

# WEST PENN NEWS

VOLUME 2 NUMBER 15 APRIL 1998

## 3 1/2 DISK DRV

by FRANK AYLSTOCK  
USER'S GROUP OF  
ORANGE COUNTY



The 5.25" (360K) drives are becoming another orphan, like our TI. The disk controllers do not know if you have a 3.5 or 5.25 drives. The only thing they know is what your input is, and the only control you have is the number of tracks per sector, number of sides and density. The disk controller will handle double sided but only single density. The Myarc card with the quad chip installed will handle disk drives up to 720K. The 5.25 quad density drives are another orphan but you can use 3.5 disk drive. The 3.5 drives can be up to 1.44 meg. This means that you will have 2880 sectors or the equivalent of 8 SS/SD floppy disks. However you can set up your system so that you have at least one 5.25 disk drive and the others 3.5 drives. The HFDC by Myarc will also accept up to quad density disks.

I would like to recommend that you switch over to the 3.5 drives as they are a superior form of storage for the following reasons:

1. The disks are enclosed in a shell/cover which holds them rigid and will not allow the disk to get bent. You can even write on the disk directly without harming the data.
2. They contain their own sliding reusable "write protect tab". By merely moving the tab up or down the disk can be protected.
3. The size is a large consideration as they require a lot less space to store or transport them.
4. They contain a sliding door which protects the storage medium at all times. This door opens and closes automatically when the disk is inserted or removed from the drive.
5. The size also helps to read and write data faster than the 5.25 floppy disk drives.

6. The disks are coated with superior oxide which is less vulnerable to data loss.

7. They are considered more reliable than 5.25, especially important when dealing with quad density disks.

8. The drives take less current during the reading and writing process. In fact some of the 3.5 drives use only 5 volts.

Last but not least is the price. One could get one for less than \$50.00 and with my own power supply Jim Wiegand fixed mine for an affordable price. I am presently using it as drive #3. The only change that had to be made was the switch in the drive.

\*\*\*\*\*

### THE ORIGIN OF THE GENEVE COMPUTER'S NAME

The clamshell containing the Myarc's computer-on-a-card says "Myarc 9640 Family Computer". The box calls it "Geneve". What is the origin of these names? No it has nothing to do with any

computer chip. There is no such thing as a 9640 chip. The answer is in an article by Dave Wakley published in the August issue 30, 1986 of Chicago Times, newsletter of the Chicago User Group. This is the first published account of anybody actually seeing a working Myarc computer. The report is from the June 1986 Chicago Consumer Electronics show.

"(Myarc owner) Lou Phillips stated that Texas Inst. asked him not to use the "9900" in the name, but he retained the "9" and added the "640" because that is the amount of ram which comes with the machine.

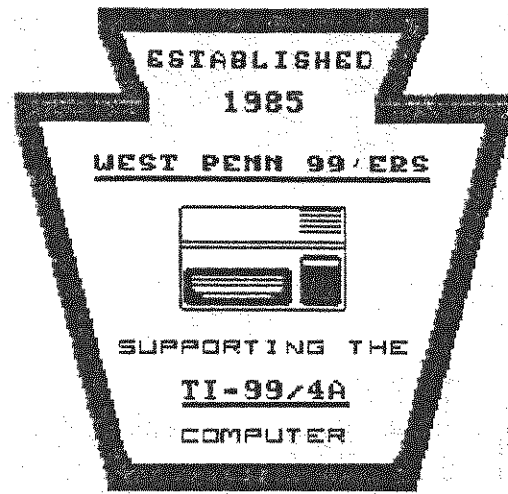
\*CONTINUED ON PAGE -5-\*

Lew King called me and said, that if all possible he would make the April meeting. He plans a Demo with his computer setup, of how he gets on the Internet. I also received a letter from him that I shall put in the N.L. Also Gary Kuehn sent me a two page article about the Internet. If all possible make the April meeting for an interesting time!

\* From the Editor \*

# WEST PENN 99'ERS CLUB INFO

Next Meeting Date: April 21, 1998  
 Meeting Location: Penns Woods Civic Association  
 Just off Route 30  
 N. Huntingdon, Pa  
 Time of Meeting: 7: P.M.



## GENERAL ITINERARY OF OUR CLUB'S MEETING

6:45 P.M. Doors Open  
 7:00 P.M. General Meeting  
 7:45 P.M. Demos and New Info  
 8:45 P.M. Questions and Answers  
 9:30 P.M. One on One Help  
 10:00 P.M. Socializing  
 10:30 P.M. Doors Close

## MEETING HIGHLIGHTS FOR THIS MONTH

CARTRIDGE DEMO'S.....Demo by Paul Brock  
 Latest Library Demo .....Demo by M.Cendroski  
 Latest in hardware.....Demo by Jim Wiegand  
 Help with C 99.....Demo Norm Rokke  
 Open Interest.....Open to all

## LIST OF WEST PENN OFFICERS FOR 1998

President:	Paul Brock	724-478-2754
Vice-President:	Norm Rokke	614-264-6442
Treasurer:	Ed Mandich	412-824-5566
Recording Secretary:	Paul Brock	724-478-2754
Corresponding Secretary:	Jim Wiegand	304-738-2110
Librarian:	Mickey Cendroski	724-265-5201
Newsletter Editor:	Paul Brock	724-478-2754
Assistant Editor:	Paul Brock	412-478-2754

The West Penn 99'ers Users Group is a Non-Profit organization, dedicated to encouraging the continued use of the TI-99/4A home computer.

Our Membership Fee is:

- \* \$15.00 per year for an INDIVIDUAL / FAMILY membership.
- \* \$10.00 per year for a NEWSLETTER ONLY membership

Those having Full memberships are entitled to the many extra benefits our club has to offer.

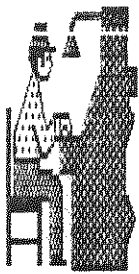
Some of those benefits are:

- \* Getting to meet some of the nicest people.
- \* Demos of the latest TI-99/4A software.
- \* Free copying of our West Penn 99'ers Disk Library.
- \* Up date of T.I. news, Local, National, International.
- \* One on one help / Problem solving.
- \* Participation in our Module Lending Library.
- \* Participation in our Video Lending Library.
- \* Ribbon re-inking- for just \$1.00 per ribbon.
- \* Various Computer supplies - at a substantial savings.
- \* Ability to trade or sell computer equipment, or electronics.
- \* Help on getting equipment fixed.

We meet the third Tuesday of each month at the PENNS WOODS CIVIC ASSOCIATION in North Huntingdon, PA. at 7:00 P.M.

If you can't make it to our meetings...at least become a Newsletter member - and enjoy our NEWSLETTER FORMAT- done entirely on a TI-99/4A computer.

SEE PAGE 10 FOR OUR WEST PENN MEMBERSHIP APPLICATION.



# FOR THE RECORD

BY  
**PAUL BROCK**

**FAB. & MAR. MIN.**



The meeting started approximately at 7:30. The wet weather was turning out to be a warm one as everyone started to arrive. I thought that I was going to be in hot water because the newsletter was so late. Roll call was not necessary.

Report from the Treasurer is starting to pick up as members remember there dues. We decided to send the N.L. would be sent out six times a year. We were looking for some feed back. Ed also mentioned that he may have to change banks. He is asking for some help in this matter.

Mickey could not attend, and the library is still being cataloged. If there is something that you need or want from the library just ask Mickey or call her.

Norm our Vice President spoke of his adventure at the Fest West. He may have to make an repetitive performance for the members that wasn't here.

## MARCH MINUTES

I was called away for the whole month of March, and Norm was going to be away on the meeting night so the leadership fell on Ed. He got the doors open at 6:45 and the meeting started at 7:20. What a guy!! A long time no-see was Emil Barca and Art Gardner. Renewing there 98 memberships were John Vukman, Mickey, and Emil. We welcome our new members.

Ed reports that the Micropendiums are starting to back up, pick up your Micro P. as soon as possible. No raffle, Thanks to Ed for getting the min. to me for the newsletter, and to repeat the Slogan.

Slogan: THE BEST THING TO APPRECIATE  
IS YOUR TI IN 98.



Untill then my  
QUILL has run  
out of ink!

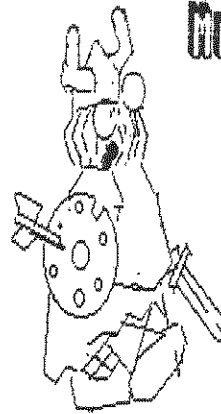
See you on the 21st of APR.

# MESSAGE FROM THE

## PRESIDENT



## EDITOR

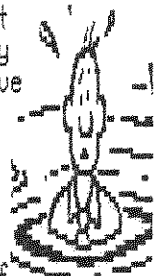


I just got back from some time in Virginia Beach. It rained almost every day. Now that I am back I am having a hard time getting started again. Everything was idle and I have to give it a kick to get it started again.

Once again we are moving into another holiday. So soon it will be summer, and the air conditions will be running. I am hoping that we have a big turnout for the meeting. Not only do we need members to turn out, but we need some input. I know that there is someone that has something that needs some attention. Ed and I would like to know more about how to transfer files from TI-99/4A to the PC, or from the PC to the TI-99/4A. We would like a demonstration. Has any one done this? Has any one any suggestions? you see we need some one to support us in this area of software and hardware.

Ed sent me an article of TRANSFERRING TEXT FILES FROM THE TI-99/4A TO THE PC. The article comes from the Dallas 99 N.L., Nov.95. With the article he asks if it was possible to have a demo on how this is done. Sometimes seeing how something is done really helps.

If there isn't any input, only those that have the knowledge will stay afloat and keep the TI going! Does anyone know if the Cactus Patch BBS of the South West 99ers is still running? I wanted to know if they are now on the Internet. Norm said that Charles Good has a Web page. There is talk that West Penn may have a web page in the future.



I'll try to bring some goodies on the 21st.

\*\*\*\*\*

**HAPPY BIRTHDAY!** TI'er where ever you are!

Ed Mandish asked me if I could write something for the West Penn 99'ers newsletter as the club now has a new President, (congratulations to Paul Brock), and Ed felt that an impressive first newsletter would be a big plus. With this in mind I set down to compose a worthy article that would most certainly add a classy touch to such a fine and respected publication.

Since I have failed to submit the above mentioned article, I hope the following news will be accepted.

Internet news.  
By Gary Kuehn.  
of the PUG.

As we have all be subjected to things Internet lately, I thought it was time to pass on some interesting items that can be used by TIers that would help them to access the information highway. If you are using a minimum system with just a console, and a Pbox, RS232, 32K memory card, and a disk drive, then you can gain a foothold onto the Internet. First let me explain how TIers can do this. If you own a good terminal emulator program, and TELCO is the preferred one for our test drive, and of course, a modem, then you are all set. After loading Telco the first thing to do is go to the setup and set your terminal to VT100va&. This will prepare you for your journey onto the information highway.

The best news about our trip is that it will be free, yes free! No online services to pay a monthly dole to and no local access providers to get frustrated about because they only have a Windows platform to work with. The limitations are that you will only have a text base window, no fancy graphics but no serious time waiting for the information to stream through. Most modems are fine to use with the provider I will introduce here, from 1200 baud and up.

A few years ago the Carnegie Library of Pittsburgh wanted to provide a service to the people of internet access. They had already introduced "Caroline", a way to find books in the Pittsburgh Library system, and now wanted to incorporate this new service in with the existing program. The "Three Rivers Free Net" was born and is still growing today.

For TIers this is a mixed blessing, the service is free and will work on TI's and Geneve's, it is fast and the world is there for you to explore. It is in 80 column format so can be a problem for TIers without that 80 column ability, but give it a try anyway. If it is too much for you then maybe now is the time to look for the 80 column cards at the next TI faire. Fest West is in April and Lima is in May.



*PSSST*  
*Don't Forget*  
*The area code*  
*change!!!*  
*412 to 724*

TRIVIA

It would take about 12 days to count to a million, and 32 years to count to a billion, if each count were one second long.

---Besides inventing dynamite, Alfred Nobel also created plywood and was one of the first designers of prefabricated housing.

Once you are ready to jump in, go to terminal mode of Telco and type the following command:

ATDT or ATDP depending on your phone service, and the number, 622-6260

ATDT622-6260

Once connected and enduring a short wait, you will be presented with a menu:

- 1. The Three Rivers Freenet
- 2. The Electronic Information Network

Choice #1 will take you to the Freenet and by typing in small letters, "trfn", and next the enter key you will be ready to travel on the highway of free information.

With information about the Free Net on the screen, you will see a menu line with suggestions at the bottom. Q for quit, M for main screen, and others but the most important is G for go. Type G and you are presented with a input line to type any Internet address you are interested in. For example to see the USAir home page type in small letters: <http://www.usair.com> Now remember, this will be in Text mode and you won't be able to see the neat graphics but you can read the text and find your way around after practicing a bit. You can always type Q to quit if you get too lost, and then dial in again after your brain settles down a bit. Yes the Internet can be confusing!!!

Good luck on your adventure and be sure to talk about your findings at your next WP99er meeting.

Gary Kuehn  
PUG

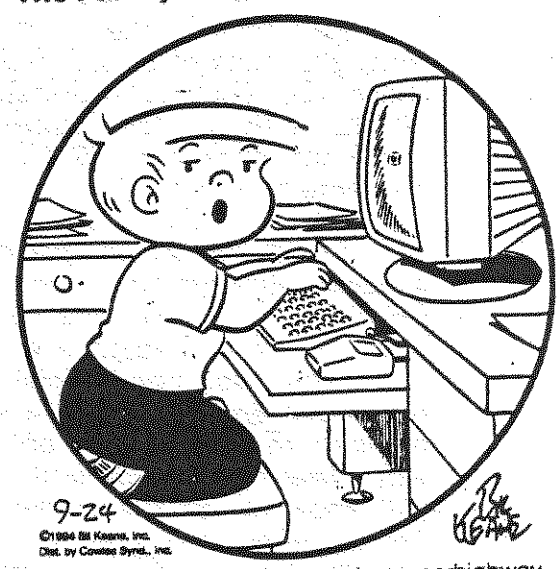
CONTINUED FROM PAGE 1

"With Phillips behind the table was Joyhn Keown, author of Module Emulator, who is now doing extensive work with Myarc. .... I inquired about the origin of the name. Keown jumped in and stated that it was his idea. It seems that a few days before the CES, while they were working together, Keown told Phillips that he felt there should be a name for the new machine instead of just a number, "the 9640". As they were heading down the staircase from Phillips' office there was a framed print on the wall. The name at the bottom was "Geneve", and when Keown suggested this, Phillips agreed to it."

\*\*\*DONE\*\*\*

### The Family Circus

By Bill Keane



"I'm trying to locate the information superhighway, but I can't seem to find the on-ramp."

**Lew King**

PO Box 144

Industry, Pa. 15052 0144

412-643-4791

USA

28 Jan 97

Letter of Interest

Dear Paul

Well, here it is almost the end of January already. At the end of December, I got short notice that I had to be in Oklahoma just after the first of the year. This was for a three week school on some new equipment that we are getting in the Post Office. So there was a lot of rushing around to get things ready for the drive out.

We just got back this past Friday, and picked up the mail on Saturday. In the mail was the January newsletter along with the note you had put in it. We are sorry to hear that your wife was in the hospital, but hope she is home and recovered at this time. Called you Sunday, but no answer, so left a message. I have trouble talking to a machine, but just wanted to check and see how things were going. One line in your note said "PLEASE SEND ART"? If you are referring to TIA pictures to use in the newsletter etc., can't help. I am a very poor artist and can only draw schematics and other things with straight lines. If however, you are referring to the musical notes and smiley faces in my last letter, those are "NON PRINTABLE CONTROL CHARACTERS" built into every printer. So, how can we print non printable characters? See next paragraph.

Last spring Bruce Harrison published a public domain program called "Font Designer". This program allows you to design any type of character that you want, then dump it to the printer. Or you can use any of the many fonts that Bruce and others have designed. Any make printer, 24 pin or ink jet, with an Epson LQ emulation can be used. The printer buffer has to be set for "DOWNLOAD BUFFER". The downloaded font can then be selected by using "ESC % 1" and the printer built in font by "ESC % 0". ESC is the escape character which shows up on the screen as a small "1b". That is hexadecimal for 27. The same as "CHR\$27" in basic. This is obtained in TI Writer or FW Editor by hitting CTRL U FCTN R CTRL U. Ref: TI Writer manual pages 98 and 146.

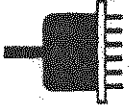
Now the fun part. Send "ESC t 2", to the printer. This moves the download font to the extended character area from 128 to 255. Along with the font, the control characters 0 thru 31, now reside at 128 thru 159. To access these you must use FunnelWeb v4.4 in the "All Character" or 8 bit mode. Hit "CTRL, CTRL U" then uppercase A B C etc. Don't forget to toggle back out of the 8 bit mode with "CTRL, CTRL U" again when you are done using the special characters.

Of course all control codes sent to the printer must be done without spaces. Spaces were used here just for clarity. Keyboard hits such as "CTRL," means to hold down the control key then hit the comma key. Also any characters that you don't design are replaced with the built in printer characters. That is, if you need one special character for something, you can make that one character and assign to a seldom used key such as the ~ (tilde). When it gets dumped to the printer, only that one character will be changed, all the others will remain as the default. Now none of the special characters that you design will show up on the screen. It is easy enough to change the character set in FW to reflect any custom characters that you want, but that can wait for another time if there is enough interest in it.

**WEST PENN 99'ers NEWS**

OK Paul, the above three paragraphs, as with anything that I write can be put in the newsletter if you need something to fill up space.

## TRANSFERRING TEXT FILES FROM



## THE TI-99/4A TO THE PC

Many of our members have had to learn to use PC's, usually due to the need for compatibility with machines used at work. Several options have existed for some time for transferring text files from the 4A to the PC, but each requires specific software and/or hardware. The following, requiring no specific hardware other than a TI to PC Cable, plus the following small programs to be typed in on each machine, was written and presented at our October 7 INFOMART meeting by Robert Jones and John Creviston:

### STEPS INVOLVED IN TRANSFERRING TEXT FILES:

1. If your TI text files include any Formatter "Dot Commands", or any embedded printer commands either explicit or as transliterates, prepare them for transfer as indicated below. If they don't include any "Dot Commands" or printer commands, they may be transferred as is.
2. At the 4A, enter the TI XB program. BE SURE TO >SAVE< IT< TOO!
3. At the PC, enter the QBASIC program. BE SURE TO >SAVE< IT!
4. At the 4A, prepare the batch file, using your favorite editor. (Editor of TI-WRITER, FUNNELWEB, or EDITOR/ASSEMBLER). Notice that ALL RECORDS MUST BEGIN IN THE FIRST COLUMN. Check your editor margins.
5. Connect the TI to PC Cable (2) between the machines, using the 9-pin to 25-pin adapter if needed. The Null Modem cable is NOT USED for this operation.
6. Start the QBASIC program on the PC first.
7. Run the TI XB program on the 4A, answering the two prompts for the batch file name and the RS232 port.
8. Upon completion, the 4A goes to the READY prompt. The PC will have an "end of batch" message displayed. Notice that the PC will scroll the incoming data on the screen as it is received, with an "END OF FILE" message following each file. Neither of these advisory messages are written to disk - only the original file data.

### PREPARING TEXT FILES FOR TRANSFER:

TI Files which contain Formatter "Dot Commands" must be "prepared", using the TI-WRITER (FUNNELWEB) Editor and Formatter as follows:

1. Load file into Editor, save the file as usual, exit Editor and go to the Formatter.
2. Load file into Formatter, but instead of the usual printer name, use a new filename, example: DSK2.NEWFILE. (no period)
3. Load the newly created file back into the Editor, you'll see that it is now 80 columns wide with a line feed at the end of each line, plus a few extra line feeds. Delete these extra line feeds, then use the PRINT FILE command to print the file to disk using another filename and the following command: C DSK2.NEWFILE2 (note: see the TI-WRITER manual, page 77 for further explanations of this command, which Strips Out Control Characters Before Printing).
4. This newest filename is the one to be included in a batch file to be transferred to the PC.

### TI EXTENDED BASIC PROGRAM FOR BATCH TRANSFERS

```
100 DISPLAY AT(1,4)ERASE ALL:"BATCH
FILE TRANSFER": "BATCH File Name:"
110 ACCEPT AT(4,1)SIZE(28)BEEP: BFN$ ::
OPEN #3:BFN$,INPUT :: FLAG=0
120 DISPLAY AT(6,1)::Send via RS232/1"
:: ACCEPT
AT(6,16)VALLIDATE("12")SIZE(-1
)BEEP:PN$
130 OPEN
#1:"RS232/*&PN$&".BA-9600.DA-8.PA-NONE
.LF".OUTPUT
140 INPUT #3:X$:: PRINT "INPUT FILE":
X$ :: IF SEG$(X$,1,5)--**END* THEN 170
ELSE INPUT #3:A$::GOSUB 180
150 IF EOF(2)THEN 160 ELSE LINPUT
#2:A$ :: PRINT #1:A$ :: GOT0 150
160 PRINT #1:"**END*OF*FILE*": : CLOSE
#2 :: GOT0 140
```



```

170 PRINT #1:"*end*of*batch*" : : CLOSE
#1 : : CLOSE #3 : : END
180 OPEN #2:X$,INPUT : : PRINT #1:A$ : :
FOR I=1 TO 1000 : : NEXT I : : RETURN

```

THE PC PROGRAM IN QBASIC

This is several lines longer than the TI XB program, but most lines are very simple:

```

PORT$ = "COM2": RATE$ = "9600": SAVDIR$ = "c:\temp"
CLS : CHDIR SAVDIR$: FLAG = 0: a$ = ""
OPEN PORT$ + " : " + RATE$ + ".N.8.1" FOR INPUT AS #2
PRINT SPC(17): "READY TO RECEIVE ASCII BATCH FROM THE
99/4A": PRINT
PRINT SPC(26): "USING "; PORT$: " AT ": RATE$: "
BAUD": PRINT
DO WHILE a$ = ""
LINE INPUT #2, a$
LOOP
DO
IF FLAG THEN
CLOSE #1
END IF
OPEN a$ FOR OUTPUT AS #1
FLAG = -1
DO WHILE (a$ <> "*END*OF*FILE*")
LINE INPUT #2, a$
IF (a$ <> "*END*OF*FILE*") THEN
PRINT #1, a$
END IF
PRINT a$
LOOP
LINE INPUT #2, a$
LOOP UNTIL (a$ = "*end*of*batch*")
CLOSE #2: CLOSE #1: PRINT a$: PRINT : PRINT "Batch
Transfer Completed": END

```

In the program above, the target directory is specified in the first line in the string variable SAVDIR\$. This may be changed to any directory desired, but the directory MUST ALREADY EXIST. The com port is specified in PORT\$.

BATCH FILE

(Create in the Editor of either TI-WRITER, FUNNELWEB, or EDITOR/ASSEMBLER). The format for the batch file is simplicity itself. It contains (n+1) records, where n is the number of files to be transferred. The first n records contain the TI path/file name, a comma, and the PC filename.ext. The last record contains the string "\*END\*" (without the quotes). For Example, look at this batch file:

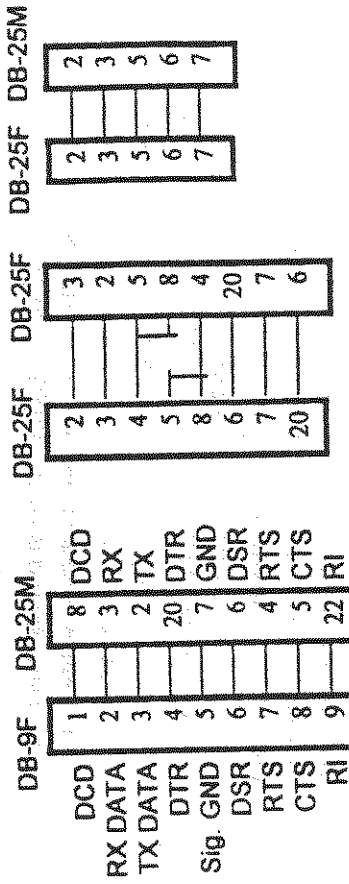
```

DSK1.TIFILE1,file1.txt
DSK5.TIFILE2,file2.txt
WDS2.RECIPE.HERS.CORNBREAD.cornbrd.txt
*END*

```

The above batch file would cause DSK1.TIFILE1, DSK5.TIFILE2 and WDS1.RECIPE.CORNBREAD to be sent to the PC and stored in the active directory as file1.txt, file2.txt and cornbrd.txt respectively. More on specifying the PC Directory later.

CABLES EVERYONE NEEDS



- 9-Pin to 25-Pin Adapter (3)
- Null Modem Cable (1)
- TI to PC Cable (2)



NOTES:

- 1. Signal names shown for the 9/25 adapter apply to null modem as well.
- 2. Signal names for 9/25 adapter apply to TI adapter female end ONLY, since the TI RS232 card is wired as DCE.
- 3. For reference only, the remaining 16 pin designations in the RS232C standard are:

pin 1 - Protective Ground	pin 16- Secondary RX DATA
pin 9 - (+) Test voltage	pin 17- Sync RX Clock
pin 10- (-) Test voltage	pin 18- (unassigned)
pin 11- (unassigned)	pin 19- Secondary RTS
pin 12- Secondary DCD	pin 21- Signal Qual. Detect
pin 13- " CTS	pin 23- Data Rate Select
pin 14- " TX DATA	pin 24- Sync TX Clock (ext.)
pin 15- Sync TX Clock (int)	pin 25- Busy

TROUBLESHOOTING

- 1. Any error displayed on the 4A indicates that either there was an error in typing the program or the batch file was prepared incorrectly;
- 2. Errors on the PC that have "expected..." in the dialog box are almost ce. ronly a result of an incorrectly entered OBASIC program.
- 3. Errors on the PC that have "timeout", "parity" or other similar phrases in them and occur while reading #2 are communication errors. (Bad or missing cable, wrong port specified, etc)
- 4. "Unable to open" file #1 on the PC probably indicates an incorrect path or possibly an invalid PC filename specified in the batch file on the 4A.

JONATHAN'S CORNER

This month I have several quirks that may be able to help with your programming. First, there is a way to go from Extended BASIC to console BASIC without pressing <FCIM> or typing BYE. This will allow you to write a BASIC program using the superior editing features of Extended BASIC, and then go directly to BASIC to try your program out. Simply type the following lines at the beginning of your program, at line numbers 1 and 2:

```
1@P-
2CALL KEY
```

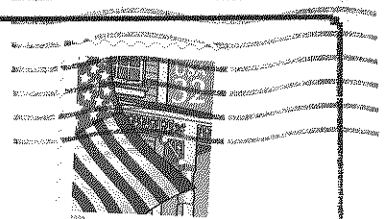
After this, type RUN and you will get the message "INCORRECT STATEMENT IN 2"; delete lines 1 and 2 and you are now in console BASIC. Note: This feature will not work with the 32K Memory Expansion unit turned on; you will simply get a "SUBPROGRAM NOT FOUND" error message and remain in Extended BASIC.

The second quirk may be of special note anyone who is marketing programs or is in a situation where he or she does not want the disk to be copied with BASIC or the Disk Manager module. Remember that SAVE OSKI,FILENAME,PROTECTED will only prevent copying or listing of the program in Extended BASIC. A protected program can still be copied using the Disk Manager module. Fortunately, there is a way to protect a disk from being copied BY ANY MEANS! Simply insert the disk that you want to protect into the disk drive and enter Disk Manager. On the main menu, press <FCIM> X ten times. You will see a strange character in the middle of the screen. Now, use the BACKUP DISK function of Disk Manager to make another copy of your disk. This new copy cannot be copied by Disk Manager. For extra protection, remember to use the PROTECTED clause whenever you save you programs onto the original disk.

If you have any questions or comments concerning the above quirks or TI programming in general, you can contact me at:

Jonathan Zittrain

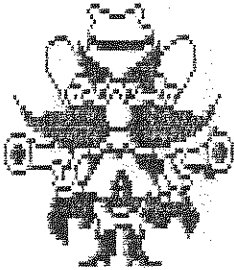
WEST PENN 99'ERS  
C/O Paul A. Brock  
P.O. BOX 222  
North Apollo PA 15673-0222



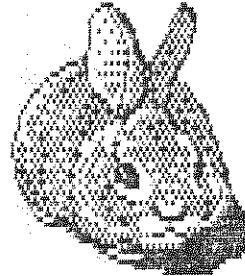
# Newsletter Editors

Please note new address  
and up date your mailing list

FIRST CLASS MAIL



MICKEY CENDROWSKI  
100 PINE STREET  
RUSSELLTON, PA 15076  
USA



FIRST CLASS MAIL

15076-1222 01



This newsletter was composed in it's intrety  
using a TEXAS INSTRUMENTS TI-99/4A computer

NEXT  
**MEETING APR. 21st. 7:00 PM**

## WP MEMBERSHIP APPLICATION

Name \_\_\_\_\_  
Address \_\_\_\_\_  
City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

Please check one

Newsletter membership  
No library privilage  
\$10.00 Per year

Full membership  
Library privilage  
\$15.00 Per year

Complete and return to

Ed Mandich, 304 Chicora St. East McKeesport, PA. 15035