



# WEST

# PENN

# NEWS

VOLUME 1

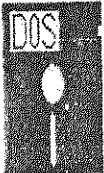
NUMBER 6

MAY

1997

## TI-BITS #20

by Jim Swedlow  
from SPIRIT 99



### A VIRUS IN TI LAND? I DOUBT IT!

A computer virus attaches itself to a program and then hides. It moves from program to program, hidden until it starts doing whatever it does. Some virus programs display humorous and/or obscene messages, others destroy data. By definition, a virus must exist in an electronic environment where it has programs to move among. This happens on a main frame or a hard disk. Since our TI's are mainly disk based, there should be no where for the virus to spread. A real danger, however, is a trojan horse. This little love is a program that is supposed to do one thing but actually does another - like reformat your disk or make the drive jump around.

Some simple precautions will keep you safe. When you get a new program, run it on a disk by itself. Keep all other drives empty, if anything unusual happens, shut your system off.

If you find a bad program and it comes from a bulletin board, call the Sysop IMMEDIATELY. (Sysop is "bulletin boardese" for system operator.)

### EDITOR ASSEMBLER MODULE



Do you own an Editor Assembler module? Probably not. Most of us have Ex-Basic but not Editor Assembler. With the price down to \$10, it is a good buy. Many fine programs run with Editor Assembler module including FUNNELWEB, ARCHIVER & DM1000. All of these programs will run under EX-BASIC but they load much faster in EA. The next time you see EA, on sale pick up a copy. Take the book out and put it on a shelf some where. Put the disks in your master box. You will not need either unless you start programming in assembly. You will wonder how you got along without Editor Assembler.

I received a call from Bob Sadusky on May 9th at 8:00 PM. The Penn Woods Civic Association will be having Primary Elections on the 20th, or third Tuesday of May. I decided to have the West Penn's meeting on the following Tuesday which is the 27th. I am hoping that everyone can make it on that date. If you have any questions give me a call.

### LOADING UTIL1 FILES IN EA

When you insert the Editor Assembler module and "PRESS ANY KEY", you have two choices:

- 1 FOR TI BASIC
- 2 FOR EDITOR ASSEMBLER

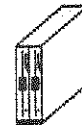
Press <2> and you get five choices. Only two are of use for loading programs:

- 3 Load and Run
- 5 Run Program File

"Load and Run" is for object code (Display fixed 80) files while "Run Program File" is for Editor Assembler Program Files.

If you press 5, Editor Assembler will ask you for

a file name. If you just press <ENTER> without entering anything, Editor Assembler will look for and try and load a file named <UTIL1> in drive 1 (close to the Extended Basic autoload of load but you have to press two more keys). That is why FUNNELWEB has a UTIL1 and LOAD program - one for Extended Basic and one for Editor Assembler.



### YOUR DISKS WILL NOT WORK

Every now and then you get errors when you try to read from a disk. This can mean any of many things. Your drive might be dirty. You might have the disk. The disk could be blown. The file could be lost. The list of horrors is long.

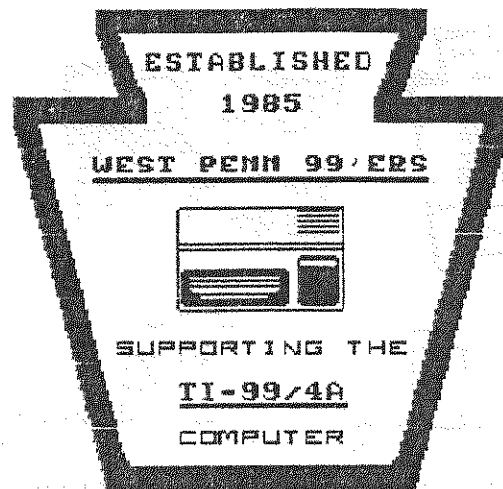
Here is a simple solution that you might try first. Remove the disk from the drive. Holding it a corner, put your fingers in the center hole and turn the disk in its sleeve a few turns. Then move the media (disk) around a little. Touch only the corner and the center. Sometimes this will restore your disk.



DUE TO CERTAIN CIRCUMSTANCE, THE MAY 20th MEETING IS CANCELED!!!

# WEST PENN 99'ERS CLUB INFO

Next Meeting Date: May 20, 1997  
 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
10:00 P.M.	Doors Close

## MEETING HIGHLIGHTS FOR THIS MONTH

Mermaid.....Demo by Paul Brock  
 Munch Man.....Demo by Paul Brock  
 TI Invaders.....Demo by Paul Brock  
 Open Interest.....Demo by Anyone  
 Open Intrest.....Demo by Anyone

## LIST OF WEST PENN OFFICERS FOR 1997

President:	Paul Brock	412-478-2754
Vice-President:	Norm Rokke	614-264-6442
Treasurer:	Ed Mandich	412-824-5566
Recording Secretary:	Paul Brock	412-478-2754
Corresponding Secretary:	Paul Brock	412-478-2754
Librarian:	Mickey Cendroski	412-265-5201
Newsletter Editor:	Paul Brock	412-478-2754
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 APRIL MINUTES



## UP DATE ON THE CLUBS EQUIPMENT

I called the meeting to order at 7:25. We were late getting started because of the construction of a new floor that was being replaced in the other building. It seems that everyone found there way.

The frist item of the meeting, was that we heard from Ron Warfield. A note with a disk and a program. The note stated "No we are not gone!" We were happy to hear that.

The minutes of the March meeting will stand as read. There wasn't any complaints about the new seating.

There was a good report from the treasurer. Mickey reported that the library is being worked on and has updated the list for new disks that have been added. She may have a hard copy of the library.

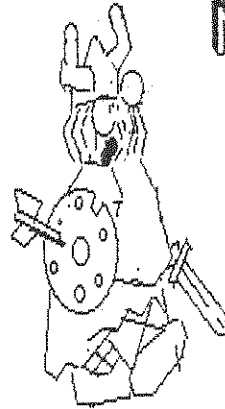
Norm gave us a report on Fest West. I am not sure, but I think that Norm said there wasn't too much that was new. Art Gardner had the 5 1/4 disks he had ordered. Art is going to to be away for some of the summer. Everyone is to bring their own drinks. I volunteered to transport the coffee pot for those coffee drinkers.

Jim Wiegand reported that the clubs montor was un-repairable. I loan the club my color montor. We were experiencing some trouble with one of our computers. Jim Peters is going to check it out. If it isn't working we can replace the II. Ralph Vasko is selling some DSDD disks to the club. I have have been using DSDD with my II controller. and so far I haven't had any trouble. The 5 1/4 disks going to get scarce in the future.

I adjorn the meeting after 8:00, so we could have some cake and drinks. See you on the 28th of May.



Untill then my  
QUILL has run out  
of ink!



## MESSAGE FROM THE

### PRESIDENT

### EDITOR

I am sitting here wounder- ing if I am going to finish this newsletter. I am trying to get things orginized to get 10 pages done by the deadline. I was in hope that I would be getting some articals. If anyone has a special program that he or she is working on, or you can't seem to get it to work just write the problem down and some one will help. Don't forget "We are here for you"!

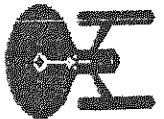
It is very hard to find something new for the II. We have 5 1/4 Disks Drives Ram Disks, Hard Drives and 3 1/2 Drives. and Printers that do a good job. What we don't have is the young programers the Hackers that we use to have, and I could sit with someone and see how to take apart a Disk Drive or computer or a P-Box. If you have something that doesn't work maybe some one can help. Ed Mandich is having some trouble with Disk Fixer. Lets have a class on fixing Disks.

I am looking for a big turnout for the May meeting. I am going to be doing my demos with some old modules. I have found out that some members have only used the EX-Basic module. I can remember, when I played the Tomestone module for many hours. (Because it was the only one I had at that time).

I read my horoscope which advised, "Be very watchful, because a ton of money is headed your way"? I got so excited that when I drove home to tell my wife. I crashed into a Brinks truck.



My IBM  
has a bug.  
beam me  
up a II



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

# The 1997 Multi User Group Conference

Friday May 23 4PM through Saturday May 24 7PM

This all TI99/4A and Geneve computer show is sponsored by the Lima Ohio User Group and will be held in Reed Hall of the Lima Campus of Ohio State University. Here are some maps showing how to get to the Conference. The event is totally free. There is no admission charge and no charge to those wishing exhibit area tables.

## Jim Peterson memorial Achievement Awards

The Peterson awards for service to the 99/4A and Geneve community in four categories will be presented at the MUG conference. These categories are:

- Community Service
- Geneve
- Hardware
- Software

Nominations and voting is being handled by Jim Krych. Anybody can submit nominations now and vote for nominees later either by email or by snail mail. Send your nominations and votes to Jim at 3969 Clague Rd., North Olmsted OH 44070.

## SEMINAR SPEAKERS

- BOB CARMANY. "A Program That Writes Programs With Token Codes"
- RON MARKUS. "The Prostick II joystick and Texaments products"
- TIM TESCH. Port, and CYA for the Geneve.
- TONY KNERR. Software demos.
- DAN EICHER. The CC40 and TI74, hardware and software demos.
- ANDY FRUEH. Internet resources relating to the 99/4 and Geneve, with actual on line demonstrations.
- MIKE WRIGHT. PC99 demo, with some newly added features of this 99/4A PC emulator.

## GROUPS REQUESTING DISPLAY TABLES

- Ramcharged Computers - 6 tables. Asgard, Texaments, and Bodentmiller software.
- Cleveland Area User Groups (TI Chips and Northcoast groups) - 4 tables.
- S&T Software - 1 table
- Tony Knerr- 1 table

- Hoosier User Group (Indianapolis)
- CADD Electronics- 1 table, sales of PC99 and TI module documentation on PC disks.
- JOHN BULL- 1 table, demo and sale of Contract Bridge
- CinDay User Group- 2 tables
- Dan Eicher- 1 table

## HOTELS

There are no dormitories on campus. Call any of the following places and make your best deal. In general, hotel prices in Lima are inexpensive.

The following hotels are conveniently located about 2 miles from campus at the intersection of I75 and route 309:

- Motel 6. Phone 419-228-0456. This has been the most popular hotel at previous MUG conferences.
- Holiday Inn of Lima. Phone 419-222-0004. Very nice with an indoor pool, but kinda expensive.
- East Gate Motel. Phone 419-229-8085.
- Economy Inn. Phone 419-222-1080.
- Lima Budget Inn. Phone 419-225-2806.
- Super 8 Motel. Phone 419-227-2221.

This place is located on I75 two exits north of the 309 exit about 6 miles from campus and has the biggest indoor swimming pool in the area. A nice family place:

- Lima Inn Conference Center. Phone 419-221-0114

The following places are about 3 miles from campus at the intersection of I75 and route 81.

- Days Inn. Phone 419-227-6515
- Econo Lodge. Phone 419-222-0596

This page will be updated in the coming weeks as more details become available. For further information, to schedule a seminar, to request exhibit room tables, phone Charles Good at 419-667-3131 or send email to [good.6@osu.edu](mailto:good.6@osu.edu).

This page last updated April 6, 1997.

□

NEW TRIX  
By Andy Frueh  
Lima UG

This article deals with a few unique tricks that I found useful. They are worth looking over.

1) If you have a D/V 40, 132, or whatever text file that you need to edit with TI Writer, you can change it to a D/V 80 file by using a sector editor. TI Writer will load ONLY D/V 80 files. Find the header sector of the D/V file. Edit that sector in HEX mode. Go to byte >11. If the file is D/V 40, you should see the number 28 ("(" in ASCII) here. To change it to an "80" (or "P in ASCII), type the number 50 over the 28.

2) Remember that E is an accepted number in TI Writer. For example, to delete from line 470 to the end of the file, Delete, then use 470,E as your numbers.

3) It seems that there is a toll free number for finding almost all kinds of computer stuff. It would appear to be a "Computer Buyers Guide" on the phone. The number is 1-800-366-0676. [Actually, this is sales information of "Vulcan Publications, Inc. --Ed.]

4) You can hook up the computer to a VCR using a standard 300 ohm to 75 ohm TV antenna adapter or a composite monitor cable. Adapters are found with almost all home video game systems or at radio supply stores. It has a cable TV male connector and two screw terminals. The male plug goes into the "CABLE IN" jack of the VCR. The screw terminals go to the modulator's "TO TV" wire. You can then hook the VCR to a stereo's "AUX IN"

jack, using a standard audio/video cable. Plug the other end into the "AUDIO OUT" on the VCR. You can then hear improved sound and record the computer's output. Note that this isn't as good as using a monitor cable into the "AUDIO IN" and "VIDEO IN" of the VCR, but it works for those without monitors.

5) If a disk doesn't seem to initialize, don't give up. First, inspect the disk for cuts or grooves. Check the visible surface on the BACK of the disk, since data is recorded on the opposite side of the label. If nothing looks wrong, continue to re-initialize the disk. Make sure that you validate each sector. Chances are, some sectors will be bad. Choosing the validate feature marks each bad sector as used. After trying this for awhile, the disk should operate.

6) Finally, for those without a monitor, here is another use for the adaptor mentioned above. I have the following display setup: a TI with 2 separate RF modulators. Each one is constantly hooked up to a TV. Only one of the DIN end plugs is connected at a time. I use a small black and white TV on the PE box (with adequate ventilation) whenever anyone needs to use the larger color TV (which is also connected to cable and a Nintendo). The problem is when I'd use the color TV, either with the computer or without (i.e. I'd be using the B&W TV), I would get interference from the computer. Placing the antenna adaptor between the color TV and it's modulator clears up the interference.

## DISK DRIVES

By Jim Ness

Reprinted from the LA 99ers

It's funny (at least to me), but there are lots of people who seem to know lots of stuff about their computers, and all those tiny chips, and how the bits and bytes are handled. And there seems to be next to nobody that knows anything about disk drives, and how they work. Sensing this huge gap in man's knowledge, I decided to figure out what makes them tick.

The great thing about disk drives is that they can find files buried randomly within a huge field of data, and they do it pretty fast. Actually, they can do it so fast because it's not at all random.

The mechanical concept is not all that complicated. A small motor spins at 300 rpm (at least in this country, with it's 60 hz power supply), and there is a tiny stepping motor attached to a read/write head. A stepping motor is a common item in indexing applications, where you want a motor to move a precise distance and stop on a dime. The read/write head is just a smaller version of what you have on a cassette recorder.

The stepping motor "steps" the head from track to track on a diskette. The tracks are concentric circles, not a long spiral as you would have on an album.

All of this is ultimately controlled by the disk software provided with your computer. Usually this is located in ROM within the machine. In most machines, the ROM is only sophisticated enough to load in the official Disk Operating System (DOS) which is located on the disk in the drive when the machine is turned on. The DOS contains all the file handling software, etc, and because it is on the disk, it can be easily modified and/or updated as time goes by.

Our friends at TI decided to put the whole thing in ROM, which has a few bad side effects. First, it makes it hard to update and improve the software, which is located in the Disk Controller Card. Second, although the machine is a 64K machine, just like all the others, TI has set aside so much memory for special purposed, that there is only 32K left to play with. They set aside 8K for cartridges, 8K for disk drive, 8K for RS232/PIO card, 8K for the Operating System (can't complain about that one), and 8K for various interfaces (speech, sound, VDP). OK those are all

good applications to have, but if you don't use them, you still can't use that memory for other things.

Anyway, all of the controlling software for the TI99/4A is located in the ROM card, as I said. This software tells the step motor when to step to the next track, when to return to the beginning, etc.

There is no standard for how a computer keeps track of data. In the case of the TI, there is a directory of existing files, and a map of where they are located, at the beginning of each disk. These files are not necessarily all in complete groups. If you delete a 12 sector file from a disk, there is a 12 sector gap recorded in the map. Then if you add a 20 sector file, the software will put the first 12 sectors in the gap, and put the rest in the first available spot. When you ask for a file that is broken this way, you can hear the disk head scooting along to read each individual segment.

Because the disk drives themselves are pretty standard, there are a few things that don't change. For instance, there are 48 tracks per inch in most 5 1/4" systems (There is a new 96 TPI system around, not TI compatible). And most systems only use 35 or 40 of the available 48 tracks. There are either 9 or 18 sectors per track (single or double density). Each sector holds 256 bytes of data. And the standard design allows 250,000 bits per second to be written.

The following is a complete and, to the best of my knowledge, accurate description of the Disk Directory format and file storage allocation used by the TI/99A computer.

## SECTOR 0 - Volume Information Block

ADDRESS	CONTENTS
0000-0009	Disk name - up to 10 characters
000A-000B	Total number sectors on disk (>1068=360, >02D0=720, >05A0=1440)
000C	(#of sectors/trk) >09=SD >12=DD
000D-000F	"DSK" (>44534B)
0010	>50=Disk backup protected, >20=not protected
0011	# of tracks/side(>28=40, >23=35)

0012-0013 # sides/density (>0101=SS/SD,  
>0201=DS/SD,  
>0102=SS/DD, >0202=DS/DD

added to above.

0038-end Sector allocation bit map

000D # of (MAXRECSIZE) records/sector

This is a sector-by-sector bit map of sector use; 1-sector used, 0-sector available. The first byte is for sectors 0 through 7, the second for sectors 8 through F, and so on. Within each byte, the bits correspond to the sectors from RIGHT to LEFT. For example, if byte >0038 contained >CF00 then the first byte equals 1100 1111. This means that sectors 0 through 3 are used, sectors 4 and 5 unused and sectors 6 and 7 are used.

000E-000F Number of sectors allocated to the file. (Disk Manager 2 will list one more than this number thereby including this sector in the sector count)

Information for sector 168 starts at >0065. Therefore, if your disk is SS/SD, all addresses from >0065 to end should be FFFF if it was formatted by DISK MANAGER and has not been tampered with.

0010 For memory-image program files and variable-length data files this contains the number of bytes used in the last disk sector. This is used to determine end of file.

SECTOR 1 - Directory Link

0011 MAXRECSIZE of data file  
>50-80 >FE-254 etc.

Each 16-bit word lists the sector number of the File Descriptor Record for an allocated file, in alphabetical order of the file names. The list is terminated by a word containing >0000; therefore, the maximum number of files per disk is 127 R(256/2)-1]. Any addresses past >0000 will not catalog, but will still be accessible. If the first address is >0000, move all addresses four digits to the left, (eliminating this false address) then the disk will catalog. If the alphabetical order is corrupted (by a system crash during the name change, for instance), the binary search method used to locate files will be affected and files may become unavailable.

0012-0013 File record count, but with the second byte being the high-order byte of the value.

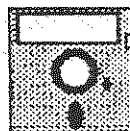
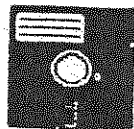
001C-end Block Link (see note)

SECTOR >2 TO >21 - File Descriptor Records

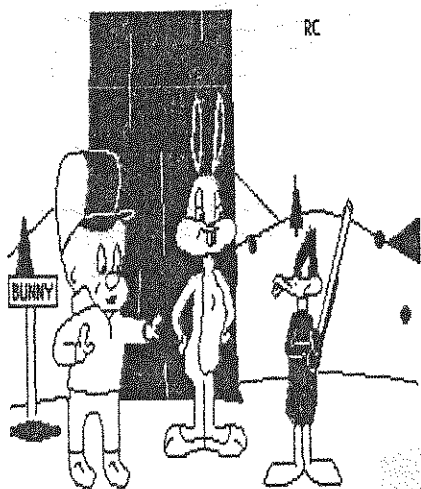
ADDRESS	CONTENTS
0000-0009	File name up to 10 characters
000C	Filetype: >01=Program (memory image) >00=DIS-FIX, >80=DIS/VAR >82=INT/VAR File deletion protection invoked by Disk Manager 2 will be shown by >08

Note on file storage: Files are placed in the disk in first-come/first-served manner. The first file written will start at sector >0022, and each subsequent file will be placed after it. If the first file is deleted, a newer file will be written in the space it occupied. If this space isn't big enough, the file will be "fractured" and the remainder will be placed in the next available block of sectors. The block link map keeps track of the fracturing. Each block link is 3 bytes long. The value of the second digit of the second byte followed by the 2 digits of the first byte is the address of the first sector of this extent. The value of the 3rd byte followed by the 1st digit of the second byte is the number of additional sectors within this extent.

Sectors 2 through >21 are reserved for File Descriptor Records and are allocated for file data only if no other available sectors exist. If more than 32 files are stored on a disk, additional File Descriptor Records will be allocated as needed, one sector at a time, from the general available sector pool.







## TIME FOR A CHANGE MAY 27<sup>TH</sup> AT 7:00 pm

Just a reminder to let you know that the meeting has been changed. We will continue with the regular meet- (THIRD TUESDAY), AFTER MAY. Ed wants me to remind you that- the Dues are Due! See you then..

Frank Zic use to be The West Penn's recording secretary for several years. While in office wrote several articles, titled, "TIPS FOR BEGINNER". I decided to re-print them. I starting with # 6.

So you are having trouble with your filing system. Seems like I heard that tune before. Well, here is a neat and clever system I devised that you may find helpful. I've always liked colors so what better approach than to use a color oriented scheme. Frist make a list of the different categories you want to keep track of. Designate a color scheme for each category. My grouping looks like this:

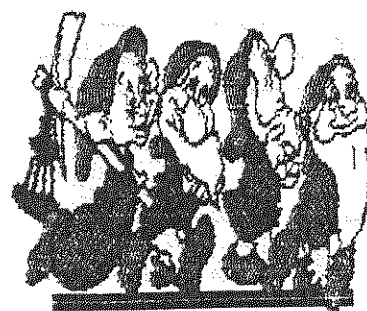
1. Business-Red
2. copy programs-Yellow
3. Diagnostic-Yellow/Blue
4. Educational-Blue
5. Finance-Red/Blue
6. Games-(Unmarked) or Black
7. Music-Red/Yellow/Green
8. Printer & dump-Yellow/Green
9. TI Artist(ect.)-Green
10. Utilities-Red/Yellow
11. Word Processor-Red

What I do is cut a 1/4" strip across a 3/4" piece of of the designated colored tape and place it Horizontally on the front of the upper left corner of the disk.

Where there are two or more colors called for, half lap the second color over the first one. Now when searching for a disk in your box or refiling one it is easy to spot the color group you want. Another feature is to use a piece of colored tape over the square write protect hole and a piece of plain black tape, "scotch" electrical works fine, over the round punch out hole. Now you have a quick eye reference to when you are loading the "A" side of the disk in the drive (colored) side up or the "B" side (black) up. How many times have you cataloged your disks and thought it would be nice when you want to catalog the next time if you had a way of remembering only the new disks you received. This can only be accomplished by again taking a piece of colored tape and placing in the upper right hand corner of the disk. Wrap the tape 1/2 over the front and 1/2 over the back in a vertical fashion. Remove this tape after the next cataloging and you are up to date. Some of you may be thinking that tape is messy and doesn't stick well, not so, you can buy a (5) color pack at Radio Shack that works just fine and can be used over and over again with good results.

I like to mark the catalog of the disk on the envelope so that I can tell what programs are on the disk when the disk is in the drive unit. When you do this you should now identify the disk with it's own envelope. This is easily accomplished by using a piece of "Scotch Magic tape". This tape is the see through kind and it is easy to write on with a ballpoint pen. Just don't press too hard when writing on the disk. I've done this for years now with no problem. On the disk, mark an identifying number such as 87/5-32. translated this says you obtained this disk in 1987 in the month of May and it is the 32nd disk added to your collection so far this year. Use the same number on the envelope. Just below this information I write who I got the disk from, Thus preventing giving the same program back in a later exchange.

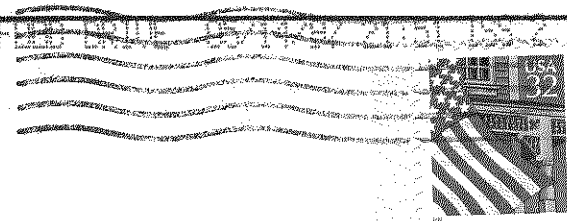
H  
I  
H  
O



Have a  
happy  
and safe  
Memorial  
day!!

## WORKING TOGETHER TO MAKE WEST PENN # 1

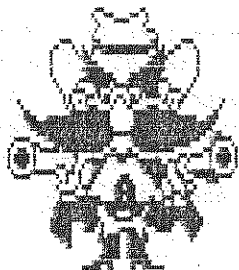
WEST PENN 99'ERS  
C/O Paul A. Brock  
General Delivery  
North Apollo PA 15673-0999



# Newsletter Letters

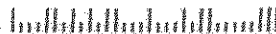
Please note new address  
and update your mailing list

FIRST CLASS MAIL



MICKEY CENDROWSKI  
100 PINE STREET  
RUSSELLTON, PA 15076  
USA

FIRST CLASS MAIL



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

NEXT

MEETING MAY 27th 7:00 PM

## WP MEMBERSHIP APPLICATION

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

Please check one

Newsletter membership  
No library priviligages  
\$10.00 Per year

Full membership  
Library priviligages  
\$15.00 Per year

Complete and return to

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