



# D.A.U.G.

## Newsletter

### DuPage Apple Users Group

OCTOBER 1985

#### 4TH ANNUAL CHRISTMAS CONTEST

#### OCTOBER MEETING

When: 7:30 pm, October 8, 1985

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

Topic: Mouse vs Koala Pad.

Guest Dealer: Micro City

#### Other Dates to Remember

- Oct 2: Applesoft SIG (Call 968-3897 for details)
- 8: Regular meeting; Mouse vs Koala vs Graphics tablets
- 16: DAUG Board Meeting (7 pm, Downers Grove Library)
- Nov 6: Applesoft SIG (Call 968-3897 for details)
- 12: Regular meeting; Appleworks demo
- 20: DAUG Board Meeting (7 pm, Downers Grove Library)
- Dec 4: Applesoft SIG (Call 968-3897 for details)
- 10: Regular meeting; 4th Annual Christmas contest
- 18: DAUG Board Meeting (7 pm, Downers Grove Library)
- Jan 8: Applesoft SIG (Call 968-3897 for details)
- 14: Regular Meeting
- 22: Board Meeting (7 pm, Downers Grove Library)

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#### 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

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The DAUG Christmas programming contest will be held as usual during the December meeting. With the proliferation of one-liner contests in various magazines, we have decided to abandon this category and do something a little different. There will be two main categories for this year's contest.

1) Creative use of the Disk of the Month.

2) Christmas applications of commercial sound and graphics hardware and software.

The disks of the month contain a multitude of graphics and sound generation programs that can be cleverly combined in a holiday spirit. For example:

Volume	Program	Type
16	SOUND MAKER	Sound
31	MAKE MUSIC	Sound
21	DR. CAT'S GRAPHIC	Graphics
33	ANIMATE	Graphics
38	BANNER	Graphics
4&41		A variety
24	HIRES SHAPE WRITER	Graphics

There are a variety of business and plotting programs also available on the DCMs. Take a look at some of the newsletter articles entitled "Adventures in interfacing" for some possible applications of plotting using either:

Volume	Program	Type
24	SOFTGRAPH	Plotting
31	BASICGRAPH	Plotting

Let's see some creative uses for business programs like:

Volume	Program	Type
23	BASICCALC	Spreadsheet
17&29		Databases
29	GEN.LEDGER	Accounting
40		A variety

There are even some educational programs that could be creatively used. Try your hand at:

Volume	Program	Type
43	PILOT	Language
44	GRADEBOOK	Grade keeping
50	ANOTHER TRIVIA GAME	Game

For those of you who are not programmers but artists or musicians, we have a category just for you. Dazzle us with your Christmas artistry using commercial programs. The more spectacular the better. Show us what the Apple can really do. Don't be shy. Any entry will be accepted and everyone will get a prize. Anything from gift certificates to blank diskettes will be awarded.

Priscilla Walling

SOFTWARE REVIEW

SIMPLE FRACTAL PROGRAM - Addendum

Since writing the article "A Program to Generate Simple Fractal Curves" (DAUG Newsletter, Sept. 1985) I've experimented with making more efficient use of available memory by using integer arrays X%(I), Y%(I) instead of the floating point arrays X(I), Y(I). You may want to do the same. This change allows increasing the Dimension statements in line 10 from DIM X(2048), Y(2048) to DIM X%(4096), Y%(4096) with a corresponding change in line 50. All references in the program to X(I) and Y(I) must of course be changed to X%(I) and Y%(I). Recall that the number 2048 in the Dimension statement of the original program is the maximum number less one of allowable points of the Fractal (or Teragon) generated and limits the maximum number of replications, NX.

In Applesoft, use of integers causes a decrease in program execution speed, but that turns out to be not too important -- unless you're very impatient. More important is a loss of accuracy when calculating values of the coordinates for the large number of points necessary to generate and display a typical Fractal curve. I've found that the loss of accuracy can be made negligibly small by choosing a large integer number for the initial value of X%(S) in line 40, and by forcing rounding rather than truncation during the calculations. The largest integer available in Applesoft is 32767, but this choice for the initial value of X%(S) will not always work since the area bounding some Fractal curves tends to expand during the early stages of development resulting in calculated values larger than 32767. A choice of 20000 seems to be a good compromise, but smaller values may be required for unusual cases. When the choice for an initial value of X%(S) is too large the error message "ILLEGAL QUANTITY ERROR IN LINE 130" will be displayed. A choice of too small a value will result in inaccuracies that will reveal themselves as distortions of the displayed shape. Rounding instead of truncation is accomplished by simply adding ".5" to the expressions for X%(I+K) and Y%(I+K) in line 130.

Incidentally, I've discovered that interesting Applesoft programs for generating Fractals have appeared in the July 1985 issue of Creative Computing and the September 1985 issue of Compute. If you know of others please let me know.

Ralph P. Stein

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Have you ever wondered why FIRE ENGINES ARE RED? It is really quite simple. First of all, fire trucks have four bells and eight men. Everyone knows that four plus eight equals twelve. There are twelve inches in a foot. A foot is also a ruler. Queen Elizabeth is a ruler and also the largest ship on the seas. Seas have fish and fish have fins. The Finns fought the Russians. Russians are red. Fire trucks are always rushin! Therefore, fire trucks are red!!!! NOW!.....if you think this reasoning is wild, you ought to here people trying to explain why they don't attend our D.A.U.G. meetings!!!!

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SuperCalc 3a from Sorcim/IUS

As a small scale user of the original spreadsheet program, VISICALC-16, I eagerly volunteered to review the clubs' copy of SuperCalc. I wanted to see just what advancements had been made since my relic was published.

SuperCalc is a spreadsheet/data management program that includes graphics. The first thing that impressed me was the professional looking documentation. Along with the ring bound manual, is a 10 minute introduction, and two quick reference cards (one is for commands and functions and the other is for graphics). The next thing that really caught my eye was the manual telling me how to make backup copies of this uncopyprotected program. This means that you can easily put the entire program (3 disks) on a hard disk for faster access.

The spreadsheet allows you to work with a matrix of 254 rows and 63 columns. They have a "spare matrix manager" that doesn't waste memory on unused cells. They claim this can increase the number of usable cells by 300%. The program is based on ProDOS. The graphics include eight graph types: Pie, Exploded Pie, Bar, Stacked Bar, Area, Line, Hi-Lo-Open-Close, and X-Y graphs. I personally only tried the Pie and X-Y graphs. The graphs can be produced (and printed/plotted) in both black and white and color. Color, however, gives you less detail.

The Data Base portion is a simple database. It allow only 253 records by 63 fields per record. The database facility does give you the capability to sort your spreadsheet data using 2 sort fields. One of the nifty features built-in to SuperCalc is the Sideways printing program. This allows you to print a spreadsheet as wide as you wish. However, you are now limited to the length (top to bottom). Apparently this is much less of a problem than the width limitation. The sideways option can be bypassed if you have a narrow width by long spreadsheet. The printing will also be much faster, as Sideways uses the graphics capabilities of your printer. SuperCalc can read files created by VisiCalc and AppleWorks files. It can read and write to DIF files. You can even transfer files to and from your poor little IBM PC.

A couple of negative points I found with the program are as follows: The 10 minute introduction guide assumes that you have read the beginning of the regular users manual (which I hadn't). The documentation also assumes you are familiar with ProDOS and its terminology (which I wasn't). The last, and most frustrating problem I found was, when saving your data to a disk, the disk must already be a ProDOS formatted disk. I couldn't find a way to initialize a disk once inside the program.

All in all, SuperCalc seems like a well written and finally featured spreadsheet. Its \$199 suggested price tag is small compared to its IBM brother. However, it is still pretty steep for many small scale users like myself.

Ed Danley

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## September Meeting

Our guest dealer, Computer Patch of Lisle, demonstrated two programs this month. The first of which was GATO. GATO is a WW-2 submarine simulator. Bob Hudson went through the built-in demo of the program to show us some of GATO's features. The program needs 128K and therefore runs on a //c or enhanced //e only. The second program they showed was SuperCalc 3a. Since Bob was not familiar with the Apple version of this product, he had to rely on his knowledge based on the IBM version. Adding to his comments were many raving reviews from the audience.

Our main topic for the night was ProDOS. Our resident experts, Ralph Stein and Chuck Jonah were our tour guides. Ralph started out the discussion talking about the basic and BASIC commands used to talk to and manipulate ProDOS. He had written a series of programs that described different sections within ProDOS. He covered and demonstrated such terms/commands as VOLUME, PATHNAME, PREFIX, STARTUP, CATALOG vs CAT among others. He also talked about the User's Disk that is included with ProDOS. He used the new ProDOS command, "-", to run through these programs. Chuck then followed with a more technical look at ProDOS. Some facts that Chuck included are that ProDOS is considerably faster than DOS 3.3. It has also increased the internal buffer size from 256 to 512 bytes. A drawback is that ProDOS is approximately 26K in size, whereas DOS 3.3 was around 10K. He also covered the area where ProDOS resides on a disk (starting at track 0, sector 0), building up in 2 sector blocks. Many thanks to both Chuck and Ralph for sharing their wisdom with us.

## Future Meetings

Future meeting topics under consideration include: Apple driven household controllers (BSR), EMAIL with the Apple, education, different graphics hardware (Mouse, Koala Pad, Graphics tablets), an indepth look into APPLEWORKS, educational software, and our 4th annual Christmas contest. Keep watching for the new contest categories. If you have any knowledge about any of these areas or have other suggestions for meeting topics, please let me (969-4433) or any other club officer know.

Ed Danley

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## Treasurers Report for September

PREVIOUS BALANCE	279.47
REVENUE	
MEMBERSHIP	148.00
MONTHLY DOM'S	120.00
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TOTAL REVENUE	268.00
EXPENSES	
REFRESHMENTS	11.50
OPERATIONAL EXPENSES	24.00
CAPITAL EXPENSES	25.00
NEWSLETTER+STAMPS	132.50
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TOTAL EXPENSES	193.00
NET INCOME	75.00
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ENDING BALANCE	356.47

John Sandora

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## 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,	469-8336
Magic Window:	Ed Danley,	969-4433
Supertext:	Dave Dohmeier,	941-1645
Appleworks:	Bruce Mansfield,	420-1608
Apple Writer IIe:	Chuck Jonah,	985-5497
DOM info:	Detleff Adolff,	766-7741
Macintosh:	Randy Paulin,	366-3274

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## Programming Hint

### Multiple copies from Apple Writer II

When you need multiple copies of a document and photocopies just won't do, you can turn to Apple Writer II's versatile Word Processing Language for a solution. Although Apple Writer itself includes no multiple-copy facility among its print functions, the WPL program presented here, Ditto, lets you print an unlimited number of copies of any text file - just follow the simple rules outlined below.

First, use the embedded printer-format commands available to you - see the Apple Writer manual for a complete list.

Second, if you've included an embedded print command .TL or .BL (top line or bottom line) in your text file to suppress the printing of your header or footer on the first page, then the last line of the file should contain the embedded command .TL\*\*\*\* or .BL\*\*\*\*. This erases the TL or BL entry from the Print/Program Commands menu. If you don't include these new commands, Apple Writer will suppress the top or bottom line on the first page of the first copy of the file, but not on subsequent copies. (If you want the header or footer to appear on every page, including the first, don't clear it as described above. In such cases, you should enter the TL or BL directly into the Print/Program Commands menu before running Ditto.) For example, use the following:

```
.tl*DITTO*--#*March 15, 1985*
This is the first line of text to be printed.
This is the second line of text to be printed.
.tl****
[]
```

Third, make sure the final line in the text file is blank (no characters or spaces) - when you save the file, the cursor should be at the left margin below the last line containing either text or embedded commands. This allows Ditto to insert a form feed (.ff) at the end of the document before printing, and ensures that each copy will begin on a new page.

The pair of brackets ([ ]) at the end of the sample file designates the position of the cursor on the last line of the file (the line containing no characters or spaces). If the cursor is not there when you save the text, Ditto may not insert the form feed in the proper position, and only the first copy will definitely begin on a new page - others may not.

To enter the program, boot your Apple Writer II disk and type it in as shown below, then save it as Ditto on the same disk.

To run the program, boot Apple Writer II and follow these steps:

- 1) Type control-P, Apple Writer will display [P rint/Program
- 2) Type DO DITTO and press the return key
- 3) Ditto then prompts you for the number of copies to be printed, the name of the file being printed (you may ask to see a catalog of your file by responding CAT), and the number of the disk drive containing the file.
- 4) The program then loads the selected file from disk and prints the desired number of copies. After each copy is printed, the

program sends the printer a form feed that lets it begin the next copy on a new page. The bell on the computer beeps five times when the printer has finished.

If you have only one drive, you may eliminate the WPL line:  
PIN DRIVE NUMBER = B\$  
and replace it with:  
PAS 1 = B\$.

If you want to use Ditto with single sheet paper, you can make the printer pause between copies by deleting the program line LOOP PNP and inserting two lines in its place: LOOP PIN (then roll in paper and press the return key) and PNP.

With WPL you can expand Apple Writer's print functions and produce multiple original documents at the touch of a few keys.

Here is the WPL program listing.

```
PGO BEGIN
CATALOG O1
PPR
PGO DOIT
BEGIN PND
P THE NEXT LINE CLEARS THE SCREEN
PPR ENTER AS CTRL/V CTRL/L CTRL/V
PPR
PPR
PPR
PPR
PPR **** DITTO COPY PROGRAM ****
PPR
PPR
PIN HOW MANY COPIES? =#C
PSX #C
DOIT PIN FILE NAME? (CAT=CATALOG) =$A
PIN DRIVE NUMBER? =$B
PAS D =$D
PAS $D$B =$D
NY
PCS /$A/CAT/
PGO CATALOG
PCS /$A/cat/
PGO CATALOG
PCS /$A/Cat/
PGO CATALOG
L $A,$D
B
E
F##.FF#
Y?
LOOP PNP
PSX -1
PGO LOOP
PPR ENTER AS CTRL/V CTRL/L CTRL/V
PPR
PPR
```

```

PPR *****
PPR
PPR          $C COPIES PRINTED
PPR
PPR *****
PPR ENTER AS CTRL/V CTRL/G CTRL/G CTRL/G CTRL/G CTRL/G
CTRL/V
PIN  PRESS <RETURN> TO EXIT TO EDITOR
NY

```

Reprinted from INCIDER October, 1985  
By David del Castillo

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### BOOK REVIEW

#### DIALING FOR DATA

A consumers how-to handbook on computer communications

This book by David Chandler attempts to clarify several aspects of the use of modems and telecommunication to the novice user. I must stress the use of the word novice because this book makes no pretense of being an exhaustive handbook and guide on the subject. In fact, it is specifically directed to the person who knows only a little about computers, let alone modems.

There is one main weak point in the book that should be pointed out right from the start. Some of the technical descriptions and explanations are weak at best and misleading at worst. Fortunately these descriptions are kept to a minimum. I imagine that the author, having little knowledge of the technical aspects himself, wanted to write a book that others like himself could use.

Assuming that one is indeed a novice and could benefit from such an approach, this book has a lot going for it as a short tutorial on modems and what can be done with them. I found the writing to be witty and fun to read. The book was also very informative and useful to me as an introduction to the various services available and how they can be accessed. In fact, the strongest point of this book is its descriptions of these services. There is also an extensive listing of bulletin board systems in the back of the book. I think that the author achieved his objectives in that after reading this book and obtaining a modem, one should have some pretty good ideas as to where and how to find somebody to communicate with.

I didn't buy this book and I would not recommend that anyone else buy it. It is not the kind of book that you would keep around as a reference. I borrowed it from the library and would recommend you do the same if you know very little about what telecommunications services are and what can be done with them.

Don Mocarski

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### Sources of Public-Domain Software

This list of public-domain software appeared in the September 1985 issue of INCIDER.

A.P.P.L.E. Co-op PDS Department N 290 S.W. 43rd Street Renton, WA 98055	LOGIC Disk Copy Service P.O. Box 496, Station 'B' Willowdale, Ontario M2K 2P9 Canada
--	---

Pandora Software P.O.Box 55 Clearfield, UT 84015	The Public Domain Exchange 673 Hermitage Lane San Jose, CA 95134
--	--

SOFTSWAP Microcomputer Center  
San Mateo County Office of Education  
333 Main Street  
Redwood City, CA 94063

Software Library Mail-Order Department North Central Regional Library 238 Olds Station Road Wenatchee, WA 98801	3A Computer Products 1803 Warren Avenue Cheyenne, WY 82001
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### HOW TO SUBMIT NEWSLETTER ARTICLES

Articles for publication in the DAUS Newsletter can be given to any of the officers at the regular monthly meeting. They can also be mailed directly to the Newsletter Editor at the following address:

Dave Dohmeier  
443 Niagara  
Elmhurst, IL 60126

The deadline for submission of these articles is the date of the board meeting (see the schedule on page 1). Remember, the Newsletter is for you and by you. As an added incentive for you to submit an article, you will be entitled to a free DCM during each month you submit an article. We can use articles from newspapers and magazines (except Nibble) and your own creations are especially welcomed. Reviews of hardware and software are particularly useful to the entire membership.

Please have each submission consist of the following:

- 1) a printed copy of your article
- 2) a diskette containing your article
- 3) the word processor used to create your article
- 4) your name and telephone number

Your cooperation is needed and appreciated.

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## A FEW WORDS ABOUT MODEMS

Telecommunications, both from the buyer and seller, are slowly moving up the scale to become a standard computer application. At our last few meetings, a vendor has been present, which indicates the growing acceptance of computer communications. In addition MCI now offers electronic/post office services, as does the Postal Service. I don't know the percentage of families that have computers here, but I have seen published that 7.5% of the California population has one, and that one-half of these have modems (which is why electronic banking is being tested there).

In previous articles I have implied that I like general-purpose applications and practical utilization of computers. I have had an Apple II+ at home for a few years but use an IBM at work, meaning both a PC and a 3033 mainframe. Modem art enables me to satisfy my pioneering instinct, yet remain practical.

Many people experienced in communications come to these meetings to share their experiences. The item advertised the most is the MODEM, but the item I found to be most difficult to select was the TERMINAL PROGRAM to use to support my communications requirements. Now I happened to buy a Hayes Micromodem II, the old model. Then communications research began.

There are three protocols of communications I have run into, though they are described in various terms. I am not talking parity or verification either, nor manual typing as if on a terminal. In order to cater to different communication systems, the following variations have been noted - in layman's terms.

1. Stop/Start usually CTRL-S/CTRL -Q
2. Line by line usually a <CR>
3. Dump it need a big buffer bucket

Generally speaking, communications systems indicate the type of up-or-down-loading protocol their system supports. The Source supports the first two via separate upload programs. They do change the line prompt to a ?. (On my Apple, I see it; on the IBM at work, the communications program doesn't let me see it.) They both work, and of course the Stop/Start method is about twice as fast as the Line by Line method.

STARTEXT, an information service for homecomputers provided by the Fort Worth Start-Telegram at \$23.85/month seems to use the line feed, but I found I had to slow the rate that I sent characters to the modem due to their input mechanism-character checking etc. My rate of output must match their input rate.

If I leave the IBM PC ready to answer the phone, I set its line control character to null, so my file is just dumped down full bore. The program at the other end has two 30K buffers and writes to disk while switching to the other buffer. Since it's receiving only, that is satisfactory. Even if other material is 'called' in later, it is all saved. The limit is about 360K characters, and I can't do that much work in an evening.

I also needed a DUMP sump at my Apple receiver since the IBM mainframe treats me poorly, and if a list is requested, it is all dumped out at once. In addition, I also have to slow the rate that I send characters to the modem enroute to the mainframe,

since the mainframe wanders off into a bit-bar now and then, and forgets the communications coming in.

Then there is the 80-column screen, or upper/lower case support if you have it, and other such trivia that the salesman never seem to consider

PS: After solving the above mess, I can start a Visicalc model on my Apple, download the model to the PC or mainframe, and continue to solve or develop it. My Apple has 34K workspace, the PC has about 450K, and the mainframe clone has 1000+K workspace.

Reprinted from Apple Gram  
by Harold Bays

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## MONEY STREET; WORTH THE MONEY?

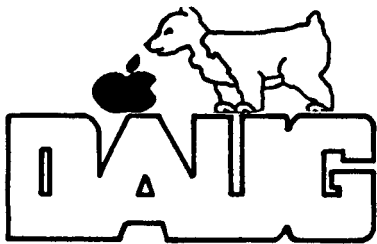
The ads in the magazines promise great things if only you will just buy their product; we've all had experiences where the hype was better than the product. Money Street by Computer Tax Services seemed to be like all the rest, according to the monthly ads to Softalk, but it did seem to be just what I was looking for, and it did carry a money-back guarantee. They even admitted to having eight unhappy customers!

Though the program takes longer than the claimed thirty minutes to master, operation of Money Street is simplicity itself. For once, the authors were more interested in the end user than showing off their programming prowess. Entries are simple to make and modify. You set up 100 expense or income codes (checks, cash, deposits), subtalled as you want; just do Ctrl-Q to toggle between the Code Dictionary and the entry function (I printed the 100 codes for easier reference). The program is intended for one checking account at a time (one per data disk), and I lump my checking, savings, and money market accounts, and pocket cash amounts together into one overall account. This is to ensure that all transactions during the month are tracked and charged to the right category even though the funds may come from various "pockets". My actual checkbook balancing is one with a DOM program, and all accounts are summarized later, along with other elements of my fortune on Desktop Plan (Personal Software/Visicorp) to show a running net worth statment.

Report printing is almost left up to my imagination, though it would have been nice to preview some of the reports available to the printer only. Error trapping is extensive: it is very difficult to make a mistake. Previous computer experience is not needed (Where was this program when I was wrestling with Apple's Personal Finance Manager?). Even having only one disk drive is not a large handicap (Compared to using VisiFile with one drive, Money Street is a dream). The documentation is simple but complete, and the program map is very helpful. There are numerous tips from customers on how to customize the system. Time will tell if it serves all the needs I have planned for it, but for now I think I got my money's worth with Money Street.

Reprinted from Apple Gram  
by Al Aston

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DuPage Apple User's Group  
Disk of the Month

VOLUME 51 - October 1985  
Heavenly Apples - Computer Astronomy

How about that! Once again our DOM is a double-sided disk! That makes it two double-sided disks in the last three months. Only the best for the members of D.A.U.G. - we spare no expense.

Much attention is being given to the return of Halley's Comet next spring. This disk will help you be prepared for this once-in-a-lifetime celestial occurrence. This DOM originated with the Griffith Observatory in Los Angeles, and we received it through the kind cooperation of John Mosley.

Side one of the disk is designed for the amateur astronomer and for the person who has at least a casual interest in the universe around us. It was written/assembled by Dr. Richard Wiesen and offers programs of interest to many different people. For those of you that can find Saturn with binoculars, it offers information about Ra/Dec, planetary diameters, Altazimuths and transit of Polaris. For those of us who sometimes have difficulty finding the Big Dipper with the naked eye, there is information about phases of the moon, rising and setting time for the sun, the moon and the planets for any location on earth, twilight times (best for catching BIG fish), and even camera settings for taking photographs of heavenly bodies.

Side two of the disk is strictly for fun. As a matter of fact, it's the Griffith Observatory Museum Disk, designed to be used by visitors to the museum. It contains a set of three informative and enjoyable interactive games designed to expand your knowledge of astronomy. There is an 'Astronomy Hangman' game utilizing astronomical terms. Also included is an interesting program titled 'Birthdates on the Planets'. If you want to test your general knowledge about our solar system, talk to 'Professor Astro'. All in all, it's a lot of fun!

These are the menus you'll encounter on Side 1.

COMPUTER ASTRONOMY - MAIN MENU

- (1) TIMES, CATALOGS & COORDINATES
- (2) THE SOLAR SYSTEM
- (3) ASTROPHOTOGRAPHY: PLANETARY
- (4) EXIT TO BASIC

TIMES, CATALOGS & COORDINATES

- (1) ELONGATIONS AND TRANSITS OF POLARIS
- (2) TIME: LOCAL MEAN (=>) SIDEREAL
- (3) JULIAN DAY & CALENDAR INTERCHANGE
- (4) ANGULAR SEPARATION -- TWO STARS
- (5) ADJUST RA AND DEC FOR PRECESSION

- (6) MESSIER & NGC CATALOGS
- (7) ALTAZIMUTH CALCULATOR - INTERPOLATOR
- (8) GREAT CIRCLE DISTANCE
- (9) TO SOLAR SYSTEM MENU

COORDINATE MOON & PLANETS - ANY DATE

- (1) PLANET RA & DEC
- (2) MOON RA & DEC
- (3) RISE - TRANSIT - SET
- (4) PLANET / MOON PHOTO EXPOSURES
- (5) RETURN TO MAIN MENU

SOLAR SYSTEM MENU

- (1) MOON: PHASES FOR ANY DATE
- (2) MOON: ECLIPSES FOR ANY YEAR
- (3) RA & DEC MOON & PLANETS - ANY DATE
- (4) SOLAR SYSTEM RISE - TRANSIT - SET
- (5) MERCURY & VENUS: ELONG. & DATA
- (6) MARS: NEXT OPPOSITION & DATA
- (7) GALILEAN SATELLITE POSITIONS
- (8) TWILIGHT TIMES: ANY LOCATION
- (9) RETURN TO MAIN MENU

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\*\*\*\*\* 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 Adoiff, the Club Librarian at the meeting. He'll tell you about free disks, free DOMs and free recognition for YOU!

# Ram disc card - cost

Apple II  
(Franklin)

## VISIT OUR FRIENDS!

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%
- CBM Computer, St. Charles Rd and Route 83, Elmhurst (530-1125) -- 15%
- CBM Computer, 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%
- Computer Patch, 2775 Maple Ave., Lisle (420-8861) -- 20%
- Micro City, 24 W 500 Maple Ave., Naperville (355-9726) -- 2-40%

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.

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P O Box 294  
Downers Grove IL 60515

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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.

\*\*\*FINAL NEWSLETTER\*\*\* 8508

