mini'app'les

apple computer user group newsletter

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NEXT MEETING

BUSINESS USERS NIGHT

The next meeting of Mini'App'Les will be on Wednesday Feb 20th at 7:30pm. Meeting will be held as usual in the Minnesota Federal Savings and Loan Building, 9th Avenue South, Hopkins, Minnesota.

The topic for the evening is 'Apples in Business'. We have tentatively arranged 3 panel discussions as follows:

DATA BASE MANAGEMENT SYSTEMS-
with emphasis on the High Technology, Interactive Business Mangement System(IBMS), Muse and Apple Controller packages. We will address requirements for DBMS, difficulties encountered before, during and after purchase, and what makes a DBMS good or bad. Panel members:
Nat Forbes, Gary Hennes, George Otis.

GRAPHICS IN BUSINESS
Several users have purchased an Apple because of the Apples superior graphics features, both in video display and its capability to support such devices as the Graphics Tablet and good quality communication. Panel members: Chuck Stockwell, Gary White.

INTERACTIVE TOOLS
Some tools which work well for diverse applications have appeared. One of these is Visicalc. How can such a package make life easier for the business user?. Panel members: Gary Hennes, Gary White.

MARCH MEETING

Tentative: PRINTER NIGHT. we hope to have a variety of printers on hand and WORKING on Apples. You will see first-hand how different printers compare. The peculiarities of each type will be explained. Users experiences will be exchanged. Meeting will take place on Wednesday March 19th at 7:30pm.

APRIL MEETING - ELECTION NIGHT Weds April 16th.

WEST COAST COMPUTER FAIRE

This annual event is scheduled to take place March 14,15 & 16 in San Francisco. Besides being a show of immense interest to Microcomputer enthusiasts, it will be accompanied by a meeting of the International Apple Corps. Those of us who live "Back East" are encouraged to attend the event in order to reduce the dominance of the Westerners (No offense meant Val Golding et al). If you think you might be in 'Frisco around that time please call Dan Buchler. Regarding the distribution of the Apple Orchard documentation being published by IAC, the rumour is that they plan to distribute it just before the above mentioned event. By the way, all extra copies ordered by Mini'App'Les have now been spoken for.

PAGE LIST

This program causes a listing of INTEGER or APPLESOFT programs to stop after exactly one "page" (screen) full of information. Steve Johnson keyed in the binary program PAGE LIST. The program, written by Robert Diaz of Torrence, California, appeared in issue #39 of Dr Dobb's Journal of Computer Calisthenics & Orthodontia. The last paragraph states "I have chosen not to copyright this program in order to produce maximum distribution. It is my hope that most of the Apple owners will be able to utilize this program. Therefore, any person or group wishing to copy the program is more than welcome to do so."
The program is now in the user bank. PAGE LIST resides in $88 bytes of storage starting at $300, so it usually will not interfere with other software. Utilization is explained below:

CALL 770   To turn on PAGE LIST
LIST   If PAGE LIST is on,
            will list next 20 lines & stop.
ESC   List one more line.
CTL C   Return to BASIC.
Other keys LIST 20 more lines.
CALL 815   TURN OFF PAGE LIST.

PAGE LIST will work with many other programs such as Assemblers and Editors. This is because it intercepts the output which is directed to the screen and counts lines, stopping after 20 lines. A Diassembler listing is published herein for those of you who don't want to pick up a copy from the bank or enjoy keying in programs.

STRAIN RELIEF NOTCHES

You have probably noticed two "C" shaped notches cut into most diskette jackets, on either side of the head access area, and wondered about their purpose. The following paragraphs are copied from INFORMATION, a series of technical notes from Verbatim which I received in response to a reader service card.

The purpose of the notches is to relieve any strain exerted on the diskette due to mishandling. They are called "strain relief" notches.

In a jacket without notches, pressure on the sides would tend to cause the jacket to crease in the area below the head access hole. That is one of the four points where the media is closest to the edges of the jacket. A crease in this area will usually result in the media rubbing the jacket.

When the same type of pressure is applied to a jacket with relief notches, the strain is taken up by the notches at either side of the media, and the chances of rubbing is considerably reduced.

These "strain relief" notches have no other function in the jacket, and have no functional value in the disk drive. Jackets without strain relief notches are usable.

```
0300-   00              BRK
0301-   00              BRK
0302-   A2 04           LDX    #$04
0304-   B5 35           LDA    $35,X
0306-   50 39 03        EOR    $0339,
X
0309-   D0 06           BNE    $0311
030B-   CA              DEX
030C-   D0 F6           BNE    $0304
030E-   4C 20 03        JMP    $0320
0311-   A2 04           LDX    #$04
0313-   B5 35           LDA    $35,X
0315-   9D 2A 03        STA    $032A,
X
0318-   BD 39 03        LDA    $0339,
X
031B-   95 35           STA    $35,X
031D-   CA              DEX
031E-   D0 F3           BNE    $0313
0320-   A9 28           LDA    #$28
0322-   8D 00 03        STA    $0300
0325-   A9 15           LDA    #$15
0327-   8D 01 03        STA    $0301
032A-   60              RTS
032B-   F0 FD           BEQ    $032A
032D-   1B              ???
032E-   FD A2 04        SBC    $04A2,
X
0331-   BD 2A 03        LDA    $032A,
X
0334-   95 35           STA    $35,X
0336-   CA              DEX
0337-   D0 F8           BNE    $0331
0339-   60              RTS
033A-   3E 03 1B        ROL    $1B03,
X
033D-   FD 48 49        SBC    $4948,
X
0340-   8D F0 05        STA    $05F0
0343-   CE 00 03        DEC    $0300
0346-   D0 0A           BNE    $0352
0348-   A9 28           LDA    #$28
034A-   8D 00 03        STA    $0300
034D-   CE 01 03        DEC    $0301
0350-   F0 04           BEQ    $0356
0352-   68              PLA
0353-   4C F0 FD        JMP    $FDF0
0356-   A9 15           LDA    #$15
0358-   8D 01 03        STA    $0301
035B-   AD 00 C0        LDA    $C000
035E-   10 FB           BPL    $035B
0360-   48              PHA
0361-   A9 00           LDA    #$00
0363-   8D 10 C0        STA    $C010
0366-   68              PLA
0367-   C9 83           CMP    #$83
0369-   F0 0B           BEQ    $0376
036B-   C9 9B           CMP    #$9B
036D-   D0 E3           BNE    $0352
036F-   A9 01           LDA    #$01
0371-   8D 01 03        STA    $0301
0374-   D0 DC           BNE    $0352
0376-   A5 33           LDA    $33
0378-   C9 BE           CMP    #$BE
037A-   D0 03           BNE    $037F
037C-   4C 03 E0        JMP    $E003
037F-   C9 DD           CMP    #$DD
0381-   D0 03           BNE    $0386
0383-   4C 00 00        JMP    $0000
0386-   4C 09 40        JMP    $4009
```

HAYES MODEM - WHY BUY ONE?

If questions put to me in recent months about modems are any indication, there are a several users who might question the motivation or utility of buying a modem. Those of you who have been with the club for over 6 months might remember a presentation given to us by Jim White who thoroughly researched the capabilities of the Hayes modem. It was his talk that finally convinced me to lay out over $300 greenbacks. This article presents a review of how I feel now about the Hayes and perhaps some reasons why you should or should not buy one.

WHAT IS A MODEM. The acronym means MOdulator-DEMomulator. Digital information such as that emanating from a computer may be transmitted over telephone lines using several tones in the audio range. When there is no data being sent, but a connection or data link between two computers, or a computer and some digital device, has been established, a carrier signal is continuously transmitted. The carrier is in fact a tone of one of the frequencies. When a character is actually being sent, the carrier is 'modulated' such that the frequency of the carrier tone is shifted. A single character in the Apple is one byte which,as you know, consists of 8 bits. Well with the type of transmission first used in the Teletype, 2 more bits are added to tell the receiving end when a character starts and when it stops, thus making 10 bits for each character. These 10 bit characters are usually sent at 300 bits per second (300 baud) thus allowing transmission of 300/10 = 30 characters per second. Occasionally, when transmitting to older terminals such as teletype 33/35s, it is necessary to send at 110 baud (10 characters/second. If you listen into a telephone line on which there is digital communications taking place, you can hear all of these signals. If thereis a steady whine, the carrier is on, but no data is being sent. When data is being sent, i.e. the carrier is being modulated, then the whine wobbles up and down.

In the earler days of digital communication, Ma Bell was very jealous of her property and safty of her employees. Consequently, the acoustic coupler was developed. (There were other reasons for this besides Ma Bell's jealousy.) The acoustic coupler is a modem which contains the electronics to convert from/to the modulated carrier signals to/from a standardized set of electrical signals compatible with may pieces of electronic gear. It also included a microphone/speaker to convert from the audio to electrical and vice/versa. The reason why the acoustic coupler defeated Ma Bell's jealosy is that there was no direct electrical connection to the telephone companies equipment. It also provide maximum convenience in that one could carry it around and attach it to anybody's phone without need for a screwdriver. Well you may have noticed that I mentioned electronic gear above. A standard was

developed which defined the interface to this communication world. For many years this has been known as RS232B. Unfortunately, your simple unadorned Apple does'nt know what RS232B is. You have to convert electrical signals on the bus to RS232B. Well if you have an acoustic coupler, ie. a need to create RS232B, then you must buy an Apple Communication card or equivalent. In fact you might already have a communication card if you own a printer with a serial interface. Then all you need is an acoustic coupler.

For those of you wno already have an acoustic coupler and are short of cash, consider some of the less expensive communication cards. Such cards can be bought for as little as $50. However, for that price you wont get any on board ROM. That means that you have to provide the software to drive the interface in RAM. Some of the less expensive boards do provide some software, but it probably won''t do all you want in the way of communicating with remote terminals or the Source. So unless you are adept at communication software development, my advice is to stay away from such combinations. So where does that leave us? If you have an Apple Communication card (they do cost $180), by all means buy an acoustic coupler. The apple on board in ROM software works well (it is'nt as extensive as the Hayes as you will see later). A new acoustic coupler costs between $175 and $225. There are several reputable manufacturers. You can even buy an adequate used one for about $50.

Now we come to the main point of this article. If you don't already own some of the above mentioned equipment, a new choice is available - The Hayes. Well the Hayes is not an acoustic coupler. Its a direct-connect modem (the Hayes micromodem) and Apple Interface card sold as a package. The list price of $380 may seem steep, but consider these points:

1. The Apple Communication card (which is the only true comparison capability wise) lists for $180 and a typical acoustic coupler sells for around $200 making a total of $380 - a wash!
2. The Hayes is a direct connect device, thus eliminating the acoustic microphone to receiver path a possible source of interference.
3. The Hayes has automatic dial and automatic answer plus software to support both in its ROM. Automatic dial and automatic answer modems cost more than $200!!! and Apple does'nt support them in their software.
4. The Hayes has in a period of one year made an excellent reputation for reliability and quality. Their support is good - I have some personal experience there.

I know I sound biased. I am. I really beleive the Hayes is the best way to go and I'll tell you more about it below.

So we have made a case to buy a Hayes. But why buy a modem at all. What can you do with the $380 dollars worth of nice looking electronics besides bragging that you have more hardware than that other member at the club? Here are a few things:

a. You can communicate with your friends Apple, TRS80, PET. In fact he can talk to your Apple, and you need'nt even be home. Thats one nice feature of the Automatic answering.

b. If you have access to a printing terminal, or any communication terminal, you can call your own Apple from that terminal. This is particularly useful, if the terminal is a printing terminal. Then you can get listings, print reports, etc. After all, the Hayes at $380 is alot cheaper than those printing terminals. In fact, if your work or hobby involves creation of reports or other publications, the printing terminal in conjunction with suitable word processing software provides an excellent printing setup. Thats how we publish this newsletter.

c. If you have need to communicate with timeshare computer systems, the Apple with a Hayes, allows the fantastic convenience of a terminal at home. The standard Hayes ROM software allows communication with Upper Case character set systems. I have a lower/upper case dumb terminal package, should you need to talk to that type of system.

d. You can talk to master computer systems on which reside program libraries such as the MECC system provided you have the downloading software. Hayes provides the listing of BASIC program that will allow you to LIST a BASIC program off the big system and transfer it into an Apple TEXT FILE. Thus, if the BASIC PROGRAM on the big machine is not 100% compatible with Apple, you can edit it, before EXECing it into Apple Basic.

e. You can talk to one of the rapidly becoming very popular 'Teletext' systems. Chuck Stockwell, one of our members, is very enthusiastic about the Source. It provides the very latest national news and sports coverage. Chuck tells of a situation where he was unable to obtain the sports event scores of a family member's home town event except through the Source. This service costs $2.50 per hour after you have paid the one time sign up charge of $100. There is a $5.00 per month minimum. The $2.50 is an evening/weekend rate.

f. If you use your Apple for Business, there are endless applications. There's an Apple in use at the Prairie Island Nuclear plant transmitting data to a remote location. Another member plans to transmit graphic information from one Apple to another right across the United States. Another member plans to transmit current test information to overseas locations. All of the above are using Hayes.

The Hayes software is flexible, but no package in a ROM can handle every situation. We copied the Hayes program to list a Basic program into an EXEC FILE. It allows transmissions of an Applesoft program sitting in one Apples memory to another. The way it works is as follows. The receiving Apple (the one asking for the Applesoft program) prints a LIST N,M command. Since the Hayes is connected softwarewise like a printer, the LIST N,M gets sent to the other Apple, which executes the LIST. N,M are chosen so that about 10 to 30 statements are listed. The other Apple on LISTing sends the listed statements back to the receiving Apple. Previously, the receiving Apple had OPENed a file, and done a
PRINT D$; "WRITE FILE"
INPUT A$
PRINT A$
thus the received Statements get written to a TEXT FILE. Then by EXEC FILE
the statements are input to BASIC as if they came from the keyboard. There is one flaw in the program as published by Hayes, besides some typos. Communication is by its nature not one hundred percent reliable. Errors in transmission do occur. Transmission of programs should be error checked using checksum techniques. (A checksum is a programming trick where the ASCII codes are added up like numbers before transmitting and on receipt. The total, or checksum is compared with the recalculated total at receiving end. If it does'nt match, the line is resent). We plan to modify the above mentioned program to include error checking and recovery.

Apple wrote an interesting program for their communication card which can be modified to work with the Hayes alled DATA MOVER. Hayes publishes a patch which allows DATAMOVER to operate with the Hayes. DATAMOVER works as follows. If you enter the Apple monitor and type
*1000:10 20 30
etc, the 10 will be stoted at hex address 1000, the 20 at 1001, the 30 at 1002, etc. Well DATAMOVER does the equivalent of a
PRINT "800:aa bb cc
where aa,bb,cc are the contents of 800,801,802, which in turn are the bytes that make up the binary program itself. At the receiving end, the Apple will store at 800, aa,bb,cc thus actually writing a copy of DATAMOVER into the receiving computer. In this way the receiving Apple needs no software at all except the Hayes ROM. Then after DATAMOVER has sent itself, it can transmit an INTEGER BASIC (not APPLESOFT) or Binary program.

The Hayes modem is not a panacea. I have had some problems with utilization of the Full Duplex capability. I tried to avoid discussing differences between full and half duplex in this article. Let is suffice to say that certain harware requires full duplex operation in which transmission takes place in both directions at the same time. Other

hardware operates in half duplex or in one direction at a time. To date we have not discovered a 100% perfect way of having one Apple keyboard operator talk to another only using the Hayes ROM software. Some special programs allow this to be succesfully accomplished.

Another annoyance with the Hayes is the fact that any programs that tab by setting the Apple cursor location CV or CH will not work with the Hayes. This includes the SC assembler, FILE CABINET, and other software. Note also that the Hayes is not compatble with Apple Pascal without modification. See PASCAL article elswhere in this newsletter.

I want to conclude by mentioning an application for modems not listed above because it really has'nt come to fruition yet. That is, game playing over the wire. Apple does provide a program called TELEPONG. It works but is not any fun because of long delays after your bat hits the ball. The potential to develop simulations (war, sports, life, etc.) where each player sees the simulation from his point of view, I believe to be a fantastic untapped area. Then carrying it one stage further, one can pit not only oneself against an opponent, but ones whole hardware/software system. One close example of this is Chess playing between computers. Imagine STARTREK where your opponent the KLINGONS are shooting at you in real time. May the best software win!!!!

PASCAL NEWS

A survey of Mini'App'les members who own language systems at the last meeting resulted in the following list:

Ann Bell   H 544-4505   W 546-3500
Chuck Boody   H 1-873-2227
Bill DeCoursey   H 574-9062   W 835-3400
John Hansen   H 890-3769   W 733-5746
Earl Hinrichs   H 623-0638
Hugh Kurtzman   H 544-7303   W 721-4875
Butch Rhoades   H 890-9779   W 540-1394
Chuck Stockwell   W 338-1441
Marilyn Thomas   H 824-9892   W 348-6013
Keith Madonna

If there are others, please let us know and we will publish an update.

With reference to articles in last months newsletter on PASCAL, I have no new information. If anybody has some good inputs about any of the PASCAL systems, please let us know so that we may all learn.
Keith Madonna recently purchased a copy of the PUMP package which provides a machine code interface between a PASCAL procedure and the Hayes modem. We hope to see a review from him shortly!.

MINUTES of JAN 19, 1980

Meeting called to order by Dan Buchler at 7:35 with 77 members in attendance. Minutes approved as published.

OLD BUSINESS

1. Disk purchases. The intention of the club to make a bulk purchase of disks has not been carried out because local suppliers have indicated a willingness to meet the prices of the mail order sources. This will save the club members postage and the club officers the task of distributing the disks. Lou Severino of Audio King has agreed to sell 3M diskettes to club members at $2.75 @ in multiples of 10. Proof of club membership (a newsletter--with mailing label (membership cards, when they are available) -- see I told you this newsletter was worth something!!) will be required. Contact Lou at 920-4272 for further information.
2. Verbatim disk problems. Verbatim has contacted Terry Pinotti indicating a great deal of concern about their disk problems. They are offering to replace all diskettes that have failed and have sent Terry disks to replace those of club members. They seem most concerned about their reputation, and really want to improve their image. Contact Terry to get a replacement, or contact Verbatim directly. One possible problem--pushing the disks into the drive too far causing it to be driven so it is swept in an eccentric manner.
3. International Apple Core is moving right along, and more information will be coming shortly.

NEW BUSINESS
1. The next meeting will be for Business users, and presently 6 people have indicated a willingness to speak. It should be a good session.
2. ZIM Computers now has the new 500 program (20 side) SUB-BANK #3, and will do in house copying with their fast copy program. Motion made, seconded and approved not to make further club copies of that bank to save the club disk costs. Members should go to ZIM to get copies. Gary Hennes, who lives "outside ZIM's backdoor" will also copy disks if ZIM is busy. The fast copy program does the job in about 20 seconds per side.
3. There seem to be many people with specific interests that need to meet others with similar interests. Nothing further was mentioned, but perhaps the club needs to look into ways to make such meetings possible.
4. SECRETARIAL EDITORIAL: We owe a vote of thanks to all of those stores who have catered to our needs in various ways outlined above. Of course they are doing it to help their business, but none the less they are helping us too...THANK YOU!!!

DAN ON PRINTERS

In the last newsletter we mentioned the Microtek and the Micro Peripherals Printers. A Mini'App'Les member brought a Micro Peripherals 88T to the last meeting. It is certainly a nicely packaged unit. It uses a conventional 5*7 dot matrix without descenders but appears to print a reasonably legible font. It is medium speed (100 chars/sec). We were unable to find out if any sort of graphics capability exists. (We hope to see one of these at the proposed printer night in March and get a chance to experiment).

I heard a story about the Microtek. It seems that a certain gentlemen had selected a Microtek on the basis of it having a high quality 9*7 dot matrix font. It uses a print head similar to the Anedex 8000 which has a reputation for quality printing. Well, on taking delivery and connecting the Microtek to the Apple, it proved not to print as nicely as the Anadex. Further, in the bi-directional mode, the left hand margin alignment was ragged. The manufacturer, on being queried about this, claimed they could do nothing to solve the problem. This particular Apple user returned the Microtek to the dealer, who did take it back without much fuss. (The manufacturer does advertise a 365 day guarantee). This same person is now the happy owner of a Paper Tiger. I do hope Microtek will rectify this problem and improve the print quality. They do have the makings of a good printer.

Talking about the paper Tiger, the January Call A.P.P.L.E. lists a one wire change to the game I/O port interface which will allow the Call A.P.P.L.E. Hires dump originally written for the IDS 225 to work with the Paper Tiger.

If things go as planned, this newsletter will be printed on a Diablo with a metal print wheel.

There is another new printer on the market. We seem to average one per month. This one is called the BASE 2. Its put out by Base 2 Inc, of Fullerton California. Anyone heard of them before?. Its advertised on p27 of the Feb. edition of Byte and lists for $499 or $549 with tractor. Their ad. mentions a graphic output option. Anyone having any information on the Base 2, please call Dan.

BUNKER RAMO PRINTER NEWS

Dan is working on completing orders. Have'nt seen any new software since last month. I want to repeat a warning previously issued. Don't spool a non dot matrix printer ribbon onto the Victor reels. Such ribbons lack the lubricant necessary for effective oiling of the print head. If you do so, your print head might jam up.

WANTED

Several members have indicated an interest in purchasing Applesoft-in-ROM cards. If you have just upgraded to a language card, let one of the officers know that you have a card for sale. Then, you members desiring to purchase a ROM, leave us your name, and we will complete the circuit.

SCANNING THE ISSUES

Feb Byte has article on a novel idea for a cheap plotter: Robert Newcomb of Wilmette, Illinois interfaced an Etch-A-Sketch to a micro. His interface would work with an Apple parallel card.

Byte also reports that the Apple III announcement is near. I heard elsewhere that it would come out mid-year. Byte says that it will be a bit-slice maybe. Heard elsewhere that there may be two versions - probably a fast bit-slice for Business and a slower (6809?) for hobby. For those of you not familiar with term 'bit-slice', it means a multichip high speed intergrated circuit technology, perhaps 10 times as fast as the more comventional microprocessor chip.

Also in Byte, the FCC new standard for RFI (Radio Frequency Interference) goes into effect on July 1. Apple will have to make modifications to comply.

In Jan. CALL Apple there is a good article on converting Integer Basic to Applesoft. (The article will be reproduced in this issue if room permits - I know alot of users who have Apple Plus machines who want Integer Basic programs to work). Randy Hyde of Applesauce again reviews the available Assemblers and again slaughters the Microproducts people!

NOTE ON LAST MEETING

A record number of members turned up last Jan to hear Randy Moser deliver a fantastic demo-talk about Mountain Hardware products. I would like to suggest to any other user group members reading this article that you arrange with Mountain Hardware to get Randy or his associate out to your club. Mountain Hardware pays their own expenses and after you hear their pitch you realize why. I have previously seen their products in various computer stores, but not until someone who really knows the product explains it to you do you really appreciate that which they have to sell. This is not meant to be a commercial about Mountain Hardware products, although I do beleive they have a good product, but an endorsement of their product promotion techniques. The INTROL PACKAGE, which interfaces the inexpensive BSR controller hardware to the APPLE, has a foreground/background capability, which in conjunction with the Apple Clock, provides automatic power-fail restart and recovery (if you have a ROM-PLUS). You have to see it demonstrated to appreciate it.

Thank you Randy and Mountain Hardware for an excellent program.

SHIFT LOCK FOR DAN'S EDIT

The User bank programs named DANS EDIT and LIST&PRINT48K together make up about the best word processing system for the money anywhere. Kidding aside, Dan put a lot of well-spent time into the package. I have gotten a lot of use out of it in the few short days I have had it running. The programs have saved me the expense of buying a commercial package to do the same job - for now. They are available free to members on the Mini'App'Les User Bank.

Occasionally there is a need to type a string in all capital letters - as when entering a title or a file name. The patch described below is copied almost word for word (byte ??) from Don Lancaster's article, LOWERCASE FOR YOUR APPLE II (Part 2), which appeared in the December issue of Kilobaud. The patch gives a shift lock capability while allowing a single character shift with the escape key as before the patch.

To enter the patch just load the 9/08/79 revision of FULLEDIT and type in the following lines (the same are applicable to LIST&PRINT48K. Line numbering is left to the user as an exercise) :

```
72 IF ZX = 27 THEN 79: REM ESC CHAR
74 IF ZX | 64  AND ZX [ 91 AND SH = 0 THEN ZX =ZX + 32: REM LOWER CASE IF NOT SHIFT
75 IF LOCK = 0 THEN SH = 0
77 GOTO 85
79 IF LOCK = 0 THEN 81
80 LOCK = 0:SH = 0: GOTO65: REM RELEASE LOCK
81 IF SH = 0 THEN 83
82 LOCK = 1: GOTO 65: REM SET LOCK, ESC #2
83 SH = 1: GOTO 65: REM SHIFT FOR ESC #1
```

All other lines remain the same as before. To use the shift lock, press the "ESC" key twice. All following letters will be in upper case. Numbers and punctuation will be in lower case (use the "SHIFT" key to shift them.). To unlock the shift lock, press the "ESC" once more. To shift a single letter while in lower case mode, press the "ESC" key once and type the letter. Letters following the shifted character will be in lower case.
          Submitted by Ken Slingsby.

COMMERCIAL/BUSINESS ADVERTISING POLICY.

You can run your advertisements in this newsletter - and get to about 150 Apple addicts. 1980 rates are:

Full Page in one issue	$20
Half Page in one issue	13.50
One vertical inch of space all the way across page (2 cols)	3.00/inch
One vertical inch in half col, about 3.5 inches wide.	2.00/inch

Advertisers must provide camera ready copy which must reach the editor not later than the first Wednesday of the month in which the ad is to be run.

BULK PURCHASE OF DISKS

As reported in January Newsletter, Scotch Diskettes may be purchased by members for $2.75. However, there has been a change in the method of distribution. Lou Severino of Audio King in the Southdale area, has kindly made available to us a special deal. He will purchase and stock 3M-Scotch Diskettes and sell them to members at $2.75 plus 11 cents (for the Minnesota Treasury). It should be pointed out that Audio King makes very little profit on this deal. It benefits them only to the extent that it gets members into their stores and assures Audio King of selling the diskettes (eventually). The advantage to us, besides the price, is that there is a readily accessible pick-up point and it relieves Terry Pinotti of the chore of distribution. If you want some diskettes, they must be bought in sets of 10. Call Lou, and find out if he has stock, then go in and pick them up. You must present your membership card (to be distributed soon - a membership list will be made available to Lou in the meantime).

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VENI, VIDI, VICI

CMX   SCHRIBE "VENI, VIDI, VICI"
CMXX   SI CAESAR > BRUTUS TUM CCX
CMXXX - -- -- --

It seems that the Williamsville Publishing Co has brought out a Latin based interpreter similar to BASIC called 'Imperial Roman Computer by Command of Caesar'. Numeric representations is in Roman numerals. If you think Buchler's code is hard to follow try following the same version in this language?

MINI'APP'LES is a non profit organization for Apple II owners living in the Twin Cities area. Membership is $10 per annum. Please send checks to the Treasurer at address shown on cover page.