



081

ISSUE #9 SEPT 1987

FOR THE RECORD

by Frank N. Zic  
(Acting Secretary)

ATTEN: ... of the ... PEN: ... WISHERS WISHING TO ...  
TO: ... TI ... ER ... ON SEPT. 17 ...  
... (41) ...  
... UIC: ... TAYLOR (312) 341 ... SCH ... BY ...  
... 9th, (maybe the 10th).

Our Aug. 16th. club meeting was well attended (40) but was a short meeting. Do you think the fact that John was on vacation and Scott was getting ready to head south too had anything to do with it? The SIG sessions, however, were extra long and interestingly different. I'll explain in a bit, a byte, -later. Scott opened the meeting at 7:15.

Old business... He mentioned the Harrisburg computer show and asked if anyone other than the 4 or 5 known to be going were interested in the show. Jan was busy working at her new job but still managed to provide us with goodies. Scott mentioned the Proto-type boards he and John were making up. It is similar to the one shown in the Sept. issue of Computer Shopper and will be sold at the Computer Bug. Connections are made at the Address & Data buses using Tri-state buffers, more details on this project at the next meeting. Scott sent to DAK Co. for the X-10 Power House unit but they said they were sold-out. He will try elsewhere. The X-10 unit, by the way, is compatible with TI, Apple and IBM but not with Commodore.

New business... Our regular secretary (Ed) showed up a little late and mentioned that next month he would take the notes and also present the Library listing that Clyde has organized. The next item mentioned was the ML system interface that allows connection between an IBM and TI unit. In this same line, two IBM keyboards were available for sale at a very nice price. The \$1 raffle was almost a sell-out, you would have thought everyone was promised a gift.

Prior to the classes, I talked about the new note keeping system that I developed using the TI-Writer called "My Electronic Notebook". The discussion high lighted some unique uses I've found for the TI-Writer and some hard copy examples were passed around. An article describing the "Notebook" is found included in this newsletter. Comments are welcome. The high point of the evening came when young Rob Ekl described how he and his father Joe Ely made a portable disk expansion system. What a nice job they did. The unit is about the size of a PEB but contains a GRAM Kracker, Horizon Ram Disk, 2 Disk Drives, 3 (modified) Card Slots, 32K in 4 chips, Power supply and Cooling Fan. The 1/8 inch thick Aluminum housing had recessed Allen head screws like an airplane. You would have to see it to appreciate the fine job. Nice going Joe and Rob. You should take a picture of the unit with the two of you standing behind and write an article about it for the MICROpendium or Computer Shopper. In the back of the room there was a catalog listing of disks available from a Florida TI users group. Late in the evening we had two more visitors Judy Muir and her friend. She showed the portable Timex Sinclair computer that she made up in a plastic folding case no larger than a TI console. It was written-up in the June/July 87 issue of CTM magazine.

Well, I guess Ed will be on the job next month. I've enjoyed writing the minutes for you the passed 4 months. Until next time may the good 4's be with you.

AUGUST TREASURERS' REPORT

FROM JAN TRAYERS

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*****
*
* 8/1 CASH BALANCE $ 85.00
*
* 8/18 REFUND (1/2 DUES)- 7.00
*
* 8/18 CASH BALANCE 78.00
*
* " LIBRARY SALES 26.00
*
* " DISK, ETC. 26.00
* SALES
*
* " RAFFLE 32.00
*
* " MANUALS 193.50
*
* " MICROPENDIUMS 16.75
*
* MEMBERSHIP + 5.00
*
* TOTAL CASH $377.25
*
* 8/25 DISK PAYMENT - 132.00
*
* TOTAL 245.25
* 8/28 BANK DEPOSIT - 200.00
*
* CASH ON HAND 45.25
*****
*
* 8/1 BANK BALANCE $444.00
*
* 8/18 POSTAGE - 61.05
*
* 382.95
* 8/21 MICROPENDIUMS - 15.00
* BALANCE
*
* 367.95
* 8/28 DEPOSIT + 200.00
*
* BANK BALANCE $567.95
*****
*
* TOTAL CASH BALANCE $613.20
*
*****

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JUST A SHORT NOTE TO THANK EVERYONE THAT'S BEEN NICE ENOUGH TO TAKE OVER AT THE MEETINGS NOW THAT I HAVE TO WORK ON MEETING NIGHTS. THANKS TO MICKEY AND MIKE THE MONEY WORKED OUT FINE. THE GOODIES MAY TAKE SOME MORE ADJUSTING, BUT I'LL WORK IT OUT. SORRY I CAN'T BE THERE. I REALLY MISS IT! \*\*\*\*\* JAN

Hey guys and gals, ( for you younger members, this means listen up), I'm sorry I missed the last meeting, but summer was fast coming to an end, and my three daughters wanted to see the ATLANTIC OCEAN. We went to the OCEAN CITY, MARYLAND area for some sun and relaxation. Well, you better be on your toes this month, I'M BACK ! And that's a warning! Lest I forget, we took FAY with us. She, the kids, and I had a very good time.

I don't know how many of you will remember, but this September, the WEST PENN 99'ERS will be an unofficial TWO YEARS old. September, 1985 we held an organizational meeting at the GREENGATE MALL Community Room. Seem's like ten years have passed. I was too busy before this club was started, and you can imagine how busy I got.

Well, if it wasn't for the people who are the officers and members who have picked up the responsibility of contributing to the WEST PENN 99'ERS, this club wouldn't be one of the FEW clubs still growing, and prospering in the fragile community of home computer users. I'm not talking about just here in Western Pennsylvania, but in the whole U.S. of A. Be proud of that!

We generally have members, who will do whatever it takes to share, and care. It's not always easy. We must ignore the exodus to other computers. Many devoted T.I. users have a PC at home, and enjoy the machine for what it does, and rightly so. They still have a spot in their lives for the T.I. 99/4A. There is NO OTHER machine that talks to you the way the TI does. There is NO OTHER machine that shows you what the TI shows you. There is NO OTHER machine that has the endurance that the TI has.

Some of you have invested thousands, as I have in the system, while others have only a few dollars in the bare console. Whichever user you are, if you have that machine out of the closet, you are learning, enjoying, and in most cases saying that you would do it all over again.

We will be starting year number **THREE** in October. We are in better shape, because within we are strong, and there is now a stronger, more dedicated bunch of suppliers of hardware and software out there now than at any other time, bar none! The number of them is less, but the **QUANTITY/QUALITY** of programs and hardware is much higher.

Over the last three months, (summer) I have tried to give you a list of offerings, that is fairly representative of what is available. **THERE'S MORE TO COME!**

Now the interesting part. **YOU** must support these who are walking a very fragile tight rope to provide you with the products, and make enough money to warrant doing it!

You can't leave it to the other guy. Please try to pay for that piece of software (if you use it and it's a freeware program), If you already have a complete system and it's paid for, why not invest in that new piece of hardware that you used to say "why doesn't someone make one?" It's here NOW! Buy NOW!

If the suppliers don't see a market there today, they will not continue very long to produce for **YOU!** You will find some interesting new things for you on page 7,8 and 9.

Some of you may have already decided to slow on your use of the TI99/4A, but it's not too late to plug it back in, come to a meeting, and start to enjoy computing again, maybe more than before !

**TIC-TAC-TOE with LIGHT-PEN**

I've seen several schematics for LIGHT-Pens that work with the T.I., but I havent seen any programs that utilize the pen. I decided to build one for the novelty of it, but I had to write a small program for it. I found all the parts at a RADIO SHACK, and the part numbers are listed in this article. Because of several differences in the schematics I reviewed, and only a basic understanding of electronics, I constructed the project on an experimenters breadboard, so that changes could be made.

After several tries, the pen worked, but was so sensitive to the slightest ray of light from anywhere set the pen off. A black hood over the photo-transistor with only a small hole in the end and some delay loops in the program solved the problem. Now about the program. It is in Extended Basic only because I wanted to use sprites.

Lines 130 to 350 set up the game board and defines characters. Lines 360 to 550 are the meat of the program. Line 430 checks to see if the light-pen has been set off by a light source (in this program it is a white colored sprite). The rest of the program lines will determine which marker (X or Y) goes where. The program is not really complete because no checks are done to see who wins. I'll leave that to you.

**JIM**

(Ed. note: There is a basic version of this program, that does more checking, but for the sake of providing a program, and a light-pen for you who havent built one, I'm including this one. There is also another program that uses a double set of light-pens for gaming between two players on one screen,)

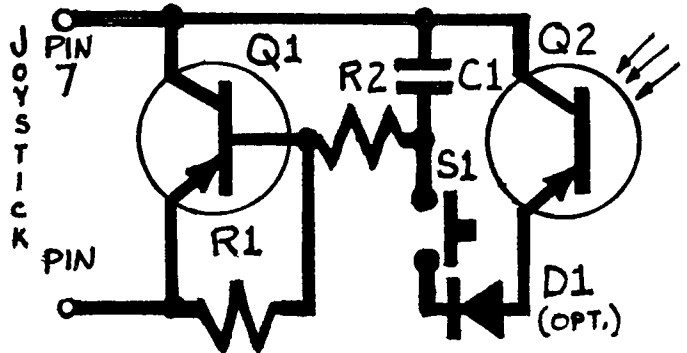
```

100 REM * TIC-TAC-TOE *
110 REM * LIGHT-PEN DEMO *
120 REM * BY JIM BURES *
130 F=1 :: Z=1
140 DIM A(9,2)
150 CALL COLOR(3,12,1) :: CALL CO
LOR(4,12,1)
160 A(1,1)=16 :: A(1,2)=16 :: A(
2,1)=16 :: A(2,2)=104 :: A(3,1)=
16 :: A(3,2)=184
170 A(4,1)=80 :: A(4,2)=16 :: A(
5,1)=80 :: A(5,2)=104 :: A(6,1)=
80 :: A(6,2)=184
180 A(7,1)=144 :: A(7,2)=16 :: A
(8,1)=144 :: A(8,2)=104 :: A(9,1
)=144 :: A(9,2)=
184
190 CALL SCREEN(2)
200 CALL COLOR(10,13,1)
210 CALL CLEAR
220 S1$="80402010080402010102040
81020408001020408102040808040201
008040201"
230 CALL CHAR(96,S1$)
240 CALL MAGNIFY(4)
250 S2$="FF80808080808080808080808
08080808080808080808080808080808
1010101FF"
260 CALL CHAR(100,S2$)
270 CALL DELSPRITE(ALL)

```

**SCHEMATIC and PARTS LIST**

- R1 - 470K ohm
- R2 - 47K ohm
- Q1 - 2N907 Tran. R.S. # 276-2023
- Q2 - TIL414 Phototran R.S.# 276-145
- C1 - 0.01 mF capacitor R.S.# 272-1472
- S1 - Any small momentary contact switch
- D1 - OPTIONAL Diode 1N914 or 1N34A



Acquire a large felt tip pen to use as a housing for the above apparatus. An old joystick cable will make a perfect cable with the female 9-PIN D TYPE connector, which will make assembly easier, faster, and definitely more economical.

(\*\* WP99 UG assumes no responsibility for any damage you may do to your console attempting to install this feature \*\*)

```

280 CALL CHAR(104,"1010101010101
010")
290 CALL VCHAR(1,20,104,24)
300 CALL VCHAR(1,10,104,24)
310 CALL CHAR(105,"FF00")
320 CALL HCHAR(8,1,105,32)
330 CALL HCHAR(16,1,105,32)
340 S3$="FFFFFFFFFFFFFFFFFFFFFFF
FFFFFFFFFFFFFFFFFFFFFFFFFFFFFFF
FFFFFFFFF"
350 CALL CHAR(108,S3$)
360 Z=Z+1
370 IF F<=0 THEN S=96 ELSE S=100
380 FOR I=1 TO 9
390 R=A(I,1) :: C=A(I,2)
400 IF A(I,1)=0 THEN 470
410 CALL SPRITE(#1,108,16,R,C)
420 FOR D=1 TO 6
430 CALL JOYST(1,X,Y)
440 IF X THEN 490
450 NEXT D
460 CALL DELSPRITE(#1)
470 NEXT I
480 GOTO 370
490 CALL DELSPRITE(#1) :: CALL SO
UND(500,990,1) :: CALL SOUND(50,4
0000,30)
500 FOR D=1 TO 6 :: NEXT D
510 CALL SPRITE(#Z,S,5,R,C)
520 Q=Q+1 :: IF Q=9 THEN 550
530 A(I,1)=0 :: A(I,2)=0
540 F=-F :: GOTO 360
550 GOTO 550

```

-BY FRANK N. ZIC

Here we go together-No.9. How many times I've heard, " I wish I had a good Data Base program to keep my personal or house inventory records up-to-date". Sound familiar? Well, perhaps the following explanation of a system I developed will help you with your problem as it has done with mine. I have it fully developed for my purpose but the nice thing about it is that it can easily be modified to suit your own individual needs. A little background first. There are a number of Data Base programs available such as: Acorn 99, Data Base 1, Name-It, TI's Personal Record Keeping, P R Base and Turbo-Dataman. Many of these I've tried and found lacking in one way or another, such as: capacity, speed, organization, instructions or some other characteristic. Well, I simply used something that most of us already have and may have over-looked. It is the TI-Writer. I have used it for so many things that surely it's uses are nearly infinite. Here is a partial listing of some of the things for which I have used TI-Writer: (1) Wills, (2) Obituaries,(3) Calling Cards,(4) Writing Letters,(5) Addressing Envelopes,(6) Postal Labels,(7) VCR Labels {all kinds of labels},(8) Recipients,(9) Photo Albums,(10) Personal Diary and many other uses. Then too let's not forget its use in writing this article. To this list can be added the object of this article, which I call "My Electronic Notebook". I am planning to demo some of these new technics at the Aug. West Penn 99'er meeting. I will have some modified hard copies as examples of some of the projects I mentioned above. Before I get into the details of this article I would like to take this opportunity to thank a very good friend of mine, Jerry Petrulak, who has been a true computer buddy and given unselfishly of his vast knowledge. While I developed the TI-Writer method of note keeping for my own needs, Jerry prefers the PR Base for his inventory records.

I'm afraid that space limitations will cut short a detailed explanation of my project, but with a detail of one of the categories, (S/3 Services) shown below, you will get the idea. Remember that all of the marvelous features of TI-Writer are available to you for up-dating, rearranging and printing out. On a single DSSD disk I loaded just the Editor of TI-Writer, the main INDEX and all of the data files. There are still over 500 sectors available for storage. Now that's what I call room. Note each filename is called up with a three (3) key filename. Give it a try and modify it to your own needs. Now if John can print the main INDEX on the facing page, we'll be all set. The phone No's below are all active. May the good 4's be with you.

S/3 Services		(cont.)
S/3/1 Auto repairs 271 1310	:	S/3/6 Hauling 751 0862
Auto body 751 9309	:	Hauling/Soil 672 6470
S/3/2 Clocks Pick-up 863 1535	:	Hauling,top soil,stones,excv.
S/3/3 EEL Svc "Cole" Heating/Plumbing	:	793 6943
823 8240 Turtle Creek	:	S/3/7 Home Baking 751 0475
EEL Svc "Bill" 243 5579	:	" cleaning 829 1417 Marianne
S/3/4 Grass cut Ray Baldis	:	S/3/8 Organ tuning 364 1038
call 751 8243 or 9309	:	S/3/9 Plastering 751 9343
S/3/5 Gen repairs Paul 751 6931	:	Plastering 30yrs 824 8089
Gen. Lawn,paint,paper hang'n	:	S/3/10 Sewing mach. 30yrs Sears exp.
John 351 5467	:	751 8765 or 372 1969
Landscaping "Chris" 795 5484	:	S/3/11 Soil \$85/Load 372 0380
Cement work 824 0513	:	Slag \$8.50/T David 793 5050
" 30yrs 373 3017	:	Soil/Walls 461 9014,462 9973
" Pete 731 7811	:	S/3/12 Upholstering 527 2106
Trees Tim Dworic 751 6563	:	"Back's" Free est./Del.
" 672 0400	:	

INDEX (Modify to your needs)

- A A/1 Addresses
- A/2 Appliance Repair
- B B/1 Bank vault
- B/2 Banking
- B/3 Birth Dates
- B/4 Boat
- B/5 Books
- B/6 Bonds
- C C/1 Camper
- C/2 Car
- C/3 Charge Cards
- C/4 Computer
- C/5 Credit Union
- D D/1 Danny
- \*D/2 Dates (Up-coming)
- D/3 Dental
- D/4 Documents
- D/5 Dog (Lady)
- E E/1 ELeanor
- E/2 Emergency
- F F/1 Frank
- G G/1 Garage
- \*G/2 Garbage pick-up
- H H/1 Hospital
- H/2 Hotels
- H/3 House
- I \*I/1 Insurance
- I/2 Investments
- J---K---L
- M M/1 Marrage
- M/2 Medical
- \*M/3 Memberships
- M/4 Misc Info
- N
- O
- P P/1 Price, Frances
- Q
- R \*R/1 Retirement Groups
- R/2 Rose & Mark
- S S/1 Sattellite
- S/2 Serial No's
- S/3 Services (Details opposite)
- S/4 Social Sec.
- \*S/5 Subscriptions
- T \*T/1 Taxes & Quaterly
- T/2 Telephone No's
- T/3 Tours
- T/4 Travel
- U U/1 Uncles
- \*U/2 UPS
- U/3 USX
- V
- W W/1 Weather
- W/2 Weimers
- X---Y---Z

The following is a master file that I used to print out a chemistry laboratory manual that I wrote. Kindly notice that I have all the form-attning commands plus all the files in the order that I want them printed out.

- .AD
- .FI
- .HE ~~~~~%
- .LM 6
- .RM 70
- .IN +5
- .TL 124:27,109,4,134
- .TL 123:27,83,49
- .TL 125:27,84
- .TL 91:27,83,48
- .PL 60
- .IF DSK2.LABNTBK
- .IF DSK2.APP
- .IF DSK2.MELTING
- .IF DSK2.DISTIL
- .IF DSK2.CRYST
- .IF DSK2.INFRED
- .IF DSK2.NMR
- .IF DSK2.SEPFUN
- .IF DSK2.DRYING
- .IF DSK2.BUTENE
- .IF DSK2.VPC
- .IF DSK2.KER
- .IF DSK2.NITBENZ
- .IF DSK2.BROMBENZ
- .IF DSK2.CRAFTS
- .IF DSK2.ANILINE
- .IF DSK2.NABH
- .IF DSK2.ROTATION
- .IF DSK2.BUTBROM
- .IF DSK2.CYCHEX
- .IF DSK2.VALERIC
- .IF DSK2.BUTACE
- .IF DSK2.BENZOIC
- .IF DSK2.METHBENZ
- .IF DSK2.MNBENZ
- .IF DSK2.MDICHLBENZ
- .IF DSK2.DIELS
- .IF DSK2.ALDOL
- .IF DSK2.MUT
- .IF DSK2.SUG

Many people have asked for copies of the T.I. WRITER series that Stan has written for the WEST PENN 99'ers. If you missed some issues, and would like the whole series, contact me. I'll provide the series for you in the original form.

Stan has already provided me with a years supply of PASCAL for the p-CODE system. So if you ever wanted to get started using and learning to program in PASCAL, and you have access to the p-CODE card for the T.I. System, get ready. (I think that using T.I. WRITER has really gotten Stan in the mood for writing!)

NOTE: \* Check these items often.

GETTING THE MOST FROM YOUR CASSETTE SYSTEM  
 BY MICKEY SCHMITT  
 14  
 UNDERSTANDING - CREATING - AND USING - CASSETTE FILES  
 PART III

THIS MONTH I AM CONTINUING WITH THE TOPIC OF UNDERSTANDING - CREATING - AND USING - CASSETTE FILES. MORE SPECIFICALLY, I WILL BE CONTINUING WITH THE TOPIC OF "HOW TO OPEN UP A CASSETTE FILE"... WHICH I FIRST BEGAN DISCUSSING LAST MONTH... IN PART II OF THIS MONTHLY SERIES.

ALL T.I. BASIC STATEMENTS, WHICH REFER TO PARTICULAR FILES, DO SO BY MEANS OF A PARTICULAR "FILE-NUMBER" (BEING 0 AND 255 INCLUSIVE) IN THE "OPEN" STATEMENT. HOWEVER, AS A WORD OF WARNING: SINCE THE "FILE-NUMBER", ( "FILE-NUMBER 0 " ) REFERS TO THE "SCREEN" AND "KEYBOARD" OF YOUR COMPUTER... IT IS ALWAYS ACCESSIBLE YOU CANNOT "OPEN" OR "CLOSE" "FILE-NUMBER 0 " IN THE "OPEN" STATEMENT. YOU MAY HOWEVER ACCESS ANY OF THE OTHER REMAINING "FILE-NUMBERS" AS YOU WISH. AS LONG AS EACH "OPEN" FILE IN THE PROGRAM HAS A DIFFERENT NUMBER THAN ANY OTHER FILE THAT YOU ARE CURRENTLY USING IN YOUR PROGRAM. THE "FILE-NUMBER" IS ENTERED INTO THE "OPEN" STATEMENT AS THE NUMBER... ( # )... ( OR " " )... FOLLOWED BY ANY NUMBER BETWEEN 1 AND 255 INCLUSIVE.

A "FILE-NAME" REFERS TO A DEVICE OR TO A FILE WHICH IS LOCATED ON A DEVICE. DEPENDING ON THE CAPABILITY OF THE ACCESSORY, EACH ACCESSORY HAS A "PREFERRED" NAME... THE COMPUTER RECOGNIZES FOR EXAMPLE, THE VALID "FILE-NAMES" FOR THE TWO COMPUTER CASSETTE DEVICES ARE "C:" AND "D:". BY INCLUDING THIS "FILE-NAME" IN THE "OPEN" STATEMENT, YOU ARE TELLING THE COMPUTER TO ACCESS A PARTICULAR "FILE" OR "DEVICE", WHENEVER THE PROGRAM REFERS TO THE ASSOCIATED "FILE-NUMBER".

IF ALL OF THIS SEEMS WAY TOO CONFUSING FOR YOU... FEAR NOT... I FELT THE SAME WAY MYSELF! WITH THE FOLLOWING CHART IN MIND... I HAVE DECIDED TO CREATE A "REFERENCE CHART"... IN ORDER TO GET A BETTER UNDERSTANDING OF ALL THE "NEW MATERIAL" THAT I HAVE EXAMINED SO FAR.

TO "OPEN" UP A CASSETTE FILE... FOLLOW THESE STEPS...

0	1	2	3	4	5	6	7	8	9
FILE-NUMBER	E	FILE-NUMBER	E	FILE-NUMBER	E	FILE-NUMBER	E	FILE-NUMBER	E
STATEMENT	E	STATEMENT	E	STATEMENT	E	STATEMENT	E	STATEMENT	E
LINE-NUMBER	D	LINE-NUMBER	D	LINE-NUMBER	D	LINE-NUMBER	D	LINE-NUMBER	D
...NUMBER	S	...NUMBER	S	...NUMBER	S	...NUMBER	S	...NUMBER	S
...COMMAND	S	...COMMAND	S	...COMMAND	S	...COMMAND	S	...COMMAND	S
100	C	OPEN	C	1	D	T	CS1	T	E

NEXT MONTH I WILL CONTINUE WITH THE TOPIC OF UNDERSTANDING - CREATING - AND USING - CASSETTE FILES. MORE SPECIFICALLY, I WILL BE CONTINUING WITH THE TOPIC OF "HOW TO OPEN UP A CASSETTE FILE"... INCLUDING... THE CONTINUATION OF THE ABOVE CHART.

IN THE MEAN TIME... IF YOU NEED ANY HELP OR HAVE ANY QUESTIONS CONCERNING YOUR CASSETTE SYSTEM - JUST GIVE ME A CALL ( 412-335-0163 ) AND I'LL TRY TO HELP.

HIGH-SCORING GAMES

GAME	SCORE	COMMENTS	DATE	NAME
ARCTURUS	14040		5-28-87	TONY MAWHINNEY III
BURGERTIME	82600	PATTERN 21	9-04-85	MICKEY SCHMITT
BURGER BUILDER	1000000	PATTERN 99 NEVER ENDS OUT OF LEVEL		ELEANOR ZIC
CENTIPEDE	301930		1-08-87	MICKEY SCHMITT
DIG DUG	262460			FRANK ZIC
DIG DUG	216740			ELEANOR ZIC
HUSTLE	WON 52	LEVEL 27 REC ONCE		ELEANOR ZIC
JUMPY	131900	PATTERN 21		ELEANOR ZIC
JUNGLE JIM	10730		5-28-87	TONY MAWHINNEY III
MICRO PINBALL	1776500		5-18-87	NORM ROKKE
MICRO PINBALL	969500		6-27-87	MIKE SEALY
MIDNITE MASON	24720		6-16-87	FRANK ZIC
MIDNITE MASON	19340		6-26-87	ELEANOR ZIC
MOON PATROL	73150	LEVEL K CHAMPIONSHIP		MIKE SEALY
MUNCHMAN	29290	LEVEL 10	8-28-87	MICKEY SCHMITT
PARSEC	41900	LEVEL 3	8-27-87	MICKEY SCHMITT
POLE POSITION	105200			DAVID RENNER
TI INVADERS	9863	LEVEL 4 ACCESSIVE	8-28-87	MICKEY SCHMITT

RECENTLY, I BROKE MY PREVIOUS "HIGH-SCORE" IN MY ALL-TIME FAVORITE ARCADE GAME WHICH MANY OF YOU KNOW IS "CENTIPEDE". HOWEVER, I FOUND OUT THAT I AM NOT THE ONLY ONE WHO HAS A "FAVORITE" GAME OR A "FAVORITE" TO TALK ABOUT! WITH THIS THOUGHT IN MIND, I HAVE DECIDED TO START A NEW COLUMN, IN OUR WEST PENN NEWSLETTER. IF YOU CAN HELP ANY OF THE SCORES THAT ARE LISTED IN THIS COLUMN, PLEASE LET ME KNOW AT ANY OF THE WEST PENN MEETINGS AND I'LL PUBLISH IT IN THE NEXT NEWSLETTER. ANY ARCADE GAME FOR THE TI IS ACCEPTABLE FOR THIS COLUMN, AND YOU MAY SUBMIT YOUR HIGH-SCORES AS OFTEN AS YOU WISH. LET'S GET AS MANY PEOPLE INVOLVED IN THIS ENDEAVOR AS POSSIBLE. REMEMBER, A LITTLE "FRIENDLY" COMPETITION, MAY JUST "SPARK" SOME UNDERLYING "RIVALRY" AND ENTHUSIASM.

Frank Foster has these (M)odules and (T)apes for sale or trade. If you want to purchase the item, Frank is asking \$5.00 w/original book/doc. Price negotiable.(412)238-7532.

A-MAZ-ING (M)	ADVENTURE (M&T)	ADD. & SUBT. 1 (M)	BLASTO (M)
BURGERTIME (M)	CAR WARS (M)	CHISHOLM TRAIL (M)	CONGO BONGO (M)
CENTIPEDE (M)	DONKEY KONG (M)	HOUSEHOLD BDG. MGM.(M)	INDOOR SOCCER (M)
TI INVADERS (M)	MUSIC MAKER (M)	NUMBER MAGIC (M)	PAC-MAN (M)
PARSEC (M)	PERSONAL FIN. AIDS (T)	STAR TREK (M)	TEACH YSLF. BAS.(T)
TEACH YSLF. EXBASIC (T)	Z-BERT (T)		

THE REST OF YOU HAVE CARTRIDGES, TAPES, BOOKS, ETC. LET'S REDISTRIBUTE THE STUFF. JFW WP99'ER

REQUIRES IMMEDIATE RESPONSE!...The "COMPUTER SHOPPER" carries ads from many suppliers of computers, peripherals, and software. It has been a long time since I have seen ads in the "NON TI CIRCLE" of advertisers. The September issue, however, carries many ads that I believe support YOU and your TI, in particularly the ALPHA SCIENTIFIC ad on page 211. Example: "Attention TI99/4A Owners: 3.5 conversion is just as easy. Works with your controller[Myarc or Cor-Comp] and software." This refers to an ad to upgrade 5 1/4" disk drives to 3 1/2" TOSHIBA Micro Drives for \$125.

The same ad lists "DOTS-PERFECT", upgrades for EPSON FX, JX, RX, MX, the TI(EPSON) matrix printer, and IBM graphics printers. This gives you Near Letter Quality, and Select Type features for these printers. (Grafrtrax included with MX kit) for \$63.

They also include a 128K parallel printer buffer, w/power supply and cable for \$89.

If you dont't subscribe to this terrific computer magazine, you should do it right now: COMPUTER SHOPPER : ALPHA SCIENTIFIC Alpha Scientific carries alot  
PO BOX 1419 : P.O. BOX 626 more, such as printers, ribbons,  
TITUSVILLE, FL : CHESTERFIELD, MO Winchester disk drives, for the  
32781-9988 : 63006 PC, Apple, and Atari users.  
Phone: 1-800-327-9926 (M-F) : Phone: (314) 878-7117 (Central Time) 10 AM to 5 PM  
1-YEAR SUBSCRIPTION \$21.00 : Saturday 10 AM to 2 PM.

MEGATRONICS, INC P.O. BOX 3660 LOGAN, UT 84321, has a very exceptional modem for sale, the AVATEX 1200 for \$85.00! Features include: (((H U R R Y ! ! )))

- \* DIRECT CONNECT
- \* 8 LED STATUS INDICATORS
- \* HAYES COMPATABLE, AT COMMAND SET
- \* TONE OR PULSE DIALING
- \* STANDARD DB25RS 232-c CONNECTOR
- \* EXTERNAL AC ADAPTER
- \* AUTO ANSWER AND DIAL
- \* BELL 103/212A COMPATIBLE
- \* TELEPHONE CONNECTION JACK
- \* FCC APPROVED

Includes FREE! Communication software & Compuserve Access Time , FREE SHIPPING, Toll Free assistance, immediate delivery, no service or handling fees. \$85.00 is IT!

CALL:1-800-232-6342 (1-800-752-2642 inside Utah) or FAX(801)752-8752

(The above ad was also from COMPUTER SHOPPER)

CHILDREN'S SOFTWARE. Over 80 original, fun, inexpensive, educational programs for the TI99/4A. Send a LARGE SASE for brochure. KIDware, 1380 156th NE, Suite H2, Bellevue, WA 98007

IF YOU ARE LOOKING FOR A GOOD DEAL, YOU WILL HAVE TO GET THE ABSOLUTE LATEST ISSUE OF THE COMPUTER SHOPPER, AND READ IT FROM COVER TO COVER THE FIRST NIGHT, ( about 538 pages) FIND WHAT IT IS THAT YOU WANTED (OR WANT), AND ORDER IT IMMEDIATELY. JUST A SUGGESTION.

"DESKTOP PUBLISHER" for the TI FINALLY !!!!!!!!!. I don't know yet. But if you got the August issue of the MICROpendium, page 7, DATABIOTICS, INC. is announcing what appears to be the closest thing yet to the DESKTOP PUBLISHER programs found on other computers. It is even touted to require only a console and printer in it's basest configuration. It is something we've all been waiting for. SEND \$59.95 + \$1.50 S/H to:

DATABIOTICS, INC. P.O. BOX 1194, PALOS VERDES ESTATES, CA 90274

Want a FANCY CERTIFICATE ? TEX-COMP is marketing a CERTIFICATE-POSTER maker for the TI99/4A. 100% ASSEMBLY LANGUAGE program. Disk based w/six text fonts in two sizes, twelve borders, twenty-four clip art graphics and official looking signatures and seals! For EPSON/STAR dot matrix or compatible printer in single or double strike or NLQ.

REQUIRES: 32K, disk, ex-basic or e/a, or mini-mem. or TI-Writer. \$19.95 + \$3.00 S/H  
ORDER FROM: TEX-COMP P.O. BOX 33064 GRANADA HILLS, CA 91344 (818) 366-6631 (24 HOUR)

For those of you who have The Printer's Apprentice, Mc Cann Software now has the: "TPA TOOLBOX" including PAGE MANAGER, SIGN TOOL, FONT CONVERSION, BORDER BUILDER, FORMS TOOL, FONTS & BORDERS. Each program of TPA TOOLBOX works and prints on it's own and each is compatible with The Printer's Apprentice. Requires: 32K, Disk System, and either EXT. BASIC or EDITO ASSEMBLER. Works with TI-99/4 Printer, Gemini 10X and Epson compatible graphics printers, including Panasonic 1091, Star NX and IBM.

TPA TOOLBOX @ \$22.50, The Printer's Apprentice @ \$22.50, Fonts Disk 1 @ \$11.50. McCann pays the postage. To order send check or MO in U.S. Funds to :

McCann Software P.O. BOX 34160 OMAHA, NE 68134

FASTEXT 80 printer owners, send for a listing of BOOKS and DISK /CASSETTE software to control your FASTEXT 80 printer with your TI99/4A computer. There are quite a lot of book and program items available. WRITE TO: McWare P.O. BOX 2784 FAIRFAX, VA 22031

- I heard rumors of this card. The "GRAND-RAM" by DataBiotics, is a PEB card with :
- \* PRINT SPOOLER
  - \* BATTERY BACKUP
  - \* OPTIONAL REAL TIME CLOCK
  - \* PLUG IN MEMORY UPGRADING
  - \* I/O EXPANSION (FUTURE)
  - \* TMS 9901 ON-BOARD INTERRUPT
  - \* FULLY DOCUMENTED SOURCE
  - \* ACCESSABLE FROM ALL LANG.
  - \* SELECT UP TO 4 DISK DRIVES
  - \* INCLUDES DISK MANAGER & EMULATOR SOFTWARE
  - \* COMPATIBLE W/ TI, MYARC, GENEVE, CORCOMP, MORNING STAR, & FOUNDATION
  - PER GRAND RAM

ALSO COMPATIBLE WITH JOHN JHONSON'S MENU PROGRAM. REQUIRES: PEB AND DISK CONTROLLER.  
 WANT TO KNOW MORE ? Call Technical Hotline 1-800-255-2985 (707-585-3922 in CALIFORNIA)  
 Available in KIT form also.

ASSEMBLED:	KIT:	
64K order no. DB646R.....\$129.95	.....\$ 99.95	You will also receive a
128K order no. DB128R.....\$144.95	.....\$112.95	Disk Manager and 4A/TALK
256K order no. DB256R.....\$169.95	.....\$136.95	with the GRAND RAM.
512K order no. DB512R.....\$229.95	.....\$185.98	This may be one of the
CLOCK order no. DBCLGR.....\$ 19.95	.....\$ 19.95	more significant hardware
AVAILABLE IN SEPTEMBER.		items ever for the TI.

ED. NOTE: LOOK at the picture in MICROpendium AUGUST 1987, page 27. You will note that the board has chips where they CAN'T POSSIBLY BE. (9901), and NO traces on component side. Is this a figment, or is that a VERY OLD PICTURE? Obviously a wire-wrap version. The price for this board is very good. The board is using the new 32K BYTE STATIC RAM chips. Up to (4) 512K GRAND RAM'S can be used, for a total of 2 MEG. BYTES of RAM DISK! MORE!!! DataBiotics will release in March 1988, an ANALOG-TO-DIGITAL converter, to run external equipment, and an EMULATOR to create your own cartridges.

ORDER FROM A DISTRIBUTOR OF DATABIOTICS PRODUCTS, or from :

DataBiotics, Inc. P.O. BOX 1194 PALOS VERDES ESTATES, CA 90274

HEY BOWLERS ! How about a program to take care of ALL your bowling league REPORTS. Called the " BOWLING LEAGUE SECRETARY I ". FEATURES INCLUDE:

- \* Mid-Season Start-up
- \* User Friendly
- \* Extensive documentation
- \* Handles up to FORTY Teams at TEN per Team ( 238 bowlers)
- \* Handles MEN'S, WOMEN'S, MIXED & SENIOR leagues.
- \* Reports inc. ABS, WIBC types reports of indiv. record sheets, weekly awards, weekly high game and series, season high game and series, team standings, weekly lane reports, and SECRETARY'S weekly report and several others.
- \* Calculates season high game and series, indiv. standings, handicaps, total pins, awards, total games, forfeits, substitutes etc.

REQUIRES X BASIC, 32K memory, disk drive, and optional 80 column printer. \$ 49.95

To ORDER or Info., call or write:

PILGRIM'S PRIDE 5 WILLIAMS LANE HATBORO, PA 19040 (215) 441-4262

RECIPE WRITER 2.0..... A database program designed exclusively for recipies! This is used to organize your recipe collection, and enhanced to help you plan a meal or find a nice side dish that goes with chicken. FEATURES INCLUDE:

- \* Full title space, oven temp. and space for 23 lines of ingredients and 23 lines of instructions.
- \* Converts any serving portions to ingredient list
- \* Multiple keywords for each recipe (Enter CHICK^N [misspelled] and the search routine finds all the recipies with "KEYWORD" CHICKEN)
- \* Super fast searches (seconds per disk)
- \* Complete recipe editing utilities
- \* Friendly fast menus with options in English
- \* Print utilities to paper or 3x5"
- \* All options fully described in extensive manual
- \* Program written in c99 and compiled to assembly
- \* Unprotected, and can be put on RAM disks
- \* 100% compatible with the Myarc Geneve 9640
- \* Minimum requirements: Console, 32K, XBasic or E/A, one disk drive, and an optional printer.

Also available now! Electronic Gourmet (tm) series of companion disks for RECIPE WRITER II. Each volume in this series is a complete book of recipies, set up so you can find what you want, at a keypress. The RECIPE WRITER II is \$19.95 (includes s/h) and the two currently available Volumes of ELECTRONIC GORMET (tm), are \$6.00 each (includes s/h). Vol. #1 = Southwest Foods and Vol. #2 = Appetizers & Soups. ORDER FROM:

ASGARD SOFTWARE P.O. BOX 10306 ROCKVILLE, MD 20850 (301) 559-2429

I hope that these two pages of some new items and software packages will be of use to a variety of users. It also goes to show that the TI-99/4A is not deserted. Give support to these vendors. They are supporting YOU ! THANKS! John F. Willforth (West Penn 99er's)



WRITE THIS ADDRESS DOWN.... BUD MILLS SERVICES 166 DARTMOUTH DR. TOLEDO, OH 43614  
 PHONE NUMBER...(419) 385-5946 because most of the next couple of paragraphs deal with  
 products that BUD is very closely involved with. He'll be glad to hear from you.

- (1) Bud is carrying a kit and instructions for putting 64K (32K usable right now), on  
 the 16 BIT buss in the TI console. I demonstrated this at the JULY meeting. The  
 KIT (includes two 62256 static RAM chips, the two support chips and instructions)  
 sells for \$27.00 (which includes s/h). INTERESTED ? Order from BUD MILLS SERVICES.
- (2) Bud also carries all the parts (less the bare board which is available from HORIZON)  
 for the HORIZON RAM DISK. The DSSD Version sells for \$110.00. Five or more KITS can  
 be ordered, and a 5% discount applied.(SEE COUPON BELOW for members of West Penn 99)
- (3) Bud is providing kits for the JOHN CHULOW DSR card. Call him for prices and info.  
 on availability.
- (4) This now is the tricky part. There is a more than strong RUMOR that a 1-MEG version  
 of the HORIZON RAM DISK is NOW available. The designer is MIKE BALLMAN. The unit can  
 be configured as (2) DSDD (yes DOUBLE Density) and (1) 256K Unit, all on ONE card,  
 and all the advantages of the ORIGINAL HORIZON RAM DISK. Remember this is a RUMOR,  
 but if you would like to know more about this RUMOR, call or WRITE BUD .
- (5) It is also appropriate to mention that BUD carries a high quality, low priced in-  
 ventory of electronic parts.

The bare board for the HORIZON RAM DISK, or the completed units can be ordered directly  
 from the "HORIZON COMPUTER LIMITED P.O. BOX 554 WALBRIDGE, OH 43465. Assembled:  
 \$165.00 for SSSD version, \$210.00 for DSSD version, 90 DAY WARRANTY. BARE BOARD price:  
 \$53.00 w/docs & disks, and \$45.00 w/one set of docs & disks in quantities of five or more.

At a meeting of the hardware SIG of the West Penn 99'ers in JUNE there were several of  
 you who indicated that you would like to build a unit (HORIZON RAM DISK) as part of the  
 SIG meeting, and wanted me to organize this undertaking. Well since summer will be over  
 by the time you read this, I've decided to make this effort now. If you are really inter-  
 ested please fill out the coupon and include TWO checks. One for the BOARD, and one for  
 the PARTS. The price will be \$105.00 made out to "BUD MILLS SERVICES", and the other to  
 "HORIZON COMPUTER LIMITED" for \$45.00. I will then order all the parts as one order to  
 get the discount, I'll duplicate the MANUALS, and you provide the blank (3) disks for us  
 to duplicate the OPERATING SYSTEM, and source code disks. We will then begin to build  
 them in the OCTOBER meeting of the SIG. (you may want to build your own at your own pace  
 but want to order with us to get the savings, that's OK too) So please fill this out and  
 return to me, no later than the SEPTEMBER MEETING ! John F. Willforth

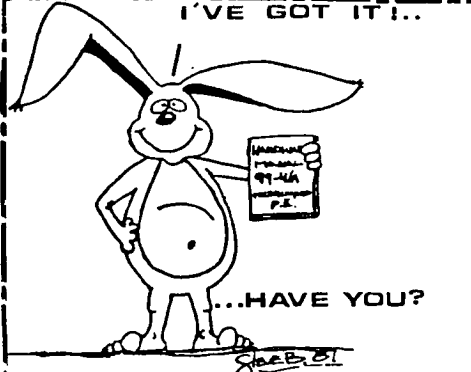
ORDER FORM ONLY FOR WEST PENN 99'ERS TO ORDER THE HORIZON RAM DISK KIT PARTS(SEPT.1987):

I WOULD LIKE TO BUILD \_\_\_\_\_ HORIZON RAM DISK(S). PLEASE FIND ENCLOSED TWO CHECKS  
 ONE FOR THE "PARTS" WITH A TOTAL OF \$ \_\_\_\_\_.00, ( \$105.00 for each kit), AND.....  
 ONE FOR THE "BOARD" FOR A TOTAL OF \$ \_\_\_\_\_.00, ( \$ 45.00 for each board).

NAME..... \_\_\_\_\_ SEND TO:  
 ADDRESS..... \_\_\_\_\_ JOHN F. WILLFORTH  
 CITY/STATE/ ZIP.. \_\_\_\_\_, \_\_\_\_\_ R.D. #1 BOX 73A  
 PHONE NUMBER ( \_\_\_\_\_ ) \_\_\_\_\_ - \_\_\_\_\_ JEANNETTE, PA 15644

YOU MAY SEND THE ABOVE INFORMATION ON A SEPARATE SHEET OF PAPER TO AVOID DESTROYING PAGE.

I'VE GOT IT!..



...HAVE YOU?

**HARDWARE MANUAL  
 FOR THE  
 TI 99 /4A**

**IT DESCRIBES:**

- CONSOLE DESIGN
- CUSTOM CHIP OPERATION
- TMS 9900 H/W ORGANIZATION
- TMS 9900 INSTRUCTION SET
- INTERFACING PITFALLS
- CONSOLE SCHEMATICS
- PEB CARD DESCRIPTION
- GROM SIMULATOR DESIGN
- EXTENDED BASIC MODULE  
DESCRIPTION & SCHEMATICS

**WEEKEND HARDWARE SEMINAR  
(INFORMATION AVAILABLE ON REQUEST)**

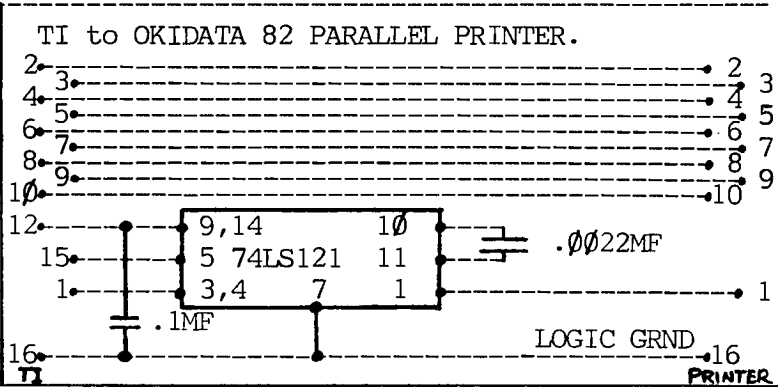
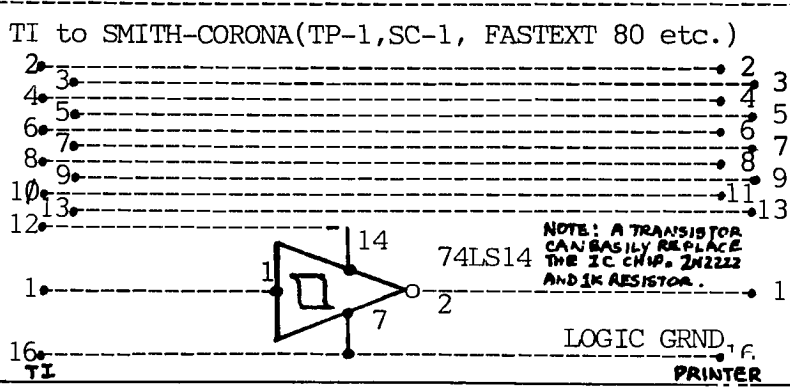
Send \$19.95 Check or Money Order To:  
(CANADA & FOREIGN SEND \$21.50 U.S. FUNDS)  
 (VOLUME RATES AVAILABLE... ON REQUEST)

**THE BUNYARD GROUP  
 PO BOX 53171, LUBBOCK, TX 79453**

**THE PEB PROTO BOARD IS HERE!**

JUST because you don't know  
 what it is, doesn't mean you  
 don't need one! Call Scott  
 or John to find out more, or  
 read last month's news let-  
 ter to find out more about  
 it. The COMPUTER BUG is sel-  
 ling them. \$35.00. Mail ord-  
 ers, please enclose \$2.50  
 S/H, and 6% PA sales tax if  
 PA resident. Info. call me  
 at 412-527-6656, Scott at  
 412-271-6283, or COMPUTER  
 BUG 5075 CLAIRTON BLVD.  
 PITTSBURGH, PA 15236  
 412-882-3374 10-7 E.S.T.

BELOW ARE TWO PIN-OUTS AND CABLE MODS FOR TWO RATHER COMMON, YET DIFFERENT PRINTERS.  
CREDIT FOR THE INFORMATION GOES TO WILLIAM M. LUCID, MEMBER OF THE HOOSIER USERS GROUP.



Keith G. Koch in the FEB. '87 issue of MANNERS, writes that "Pictures taken from a video camera can be fed into the system.....(99/4A, TMS9918A, by placing the video signal)... on pin 35 of the TMS 9918A video chip, and then turn off the internal sync of the chip with the following program!"

```

100 CALL INIT
110 CALL LOAD("DSK1.SYNC")
120 CALL KEY(0,R,S)
130 IF S=1 THEN 120
140 IF R=73 THEN CALL LINK("ISYNC"):: GOTO 120
150 IF R=69 THEN CALL LINK("ESYNC")
160 GOTO 120
ASSEMBLE THE PROGRAM BELOW AND ON THE RIGHT.
*INTERNAL/EXTERNAL VIDEO SYNC
DEF ISYNC,ESYNC
ERRNBR EQU >837C
GPLWS EQU >83E0
VWTR EQU >2030

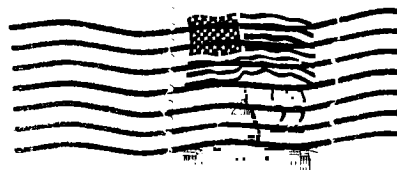
```

```

*SET SYNC TO INTERNAL
ISYNC LWPI WS
LI 0,>0000
BLWP @VWTR
JMP RETURN
*SET SYNC TO EXTERNAL
ESYNC LWPI WS
LI 0,>0001
BLWP @VWTR
*RETURN TO BASIC PROGRAM
RETURN LWPI GPLWS
SB @ERRNBR,@ERRNBR
RT
WS BBS 32
END
The WEST PENN
99'ERS take no
responsibility
for any damage
resulting from
your attempt to
incorporate this
hardware modifica-
tion.
Aside from this
WARNING, Enjoy!
John Willforth

```

THE WEST PENN 99'ERS  
% JOHN F. WILLFORTH  
R.D. #1 BOX 73A  
JEANNETTE, PA  
15644



SEPTEMBER 1987 ISSUE

NEXT MEETING SEPT. 15th  
at the UNITED PRESBYTERIAN  
CHURCH OF THE COVENANT  
4th and OAK Streets  
IRWIN, PA 15642  
AT: 7:00 PM

