Mass Users of the Ninety-nine and Computer Hobbyists

APRIL 1996 Monthly Newsletter Version 15.04

AT OUR NEW HOME IN WORCESTER

A TI'ERS CREED

KEEP EVERLASTINGLY AT IT!

M.U.N.C.H.
C/O J. W. COX
905 EGDEBROOK DRIVE
BOYLSTON, MASS. 01505

NEXT MEETING: TUESDAY, APRIL 9th.

POSTMASTER: Forwarding and Address Correction Requested.

FIRST CLASS!!

NEXT MEETING TUESDAY, April 9, 1996 7:00 PM.
OFFICERS AND NUMBERS (all in 508 area unless noted)

PRESIDENT	Walt Nowak	413-436-7675		
VP./Treas./Editor	Jim Cox	869-2704	MUNCH DUES:	
DEMO LEADERS:	Corson Wyman	865-1213	New Membership	$25.00
	Jack Sughrue	476-7630	Renewal	$15.00
CLERK	Ben Parda	791-9172	Newsletter Sub.	$13.00
Advanced Programmer	Dan Rogers	248-5502		

****

MARCH MEETING. I missed the meeting because I was viciously attacked by Bank Examiners. Just because someone steals a million or so, they get testy.

APRIL MEETING. The examiners are gone, so I should be in attendance. Leslie Hadley who won a modem and RAM Disk at the Faire last fall has returned these items to the group because he can not use them. He suggests we do what we want with them. One thing he mentioned was to raise money for the Tony Falco Fund. I would like to use the RAM Disk in the Group's system. I know we have made generous contributions to the Falco Scholarship Fund both as a Group and individually. We can decide on this and look at some of the recent disks of the month at the meeting.

RAFFLE. Occasionally we have a raffle to help defer the rental cost of our meeting hall, it depends on the number present.

REPRINTS. Reprints are permitted as long as credit is given to M.U.N.C.H.

ARTICLES. I am always looking for articles for this newsletter, anything which interest you will probably interest other members of the T.I. community, so please share your ideas and opinions with all of us.

DISK LIBRARY. The disk library is at all meetings. We have copies of all disks in the library and they are available to members for just $1.00 for each disk unless otherwise specified. You can order them through the mail, please add $1.00 for the first disk and $.40 for each additional disk ordered to cover postage and handling.

DISK OF THE MONTH. This month's disk #151 is Ron Warfield's Disk Catalog programs.

ADVENTURE II. This is our fund-raiser for now. The cost to members is $4.00, add $2.00 for first class postage. The regular price is $6.95 plus postage. This is a two DSSD disk set, archived. There is also a special on The Adventure Compendium and Adventure II for members it is $8.00 plus $3.00 for first class postage.

FOR SALE: Al Eisenhower of Hyannis, Mass. has T.I. equipment for sale. He is especially interested in trading T.I. stuff for American Flyer trains or other trains. Call him after 5:30 p.m. EST at 508-775-4289.

Dennis Lavoie, a former member, has a complete system with software for sale. Call Dennis at 508-797-3538. Another former member, Al Kresock has a lot of software and hardware for sale. He wants to sell it as one package. Call him at 607-797-0589(Johnson City, N.Y.).

THE M.U.N.C.H. FINANCIAL REPORT

FOR THE FISCAL YEAR ENDING 12-31-95

This statement of income and expense is for the fiscal year ending 12-31-95. Please note, we have changed our fiscal year end from 9-30 to 12-31, so this report is for fifteen months from 10-01-94 to 12-31-95.

INCOME

Disk sales	$282.90
Dues	450.00
Faire earnings	347.00
Raffle income	53.00
Total Income	$1,132.90

EXPENSES

Hall Rental	$175.00
Newsletter supplies	93.53
Faire expenses	227.18
Misc. disks purchased	96.50
Postage	314.33
Bank service charges	98.00
Total Expenses	$1,006.54

Checkbook Balance 12-31-95 $572.68

Respectifully submitted,

James W. Cox
Treasurer

I saw this little tip published in a couple of newsletters for the Horizon. Well, it also works on the Grand Ram.

A 32K TESTER

If you are having problems with your computer and have it narrowed down to the 32k card in the P-Box, here's a little Basic program that you can use to test the memory chips. I use it to find exactly which memory chip is bad (assuming this is the problem). This program was developed by Joe Nuvolini at Front Range and John Willforth at the Pittsburgh User Group.

You will need a Mini Memory to run it since you don't want to use the 32k because it's supposed to be defective, remember?

John Willforth says it checks the memory chips for the most common defects and should pinpoint the defective chip. He also says that if the program shows all chips in a row to be defective except for one chip, then suspect that chip to be the one that is defective.

The program that I typed in follows, if you have a question, the original articles are in our library.

```
100 ! 32k tester by Nuvolini/Willforth
110 N=0
120 CALL CLEAR
130 CALL SCREEN(13)
140 PRINT " MEMORY EXPANSION CHECKER
145 PRINT
150 PRINT " PLACE YOUR MEMORY EXPANSION

T THE TOP"
180 PRINT :" ENTER :":"      1 TO CHECK

      3 TO END"
190 CALL KEY(0,K,S)
200 IF S=0 THEN 190
210 IF K<49 THEN 190
220 IF K>51 THEN 190
230 R=K-48
240 IF R=1 THEN 700
250 IF R=2 THEN 720
260 IF R=3 THEN 680
270 IF R=1 THEN 300
280 N=27
290 GOTO 310
300 N=35
310 V=N
320 CALL CLEAR
330 IF R=1 THEN 350
340 GOTO 370
350 PRINT "TEST OF TOP ROW OF 4116'S"
360 GOTO 380
370 PRINT :"TEST OF BOTTOM ROW OF 4116'S
380 PRINT "READING FROM RIGHT TO LEFT.."
390 FOR T=1 TO 2
400 FOR I=0 TO 7
410 IF T=1 THEN 440
420 IN=2 I
430 GOTO 450
440 IN=0
450 CALL LOAD(A,IN)
460 CALL PEEK(A,D)
470 IF IN=D THEN 510
480 PRINT "    CHIP U ";STR$(N);" IS BAD
490 CALL SCREEN(10)
500 GOTO 520
510 PRINT "    CHIP U ";STR$(N);" IS OK"
520 N=N-1
530 PRINT "WRITTEN =";IN;" READ =";D
540 NEXT I
550 GOSUB 740
560 CALL CLEAR
570 IF T=1 THEN 610
580 PRINT " END OF SECOND PASS"::::::::
590 GOSUB 740
600 GOTO 640
610 PRINT " END OF FIRST PASS"::::::::
620 GOSUB 740
630 N=V
640 NEXT T
650 PRINT
660 INPUT "PRESS ENTER TO CONTINUE ":X$
670 GOTO 110
680 CALL CLEAR
690 END
700 A=-12288
710 GOTO 270
720 A=12287
730 GOTO 270
740 FOR DELAY=1 TO 600
750 NEXT DELAY
760 RETURN
```

continued from previous page.

The logic cable is made by snapping the 34 position insulation displacement connectors onto the 34 wire ribbon cable It is really very easy with either the tool that was designed to crimp the connectors or as I did by crimping them in a small vice. Be careful not to crush the connectors also be sure that the ribbon and the connector are lined up well before you crimp or you may end up with a bunch of open or worse yet shorted connections. Now it's time to set up the drive number and get the load resistors squared away. Find the drive select lines coming on to drive #2 they are lines 10, 12,14,16 on the logic connector for the drive. There should be a dip switch or jumpers in each of these lines. Make sure that the jumper in line 12 (drive #2) is connected or turned on and that the others are open or off. Next remove the resistor pack on the #1 drive as called out in the T.I. disk controller manual. Put your #2 drive into its sheet metal case (I'm not sure if they all came with a case but if not you'll have to build one from wood or sheet metal to protect the circuit board). Another thing I did to help conserve power was to cut the tape from pin 16 on the logic connector. (This is the Motor On signal.) I also removed the 150 ohm pullup resistor on this line. This was done to both drives. Then I jumpered the drive select line (after the switch or jumpers) to the motor on line which is pin 16 of the logic connector (after the cut) so that the motors will come on with the drive select instead of both comming on at the same time and drawing twice the current from the 12 volt supply. One or two of the disk copying programs out there have a problem with this configuration but most of the time there is no problem at all.

Reference MICROpendium article Dec. 85 (?) for another way of making the logic cable.

Reassemble your first drive into the P.E.box then connect the second drive and tape it to the side of the P.E. box to hold it in place. Connect the rest of the system and turn it on.(How did you do? any smoke? Did the title screen and basic come up ok? If not shut the system down quickly and double check everything. But let's assume all has gone well up to this point. The next thing to do is try to load a file from each drive(this is where you find out if you got your jumpers and load resistors in the right spots). If both drives responded properly then you are done. Make sure everything is put back together neatly and with no pinched wires. Have fun with your new drive.

See you next time

Joe Z.

FROM:
PIONEER VALLEY 99ER'

HARDWARE PROJECTS

by

Joe Ziemba

STEALING POWER FOR EXTERNAL DRIVES

THIS MOD IS NOT RECOMMENDED BY MOST PEOPLE I KNOW. However mine has been in place for about 5 years now with no problems at all. I have been told that the older PE boxes (the ones with a push button on the front instead of the rocker switch on the later model) were built with somewhat better transformers and would be more likely to support the extra drive without damage. The drives I am using are the standard height drives TI put in the PE boxes PHP1200 is what TI called them. I took mine apart and it is a SHUGART 400H. Many half height drives draw less power than full height drives do so they might be an even better choice for this mod.

List of equipment needed for this modification:

(1) full height drive (Shugart 400H etc.)

(2) 34 position insulation displacement connectors

ribbon cable 34 conductor (1.5 ft.)

8 feet of 18 gauge wire

soldering iron and a little solder

wire strippers

screw drivers

duct tape or double faced tape

OPTIONAL: connector that mates with the one on the second drive. That way the drive can be disconnected if a problem develops.

O.K. here we go. The first thing to do is remove the old drive from the expansion box. Then splice a wire into each of the four wires just behind the power plug(+5+12-12gnd). If you are splicing on another power plug for the second drive (this is the preferred approach) use that instead of four seperate wires. Be sure that both plugs are wired the same way or you're gonna be in big trouble when you turn the system on. If you don't want to use another connector you can remove the power connector on the second drive and solder the power connections to the holes left on the board when the power connector was removed. (Again make sure the right wire goes in the right hole or smoke city!!)

continued: POWER: next page

5. If you saw a non-zero entry after the E entry in the first column, type in a zero and a space and repeat until the first column shows a zero.

6. Press Enter.

7. Write the revised sector 1 to the blown disk: E 1,1 <Enter>.

You have just entered a table of pointers to the files on the disk. The table points to the corresponding sector for each filename. This is the table that is updated and sorted when you add/delete files.

Leave Disk Fixer by typing the letter "Q" and press Enter. Then catalog the disk. Let's call this new catalog the "mixed" catalog. You will see the reason once the disk has been cataloged. Notice how the catalog is not in alphabetical order. However, it does contain all of the filenames that you hoped would be on the disk. The next step is to alphabetize the catalog. This is done by first alphabetizing the catalog on paper and carrying along the appropriate sector number of each filename. Here is an example of a mixed catalog:

Mixed Catalog		**Sorted Catalog**	
Filename	**Sector**	**Filename**	**Sector**
CAT	1	APPLE	E
SCREEN	5	CAT	1
VOTE	2	DEMO	7
FIRE	6	FREE	6
APPLE	E	HELLO	9
HELLO	9	JUSTIFY	D
SCROLL	C	LOAD	3
LOAD	3	LOGO	A
TIME	8	PLOT	B
DEMO	7	QUICK	4
QUICK	4	SCREEN	5
JUSTIFY	D	SCROLL	C
PLOT	B	TIME	8
LOGO	A	VOTE	2

The above example shows how you should alphabetize the filenames and the corresponding sector numbers on paper. If you are unsure when dealing with "funny" characters, the system alphabetizes by lower to higher ASCII values. These values can be found on your TI BASIC reference card. Once you have done this, you are ready to enter this information into sector one. You do not have to enter the filenames, just the sector numbers. Here is how to do it:

1. Place the blown disk into the disk drive.
2. Read sector 1 by entering R 1,1 <Enter>.
3. Enter the Alter function: A 0 <Enter>.
4. Type in the sector numbers in the order shown the above sorted example catalog. Separate e number by a space: E 1 7 6 9 D 3 A B 4 5 C 8 2
5. Press <Enter>.
6. Write the revised sector to disk: W 1,1 <Enter>
7. Put a write-protect tab on the disk.

You have now fixed up the disk. For verification, q Disk Fixer and catalog the disk. You should have problems during the catalog process. But you are completely done yet. DO NOT add or delete any fi or programs using this disk. Get a fresh disk initialize it to the same configuration as the blown di Then back up the blown disk to the fresh disk. Tl catalog the fresh disk. You should see that the used/f sector information is now correct. Thus, the fresh d is now your working disk and the blown disk is no disk for your archives. Keep the blown disk in a s place, just in case you remember a filename that was previously recovered from it. Go through the ab procedures to recover that new-but-old file.

Submitted by Bob Charlson(author unknown)-Ed.

In the beginning was the plan,
and then the specification;
And the plan was without form,
and the specification was void;
And darkness fell upon the faces of the implementers;
And they spake unto their supervisor, saying:
"It is a crock of unmentionable, and it stinketh;"

And the supervisor went to the manager;
And spake unto him, saying:
"It is a crock of unmentionable,
and none may abide the odor thereof;"

And the manager went to the director
and he spake unto him, saying:
"It is a container of unmentionable,
and is very strong,
such that none may abide before it;"

And the director went to the AVP
and he spake unto him, saying:
"It is a vessel of fertilizer,
and none may abide its strength;"

And the AVP went to the VP
and he spake unto him, saying:
"It contains that which aids plant growth,
and it is very strong;"

And the VP went to the EVP
and he spake unto him, saying:
"It promoteth growth,
and it is very powerful;"

And the EVP went before the President,
and he spake unto him, saying:
"This powerful new plan
will promote the growth of the company;"

And the President looked upon the Plan,
and saw that it was good.

The following article appeared in MICROpenium/January 1996-Ed.

HOW TO FIX BLOWN DISKS

If you can remember filenames, your halfway there

By NIRAJN SNAH
and MIKE BALLMAN

This article originally appeared in Spirit Of99, the newsletter of The Central Ohio Ninety-Niners. The instructions are for Disk Fixer, but other sector editors may be used.-Ed .

Did you ever try to catalog a disk and find out the disk controller thinks the disk is not initialized? But you know better! What do you usually do with the blown disk? Most people delete the file giving them the problem. Usually that corrects the problem, but it also gets rid of that file forever. The ultimate solution is to use Disk Fixer by Navarone Industries.

Here is the process to fix a blown disk. Start by getting a hard copy catalog of the blown disk, or even better, get a complete "old" catalog of what should on the disk. If a complete catalog is not available, try to remember the filenames that should be on the disk and write those names down. Once you have a catalog of the disk, you are ready to start using Disk Fixer.

Insert the Disk Fixer cartridge an select option 2 from the title screen. You should see the Disk Fixer menu. Do the following if the most recent catalog of the blown disk tells you there are more sections use/free than is logically possible. For example, a single-sided, single-density disk would have no more than 358 sectors. A double-sided, single-density disk would have no more than 718 sectors. If the catalog lists 500 sectors used/free on a single-sided, single-density disk, then do the following. If not, you can go the paragraph that discusses sector one.

FIXING SECTOR ZERO

The following instructions tell you how to fix up sector zero, which is the sector containing information about the disk name and number used/free sectors. If the disk catalog tells you the used/free sector information is in error, then sector zero needs to be repaired. The easiest way to do this is to copy a good sector zero from another disk to the blown disk. Here is how to do that:

1. Insert a good disk in the drive.
2. Read sector zero of the disk (R 0,,1 <Enter>).
3. Put the blown disk in the drive.
4. Write the good sector zero to the disk (W 0,1 <Enter>).

FIXING SECTOR ONE

If you now catalog the blown disk, you do should that the disk name and the used/free information identical to the undamaged disk. Do not let that ala you. We did that to fool the disk controller i thinking the blown disk is at least partially restored normalcy. Now we need to fix up the blow disk much as we can. This is done by changing sector o. Here is how to fix sector one:

First, get the most complete catalog and the m recent catalog of the blown disk in front of y Compare the two catalogs to see which filenames missing. Next, compile an alphabetical listing of all filenames that are and should be in the catalog. Tl you need to find the corresponding sector for each, t name. This is done by using the Find String function Disk Fixer.

1. Put the blown disk in the disk drive.
2. Find a filename by: F 0,208,1 <Enter>. Type the filename and Enter.
3. Ignore the "ERROR IN SECTOR" message.
4. Write down the sector number for that filename.
5. If that filename could not be found, make sure y typed it in correctly and try again. Otherwise that does not exist on the disk.
6. Repeat the process from step two for all of t filenames.

You should now have an alphabetical listing tl consists of two columns: filenames and sectors. W this information in hand you are ready to begin fixi up the blown disk. This is done by modifying sect one of the blown disk. First, you have to read sector from the blown disk:

1. Put the blown disk in the drive.
2. Read sector one of the disk by: R 1,1 <Enter>.

Then you want to alter the contents of sector on This is done by using the alter function of Disk Fixe This process is best learned by observing a concre example. Let's say the blown disk has 14 fil (filenames) on it. Thus, there should be 14 entries sector one, one entry for each file. The rest of t sector should consist of zeros. Now let's alter sect one.

1. Keep the blown disk in the drive.
2. Enter the Alter function of Disk Fixer: R 0 <Enter>.
3. Type in the following as shown, including tl spaces: 1 2 3 4 5 6 7 8 9 A B C D E.
4. Do not press enter yet.

TI Owner's
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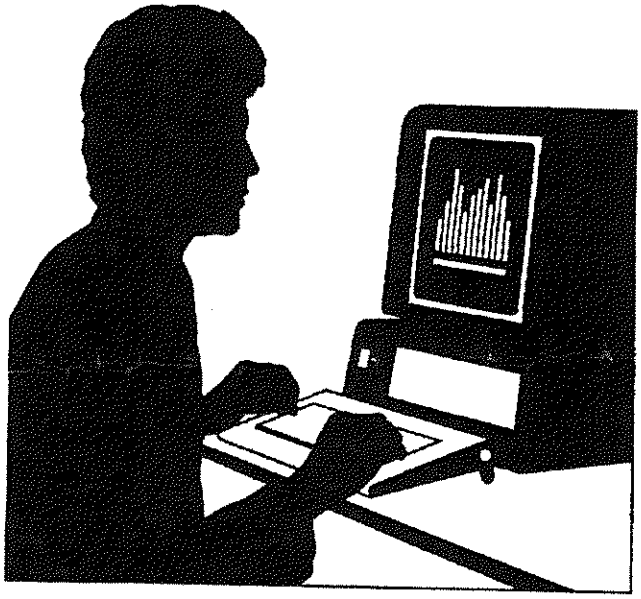

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THE JIM PETERSON ACHIEVEMENT AWARD

The following people have been nominated for their outstanding efforts, and as such, have been nominated for the 1996 Jim Peterson Achievement Award.

Please send all responses, according to the rules of the Award, to Deanna Sheridan. Email address aa726@cleveland.freenet.edu.

Standard mail address is Deanna Sheridan, Jim Peterson Achievement Award, 20311 Lake Road, Rocky River, Ohio 44116. The last day for voting is April 25, 1996. Please send in your votes before then.

Jim Peterson Achievement Award

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SW99ers (super AMS)

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9640

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