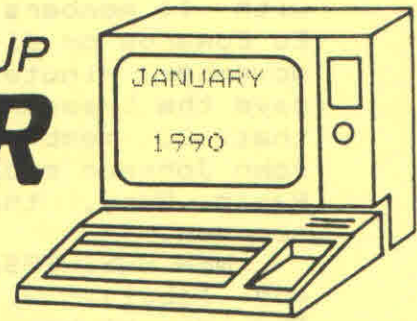


CEDAR VALLEY 99'ER USER GROUP

NEWSLETTER



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*****NEWSLETTER TOPICS*****

1. Future Meeting Dates
2. Next Meeting Notes
3. Minutes from the December Mtg
4. For Sale/Wanted/Trade, etc.
5. The Library Blurb
6. Disk Fix (reprint)
7. Printers #2 (reprint)

*****FUTURE MEETING DATES*****

Please mark the following dates on your calendar for future meetings:
JANUARY 8, FEBRUARY 12, MARCH 12.

*******NEXT MEETING*******

The regular monthly meeting will be Monday, Jan. 8, at West Music, Cedar Rapids, with open discussion starting at 6:30 PM. Ed Edwards will bring the TIPS picture files, and he will surely have some other neat stuff for the new year! Come and learn!

*** MINUTES FROM THE DECEMBER MEETING ***

The December meeting was called to order by President Jerry Canady with 11 members in attendance. The evening started with a discussion by Ed Edwards on Jiffy Flier. It was moved, seconded and passed that the November minutes be accepted as printed in the NEWSLETTER. Bruce Winter gave the treasurer's report and it was approved as read. Bruce reported that 20 members have renewed their membership so far. OLD BUSINESS: 1. John Johnson made a correction to what he had told us about the speed of Rapid Copy, that it will copy a single side-single density disk in 27 seconds.

NEW BUSINESS: 1. Bruce is going to be ordering 500 more new disks and labels. 2. A Christmas card from Sister Pat was passed around. 3. The idea of having a disk of the month was discussed. 4. There is going to be a Computer Fair in March put on by the Commodore Computer club and it was discussed about the possibility of our group having a table there.

PROGRAM: Ed Edwards had the program for the evening. He demonstrated several programs by Don Shorock. These were foreign language helps disks and some educational type programs. TIPS by Ron Walcott, which are instances for use with TI Artist were shown.

Submitted by Bob Wahlstrom, Sec. Pro Tem

*** FOR SALE ***

Extra items Sister Pat Taylor has acquired but needs to sell: EZ Keys, by Harry Wilhelm, \$10; Security Analysis cartridge and manual, \$5; load interrupt switch, \$3; Screen Scroll package from Disk Only Software, \$7; Nibbler disk copy program by Starsoft, \$5; Disk Manager IV and Quick Cataloger, both from Quality 99 Software, \$5 each. Prices are suggested; all offers considered. Custodian of the above: Gary Bishop, (319) 377-9574 after 6 pm.

*** FOR SALE OR TRADE ***

Issues of 99'er/Home Computer Magazine: Jan, Feb, Apr, May, June, July 1983: V4#5, V5#2, V5#3, V5#4, V5#5, \$2 each or \$20 for all; Sam's 99/4A Calc book, \$4; 101 Programming Tips and Tricks for 99/4A, \$5; Introduction to Assembly Language for the TI Home Computer, by Ralph Molesworth, \$10; "Telephony Today and Tomorrow", by Chorofas, \$4. Cassette games: Thief/Chicken/Shootit, \$5 all; Tunnels of Doom manual, cart, & cassette, \$5; Teach Yourself Basic cassette, \$5; 99er On Tape V#1, \$2; Rapid Fire adapter for games--doesn't work on TI, Commodore/Atari only, \$2. Gary Bishop, (319) 377-9574 after 6 pm.

WANTED: Stand alone disk drive controller of some sort: TI/Percom/??, For high schooler starting out in computers. Call Gary as above.

* * THE LIBRARY BLURB * *

First I will repeat the retraction that I brought up at the last meeting. Rapid Copy copies a SSSD disk in 27 seconds, a DSSD takes 54 seconds and I see from my Texaments catalog that a DSDD takes 1 minute and 17 seconds. I still don't know how I lived without it. The DSDD time includes formatting the disk also. As long as we are on the subject, here is a small query for you trivia buffs. Rapid Copy lists the track it is copying as it runs. The standard format for TI single density is 40 tracks per side. Yet the highest number that Rapid Copy lists is >27 (hex 39). Where did track number 40 go?

Texaments has Rapid Copy in their catalogue if anyone is interested. They also have a used equipment list on their BBS at 1-516-475-6463. They have a lot of advertising and the used list was very short, but if you are interested I used my allotted 45 minutes before 8AM and it cost \$6. When you sign on they ask a series of questions about your system. I didn't think I needed line feeds. I was wrong. It took a while to get that straightened out.

The latest and greatest program in our library is the public domain program TIPS by Ron Wolcott. I have had two requests for this program since Ed Edward's demo of it at the last meeting. A couple of things should be noted to warn any of the rest of you who may want it. The program is on DSSD disks and takes 14 of them for the whole set. If you have only SSSD capabilities it will take 42 disks for all of them because the programs fit 3 on a DSDD but only 1 on SSSD. Ed will have his catalogue of the pix at the next meeting for anyone who wants to pick out some of them from the groups. Also one of the disks for the program was bad so we won't have a complete set until the next meeting when Ed brings us one. The program TIPSSHOW will print that catalogue. I am told.

Lastly, I have started looking at the C language disks in the library. I was skeptical at first, but the docs have some interesting data that has me investigating further. C as used on these disks compiles a source code for an assembler. The code is somewhat inefficient but it is still more than twice as fast as Forth and over 40 times faster than Basic. I see also that the TIPS programs are written in C.

That is it for now, with actually some lines left on the bottom of the page.

J Johnson CR

Disk Fix

by WESLEY R. RICHARDSON
BLUEGRASS 99 COMPUTER SOCIETY, INC.

When you have a disk with several files that you have been working on and you do a catalog and it comes up DISKETTE IS BLANK, or DISK NOT INITIALIZED, it can be very frustrating. There are times when the sectors used and available get changed to values like 2389 free and 7887 used, but you know you have a single sided, single density (SSSD) disk drive, with a maximum of 360 sectors. It is also possible to have a disk which will not catalog, yet when Extended BASIC is selected, the disk will run the LOAD program and continue without a problem. These have happened to me and I am sure it has happened to others, so I thought I would document a way which may recover your disk for you.

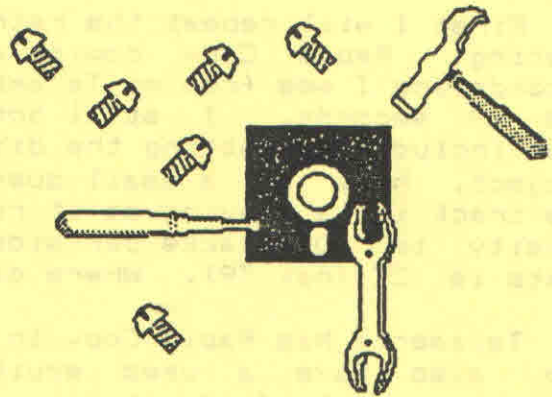
The items which you will need are your blown disk, two blank disks, Disk Manager 1000 v3.5, Disko or Disk Patch, and a sector or track copier program, or the equivalent of any of the above. I will use the Funnelweb v4.10 DISK-PATCH for the sector editor.

1) The first step is to initialize a disk in the format which you believe the blown disk was, for example SSSD. For the disk name, use the name that you want on the blown disk after it is restored.

2) Using the sector copier or track copier, make a copy of the blown disk. If you get a read error in sector 0, just tell the program to ignore the error. If you are unable to copy the disk with the copier programs which you have available, you may still continue the following steps with the original disk, but be advised that you may lose everything on the disk.

3) Load DISK-PATCH or DISKO and then insert the back-up copy of the blown disk in drive 1. Select option 1 for disk sector editor. Then disk 1, and sector 0. The screen should come up with the data from sector 0. Pressing FCTN 2 will change the screen to ASCII and pressing FCTN 1 will change it to HEX. In ASCII, the first ten characters will be the disk name. In HEX, at byte 12h (h=HEXADECIMAL) will be 01 for single sided and 02 for double sided. At byte 13h, will be 01 for single density and 02 for double density.

4) Press FCTN 4 to go to sector 001h. You should



find groups of four digits of HEX numbers such as 0002 0003 0009 0015 and so on. These indicate where the file names and file maps may be found. Write down each of these numbers in the order which they are found when read from left to right and top to bottom on the screen. Note also if the first number is 0000, then the disk will catalog as being blank and no file names will appear.

5) Press FCTN 4 to go to sector 002h. In the first ten ASCII characters you will find a file name. Write this down next to the appropriate four digit number you had in step 4). Do this for each of the numbers from step 4). If there were several files on the disk, you may need to press FCTN 9 and then option 1 again to go directly to the location. While in sector edit mode, pressing FCTN 6 will take you to the next lower numbered sector.

6) You now should have a table similar to the one below with the file name and location of each file on the disk.

0000	A-SECTOR2	000D	PACMAO
0003	CENTIPEDE	0005	PINBALL
0009	DEFENDER	0006	PINBALM
000A	KONG	0007	POLE/POS
000B	KONH	0008	POLE/POT
0004	LOAD	000E	TI/INVADER
000C	PACMAN	000F	TI/INVADES

7) Note in the case that we did find a 0000 but a file was there, as in this case file A-SECTOR2 directory was located at sector 002h, then use the sector editor to view sector 001h. Move the cursor to the first 0000 in HEX and change it to read 0002. Then press CTRL W to write the sector back to the disk, and answer Y to the question RE-WRITE SECTOR?

...DISK FIX

8) Remove the copy of the blown disk and insert the formatted blank disk in drive 1. Select the sector editor, giving drive 1 and sector 0. After the sector comes up, remove the blank disk and insert the blown disk copy in drive 1. Press CTRL W to rewrite the sector.

9) Load Disk Manager 1000 version 3.5 (DM1000), and then put the blown copy disk back in drive 1. Select option 1, File Utilities. Then select option 2 for Recover file. Give the drive as 1. Enter the first file name on you list and press enter. The program will say SEARCHING DISK, then RE-BUILDING LOST FILE, then FILE RECOVERED. Press enter and then 2 for Recover file. Repeat these steps until all of the files are recovered.

10) Press 1 for Copy/Move/Delete... and give the disk number as 1. Your disk free and used does not match up with the sum of the file sizes plus 2 sectors, then go to step 11), otherwise you are done.

11) Do this step only if the disk free is not correct. Place a D in the left column to delete all of the files and a U in the right column to unprotect all of the files. DM1000 will unprotect and then delete all of the files. At this point a catalog should show free 358, used 2 for a SSSD disk. Go back to the recover file section of step 9) and recover each file again.

One other piece of advise, if you have a disk with a bad directory, do not write any files to the disk until you have a chance to fix the directory. If you write a new file, then you are taking the chance that part of another file will be over-written. This can happen because sector 0 may show that a location is free, when in fact it has part of a file in it.

The other advise is to always keep a back-up copy of anything which you do not want to lose. It is a good idea to keep a write protect tab on your master disk and keep it away from your work disk. On documents or programs, save your work to disk every 15 minutes so if the power goes off or your computer locks up, you only lose 15 minutes worth of work. Alternate saving to two disks when you have a large and important program or file.

If you always keep back-ups, I hope you will not need to use DISK-FIX, but if that time comes when the disk is blown, now you have something to try.

DISK NAME

NO. OF SECTORS 168 = 360
9 SECTORS PER TRACK

BYTE	0	2	4	6	8	A	C	E
0	5353	5344	2020	2020	2020	0168	0944	534B
1	2020	0101	0000	0000	0000	0000	0000	0000
2	0000	0000	0000	0000	0000	0000	0000	0000
3	0000	0000	0000	0000	FFFF	0000	FCFF	FFFF
4	FFFF	FFFF	FFFF	FFFF	FFFF	FFFF	FFFF	FFFF
5	FFFF	FFFF	FFFF	FFFF	FFFF	FFFF	FFFF	FFFF
6	FFFF	FFFF	2FFF	FFFF	FFFF	FFFF	FFFF	FFFF
7	FFFF	FFFF	FFFF	FFFF	FFFF	FFFF	FFFF	FFFF
8	FFFF	FFFF	FFFF	FFFF	FFFF	FFFF	FFFF	FFFF
9	FFFF	FFFF	FFFF	FFFF	FFFF	FFFF	FFFF	FFFF
A	FFFF	FFFF	FFFF	FFFF	FFFF	FFFF	FFFF	FFFF
B	FFFF	FFFF	FFFF	FFFF	FFFF	FFFF	FFFF	FFFF
C	FFFF	FFFF	FFFF	FFFF	FFFF	FFFF	FFFF	FFFF
D	FFFF	FFFF	FFFF	FFFF	FFFF	FFFF	FFFF	FFFF
E	FFFF	FFFF	FFFF	FFFF	FFFF	FFFF	FFFF	FFFF
F	FFFF	FFFF	FFFF	FFFF	FFFF	FFFF	FFFF	FFFF

> 28 = 40 TRACKS
1 = SIDES
1 = SINGLE DENSITY

ALPHABETICAL LIST OF FILE DESCRIPTOR RECORD

BYTE	0	2	4	6	8	A	C	E
0	0002	0003	0004	0005	0006	0007	0008	0009
1	000A	000B	000C	000D	000E	000F	0000	0000
2	0000	0000	0000	0000	0000	0000	0000	0000
3	0000	0000	0000	0000	0000	0000	0000	0000
4	0000	0000	0000	0000	0000	0000	0000	0000
5	0000	0000	0000	0000	0000	0000	0000	0000
6	0000	0000	0000	0000	0000	0000	0000	0000
7	0000	0000	0000	0000	0000	0000	0000	0000
8	0000	0000	0000	0000	0000	0000	0000	0000
9	0000	0000	0000	0000	0000	0000	0000	0000
A	0000	0000	0000	0000	0000	0000	0000	0000
B	0000	0000	0000	0000	0000	0000	0000	0000
C	0000	0000	0000	0000	0000	0000	0000	0000
D	0000	0000	0000	0000	0000	0000	0000	0000
E	0000	0000	0000	0000	0000	0000	0000	0000
F	0000	0000	0000	0000	0000	0000	0000	0000

F = USED SECTORS

FILE NAME

I = PROGRAM TOTAL SECTOR

BYTE	0	2	4	6	8	A	C	E
0	4345	4E54	4950	4544	4520	0000	0100	0020
1	0000	0000	0000	0000	0000	0000	23F0	0100
2	0000	0000	0000	0000	0000	0000	0000	0000
3	0000	0000	0000	0000	0000	0000	0000	0000
4	0000	0000	0000	0000	0000	0000	0000	0000
5	0000	0000	0000	0000	0000	0000	0000	0000
6	0000	0000	0000	0000	0000	0000	0000	0000
7	0000	0000	0000	0000	0000	0000	0000	0000
8	0000	0000	0000	0000	0000	0000	0000	0000
9	0000	0000	0000	0000	0000	0000	0000	0000
A	0000	0000	0000	0000	0000	0000	0000	0000
B	0000	0000	0000	0000	0000	0000	0000	0000
C	0000	0000	0000	0000	0000	0000	0000	0000
D	0000	0000	0000	0000	0000	0000	0000	0000
E	0000	0000	0000	0000	0000	0000	0000	0000
F	0000	0000	0000	0000	0000	0000	0000	0000

START SECTOR > 023
OFFSET (LENGTH) > 01F

Nearly everything we attempt in life needs some control or supervision. I am expected to do my job at work within the guidelines set up by Data General Corp. and the management down through the ranks. If this were not so, not one customer would be able to rely on our company. We must be consistent. I hope I can be as flexible as needed to accomplish the company's objectives. I sometimes need some direct commands to perform specific jobs, and at other times, the procedures to perform a task are already in memory. Guess what! Printers are like this.

Most printers on power-up are ready to do mundane printing in Draft Pica mode at 10 characters per inch and with a line spacing of 1/6" and is what you would expect a basic printer to know how to do on it's own. But we will never be happy with that so we ask for ELITE, CONDENSED, ITALIC, ORATOR, NLQ, CONDENSED, DOUBLE WIDTH, SUPERScript, SUBScript, BOLD, UNDERLINED, GRAPHICS, PROPORTIONAL, as well all kinds of form handling capabilities both forward and backward spacing of the forms in any imaginable increment.

The printer will need more information to do these things. The information is passed to the printer in the form of CONTROL CODES. These are special and must be sent to the printer but not be printed. Some of them cause the printer to do very strange things (feed paper, over-print, etc.) unless it is warned of the control character coming. The ESCape command is one that all printers recognize as the "command coming next" warning. This is represented by a "27" decimal or a "1B" in HEX. Every character that goes to the main logic board in the printer is examined first to see if it is an "ESC" character. If it is not then the printer will attempt to print it. If an "ESC" is recognized then the printer will be set to accept Control Codes. You can send several Control Codes to a printer in succession if they are legal for your printer. For example, on my Epson compatible, I can send a "27,120,49" to put it into Near Letter Quality mode. This is done by either a program or a direct keyboard command. Let's look at ways to do it.

I chose "NLQ" mode because it required three (more than two) elements to be sent to the printer. The ESCape (ASCII "27") an ASCII "120" and an ASCII "49". These can be sent using a TI BASIC/XBASIC function called "CHR\$" or by sending the character representations of these ASCII values. The ESCape must be sent as a Character String (CHR\$) "CHR\$(27)" in either case. Below are several ways to do the same job, all can be within a program (statements) or as you type it in (commands).

```
100 OPEN #1:"PIO" ( Opens the printer )
110 PRINT #1:CHR$(27);CHR$(120);CHR$(49) ( Sends "ESC,x,1" to the printer in a
110 PRINT #1:CHR$(27)&CHR$(120)&CHR$(49) variety of ways. The ";" appends
110 PRINT #1:CHR$(27);"x";"1" the succeeding characters to the ESC
110 PRINT #1:CHR$(27)&"x"&"1" character, as does the "&" which
110 PRINT #1:CHR$(27);"x"&"1" says, "ESC" and "x" and "1". As you
110 PRINT #1:CHR$(27);"x1" can see, if you directly send the
110 PRINT #1:CHR$(27)&"x1" character "x" it takes less space
than to have the computer translate
a CHR$(120) to a lower case "x".)
```

Results in printer going into NLQ mode.

Controlling the printer is quite different in TI-WRITER. We can't get into it here but it should suffice to say that it is all explained in the manual.

I've just covered the NLQ mode, but you can take this form and use it to do a RESET on your printer without having to shut it off (to clear any previous mode selected). On the EPSON compatibles, this can usually be done as indicated:

```
100 OPEN #1:"PIO" ( Opens the printer) 110 PRINT #1:CHR$(27)&"@ " ( Init.)
```

CONTINUED ON PAGE 7

Condensed mode is on most printers and one of the few that doesn't require an ESC to be sent first. Send the CHR\$(15) by itself. Hey! What can I say?

```
100 OPEN #1:"PIO" ( Opens the Printer) 110 PRINT #1:CHR$(15) ( Condensed )
```

If your printer supports ELITE (12 characters per inch) then ESC,"M" is it.

```
110 PRINT #1:CHR$(27)&"M" ( Sets up printer for ELITE ). ( EPSON compatible)
```

There are many others that you may want to use, but they must be referenced in the manual that came with your printer. I'd recommend that you look at that manual before next month after reading this article and experiment. It would be a good idea to write a little program like the one below and "RUN" it, "BREAK" it and change line 120 to test the CONTROL CODES you insert. You may want to do a list of the program also each time so that it isn't lost.

```
100 OPEN #1:"PIO" 120 PRINT #1:CHR$(27)&"&" "&" "&" "  
110 PRINT #1:CHR$(27)&"@ (Resets printer) 130 PRINT #1:"ABCDEFGHIJKLMN OPQR"
```

I have written my own printer set-up program to run before I load TI-WRITER so that if I don't have the time to set the article up for the FORMATTER, it is at least set up for ITALICS, NLQ, and perhaps ELITE modes. Yes you can send the CONTROL CODES for each of these to the printer in succession, and it will do all three functions. Also to keep the size of the lines shorter, VARIABLES can be given the Control Code values. ESCape "CHR\$(27)" could be E\$. See both examples:

```
100 OPEN #1:"PIO" 120 PRINT #1:E$&"4"&E$&"x1"&E$&"M"  
110 E$=CHR$(27) 130 PRINT #1:"This prints in Near  
Letter Quality, Italics, Elite"
```

Try these out and look at your manual and I feel that you will be amazed at what you can do with the ESCape command can do for you.

There are some CONTROL CODES that will affect only the line that's printing under it's command. The printer will drop the command on the next line. DOUBLE-WIDTH is one of the commands that has both a "Valid until terminated" mode and a "Valid for only the present line" mode. Useful both ways, you must be careful to use the appropriate one for your needs.

If you printer manual does not indicate the symbols to be sent to the printer you can take the ASCII values in the printer manual and cross reference them to the characters using the USER'S REFERENCE GUIDE pages III-1, III-2. This is one of the two manuals that came with your TI Computer. The "120" will correspond to a lowercase "x", and the "49" will translate to a "1". The "27" must be entered either as a CHR\$(27) or as a Variable as described earlier.

If you are doing a lot of printing with TI-WRITER, it would be advantageous for you to learn to use the Transliterate Commands to control your printer, so you can exercise exact control over your printer.

If you are writing programs, then this article may be of assistance. I think most would like to make the new high tech. printers do things that you couldn't do with your old typewriter. It is a great satisfaction to ELONGATE the header, to DOUBLE-STRIKE the key words, To UNDERLINE certain words, to PROPORTION the text, to CONDENSE the print to 132 columns, to ITALICIZE a word, and NLQ dresses up a letter. You can learn to do this, so why not try? If you have any ideas or some neat printer programs, I'd like to see them.

By the way, most printer manuals are written for the IBM PC. It will take a little work to weed it out, but maybe this article will simplify that. M.L.

NEXT MEETING

MONDAY, JANUARY 8

6:30 PM --- WEST MUSIC COMPANY

DEMONSTRATION OF NEW TIPS FIX!

OTHER SURPRISES IN STORE!

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