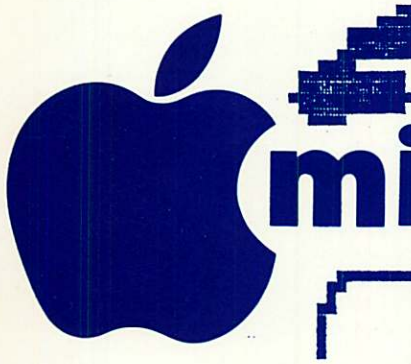
VOLUME V No 10
OCTOBER 1982



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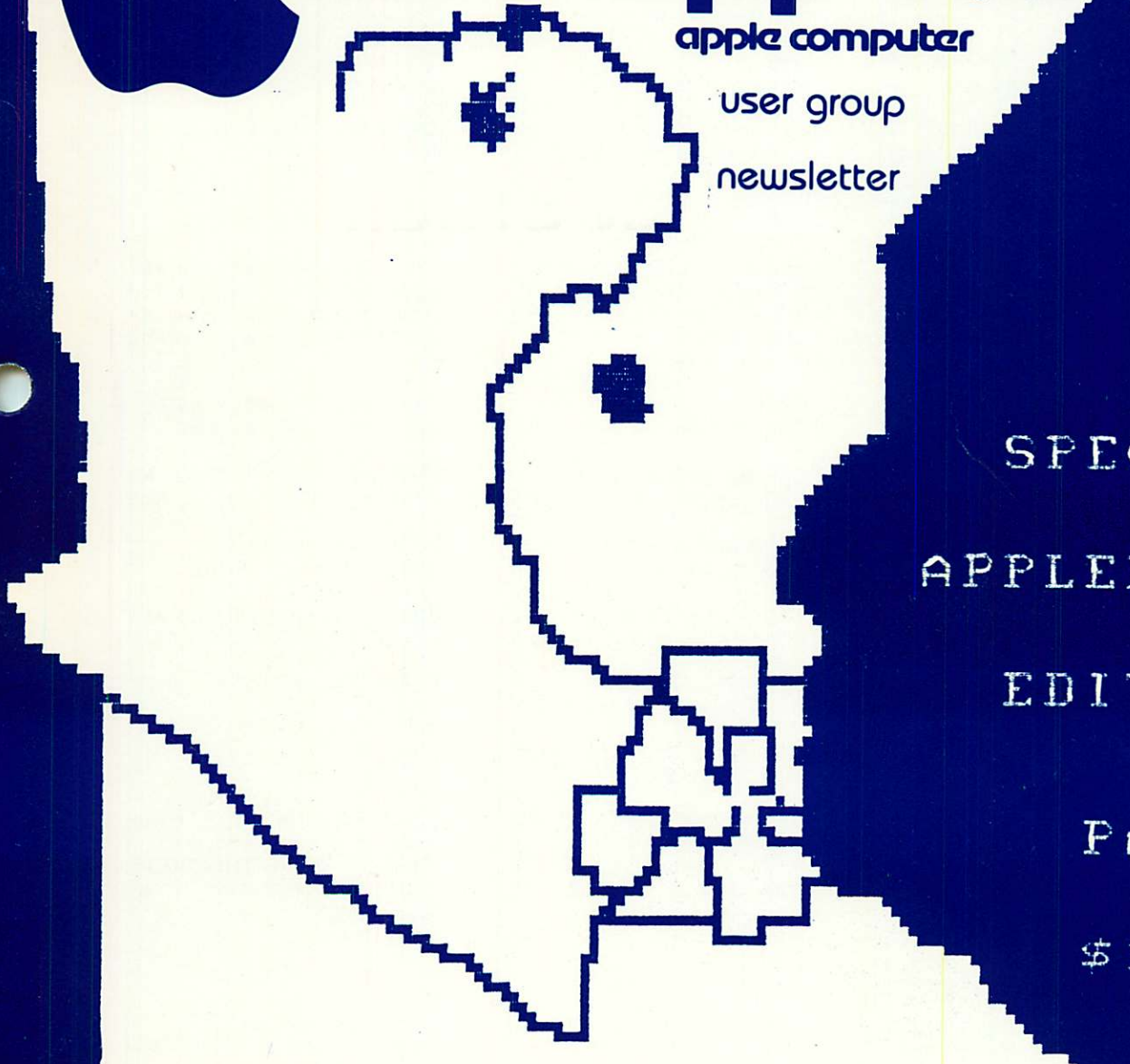

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EDITION

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Minnesota Apple Computer Users' Group
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CALENDAR ..... Inside front cover

CALENDAR CALENDAR CALENDAR

WHICH	WHEN	WHERE	WHAT
Apple-Fest 82	Sep 16-19 Note 6	Auditorium and Convention Center, Mpls	A Huge Exposition devoted exclusively to Apples Come see our booth!
St. Paul Branch	Tue Sep 21 7pm-10pm	Minnesota Federal White Bear Lk Shp Ctr	*Jim White* on Communication Programs - Note 3
Minnetonka Branch	Wed Sep 22 7pm-10pm	Minnetonka High Sch Cafeteria	General meeting Note 8
Pascal Note 1	Wed Oct 6 7:30pm	Minnesota Federal 9th Ave S Hopkins	Regular *Pascal* Special Interest Group Meeting.
Genealogy Note 4	Sat Oct 9 2.00pm	4648 Fillmore N.E. Columbia Hts.	Genealogical Computing Special Interest Group
Dakota County Branch	Tue Oct 12 7pm-10pm	St. John Neumann Chch Pilot Knob Rd, Eagan	General Meeting Note 7
Business Note 10	Thu Oct 14 7:00pm	Minnesota Sch of Bus's 11 S. 5th St., Mpls	
REGULAR MINI'APP'LES Note 2	WEDNESDAY OCT 20th Prgm-7:00pm SIGs-8:00pm+	**UNIVERSITY MINNESOTA ST. PAUL** Room B45 Bldg 412 Map inside	VERTIMAG - Technical Presentaion of Perpendicular Technology or *'How to get 5 MBytes on a 5" floppy'*
VisiCalc Note 9	Tue Oct 26 7.00pm	PBS 4306 Upton Ave S.	Tentative - VisiCalc Advanced Version
St. Paul Branch	Tue Oct 26 7pm-10pm	Minnesota Federal White Bear Lk Shp Ctr	*Bill Irish* St Paul Water Process Control - Note 3
Minnetonka Branch	Wed Oct 27 7pm-10pm	Minnetonka High School Cafeteria	General Meeting Note 8
Pascal Note 1	Wed Nov 3 7:30pm	Minnesota Federal 9th Ave S Hopkins	Regular *Pascal* Special Interest Group Meeting.
Dakota County Branch	Tue Nov 9 7pm-10pm	St. John Neumann Chch Pilot Knob Rd, Eagan	General meeting Note 7
Business Note 10	Thu Nov 11 7.00pm	Minnesota Sch of Bus's 11 S 5th, Mpls	
REGULAR MINI'APP'LES Note 2	WEDNESDAY NOV 17th Prgm-7:00pm SIGs-8:00pm+	**UNIVERSITY MINNESOTA ST. PAUL** Room B45 Bldg 412 Near State Fair	*Chuck Boody* will demo Music systems incl: Passport Design, ALF, Mountain Hardware, etc. Map inside
VisiCalc Note 9	Tue Nov 23 7.00pm	PBS 4306 Upton Ave S.	
St. Paul Branch	Tue Nov 23 7pm-10pm	Minnesota Federal White Bear Lk Shp Ctr	*Jim Schenz* on Assemblers - Note 3

Note 1. Contact- *John Schoeppner*
2. see pg 2 *Chase Allen*
3. for tel. *Pete Halden*
4. nos. *Bill Decoursey*
5. *Ron Androff*
6. *Dan Buchler*
7. *Bob Pfaff*
8. *Martin Thames*
9. *Mike Carlson*
10. *Subir Chatterjee*

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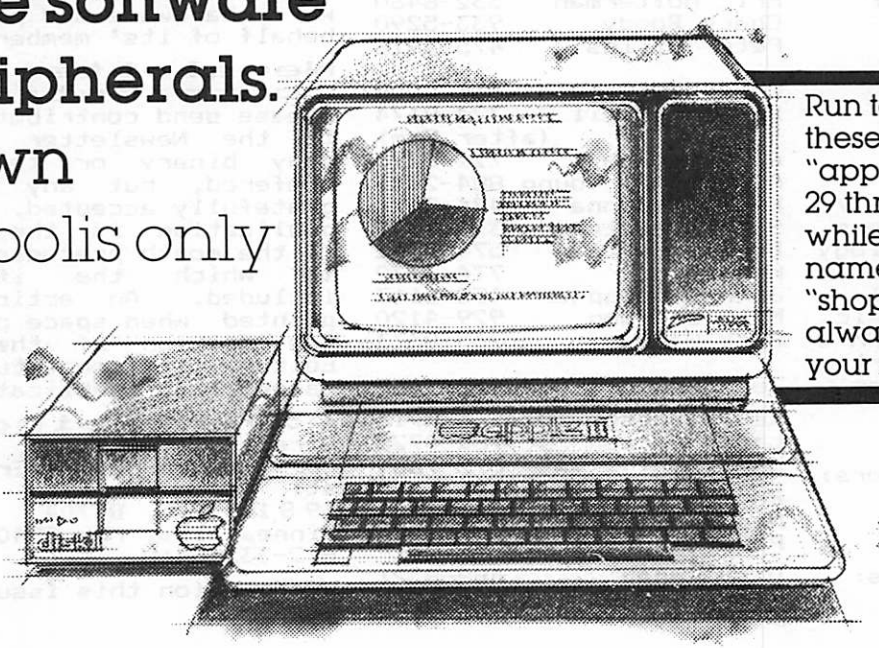

Run to your Apple and file these dates under "appointments." September 29 through October 2. And while you're at it, file the name "Dayton's" under "shopping list," just so you'll always know where to fill all your Apple computer needs.

Four days only. Dayton's Electronics

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The Minnesota Apple Computer Users' Group, Inc.

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Hopkins, MN 55343

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INFORMATION

This is the Newsletter of Mini'app'les, the Minnesota Apple Computer Users' Group, Inc., a non-profit club. Articles may be reproduced in other User Groups' publications except where specifically copyrighted by author.

Questions

Please direct questions to appropriate board member or any officer. Technical questions should be directed to one of the Technical Advisers listed here.

Membership

Applications for membership should be directed to the Membership Co-ordinator. $12 buys membership for one year. Members receive a subscription to this newsletter and all club benefits.

DOMs

The 3 most recent DOMs (Disk of the Month) are available at meetings for $5/disk or any DOM may be ordered by mail for $7.50/disk. Contact Software Sales coord'r.

Dealers

Mini'app'les does not endorse any specific dealers but does promote distribution of information which may help club members to identify the best buys and service. Consequently the club does participate in bulk purchases of media, software, hardware and publications on behalf of its' members.

Newsletter Contributions

Please send contributions directly to the Newsletter Editor. Hard copy binary or text files are prefered, but any form will be gratefully accepted. Deadline for publication is the 3rd Wednesday of the month preceding the month in which the item might be included. An article will be printed when space permits if, in the opinion of the Newsletter Editor, it constitutes suitable material for publication.

Advertising

Direct Advertising inquiries to our co-ordinator Eric Holterman at:
19 S 1st St., B1704
Minneapolis, MN, 55401
612-332-8460

Circulation this issue: 3000

WELCOME TO APPLEFEST!

I want to welcome you to Applefest and provide for you a few reasons why you should consider membership in Mini'app'les.

We put out a newsletter each month. Even though the special edition you are reading is larger than our usual copy, our regular newsletter follows a similar format and content philosophy.

Mini'app'les now has three branch groups that meet each month; Saint Paul (north), Minnetonka (west) and Dakota County (south), as well as the regular meeting.

We also have several special interest groups (SIGS) that have regular meetings: Pascal, active for a couple of years now; Apple ///; Hardware that gets together to build things like joysticks; Geneology; VisiCalc; and Business, a very active group for those businessmen who have felt very lonely when they had software problems, or when their systems did not do what they wanted. Now those business users have company with whom to share their problems. The members of the Business SIG are actively seeking other businessmen to join them.

With around eleven hundred members we have people with experience in almost any facet of the Apple computer and its hardware or software that you could care to name.

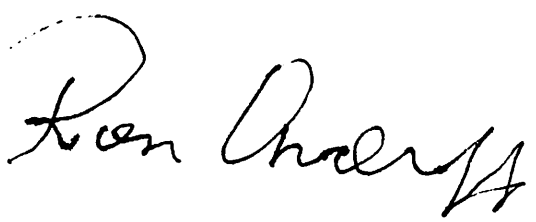
We have fifteen edited and documented disks of public domain software. Recent disks are sold at meetings to members for $5.00 each; older disks for $7.50 each including mailing costs. As we are able to acquire public domain software from various sources including our own members we will make more disks available.

Concerning our educational programs, we had several seminars last year hosted by some of our talented members. It is our intent to broaden the range of our educational programs through an increased effort during the months to come.

We think we have a lot to offer for an annual membership fee of only twelve dollars.

Sincerely,

Ron Androff



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EDITORIAL

by Dan Buchler

Well, maybe some of you didn't see what was going on, but by the time you read this, Applefest will be upon us and maybe gone. A lot of members put in alot of work, and I hope that the results of that effort are evident.

This is the **Applefest Special Edition** of the Mini'app'les newsletter combined with our Regular October Edition. To make this a special issue, we have done two things. First, we have some quality articles and information among which are reviews of the word processor Magic Window, a mailing list program called Micro/Mailer and Versacard by Prometheus. We also bring you details of DOM#15. This is a Special Applefest edition of the disk of the month containing only locally contributed public domain software. It is being sold at the 'fest to non-members for $10.

Second, we have included a selection of articles which have appeared previously in this newsletter and which several of us felt were of sufficient interest to warrant a second printing. Because our club has been growing at the rate of about 50 members per month, only half of our membership was with us a year ago. Thus, most of those persons have not had the opportunity to read the reprinted articles before. For the remainder, I hope you will bear with us and perhaps might even reread some of those older articles, many of which have been revised and brought up to date.

Also in this newsletter you will notice many advertisements. A considerable amount of credit for this most go to Eric Holterman who has spent many many hours tracking potential advertisers and persuading them of the advisability and profitability of advertising in this journal. Without the advertisers, we could not afford a special issue such as this.

If you read this before the 'fest is over, please come visit us there. Your ticket is good not only for the Applefest itself but also for the National Computer Show. These two exhibitions provide, for the first time in the history of the Twin cities, an opportunity to see more personal computer in general, and Apple Computer specifically, hardware, software and related products than has ever been possible before.

BUSINESS SIG

by Subir Chatterjee

The Business Special Interest Group (SIG) met on Thursday, August 12th at the Minnesota School of Business to review four Word Processors. The evening's format was to have each presenter spend a half hour demonstrating a package, and then to have a general discussion.

Dick Marchiafava spoke on Magic Window followed by Al Peterman showing us Screen Writer II. Subir Chatterjee demonstrated Wordhandler II and Tom Edwards reviewed Executive Secretary. Of the four, Screen Writer II and Wordhandler display Upper and Lower case without modifying the Apple, Executive Secretary works with 80 column boards while Magic Window uses clever scrolling to offer a full line of text.

Mini'app'les newsletter (May 1982) reviewed Executive Secretary and Super Scribe II (now renamed and reissued as Screen Writer II). Both received good reviews. Dick Marchiafava has reviewed Magic Window in this issue, while Nibble magazine recently reviewed Wordhandler II (Vol III No.4).

Our thanks to all who prepared presentaions for the meeting.

The database questionnaire is now ready and Business SIG members will want to obtain their copies at the next SIG or General meeting. Alternatively, please call Subir Chatterjee at 330-7347 and make other arrangements. The purpose of the directory is to enable members to locate other members who are experienced in a particular area of interest and to learn from each other. This directory will be restricted to SIG members.

The next meeting of the Business Special Interest Group will be on October 14th at the Minnesota School of Business. The location is at 11 South 5th. Street, Minneapolis. The meeting will start at 7 pm.

ANNOUNCEMENTS

The OCTOBER Mini'app'les Regular meeting, which normally would have been held at the Penn Center, will be at the UNIV of MINN instead. This change is a result of non availability of the Penn facility on our meeting night. We will probably return to our normal flip-flop between U. of M. and Penn after the November meeting.

There have been some meeting night changes for some of the branches/SIGS.

Mike Carlson moved the Visicalc SIG to the Tuesday before the fourth Wednesday of each month.

There's a new tabloid magazine which is devoted to computers. Its called TWIN CITY COMPUTER USER. It is being edited by Dale Archibald and will be distributed free of charge, being entirely supported by advertising. If anyone wants to act as a distribution point, please call 646-4833 to obtain copies.

Applesiders of Cincinnati have an Apple-Vention 82 on Sat, Oct 9th at which Bruce Tognazzini will make a presentation at the Univ. of Cincinnati. Call your newsletter editor for more information.

CLASSIFIED

These ads are provided free to members for non-commercial use, and are limited to 10 lines. Ads will be repeated on request only. Also, please notify editor if item is sold.

Looking for comments and knowledge of PEEKS, POKES and machine code requirements for the following equipment: Apple Super Serial Card, BSC-100; RAM (Language) Card by COEI; Voice synthesizers; Novation Apple Cat II and VistaVision 80.
Leif Pihl 729-3948

Sanyo 9" Monitor, VM4509. Excellent Condition.. $75

2 Boards with 3 voices/board ALF Music Synthesizer (10-5-16). Excellent condition. Originally $250/board - sell both for $150.
Pete 224-4175

For sale: Paper Tiger (IDS Model 440) Printer, parallel interface card and cable. Printer is in excellent operating condition.
Make an offer. 484-2077

For sale: Apple /// with 2nd Drive, Universal Parallel Card, Hayes Smart Modem and Miscellaneous sofware.
Christer or Beth Malmgren 937-1950

DOM #15

by Al Peterman

This Disk of the Month represents some of the best public domain software created by the Mini'app'les membership over the last 2 years. However, I remain convinced that there are many more good programs waiting to be contributed. This DOM contains quite a few repeats from previous disks, as well as several notable new programs.

The first new program (and one of interest to nearly everone) is a very well done mailing program written by Dana Lonn. It has many features of the commercial programs and a few they never even thought of! Chuck Boody dug into his stock of student programs and found four new games/demos. POKER DICE is a nice game and the TRICOLOR GRAPHICS are really quite stunning. Lastly, there is Rob Wentworth's SLOT MACHINE which is as nice visually as Budge's Raster Blaster, however it is in INTEGER Basic.

Also on this DOM are a few programs from the old library and other places. The CHECKBOOK BALANCER is a simple little program to simulate the form on the bank statements and the APPLESOFT AUTO-NUMBER adds the line writing feature that APPLESOFT should have had in the first place.

MAIL LABELS

A rather nice mailing label program. It allows one to handle files of up to 400 names and sort them alphabetically or by zip code. It also will go to condensed print for names that are too long for a standard label. By Dana Lonn.

CLUB OFFICERS MAIL LIST

A sample of a 'MAIL LABELS' name file.

COMPARE MODIFIED

Tom Edward's modification of a program by Chuck Boody for comparing versions of Applesoft programs. The programs should be turned into text file format for comparison. From DOM #5

MAKE LINE CAPTURE

A routine to create an 'EXEC' file from a program. It can be used with 'COMPARE'. By Dave Nordvall; from DOM #7.

HI-RES DUMP.EPSON MX-80

A dump to an EPSON printer of a HIRES picture. It requires an interface that can output 8 bits of data (any but the Epson board). See the instructions in

GOTO 7

PASCAL SOFTWARE BANK

by John Schoeppner

At the last board meeting I learned that many club members, even board members, didn't know that there is a Pascal software bank. This software will now be offered by the club's software sales coordinator at the same price as a DOM. All the software is on Apple II Pascal disks and requires 64K of RAM and the Pascal operating system.

There are eight disks available now and three more possible if we get permission from the copyright holders. Your software sales coordinator has listings of program titles. To obtain a copy of this listing, send a stamped self addressed envelope to the software sales coordinator or send one dollar and we will buy the stamps.

Here is a brief description of the first 8 disks:

ATTACH: From Apple Computer, this is the software and documentation to attach non-standard hardware to the Pascal operating system.

COMPUTE: This disk has a little of everything. There are demos, utilities and some simple games.

DARYL1: This one, our first disk, is packed with 24 different programs of all kinds. One of the more useful programs is a graphics dump routine for the IDS 440 printer. *(Only useful if you own an IDS 440! - Ed.)*

PASEX1: This is a MECC disk and will be sold to Minnesota residents only. It is a teaching disk and has programs written for classroom instruction of Pascal and structured programming.

PMU: This is a utility disk. Programs include a modem transfer program, a DOS to Pascal transfer, a memory utility and a disassembler.

PROSE: This disk has the code file and documentation for Prose. This program is a good but complicated text processor. This disk also has the program Catalog which is a product of the Pascal SIG. It is a master catalog program with program or disk search and dump routines for CRT or printer.

PROSTXT: This disk is the source code for the program Prose.

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DOM #15 Continued from page 6

'DUMP INSTRUCTIONS'. By Cary Mariash and Dan Buchler from DOM #7.

INVERT HI-RES PAGE 1
A machine routine to invert the black and white areas for the printing of a HIRES page. See 'DUMP INSTRUCTIONS'.

DUMP INSTRUCTIONS.A
The instructions for running HI-RES DUMP.EPSON MX-80 and INVERT HI-RES PAGE 1.

MOVE SCREEN UTILITY
This program gives a method of creating a very nice title page. The notes will make this utility adaptable to your own programs. By Steve Sullivan; from DOM #9.

PAYMENT CALCULATOR
A little program to calculate the total payments on loans for a range of interest rates and maturities. By Alan Peterman from DOM #6.

AUTO-REDIAL
A menu driven program to allow easy use of a Hayes MICROMODEM II. It will dial any bulletin board and redial if it fails to get through. It can automatically redial at set intervals. By Alan Peterman; from DOM #12.

TEXT WRITER B1
A text processor based on an article in 'MICRO'. Bill Hamelink modified it and made it much more elegant. From DOM #6.

GERMAN
A German/English vocabulary exercise. It can be modified to create flashcards for any language or math situation. By David Lau on DOM #8.

BIORHYTHM PRINTER
A biorhythm program that will print a hardcopy for any time period desired. By John Schoeppner from DOM #9.

APPLESOFT AUTO-NUMBER
A program to give APPLESOFT automatic line numbering. The program tells how to get the intervals and starting line number you desire. By Daryl Hammond from the old library.

CHECKBOOK BALANCER
A program to help you reconcile a bank statement with your checkbook. It works much like the form on the back of your bank statements.

AUTO PROGRAM
Bill Decoursey's version of a system to write the standard parts of programs. It includes input and output routines and also has some utilities such as CLEAR SCREEN. From DOM #10.

PARABOLIC CALCULATIONS
A program to calculate and display a parabola from inputed data on the focus point and the object line. By Frank W. Claude.

PARABOLIC ERROR
A program to calculate the limits of the foci of a parabola. By Frank W. Claude.

SLOT MACHINE
An excellent INTEGER HI-RES Slot Machine game by Rob Wentworth. It uses PADDLE 1 as the lever to throw the slot machine into action and actually reads the speed the paddle is turned to get the speed of the wheels.

POKER DICE MK V
The game of POKER DICE (rather like YAHTZEE). It was done by Mark Anderson who was a student at Belle Plaine High School. This (and the next three programs) show that first year programs can be quite entertaining.

TRICOLOR GRAPHICS
A color graphic demo program done by Todd Peterson who was another Belle Plaine H.S. student. This is a watch and enjoy demo of HI-RES graphics. Chuck Boody added the color flipper routine at the end of the program.

BRAKING DISTANCE
A program to calculate braking distance for a car under various circumstances. The numbers are realistic for a 'normal' car but may not reflect a Porsche or an overloaded pickup. Also by Todd Peterson.

COLOR BARS
A quick color recognition game by Keith McConnel. It is a cute and creative game that requires a color display to play.

ORDERING DOM's

A reminder that DOM's are available by mail at $7.50 each.

Send your order to:

MINI'APP'LES DOM's
Box 796
Hopkins, MN 55343

BUSINESS-ROUNDUP

by Jane Chatterjee

See also "Turning the Pages" with David Laden for more abstracts.

INFOWORLD — Aug 9

Solid state Disk Emulator for Apple II. Stores 147K or 294K on sigle board. Synetix Industries. $550 or $950....p.55

Column reports Apple prices falling - being discounted by retailers prior to Apple SuperII (?!!)...p.29

INFOWORLD — Aug 16

Apple signs software agreement with Prentice-Hall to develop educational software ...p.8

MICRO WINDOW is an instructional tool to teach microprocessor programming-by Window Research. $120....p.56

Hayes Terminal program for Micro Modem II handles communication and file management. $399....p.56

Intelligent terminal software for videotex - Appletel - by Logica Inc. $85....p.46

Menu generator - tool for custom generating menus by Crane Software. $39.95....p.44

Review of Combined Enhanced Graphics Software by Computer Station Inc. $54.95....p.42

INFOWORLD — Aug 23

High speed disc copy program - PenultiCopy - by ALF Products. Designed for commercial reproduction. $34.95....p.33

PERSONAL COMPUTING SEPTEMBER 1982

Discussion on service contracts for micros. Alternatives reviewed....p.50

Extend your reach with tele-communications...p.74

Comprehensive survey of 4 major areas of accounting - General Ledger, Accounts Payable, Accounts Receivable and Payroll. Guide to available software packages....p.82

Cost justification of computerizing payrolls for small businesses...p.117.

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TURNING THE PAGES

with David E. Laden

BYTE — AUGUST 1982

Byte's topic for this month is the LOGO language. LOGO was developed by Seymour Papert at M.I.T.

Ciarcia's Circuit Cellar: High-Resolution Sprite-Oriented Color Graphics by Steve Ciarcia. Pages 57-80. This is a construction project for the Apple computer. "A sprite is a graphics object of a specified pattern appearing on its plane in a position determined by a single coordinate pair... By changing this one set of coordinates, the sprite can be moved easily and quickly across the screen." A 6502 assembly language program is included in addition to the schematic diagrams.

A Beginner's Guide to Logo by Harold Abelson. Pages 88-112.

Logo in the Schools by Daniel Watt. Pages 116-134.

Designing Computer-Based Microworlds by R. W. Lawler. Pages 138-160. This is another Logo oriented article.

Why Logo? by Brian Harvey. Pages 163-193. "Logo is designed to encourage development of problem-solving skills."

Introducing Logo to Children. Cynthia Solomon. Pages 196-208.

Logo -- A Cultural Glossary by E. Paul Goldenberg. Pages 210-228.

Logo for the Apple II, the TI-99/4A, and the TRS-80 Color Computer by Gregg Williams. Pages 230-290. The author discusses and compares each version of Logo. This includes discussion of the three different versions available for the Apple: Apple Logo, Krell Logo, and Terrapin Logo.

Also included in this issue is The Logo Journal. Pages 323-340. This section contains nine shorter articles about Logo and how it is being used.

Assisted Instructional Development System by George Wolfe. Pages 408-414. This is a review of the AIDS authoring system from Instructional Development Systems.

Using the LOOKUP Function in Visicalc by Robert E. Ramsdell, C.P.A. Pages 443-445.

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Get your Apple from our teachers.

We'd like to introduce you to Computer King. A brand new computer store with a very different way of doing business.

You see, at Computer King we don't have salespeople. We have teachers. They're professional problem solvers who'll work with you on a one-to-one basis. Answering questions and enabling you to make an informed buying decision.

If this sounds unusual to you, consider this: Computer King is a division of Audio King. And our staff is committed to the same careful consultation and personal service that our parent company built its reputation on.

So if you've been considering a computer for your business, we urge you to stop by or call Computer King. Just don't be surprised when you find patient, understanding teachers like Rodney, Sean and Tom. Instead of fast pitch salespeople.

ATTEND OUR "HANDS-ON INTRODUCTION TO COMPUTERS." These education programs will be held twice daily on September 23, October 7, 14, 21 and 28. Choose either our 10 am to 12 noon or 1:30 pm to 3:30 pm session. Cost is $20, phone 920-1154 for reservation. Programs will be held in Computer King's training room at Leisure Lane.

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MICRO/MAILER

of

Prairie Microsystems

A review

by Subir Chatterjee

MICRO/MAILER is a mailing list program that also generates personalised letters using text files produced with MAGIC WINDOW , a wordprocessor. *See Review of 'Magic Window' elsewhere in this newsletter.*

The program is menu driven and selection of options is easy, with the forward and reverse arrows (---> , <---) being used to step through the menu. The program can be configured for a Lower Case adapter chip and for Printer slot number. The manual explains that field lengths cannot be altered once set - care is needed in their selection. Eight fields are provided (name, address, city, state, zip, phone, attention of, comments) and each field can be up to 30 characters long. When used as a simple mailing list, with minimal use of comments etc., a disk holds up to 1000 records.

The program uses default values for each configuration step. This makes it quick to set up the system. The program also supports some of the EPSON printer's features - like double strike and enhanced mode - for use with personalized letters. I do not know whether the program can be configured for a serial card such as required for an IBM typewriter.

The program is very easy to use, with screen prompts clearly indicating what needs to be done next. Also, the error trapping is excellent, and invalid entries are rejected. In addition, the screen prompts indicate what corrective action is required. The program has a sort capability, to permit mailings by address (state, city, street, zip) or by last name. The program also stores the sorted records for future use. The data disk can be used to store more than one file.

The instructions accompanying the disk, while adequate, are brief. Novice users might feel more reassured with a more extensive manual. However, once the user boots the disk, screen prompts do provide adequate guidance.

One small quibble with the program is that in the 'Edit' mode, you are asked to terminate data entry with a 'RETURN'. In practice that only takes you to the next field. Data entry is actually terminated with an 'ESCape' to EXIT command.

My wish list for this program is that file names would not have to be entered from the keyboard, but could be selected from a CATALOG menu. To be fair, this is one of my quibbles with many commercial programs, including VISICALC!

On the whole, MICRO/MAILER successfully delivers a mailing list program (designed to be compatible with MAGIC WINDOW) that is easy to use and versatile. The screen prompts are excellent and the default values, thoughtful. Slightly more extensive documentation, while not strictly necessary, would increase user confidence. For the number of features provided the program is a good buy at $21.95.

APPLE'CATIONS

Visit to WCCO

by S. K. Johnson

Reprinted from the August, 1981, Mini'app'les newsletter

Did you know that WCCO-TV channel 4 uses an APPLE II as one of its weather forcasting tools? In July, 1981, I had the unique chance to visit WCCO's weather center for a first hand demonstration by meteorologist Mike Fairbourne of their APPLE II system, color weather radar, and various computer and color graphic systems.

WCCO-TV has an APPLE II+, dual DISK II's, an APPLE GRAPHICS TABLET, a clock card, two color monitors, one special interface card, and a special black box. The special black box does several things. First, it allows the system to use sixteen HIRES colors. Second, it allows a higher resolution HIRES screen to be used. (exact number of dots wasn't given to me) Third, it translates this HIRES video into a signal that WCCO-TV can broadcast. An additional special sync signal is also required and fed into the system.

The special interface card, that plugs into one of the expansion slots, is used along with special software to collect weather data from up to 100 different stations directly from the lines to the weather service teletypes. This data consists of temperature, wind speed and direction, barometric pressure, and relative humidity for each reporting station. Up to two hours of data can be collected before it must be dumped.

GOTO 33

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NEW APPLES

Fact or Fiction?

by Tony Meirovitz

There I was, sitting at my desk, thinking of a topic for my next article in the newsletter. I thought that a good subject would be on the new Apples that are rumored to be coming out. So I picked up the phone, and called Apple Computer Inc. I asked for some information on the new Apples. The lady connected me to some executive by the name of Joe. Joe gave me a lot of information on the subject that he claimed to have heard. I just listened and took notes. After I got off the phone with him, I dialed up one of the local bulletin boards called 'Conference Tree'. *(Article on Conference Tree reprinted elsewhere in this newsletter - Ed.)* There I found a whole message about the new Apples. So I combined the notes I got from Joe and Conference Tree. This is what I came up with------.

There are supposed to be 3 new Apples coming out as follows:

—**McIntosh:** Called the Baby Apple or Crab Apple. It will carry a price of about $580.00. The computer will be considerably smaller than the Apple II, but will be functionally identical to it. The only difference is that it will be supplied with 64k, instead of the common 48k. No info yet on the method of data storage it will use. They also say it will be slot compatible with the Apple II. *(According to other sources this machine is built using the latest LSI technology, such that Apple have gotten the whole machine on a handful of chips. This provides for much lower manufacturing costs and probably higher reliability. It is supposed to be 100% compatible with the II. Because of the lower manufacturing cost, it is likely that the II will cease to be a viable product for Apple to sell. This contradicts what Tony was told, below, so the mystery continues - Ed.)*

—**Apple II Ultra:** Also called the Super II, it will carry a price somewhere between $1200 to $1500. This one sounds good! Some of the features will include:

-10 digit keypad
-Built in RS232 port
-Built in parallel interface
-Support for 40-80 columns
-Faster processor
-Enhanced graphics (560 X 384, 8 colors)
-Will run Apple II programs by using an emulator disk.

BASIC ANSWERS
Private Computer
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Call 421-6559 after 6.

—**Lisa:** Pronounced (ly-za), will be priced lower than the IBM PC. It will utilize the Motorola 68000 16 bit microprocessor. Fast! They say that it will have a 6502 slave processor and it can use Apple II peripherals.

They said that there is a chance that one of these new machines may be shown at Apple Fest here in Minneapolis in September. But who knows! *(At the time of writing, one input suggests Apple are not coming to the Fest at all - Ed.)*

That is what I found out. I want to make it clear that none of this information is official. So don't get rid of your Apples on account of this article. Joe said that some is true, and most is rumor, so you never know. A lot of you are probably wondering if our Apples will become outdated. Well, they said that they will continue making the II's, but the price will be cut to somewhere between $800 and $1000. This, of course, will only happen when the new ones are released, whenever that is. Since there are so many Apple II's out, maybe Apple will have a trade-in plan or something like that. I don't know. I myself plan on keeping my Apple for a long time. Being 15 years old, I don't think I could afford another computer! *(Nor can I! - Ed.)* I have so much money tied up in it already, it would be ridiculous to get rid of it. But I am not raising a finger uhtil something official is known. I'm sure you feel the same way.

In closing my article, I would like to thank Joe (I don't know his last name) of Apple, and the BBS 'Conference Tree' for the information. I guess we are faced with this question: Are the new Apples fact or fiction? We will unfortunately have to wait and see. Look at it this way: it is something to look forward to!

HOME-PROJECTS (3)

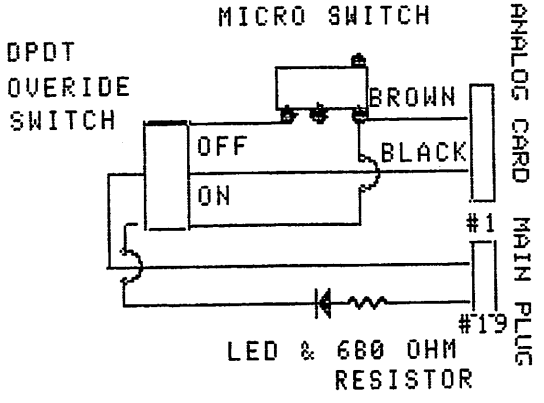
Write Protect Bypass

by Roger Flint
771-2868

Well, it's been another great month. The help I have received from other members has been nothing short of fantastic! The 16k RAM board project design has now been finished. A very special thanks to Dan Swanson and Ray Fuller for help on that project.

This month's construction project has proved very useful to me. It's a Disk Write Protect Bypass Switch. I'm sure this piece of hardware has been seen before, but for the benefit of all us new members, I want to do it again.

The device lets the disk drive operate just like it normally does, unless one decides to write over a disk with a write protect tab. It also contains a light so that there will be no mistaking as to whether or not the switch is on or off. The change fits very nicely in the front lower left corner of the disk drive, with a green light added just above the 'in-use' red light which is on all Apple drives.



HOME-PROJECTS by Roger Flint
WRITE PROTECT BYPASS SWITCH

Most of the parts can be picked up at any electrical outlet store: Here is the parts list applicable to Radio Shack.

278-1304	20ga. stranded wire: $2.19. Package of 3 different colors. Don't worry, you will use wire in other projects.
276-069	LED green lens: $1.59
271-021	1/2 watt 680 ohm resistor 2 for: $0.19
275-614	DPDT subminiature toggle switch: $2.19

As with previous projects, this is not intended to be a complete step-by-step construction article. If you are knowledgeable in electronics, go ahead and build it. Otherwise, contact me and we will set up a time to do a group project. Also, anyone who is interested in the special interest HOME-PROJECTS group, please contact me.

Now, when you want to put something on a disk that is write protected, you won't have to peel off the sticky tab. I did this modification to Drive 2, because it's the one used to do most of the writing.

Also, we are looking for someone who has replaced in his/her Apple Apple II ROM with an Auto-start ROM. We would also like to contact anyone who has converted from DOS 3.2 to DOS 3.3 and has kept the old parts, and also, anyone with information on building a keypad.

Conference Tree Continued from page 16

Currently, the Twin Cities Conference Tree is the only one operating outside of California (at least as far as I know). It can be reached at (612)-854-9691, and will accept 110 or 300 baud. In order for a tree to grow, it needs nourishment from the land around it. For a Conference Tree to grow and flourish, it needs input and strong support from as wide a base of local users as possible. Give it a try. Please leave a few comments on what you find especially good or bad about it. I'm certainly interested in what you have to say, and so is The CommuniTree Group.

Epson MX-80/100 Comparison Update

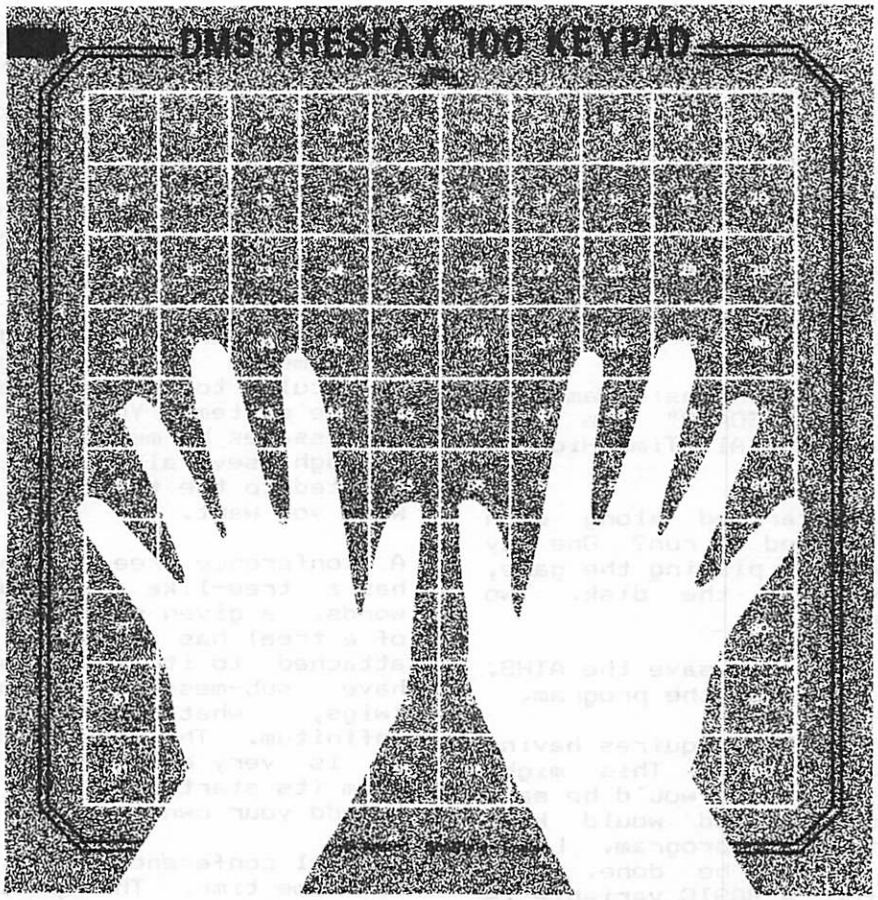
Concluded from page 36

Also the ASCII codes 129 thru 133 provide a set of foreign character symbols which, when overstruck in conjunction with other letters and symbols can produce most of the commomly used symbols in languages based on the Roman alphabet.

With Graftrax +, the meaning of the switches has been redefined to include:
1. Defeat out of forms detection.
2. Turn off buzzer

HANDS-ON LEARNING

Presfax® and Apple® II



Young students, the handicapped and many others are finding the Apple® II computer more accessible than ever before. Thanks to the Presfax 100® Touch Teacher keypad from Computer Data Services.

With a square, touch-sensitive area consisting of 100 "keys," the Presfax 100 keypad fits right over the Apple II's keyboard, freeing users from any restrictions they may encounter with the standard keyboard arrangement.

The keypad grid can be covered with overlays composed of whatever symbols the user feels most comfortable with — large alpha-numeric characters, braille, special symbols and pictures, etc. Grid values and coordinates are memory-stored and assigned individual audible pitches to ensure user feedback.

Driver software comes on a 3.3 DOS disc complete with full instructions on how to incorporate it with the purchaser's own programs. Demonstration and educational programs are also available. Contact Computer Data Services, P.O. Box 696, Amherst, N. H. 03031 for full details. Or call (603) 673-7375.

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Save That ATHS

All Time High Score

by Dave Nordvall
Reprinted from August, 1981,
Mini'app'les Newsletter

On July 6, 1981, Chuck Boody talked to our Programming Sub-Group about his "Le Mans" program (NIBBLE Vol 2, No 2) and on using standard sub-routines when writing programs. This lead to several ideas, some of which will be discussed in future articles.

While many interesting techniques were used in the Le Mans program, the one I want to consider now is how a program can change itself.

One problem I've had with Basic Games is "WHAT SHOULD BE THE GOAL?" One goal might be to make the All Time Highest Score (ATHS).

How can the ATHS be carried along each time the game is loaded or run? One way is, in the middle of playing the game, to save the new ATHS to the disk. Two methods come to mind:

1. Open a text file and save the ATHS.
2. Save ATHS as part of the program.

Using the first method requires having two files for each game. This might work, but the high scores would be easy to lose. The second method would keep the ATHS as part of the program. Let's discuss how this might be done. The current value for a BASIC variable is not saved with the program. To save that variable, the value must be included as part of the program in an APPLESOFT statement.

A small understanding of how a program is stored in memory is needed. I will not go into great detail and would recommend Creative Computing Sept, 1980, P 176, for a short explanation of Apple's memory.

The first thing to do is type -

```
FP c/r
0 X% = 00000 c/r
```

The % means that X% is an integer. This sets a high limit of 32767 for the ATHS. Line 0 is used so we know where to find X% in memory (i.e. the first statement).

GOTO 39

THE TWIN CITIES CONFERENCE TREE

By Mark Abbott
Reprinted and revised from the
November, 1981, Mini'app'les newsletter

There is a renewed computer access message system in the Twin Citis area. It is called The Twin Cities Conference Tree. It is run on a 48k Apple II, with 2 disk drives and a Hayes Micromodem. The conference tree is like a computer bulletin board, in that if you have a terminal and a modem, you can access it over the phone lines and leave messages. The similarity ends there, however.

Bulletin boards are ordered linearly. This means that messages that cover a particular topic are spread out over the entire system. You have to keep track of messages by message number, or search through several items which are not related to the topic, in order to find what you want.

A conference tree, as the name implies, has a tree-like structure. In other words, a given conference topic (branch of a tree) has messages (sub-branches) attached to it, and these, in turn, may have sub-messages (sub-sub-branches, twigs, what-have-you) attached ad infinitum. The Tree is set up so that it is very easy to follow a conference from its start to its current state, and to add your own input.

Several conferences will be going on at the same time. This particular Tree was 'planted' at the end of September, so it is still very much a 'sapling'. At present, we have conferences on topics such as FORTH, space exploration, flight (hang gliders, power gliders, etc.), Apple-Pascal, TRS-80, a calendar of computer related events and users group meetings, and movie reviews. There is no restriction on the range of topics, or contents of messages, as long as common civility is maintained. Guidelines detailing when messages are deleted are kept on-line, as well as a series of HELP files if you get stuck.

The Conference Tree was developed by The CommuniTree Group, based in San Francisco, who saw a need for a computer conferencing system designed with ease of use in mind, as well as low cost to run. The average user can learn the system in 10-15 minutes. The Conference Tree is written in FORTH.

GOTO 14

BBS
and
Cheap Communications

by Minneapolis PMS SYSOP
Reprinted from Feb, 1982,
Mini'app'les newsletter

Last time I wrote an article for the newsletter I was worried that the bulletin board system I had set up would not catch on. That was almost two years ago. I believe that I can now safely say that it has caught on. January will mark the two year anniversary for the system. In those two years the system has accommodated over 21,000 callers. The growth rate for this system and systems across the country has been phenomenal. Usage has increased everywhere. This is evidenced by the increasing number of systems both locally and across the country. Two years ago there was only one bulletin board system in the Twin Cities area. Today there are over nine (The numbers for these systems can be found elsewhere in this newsletter). The number of systems nationally has increased also. Recently a publication which reports on bulletin board systems reported a 139% increase in the number of verified systems from 5/12/81 to 11/3/81.

I suspect that the growth rate of bulletin board systems is comparable to the number of users who have telecommunication capabilitites. For this reason I wasn't surprised to learn that 43% of the people who responded to the equipement survey had modems. Many of the new users that I have talked to report that they had no idea that there were such systems operating.

Each of the systems has its own personality and special areas of interest. If you call systems outside of the Twin Cities area you will find this to be especially true. A list of long distance systems is available on PMS. This list is the 'O' command. It may be searched by entering 'O:SEARCH' where SEARCH is what you are looking for. If you desired a list of all systems in the 612 area code then you would enter 'O;(612'. The open parenthesis is necessary so that systems with 612 in the number would not be retrieved.

Those of you who call outside the Twin Cities area know this can be expensive, especially if you do a lot of

GOTO 19

BBS's
MSP Bulletin Boards

by Dan Buchler

A Bulletin Board System (BBS) is a free Computer based information system which you may dial up from your modem equiped Apple. BBS's are springing up all the time. Some die out, but most survive. Most of the systems are privately owned and privately financed. Their owners enjoy being SYSOPs (System Operators) and providing the service.

Here is a current list. All are in area code 612. Note the Conference tree has a new number (also see article elsewhere in this newsletter). Thanks to SYSOPs of Minneapolis PMS and Maxwell's Place for help in compiling this list.

ACTIVE SYSTEMS

CBBS Richfield (CP/M).....	423-5016
CMC/ABBS.....	471-0252
Computer Pace (After 5pm)..	869-3246
Conference Tree #17.....	854-9691
Erik's Net (NETWORKS).....	920-3975
Heathkit (After 5pm).....	778-1213
Loki's Corner (NETWORKS)...	571-5965
Maxwell's Place (NETWORKS).	922-9338
Minnesota Microphone.....	933-2606
NC Software.....	533-1957
On-Line Minneapolis.....	929-3094
PMS Minneapolis (ABBS).....	929-6699

INACTIVE SYSTEMS (systems are down)

Hector's Message System
Mailbox (UofM Pascal System)
Osmosus (OSI User Group)
Unix
Ziggy's Message System (ZBBS)
Zim Computer NET-WORKS

For beginners - if you have a Hayes Micromodem II, just do:
IN# slot
Ctl-A Ctl-H,
Ctl-A Ctl-Q, and dial number.

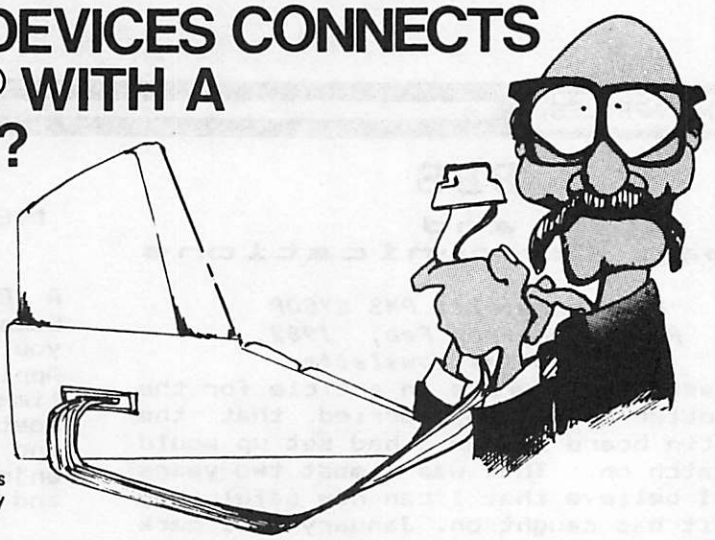
If you want a complete list of BBS's in the country, there is a 4 page document available by signing on to PMS Minneapolis.

Pascal Software Bank Continued from page 6

PUG1 = This is another utility and demo disk. The System Library contains a graphics dump for the IDS 440 that is faster than the printer. The source listing for this dump is not available for copy.

WHICH OF THESE DEVICES CONNECTS TO YOUR APPLE II® WITH A DUAL-COMM PLUS?

(a) Any Serial Interface Printer
(b) Any Modem
(c) A Speech Synthesizer
(d) A Spooling Printer Adapter
(e) Another APPLE II
(f) A Display Terminal
(g) Any of the Above
(h) Any Two of the Above



ANSWER: The correct answer is H. Circle the reader service number or contact BIT 3 for more information.

The DUAL-COMM PLUS adds two fully independent serial I/O interfaces to your APPLE II. Each serial interface can be set to respond to its own APPLE slot number or both interfaces can be operated from the same slot location. Slot locations are selected by two thumbwheel switches on the card, one for each serial port. Because each serial port has its own crystal-controlled baud rate generator, each port can be individually selected from 50 to 19200 baud, Either serial port can be used as an input port, an output port, or both. The on-board firmware provides special support for printers and modems but the card can also be used with general purpose serial devices such as a voice synthesis unit, video disks, or any number of other RS232 peripherals.

ADDITIONAL FEATURES: ■On-board firmware provides extensive printer and U/L case terminal/modem support. Great with an 80 x 24 card (especially the Full-View 80) and a Novation CAT or Hayes Smartmodem. ■Can be programmed for async., sync., or even SDLC operation. Supports interrupts. Uses Z80 SIO chip. ■Works with the APPLE II PLUS, APPLE PASCAL, Z80 SOFTCARD, and 80 column cards (especially the BIT 3 FULL-VIEW 80) ■Each port has a 4 character FIFO receive data buffer. ■Jumper plug permits user to "customize" the RS232 connections. ■Two 10 inch cables with RS232 connectors are included.

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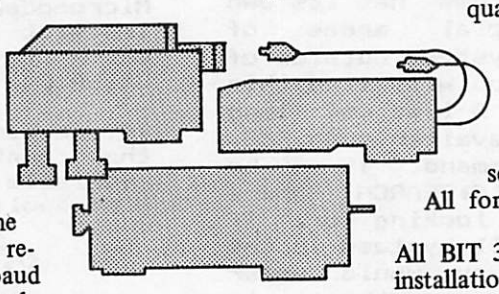

The FULL-VIEW 80 provides an 80 x 24 display yet retains the standard APPLE display too. You can switch between 80 and 40 column mode via keyboard or program. An 8 x 10 cell size character set provides quality characters, full descenders, and line-drawing graphics. The

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RENUMBER FIX

by Jim White
Reprinted from the November, 1981
Mini'app'les newsletter

Renumber is a very powerful tool for developing programs. However, if you use it, you may find some strange alterations in your program. RENUMBER may have done it. What happens is that the number after a "*" sometimes is mistaken as a line number and RENUMBER reunmbers it! So, if you had a line:

```
10 LET A = B * 10
```

it might renumber as:

```
20 LET A = B * 20
```

The fix (for Renumber running under DOS 3.3 with Applesoft in ROM or on the Language card) is:

```
]LOAD RENUMBER
]POKE 4789,172
]POKE 4790,171
]SAVE RENUMBER
```

Happy renumbering!

BBS and Cheap Comm. Continued from page 17

calling. There are, however, ways to reduce this expense. There are three companies which offer alternatives to Ma Bell. Each of these companies has several types of services available to the small consumer for long distance communication. All you need is a touch tone phone. Calls are placed by dialing a local number and then entering the number you wish to call plus your account number. From there it's all automatic and you get connected with the number you dialed just as if you had dialed through the telephone company. These services don't reach to every city in the country but they do cover all the large ones.

Here are the companies:

Southern Pacific Communications Co. (SPRINT) Burlingame Ca. 425-692-5600 local: 333-2336

International Telephone & Telegraph Corp. (ITT-CITY CALL) New York City telephone: 800-221-7267

MCI Telecommunications Corp. Washington D.C. 202-872-1600 local: 544-8177

The prices for these services vary depending on when you call and what type of service you select. Each of these companies offers two types of services; a business service which can be used 24 hours a day and a residential service which can be used after business hours (generally after 5:00 P.M.). The residental service offers quite a savings over the business service. The charges for the residential SPRINT and MCI services are similar. Each charges a $5 monthly fee plus an average of $.13 a minute per call. I understand that ITT charges are a little higher per call. If you make a lot of long distance calls these services can help save on your long distance phone bill.

For those of you who haven't called a bulletin board give it a try. It may be addictive.

For the new caller to PMS there is one time saver that you may not be aware of. This is the ability to flag messages during a scan 'S' or quickscan 'Q' by entering 'R' right after the message header appears. The flagged messages can then be retrieved with the '*' command.

Good luck and happy BBS'ing.

Notes about Machine & Assembly Language

Continued from page 33

and use a higher level language because so much of the detail has already been taken care of. In the case of BASIC, a Machine/Assembly Language program, called an interpreter, has already been written that translates BASIC's English-like words into Machine Language. This interpreter is usually stored in the microcomputer's Read Only Memory (ROM).

While most of us will be content using a higher level language like BASIC, it is sometimes advantageous or even necessary to use Machine/Assembly Language.

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APPLE COMPATIBLE SYSTEMS

by Dan Buchler

I had a call from Steve Gross of the Star & Tribune. He was working on an article on the impact of Apple Compatible computers on Apple Inc. and the Apple world in general. Since I had not seen in any one place a summary of the various systems which have recently hit the market, I decided to do a quick research on the subject. Here are the results of that research:

BASIS 108 (ref 1) is imported from Germany by:

BASIS Incorporated
23116 Summit Road
Los Gatos, CA 95030

This machine is probably similar to the 'Super II' about to be announced by Apple. It has lots of features including 64k standard, 40/80 col standard, upper/lower case, expansion to 128k, RGB monitor output, heavy duty power supply, space in cabinet for two drives (none come with base system), a built in Z-80 microprocessor such that one can run CP/M (CP/M software is not supplied), fans, various connectors on the back of the computer, etc, etc. It only has 6 slots, but the memory and 80 col capability are part of the mother board. Base price is $1949. According to reference 1, there are some minor incompatibilities which can be gotten around. The manufacturer does not sell Applesoft ROMs (that's to avoid copyright infringement). You can buy them yourself and install or use ones from your old Apple. They supply a BASIC on disk which is similar to Applesoft with a few improvements.

FRANKLIN has two models: the Ace 100 and the Ace 1000. The Ace 1000 is an Apple look-alike in that it is housed in a case similar to the Apple's. Both have full upper/lower case keyboards, keypad and 80 columns. The 1000 has 64k built in, the 100 uses a 16k RAM card. Both have heavy duty power supplies (much more than is available on the Apple II). The Ace 100 has no Hires color. The Ace 1000 offers Hires color as a $40 option. Apple brought suit against Franklin for copyright infringement, but the court ruled not to grant Apple's injunction. Apple is expected to appeal.

A local store here in the Twin Cities, called ON-LINE, will sell Franklins and Ataris. The Ace 100 lists for $1495 and the Ace 1000 lists for $1595.

Franklin's address is:

Franklin Computer Corp
7030 Colonial Highway
Pennsauken, NJ 08109

Franklin was shipping MicroSci manufactured disk drives but, according to reference 2, Franklin are now buying Shugart drives.

Pearcom is another European product. It offers 96k, Keypad and 14 slots. The machine does not provide NTSC color, so has not been seen in this country. Its original version had a pear shaped logo complete with bite out of it. Apple sued for trademark infringement. The company agreed to drop logo and apparently Apple was satisfied. This is one machine where you must supply the ROMs, 6 in all. Because of this they have avoided further litigation.

Sunrise Computer of Taiwan is the leader of several companies selling kits and finished Apple II computer compatible systems in Taiwan, some of which have been exported. The price range of these products is $500 to $1000 in that country. According to reference 2, as many as 5000 per month have been made and sold! Apple Computer Inc., having only just registered the copyright in Taiwan for the II's ROMs, has obtained a court seizure order for the Apolo II (or Apollo II), one of Sunrise's products.

One of those from the East is called the **Pineapple**, and in kit form sells for $645. A full page advertisement for this product appeared in August Byte magazine. The importer is Formula International Inc. It comes with 48k, numeric keypad and Apple II look-alike case.

Orbit Computer of Auckland, New Zealand, makes an 'Orange' computer which is an Apple compatible system. Again Apple Inc. has obtained an injunction to halt production of that machine. Apple also has an injunction against another company in Hong Kong.

I think Apple must have a very harried legal staff! Incidentally, my personal feelings on this subject are that I would rather stick with Apple because of their known support, known lack of compatibility problems, etc. There would have to be a really significant price difference to justify say a Franklin. We also should wait for the new Apple offerings to be announced.

Bibliography

1. Call A.P.P.L.E, August 1982; a full review of the OASIS entitled **BASIS 108**.. An Alternative
2. Electronic News, Monday August 9th, 1982.
3. Infoworld, August 9th, 1982. The Pearcom is described.

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VERSACARD
A review

by Charles J. Mages

The Versacard by Prometheus is a new multifunctional board for the Apple Home Computer. The Versacard is a five function board in one. The functions on the board are:

1) a parallel output port for printers that use the Centronics interface,

2) a serial interface card for either a printer or a modem using the RS232-C protocol,

3) a calendar-clock with one second precision and software/format compatible with the Thunderclock and the Mountain Hardware clock,

4) a BSR/X-10 command module controller and

5) a real time clock with three selectable interrupt rates.

Discussion of the various functions follow:

The **parallel** printer controller is hardware compatible with the Apple parallel card. There are a number of added features. This card function is compatible with the standard BIOS (Basic Input/Output System) of the Apple BASIC system, the UCSD Pascal system and the CP/M Operating System. There is a software option to support the selection of the upper data bit as either 'on', 'off' or pass the data bit as stored in memory. The card can RETURN. The card can also do automatic paging of output, thereby forcing the output of data to skip over the perforations at the bottom of the page.

The **serial interface** is the standard RS232 interface with the polarity set to Data Terminal End (DTE). Again, as with the parallel interface, the card is recognized by all operating systems as a serial communications card in their BIOS. The interface chip is the standard 6850 communications chip. In addition to the above features on the parallel card, the serial interface includes a terminal mode in the firmware. This makes the Apple a dumb terminal. Within the terminal mode of operation the printer can be turned on or off, the duplex changed from half to full and back, and a software break sent with a single keystroke. When finished with the terminal mode a single key stroke will return it to its normal serial interface. The Versacard has switch selectable baud rates of 50 to 19.2KB.

The **clock** is a 24 hour date time clock with the added capability of storing the year. The output format for the clock is compatible with the Thunder clock card. It can produce a date time string in am/pm format, in 24 hour notation, in Mountain Clock format (all numeric) as well as in a non-string format of real values. The clock is write protected by an on board switch and has battery backup of two years using two 'N' type batteries. The Pascal Software from Thunder clock works with the Versacard. This allows a user to have a system_startup routine that reads the clock and then goes and sets the FILER date for you automatically at boot time.

The **BSR/X-10** interface allows the user to remotely set the BSR switches and also selects the duration of change for any of those switches. All sixteen switch durations are programable and the time intervals can be anywhere from .10 seconds to 5.30 seconds. To use the BSR you need an ultrasonic transducer, and of course the BSR system. Then the Versacard will do all the functions for you.

The real time clock is a time interrupt clock that interrupts the processor of the Apple once every minute, once every second or 1024 times per second. This is of importance if you are doing real time work or if you want to try to do multi-tasking on an Apple. One useful feature is the ability to spool output to disk, then print at a later time in background.

The Verascard can reserve up to three slots on the Apple bus. The serial slot corresponds to the slot that the card is in. The parallel and clock slots are chosen by the switches on the card. The BSR interface and interrupt control also reside in the same logical slot as the clock. It is required that there shall not be any card with firmware in those physical slots corresponding to the logical clock slot and the logical parallel card slot. The logical clock card slot can be the same physical slot that contains any of the available Z80 cards and there will not be any conflict.

I have used this card on my Apple with an Okidata printer and modem. A wide variety of software is compatible with that hardware. The price of the Versacard is under $200.00 list. At this price the card is a bargain since there are few single function cards that provide one of these functions for less than half the price. *(Editor's note: Call Apple members may buy the Versacard for $135).*

MAGIC-WINDOW

A Review of that Word Processor

by Dick Marchiafava

Magic Window is a word processing system from ARTSCI Inc. of 10432 Burbank Blvd., North Hollywood, CA 91601. It is modestly priced, easy to use and has good capabilities. It allows text to be entered, edited, printed, saved to and restored from disk. The *Magic Window* is unique in the way it performs these functions. Most systems separate the tasks of editing and formatting from printing. This separation requires formatting commands to be placed in the text file. *Magic Window* formats text as you enter it. You can see what you get.

DESCRIPTION

A *Magic Window* display is 40 characters wide by 23 lines long. The "paper" moves thru this display area. The cursor does not move while entering text. In this way *Magic Window* deals with the APPLE 40 character limit without an 80 column board.

File management, printing and system configuration are controlled by menu driven subsystems. Function is simple and syntax free. The system is designed to boot up configured as you like it. The configuration is saved on the data disk as is the format of each file.

The printer interface is flexible and will handle ROM driven "intelligent interface" cards & resident RAM drivers. I use *Magic Window* with an EPSON MX-80 printer. It directly supports six character styles on the EPSON.

Text is entered as with normal typing. The system does not display lower case without the use of an adapter. However, it does print lower case. Upper case is entered by using the ESC key, and is displayed as an inverted character. There is an auto CARRIAGE RETURN that will move any word that is overtyped to the next line.

Two file types are supported for use with *Magic Window*. They are FORMATTED (binary) and UNFORMATTED (text) files. Both types offer storage and retrieval of your files. They differ in how they are saved and the choice of type depends on application. Back up disks are made by using the DOS COPYA program.

The *Magic Window* format is up to 80 characters wide. It does not have sub or super script capability. *(Editor's note: If you own an Epson MX-xx with Graftrax Plus, you can send appropriate control codes so as to turn on/off the Epson Super- Sub- script fonts.)*

SYSTEM HARDWARE REQUIREMENTS

APPLE II or APPLE II + 32K of RAM (48K recommended), Display, 1 Disk Drive and Controller Card, Printer and Interface Card, and DOS 3.3 Initialized Disc.

ARTSCI has just announced *Magic Window* II. Some of the improvements are; 160 character line length, search & replace, shift key modification compatibility, paragraph glue & justification, underlining supported and a new manual. The price is $149.95. Present owners of *Magic Window* may receive a discount of $100.00 on direct orders placed before October 30, 1982.

I am going to get this updated version of *Magic Window*, and will report on it in the future.

I have found *Magic Window* easy to use, and have used it extensively for price lists, form letters, statements and for correspondence in a small business. I am not sure that it would be suitable for a high volume user. I give *Magic Window* an excellent rating for the way it preforms within its stated specifications! *(See Micro/Mailer Review elsewhere in this newsletter)*

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BYTE Subscriptions
PO Box 590
Martinsville NJ 08836

CREATIVE COMPUTING SEPTEMBER 1982

Apple Paddle Controls and Game Port Extenders by David H. Ahl. Pages 14-30. This is quite a comprehensive review of Apple paddles and accessories.

Keys to Success by Mike Coffey. Pages 33-39. This is a review of three keyword filing systems for the Apple: Datafax, Visidex, and Cardbox.

Record Players by Mike Coffey. Pages 43-48. This is a review of DBMaster and Visifile.

Form Fiddling by Mike Coffey. Pages 50-53. This is a review of PFS: The personal filing system.

Bridging The G.A.A.P. by Ron Exner. Pages 72-77. This is a review of the accounting package General Ledger by B.P.I.

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P.S. For more information see the review found elsewhere in this Newsletter!

Woz and Us by David H. Ahl and Betsy Staples. Pages 96-99. This is an interview with Steve Wozniak.

The Graph Paper Part Three: Moving Experience by David Lubar. Pages 118-125. This is a tutorial on Apple graphics.

A Modular Data Base for the Apple by Mark Pelczarski. Pages 146-156. This program is written in Applesoft.

Creative Computing is published monthly and has a cover price of $2.95. Subscriptions can be obtained for $24.95/year from:

Creative Computing
P.O. Box 5214
Boulder, Colorado 80321

MICROCOMPUTING -- AUGUST 1982

Equip Your Apple For the Challenge by Peter Heilmann. Pages 34-43. This article discusses the use of California Computer Systems' arithmetic processor to speed up Apple Pascal's computations. An assembly language program is included.

An American Daisywheel You Can Afford by Frank J. Derfler. Pages 67-72. The author reviews the Smith-Corona TP-I Daisywheel printer.

Micros Are Sounding Good by Jim Hansen. Pages 104-113. This is a review of the Votrax Type 'N Talk. Two sample programs written for the Apple are also listed.

Microcomputing is published monthly and has a cover price of $2.95. Subscriptions are available for $25/year from:

Microcomputing
Subscription Dept.
POB 997
Farmingdale NY 11737

POPULAR COMPUTING -- SEPTEMBER 1982

Visicalc and "Visiclones" Part 1: Electronic spreadsheets for business use by Steve Ditlea.

Datadex by Robert Schilling Jr. Pages 69-70. This is a review of Information Unlimited Software's Database program.

The Art of Flowcharting by Robert Swirsky. Pages 75-78.

The Apple III by Steve Ditlea. Pages 98-103. The author reviews this computer.

GOTO 30

EPSON TIPS

by Dan Buchler

Special ASCII codes

If you own an Epson with the new Graftrax plus, you will find that there are many different codes needed to make use of all of its features. It is possible that your particular word processor will not be able to handle one of those codes.

Let us assume you have difficulty creating the ASCII null code ($00). If you can create all possible codes, as does Pie Writer, for example, then don't bother to read this article.

You may have gotten frustrated in not being able to select superscript, or continuous double wide. Both these modes require that you send a null code to the printer:

```
Esc S '0' for superscript
Esc W '0' for double wide off
```

The following EXEC file places a machine code program at location $300 and links your word processor to it. Note again that with Pie Writer, there is an easier way of getting a null - just hit Ctl-SHFT-M-@). When you EXEC the file, which we shall call GRAFTRAX, instead of using a null for the above function, you may use an ASCII 127 or 255 (which, by the way, is created in PIE by a SHFT #.) If you have a Dan Paymar Chip, that code appears as a blob or unflashing cursor. On some other LCAs, the code appears on the screen as an Apple!

The EXEC file is as follows:

```
BLOAD (name of word proc. print prog)
CALL -151
XXX: 0 03
0300: 09 80 C9 FF D0 02 A9 00 4C
0309: 0B 03 48 A9 C1 8D 0A 03 A9
0312: 02 8D 09 03 68 4C 00 C1 00
YYYG
```

where XXX is address in word processor print program at which address of output program or firmware is stored, and YYY is starting address of print program. Some word processors will not allow you to reconfigure the print program address in this way. In such cases, follow the instructions given.

The two bytes in italics represent the incoming and output ASCII codes respectively. Here we change all $FF codes to $00. Any other pair could be selected by using the appropriate ASCII code. With a little more complexity, a table of code conversions could easily be added.

APPLEWRITER COMMANDS

from

ZIM COMPUTERS Inc

passed on by Charles Mages

EDITING COMMANDS: : : :

ESC	upper case mode(first letter only)
ESC ESC	cursor control mode- use I,J,K,M
ESC ESC CTRL-C	to change case of line- use I,J,K,M
ESC ESC CTRL-Q	to return to editor menu

CONTROL COMMANDS: : : :

(hold down control key)

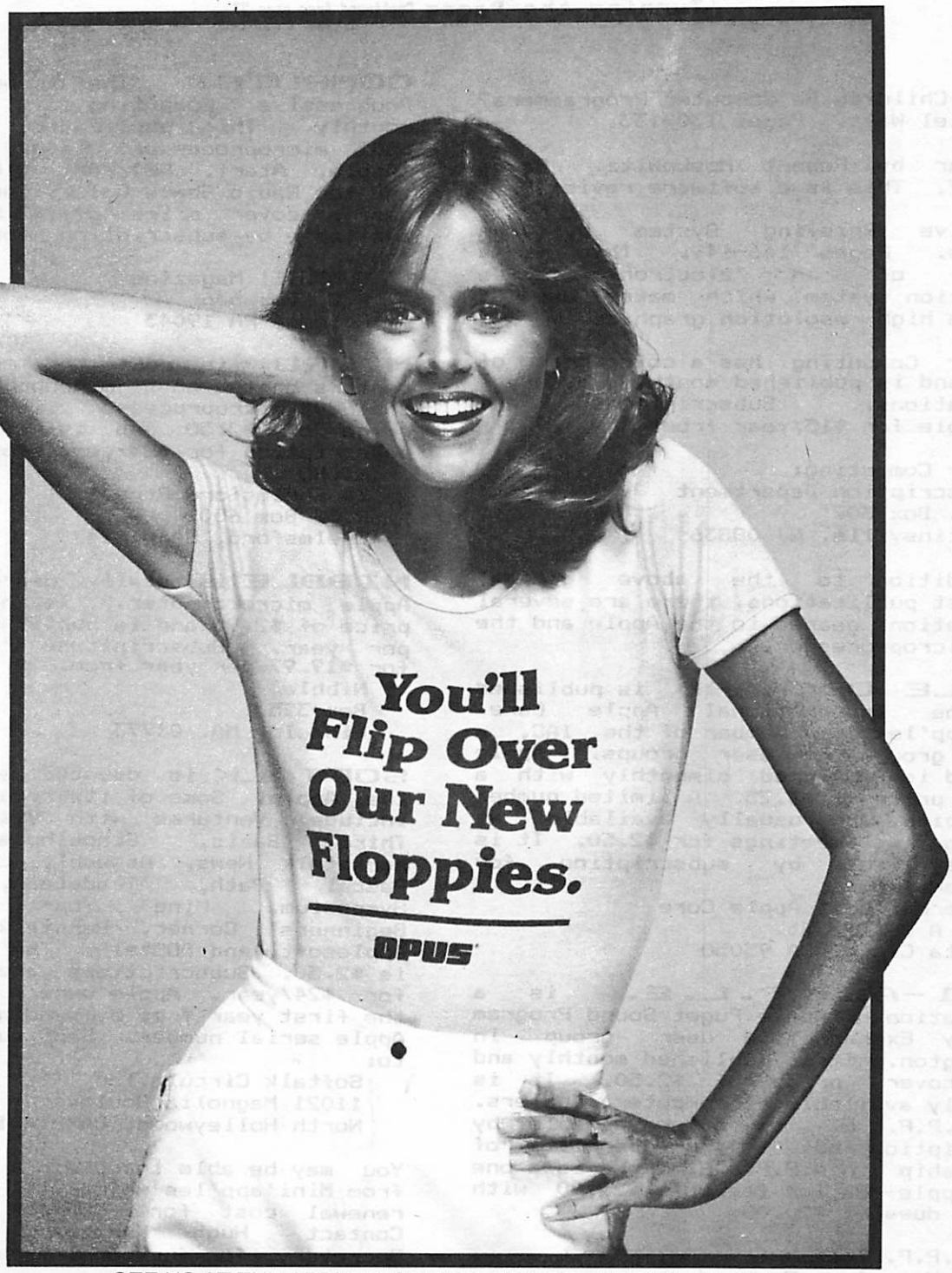
T	cursor up 12 lines
V	cursor down 12 lines
B	cursor to beginning
E	cursor to end
D	access to disk
F	check free memory
I	insert file from disk
K	save file to disk
P	clicks over return
S	starts search & replace
R	replace specified string
W	deletes a word
X	deletes a line or paragraph (>256 characters)
Y	moves block within file - uses disk

PRINTING COMMANDS: : :

(preceded by exclamation mark (!)

fj	fill justify mode
lj	left justify mode
cj	center justify mode
rj	right justify mode
np	a new page
lm(#)	left margin to column (#)
rm(#)	right margin to column (#)
tm(#)	top margin
bm(#)	bottom margin
sp(#)	# of spaces between lines

(The exclamation & characters must be preceded and followed by a return.)



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Should Children Be Computer Programmers? by Daniel Watt. Pages 130-133.

Robotwar by Robert Moskowitz. Pages 134-137. This is a software review.

Executive Briefing System by John Edwards. Pages 146-149. This is a review of an "electronic slide projection system" which makes use of Apple's high-resolution graphics.

Popular Computing has a cover price of $2.50 and is published monthly by Byte Publications. Subscriptions are available for $15/year from:

Popular Computing:
Subscription Department
P.O. Box 307
Martinsville, NJ 08836

In addition to the above general interest publications, there are several publications geared to the Apple and the 6502 microprocessor.

APPLE ORCHARD is published by the International Apple Core. Mini'App'les is a member of the IAC, a user group of user groups. Apple Orchard is published bimonthly with a cover price of $3.25. A limited number of copies are usually available at Mini'App'les meetings for $2.50. It is also available by subscription for $15/year from:

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Call-A.P.P.L.E. is a publication of Apple Puget Sound Program Library Exchange, a user group in Washington. It is published monthly and has cover price of $2.50. It is generaly available at computer dealers. Call-A.P.P.L.E. is not available by subscription but is a benefit of membership in A.P.P.L.E. There is a one time Apple--Cation fee of $25.00 with annual dues of $20.00.

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COMPUTE! The Journal For Progressive Computing is published monthly. This publication centers on 6502 microprocessor based computers (Apple, Atari, PET/CBM, VIC, and OSI) and the Radio Shack Color Computer. It has a cover price of $2.50. It is available by subscription for $20/year from:

COMPUTE! Magazine
P.O. Box 636
Holmes, PA 19043

MICRO is published monthly and centers on the 6502 microprocessor and the 6809 microprocessor. It has a cover price of $2.50 and is available by subscription for $24/year from:

MICRO
34 Chelmsford Street
P.O. Box 6502
Chelmsford, MA 01824

NIBBLE is totally geared to the Apple microcomputer. It has a cover price of $2.95 and is published 8 times per year. Subscriptions are available for $19.97 per year from:

Nibble
Box 325
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SOFTALK is devoted entirely to the Apple. Some of its regular columns include: Ventures with VisiCalc, The Third Basic, Schoolhouse Apple, Marketalk News, Assembly Lines, The Pascal Path, Tradetalk, SoftCard Symposium, Mind Your Business, Beginners' Corner, Hardtalk, All About Applesoft, and DOStalk. The cover price is $2.50. Subscriptions are available for $24/year. Apple owners may receive the first year free by sending in their Apple serial number. Send subscriptions to:

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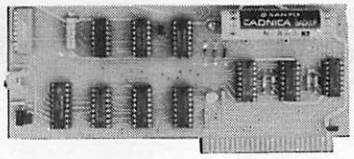

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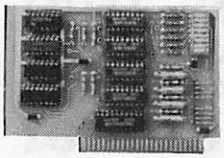

- Complete 16 volce music synthesizer on one card. Just plug it into your Apple, connect the audio cable (supplied) to your stereo and boot the disk supplied and you are ready to input and play songs.
- It's easy to program music with our compose software. You will start right away at inputting your favorite songs. The Hi-Res screen shows what you have entered in standard sheet music format.
- We give you lots of software. In addition to Compose and Play programs, the disk is filled with songs ready to run.
- Easy to program in basic to generate complex sound effects.
- Four white noise generators which are great for sound effects.
- Plays music in true stereo as well as true discrete quadraphonic.
- Envelope control.
- Will play songs written for ALF synthesizer (ALF software will not take advantage of all the features of this board. Their software sounds the same in our synthesizer.)
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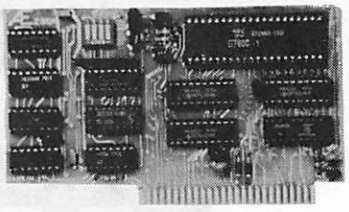

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NOTES

About Machine & Assembly Language

by David E. Laden

All computers have a Central Processing Unit (CPU). In the case of microcomputers, this CPU is called a microprocessor. The Apple II microcomputer uses the 6502 microprocessor. The CPU is the "heart" or "brain" of a computer. This is where all of the work gets done. Each CPU has its own Machine Language. A program written for one CPU will not run on another CPU.

Machine Language consists of a series of zeros and ones (a binary number) going to the CPU. Different patterns of zeros and ones make up different instructions that the CPU can do. Programming in Machine Language means that we must put together a series of numbers and then give these numbers to the CPU. This might be kind of fun if you are writing some very short programs or have lots of time to play around; but, it will very quickly get to an unmanageable point as the size of your program grows.

In comes Assembly Language and the Assembler. When programming in Assembly Language you are still concerned about only one CPU and the instructions that can be carried out by that CPU. However, instead of working with numbers, you are working with mnemonics (memory aids) like LDA, ADC, JMP, or RTS. These mnemonics become much easier for us to work with and remember, but the CPU can't understand them. We need a way to translate these mnemonics (Assembly Language) into numbers (Machine Language). This translation is done by an Assembler.

Machine Language and Assembly Language are called low level languages. Machine/Assembly Language programming is a very detailed, tedious, and time consuming type of programming. The primary advantage of working in Machine/Assembly Language is increased speed of program execution. Of course for us to be able to use a computer at all means that someone had to do some programming in Machine/Assembly Language. Most Microcomputers come with a language called BASIC. BASIC stands for Beginner's All-purpose Symbolic Instruction Code. BASIC, a higher level language, uses English words like PRINT, LET, and END. It is much easier to read

Apple'cations Continued from page 11

Any desired items from this data can then be graphically plotted as 3-D bar charts or plotted on a national, regional or local map. These bar charts or maps can then be used as one of the ways in which data is displayed when you watch the weather section of the news. Because the plotting is done on an electronically stored map, 10:15 pm data can be used for the 10:20 pm weather show. If this was done manually 9.00 pm data would have to have been used.

The special software by Color Graphic Weather Systems also allows the user to create special charts or maps with the use of the graphics tablet. Areas of these maps can be colored in and labeled with text and weather symbols. These maps are useful for indicating areas for which a severe weather watch or warning has been issued.

One of the advantages of this APPLE II weather tool is cost. It costs at least 10,000 dollers less than another graphics system which WCCO has that doesn't do as much as the APPLE II.

Mike Fairbourne also demonstrated other computer graphic tools that they have and use. The color radar really interested me. They have the ability to dial up color radars in other cities. We had a chance to dial up Fargo and look at a thunderstorm in progress. The systems for receiving satellite pictures were also amazing. One receives pictures which are so clear they look like actual photographs. Another graphics system allows the meteorologist to color enhance the satellite pictures. He can 'paint' the ground green, the Great Lakes and oceans blue and also draw in weather fronts, highs and lows and add text where desired. This helps add contrast to the pictures so details can be clearly seen.

WCCO-TV also has a terminal that can be used to call up and print up-to-date weather information in a pseudo graphics (using standard text characters) mode for various areas of the country.

WCCO-TV's application of an APPLE II really impressed me. I wish to thank WCCO-TV and Mike Fairbourne for taking time and allowing me the privilege of a first hand demonstration of the equipment in their weather center.

EPSON MX-80/100 COMPARISON UPDATE

by Dan Buchler

The original version of this article appeared in the Feb, 82, Mini'app'les Newsletter. It was later revised to include Graftrax Plus and published in the Honeywell Computer Club journal 'I/O'. This version includes some corrections and additions.

I have been asked several times about the merits of buying an MX-100 over the MX-80. The obvious answer is that the 100 is simply a 'wide' 80. Well, that used not to be true, but is absolutely true with the new Graftrax + firmware chips, which are now appearing on all MX series Epsons.

The following attempts to detail the differences between the various versions of the Epson MX-80s and 100s both pre Graftrax + and including the Graftrax +. It is useful as a summary of all codes but is not intended as a primer on using an Epson. If you want a primer, Epson has just published a 48 page document called the **Apple Connection**. It is exactly a primer on using the MX-80/100 (pre Graftrax Plus) and may be obtained from Epson America for a small charge (not sure how much but around $3). My thanks to member Stanford Robins for providing the above information. The 'Apple Connection' is a lot more readable than the regular Epson manual, being without the clutter of all the silly remarks of the Regular Epson manual.

Another outfit:

Cut the Bull Software
Box 82761
San Diego, CA, 92130,

offers a 29 page manual on the non-Graftrax MX-80. It costs $7.30 including postage. They are preparing similar documents for the older MX-100 and the new MX-80/100s with Graftrax Plus. These will cost $11.50 including postage. You may send a postcard to get on the mailing list, but don't send money for those.

Personaly, if you are having trouble understanding how to program the Epson, I recommend you get the 'Apple Connection', or call me or any other of the many club members who have Epsons.

This article does contain a couple of undocumented by Epson features, such as Esc 'M' to obtain 12 characters/inch on the old MX-100. It works: I tried it!

In lieu of a primer, for Beginners, I offer the following 3 points:

1. The column labeled 'Ctl Code' is the sequence you would send from a program like a word processor. Most word processors allow you to send any control code combination.

2. The column labeled 'Asc code' is the value to be placed as the argument of a CHR$ function in BASIC. For example:
   PRINT CHR$(7)
   rings the printer's buzzer. If a preceding 'Escape character' is required, then a CHR$(27) must be included. Example:
   PRINT CHR$(27);CHR$(69)
   turns on the printer in Emphasized mode.

3. Some codes are followed by one or two values (referred to as 'n' or 'm' in the tables below). These values are single codes, the value of which is obtained by looking at the ASCII decimal for the code in question. For example, one frequently used is Esc A n, which redefines the distance the paper travels when the Epson receives a line feed. If you wish to set that paper travel to 11/72" rather than the default 12/72", then 'n' must be 11. In BASIC then we send:
   CHR$(27);CHR$(65);CHR$(11)
   From a word processor, we send:
   ESC, A , Ctl K
   A Ctl_K has the ASCII value of 11.

   If you use Apple Pie/Pie Writer or SuperScribe/Screen Writer II, you may be interested in the article on sending '0's to a Graftrax Plus, found elsewhere in this newsletter.

General specifications:

	MX-80	MX-100
Paper feed	Tractor (MX-80 F/T has platen or you can buy add on platen)	Tractor & Platen
Print Sizes & positions		
@10 chars/in	80	136
condensed	132	233
enlarged	40	68
enl/condensed	66	116
Block graphics	64chars (Note A)	None
Variations on Roman character set	Software Control (Note B)	Software Control

GOTO 35

Epson MX-80/100 Comparison Update

Concluded from page 34

Italic Characters	All print modes but only with graftrax option.	Available on MX-100s with Graftrax +.
Dot graphics	(With graftrax option)	Standard
Across page--		
Regular	480 dots	816 dots
Dual density	960 dots	1632 dots
Print speed @10 chars/in	80cps	80cps

Not including paper motion or head positioning time. Since it takes about 6 character times to move paper, the Epson really prints around 49 chars/sec for an average line length of 40 characters.

Print modes	Regular Emphasized Double Strike	Regular Emphasized
Char matrix---	Horizontal spacing at half dot intervals.	
Regular	9*9	9*9
Expanded	9*18	9*18
Inter-character spacing---		
Regular	1 dot plus	1 dot plus
Expanded	2 dots plus	2 dots pls

Note A Only on Epson MX-80s prior to Graftrax +.

Note B On MX-80s without Graftrax (prior to Graftrax +), by switch selection only. Also had Japanese Katakana thru switch selection.

Firmware specifications:

Capabilities common to all Graftraxs on **MX-80** and **MX-100**. Includes old Graftrax and new **Graftrax +**s. Does not include old MX-80 without Graftrax.

Hex Code	Asc Code **	Ctl Code	Feature **Note 1 below
No preceding escape character----			
07	7	Ctl G	Bell - 1 second buzzer
09	9	Ctl I	Horizontal Tab
0A	10	Ctl J	Line feed
0B	11	Ctl K	Vertical Tab
0C	12	Ctl L	Form Feed
0D	13	Ctl M	Carriage Return
0E	14	Ctl N	Enlarged on
0F	15	Ctl O	Condensed on. Note a
11	17	Ctl Q	Select printer
12	18	Ctl R	Condensed off
13	19	Ctl S	De-select printer
14	20	Ctl T	Enlarged off

Note a: Condensed will not work if Emphasized is still on.

Escape character preceds all codes.

30	48	Esc 0	Select 8 lines/inch
32	50	Esc 2	Select 6 lines/inch
38	56	Esc 8	Deselect end paper det
39	57	Esc 9	Select end paper det't
41n	65n	Esc A n	Set line spacing n/72"
42n..66n..		Esc B n...0	Set vertical tabs (Note 2)
43n	67n	Esc C n	Set form length n line (Note 3)
44n..68n..		Esc D n...0	Set horizontal tab (Note 2 & 4)
45	69	Esc E	Emphasized print on
46	70	Esc F	Emphasized print off
47	71	Esc G	Double Strike on
48	72	Esc H	Double Strike off (Note 5)
4Bnm	75nm	Esc K	Normal density graphic
4Cnm	76nm	Esc L	Dual density graphics
4D	77	Esc M	Turn on 12 char/inch mode. (Note 6)

Note 1 'n' means additional single char follows ASCII code. nm is 2 byte count of graphic chars following. Note also that the meaning of n is usually determined by the ASCII code value.

Note 2 '0' is terminating character for tab-set sequence. Must be an Ascii 0 or 255.

Note 3 MX-80 255 lines max
MX-100 127 lines max

Note 4 MX-80 16 tabs max
MX-100 12 tabs max

Note 5 Double Strike not documented in Epson manual. Cannot turn off in middle of line.

Note 6 12 Char/inch mode not documented by Epson.

Features specific to the **MX-100** (pre-Graftrax +) and the **100 & 80** with Graftrax +. These features are not available on the older MX-80 with Graftrax. These items are repeated again when the Graftrax + features are listed.

4E	78	Esc N	Set skip over perforation at bottom of page.
4F	79	Esc O	Turn off skip over perf.
51n	81n	Esc Q	Set column width (This is similar to the "CTL I 80 N" provided by most Apple interface cards)
43n	67n	Esc Cn	Allows setting of form length in inches instead of <c/r>s. This is particularly useful when using Graphics. (The MX-80 loses track of top of form.)

GOTO 36

Epson MX-80/100 Comparison Update

Continued from page 35

Features specific to the older MX-100 without Graftrax +.

82n	52n	Esc R	Selects 1 of 8 char set variations for 8 languages:
n=0 USA English			n=1 French
n=2 German			n=3 UK English
n=4 Danish			n=5 Swedish
n=6 Italian			n=7 Spanish

Note that an MX-80 without Graftrax provides similar capability via switches.

Features specific to the MX-80 with Graftrax option installed. Options provided by the newer Graftrax + for MX-80s, which were not available with the older Graftrax are listed separately. Features deleted by the Graftrax + are identified by footnote 5. The features listed below are not available on the older MX-100s.

(All codes must be preceded by Escape)

31n	49	Esc 1	Set line spacing 7/72"
33n	51n	Esc 3n	Set line space n/216" (1/3rd dot vertical spacing. Reqd for precision graphics)
34	52	Esc 4	Italics On
35	53	Esc 5	Italics Off
3A	58	Esc :	Block graphics mode on
(Note 5)			
3B	59	Esc ;	Block Graphics mode off
(Note 5)			
3C	60	Esc <	Home Print head
3D	61	Esc =	Clear Most Signif't bit
3E	62	Esc >	Set Most signific't bit This allows block graphics with unmodified Epson interface card.
3Fn	63n	Esc ?n	Redefine Escape codes
40	64	Esc @	Reset printer
47	71	Esc G	Double strike on
48	72	Esc H	Double strike off
4Anm	74nm	Esc Jnm	High speed dual density
(Note 5)			graphics (of dubious use!!)
50	80	Esc P	Condensed on (can do same thing with Ctl O)
51	81	Esc Q	Condensed Off(can do same thing with Ctl R)
53	83	Esc S	Expanded on (can do same thing with Ctl N)
54	84	Esc T	Expanded off (can do same thing with Ctl T)

Note 5 Items deleted in MX-100s with Graftrax +.

Features specific to MX-80 and MX-100 with Graftrax + installed. These features are in addition to those listed above for MX-80s with the older Graftrax. In some cases the feature was previously available on the MX-100 and is so indicated by footnote 6. In other cases, the feature was available on the MX-80 with older Graftrax but not on the older MX-100. These are indicated with a footnote 7.

(All codes must be preceded by Escape)

2D	45	Esc - n	Set underline mode. An underscore is printed at same time as the character itself.
33n	51n	Esc 3 n	Set line space n/216"
(Note 7)			(1/3rd dot vertical spacing. Reqd for precision graphics)
34	52	Esc 4	Italics On
(Note 7)			
35	53	Esc 5	Italics Off
(Note 7)			
3C	60	Esc <	Home Print head
(Note 7)			
43n	67n	Esc C n	Allows setting of form length in inches instead of <c/r>s.
(Note 6)			
48	72	Esc H	Double strike; super-, sub- scripts off.
4A	74	Esc J n	Same as ESC 3n, except for 1 line only.
4E	78	Esc N	Enable Skip over perforation.
(Note 6)			
4F	79	Esc O	Disable Skip over perf
(Note 6)			
51n	81n	Esc Q n	Set column width to n
(Note 6)			characters.
83n	53n	Esc S n	Select low profile characters for use as sub- or super-scripts. n=0 for Superscript. n>0 for subscript.
84	54	Esc T	Sub-, super- scripts and unidirectional off.
85	55n	Esc U n	Unidirectional printing. n=0 off; n>0 on.
87	57n	Esc W n	Double width printing on all the time: n=0 off; n>0 on.

Note 6 Was available on older MX-100s without Graftrax +

Note 7 Was available on older MX-80 with Graftrax but not on older MX-100.

A line graphic feature has been added. Instead of the MX-80 block graphics, there are a set of 11 'line' graphic characters consisting of horizontal and vertical line segments, corners and intersections. ASCII codes 134, and 149 thru 159 (less 155, the ESC) are used.

GOTO 14

ORGANIZING YOUR DISKS

by S. K. Johnson

Condensed from an article originally published in the Feb 1981 Mini'app'les Newsletter.

After acquiring 50 or so disks full of programs, there comes a time when one must STOP and CONSIDER "HOW CAN I ORGANIZE THIS 'MESS'?" This is when you realize that a system, so you can quickly identify which disk has the program you want, is needed. The following is a list of alpha codes that could be used to categorize your disks according to the type of programs that they would contain. This alpha character would be followed by a volume number. Volume numbers could be assigned sequentially throughout all categories or started over for each one.

A APPLESOFT MISC. Applesoft programs that are in the process of being written or that don't fit into any other category yet.

B BINARY MISC. Uncategorized binary files. Working disk for machine language program generation.

C COMUNICATION Store programs for interfacing printers, modems, etc.

D DISPLAY Programs that draw pictures or use the graphics capabilities of your machine, but don't fit better into any other category.

E EDUCATION Programs that teach or have educational value (MECC programs for example).

F FINANCE Checkbook and budget type programs.

G GAMES This is going to be your biggest category, and it could be broken down into sub-categories (See H and L).

H HIRES GAMES Games that use hires graphics.

I INTEGER MISC. Programs in the process of being created using Integer basic or Integer programs that don't fit into any other category.

J JUNK Programs that arn't worth categorizing but you haven't the heart to throw away.

K KATALOG (Catalog) A good place to store a master catalog of all your programs and where to find them.

L LORES GAMES Games that use lores graphics.

M MUSIC/SOUND Programs that generate sounds or play songs.

N NEWSLETTER Articles for the newsletter.

O OOPS Programs that don't work but you may want to fix "someday".

P PRIVATE Reserved for stuff you don't want anyone else to see.

Q QUALITY If a program is exceptional and you want to use it to demonstrate your Apple II to your friends, then it belongs under this category.

R REJECTS This is stuff you think will never work, but maybe sombody else might like to take a stab at fixing.

S SCIENCE/ENG. Engineering or Scientific programs.

T TEST Programs that test the system hardware.

U UTILITY Good utility programs.

V VISITOR This disk is for your friends, relatives, etc. to use. (If they destroy it nothing is lost.)

W WORD PROCESSING Word processing programs can all be placed in one category.

X EXCHANGE For bringing programs you have written for exchange with other club members, (example programs for DOM).

Y YOUTH Programs for young kids.

Z Z80 CP/M and other Z-80 card stuff.

I hope this list will help you resolve the problem of how to organize all of your software. If it gives you ideas then it was worth sharing my ideas with you.

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PRINTERS

Epson MX-80 w/Grftrx	~~$509~~ 459
Epson MX-80 F/T w/Grft	~~$599~~ 534
Epson MX-100	~~$749~~ 719
Graftrax + option	$69
Epson 8131 apple card	$69
Epson 8230 cable	$24
C. Itoh Starwriter F10	$1499
IDS Prism 132	$1359 WOW!
IDS Prism 80	$999
Okidata u80	$369
Okidata u82A	$519
Okidata u84	$1114
NEC 8023	$529
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PFS report	$79

DISKETTES

Elephant Mem. 10 Box	~~$23.95~~ 21.95 WOW!!

Save That ATHS Continued from page 16

Now type:
```
CALL-151 c/r
```

and after the * Type:
```
800.80E c/r

0800- 00 0E 08 00 00 5B 25 D0
0808- 30 30 30 30 30 00 00 00
```

With Applesoft in ROM, $800 (2048) is the start of program memory and is 00. The next two bytes, 0E 08 at $801 & $802 respectively, contain the location of the next APPLESOFT line (or end of program). The next two bytes, 00 00 contain the current line number, 0 in this case. 58 is Ascii code for X. 25 is the Ascii code for %. D0 is the Ascii code for '=', and the next five 30's represent five zeroes. These are the 0's for the constant '00000' in line 0. We now know where in memory the value that is assigned to X% will be stored - $808-80E. (2056-2060 Decimal) The next byte 00 is the end of statment marker and then 00 00 is the end of program marker.

Now type:
```
LIST c/r
```

and take a look at line 0 as it is now. O.K? Now type:
```
POKE 2056, ASC("1") c/r
POKE 2057, ASC("2") c/r
POKE 2058, ASC("3") c/r
POKE 2059, ASS("4") c/r
POKE 2060, ASC("5") c/r
LIST c/r
```

Our program now reads:

```
0 X% = 12345
```

We haved changed the program! If it were saved, X% would have a new value.

Let's write the sub-routine to save the ATHS from a program.

```
0 X% = 00000: Z$ ="0000": D$ =CHR$(4)
```

Initialize variables:

```
51000 REM SAVE HIGH SCORE
      USE GOSUB WITH SC% = TO
      THE LAST SCORE
      I & A$ CHANGED IN THIS
      SUB-ROUTINE
```

```
51001 IF SC%> X% THEN RETURN
```

If last score made (SC%) is less than the current ATHS (X%) a return is made with no change.

```
51002 A$ = RIGHT$(Z$+STR$(SC%),5)
```

The score is turned into a string five long filled in with leading zeros. We now have to poke in each character of the string into the memory locations found earlier at 2056 to 2060.

```
51003 FOR I = 1 TO 5 : POKE 2055+I,
     ASC(MID$(A$,I,1)):NEXT: X% = SC%
```

Each character is poked in and then X% is set equal to the new ATHS.

```
51004 PRINT D$;"SAVE 'GAME NAME'"
      :RETURN
```

The whole program is saved to disk (with a new line 0) and then execution returns to the main program.

To use this routine, capture lines 51000 to 51004 in a text file. Key in line 0 and then EXEC in lines 51000 to 51004. In the program set the score made in the last round equal to SC% and GOSUB 51000.

Business Roundup Concluded from page 8

Graphics Processing Systems - a graphics package by Stoneware. Manipulates and edits graphics as a wordprocessor edits text. $59.95 (standard). $99.95 (professional).

CREATIVE COMPUTING SEPTEMBER 1982

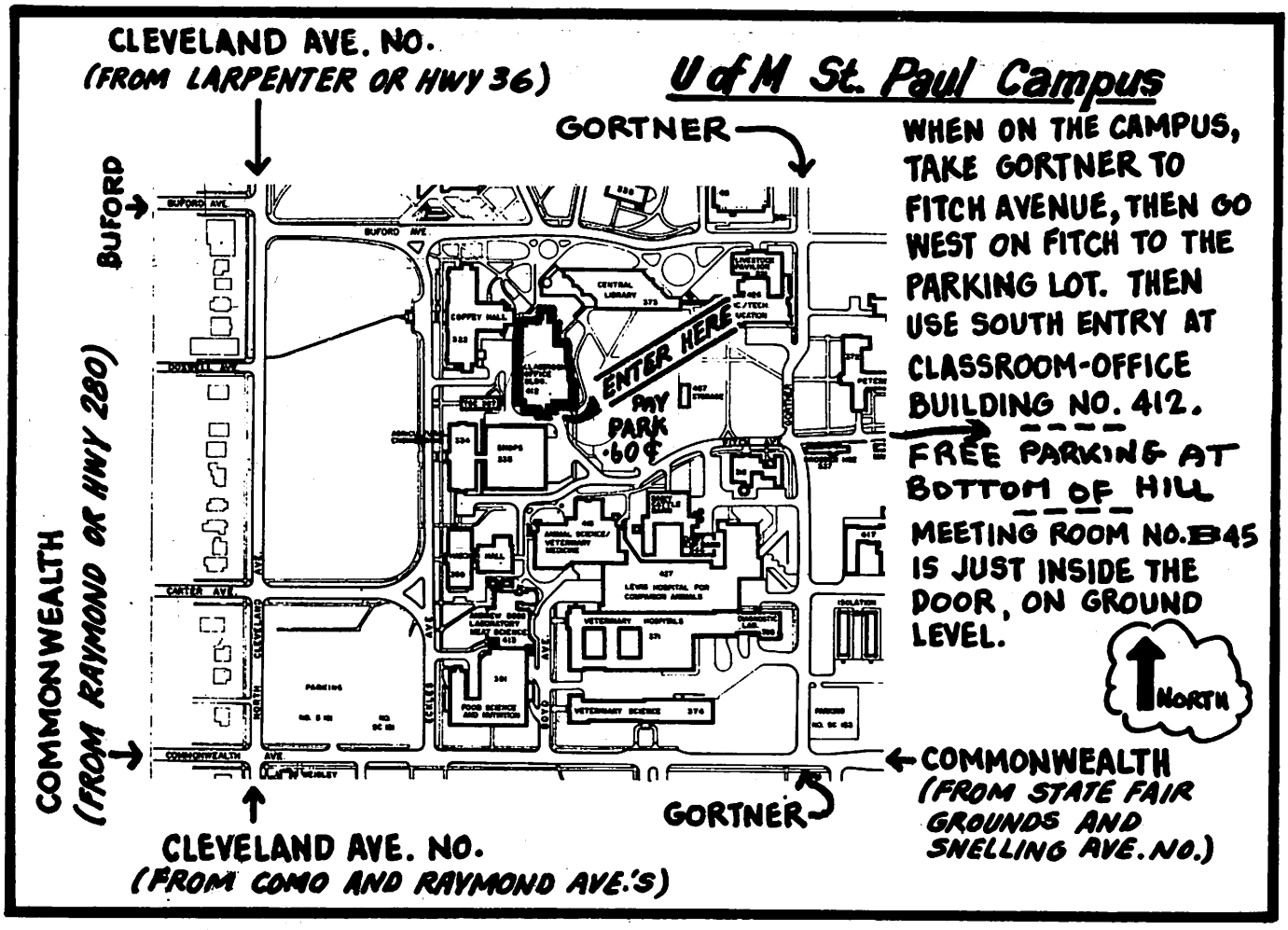
Evaluations of various database managers, file mangers. (See Turning the Pages, elsewhere in this newsletter).

Apple III Users' Newsletter by Media Works. $ 10/yr...p.218

Investment Analysis software packages by Wall Street software.$3. ...p.220.

NIBBLE - Vol 3 No.4

Review of Wordhandler II - easy and powerful Apple wordprocessing without investing in hardware for lower case or 80 columns.



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