

ISSUE #6 JUNE 1989

The MAY meeting of the West Penn 99ers was held as usual on the third Tuesday of the month at the United Pres. Church, Irwin Pa. This will soon change. As announced by President Mickey Schmitt for this upcoming month JUNE 20th meeting will be our last at the United Presby Church. Starting in July we will move our site to the St. Stevens xxx Church on xxx road. Directions will be supplied at the June meeting.

Mickey opened the May meeting at 7:10 with a friendly greeting to all and asked for officers reports as the first order of business. Starting with #1, the recording secretary's report consisted of a silent reading of the newsletter from April meeting followed by a plea that someone please volunteer to stand in for the next two meetings for the taking of the minutes. Frank Zic rushed to the fore trampling all who got in his way. Thank's Frank. (PS. What to you call a picture of Zic on a beer mug---Frank-on-stein). Jan gave a brief report on the treasury- All is good, and Rob announced that 10 new disks including more Mac-Flix pictures have been added to the library. Joe Ekl reported on a nice deal on a printer for \$149. (accepts only serial ???) See Joe for details.

The club inventory has been updated and as a personal note I have found the club's cartridge borrowing policy quite useful for several math programs and games for my kids. Also, Mickey reminded the club of the diskette sales (25/\$10; 10/\$4; 5/\$2), as well as Micropendia and misc. cartridges and games for sale at the back table.

Under New business, the award for the contest winner was put off until the June meeting as producer, director, judge and jury as well as corresponding sec. Gene Kelly was absent. John Willforth has come across a person who is willing to sell us reconditioned (used) monitors, in both amber or green, for approximately \$20 each, including postage-see John if your interested.

There were SIX raffle prizes and if you only bought one ticket..... well you know your chances. Demonstrations ruled the night.

Mickey -BORDERS 3, Asguard Gary T.-- **GIANT** pictures
Rob- ULTRACOPY, REDISKIT, MASS COPY Frank Z.- TI RUNNER
John- SNIPER, BILLIARDS, TRAPTRACKS, DEMONDESTROYER

Comfortably submitted,
Scoops Bittner

PS: Reminder--- DON'T miss the June meeting, as the cabinet will be cleaned out. Who knows what will be pitched. BE THERE !!!!!

WEST PENN 99ERS JUNE, 1989

WEST PENN 99'ERS CLUB INFORMATION

TREASURER'S REPORT FOR MAY 16, 1989

NEXT MEETING DATE: JUNE 20, 1989
 MEETING LOCATION: UNITED PRESBYTERIAN CHURCH OF THE COVENANT
 CORNER OF 4TH AND OAK STREETS, IRWIN
 TIME OF MEETING: 7:00 P.M.

LIST OF WEST PENN OFFICERS FOR 1989

PRESIDENT: MICKEY 335-0163
 VICE PRESIDENT: SCOTT 523-3754
 TREASURER: JAN 863-1575
 RECORDING SEC: ED 864-4924
 CORRESPONDING SEC: GENE 829-0469
 LIBRARIAN: ROB 864-1233
 NEWSLETTER EDITOR: JOHN 527-6656

GENERAL ITINERARY OF THE 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. HARDWARE CLASS
 8:45 P.M. INTRO TO FORTH
 8:45 P.M. TIPS FOR BEGINNERS
 8:45 P.M. USING YOUR CASSETTE
 11:00 P.M. DOORS CLOSE

MEETING HIGHLIGHTS FOR THIS MONTH

VOTING ON LOGO FOR THE WEST PENN 99'ERS
 T. I. PRODUCTS REPORT FROM THE LIMA SHOW
 CERTIFICATE 99!, DEMO BY MICKEY SCHMITT
 ASGARD'S NEW BATCH IT!, DEMO BY ROB EKL
 LATEST SOFTWARE DEMOS BY JOHN WILLFORTH

RENEW YOUR MEMBERSHIP DUES!

\$15.00 PER YEAR FOR INDIVIDUAL / FAMILY
 \$10.00 PER YEAR FOR JUST THE NEWSLETTER

FROM JAN TRAYERS

 *
 * 5/16 CASH ON HAND \$ 50.00 *
 *
 * " LIBRARY SALES 40.00 *
 *
 * " MICROPENDIUMS 27.25 *
 *
 * DISKS & CASES 61.00 *
 *
 * DUES 85.00 *
 *
 * RAFFLE 41.00 *
 *
 * REC. FOR JOHN 30.00 *
 *
 * TOTAL \$334.25 *
 * 6/9 DEPOSIT - 284.25 *
 *
 * 6/9 CASH ON HAND 50.00 *

 * 5/16 BANK BALANCE \$1345.42 *
 *
 * 5/16 MICKEY/RAF/PRZS -100.00 *
 *
 * 1245.42 *
 * 5/16 SCOTT/RAF/PRZS - 53.00 *
 *
 * 1192.42 *
 * 5/16 JOHN/POSTAGE - 70.00 *
 *
 * 1122.42 *
 * 6/2 JOHN/REIMBURSE - 30.00 *
 *
 * 1092.42 *
 * 6/2 MICROPENDIUM - 30.00 *
 *
 * 1062.42 *
 * " MICKEY/RAFFLE - 42.90 *
 *
 * 1019.52 *
 * 6/9 DEPOSIT + 284.25 *
 *
 * BALANCE 1303.77 *

 * TOTAL CASH BALANCE \$1353.77 *

 NEW MEETING LOCATION IN JULY!!!!!!!
 The West Penn 99'ers will be moving to a new location with basically the same type of facilities and only about two miles from our current facility. St. Stephen's Byzantine Catholic Church. Near Spitz Auto Recyclers on US route 30. Directions next month.

I just finished three days of frustration getting a bug out of a Pascal program and I would like to pass along the solution.

First the problem; I wanted to do some error trapping in a program that I made and use. In Pascal if you enter a wrong file name it will cause the entire program to "bomb" and take you back to the command line. I wanted to error trap this so that I could re-enter a correct file name without the program bombing. In order to do this one can disable the I/O checking of the compiler and then you check the I/O in the program. To do this one issues the compiler directive {\$I-} and {\$I+}; the first disables the I/O checking and the second enables the I/O checking.

Let me show you a segment of BAD code to do this;

```
Repeat
  {$I-}
  Reset(f, S1);
  Result:=IOresult;
  {$I+}
  If Result<>0 then
    Begin
      Writeln('This is a bad file name');
      Write('Press enter to continue');
      Readln;
      Filename;
    End;
Until Result=0;
```

"Filename" is another procedure, outside the Repeat..Until loop, that allows for the input of a file name. What we are doing at "Filename" is leaving a Repeat..Until loop. What this action did was to cause the program to read the correct file **twice** not once.

Now the solution. Here is the correct code segment;

```
Repeat
  {$I-}
  Reset(f, S1);
  Result:=IOresult;
  {$I+}
  If Result<>0 then
    Begin
      Close(f);
      Writeln('This is a bad file name');
      Write('Enter correct name ');
      Readln(Fname);
      S1:=Concat('#5: ', Fname);
    End;
Until Result=0;
```

With this code you stay in the Repeat..Until loop until you have made the correction and then the file will only be read once.

MORAL; In Pascal if you are in any kind of loop (For..Do, Repeat..Until or While..Not) **STAY IN THE LOOP**, do not leave for any reason. It is like HELL, you must stay until your time is up.

TOUCHDOWN a Professional Football Prediction Program in Basic/XBasic on tape or disk. The program has an outstanding record over the past dozen years, consistently defeating a pool of other top notch computer programs written for a number of other brand personal computers. Many features and easy to use. \$10.00 and specify tape/disk and if BASIC/XBASIC. Write: ARCADE ACTION SOFTWARE, 4122 N. Glenway, WAUWATOSA, WI 53222

ORGANIZING YOUR DISKS, PREVENTING DATA LOSS
by Frank P. DeCandia (June '89 North Jersey U.G.)

(I don't believe this! Three times I started this article and was unable to save it. No kidding. Irony is best served on someone else's plate!)

Sooner or later it happens to all disk drive users, the plight of Diskus-discomboobulus. Followed by the sometimes fatal disease of Data-Disappearus. Symptoms are as follows: Disks are everywhere and you have no idea what is on what disk. You get the feeling your hard work on program or file is amiss. Once you have confirmed this feeling, you give out a scream that would scare Freddy Krueger. Followed by violent hair pulling, burying your face in your hands, swearing (optional), and long hours re-typing lost data.

The best preventative measure is called OAYG (Organize As You Go). If you are like me, you probably have all kinds of programs and files. The first thing you should do is get a DSDD disk drive if you don't have one, and some blank DSDD disks. You won't lose compatibility with your SSSD Disks.

First format at least 6 to 10 disks at DSDD with 40 tracks. Make sure you include the disk manager itself. You should keep your like-data on the same disk. Mine are broken up like this: 1. Basic Programs. 2. Extended Basic Programs. 3. Logo Files. 4. Word Processing Data Files. 5. Programs from Books. 6. Copies of Bought Programs. (For personal use only!) You will make 2 (yes, 2) copies of all files. The first disk is your working copy, the second disk is your Master Back-up. Remember to use the "protect" option in the Disk Manager for finished programs and files. This will not copy protect it, but it will prevent writing over something you want.

First of all, make a copy of your Disk Manager disk. Without this you may as well be dead. Programs of different languages should be on different disks. You can have programs from books on the same disk, like Basic and Extended Basic. To tell them apart precede the Extended Basic files with an "X-" or "X". Ex: "X-PROG1". This will put all Extended Basic files at the end of your disk catalog. Some Basic programs may use speech and require the T.E. II cartridge. I would give a name like "PROG-TE2". It's a big extension to use, but it's better than loading a program only to find out you need to re-load it with the T.E. II cartridge. Develop your own system of naming files and stick with it.

Make sure your on a power line that isn't shared by an appliance like the fridge. The constant drops and surges of power cause unseen havoc on your computer chips, making them weak and shortening (or ENDING) their lives. I don't even want to think what happens to your disk drive heads should you be writing or saving a file when it strikes. Even if it means digging out the extension cord and dragging it to the next room, get off that bad power outlet! You should also consider a spike and surge protector. Did I say "consider"? Better yet, GET ONE! Even a "safe" outlet isn't safe for your computer. Your local Radio Shack or computer store should carry several models. Dig deep in your pockets and get a good one.

Save your work once in awhile, WHILE YOU'RE WORKING. When you feel "Now is the time to save." - do it! Many a time I lost large portions of Extended Basic programs by ignoring this feeling. NEVER eat while you are working. Food crumbs gum up the keyboard and destroy data on disks. Even careful users such as myself lose data. A printed copy of all your programs and files will help you recover from a total loss. "What would cause that?", you ask! Lots of things, animals (some children fit this category), disk theft, some joker with a magnet, or even a magnetic meteor passing over your house. I know, I know. Some of you are saying, "That's silly! There are no animals in my house!". Maybe so, but we never can tell when Mr. Meteor will pay a visit - can we?

Get a disk holder and keep all disks in their sleeves and in the holder when not in use. If there are small children in the house, get one with a lock. Never give a small child a disk to play with, even a bad one. (Bad disks that is not a bad child). They put everything in their mouth... even if it tastes like strained broccoli. (Yeck!) Loose disk particles, lubricant and dirt might be swallowed. The same is true of a dirty baby bottle or teething ring, but at least those things come sterile.

Get a vinyl dust cover for your computer and other peripherals. Meanwhile the styrofoam cover that came with your computer will do. DO NOT use cloth, loose threads and dust can get ANYWHERE. A Cartridge Expander by Navarone is the 2nd best way to prevent cartridge contacts from wearing out. The best method is not using cartridges. A disk cleaning kit with fluid cleaner is good also. Don't over clean a disk drive head. It will cause more damage than good.

There you have it, most of what you need to know to make computing a little easier. So remember the next time you spill soda on a disk don't throw it out. Use it as a coaster at the dinner table to serve as a painful reminder.

NEW PRODUCTS FOR OUR T.I. 99/4A and 9640.....

THE ADVENTURE REFERENCE GUIDE by Mickey Schmitt

The Adventure Reference Guide is the "bible" of TI adventure gaming. This remarkable reference is the product of nearly a year of planning, research and writing. This is a large book that lists the almost 200 adventures available for the 99/4A, rates them within their categories, lists the equipment needed to run them, reviews the most significant programs, and even provides lists where they can be obtained. Did you know that most 99/4A adventures can be had for next to nothing? This book will show you where to get them and how. 108 pages. \$14.95 plus \$2.00 S/H write: ASGARD, P.O. Box 10306, Rockville, MD 20850 Phone: (703) 255-3085

The TI ADVENTURE COMPENDIUM Disk Set is a set of Fairware and public domain adventures (some requiring Game Modules) available on 10-SSDD disks for \$19.95, 5-DSSD disks for \$15.95 or 3-DSDD disks for \$11.95. These are available from either:

WESTERN NEW YORK 99ers
% Harry T. Brashear
2753 Main Street
Newfane, NY 14108

M.U.N.C.H.
% Jack Sughrue
Box 459
East Douglas, MA 01516

I counted 79 adventures listed in this compendium.

GIANT ARTIST POSTERS (G.A.P.) by NAMELOC SOFTWARE

Paul Coleman has a new program written in "C" that is a support program for T.I. -ARTIST. You can take a full T.I.-ARTIST screen and print it out as a poster in any size from 10"x14" to over 5'x8' ('=feet). You can even print two full screens side by side for an even bigger poster. Load or create a picture using T.I.-ARTIST that takes up a full screen. Then save it as an instance. G.A.P. will load and print it out in banner fashion in a wide choice of sizes. Requires T.I.-ARTIST V2.0, disk, 32K, and an EPSON compatible printer. (and lots of ribbons). Cost \$10. plus \$1.50 S/H and available from NAMELOC SOFTWARE, 3971 S.E. Lincoln, Portland, OR 97214

THE GEOMETER'S APPRENTICE by McCann Software

Mike McCann has produced a 3-D C.A.D. color, light and magic show for the T.I. 99/4A and GENEVE (9640). You can create screens of Lambert shaded objects. The 99/4A can be used to create motion sequences in bit-map mode. The 9640 will be strained to it's limits in all available memory use and color use in 512x212 mode. Objects may be scaled, translated and rotated in 3-D and once created moved from one drawing to another. Both the 99/4A and the 9640 versions are menu driven with the added bonus of the 3-D slides language on the 4A. T.G.A. produces external files compatible with The Printers Apprentice and will print using "Cpixel" user defined pixel shapes in portrait or landscape modes on popular dot matrix printers. Required for T.I. 99/4A: 32K mem., Disk, and XBasic/Ed.Assembler. Required for Geneve (9640): at least MDOS version 1.01, V.99 GPL and E/A. Printers: 100% Epson, Gemini 10X, Star NX, IBM, Panasonic 1091, and T.I. Send check or M.O. for \$39.95 to: McCANN SOFTWARE, P.O. Box 34160, Omaha, NE 68134

PAGE PRO 99 by ASGARD SOFTWARE

A remarkable program that lets you compose a 66 line page full of text, graphics and lines quickly and easily. It's a "what-you-see-is-what-you-get" program with the ability to paste in pictures and type text. Up to 28 pictures of any size or shape anywhere on the page. Type text in any number of large and small and upper or lower case fonts and draw lines anywhere needed. You can type up, down, left or right with full editing. You can window around the page using TI-WRITER keys, and load or save as text file. You can even load a text file and paste it on the page. There are many more options and features. For TI 99/4A and Geneve. \$24.95 plus \$.75 S/H. ASGARD SOFTWARE, P.O. Box 10306, Rockville, MD 20850

DISK DRIVES #9

by John F. Willforth (WP99 June, '89)

Last month I left you up in the air (ran out of space) right in the middle of aligning your drive. The last thing I asked you to do is check for 3 volts on the AC scale using the NULL circuit shown in Fig. 1 in last month's article. You should experiment by adjusting very slowly in and out on both sides of the 3 v. peak. Make SURE that you're at the PEAK reading especially after tightening your adjustment down.

Test the drive using a diagnostic for disks such as DMI, DMII, or any other disk exerciser writing and reading from the entire disk in a random fashion. To really test the drive, load and run as many varied programs as you have. After you are satisfied, close it up.

If you have neither an Alignment Disk or the Disk Exerciser described earlier then you may want to use the "seat-of-the-pants" alignment procedure, and do not forget that if you fail, you may as well buy a replacement drive.

To do the "seat-of-the-pants" alignment, you will need only the tools that will allow the actual adjustment (screw driver, allen wrench, etc) and the two disks that I asked you to have made up last month (one initialized, the other Extended Basic bootable, with a lot of runnable files).

We can get drives into "near" perfect alignment with just a little patience and a steady hand. A little practice is also needed. You may have adjusted the engine on your lawn mower or car to run a little smoother without any high cost equipment or tools. You did it by FEEL. You can do a USEABLE alignment by FEEL.

If your problem is so severe that it is impossible to read a disk, and you are sure that it is an alignment type problem, insert the initialized disk you made, and do a "READ ONLY" (non-destructive) test of the disk, DMII is good for this. See how the drive acts noting if and where errors occur, then insert the disk containing the program files and boot up the "LOAD" (XBasic) file. If the drive is badly aligned, you will probably get a disk error. Loosen the adjusting mechanism slightly and move the adjusting mechanism a little. I'm vague about the adjusting mechanism, because there are so many different types. By the way it would have been a good idea to mark your old adjustment before you loosened it! It doesn't matter which way you start to make your adjustment, so long as you keep in mind at all times what you did last. You may keep a log of activity. Experiment, listen and watch, see if you can get a FEEL for the drive. Who knows, you may become an Expert. When it seems to be able to load the LOAD program successfully, then go on to try loading the rest of the varied length programs on the disk. If OK then try some of your other disks. Check from a variety of sources. If not successful try again. Try as many times as you wish, but remember, you may be able to pick up a better drive at such a low cost, you may be wasting your time.

Below is an adapter diagram for you to interface a 3 1/2" floppy to your 5 1/4" disk controller or the Disk Exerciser I described in articles 2&3.

	5 1/4" INTERFACE		3 1/2" INTERFACE
MOTOR ON	16 >-----TO DRIVE-----<	01	MOTOR ON (SOME UNITS)
DRIVE SELECT 0	10 >-----TO DRIVE-----<	02	DRIVE SELECT 0
DRIVE SELECT 1	12 >-----TO DRIVE-----<	04	DRIVE SELECT 1
STEP DIRECTION	18 >-----TO DRIVE-----<	06	STEP DIRECTION
STEP HEAD(S)	20 >-----TO DRIVE-----<	08	STEP HEAD(S)
WRITE DATA	22 >-----TO DRIVE-----<	10	WRITE DATA
WRITE GATE	24 >-----TO DRIVE-----<	12	WRITE GATE
HEAD LOAD	02 >-----TO DRIVE-----<	14	HEAD LOAD
DRIVE SELECT 2	14 >----*NOT USED HERE *----<	16	RESERVED
SECTOR INDEX	08 >-----FROM DRIVE-----<	18	SECTOR INDEX
T00 SENSOR	26 >-----FROM DRIVE-----<	20	T00 SENSOR
WRITE PROTECT	28 >-----FROM DRIVE-----<	22	WRITE PROTECT
READ DATA	30 >-----FROM DRIVE-----<	24	READ DATA
READY	34 >-----FROM DRIVE-----<	26	READY
DRIVE SELECT 3	06 >----* \		ALL ODD PINS (EXCEPT PIN
SIDE SELECT	32 >----* >NOT USED HERE		1 ON 3 1/2" DRIVE) ARE AT
OSIN USE	04 >----* /		LOGIC GROUND.

WORKING WITH THE MYARC HARD AND FLOPPY DISK CONTROLLER (HFDC)
By Ed Hall

I recently purchased a MYARC HFDC card to use with one of my TI-99/4A systems and have been providing feedback through bulletin board messages on my first impressions, second impressions, etc. While talking with John Willforth one night, he asked me if I could provide an article of that information and so here it is.

First off let me start with the initial inclination to buy the HFDC. Having used the TI controller for several years and being held back by the limitations, I needed (wanted) to upgrade. I looked at maybe getting a floppy card but decided to go ahead and buy the HFDC so I wouldn't be wishing I had it later. This step proved very disappointing! No one had told me that if you don't have a hard drive on the system, you can't access the floppies for 45 seconds! And this is every time you reset! Thinking perhaps a jumper could defeat this I tried adding a low and then a high signal to the ready pin on the hard drive 34 pin edge connector. One way left it the same - 45 second wait. The other made a difference. Now it wouldn't access at all! Apparently, it was telling the card that there was a hard drive ready to go and the card was looking for DSK emulation and somewhere in between it would get lost. OK, well that didn't work so I put up with the long wait and tried to set up files as much as possible to have the fewest resets.

After the first bad experience I quickly started loving the added features. I had installed two 80 track 5.25" floppies along with the card, as well as an external 3.5" I had been using with the TI card as a 40 track. WOW! 2880 SECTORS! I was impressed. Subdirectories! More great stuff. Even though the subdirectories on floppies are limited to three plus the root (508 files) it is a vast improvement over 127. I am still a little disappointed that the root directory on the hard drive can only hold 127 files, but I'll get over it or around it. Ah, but all was still not well. I noticed that after a few minutes operation the card would quit and upon further examination I found it was extremely hot. (I had heard of this problem before on several occasions.) Upon closer inspection I found that one of the regulators had already discolored the circuit board. And this was after only a couple of nights (limited hours) of operation. Very poor design for heat sinking is the problem. I ended up putting the card in the clam shell of the TI controller in order to sink the 5 volt regulators, which are mounted on the corners, to the metal case. The card still runs too hot to touch, but it does run continuously now. CAUTIONARY NOTE: The TI metal shell has a post which is designed to fit into the circuit card. It MUST be removed so it does not even touch the card since the HFDC has traces in that area. Another important item to note is that the cover must be in place on the expansion box for proper air flow across the card.

After a short time I was able to get some hard drives and off I went with more fun in mind. The first one was a 30 meg and it is now hard drive #1 and is working well, although I've had some troubles (caused by other factors) along the way. The HFDC has some interesting features. Not all of them even seem to be documented. Some that are included are step rate setting and interlace choice. If you experiment with these you can find the settings which allow the fastest access to the drive. There really is a big difference in some of the settings. A feature I haven't seen documented but have run across is that if you have the H11 EPROM and MDMV 1.29 you can format 33 sectors per track instead of 32 which will give you one extra sector (256 bytes) per head per cylinder. I've been told that an added benefit is a smoother functioning of some hard drives at 33 sectors per track.

All experimentation didn't run smoothly, as is most times the case and when I added a second hard drive I started having troubles with it. I believe it was the drive itself. It would format and seemingly work, but suddenly during transfers it would get odd errors. So I tried another drive and this one was cruel. When I told the Manager to format hard drive #2, hard drive #2 told it to trash hard drive #1, and it promptly obeyed. HMM, perhaps a valuable lesson here! It's probably better to disconnect any other hard drives before experimenting with an unknown. In amongst all my experimenting I did learn some interesting things. For one, it is very common for the hard drive under test to keep the system from loading files from floppy drive #1. Since the MYARC Disk Manager is programmed to get files from drive 1, you either have to edit the files (not too difficult if you're familiar with sector editors) or find a way to get rid of the hard drive temporarily. My method of choice is to turn off the power to the hard drive, then load the Manager from floppy #1. In order for this to work you need to leave the hard drive off until just before the actual formatting. You will need to wait the 45 seconds for the floppy access to start and then choose the options for formatting a hard drive. After

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you have entered all the parameters you desire you will be at the screen where you must type in FORMAT. Do so but don't press ENTER yet. This is where you turn on the power to the drive and wait for it to come up to speed. After it comes up, go ahead and press ENTER. You should get the verification and cylinder counts running now. Let me add a note here. Sometimes when working with larger parameters than are valid the hard drive will park or shut down different parts of its circuitry to include the motor or some of the logic. If the drive fails to respond at some point in time, especially if it is right after a format attempt, you may need to shut off the drive power and wait for approximately ten seconds and then repower it.

While we're on formatting of hard drives, here's some experimenting for you. Do you have a drive that you can't find the info on? How many heads? How many cylinders? Here's what you do: First, take a guess at the heads, or try 8. Then enter a low number, maybe 100 for cylinders. Accept all the defaults and see if it will format. If you have chosen too many heads it will hang up on the first cylinder. If it does, redo the experiment using a lower number of heads each time until it formats at 100 cylinders. Now you know how many heads it has. Next we'll look at cylinders. This gets a little trickier. First use only 2 heads no matter how many there are since it will format quicker. Try a large number for cylinders, maybe 1000. Now you HAVE to pay attention to this part and it may take quite a few minutes. Go ahead and start the format watching the cylinder count rise. At some point it will pause. This is the last cylinder. (Actually, it's 1 less than the last, since the count started with 0. If 614 was the last count then there are 615 cylinders.) Some drives will park at this point. Some will then unpark and restart from this count. This extra count is false. Some drives will pause and then pop to the finished screen. If you missed the last cylinder count, you'll have to try again. (NOTE: If for any reason the drive starts chattering or stopping and starting then go ahead and shut off the power and reset the system.) If it made it all the way to the count you entered with no pause, try a larger number and format again. Once you have both the heads and cylinders you're almost there. Now you can compare the numbers to those of known similar drives (if available) and determine other parameters or use the defaults provided.

As a couple extra notes let me mention something about interlace and then drive size. First, interlace settings can optimize the speed with which a hard drive accesses so you need to try several to get the most speed possible with any particular drive. If you format the whole drive you will be spending an awful lot of time trying each one. As shown above you don't have to format with all the cylinders to check drive operation. If you select a lower number of cylinders when you make your tests, they will finish a lot quicker so you will have time for more tests. Second if you're wondering how many bytes there are on your drive the formula is sectors/track x heads x cylinders x 256. An example using a CMC640 with 32 sectors per track would be $32 \times 6 \times 640 \times 256 = 31,457,280$ bytes or roughly a 30 megabyte drive. (Using 33 sectors per track would add 944,640 bytes.)

VERY LOW PRICED AMBER or GREEN MONITORS

John Dempkowski has offered to sell 9" amber or green monitors that can easily be hooked to the TI. Price including shipping is \$20. There is no sound, and the video cable will need a 5-pin male D-connector to plug into the video out jack on the TI. They come with the video cable and power cable. I tested two at the Pittsburgh Users Group in May, and they are worth the \$20. Audio could be added to the console to make up for it's absence in the monitor. Write or call: (305) 771-7014, John S. Dempkowski, 5111 N.E. 15th Ave., Ft. Lauderdale, FL 33334

FOR SALE..... Marc Zajac, 1224B Lehigh St., Easton, PA 18042

1- TI-99/4A console (B/S) complete in box	\$35.		
1- USI Amber Monitor EV-9031A 12".....	\$45.		
1- Widget	\$15.	1- Cassette Cable.....	\$ 3.
1- Disk Fixer Cart.w/dx	\$10.	1- Parsec w/dx	\$ 5.
1- Video Chess w/dx....	\$ 5.	1- TI Writer Complete.....	\$10.
1- Microsoft Multiplan.	\$ 5.	1- Complete Schematics TI orig.	\$15.

Write or call: (215) 252-5436

MOONMINE MODULE (from B.C. 99er Users Group April, 1989)

Q: How do you pick up objects - eg. water?

A: When the object appears at the bottom of the screen, hit SPACE. See that newlittle man? Walk him over to the object and press FIRE and he'll pick it up! To return to the ship you must first destroy that monster lurking on the screen. (ED. note.. Thank You B.C. 99ers)

UPDATE ON ZENO BOARD.... I'm told that I'll have a Zeno Board to check out by July. (Give or take) Eric has been working very hard on this, and has received quite a bit of support for this project, at least in the form of letters of interest. He cannot afford to respond with updates till it has reached the final stages, since this then would require several letters to each of the nearly 200 inquiries. This could cost at least \$50. for each additional mailings. Eric can put his money to better use for the completion of the project, and then mailing the update to those who have sent S.A.S.E. to him. He is not expecting to make any money above his cost on this project. It is looking good, and I hope to be able to report to you in the July newsletter that the project is completed and deliverable.

MULTI-FUNCTION PROJECT for the PROTO-BOARD provided by Russel L. Norman I recently received a schematic, parts list and some brief detail on the construction of a Multi-function card for the TI P.E.B.. The card has on it 32K of Expansion memory, a Real-Time Clock, and up to eight Super Cart spaces, selected by a BCD Rotary switch. You may receive your copy by sending a S.A.S.E. and \$.50 in postage to: John F. Willforth, R.D. #1 Box 73A, Jeannette, PA 15644 U.S.A. If outside USA or CANADA, don't send the postage, but send U.S. equivalent to \$1.00.

TOM HALL of the Dallas Home Computer Users Group, writing in the May, 1989 issue of the Dallas 99 Interface, shows us how to create a HEART in T.I.-WRITER, using the Transliterate Command. He credits a Micropendium review of a disk called PLUS! by Jack Sughrue for the material for his offering. You can use the information to redefine nearly any unused characters as a representative in the transliterate command definition. For example a "+" will be used to generate a HEART anytime the following is entered with the TI-WRITER editor and then printed with the formatter.

<u>DRAW A MATRIX</u>		<u>DRAW A HEART</u>		<u>COUNT THE NUMBERS</u>
	128 64 32 16 8 4 2 1		128 64 32 16 8 4 2 1	
				1 2 2 1 2 2 1 1/2 4 5 2 5 4 1/2 2 8 6 6 2 8 2

Now in the TI WRITER (EDITOR) do the following Transliterate Command:
>.TL 43:27,75,7,0,112,248,252,126,252,248,112
>.TL 43:27,75,7,0, sets up the key. The rest is from the drawing above. Of course 43 is the plus "+" sign, so put a plus where you want a HEART and the Formatter will print a heart where ever a "+" appears in the text. This will only work if you run the text through the Formatter!

Thank You Tom for reminding us of the power of the TI and TI-WRITER!

MIKE EWELL of the South Day T.I. Users Group of Campbell, CA reminds us... "If you have considered buying another brand of computer, but are not sure. Answer one question. Will your new computer do anything that your old computer can't do now? Speed does not count in the question or in the

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answer. If you had to have a lot of speed, I think you would have already bought your new problem child! Speed can be bought for the 99/4A in the form of ramdisks and internal 32K memory mods for the machine that you already use!! IF YOU DON'T HAVE YOUR PRESENT COMPUTER MASTERED, BUYING A NEW ONE WILL NOT HELP!" Ed. note: Unless we have more money than brains.

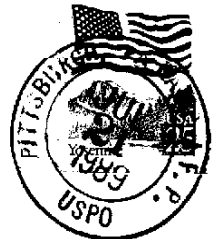
FROM GARY BISHOP of the Cedar Valley 99'ers User Group , May 1989.....

```
70 CALL CLEAR
80 PRINT "FILE CONVERSION PROGRAM", "CONVERTS A D/V80 FILE TO      A D/V 132 FILE"
90 PRINT "SO IT CAN BE PRINTED IN      COMPRESSED MODE BY OTHER  PROGRAMS." ::
PRINT :: PRINT
100 ! CONVERT FROM D/V 80 FILE TO D/V 132 FILE, FOR COMPRESSED PRINTING
110 ! BY GARY D. BISHOP CEDAR VALLEY 99ER UG, IOWA
115 ! PLACED IN THE PUBLIC DOMAIN 4-30-89
120 DIM A$(100)
130 INPUT "INPUT FILENAME?:          ":I$
140 OPEN #1:I$,DISPLAY ,VARIABLE 80,INPUT
150 INPUT "OUTPUT FILENAME?:        ":O$
160 OPEN #2:O$,DISPLAY ,VARIABLE 132,OUTPUT
170 B=-1
180 LAST=100
190 FOR L=1 TO 100
200 IF EOF(1)THEN LAST=L :: GOTO 230 ELSE 210
210 LINPUT #1:A$(L)
220 NEXT L
230 B=B+1
240 PRINT "CONVERTED ";B*100+LAST;" LINES"
250 FOR J=1 TO LAST
260 PRINT #2:A$(J)
270 NEXT J
280 IF EOF(1)THEN STOP ELSE GOTO 190
```

WEST PENN 99'ERS

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ISN'T IT GREAT!