



# mini'app'les

apple computer user group newsletter

VOLUME VII No 7

JULY 1984

## CALENDAR

## CALENDAR

## CALENDAR

### WHICH

### WHEN

### WHERE

### WHAT

Macintosh SIG Note 1	Mon Jul 9 Gab 6:30/Mtg 7:00	Southdale Branch Hennepin County Library 70th & York	1st regular meeting. Open to all interested members.
Dakota County Branch Note 7	Tue Jul 10 7pm-10pm	St. John Neumann Church 4030 Pilot Knob Rd, Eagan	Demo of Koala Pad and double high-res picture parameters
Board Meeting	Wed Jul 11 7:30 pm	Call Dave Laden for location	Regular Board Meeting. All members are welcome!
Medical SIG Note 13	Wed Jul 11 7.00pm	Health Associates Ctr. 2221 University SE, Rm 115	
REGULAR MINI'APP'LES Note 2	WEDNESDAY July 18th Prgm-7:30pm	UNIVERSITY MINNESOTA ST. PAUL Room B45 Bldg 412	Joe Nathan, St Paul Public schools, author of "Free to Teach", will speak. See announcements!
Educational SIG	Wed Jul 18	After Regular Mtg.	Note 12. Meet with Joe!
Business SIG	Wed Jul 18	After Regular Mtg.	Demo Soft-Graph by Ken Ruzek
New Hope Branch Note 16	Tue Jul 24 7:00pm	Rockford Rd Library County Road 9	
Mnetonka Branch Note 8	Wed Jul 25 7:30pm	Glen Lake Community Ctr 14300 Excelsior Blvd room E	Jim Reitz of Digital Den will demo AppleWorks.
Pascal & Apple /// Note 1	Wed Aug 1 7:30pm	Minnesota Federal 9th Ave S Hopkins	Pascal & Apple /// Special Interest Group Meeting.
St. Paul Branch - Note 3	Tue Aug 7 7pm-10pm	Mahtomedi Fire House Hallam & Stillwater.	
Dakota County Branch	Tue Aug 7 7pm-10pm	St. John Neumann Church 4030 Pilot Knob Rd, Eagan	Note 7
Board Meeting Note 2	Wed Aug 8 7:30 pm	Call Dave Laden for address	General club business. Meeting is open to all members.
Geneology SIG Note 11	Sun Aug 12 2:00pm	Minnesota Historical Society Library St Paul MN	Bimonthly meeting.
Macintosh SIG Note 1	Mon Aug 13 Gab 6:30/Mtg 7:00	Check meeting place	2nd regular meeting. Open to all interested members.
REGULAR MINI'APP'LES Note 2	WEDNESDAY August 15th Prgm-7:30pm	To be determined	To be determined
Map next month	SIGS-8:30pm+		
Educational SIG	Wed Aug 15	After Regular Mtg.	Note 12
Business SIG	Wed Jun 20	After Regular Mtg	Disc Management & Back-up utility
New Hope Branch	Tue Jun 27	Rockford Rd Library	Note 16
Mnetonka Branch	Wed Aug 22	Glen Lake Community Ctr	Note 8. Modem demo by Jim Hanson.
Twin City Comp. Show	Oct 25-28	Minneapolis Auditorium	See announcements.

### Notes:

(See page 2 for telephone numbers)

- |                    |                |                      |                     |                        |
|--------------------|----------------|----------------------|---------------------|------------------------|
| 1. John Schoeppner | 5. Mark Abbott | 9. Mike Carlson      | 11. Bill DeCoursey  | 14. Steve George       |
| 2. Scott Ueland    | 6. Dan Buchler | 8. Martin Thames     | 12. Jane Chatterjee | 15. Frank M. Ringsmuth |
| 3. Fred Woodward   | 7. Bob Pfaff   | 10. Subir Chatterjee | 13. Stewart Haight  | 16. Jere Kauffman      |
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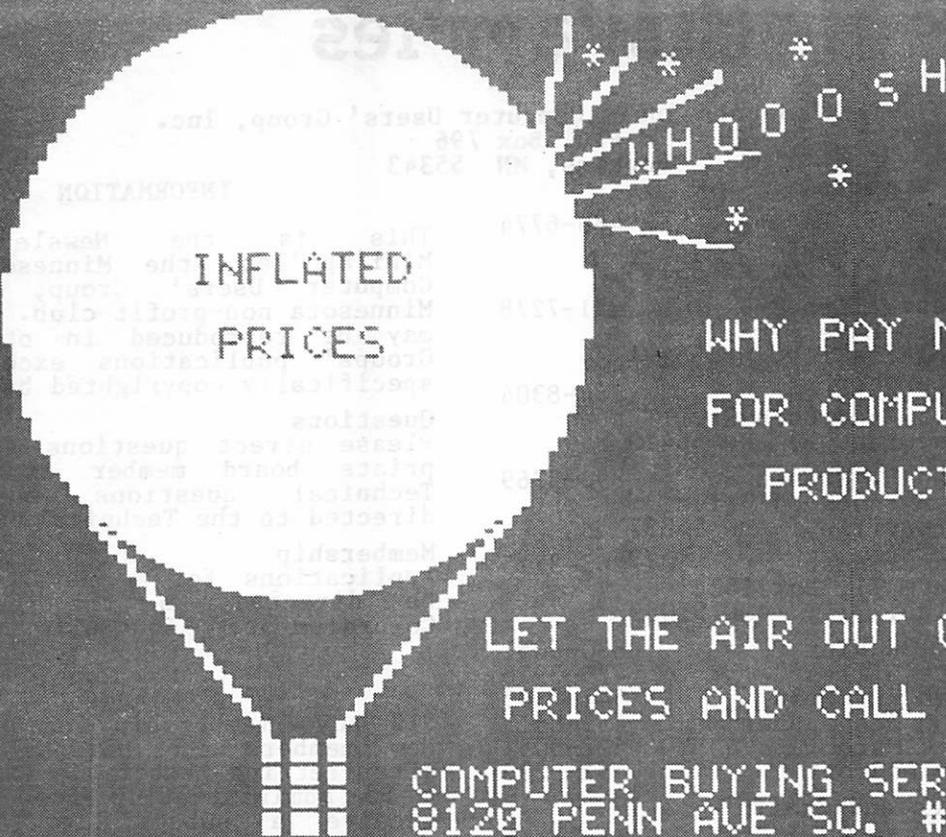
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## INFORMATION

This is the Newsletter of Mini'app'les, the Minnesota Apple Computer Users' Group, Inc., a Minnesota 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 officer. Technical questions should be directed to the Technical Director.

### Membership

Applications for membership should be directed to the Membership Co-ordinator: Ann Bell 544-4505  
8325 39th Avenue N.  
New Hope,  
Minnesota, 55427

\$12 buys membership for one year. New members and persons renewing after letting membership expire, pay a \$5 administration fee. Members receive a subscription to this newsletter and all club benefits.

### DOMs and MSDs

DOMs (Disk of the Month) are available at meetings for \$5/disk or any DOM may be ordered by mail for \$6.00/disk. MSDs are \$15/disk at meetings or \$17.50/disk by mail.

### Contact

Terry Schoeppner,  
Box 241, Inver Grove Heights  
MN, 55075 (455-8613)

Members may have DOMs copied to their own media. Contact Chuck Thiesfeld - details within this newsletter.

### 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 preferred, but any form will be gratefully accepted. Deadline for publication is the 1st 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

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# ANNOUNCEMENTS

## Meeting Notes by Mark Abbott

**A**s your vice president, I am responsible for, among other things, the main programs for each meeting over the next year. This is not an easy task. With a membership of around 1900 in the club, we have a wide diversity of backgrounds and interests. However, only about 10-15% of the membership ever show up at the meeting. Why? I'm not sure, but it probably has to do with the difficulty of walking that fine line between a) boring (or frightening off) the novice as a result of being too technical, and 2) boring the technically adept by being too simple.

I see a few ways around this problem. One way is to pick topics which are of interest to a large number of people and that are also less well understood by most people. You then have the interest and the expectation of learning something. Another is to pick an interesting topic and allow the program to speak to both levels. Parts may be boring (or incomprehensible) to you, but you should come out having learned something.

Both of these approaches make one assumption: that you have an interesting topic. Now, I know what interests me, but I don't think I am a typical user. I can only guess what interests you. Or I can ask. I have talked to several people about ideas for programs: past club presidents and vice presidents, and others whose opinions I respect. Finally, though, it's up to you. What would you like to see discussed at a meeting if you were able to pick? I want (I need) your input to be an effective vice president. Please give me a call or talk to me at the meetings.

To make things a little easier, I have decided on a general theme under which I would like to organize several programs. This is: "Problem Solving with Your Apple". Is there some general area of problems, which the Apple might be able to solve, that you would like to see covered? For example: how can I do effective graphics on my machine? How can I use my Apple to monitor my house? You probably bought your Apple, in the first place, because you felt that it would solve some problem that you had. Did it? All of them? Completely? If not, then why not use the club to help you. You may find out that there are a large number of other members that wanted to learn the same thing.

The speaker during the main program of the July meeting will be Joe Nathan: educator, author, lobbyist for education, and presently R&D fellow for Public School Incentives, St.

Paul. Joe gave a talk to the local Osborne Users Group in early June, on the topic of public schools and how computers are being used and abused by them, which so impressed me that I asked him to come and talk to us. Rather than talking to an audience, he prefers to converse with it. He provokes a response. You may not agree with him but you can't ignore him. If you are at all interested in the public educational system, and also in how it will affect your kids, then you owe it to yourself to come and talk to Joe. (See also ED SIG Notes).

## Minnetonka Branch by Steven E. Baker

The July 25 meeting of the Minnetonka Branch will be a presentation of AppleWorks for the //e and //c. Jim Reitz of Schaak's Digital Den in Southdale will be demonstrating the software package.

AppleWorks is an integrated program combining word processing, data base and a spreadsheet program into one package. The three parts of AppleWorks work together and make it possible to "cut and paste" information between applications.

We want to thank Mike Carlson of PBS for showing the //c during our May meeting. And thanks for the edible apples.

## KSTP Computer Talk

Tune in to KSTP (1500 AM) every Saturday at 5 p.m. to hear Computer Talk. Mini'app'les will supply an 'expert' for this show on the 2nd Saturday of each month. If you have an Apple related question, here's your chance to get on the air! Note: Subir was our representative for June and came over like an old Pro!

Chuck Boody will be the representative for July! During the show, call 646-TALK.

## CP/M Sig

The CP/M SIG has temporarily ceased activity. Last month we reported that Scott Ueland had resigned from that post.

If there are any members who feel that they could contribute to getting that SIG going again, please telephone Dave Laden, your President.

Announcements Continued from page 7

**Hip! Hip! Hooray!!  
Three Cheers for More Volunteers  
by Steve George**

Five times since accepting the position of Special Events Coordinator, Mini'app'les has participated in various computer shows. And each time, you, the club members have freely given time to a worthy cause: answering general computer questions, specific hardware queries, and the role that Mini'app'les can play in the life of a new Apple owner.

The last three shows (covering 4 days) all fell during one 30 day period: 2 at the Science Museum of MN and one at the Amateur Fair. With such close scheduling, many people were needed to help avoid "computer show burnout".

Many thanks to the following Amateur Fair volunteers: John Pawlik, Steven Baker, Ann Bell, and Dick Peterson.

A 2 day Telecommunications demonstration at the Science Museum was staffed by: Eric Holterman, Greg Kitchak, Hugh Kurtzman, Chase Allen, Jim Hanson, Steven Baker, Barb Kostial, and Dick Peterson.

Steven even provided Mac-created badges for all of our people, complete with Mini'app'les logo! The first day we used a Networker modem and NetMaster software with excellent results. Day 2 provided a change of pace as Jim supplied a Smartmodem and ASCII Express PRO. He and Chase figured out what to do and explained the procedure to the rest of us.

The Amateur Fair was quite the last minute arrangement: we learned Tuesday night (~9:30pm) that we had a booth if we wanted it. A flurry of phone calls later, we were all prepared to offer the public our "wares". Thanks go to Amateur Fair's John Desmond for letting us participate and handling the small annoyances that arose.

The Science Museum's Chuck Penson arranged for 3 (only 3!!) groups to demonstrate telecommunications software, hardware, and general usage. The three included GamBit Timeshare (a multi-user local board), the TRS-80 user group (T.C.T.U.G.), and US! We enjoyed ourselves and provided some much-needed info for those interested. Thanks to Chuck Penson, the 2 days went quite smoothly and we had a //e on hand. Personal Business Systems came through for the club again by providing a //c — that was an attention getter! Thanks PBS.

BUT MOSTLY, THANKS MINI'APP'LES VOLUNTEERS!

(Editor's Note - not mentioned above is the simple fact that one person at each of those shows was Steve George himself. Steve has become a major asset of the club. Besides doing all the organizing of the various shows, he provides most of the articles in the newsletter, comes to every meeting board meeting and even a large percentage of the branch meetings. He also assists Hugh Kurtzman in the newsletter mailings and recently has turned up at the Editor's house to help put the newsletter to bed. Thank you Steve!)

**In Sickness and In Health  
For Better or Worse  
by Steve George**

Getting tired of seeing my name plastered all over YOUR newsletter? Lets remedy that by sending your contributions to Dan for the newsletter.

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**GOTO 9**

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Announcements Continued from page 8

Calendar Announcements

Twin City Computer Show  
1984

There will be a 1984 Twin City Computer Show. The show is under new, and I believe better management; CompuShows of Annapolis Maryland. This company has been managing shows for many years! The date is Oct 25-28 and the place is the Minneapolis Auditorium.

We, Mini'app'les, will have a booth. As in past years, we need a lot of volunteers. Call Steve George, at 935-5775, if you are interested.

The show will retain the same format as last year, but with emphasis on local dealers and suppliers and on distributors, manufacturers, etc.

I think the show management is doing a good job in promoting and soliciting good exhibitors. If you are interested in exhibiting, call 800-368-2066.

Handicapped Applications SIG  
by Steve Lyle

Non-meeting news

The nature of most of our members' disabilities makes in-person meetings somewhat impractical. However, due to our insatiable interest in computing, we plan to meet on the new Bulletin Board. Thanks to Jay Warrior, Honeywell Inc., and some other very generous folks, the Bulletin Board is Up and Running.

The system operates 24 hours/day. Anyone in the Handicapped SIG may use it by just dialing 378-4430 and use PUBLIC access or request a user code. It operates under the following protocol:

300 baud  
1 start bit }  
7 data bits } 7el  
1 stop bit }  
even parity }  
80 column capability  
full duplex

Right now, we can handle up to 100 users - so visitors are welcome!

Anyone interested in joining the Handicapped SIG (HASIG) or with an interest in handicapped applications for themselves, friends, students, etc., may join the HASIG. Call Steve Lyle at 894-2991 for details.

Please submit all calendar dates, changes, etc., to Ron Androff. Ron has volunteered to be the calendar maker for the newsletter. As for all newsletter items, timely submission helps us all!

Have you a question?

The club received a letter from:

Burton Bhavisyat  
Rte 1, Box 320  
Moundsville  
WV 26041

(That's where the coal comes from - Ed.) A recent columnist in InfoWorld, Tom Shea, recommended that Burton be used as a resource to answer technical questions.

In his letter Burton says: "As a direct result of this service (which I offer for the price of a SASE), many user's groups across the country have asked me to author a column for their newsletter containing the best and most useful of these Q's and A's, plus some practical, everyday type of advice. I am also open to whatever users want to hear or ask about."

So, members, if you have questions, send them in. In the mean time, your editor would like to take advantage of an offer by Burton to provide a file of his column which we may use in our newsletter. The catch is that he uses CP/M-80 and that is one operating system format which your newsletter editor cannot currently read! If anyone with a modem and compatibility with CP/M-80 will volunteer to receive the disk and then transmit the file to me, we can be in business?

GOTO 10

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Announcements Continued from page 9

**Business Sig**  
by Dick Marchiafava

**SUMMER DEMO SUBJECTS**

The Business SIG meetings have been suspended for the summer. However, we are holding demonstrations during the SIG cluster after the main club meetings.

After the July 18th meeting Ken Ruzek will demonstrate SOFTALK'S SOFTGRAPH program. The version Ken will demo has many enhancements which he has added. This software is public domain, so if you wish a copy, bring a disk. Copies will be made as time allows.

The subject of the August 15th Business SIG cluster will be Disk Management and Backup Utilities. Members of the Business SIG will show how utilities are used to organize and manage disk files, and how to make backups. Persons who are not of a technical bent may be unaware that disk management utilities are tools of which they could make good use.

See you at the Business SIG clusters!

**MacSIG Organizes for Growth**  
by Tom Edwards

Bouncing off of a preliminary meeting held June 11 at Personal Business Systems, about 25 or so Mini'app'les members set a date for a second meeting of the Macintosh SIG on July 9 (Monday). This next meeting has since been confirmed to be held at the Southdale Branch of the Hennepin County Library. Since the library hours dictate a fixed closing time, 6:30 has been set for the "gab" session and 7:00 for the start of the program. The speaker has not yet been selected, but we will try to have someone that really knows the Mac share some of its surprises with the group. All interested members are invited to attend.

A very brief survey of those attending the June 11th meeting, showed that there is a wide range of interests and experience levels to tap for future meeting subjects. Some of those in attendance haven't yet bought their Mac, and some are writing application programs that the others will be using in the future. If you are also interested in exploring the "next standard" in computers, be sure to mark down the July 9 date as a SIG you should attend.

If you need additional information, contact Mike Carlson (929-4120) or Tom Edwards (698-1211).

**DOM Pricing changes**

With a change in leadership resulting from the April Mini'app'les elections, comes inevitable changes in how we do business. We think you will like this one. Some DOM prices have been reduced. First of all, recent DOMs will still be sold at meetings for \$5. However, on an available basis, older DOMs will also be sold for \$5. We hope also to add more public domain disks to those which are currently available.

The other good news is that DOMs, both recent and old, plus EAMONS, will all be available through the mail for \$6.00 (tax included).

Send your orders to:  
Mini'app'les  
PO Box 796,  
Hopkins, MN, 55343  
Attention DOM Sales

Please do not forget the Attention marking!

**GOTO 11**

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Announcements Continued from page 10

**EdSIG NEWS**  
by Jane Chatterjee

**Meetings:** The main meeting in JULY is of particular interest to computer-using educators. Joe Nathan, St Paul public schools educator and administrator, will be the presenter. He is well known as an educational innovator and is the author of the book: Free to Teach. I enjoyed very much a recent presentation of his, which I attended. I am sorry to have to miss this one, as I will be in England. I have not arranged any formal EdSIG meeting for after that, but I am sure you will have an opportunity to get into discussion with Joe.

**May and June meetings:** At our May EdSIG meeting, Dave Wark, Psychology professor from the University demonstrated the reading comprehension program he has written. It is a novel approach to the idea and I hope he decides to go ahead and look into publishing it. At our June EdSIG meeting, JoAnn Blatchley, of Edina school district demonstrated how she is using the program MicroQuest, for creating instruction and quizzes. Our thanks go to you both for sharing your expertise with us. Any other club members who would like to make a presentation to the EdSIG, please contact me and we will set this up.

**Minnesota State Software Evaluation Project:** The director of this project is interested in contacting classroom teachers who would like to participate, with their students, in evaluating software submitted to the project. The evaluation will take a few hours and there is a small fee involved. Also, your school can be put on the project's mailing list, when you will receive copies of the evaluations, every few months. I have the application forms available, or you can obtain them directly from: Harold MacDermot, Project Director, Minnesota State Dept, phone 297-2534.

**Magazines / Journals, June issues:** Byte has a special educational computing issue this month. Personal Computing has an article on evaluating computer camps. The University of Minnesota Walter library subscribes to: The Computing Teacher; Electronic Learning; Educational Technology.

**Rana 8086 Bulk Purchase**  
by Dan Buchler

I am thinking (but have by no means as yet made up my mind) of taking the plunge and buying the Rana MS-DOS sub-system. If there are others in the same boat, I would love to talk to you. Maybe we can help each other decide and maybe we can come up with a bulk purchase plan! Please call me at 890-5051. Also see article elsewhere in this issue.

**DOMs by Mail**

Continuing Service for Mini'app'les Members

by Chuck Thiesfeld

Now members can order DOMs (not Mini'app'les Software) using their own diskettes. Here is the procedure:

Make up a package containing the following:

1. Blank diskette (or diskettes if more than one is desired).
2. Mailer. Diskettes will be returned in same protective device used to send the diskettes, provided such will fit in the mailer.
3. Send correct postage in stamps - do not send money in lieu of stamps.
4. Self-addressed return label.
5. \$1.00 copying fee per DOM or disk.
6. A note indicating which DOMs are desired.

Send to:

C. Thiesfeld  
8416 Xerxes Avenue S.  
Bloomington, MN 55431

**GOTO 15****QUESTIONS?**

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# \$129

Your best buy in modem history. The **Networker**<sup>™</sup>, a plug-in single-slot direct connect modem for the Apple II family of computers. Send electronic mail to a friend or business associate, use your school's computer, access hundreds of computer bulletin boards or thousands of data bases for up-to-the-minute news, sports, weather, airline, and stock information.

There's absolutely nothing else to buy. You get the modem board, communication software, and a valuable subscription to America's premier information service, **THE SOURCE**<sup>SM</sup>. For \$129 it's an unbeatable value.

This is the modem that does it all, and does it for less. The Apple Communications Card is on board, so no other interface is needed. It's 300 baud, the most commonly used modem speed. And it comes complete with **Networker** Communications Software on an Apple-compatible disk, giving you features no modem offers.

Like the ability to lock on-screen messages into your Apple's RAM, and then move the information onto a disk for easy reference and review. A terminal program that turns your computer into a communications command center, with on-screen "help" menus, continuous updates of memory usage, carrier presence, and communication status.

The **Networker** supports both originate and answer modes, so you can send and receive information, in full or half duplex modes. Just plug it into any slot in your Apple computer, and then into your phone jack. Now you're part of a vast network of computers.

#### EXTRA BONUS:

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For \$179 we include with the **Networker** the **Netmaster** Communications Software for advanced users. **Netmaster** will let you transfer games, computer graphics, programs, sales reports, documents—in fact, any Apple file of any size—to another computer, directly from disk to disk, without errors, even through noisy phone lines.

For transferring information between computers, **Netmaster's** superb error checking and high speed are an unbeatable combination. With a **Netmaster** on each end, you can transfer information three to five times faster than other communications packages like **Visiterm**<sup>™</sup> or **ASCII Express**<sup>™</sup>. Error free.

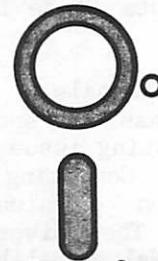
But **Netmaster's** not stuffy. It will talk to those other communications packages, but they don't work as fast and they don't check errors like **Netmaster**. And **Netmaster** doesn't only work with the **Networker** modem. Even if you already have another modem for your Apple, **Netmaster** is an outstanding value in communications software, so we sell **Netmaster** by itself for \$79. **Netmaster** requires 48k of RAM, one disk drive, and the **Networker** or another modem. It can also be used without a modem when two Apples are hard-wired together.

#### WE EVEN GIVE YOU SOMEONE TO TALK TO!

Your purchase of the **Networker** with or without **Netmaster** comes complete with a membership to **THE SOURCE**, with its normal registration fee fully waived. **THE SOURCE** will put a world of electronic information and communication services at your fingertips—instantly. Electronic mail and computer conferencing. Current news and sports. Valuable business and financial information. Travel services. A wealth of information about personal computing. Even games. All fully compatible with your equipment, and ready to use at once.

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## SOFTWARE<sup>™</sup>

# zoom



# Renumber

A tutorial  
by Tom Alexander



One of the more useful utilities available to the basic programmer is the RENUMBER program found on the DOS 3.3 SYSTEM MASTER disk. This program has two major utilities - Renumber and Merge. This month we'll look at the Renumber utility and next month the Merge portion of the program will be examined.

Essentially, Renumber will assign new line numbers to a program in existence. If, for example, an existing program whose line numbers start at 10 and end at 100 by increments of 5 (10, 15, 20, etc.) can be renumbered with the first number beginning at 100 and incremented by 10.

The example above is more informative than instructional. A practical situation may arise when new lines are to be inserted in a program at a point midway between the first and ending line. Assume the program starts with line 10 and ends with line 500 by increments of 10. The routine to be inserted will take 10 lines but should begin at line 250. The existing program should be renumbered starting at line 250, ending the renumbering procedure at line 500, with the new first number being 400, and incremented by 10. This will open a space in the existing program between line 240 and the new line number 400. A space large enough to accept the 10 new lines to be inserted beginning at line 250 and ending at line 390.

To renumber a program two disks are needed: (1) the System Master disk and (2) the data disk on which the program to be renumbered is stored.

Using the example given above, follow the steps given below (assume the file name is LINES):

- (1) Insert System Master disk in drive one.
- (2) Start or reboot system.
- (3) After the blinking cursor appears on the monitor type: RUN RENUMBER.
- (4) The Renumber screen #1 will appear giving the correct syntax of the Renumber command and the Merge command. Press Return. Screen #2 will appear with the captior 'RENUMBER IS INSTALLED AND READY' shown at the top of the screen and the blinking cursor on the left side of the screen.
- (5) Remove the System Master disk from drive one and insert the data disk.
- (6) Type: LOAD LINES and press Return. (Use the name of the program to be renumbered.) After the program has been loaded, the blinking cursor will appear.

- (7) Type: & S 250, E 500, F 400, I 10. Press Return. The ampersand (&) activates the renumber program. S means start at line 250. E means end the renumbering procedure at line 500. F means the first line number of the renumbered program will be 400. I means the increment of the new line numbers is 10. The increment can be any number - 1, 7, 3, 15, 22, etc.
- (8) After a few moments or longer the blinking cursor will appear. While the file is being renumbered, the disk will not spin nor will the drive make any noise. Be patient. If a long program is being renumbered it may take some time to finish the renumbering procedures. Keep in mind that in addition to renumbering the entire program all Goto's, Gosub's, Return's, and the Then destination in If - Then statements will renumbered to show the current destination.

At this point the program has been renumbered to the specifications in (7) above. It is a good idea to type LIST. The program that has been renumbered will scroll by. If it is to your satisfaction, type SAVE NEWLINES. This will create a new file called NEWLINES. The old program, LINES, will remain intact as it was before the renumbering process. Of course, the new program can be named anything you want.

It is always a good idea to have the DOS PROGRAMMERS MANUAL at the ready for any questions or problems that can come up. When I'm not too confident of my ability, I make a back-up of the program to be renumbered before the steps listed above are taken. Let's face it, I always make a back-up.

Next month we'll cover the Merge portion of the RENUMBER program. The procedures will incorporate the Renumber process as will be shown.

Money Matter\$ Concluded from page 16

The Investments portion of MONEY MATTER\$ is a good accompaniment for the Finances program. It will handle the needs of most households, but will also take some patience. It is not, nor is it meant to be, a free-standing portfolio record keeping system. My overall reaction to MONEY MATTER\$ is very favorable, and would recommend it to those who are looking for a good, reasonably priced family financial planning program.

# Service Policies

from SOURCE APPLE USERS GROUP (SAUG)  
via the IAC Compiler (7/83)  
by Joel Amromin

**A**t the Apple //e workshop the weekend of March 4-6, 1983, Apple discussed the formal procedures for repair service and technical assistance. This article is a summary of that presentation. Where appropriate, I will interject some of the comments and criticisms that were presented by the delegates to the conference.

In addition to the standard 90-day warranty on all Apple products, there are two kinds of "service contracts" available: 1) "AppleCare" and 2) RCA Field Service. The AppleCare program replaces the old extended warranty. Like the extended warranty, it is a renewable one-year extension of the factory warranty. Unlike the previous extended warranty, you pay separately for each item that is included in the contract. That is, there is a separate rate for the CPU, a disk drive, a monitor, graphics tablet, etc. The annual cost for a basic single drive system with monitor is still about \$200 per year. That is based on an average cost of about 9% per year of the retail price of the system. If you add something to your system during the term of the contract, it can be added to the contract on a prorated basis.

The AppleCare program can be started at any time, but it is recommended that you purchase the contract when you buy a system. That gives you a full 15 month warranty.

The AppleCare program covers all Apple hardware and can be obtained for any Apple product up to and including the Lisa (What? you don't own three of them????). You must bring the computer to your dealer for service. All Apple dealers are Level 1 service centers (more about that later). NOTE: you don't have to take it to the dealer you bought it from. The warranty is good at any Apple dealership.

Why spend \$200 per year on such a reliable product as the Apple Computer? Well, let's face it, the chances of spending that much on service are pretty slim. However, what you are paying for is much faster service. Here is an excerpt from the AppleCare brochure:

Using Apple diagnostics and modular-based repair, the Apple technician is able to quickly isolate the problem to a particular exchange module, such as the keyboard or power supply, and replace the module in no time. As an authorized Apple Service Center, your dealer carries a full inventory of replacement

modules and parts, assuring that your Apple equipment is out of the shop and back to work quickly. In fact, many repairs can be performed in minutes — often while you wait.

I work in a computer store. Our service department is REQUIRED by Apple to maintain a spare parts inventory with certain specified items. The list is very complete. For instance, just to qualify as a Lisa dealer, the store must purchase a \$10,000 spare parts kit.

If you don't have the AppleCare contract (and are out of warranty), then service is performed in a different manner. The technician may now start working at the chip level to fix your computer. Apple does not train technicians how to do this and you are at the mercy of the technicians. One of the big complaints at the conference was that a lot of dealers have incompetent technicians. Apple showed some concern about that but was unprepared to address the problem at the conference. However, they did express interest in trying to resolve the problem. In a minute, I'll get into redress methods. Without the service policy, a technician might exchange your motherboard and charge you a fairly stiff fee, even though the motherboard may not even be the problem. Or a technician may save you a few dollars by doing component level repair, but keep your Apple for a week to do it. The point is, without the service contract, you don't know what to expect.

Apple wants the owner of the computer to take all service and technical support questions to the dealer. Apple no longer has a customer hot-line in Cupertino. A lot of people were upset that Apple seems so aloof from the customer. However, Apple replied that it was becoming impossible to take the thousands of phone calls a day, most of which were simple questions that the dealer should be able to answer (e.g. "Why won't my old DOS 3.2 disks run on my Apple now that I have Pascal?"). If your dealer can't answer the questions you have, there are regional Level 2 service centers with dealer hot-lines. Your dealer is not allowed to give out those numbers, but can call on your behalf to get assistance. As a dealer myself, I can honestly say the system works. Twice in the last month, I have called the regional center with software questions and received accurate answers while the customer was in the store.



## Service Policies Concluded from page 14

If your dealer can't solve your problems, either in service or technical support, or if you feel that your dealer has mistreated you, you should contact the Level 2 Regional Service Center. Apple says they want to know about problems you are having. If you can't get satisfaction from one dealer and go to another, but don't tell Apple about the mistreatment you may have received, Apple won't know about it. Apple has published the addresses of the Regional Centers. If you need this assistance, write to the attention of the Service Manager at the address indicated for your area. The list of Regional Service Centers is in a separate file called "SERVICE-CENTERS" (on this disk). The Regional Service Center will need certain specific information from you. Include all of this information in your letter:

1. Model of your Apple system.
2. Serial number.
3. System purchase date.
4. AppleCare Agreement number (if applicable).
5. Your dealer's name and address.
6. The name of the person you dealt with.
7. Your name and phone number.
8. The nature of the problem.

Well, let's suppose that you still don't get satisfaction. You can write to Mecca (Apple Computer, Inc.). Send the same information listed above to:

Service Manager  
Apple Computer, Inc.  
20525 Mariani Avenue  
Cupertino, CA 95014

I would suggest that in all correspondence with either the Level 2 center or with Apple Computer, you include photo-copies of all relevant documents (invoices, service tickets, previous correspondence, etc.). One of the problems which came up at the conference was that mail can take a long time reaching the right person at Apple once it gets into the system. Many of the Apple people were very upset about that, too. So don't expect an answer from Apple in 24-hours. Apple is trying to find ways to improve and speed up the process. It will help if you address your letters exactly as shown in the Level 2 list and as above. And be sure to send it to the attention of the Service Manager.

The general consensus at the meeting was that Apple has fallen behind in quality of service. However, it was also felt by many that the conference was a start by Apple to try to "clean up their act". The formalization of the three tiered service system is part of that attempt. While the system was in place

for some time, it was never formally put into operation. Apple expressed an interest in working with user groups to improve the service situation. We will see what happens. The people I talked to from some of the IAC member groups felt rather good about the final results of the meeting and that Apple was sincere about moving ahead with improvement. One possibility is that consideration is finally being given to setting up some user groups as service centers. The groups would have to take the same training and purchase spare parts as the dealers. I would anticipate several interesting changes in the course of the next year.

I will only briefly discuss the RCA Field Service Contract. This will appeal primarily to businesses and large corporations. RCA Service Company is a division of RCA which performs field service on many different kinds of equipment. Apple has contracted with RCA to provide service in the field on Apple equipment. The user contracts with RCA. It will not be cheap. But you will get the same sort of immediate field service that you get on office equipment like Selectric typewriters. RCA also services many non-Apple peripherals that you may have connected in your system. RCA can also provide installation, preventive maintenance, and other specialized services upon request.

To get more information about the various service options and procedures for Apple Computer equipment, you can request the following brochures from your dealer:

1. Your Guide to Apple Service and Support
2. Protect your Apple with AppleCare
3. RCA Service for your Apple Computer System

## Announcements Concluded from page 11

Please allow 60 days for delivery in USA. Incomplete packages will not be returned. DOMs 1 thru 26, except 18, EAMON #3, and 8 Pascal disks are currently available. Mini'app'les Software disks (MSD) are not available! General questions about DOMs should be addressed to Terry Schoeppner. Questions on DOM content should be addressed to Al Peterman, our DOM editor.

Please note that DOMs may also be purchased on club-supplied media by sending \$6.00 to the software sales coordinator. See page 4. The first 3 Mini'app'les Software Disks (MSD): #1 - Mini'scrip, #2 - Micro Mailer, and #3 - Higher Print/Higher Word Processor/Message Maker are available by mail from Terry for \$17.50. Or, most DOMs, EAMON disks and some other public domain software are available at regular meetings, and at some Branch meetings, for sale to members at \$5 each, and the MSDs for \$15 each.



# MONEY MATTER\$

Part 2 of a Review  
by Eric Holterman

**M**oney Matter\$ is a program designed to aid the user in financial planning and investment tracking. In the April, 1984 issue of Mini'app'les I reviewed the Finances part of the program which contains sections for establishing a personal budget, net worth, investment goals, tax planning, and income and expense records. This part of the program fulfills its promises very well. I feel it is by far the more important part of the program and if you missed that review and are interested in this area, I suggest you pull out your April issue to read it (you did save it, didn't you?).

The program is available from POST Software (see ad elsewhere in this issue) for \$50.00. It comes with a Finances disk, Investment disk and a 50 page manual. Operation requires 2 data disks which you provide (one if you use only the Finances part of the program). Back-ups are \$5 for each program disk, replacements for defective disks are at no charge for 30 days and \$5 each thereafter. The program requires any Apple ][ series computer (I have not tried it on a //c but the program does not seem to have anything in it that would create a problem), 48K, 1 disk drive (2 is better), and a printer that can deliver 132 columns (an 80 column printer in compressed mode is fine).

The Investments portion of the program maintains investment records which include the original basis of the investment, interest and/or dividend income, sale of all or part of an investment and calculates a rate of return on each investment either from the inception of the investment or from the beginning of the current year based on the original basis of the investment even if it predates the current year. You make the selection of the type of yield calculation for each investment. Investments may also be divided into different portfolios which can be set up to match investment goals in the Finances part of the program. A detail report can be generated for each security or a summary report for all investments on a disk, broken down by portfolio, including both individual portfolio totals and totals for all portfolios.

Reports also include tax information, keeping track of long and short term gains (both realized and unrealized), interest and dividend income and the effect of taxes on the rate or return for each security and portfolio. A year to date capital gains worksheet can also be produced. The income and tax information generated by these reports can be used in the Finances part of the

program but is not transferred automatically. You must enter the information yourself from the reports when using the Finances program.

A Market Watch section is also included which allows you to track up to 50 securities for a year, assuming one weekly price is recorded. Information is provided in table form with a listing of each price entry, date, high and low and a 'watch' price you establish as a reminder for action on your part. The market watch section will update the prices in the investment records area. Prices are always entered manually, they cannot be retrieved by modem.

I feel the Investments portion of the package does have drawbacks. Some may be unfair to bring up since the program is not intended to be a complete record keeping system for the very active or demanding investor. That's sort of like downgrading a Boeing 737 because it doesn't have the load capacity of a 747. For example, provision is not made for handling cash (both credit and debit) as a part of a portfolio. Long positions in stocks, bonds and mutual funds work well but short positions take special handling (when's the last time you sold short?). Stock splits can be accomplished, but the procedure is not covered in the manual. Data entry is somewhat awkward, not good for the daily or weekly trader. Options, futures and margin requirements aren't covered or handled at all. So if you are in the market for a program to handle these areas, you need to keep looking since this program was not written with you in mind.

On the other hand, if you stick to long positions and don't do a lot of trading, your needs may be met here. The problem you are most likely to encounter will be the manual, which I found to be confusing for the Investments area of the program. I understand the author plans revisions to the manual, but these are not now available. There are some other tricks you may need to learn too, such as giving a particular security a different ID for each portfolio it is in. Apple might be AAPL for one portfolio and APLE for another. The other side of this coin is that you probably will not have the same security in different portfolios and therefore not encounter this problem. Mutual funds are handled well, with provision for reinvestment of dividends, or taking them in cash. Both long and short term capital gains distributions are accounted for, either reinvested or in cash.

GOTO 13

## EXPANSION/PERIPHERALS

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Videx Compatible, with Inverse, Graphics, Upper/Lower Case.  
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*A Fully self contained, Intelligent modem for the Apple.*
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  - Auto Dial/Auto Answer
  - Full/Half Duplex operation
  - Utility Diskette - Program Transfer & Terminal Software

- 1200/300 Baud Modem** Signalman Mark XII by Anchor Automation, **\$298.00**  
Auto-Answer, Auto-Dial, Auto Speed Select, 212A Compatible.
- Volkmodem** by Anchor Automation - Bell 103 compatible. **\$ 72.50**
- 12" Monitor** by BMC, Excellent resolution, wide band width. **\$105.00**
- Printer** BX-80 by BMC 80 cps., 80-142 column, graphics. **\$279.00**
- 128K Ramdisk/Memory Expansion** w/software package **\$224.50**  
(Apple II, II+, IIe)
- 32K Printer Buffer/Interface** (Compatible w/Buffered Grappier+) **\$119.95**
- Extended 80 Column Card** (IIe) by Fourth Dimension, 80 Column's **\$134.50**  
plus an additional 64K memory. 1 Year Warranty.
- Slimline Disk Drive** by Laser Micro Systems Direct Drive, 40 track **\$198.95**  
100% Apple Compatible, 1 Year Warranty (Dual-Drive available).

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# News from Afar

or Current Rumors  
by Dan Buchler

**R**umors have been a way of life in the personal computer business ever since the first Altair hit the streets. This column has appeared intermittently in the newsletter since the early days of Mini'app'les. During the last two years we have not made it a regular feature figuring that most Apple owners read about new products both in the national press and in the various Apple and non-Apple microcomputer magazines.

Last month I put an announcement in the "Announcements" section about the IBM compatible Rana drives. The announcement is still there! I received many calls from persons who did not know what they were. I guess most of you are like me. Even if you receive a magazine, you just don't have time to read everything. Well, I am being vain enough to assume that you may read the Mini'app'les newsletter. So, I am making an attempt to revive, at least for one month, the News from Afar column.

## Rana 8086/2

This product was announced about 6 months ago and scheduled for shipment in early 2nd quarter. Like most new products, it didn't come out on schedule. Now, it is supposed to ship around July 1.

What you get is this:

- A box approximately the size of two disk drives containing (funnily enough) two drives.
- Each drive will read either a double-sided 360K byte IBM compatible disk, or, any Apple compatible disk. With Rana software the second side can be used in Apple format.
- Inside the box is disk controller electronics and an 8086 coprocessor chip with supporting logic. The box is connected to the Apple through a cable and board which plugs into the Apple bus. The 8086 is the 16-bit version of the microcomputer used in the IBM PC. That means it runs faster! The box also contains 256K bytes of of random access memory, expandable to 512K bytes, and 16K of ROM. Finally there is video logic compatible with the IBM which provides low and high resolution black and white and color output, up to 640x400 pixels in black and white, text or graphics, and, 80 x 25 characters in RGB color or black and white text mode.
- Software includes MS-DOS 2.0, GW Basic, MicroSoft Windows and Rana enhancements to PRO-DOS, DOS 3.3, CP/M 56 and CP/M 60.

It is rumored that the system will run Lotus 1-2-3, although whether this is a customized version or a standard IBM PC version, we do not know. The system has been seen at several computer shows. The delay in shipping may be due to the MicroSoft Window software which has yet to become generally available in the pure IBM form.

The list price is \$1800. Now, before your head hits the ceiling, realize something about IBM PC and compatibles. You are not dealing with home computer prices. If you go out and buy an IBM compatible PC, you fork out about \$2500 at discount prices for a 2 drive system with 128 or 256k. You may get some software, but usually not what you want. I figure the pricing on this unit as follows. Assume a 15% discount which brings the Rana price to \$1530. DOS 2.0 and Windows are worth at least \$150 (at discount prices) and the expandability to 512K is worth \$100 in card savings. So, for \$1500+ you get what you might otherwise have to pay \$2800 for.

GOTO 19

## Save \$\$\$ & Gas

*Specify // or //e	List	Ours
PFS: File *	125.00	99.95
PFS: Report *	125.00	99.95
PFS: Graph *	125.00	99.95
PFS: Write //e	125.00	99.95
Flight Simulator II	49.95	39.95
Beagle Basic	34.95	27.95
Format II	150.00	121.95
Master Type	39.95	31.95
Multiplan (DOS)	250.00	199.95
Dollars & Sense	100.00	79.95
Homeword	49.95	40.95
Pie Writer	149.95	122.95
Magic Memory	89.95	79.95

Fontrix	List	Ours
Fontpak	75.00	61.95
Vol 1, 2, or 3	20.00	16.95

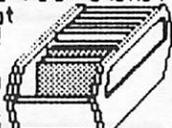
New for Macintosh		
	List	Ours
Multiplan	195.00	159.95
Microsoft BASIC	150.00	122.95
ClickArt	49.95	39.95

other software coming soon

**SALE**  
**VersaForm**  
List 389.00  
Sale 299.95

**Incredible Jack**  
List 179.95  
Sale 99.95  
with any purchase over \$30 from this ad.

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Holds 100+ Disks!  
Great buy!  
List 36.00  
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News from Afar Concluded from page 18

What are the disadvantages:

1. You tie up your Apple.
2. You use up an Apple slot.
3. You must use the Apple keyboard wherein control combinations have to be substituted for IBM PC compatible function and other special purpose keys which are not contained in an Apple keyboard. It is understood that, in order for the Rana to be compatible with the ][+, the system does not make use of //e keyboard features.
4. You get no IBM PC compatible expansion slots.
5. \$1500 is still \$1500!

Unknown at this time is how, if at all, you can use other Apple peripherals, such as a modem or other disk drives, with the 8086. Also unknown is how really compatible the unit is with the IBM PC.

Anyway, if anybody thinks they might be interested in a bulk purchase, once the thing comes out and we have a chance to evaluate it - let me know!

Use an Epson with a Macintosh

This piece of information is courtesy of Subir

Chatterjee. It seems that Epson are about to release a board which plugs into your FX-80 or FX-100 which allows the Epson to both talk serially and to be compatible with the Apple Image Writer printer. To this day, if you wanted to print from a Mac, you had to have an ImageWriter (made by C. Itoh).

Use an Okidata with a Macintosh.

There's also something in the wind from Okidata. Maybe you can use your Okidata printer with a Mac. It will probably be delivered in the form of new ROMs for the printer.

Macintosh software developments.

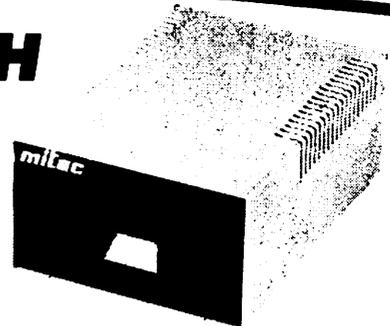
If you are a Mac owner or are thinking about a Mac, you probably know that Apple published a document about one a month listing those companies developing software for the Mac, the product on which they are working and the projected release date. Those release dates have proven to be rather optimistic (but that is a norm for the industry). At any rate, there are companies developing Unix and Xenix operating systems and lots of other goodies.



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# Increasing Disk Storage (Part 7)

Eliminating Redundant Data  
by Steve George

**A**nother area for saving disk storage space is not really a space-saving technique, but rather data compression which results in storing the same information in a smaller space.

Last winter I contributed a set of programs to the software coordinator which would 'compress' and 'decompress' a hires picture along with an Applesoft driver. Parts of the programs have been used for loading in the compressed DOM logos since February. The programs are: HIRES SCREEN SCRUNCHER, HIRES.PACK, and HIRES.UNPACK. They are copyrighted but we received permission to use them from the publisher of Hardcore Computist (Charles Haight). The programs were written by Robb Canfield.

A second immediate use for these routines was with the club's Slide Show used at every computer show. The 'slides' are a series of 15 hires pictures which explain: who we are, what we do, when we do it, how often, and how to join in on all the fun. (Never quite sounded so inviting before, eh?)

The first obvious problem is that 15 pictures won't fit onto a single disk (a decided necessity). Secondly, in a vanilla 48k Apple you only have memory from about \$800 to \$9A00 (with DOS loaded and MAXFILES1). That's \$9200 bytes @ \$2000 bytes per picture = 4 hires pictures in memory at any given time (plus room for a program to do the memory moves to display the desired picture).

Canfield's routines will condense the information contained on a hires screen saving storage space on disk and in memory; and they are fast to load and space-efficient.

The process is as follows: a hires screen is scanned vertically looking for recurring sets of bytes. Whenever adjacent (top-to-bottom) bytes match for 4 positions or more, they are encoded by the program into a 3-byte string. This is essentially the method for compacting.

This 3-byte string contains 1) a special hex number to tell HIRES.UNPACK that what follows has been compacted, 2) the number of times to repeat the byte of compacted material, and 3) the byte which represents hires screen information which is to be repeated.

This method of scrunching is more efficient (storage-wise) than the scruncher back on DOM #14. The illustration below shows the storage requirements for the first 9 pictures we use in the Mini'app'les Slide Show (numbered 0-8):

Slide Show	HIRES SCREEN		
	DOM#14		
Picture Number	storage # sect.	storage # sect.	% saving over norm. 34 sect.
0	8	5	85%
1	23	11	68%
2	28	19	44%
3	20	13	62%
4	20	17	50%
5	23	20	41%
6	21	15	59%
7	9	6	82%
8	14	14	59%

(Even this last one which requires 14 sectors for storage for either crunched version, is actually shorter in length by 8 bytes).

When compared to normal storage, the HIRES SCREEN SCRUNCH version saves an average of 61% for the pictures sampled above. Incidentally most of the pictures listed are awash with brilliant colors. These routines shrink and then expand to produce an EXACT duplicate of the original picture. They do NOT 'average' any bytes as some routines do, nor do they allow for a 'percentage error' allowance.

In the same storage area as 9 normal pictures (306 sectors), our Slide Show has 18 sectors of 'start-up' programs and 16 compressed pictures! This is still too much to be fully memory resident in 48k, but with the help of some extra RAM it all fits nicely, and avoids constant disk access.

To use these programs, simply RUN the Applesoft program HIRES SCREEN SCRUNCHER and follow the prompts for either compressing or de-compressing a hires picture.





# Networker Update

A Crash Course in Software  
by Steve George

**S**ince the article appeared describing the Networker modem and 2 software packages, it has come to light that the lesser expensive piece of software has a fatal flaw in it. It CRASHES on any disk error when trying to save the Text Buffer!!

I first pointed out a problem with disk errors to ZOOM Telephonics last February at which time the software re-booted, effectively wiping out your Text Buffer when the hires picture was loaded. They assured me that the problem was fixed in the latest version (1.1). THAT problem was resolved, but another one cropped up: crashing.

But, all is not lost! Just because the program crashes, don't conclude that your data is lost forever. In fact, given the (poor) choice between rebooting and crashing, its better to crash in this instance. USUALLY you'll crash into the monitor. (DON'T POWER-DOWN!) Insert a disk with a short or non-existent 'Greetings' program on it and boot from the \* prompt with '6 ctrl-P' <Return>. When the program below is RUN, you can recover your Text Buffer.

The BASIC program (read: slow), has been given to Diskover Software to give to those who want/need it. It will also be given to the software coordinator for possible inclusion on a DOM.

If you just can't wait that long, it is reproduced below to further test your typing skills. (See, Type Attack was useful.)

```
100 POKE 222,0: ONERR GOTO 320
110 D$ = CHR$(4):BETA$ = "": TEXT :
HOME : PRINT " * S. GEORGE'S
BUFFER RETRIEVAL *": PRINT : PRINT
"WORKING ";;: FOR LOC = 2816 TO 34815
:BYTE = PEEK(LOC): IF BYTE = 141
THEN PRINT "*"
155 IF BYTE = 255 THEN POKE LOC,160
160 IF NOT BYTE THEN LOC = 34815: GOTO 175
170 LENGH = LENGH + 1
175 NEXT :SECT = INT (LENGH / 256) + 3:
PRINT : PRINT : PRINT "1) INSERT AN
INITIALIZED DISK WHICH HAS "
CHR$(7);SECT" FREE SECTORS": PRINT
: INPUT "2) SAVE UNDER WHAT NAME: ";
NAME$: PRINT : PRINT D$"MONCIO":
PRINT D$"OPEN "NAME$: PRINT D$
"WRITE "NAME$
230 FINISH = 2816 + LENGH: FOR LOC =
2816 TO FINISH:X = FRE (0):ALPHA$
= CHR$( PEEK (LOC)): IF ALPHA$ =
```

```
CHR$(141) THEN PRINT BETA$:BETA$ =
"": NEXT
300 BETA$ = BETA$ + ALPHA$: NEXT
320 RR = PEEK (222): POKE 216,0: PRINT
: PRINT D$"CLOSE": PRINT D$"NOMONCIO":
IF RR THEN ERR = PEEK (222): PRINT
D$"DELETE"NAME$: PRINT : PRINT CHR$
(7)"ERROR #"ERR". FIX IT AND RUN
AGAIN": END
325 PRINT : PRINT NAME$ " HAS BEEN SAVED!"
```

There is room for this much and nothing more, so don't add to it. The Applesoft program and variables storage ends just 4 bytes before your data. If you care to re-write it keep in mind that data (your Text) is stored beginning at \$B00.

If you simply need a printout and no more, do the following (immediate mode is fine):  
PR#1 : FOR I= 2816 TO 34815: PRINT CHR\$  
( PEEK ( I ) ) ;; NEXT <Carriage Return>  
When the text has finished, garbage (unused Text Buffer characters) may follow, so just hit RESET to quit printing.



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# Communications

from 'BYTE LINES'-v.2 #3  
via the IAC Compiler (7/83)  
by Dave Crouse

**W**ith our recent program on modem communication it might be appropriate to discuss how the communication process works. Ian H. Itten covered the subject quite well in a recent article titled "Welcome to the Standards Jungle" (Byte, February 1983). If you didn't read his article, I'll try to synopsise it.

There are many standards in use for communication between computers and terminals: RS-366, RS-423-A, RS-499, V.10, V.24, Current-Loop to name a few. Those with an RS prefix come from the Electronic Industries Association (EIA), the V or X prefixes come from Comite Consultatif International Telephoneique et Telegrphique (CCITT). The RS standards are US recognized while the CCITT "standards" are world wide recommendations.

The RS-232-C standard is the most used currently for home computer applications (and probably for other applications). Its official title is "Interface Between Data Terminal Equipment and Data Circuit-Terminating Equipment Employing Serial Binary Interface". The standard consists of four parts: electrical signal characteristics, interface mechanical characteristics, functional description of signals and a list of standard subsets of signals for specific interface types.

In our applications, the computers involved in a connection are called Data Terminal Equipment (DTE) and modems are called Data Circuit-Terminating Equipment (DCE). The RS-232 standard was not designed for direct connection of two computers or a computer and a terminal and if used in those applications, most of the electrical connections are unnecessary. The standard was designed for transmission distances of less than 50 feet and speeds of less than 19,200 bits per second (bps). 9600 bps is the maximum practical rate for most applications, and switched telephone networks are even lower (110 to 300 bps). The voltage (transmitter) of the standard is >5 volts for a space (0) and <=5 volts for a mark (1). This is not compatible with standard computer circuit voltages, 0 to 5 volts.

The RS-232 uses 21 different signals lines. In the minimum configuration such as a video display terminal, only three lines are required (although a line called Protective Ground is recommended to connect the chassis of the two items for a fourth line). The required lines are:

- \*Signal Ground
- \*Transmitted Data
- \*Received Data

For a serial printer the Received Data Line is not needed but:

\*Data Set Ready (DSR) is added. This allows the printer to tell the computer that it cannot accept any more data. The DSR line actually has other purposes. In modem applications, it can tell that the modem is on and ready to accept data for transmission.

Another data control technique is to transmit ASCII (American National Standard Code for Information Interchange) control code DC 1 (Device Control 1 or XON) and DC 4 (Device Control 4 or XOFF). These correspond to Control Q and Control S. In this case the Received Data line is connected instead of DSR and the printer transmits the appropriate code when full or ready to accept data.

As you can see, the first application assures direct connection between the computer and the printer while the second can be applied over telephone lines. You could drive a printer at a remote location over the phone assuming that the computer operating system can shut off the data flow fast enough to prevent overflow at the printer.

In Full-Duplex Private-Line Modem applications, the lines used are:

- \*Protective Ground
- \*Signal Ground
- \*Transmitted Data
- \*Received Data
- \*Received Line Signal Detector
- \*Data Set Ready (possibly)

The Received Line Signal Detector, often called Carrier Detect, says in effect, "I hear something like a modem trying to talk to me." This can signal the computer that someone is trying to make contact.

In Half-Duplex Private-Line Modem applications, two lines are added to the Full-Duplex lines:

- \*Request to Send
- \*Clear to Send

These lines control the direction of the half-duplex operation. The request indicates that the computer is ready to send. The clear indicates that the modem is ready to receive characters for transmission. The request causes the modem to turn on its transmitter. When the computer is finished with data transmission it turns off the request line causing the modem to turn off the transmitter. As you can see, this approach requires that the two devices attached to the modems (it takes two to tango and to transmit/receive) cooperate in choosing the direction of transmission.



# Printers

## Daisy Wheel Printers

As promised in the last issue, I am going to outline some of the basics of daisy wheel printers. Because of space restrictions, the glossary of printer terms will have to wait until the next issue.

Daisy wheel printers are derived from the development of typewriters. Early typewriters used individually controlled mechanisms for each letter (or 2 including the 'shift'). This kind of arrangement was inherently slow, and the standard 'QWERTY' keyboard was designed deliberately to limit the speed of typists. (I understand that the //c uses optionally the 'DVORAK' arrangement, which is designed for maximum speed of input).

Early electric typewriters used this mechanism which limited not only the speed, but also the typestyle to that of the original manufacture. IBM introduced the 'golfball' system which allowed faster speeds and the changing of the typeface. The mechanism was still quite complex, with a surprising number of moving parts. The daisy wheel is a direct descendant of this idea. It is so called because of the shape of the wheel on which the characters are held. (The NEC Spinwriter uses a 'thimble' rather than a wheel, but the principle is the same.) The wheel itself is normally removable, allowing for different sizes and styles of print.

The advantage of the daisy wheel printer is that it allows extremely high quality. Hardcore is produced using a daisy wheel printer to give the highest possible quality of print. As with all engineering, in order to achieve this high quality, there are some trade-offs. These are versatility, noise and speed. Because a new wheel is needed for each style with a price of, typically, £12 - £18 each, not many styles tend to be used. The style that is used for Hardcore is called Madeleine. Other styles you may spot from time to time are :-

This is 10 pitch Courier

This is 12 pitch Letter Gothic

The Madeleine font is what is called a 'proportional' font, that is, the width of each character is different, as opposed to a 'monospaced' font, where each character has approximately the same width. Proportional spacing is generally considered to be easier on the eye because the words are more solid. It also allows more letters to be put in the same space. e.g.

iiiiiiii (proportional)  
iiiiiiiiii (monospaced)  
mmmmmmmm (proportional)  
mmmmmmmm (monospaced)

Some word processors such as Wordstar claim to support proportional spacing, when what they actually use is proportional word spacing. This means that the 'white space' between words when fill-justifying a line is evenly distributed between the words.

Here is a sample paragraph, printed first as Applewriter would print it, monospaced and fill-justified with whole spaces. Next on Wordstar, with monospacing but proportional word spacing, and finally in the style that we use in Hardcore, with full proportional letter spacing, and word spacing.

Here is a sample paragraph, printed first as Applewriter would print it, monospaced and fill-justified with whole spaces. Next on Wordstar with monospacing but proportional word spacing, and finally in the style that we use in Hardcore, with full proportional letter spacing, and word spacing.

Here is a sample paragraph, printed first as Applewriter would print it, monospaced and fill-justified with whole spaces. Next on Wordstar, with monospacing but proportional word spacing, and finally in the style that we use in Hardcore, with full proportional letter spacing, and word spacing.

Word processors that support full proportional spacing on daisy wheel printers include Format 80 and Gutenberg. Two that include proportional justification are Wordstar (if you have CP/M) and Letter Perfect. This degree of control of the printer is available because the Qume and Diablo models which are the most important for software support, allow absolute carriage movements in units of 1/120th of an inch. Most Dot Matrix printers do not have such commands. One honourable exception is the Centronics 737/9 on which Hardcore used to be prepared, another being Epson's new LQ1500, and of course Apples own Imagewriter. Printers such as the Epson FX80 have a proportional character set, but without very complex programming proportional justification cannot be achieved.

Because very small movements of the head can be made, graphics can be produced of a very high quality, although the aspect ratio is usually wrong, and it can be very slow, as each dot is produced by printing a full stop character. The character set of the Apple LQP, which is an Apple modified Qume II, is specially designed to allow faster printing of graphics than most daisies. Intensive use for printing graphics means a lot of wear on the full stop character, so on some machines these are made of metal. The diagram of the daisy wheel was produced on Logo, and printed on the Ricoh RP1300. You may notice how the picture has been stretched sideways in printing.

Ribbons are normally of one of three types, fabric, carbon single-strike and multi-strike. Fabric ribbons are the cheapest to use and consist of a loop of ribbon saturated with ink. Their life is limited by the faintest image that you can accept. They are good for first drafts and 'in-house' use. Single strike ribbons consist of a fine transparent backing with an even coating of carbon. The impact of the character transfers the carbon to the paper, and the ribbon is moved on by the width of the character. This gives the highest possible quality, but at



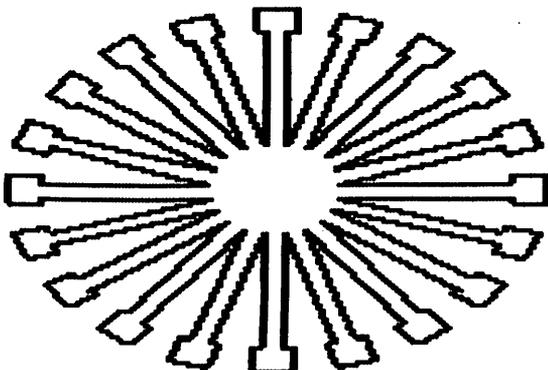
### Printers Concluded from page 23

the highest price. Multi-strike is a compromise. The same basic principle is involved, but the coating of carbon is thicker, and the advance after printing a character is smaller, typically about 1/4 - 1/6th of the width of the character. While costing slightly more than single-strikes, they last many times more. Specialist ribbons include red or red & black for printers that support two colour effects, and correctable types for machines that can be used as typewriters.

The use of typewriters that can be used as printers and vice versa is increasing with companies such as Brother and Silver Reed who have made typewriters for many years. When looking at printers that can have keyboards attached, it is important to check that the keyboard can communicate fast enough with the printer. One or two models cannot keep up with a fast typist.

As with dot matrix printers, so paper feed is important on letter quality printers. All models, as far as I know, have friction feed, which means that printed stationary can be used. It does mean that each sheet has to be put in by hand. Tractor feed, so that labels and forms can be accurately fed, are normally available as an option (often more than £100). Single sheet feeders, which will automatically feed a new sheet of paper when necessary, are again extra - a simple one will cost from £220 (for a Brother HR15) up to over £500. More sophisticated feeders incorporate more than one hopper, so that a choice can be made for example between headed paper, continuation sheets and envelopes. The cost of these is very high.

The major disadvantages of this type of printer are speed and noise. Typically the speeds vary from 10-12 characters per second up to a maximum of 65-70. The actual throughput is often faster than dot-matrix printers because there is often a facility to skip over spaces at high speed, and they often have faster Line/Form Feed.



### Notice

The above article appeared in the June, 1984, edition of 'Hard Core', the journal of the British Apple Systems User Group (BASUG) - Volume 4, No. 3, Page 38. BASUG is the Apple user group in the U.K.

**Mini'app'les Software Disks  
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- **Higher Text Extensions - MSD #3.** Contains Higher Print by Dan Buchler, Message Maker by Charles C. Boody and Higher Word-processor by Don Hagberg.

Higher Print provides a high density print capability with a selection of fonts and more if you own Higher Text from A.P.P.L.E. The newsletter headers and logo are printed with Higher Text.

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Higher Word Processor is a easy to use line oriented text editor suited to letter writing and everyday home use. It integrates with Higher Print.

All MSDs are available at meetings, to members only, for \$15, or by mail from Terry Schoeppner for \$17.50. See classified ads.



# Minutes

June Board Meeting  
by Ken Slingsby - Secretary

**P**resident Dave Laden called the meeting to order. The secretary's report was approved as written in the newsletter. The treasurer's report was not available.

The resignations of Scott Ueland and Subir Chatterjee as Vice President and SIG Director, respectively were accepted by the board. Mark Abbott and Dick Marchiafava were appointed to fill their unexpired terms. The motions were made, seconded and carried. The position of CP/M SIG Chairman is unfilled at this time. The Club is asking for volunteers to step forward.

The board also accepted the appointments of the Newsletter Publication staff as made by Dan Buchler. The appointments of Technical Support director, Bibliographer, and Communication SIG Chairman were tabled.

The following items of business were approved:

- Name tags for all persons listed on the Newsletter masthead will be purchased. Hugh Kurtzman was appointed to investigate the purchase of "generic" tags.
- Business cards for the Club officers.
- The withdrawal of Dennis Foster as paper sales vendor was accepted. Increased costs (>\$30%) were cited as the reason.
- All disk software (DOM's, Eamon Adventures, As-Is Public Domain, and IAC disks) will be sold at meetings for \$5.00. Mail orders of same will be sold for \$6.00. This reflects the club's ability to more efficiently distribute the disks. The MSD software will continue to be sold at the current prices.
- The Twin City Computer Show will be held October 25-28 in the Minneapolis Auditorium. The show is now under new management and promises to be better than we saw in previous years. Dan Buchler and Steve George will coordinate the Club's activities at the show.
- The Club will purchase two disk drives and a Hayes Micromodem for the Club's third Apple system. The money had been previously allocated but not spent for this equipment. For the time being, all club Apples will be controlled by Hugh Kurtzman.
- Dan Buchler was authorized to purchase a maintenance agreement for the Club's letter quality printer. Hugh Kurtzman was

authorized to get the Club's CP/M board repaired.

- President Dave Laden asked that all budgets be presented to him by July 3 so that they may be discussed at the July 11 board meeting.

The meeting was adjourned.

Respectfully submitted,  
Ken Slingsby



## Zapper

A Public Domain Zapper  
Performs Lightning Fast  
by Steve George

**J**ust 20 minutes ago the sun was shining and the neighborhood kids were gleefully tearing up your newly-mowed lawn with their dirt bikes and getting grass stains EVERYWHERE while practicing their form of 'dancing'. Not wanting to sound like YOUR parents, you put their antics out of your mind while finishing the latest newsletter article.

Meanwhile, the now mud-bikes were trashed in a hurry to avoid the pelting rain. The polo shirts were just starting to lose their lawn-shaded colors in the wash, when suddenly.... !KaBOOM! Th-that was a c-close one!!

Close enough to startle you out of your concentration (wondering where the Sunday had gone), to realize that there you were: sitting at your computer during the raging lightning. Quickly you save-off your latest rendition and unplug your Apple. No sense not having a machine to load it back into, right?

At least two members have had their Apples zapped and in both cases totalled (from the point of view of the insurance companies). One of these cases was unusually severe. Metalized wallpaper in the bathroom fell off the wall! The point is that lighting can, and will, damage sensitive electronic equipment. Surge protectors will only protect from surges caused by distant strikes. Only total disconnect may protect your investment during a direct strike on your house or apartment!

Now, did you also unplug the modem? BZZzzt.



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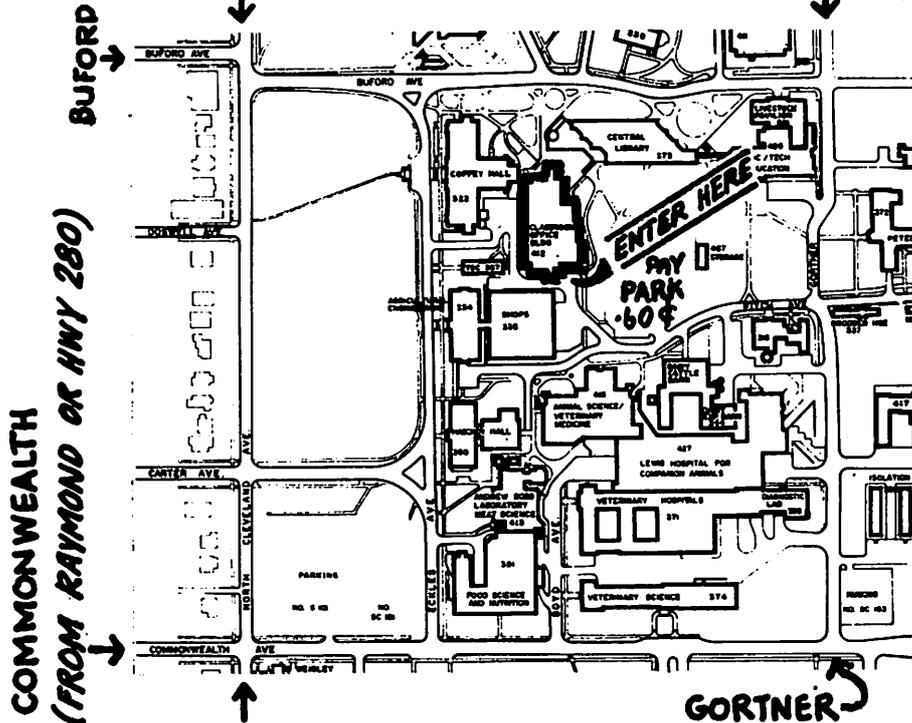
GORTNER

WHEN ON THE CAMPUS,  
TAKE GORTNER TO  
FITZ AVENUE, THEN GO  
WEST ON FITZ TO THE  
PARKING LOT. THEN  
USE SOUTH ENTRY AT  
CLASSROOM-OFFICE  
BUILDING NO. 412.

FREE PARKING AT  
BOTTOM OF HILL

MEETING ROOM NO. B45  
IS JUST INSIDE THE  
DOOR, ON GROUND  
LEVEL.

FROM MIDWAY  
PKY TO FREE  
LOT ←



← COMMONWEALTH  
(FROM STATE FAIR  
GROUNDS AND  
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Steve 631-3682 (home)  
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NUMERIC KEYPAD, new \$135;  
\$70 or best offer.  
Gloria 457-2828

Most DOM's and all the  
MSDs are available at club  
meetings. Because of the  
volume of disks  
distributed, they are not  
tested. Club members are  
asked to make every effort  
to get the DOM or MSD  
running. For example,  
occasionally the DOS on  
the disk will be bad, but  
it will catalog OK and one  
can run the programs.  
Master Create on your  
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See announcements  
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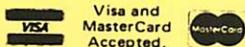
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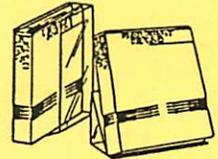
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