



* BITS & BYTES * NEWSLETTER *



Mailing Address: P.O. BOX 110037 CAMPBELL, CALIFORNIA 95011-0037

* * * JULY 1989 * * *

PRESIDENTS MESSAGE
by Mike Ewell

The demo for the July meeting will be on using a BBS with a live hookup to the club BBS. Chris Schram will be doing the demo using the pay phone in the library! Bring any questions that you might have.

!+!+!+!+! PLEASE HELP WITH THE NEWSLETTER: !+!+!+!+!
The club could use your help with the newsletter. Ask Bill!!

I will be back on line soon with the BBS's. By the time you get this newsletter I may have some more new programs to add to the club library!

The club could use your help with the newsletter, Ask Bill!!
!+!+!+!+! PLEASE HELP WITH THE NEWSLETTER: !+!+!+!+!

If you leave your hunting camp and travel 10 miles south and then travel 10 miles west and you are still 10 miles to your camp, what color bear are you hunting? Answer in ASCII later

New to the library is XIB/1-5!! This is from Genial TRAVELER with permission to pass it along. Extended Extended Basic is just that. It has 45 new commands added to extended basic on a disk with 27 files and full.

L and M Systems is no longer a Myarc dealer by his choice.

!+!+!+!+! PLEASE HELP WITH THE NEWSLETTER: !+!+!+!+!

```

()()()()()()()()()()()()()()()()()()()()()()()()()()()()()()
[]
[] The July SBTIUG meeting will be held at 7:16 P.M. []
[]
[] THURSDAY, July 6, 1989 []
[]
[] The meeting will be held in the Saratoga Public []
[] Library. The library is located at 13650 Saratoga []
[] Avenue. From 280(680), take the Saratoga Avenue exit []
[] SOUTH. The library will be on your left, just past []
[] the Fruitvale intersection. This is about four miles []
[] from the 280 exit. []
[]
[]()()()()()()()()()()()()()()()()()()()()()()()()()()()()()

```

Member input is still needed for future demos that appeal to 2 or more members. More is better, but 2 can make the choice for More since the 2 speak up while the More remain silent.

!+!+!+!+! PLEASE HELP WITH THE NEWSLETTER: !+!+!+!+!
The club could use your help with the newsletter. Ask Bill!!

Triton sent letters to their customers that had back orders for PRESS! that due to the delays, their orders were dropped and any monies paid would be refunded.

877273846933 897965 658269 6584 847269 787982847280766933

```

X NOTICE XX NOTICE XX NOTICE XX NOTICE XX NOTICE XX NOTICE X
X
X AUGUST AND SEPTEMBER MEETINGS X
X X
X The August meeting will be held on 8-3-89 which is the X
X first Thursday. X
X X
X The September meeting will be held on 9-7-89 which is X
X the first Thursday. X
X X
X The first Thursday will continue to be the first choice X
X for our meetings, but please read the dates carefully X
X to avoid a wasted trip or missing a meeting. X
X X
X NOTICE XX NOTICE XX NOTICE XX NOTICE XX NOTICE XX NOTICE X

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SBTIUG CLUB OFFICERS AND OTHERS

```

PRESIDENT.....MIKE EWELL...New number>>>415/797-7966
VICE-PRESIDENT.....JOHN WENTE.....408/559-1680
TREASURER.....KEVIN DABERKOW.....408/261-7435
SECRETARY.....NORMAN KNUDSEN.....408/267-8193
LIBRARIAN.....HELMUT FUCHS.....408/263-8339
EDITOR.....BILL SCHULT.....408/446-1182
*ASSISTANT.....PAT MIDETICH.....408/227-6212
*ASSISTANT.....????????????????..... 99/4A-9640
SBTIUG BBS.....24-HRS/DAY.....408/258-3675
*Mr. SYSOP.....CHRIS SCHRAM.....408/926-4413
*MRS. SYSOP.....MARTHA SCHRAM.....408/926-4413
VAPORWARE.....TRANS PARENT.....99/4A-9640
PUBLIC RELATIONS.....DON APTE.....408/629-6725
ARCHIVER/NEWSLETTERS..HOY COLE.....SEE AT MEETING

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SBTIUG GENERAL MEETING 1 JUNE, 1989

by Norm Knudsen

The June meeting of the SBTIUG was held at the Saratoga Library on the first Thursday, the 1st of June, with 10 members in attendance.

ing. President Mike Ewell opened the meeting promptly at 7:31 PM. The first order of business was to request a report from Treasurer Kevin Daberkow who stated that the current balance is \$484.03 but that there are incurred expenses of about \$80.00 outstanding.

The Librarian's report was next. Helmut Fuchs reported that there were no new disks in the club library, although we have a substantial selection on hand.

The newsletter editor, Bill Schult, repeated his request for original articles for the newsletter.

Our PR man, Don Apte, followed with announcements on upcoming swap meets and show around the area.

A report from the SYSOP, Chris Schram, contained some interesting statistics. We have 62 regular users, 25% of the callers were from out of state, and 40% called in only once.

The business portion of the meeting concluded, we adjourned for a Demo by Mike Ewell on his favorite topic, Graphics using TWRITER and the transliterate command.

TREASURERS REPORT

by Kevin Daberkow

PLEASE look at your mailing label to see if some color has been added. If your membership expiration date has been high-lighted in RED, this is your last issue until you renew. If your membership expiration date is in YELLOW, then you should renew at the next regular club meeting.

>> THE DUES ARE \$15 PER YEAR <<

NOTE: Your membership expiration date can be found on the last line of your mailing label.

If any information on your label needs to be changed, please let me know. Call me at (408) 281-7435 or write to me at the following address:

SBTIUG - Treasurer
P.O. Box 110037
Campbell, CA 95011-0037

There was one renewal in the month of June: Pat Micetich. Pats continued support in the area of newsletter publishing

deserves special note. Even though she does not have the time to attend our regular meetings, she continues to contribute to the club! THANK YOU Pat!! There are several members up for renewal, I hope that you will continue your support of the SBTIUG.

The club made the following payments in the month of June: \$9.18 to Chris Schram for the BBS phone bill; \$77.85 to Pat Micetich for newsletter copying and mailing expenses.

The club now shows a balance of \$397.00.

Editors Ramblings
by Bill Schult

This month we continue with John Willforths series on disk drives. Included in this issue are some tips that I hope will prove to be helpful to our readers.

I would like to thank those that have contributed articles in the past. We are in constant need of articles if we are to have a newsletter that is useful to our members. So do not be bashful. If you have an idea, technique or whatever that may be of interest submit it for publication

One thing that is necessary for an editor to know is what does the membership want to see in the newsletter. It is your newsletter and it is my desire to publish articles that is of interest to the readers. So let me know at the meetings or give me a call at home and let me know your interests. At this time I am using articles that are of interest to me reasoning, that if it is interesting to me, some one else will find it interesting.

CALL WAITING
reprinted from PEKINS USER GROUP
newsletter

Call waiting loses your connection? No guarantees, depending on your phone system, but try the following:

Ask your phone company if they have a new feature called "Do Not Disturb". When using this feature, you dial , or 1170 if you have a rotary phone, and you get a second dial tone. Call waiting is turned off for the duration of the call.

Alternately, it is sometimes possible to use call forwarding to forward any incoming calls to another number while you are using data connections. For this, you have to remember to reset when you are done.

MORE SOURCES OF PROGRAMS FOR CHILDREN TO TYPE IN
BY KYLE CRICHTON

Since my last article I have run across two more good series of

FUN COMPUTING BOOKS FOR CHILDREN:

The first is a series of solve-it-yourself mysteries written by Lois and Floyd McCoy, published by Bantam Books in 1984. Three titles were published in this series that I know of:

THE BYTES BROTHERS INPUT AN INVESTIGATION

THE BYTES BROTHERS PROGRAM A PROBLEM

THE BYTES BROTHERS ENTER THE EVIDENCE

These books are intended for children who can read at the fifth grade level and contain basic language programs which will run on the TI99/4A with only a little help from the debug sections of each book.

The second source is a series of softcover books designed to introduce children to the various uses of computers. Each book in the series covers a particular computer application and each includes a BASIC language program to demonstrate a practical application of the subject on a home computer. All the books in the series came with 12 collector stickers inside and all are profusely illustrated in color. The series is edited by Christopher Brown, published by Antioch Publishing Company, Yellow Springs, Ohio, 1983. The titles are:

MR. BYTE PRESENTS A KID'S BOOK ABOUT COMPUTERS

MR. BYTE PRESENTS COMPUTER GAMES

MR. BYTE PRESENTS COMPUTERS IN SPACE

MR. BYTE PRESENTS COMPUTERS IN SPORTS

MR. BYTE PRESENTS COMPUTER ART

MR. BYTE PRESENTS COMPUTERS AND ROBOTS

All of the books in this series require third grade reading ability and perhaps some assistance with the generic BASIC language program included in each one as they are not written for any particular computer.

TRIVIA QUESTION OF SEVERAL MONTHS AGO WAS:

NAME THE COMPUTER THAT HAD THE SAME MICROPROCESSOR AS THE MYARC 9640 BUT WAS INTRODUCED IN 1983. HINT: IT WAS MARKETED FOR CHILDREN.

ANSWER: TOMY TUTOR WHICH ALSO SHARES THE SAME VIDEO CONTROLLER CHIP AS THE TI99/4A.

WARNING ON PRODIGY:

DECEPTIVE ADVERTISING MAY HAVE LED MANY TO BELIEVE THAT SERVICES ADVERTISED AS AVAILABLE ONLY ON PRODIGY COULD ONLY BE ACCESSED THROUGH PRODIGY. NOT SO!!! Take GROCERY EXPRESS for example which can be accessed by any home computer which can emulate a dumb terminal and support 1200 baud RS232. Of course you have to call during normal business hours to set up your account and password first.

DISK DRIVES (#5)
by John F. Williforth
reprinted from PUG Peripheral

Last month I left you up in the air with several items. The code disk on the lower right corner of the page can be used with both 60-HZ and 50-HZ powered drives. The only difference is that you look at the outer band when adjusting 60-HZ units, and at the inner band for 50-HZ drives.

The other item left to your imagination was on what happens when an error does occur while reading or writing. This is of course the responsibility of the DSR stored on the disk controller card but switched into the CPU memory space. The errors can be found described in your disk controller manual and are indicated by either a BASIC error code, or an error encountered while using the Disk manager. So be careful which code you are really dealing with when one occurs.

This month I'd like to talk about a little troubleshooting of some of the basic type drives that TI used. They were Single Sided/Single Density (SS-SD) full height (3-3/8") thick, full power (about 1 to 1.3 Amp.) on +12 Volt DC. The drive was slow, noisy expensive, and only held 360 sectors. (90-K Bytes) of memory. But, hey, try to find anything as fast, smooth, cheap and with that much capacity in the personal home computer market. You couldn't! so that makes it the BEST! There are thousands of these still running as good as the day they were first put into use 9 years ago.

They are mechanical, and today I'd like to talk about some of the mechanical failures in the SHUGART, TANDON, and MPI drive, the most common of TI drives.

I must assume you can get your drive out of your PEB or Stand-alone box. We will assume that the drive is sitting in front of you for this discussion. It is either a Shugart 400L, a Tandon TM 100 or the MPI model 51, however, the double sided versions of these drives can also be referenced here. The main difference being two heads and two head wires going to the drive logic board (the board attached to the top of the drive. Let's also slide the the TI Shield (aluminum cover) off the drive. Next disconnect the HEAD WIRE connector(s) from the right front of the logic board (even though these are Keyed, and marked, you mark them so you will know where to put them). Next all three of these drives have the logic board held in place by two screws. Remove them and slide the board to the rear slightly out of a slotted channel and lift on the front of the board. This will expose the main mechanical parts of these three drives. You will have to remove a 2-1/2" by 3" snap on cover rear center of the MPI drives to see the HEAD(s). Be careful not to dislodge the cables attached to the rear of the logic board as it is lifted.

Common problem #1, gummy residue on the two shafts that guide the HEAD assembly. This causes difficulty writing/reading from a localized area of the disk, such as track 32 to 38. This can also be a broken HEAD wire, but cleaning these shafts will be easier, and less costly. A clean cloth with a little alcohol, and dry the area afterward, DO NOT LUBRICATE.

Common problem #2, dirty HEAD(s), cautiously lifting the pressure pad assy, on a single HEAD drive, or the upper HEAD on a two HEADED drive, clean the HEAD(s) with a clean cloth just dampened with alcohol (remember the water in alcohol can cause new problems).

Common problem #3, drive speed incorrect or erratic. Use the disc from last month's article, or the one that may already be on your disk drive, and either the DISK EXERCIZER I showed you how to build in articles #2 and #3, or the PEB power connector and short pin 16 (the eighth edge-card-pin from the right, going over the key-slot, all even numbered pins are on top of the board) to ground. The ground will be any of the odd numbered pins on the bottom of the board. Now with the drive running, adjust the Motor speed Pot. on the logic board of the Shugart R53 (marked speed adj.), and on the MPI R38 (left center), and on the Tandon the pot. is on a small board attached to the back of the drive, and is labeled R4. Adjust the POTentiometer (variable resister) until the bars on the outer ring of the disc appear to stand still. The drive should be at 300 RPM. It may pay to watch for awhile to see if it stays steady. You could have a dirty pulley or stretched belt, or dry or dirty spindle parts. Examine these parts to see if they are free. At least clean them, again with a modest amount of alcohol on a clean cloth. You may have to put a very small amount of oil on the spindle shaft or the hub bearing that lowers toward the disk as the door closes. Be very careful! a drop is enough and could be too much! as for the stretched belt, you will have to get one, since this cannot be replaced by a rubber band. A local computer repair center may be able to help you with a used one for your drive, if just to help you troubleshoot a problem. They may help you just to get your business after you destroy the drive trying to fix it yourself.

Common problem #4, In step #2, I mentioned a PRESSURE PAD. This applies to a single-sided drive, and is on the underside of the arm you lifted to clean the HEAD. They have fallen off, and thus cannot keep the diskette media against the HEAD on the other side, resulting in a lot of read/write errors. This is common because the diskette can hit it on insertion, and tear it loose. A round 1/8" felt pad is glued into a recess opposite the HEAD. You decide how you want to repair this. If you don't use FLIPPIES, you might try your own felt repair.

Common problem #5, Transparent, or opaque write protect tabs, result in a disk being over written even though protected. Some old drives use a micro-switch to sense the tab, but most use an optical sensor, which can see right through some write protect tabs. In another similar but opposite problem exists on the older drives with micro-switches, they get out of adjustment and do not always sense the tab. You may either have to replace the micro-switch, or adjust it so that it is reliable.

Well that does it for this month. I'll continue in this vein next month...

TIPS
reprinted from ROCKYMTN 99'ers TIC TOC

The following tips have been collected from many sources including; Rocky Mountain 99'ers Computer Club news letter TIC TOC, Home Computer Magazine, COMPUTE!, Super 99 Monthly, The Smart Programmer, MICROpendium and many others I have lost track of. This list was put together to help one and all with some problem that someone else may have solved in one way or another. No effort has been made at this time to write for releases on copyrights or such.

BREAK

For a one handed BREAK if you can't reach FCTN-4, try FCTN-J and the space bar together.

CALL CLEAR

To clear the screen other than by CALL CLEAR try;

100 CALL HCHAR(1,1,32,768) (for a horizontal screen wipe from top to bottom)

100 CALL VCHAR(1,1,32,768) (for a vertical wipe from left to right)

CALL KEY

To get computer to "read" CALL KEY input as upper case letters, even if the Alpha Lock is in the up position, use key-unit 3 : CALL KEY(3,K,ST). To get back to read upper and lower case letters, enter CALL KEY(5,K,ST).

CALL LOAD

To disable the QUIT command (Function QUIT) in Extended Basic and 32K memory expansion Enter: CALL INIT :: CALL

CALL INIT :: CALL LOAD(-31806,16)

Although you cannot use QUIT to exit, the word BYE still can be used.

To Re-enable a QUIT: CALL LOAD(-31806,0)

To gain more memory by disabling all disk drive capabilities, type CALL LOAD(-31888,63,255). Typing BYE returns to the main screen and allows the disks to be used again.

NOTE: once the drive is turned off you cannot turn it

back on without using the CALL LOAD statement or shutting off the console. Therefore any program should be SAVED to cassette.

To turn the drive back on try;

CALL LOAD(-31888,55)

To unprotect program (simple protection)

CALL INIT

OLD DSK1.DSK1.(FILENAME)

CALL LOAD(-31931,0)

LIST

To reprotect a program

CALL LOAD(-31931,128) FILE# (LIKE OPEN #99:)

To be able to use all of the memory in the 32K expansion box try:

Start system in Extended Basic

Enter:

CALL INIT :: CALL LOAD(-31866,33,0)

Do a size command, it should show 32,000 bytes of program space available.

OR

CALL LOAD(-31866,160)

To switch the disk drive off from the Editor/Assembler or Mini-Memory to save 2 K of memory, try:

CALL LOAD(-31888,63): turns off disk drives

CALL LOAD(-31888,55): turns disk drives back on

CALL LOAD(-31962,255): Causes system to restart X-RASIC

CALL LOAD(14586,0,0): Then press FUNCTIN-QUIT; F-CODE (PASCAL) Warm start

CALL LOAD(-31806,64): Disables sprites

CALL LOAD(-31806,32): Disables auto sound processing

CALL LOAD(-31806,128) Disables FCTN QUIT, sound and sprites

CALL LOAD(-31806,0): Restores any or all of the above functions

CALL LOAD(-31748,1): Represents normal cursor speed and normal duration for warning tones and input beeps.

CALL LOAD(-31748,12): Causes the cursor to blink faster and increases the duration of the tones.

CALL LOAD(-31748,0): Halts the cursor and disables the tones.

CALL PEEK

CALL PEEK(Z,A,B): CALL LOAD(-31804,A,B) Returns you to the main title screen as though you pressed FUNCTION-BUIT

CARTRIDGES

If you plug in a cartridge and soon after the console "locks up" it may be a loose connection between the cartridge and the GR0M port. Try insertring a matc;book cover beneath the cartridge to improve the fit. This should be done as you slide the cartridge in.

CSI

If you accidentally type OLD CSI instead of SAAVE CSI, try typing Shift E and press Enter. You will get an I/O ERROR but still will have the program in memory.

CURSOR

To change cursor in (X-Basic only) type 1 CALL COLOR(0,11,1)

DATA

You don't have to RESTORE anything with the RESTORE statement. In other words you don't have to read a DATA statement before you can RESTORE it. You can write the program to optionally or randomly RESTORE any one of the DATA statements and thus begin reading DATA from any one of the DATA statements.

BASIC display at subprogram

This program is used to display titles and other messages at specific locations on the screen without scrolling. The messages appear in typewriter fashion; one character at a time.

```
110 FOR I=1 TO LEN(M$)
120 CALL HCHAR(R,C+I,ASC(SEG$(M$,I,1)))
```

Where R is the ROW and C is the COLUMN in which the first character of the first (M\$) is to appear. By adding the the following lines

```
100 C=INT(372-LEN(M$))/2
```

The message will appear approximately centered on the screen without all the character and space counting sometimes required.

BASIC Display at subprogram

```
100 REM DISPLAY AT IN BASIC 110 REM THIS PROGRAM WILL
NOT HANDLE WORD WRAP
```

```
120 REM A$=MESSAGE
```

```
130 REM Y=ROW
```

```
140 X= COLUMN
```

```
150 CALL CLEAR
```

```
160 A$="I LIKE YOU"
```

```
170 Y=12
```

```
180 X=4
```

```
190 FOR Z=0 TO LEN(A$)-1
```

```
200 CALL HCHAR(Y,X+Z,ASC(SEG$(A$,Z+1,1)))
```

```
210 NEXT Z
```

DATA ERRORS

OUT OF DATA

You must have as many DATA statements as read statement X loop. If there are less, it is O.K. (the line number will be the READ state;t).

Error in DATA are frequently commas at the end of DATA statements.

Errors in graphics check for 0 for 0. If program stops with BAD VALUE, print variable names to check DATA statements. (PRINT A\$)

DATA may be trying to read a numerical value, but gets a string (letters): 0 for 0

Last lines around READ statement referred to by the DATA ERROR message.

Print variables for the last good value that was accepted

Print INDEX counter in FOR-NEXT loops to see how far along you were

An ERROR in DATA statement may actually be a statement other than READ. Such as:

```
650 FOR I=1 TO N
660 READ X,Y,G
670 CALL HCHAR(X,Y,G)
680 NEXT I
```

You could get a BAD VALUE in 670
X,Y or G is not acceptable
X must be a value from 1-24 for row
Y must be a value from 1-32 for column
G must be a ASCII code number

Try: PRINT X,Y,G

Line 660 gets value from DATA statements.

Look at DATA statements to find the sequence of the three numbers.

The ERROR will probably be a typing error just before these numbers.

If you get a DATA ERROR IN LINE XXXX; if the line is a READ statement, change the READ to PRINT. When you run the program, the error message that appears will tell you the last value that was read correctly. The next one will be the one in error.

DISK DRIVES

To enable the disk drive to stay on for about 30 seconds when cleaning disk heads type:

```
10 ON ERROR 30
20 RUN "DSK1.LOAD"
30 ON ERROR 40
40 RETURN
```

EXTENDED BASIC

To find the version Extended Basic you have, type:

```
CALL VERSION(X) :: PRINT X
```

If the answer you get is 100 you have the old version, 110 is a newer version and 120 is Super Extended Basic.

ADDRESSING ENVELOPES WITH A GEMINI 10X OR 5610 PRINTER by Charles Good reprinted from CIN-DAY newsletter

Although Star Gemini 10X and 5610 printers are supposed to be able to work with single sheets of paper as well as tractor feed paper, the printer normally stops printing well before it reaches the bottom of the single sheet. Perhaps other printers do also. This means that you cannot easily run single business sized envelopes through the printer and have the printer print the sending address directly on the envelope, since this address is too close to the bottom of the envelope. The problem is that the printer detects that it is "Out of paper" before the middle of the envelope reaches the printhead.

The following command, entered at the beginning of a TI-Writer file will disable the "Out of Paper" detection when printing from either the editor or the formatter
CTRL/U FCTN/R CTRL/U 8 (without any spaces)
You see a funny looking character on the screen followed immediately by the number eight. Neither the funny character nor the "8" are printed by the printer.

With this as far as I can tell)previously underscribed "disable out of paper" TI-Writer command, I have developed a generic D/V80 envelope addressing file which I keep on my hardisk. On line 1 I have the above "disable the out of paper" CTRL/U command followed immediately without any intervening spaces by CTRL/U FCTN/R CTRL/U SHIFT/E (the command for emphasized print). On the next three lines I have my return address at column zero to print at the upper left of the envelope. I skip two lines and on the next three lines (lines 8-10) I have a sample senders address beginning at column 35. When I want to address an envelope I back out the fanfold paper, insert an envelope, roll it around the platen so that the envelope top is even with the print head. I then bring up my ENVELOPE file with LF (enter) DSKx.ENVELOPE from the TI-Writer editor and type the new sending address over the address displayed. When I originally created my ENVELOPE file, my last step was move the left margin setting over to column 35. Thus every time I boot ENVELOPE, the TI-Writer cursor aligns with the left edge of the sending address. When I am finished typing this sending address, all I do is enter command mode and PF(1) to my printer directly from the TI-Writer editor.

Using ENVELOPE is often faster and certainly more professional looking than inserting a strip of sticky labels into my printer, printing a label, and then sticking the label on an envelope.