THE ROVING EDITOR: BILL THIBODEAUX

Well it's my turn in the barrel, so roll it out. Funny thing, if I am talking to you face to face, you could lose a leg, however in the written language I am not naturally verbose.

I would like to lead off this month by reminding you as true TI enthusiasts to write concerning the TI 99/8 clone (ref last newsletter). This is our chance to get back in the chase with a machine to our liking.

Secondly, I wish to reiterate the challenge to our membership to get involved. This can be accomplished in several ways:

1. Write an article or review for the newsletter.
2. Write a program for the library. Remember, other folks share your interests.
3. Come to the meetings and speak out. Pay your dues. The club needs funds to operate.

TRADING POST:

The club attempts to save members money on certain items by buying bulk. Unfortunately in the case of our diskettes, we needed some and paid the piper, but they are first class, non-bulk diskettes available for $2.50 each if you need programs from the library. For an additional $1 (postage and handling), they can be mailed to your home. Presently we offer to the members the following items for the indicated contribution:

```
        Cassettes        - $0.50 each
        Video Modulators - $3.00 each
        Keyboards        - $3.00 each
```

Complete TI 99/4A system for sale. Includes PEB, internal SSDD disk drive, TI SSSD disk controller, 32K memory expansion card, RS232 card, TI impact printer, TI-WRITER, TEII module, extended basic module, and other software. Price for all; $700. CALL ROBERT at (615) 344-5449.

ATTENTION:

One reason I chose a TI computer over brand X was the availability of service centers. Several of our members have used the exchange facilities in Atlanta. This is to inform you that they have moved those facilities. Their new address is:

        Texas Instruments Inc.
        5515 Spalding Drive
        Norcross, GA 30092
        Tel: (404) 662-7900 Customer Service
             (404) 662-7907 Exchange Center

This location is at the corner of Spalding Drive and GA 141 if you are looking on a map.

SPECIAL INTEREST GROUP (SIG):

Just a reminder that we do have a SIG formed to learn FORTH. It's not too late to join if you have an interest.

HARDWARE REVIEW:

Happiness is two disk drives in your PEB. Having upgraded my system from cassette to disk, I was as happy as a dead pig in sunshine. But as my wife says, "You are never satisfied.", I made the mistake of visiting a fellow member who had an "out" drive. The difference in operation was fascinating so needless to say when I heard that a local business had two TEAC half height drives for sale, it set me on fire. These are TEAC 54A SSDD drives. Someone had upgraded a Sanyo and sold these for $150. No guaranty, though so I was very hesitant when I got home.

The first thing I did was to pull my TI drive and insert the TEACs, one at a time, to make sure they were compatible and worked. You can imagine my relief when this check was successful.

The TEAC drive has a dip switch with shorting bars to select the position of the drive in the system, ie DS0 for drive 1; DS1 for drive 2; DS2 for drive 3; or DS3 for drive 4.

I thought that mounting the drives would be my least problem, but wrong again! I went all over town trying to find connecctors to build a "Y" cable for power. You can order these from mail order houses, but I could not find any locally. I did find some at Radio Shack which were close. I bought them, made a cable, and shaved the housing to fit. Also the female pins had to be crimped slightly since they were larger than the pins on the drive. The edge card connector was easier. It is available at Radio Shack. I removed the ribbon cable from the PEB, set the two drives side by side, connected the existing connector to drive 1 and measured and marked the distance to drive 2 edge card. There I crimped on the new connector. A vise is very handy to supply the necessary pressure to accomplish this task.

Next I measured the mounting holes on the drives. Naturally the screws used to mount the TI drive were too big, so I scrounged some to fit. Also the holes in the PEB did not match up. Here I advise setting the two drives side by side and making a template for drilling the mounting holes. Use the template to mark the PEB. Next MASK the PEB thoroughly so that metal chips do not contaminate the PEB. Drill your holes and vacuum the filings and remove the masking material. From here on it is clear sailing!

Put it all together and turn it on. It is pure happiness. The TEAC drives are considerably quieter than the TI drive and operate very smoothly. It is very convenient to have the drives closely grouped. Since I have the TI controller, I still am only using them single density, but some of our members have already bought CORCOMP controllers and I am getting the bug. Keep your eyes open, there may be another bargain around the corner. I heartily recommend the use of TEAC 54 or 55 half height drives for TI systems.

USE YOUR TI:

Remember your TI is a 16 bit processer able to perform calculations twice as accurately as brand X 8 bit machines. The following is a simple program to perform a least squares analysis.

```
100 DIM X(200)
110 DIM Y(200)
120 CALL CLEAR
130 PRINT "LEAST SQUARES ANALYSIS":
140 PRINT "BY A W THIBODEAUX": :
150 PRINT "PRESS ANY KEY TO START"
160 CALL KEY(0,K,L)
170 IF L>0 THEN 190
180 GOTO 160
190 CALL CLEAR
200 A=0
210 B=0
220 ZS=0
230 CS=0
240 PRINT "INPUT COORDINATES OF POINTS."
250 PRINT "WHEN LAST POINT IS ENTERED,"
260 PRINT "INPUT X=9999.": :
270 FOR N=1 TO 200
280 INPUT " X COORDINATE = ":X(N)
290 PRINT
300 IF X(N)=9999 THEN 400
310 INPUT " Y COORDINATE = ":Y(N)
320 PRINT
330 Z=X(N)*Y(N)
340 ZS=ZS+Z
350 A=X(N)+A
360 B=Y(N)+B
370 C=X(N)^2
380 CS=C+CS
390 NEXT N
400 N=N-1
410 W=(N*CS)-(A^2)
420 M=(1/W)*(N*ZS-A*B)
430 B=(1/W)*(CS*B-ZS*A)
440 SB=0
450 FOR I=1 TO N
460 S=(Y(I)-((M*X(I))+B))^2
470 SS=S+SB
480 SB=S
490 NEXT I
500 SSQ=(1/N)*SS
510 IF ((N*SSQ)/W)<0 THEN 650
520 DELM=SQR((N*SSQ)/W)
530 IF ((SSQ*CS)/W)<0 THEN 630
540 DELB=SQR((SSQ*CS)/W)
550 CALL CLEAR
560 PRINT "THE RESULTS ARE:": : :
570 PRINT "SLOPE M =";M: :
580 PRINT "INTERCEPT B =";B: :
590 PRINT "ERROR OF M(+/-)=";DELM: :
600 PRINT "ERROR OF B(+/-)=";DELB: : :
610 PRINT "THE EQUATION IS:": : :
620 GOTO 660
630 PRINT "ERROR OF B IS SQ RT OF NEG NUMBER!": : :
640 GOTO 660
650 PRINT "ERROR OF M IS SQ RT OF NEG NUMBER!": :
660 PRINT "Y=(";M;")";"X + (";B;")": : : :
670 PRINT "INPUT <R> TO RECALCULATE"
680 INPUT Z$
690 IF Z$="R" THEN 190
700 END
```

TI VERSUS APPLE:

At the COMDEX show in Las Vegas, Apple was demonstrating a new board called the "Arcade Board". It plugs into the Apple. It had very good graphics and sells for $488. It was called the supreme board for the Apple. The Apple Card uses the TMS9918A VDP chip that your TI 99/4A uses. This allows the Apple to do SPRITES just like your computer. However, just the board sells for more than most of us paid for the whole system. Thanks to the K*3TI USERS' GROUP for this tidbit.

SAKATA MONITOR:

I really did some talking a while back. Had my wife ready to let me buy a MODEM. Kerry Roach thru a monkey wrench into that when he told me that HILL's had a color monitor on sale. I had been using an old 12 inch black and white. Earl Conway and I raced each other down there and sure enough there they were. Only $148 for a 13 inch color monitor. Why you couldn't beat that with a stick. So, home I went to talk to the wife. After I had sulked around for about an hour, she was ready to kick in the extra money over the MODEM. I figured I would use the monitor much more than a modem and I was right.

The monitor is a SAKATA SC-100 13 inch color with sound. It is a medium resolution monitor good for 40 column text. It really works good. They give you an alignment tool with it and then tell you not to use it. However, I was never too good at following directions, so I immediately began to fine tweak it.

If you buy one, dont forget you need a cable. You could make one if you have a five pin DIN connector and two phone jacks. If you knew you were not going to ever need your video modulator, you could cut the cable at the box and solder on two phone jacks.

The SAKATA is a very fine monitor. In fact the Tennessee Valley Authority is buying them to use with their IBM PC's. However, they are getting the SC-200 model which is a high resolution monitor. I have seen one of these in operation also and it looked real good.

Now that I have a color monitor I am critical of the colors used for text in Extended Basic. I like the white on blue used by the Editor Assembler. Until today, I could write a basic routine or assembly language routine which would change the colors, but as soon as I left the program, the screen would return to the default values. I had just about given up when our Massachusettes Users came to the rescue. You can change text colors in the immediate mode but it takes a little trick which they divulged.

If you are in the immediate mode, type the following line without a line number:
FOR I=0 TO 12 :: CALL COLOR(I,16,1) :: NEXT I :: CALL SCREEN(6) :: ACCEPT AT(1,1):A

PRESS <ENTER> and the text will change color and the cursor will move to position 1,1 awaiting an input. DO NOT PRESS <ENTER>! Instead press <FUNCTION 4> or CLEAR. The screen will remain until you run the program or clear screen. I saved the line as a MERGE file and when I need it, I merge it in; edit the line; press REDO; delete the line number and enter. After the screen changes, I delete the line I merged in with line number 1. This is really an eye saver since I can now program with the white on blue text.

TOUCHTONE FREQUENCIES

Your computer can generate sounds that will dial your phone.
It has to be a dual tone since a single tone is not always accepted
properly . Use these in a program to get the sounds and then hold
your telephone near the speaker to see if it works. This
information has been around a long time so I dont know who
originally came up with it. Larry Bryant has written a program
using these codes. It is pretty good too and available in the
library.

```
1 - CALL SOUND(100,1209,0,697,0)
2 - CALL SOUND(100,1336,0,697,0)
3 - CALL SOUND(100,1447,0,697,0)
4 - CALL SOUND(100,1209,0,770,0)
5 - CALL SOUND(100,1336,0,770,0)
6 - CALL SOUND(100,1447,0,770,0)
7 - CALL SOUND(100,1209,0,852,0)
8 - CALL SOUND(100,1336,0,852,0)
9 - CALL SOUND(100,1447,0,852,0)
0 - CALL SOUND(100,1336,0,941,0)
```

WORD SEARCH: (FROM CAPITAL AREA USER GROUP)

Try to find the words listed on the right in the rectangle.
The words can be found vertically, horizontally, diagonally, and
backwards.   GOOD LUCK!

```
DATAZOUTPUTYFMAINFRAMEW
STTHOOPVIBCEHGRQZLEKIME
LBMCOUUMUITIPLANMEAWCXG
CCBHFMMLEOUPXEIUYADCRKR
WZAAOPERRORPLISOABELOLA
CHARIALCPPETAILBCEELPFP
ODAKCDISONGRCOLOREBGROH
PLXLEEMXRAPROGRAMYSCCIC
UEERCREMGIAUNTCTICIKEES
TTXBOSITUONTTAPEXXCVSOS
EPPEOPLPENAELEFINEGESPK
RWAIREPRHEITTYRUNNICOEE
PENNNYSIXETCYTOHIOUSRAY
CASSETTENDROGETRBYEOITB
LSITAPLEEISAXTRABUGYNAO
AMOETISSAESGLUIELSSSWYA
NPNVENCSILLOOPAOEDITACR
OBLARRAYANOTDOVUNSTRTSD
ICKRMKNNCXOOABZXASIIJKL
TXHIMETTEKSDPLATOBANSCP
ADIARGUARJHRQIWFHPPGMPR
CKLBQPFXGHAKCSBAGENSDBI
UJMLRUERQIRDETNIRPXSOON
DENEWUFTRJDFPGHOAIJLKWT
EVPGNVSOFTWARERSMOOOLYE
FHOTRDRCXXAGGWVQPGVXMNR
MORUYZARZZRYYXPROCESSOR
SIWVXMANAGEMENTRWUVSTXW
```

MAINFRAME	MICROPROCESSOR	MANAGEMENT	LOOP
HARDWARE	HCHAR	COLOR	REM
VARIABLE	EXPANSION	SOFTWARE	ROM
COMPUTER	BASIC	GRAPHICS	RAM
CASSETTE	PROGRAM	PRINT	END
PRINTER	STRING	SYNTAX	LOGO
OUTPUT	PERIPHERAL	KEYBOARD	BUG
PLATO	EDUCATIONAL	PROCESSOR	ARRAY
ERROR	RUN	NEW	READ
GOTO	HOME	EDIT	DATA
LIST	BYE		

```
/////////////////////////////////////////////
/                >> TIPS <<                   /
/                                             /
/ This is a good one for you cassette users.  /
/                                             /
/ Have you ever wanted to save a program but  /
/ instead of typing "SAVE CS1", you type in   /
/ "OLD CS1" and hit >ENTER< before you think? /
/ Well from now on dont worry, just press     /
/ >SHIFT< and "E" and >ENTER<. Now you can    /
/ start over.   (TI BASIC ONLY)               /
/     If you are editing a program and press  /
/ >FUNCTION 3< (ERASE) instead of >FUNCTION   /
/ 2< (INSERT), DONT press >ENTER<, instead    /
/ press >FUNCTION P< (") and then press       /
/ >ENTER<.  Your original line will have      /
/ returned.                                   /
/////////////////////////////////////////////
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MEETING ANNOUNCEMENTS
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GROUP MEETING

    The next meeting of the Chatanooga Users Group will be held on
May 13, 1985 at 7:00 PM. It will be held at Chattanooga State Technical
Community College room 214 student center. Therefore watch for signs at the
Technical Building. If you have hardware or software that you wish to sell or
trade, bring it with you. If you have any desires of the club library, please
call one of the officers and tell them so we can have the material at the
meeting.

FORTH SIG MEETING

    The FORTH-ASSEMBLY SIG will meet on April 18, 1985 at Kerry Roach's home.
The time is 7:00 PM. Kerry's home phone is 843-0648 if you need directions.
Remember your homework.

CHATTANOOGA USERS GROUP
PO BOX 136
CHATTANOOGA, TN
37343
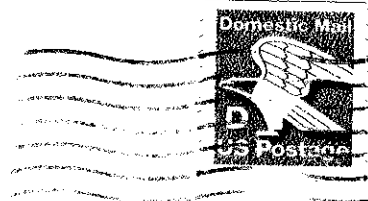
MIAMI COUNTY AREA 99/4A H.C.U.G.
P.O. BOX 1149
PERU, IND 46970