits when the guys told me they had picked the hardest game possible. They re-booted and chose the easy game for my next try. I then discovered there are four different skills, and three modes of play. Two players may play each other instead of the computer. The menu lets you select two joysticks or joystick and keyboard. You can also select which keys will move in which directions. After each score you change positions, joystick moves to keyboard and vice versa. That keeps one player from having an advantage due to the device used to move his man. The program is menu driven and it's very easy to select the items you want for each game. You can also select possession of the ball i.e., winners out or loser out, and who you will be during the game, Larry Bird or Dr. J. (Julius Erving). You can play a timed game or to a set score.

This time it was just a game between friends, if you can consider a guy who made a score of over a hundred to zero a friend. This level is called PARK & REC; the other selections are VARSITY, COLLEGE and PRO, each making the computer a better player.

I was able to get the ball and even tried throwing it through the basket. The first few times it didn't go but as time went on I learned how to somewhat maneuver around and even scored. Sometime you will see an instant replay of the last point scored. This helped me to see just what I was doing wrong. It's hard to see what you should have done while you are making the 3
move. You do know it was wrong though when you see the computer's

score jump up once more.

Even though I don't believe I could ever get serious about basketball, I found the game to be challenging and a lot of fun. Those little guys on the screen move with such grace from the front of the court to the back, running, jumping and turning to and fro. Even if you can't score it's fun to watch.

It seems to be a great way to learn to see dimensions and depth, and improve co-ordination. The score I made would never set a record, but with practice I hope to challenge my friend, and maybe someday win.

If you like action, whether you understand basketball or not, I think you will enjoy this game.

Crickett Townsend -- Reprinted from SPC APPLE

SOFTWARE REVIEW

BUG OFF Pascal Debugging System by First Byte

SYSTEM REQUIREMENTS: APPLE II, II+, //E
Apple II Pascal Version 1.1 or 1.2

MEMORY REQUIRED: 64K (will also support
128K)

DISK DRIVES: 2 Recommended

PACKAGE RATINGS: Program - 6

Manual - 4

(* Rated on a scale from 1 = poor to 10 = excellent *)

If you have ever done any programming at all, then more than likely you have run into the problem of "Bugs". This problem, in some ways, tends to get worse as you become a better programmer because the errors that you make become just that much more subtle. This, in turn, makes them just that much harder to find. There are many ways to track down those bugs. Some are definitely harder than others. The hardest, at least for me, is to manually "walk through" each step of the program, writing down each new value of each variable. This is long, hard and tedious. Another way is to place extra statements in the program that print out the values of the variables. This method also has many drawbacks; for one thing, it requires that you go back and remove all of those extra statements. The best way to find errors is to use a debugger program. "Bug Off", by First Byte is one debugging system available for Apple Pascal.

The first thing that I noticed about Bug Off was that it was not a program that I could immediately use on my programs. It turned out to be another one of those things where there was "some assembly required". Bug Off is used as an intrinsic unit. If you are experienced in installing and accessing intrinsic units you will have no problem. If you are not familiar with this process, then do not expect the Bug Off Manual to be of much help; in fact, it was the source of some confusion for me. Once Bug Off has been installed, a one or two line call to the "DEBUG"ing unit is inserted at the beginning of the program to be debugged. Your program is then compiled and run.

First of all, Bug Off greets you with a title screen and a fairly lengthy copyright notice. Then you are asked to insert the original Bug Off disk into one of the drives and to specify which drive. It checks the disk to verify that you do have an original Bug Off disk. This seems like a reasonable copy protection scheme to me because it allows you to make as many copies of the program that you need. Each of the copies is then dependent on the original disk. I do not feel, though, that it is necessary to take a full minute to decide that the disk is an original, compilation is time consuming enough as it is.

Bug Off provides numerous debugging features. As you might expect, you have the ability to set and clear program breakpoints and traces. Since Pascal does not have line numbers, a trace returns the segment number, procedure or function number, and the offset. These numbers correspond with those given in the compiled listing. Bug Off also allows you to list, on the screen, source code or compiled listing files. This feature can be a big paper saver if you do a lot of debugging because you will not have to print the compiled listing each time you compile your program. If you have a real problem area in your program, you can execute the program one step at a time through that portion of the program. If a null command is given, then Bug Off will automatically repeat the last command. This is quite convenient when you are taking multiple single steps through a program. The most important feature to any debugger, though, is the ability to display the values of specific variables. Bug Off does support this feature. I thought it was interesting to single step through a program displaying all of the variables after each step.

Bug Off also has provisions for letting you define command macros and allows you to save to disk the debugging options that you have defined. This is a nice feature because, as the Bug Off manual put it, "It takes time and effort to establish an effective program development environment".

Although Bug Off had quite a few strong points, I felt that it had some weak points as well. For one thing, the manual seemed to be too short. Brevity can sometimes be an asset, but if First Byte would further explain some things like the initial setup process, then Bug Off would be easier to learn to use. Another drawback to this debugger was that it seemed to have no provisions for resetting current processing to the beginning of my program. There was a couple of occasions where I wanted to re-step through a portion of my work. I had hoped that I could go back to the beginning of my program, set a breakpoint just prior to the code that I wanted to test and then slowly step through the following code. The closest equivalent that I found was to QUIT and start all over again, disk verification and all. I also felt that First Byte should make some provisions for at least one backup master copy of this piece of software. As it is now, no backup is provided, nor is there any way for you to make a backup. Their policy is that if the disk fails to boot, you must send it back to them. If the failure is within 90 days of purchase, it is replaced free of charge. If it is not within 90 days and the disk is physically damaged, the disk is replaced at a \$10.00 charge. I did not feel that this was acceptable when you consider that their copy protection was so good that even the original disk failed the validation check for me two or three separate times.

I would say that, on a scale from one to ten, Bug Off ranks

about a six. The manual, on the other hand, should only get about a four. The package, as a whole had some weaknesses in certain areas, but I would say that it had enough redeeming qualities to make it a worthwhile program. The \$49.95 price tag on Bug Off seems fairly reasonable to me, especially when you consider that there are quite a few worthless game programs available with similar price tags. If you find that you do a fair amount of programming with Apple Pascal, you might want to consider investing in this inexpensive programming aid.

Don Parsons -- Reprinted from Apple Dillo

SOFTWARE REVIEW

ENCHANTER

Infocom has come up with another award winning program called ENCHANTER. This is Infocom's newest adventure game and it's incredible. There are no graphics, but the game doesn't need them. Everything is described in clear, vivid text making you feel like you are actually there.

You are a young enchanter sent by the Circle of Enchanters to stop the evil warlock, Krill. His magical defenses have subjugated the land and he can recognize all who have attained the Circle of Enchanters. You are weak in power so Krill can not detect and destroy you. You are the last hope to save everyone from slavery and death.

On your search, you will find scrolls and learn powerful spells to aid you in finding Krill, who has laid many traps for you. Also, you will meet many beings that will either help or slow down your search for Krill.

Enchanter is a very good game and even though there is a steep price tag, it is well worth the money. If you are new to adventures or an old fanatic I highly suggest that you take a good look at Enchanter.

Infocom has added something new to their product line called Invisi-clues. This is a book with invisible clues that you develop with a special marker and uncover only what you want to see. Also included is a complete map of the game. Invisi-clues are available for all 10 adventures and are a tremendous help if you are stuck and need help fast. The price is about \$7.95 for both the hint book and map and can only be ordered directly through Infocom at this time.

Enchanter and Invisi-clues are a trademark of Infocom of Cambridge, MA.

Weston Clatanoff -- Reprinted from SPC Apple

June Meeting

Our meeting started right on schedule as it always does. After making up for those 5 minutes, we were presented with a list of documentation that is currently available for the Apple II series of computers. From the lists read (these lists will be published later in a complete form), there seems to be plenty of documentation for all phases of the computer (//e, //c, DOS, Applesoft). The problem first seems to lie in finding that documentation, then finding which of those few are worth something.

Following the break and the awarding of the door prize, Drs. Gallagher (psychiatrist) and DuFresne (psychologist) of Oak Brook discussed the story behind Human Edge Software and in particular, Mind Prober, a program to give you insight into what is probably going on inside another person's mind. In sampling Mind Prober, we assessed a well known (although not well liked) local TV personality. This gave us some insights into the inner lurkings (including a 3 letter word) of this person. Drs. Gallagher and DuFresne then discussed how their other products - Sales Edge, Management Edge, and Negotiation Edge - are designed to help in the business world and how they have been used, in ways other than they were designed, to work with each other to give that extra 'edge' to the user.

Beginning with our July meeting, and hopefully every month thereafter, we will be having a local dealer demonstrating a 'new' product for the Apple (either hardware or software). Don't miss it!

At our next meeting, we plan to discuss the AE RAMWORKS card which is expandable to 2 Meg. (top that IBM PC). We will also have several seasoned members discussing how they went about marketing the programs they wrote for the Apple.

At the August meeting we plan to discuss what software is available for the MAC.

Future meeting topics under consideration include: ProDOS in detail, Apple driven household controllers (BSR), EMAIL with the Apple, Scientific Data Acquisition among others. If you have any knowledge in any of these areas or have suggestions for meeting topics, please let me or any other club officer know.

Ed Danley

Hardware review: The Mockingboard

Price:	A) Mockingboard (music & sound only)	124.95
	B) Speech Upgrade (for board A)	99.00
	C) Mockingboard (music, sound & speech)	219.00
	D) Mockingboard for //c (see below)	229.00

Accompanying software: See below Company: Sweet
Micro Systems
Equipment required: 2 8ohm speakers for A-C
Cranston, RI 02920
Optional Equipment: Joystick for C (see below) (800)
341-8001
Machines: A-C work on II, II+, //e; D is for //c

Rating (on a scale of 1 to 5): 4 (it's that good)

If you have ever wanted to quiet your little Apple speaker because it sounded so trashy, and the sound on it wasn't overly good anyway, the Mockingboard is for you. If you had ever dreamed of an extremely versatile speech synthesizer that could sound like a bellowing mad scientist or a whimpering baby, or one that could sing to musical accompaniment, then the Mockingboard is for you. If you wanted a fairly inexpensive toy to show off to the extremely non-computerized relatives, well, the list goes on and on. The fact is, the Mockingboard is a well-designed, extremely versatile tool that at times can even be fun.

There are three versions of the Mockingboard and one upgrade kit. Let us start at the bottom:

The Mockingboard A is strictly sound and music. It comes with it's own sound editor and is supported by many software companies (see list following). The board runs completely independent from the computer. By that, I mean that while the mockingboard is playing a song, you can be executing something else (until you hit RESET). Thus, you can ad background music to any of your programs very simply.

The speech upgrade, or Mockingboard B, is just a chip that plugs into the Mockingboard A. This allows the user to add speech to his or her programs. The speech chip comes with a speech program and some demos.

The Mockingboard C is simply A+B. This is what I was given for the review. It comes with all of the other software plus a stereo arcade game that uses the speech chip as well. The game can be played with either keyboard or joystick. There is a rule editor for the speech that allows you to change how certain words are pronounced. This allows you to make the Mockingboard sound like a Texan, a New Yorker, or anything you want. It will even let you speak in foreign languages.

The manual is extremely well written. It runs you through all of the basic aspects of the music, sound, and speech processes. It also shows you how to program the Mockingboard from both basic and assembler.

There is one other thing I should mention, and that is the Mockingboard D. It is for the //c only. It plugs into one of the serial ports in the back of the machine. The Mockingboard D is functionally like the Mockingboard C except that the D has 2 speakers already built in. There are still jacks to attach another set of speakers or an amplifier to, but it is not necessary.

Overall, I think the Mockingboard is a very good product. It does everything it is supposed to, and more. Perhaps the best thing about the Mockingboard is that so many software companies allow it's use in their products. Here is a partial list of some of the companies and their products:

Company	Product
Electronic Arts	Music Construction Set
One	Dr J & Larry Bird; One on
Penguin Software	The Spy Strikes Back
	Bouncing Kamungas
	Crime Wave

Silicon Valley Systems	Lancaster (a game)
Mind Systems simulator)	Airsim 3 (a flight simulator)
Datasoft	Zaxxon
Origin Systems	Exodus: Ultima 3
California Pacific	Lady Tut
Earthware	Zookeeper
Datatrek	Maze Craze
Strategic Simulations Inc. (SSI)	Broadside
Avlon Hill	Tactical Armor Command
Sierra Online	Apple Cider Spider

And the list goes on. The lady at Sweet Micro Systems told me that there would be many new products coming out, especially for the Mockingboard D. I highly recommend the Mockingboard, if for no other reason, because it's FUN!

Gavin Clarkson -- Reprinted from Apple Dillo
(See also article by Dave Dohmeier in July 1984 newsletter

SOFTWARE REVIEW

APPLEWORKS

Apple has jumped into the Integrated Software bandwagon with its new product called AppleWorks. AppleWorks combines a Word Processor, Data Base, and Spreadsheet in an integrated software package that is custom-built for the Apple //e. It gives you the capability to move data from one application to another easily.

Apple went the extra mile by providing lots of help screens (available almost anywhere in the program), interactive training disks (with Tutorial Manual), uniform commands, and easy to use menus.

The Word Processor displays your document as it will print, including such things as page breaks. Other features are:

- * search and replace
- * page headers and footers
- * page numbering
- * boldface, underline, superscript, and subscript
- * reads and writes ASCII files.

The Data Base is an enhanced version of Quick File with the same key benefits. The enhancements include:

- * faster sorting
- * up to 30 categories per file
- * up to 3 calculated categories per report
- * reads Quick File & ASCII files
- * writes ASCII files.

The Spreadsheet is a huge 999 rows by 127 columns with a full complement of built-in functions such as "net present value", "if", "choose", and "lookup". Some of its sophisticated features include:

- * individually variable column widths
- * fully adjustable decimal points
- * dollar and percent sign formats for values
- * centering of labels within cells
- * cell protection

- * sorting of rows either alphabetically or numerically
- * 15 place numerical accuracy.

I see this package as a very practical tool for the businessperson who uses all three applications AppleWorks offers, because it also has the capacity to hold up to 12 files in memory at once and switch between them in seconds. However at the suggested retail price of \$250.00 I see the package also attractive for the "home" user who needs at least two of the three applications.

Please note the equipment required to use AppleWorks:

- * Apple //e only (not II, II+, or compatibles)
- * Apple 80-Column Text Card (ext'd memory recommended)
- * will work with one or two disk drives.

Ed Estrada -- Reprinted from SPC Apple

```
*****
#####
%#                               %#
%#                               %#
%#      P R E V I E W           %#
%#                               %#
%#                               %#
#####
*****
```

Coming up NEXT MONTH:

The August DAUG DOM will feature some fantastic programs titled "Trial Size Toolbox"! These are 8 routines which tremendously enhance the power of Applesoft. These programs are from Roger Wagner Publishing and are a sample of their commercially available "Toolbox" programs. We will include lots of documentation on the backside of the disk.

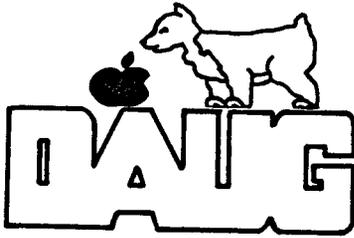
Coming SOON:

Sometime soon we will feature a new SPECIAL Disk. This disk will contain many useful programs for the APPLEWRITER //e. These added utilities will complement our SPECIAL Disk #8, which contains utilities for the APPLEWRITER.

** H E L P **

If YOU have some interesting, unusual, or just plain old neat program you've written and that you are willing to share with the other club members...please, Please, PLEASE see Detlef Adolff, the Club Librarian at the meeting. He'll tell you about free disks, free DOMs and free recognition for YOU!

Detlef Adolph



DuPage Apple User's Group
Disk of the Month

VOLUME 48, July 1985

This disk originated with LOGIC and was prepared by Keith Falkner. It was released as IAC DISK #42. It is formatted with APPLE's Pro-Dos operating system. The Pathname PREFIX is /IAC.42/.

The programs included on this disk are:

MAIN DIRECTORY:

PRODOS--

This is the operating system file. It loads in when you boot the disk.

BASIC.SYSTEM--

This sys file allows us to use APPLESOFT BASIC.

STARTUP--

This program runs when you boot a disk and reads in the menu. You then have your choice of which program(s) to access.

MENU--

This text file was prepared with a text editor and contains program explanations.

CLEAN.LISTER--

This program prints neatly formatted listings of Applesoft programs. It's very easy to use, and offers two different listing formats.

APPLESOFT.TOKEN--

This BASIC program lists the vocabulary of BASIC and shows you the ROM memory locations for the machine-language routines used by BASIC to handle each word in a program. Here's an easy way to explore 6502 machine-language!

OUTER.XXXX--

These four files are intermediate steps in the construction of the demo program listed next.

OUTER.LIMITS--

This program performs three fascinating stunts, and offers no hint of how it does them. The more you know about your APPLE, the more surprising these stunts are, since APPLE'S documentation says they're impossible.

MINI-ASSEMBLER--

This is the one-pass Assembler which is hiding on your DOS System Master. It is documented in the APPLE II and APPLE //e Reference Manuals. This program runs at \$6000 (24576) and is \$140 (320) bytes long.

ORGANIC.CHEM--

This demonstration program asks you for the constituent atoms of an organic molecule. It then generates the molecule in the form of a rather crude drawing on Hi-Res Screen 1.

DG.XXXX--

These files demonstrate DOUBLE HI-RES GRAPHICS. You need 128K RAM to run this demo.

FIN--

This is a DIRectory file, or nested Catalog, containing over 30 short Applesoft programs, each of which performs a financial calculation.

FINANCIAL CATALOG:

HELLO--

This program is run first. It allows you easy selection of the dozens of programs available. If you find you've accessed the wrong program, get back here by typing RESET and then RUN HELLO.

FINANCIAL PROGS--

This is a list of Financial Programs available. Their names explain their functions.

CHKBOOK.BALANCE
AGE.INVESTMENT
REG.WITHDRAWALS
EFFECTIVE.RATE
DEPREC.AMOUNT
LOAN.PRINCIPAL
LOAN.BALANCE
COMMON.DIVISORS
OPTION.PRICING
TRIP.COST.ANAL
LOAN.REDUCTION

NUMBER.OF.DAYS
ANNUITY
INIT.INVESTMENT
EARNED.INTEREST
SALVAGE.VALUE
LOAN.REG.PAYMT
LOAN.CALC.TERM
PRIME.FACTORS
BOND.ANALYSIS
INVESTMENT.ANAL
AMORTIZE.PRINT

MORTGAGE.TABLE
REG.DEPOSITS
MIN.INV.WITHDRA
DECPREC.RATE
DISC.COMM.PAPER
LOAN.LAST.PAYMT
LOAN.INT.RATE
SECURITY.ANAL
BUDGET.ANALYSIS
LOAN.ANALYSIS

VISIT OUR FRIENDS!

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A number of local computer stores support our activity by offering the discounts listed below to those who show their membership cards. Stores that sell merchandise to everybody at a discount are not included.

- Byte Shop of Darien, 8105 S Cass Av, Darien (960-1422) -- 10%
- Computer Grove, 1121 Warren Av, Downers Grove (968-0330) -- 10%
- Computer Junction, St. Charles Rd and Route 83, Elmhurst (530-1125) -- 15%
- Computer Junction, 7 S LaGrange Rd, LaGrange (352-4700) -- 15%
- Computer Workshop, 1626 W Ogden Av, Downers Grove (971-0004) -- 10% on training and rentals; none on consulting or programming
- ComputerLand, 136 Ogden Av, Downers Grove (964-7762) -- 5%
- Farnsworth Computer Center, 1891 N Farnsworth Av, Aurora (851-3888) -- 15%
- Farnsworth Computer Center, 383 E North Av, Villa Park (833-7100) -- 15%

Frequently a smaller discount is offered if a credit card is used. If a store would like to be included in this listing, please write the editor and give us your discount schedule for Apple-User Group members.

P O Box 294
Downers Grove IL 60515

The mailing label to the right is the only notice you will get that your membership is expiring. If you let your membership lapse, you will have to pay another initiation fee of \$8, plus your \$12 dues, to get back on our list.