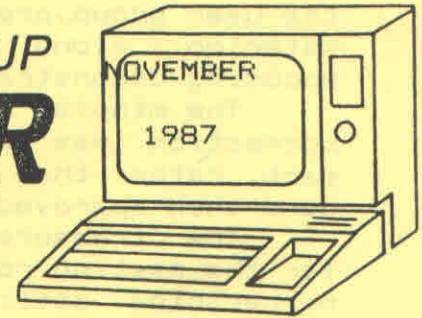


CEDAR VALLEY 99'ER USER GROUP NEWSLETTER



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NEWSLETTER TOPICS

1. Future Meeting Dates
2. Next Meeting Notes
3. Minutes From November Meeting
4. Jim Reiss Now a Celebrity
5. Call Files
6. From the Mailbox
7. Disks by the Pound

(If you had sent me an article, then this table of contents would be much bigger!)

FUTURE MEETING DATES

Please mark the following dates on your calendar for future meetings:
DECEMBER 8, JANUARY 11, FEBRUARY 8.

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

Tuesday, December 8, 7:00 PM at the JA building, 330 Collins Rd. NE. Results of the renewal campaign will be announced, and Ed Edwards will have another surprise program for us. John Johnson will continue his class on TI assembly language. Come for some holiday cheer!

****MINUTES FROM THE NOVEMBER MEETING****

The Cedar Valley 99er User Group meeting was called to order at 7:02 PM on November 10, 1987 by President Jerry Canady. There were 17 members of the user group present. Also present were Daryl and Anne Diehn from Waterloo, along with a Geneve 9640 computer. All eyes were on their upcoming demonstration, so Jerry made the meeting short.

The minutes of the October meeting were read by the secretary. One correction was noted; the price of the DSDD disks has been set at 40 cents each, rather than the price suggested at the October meeting. The minutes were then approved.

The treasurer read the year end treasury report. An outstanding bill for the meeting room rental was waiting for the expected influx of annual memberships anticipated at this meeting. This method was used to preserve our savings account funds. The report was approved as read.

OLD BUSINESS--The Commodore Fair is next Spring. The discussion anticipated that we would set up a demo/display as requested. Tim Mussman of the Commodore club will be in touch with the U.G. at a later date.

SWAP MEET--As usual, the president allowed everyone who had items for trade or sale to read their list.

This concluded the formal business meeting.

DEMONSTRATION--Daryl and Anne Diehn of Diehn's True Value Hardware in Waterloo demonstrated the Myarc 9640, which is available at their store. Many thanks for a great job! They covered almost all features of the computer, including the DOS, extra memory, MYWORD word processor, MYPAIN artist package with a mouse, the 80 column screen display, multiple processor speeds, loading cartridges to disk, and the extra commands available with Myarc's Extended Basic II.

With a short time left after such a complete demonstration, the swap meet continued and memberships were renewed. By the end of the evening, we had at least 21 members continuing, with a few mailings yet to be received.

Submitted by Bill Faeth, Secretary

* * *JIM REISS NOW A LOCAL CELEBRITY* * *

Our newsletter should not ignore the occurrence of some national publicity for one of our own members. Jim Reiss, from Cornell College, is featured in the TI Forum in the November, 1987 issue of Computer Shopper, page 188. It seems that Jim has some hidden talents that we have not yet discovered. Jim has written some assembly routines that improve the TECHIE bulletin board program. Congratulations, Jim!!

* * *WHY WON'T THIS PROGRAM LOAD?* * *

The next article is reprinted from several other user group newsletters; I think I found it in the West Penn or Decatur newsletter. It answers the questions that have been coming up more frequently lately about loading and running various programs in our library. Since the article was a help to me, I thought it might help some of you, also.

CALL FILES

by Dallas Phillips

from: TIdbits

KENTUCKIANA



In this month's column I will attempt to tackle a universal problem! How's that for putting on the old seven league boots? A universal problem. Let's call this discussion LOAD IT AND RUN IT (USUALLY)

Research and information for this topic came from articles by Don MacClellan, (Lexington, KY - Bluegrass 99 Computer Society, Inc.) [Hey Don, I got it right this time, my average is improving.], Darren Leonard, (Pittsburg PA - UG), my own discoveries from the school of hard knocks and part of a fine BES article that had been condensed from an article that had appeared in BITS, BYTES & PIXELS (Sorry, I don't know who the author was or which BES it was downloaded from but the part I got was very good.) Surely all of those bright people can set this little problem straight. (It says right here.)

Actually, a great number of us have asked several questions, concerning how to load files and programs so this article will attempt to answer some of them.

The 5 broad categories of files are:

PROGRAM
INTERNAL/FIXED
DISPLAY/FIXED
INTERNAL/VARIABLE
DISPLAY/VARIABLE

The subject of file types and the methods of creating them is covered in the manual that comes with the TI disk controller so if, like me, you blundered through it without understanding what it meant or if you happen to be a try-it -first -and only-read-the -instructions-when -all -else- has -failed person, "RAT NOOW" is a very good time to try to figure out what they mean, so we'll not redo what they have already done.

The subject is reasonably well covered in a 16 page section of the manual and I will pass on Don's instructions for studying them:

First, scan over the pages, rapidly to get the gist of the topic.

Second, read it again, more slowly, to absorb the general description of file handling and processing.

Third, read it again, with special care, to note the form of the input statement. Notice the default values if they are not specified.

Fourth, read it again, this time following the examples that are given.

The final time through, read it, including a study of the sample programs, giving much attention to what the author is attempting to do with each program segment.

I know I have just advised you to read and study 16 pages four times. I know that is 64 pages but if you absorb it as slowly as I do you will probably need to look it over a few more times, when you realize you didn't retain it all.

Disk files that can be loaded directly into the computer are:

PROGRAM
INT/VAR 254
DIS/VAR 163
DIS/VAR 80
DIS/FLX 80

Any other file format is a data file and it cannot be loaded directly but must be loaded from within a program that is already in the computer. Examples are:

INT/FLX108
INT/VAR 128
DIS/VAR 64

PROGRAM files are the most common. The majority represent TI BASIC or EXTENDED BASIC programs. Many TI BASIC programs load and run in EXTENDED BASIC but not the other way around. If, after loading the program in EXTENDED BASIC you get a BAD VALUE IN nnn error when you attempt to RUN it, reload it in TI BASIC. The BAD VALUE error is usually caused by the use of chars above 143, which cannot be used in EXTENDED BASIC.

If you attempt to load an EXTENDED BASIC program in TI BASIC it will seem to load ok but when you RUN it you will often get a FOR-NEXT ERROR IN nnn message. Attempting to list line nnn shows a screen of garbage. You can run some but not all

* * * FOR SALE / WANTED * * *

FOR SALE: TI computer, joysticks, cables, speech synthesizer, and Extended Basic. Asking \$75 for all. Gary Kristiansen, 393-2558.

FOR SALE: The following items are available from Dave Reinhart, 377-0661, 169 Chatham Rd NE, Cedar Rapids 52402. Prices are negotiable.

Speech synthesizer	\$25	Disk storage case	\$ 2
CorComp RS-232/parallel	70	Doom of Modular	5
Old Dark Caves	10	Doom char. generator	5
Cassette cable (single)	3	Super Sketch	20
Terminal Emulator II	7	Return to Pirates Isle	3
TI Invaders	2	Star Trek	7
Adventure/Pirates Adven.	3	Savage Island I II	3
Super Demon Attack	2	Teach Yourself XB (Cs)	2
Blank disks 45 @ \$20 or .50		16 utility pgm disks	16
4 adventure disks	4	8 game disks	8

* * * SPECIAL ANNOUNCEMENT FROM TI * * *

Our group received a (form) letter from TI asking that we make the following announcement: Texas Instruments cannot sell home computer products, either new or used. Rumors have been circulating that TI still is selling product. TI refers us to either Triton or Tenex.

Repair of TI home computer products will still be handled at published repair rates through TI, 2305 North University Ave., Lubbock, TX 79408. Contact the service people at 806-747-1882.

* * * SOFTWARE LIBRARY CATALOG NOW ISSUED * * *

A note about the new software list: If you didn't pick up the new list at the July meeting, please try to get it at the August 10 meeting. If you live too far out of town to make the meeting, we will mail your copy. The list is divided into seven sections: Games, Music, Educational, Utilities and Graphics, Home Ideas, Business and Professional, Shareware. Remember, the programs are now free, but you must supply the tape or disk. The club has a supply of disks that will cost \$1.00 when supplied with a software order. When ordering programs, please include the disk number and program name and/or title. The letter under the heading called "RATE" is the program rating which is subject to the reviewer's bias. E is excellent, G is good, F is fair, P is poor, and a blank space for not rated. I think the rest of the list is self-explanatory. If you have any questions or comments or would like to order some programs, contact Bruce Winter or come to the monthly meeting.

Many thanks to Ann Dhein and her husband for coming to the Summerfest '87 on August 2. They demonstrated the current version of the Myarc 9640 computer to those of us still remaining at the show. Ann promised that she will come back to Cedar Rapids for a group meeting when Myarc has the operating system more complete. We look forward to a thorough demonstration! Thanks, Dheins!

D/V 254 files are also used as files for special programs. If you find short INTERNAL/VARIABLE 254 files with names ending with /CH or /CR, as (BLOCK/CH, COKE/GR, etc.) they are CSGD files.

DIS/VAR 163 files represent an EXTENDED BASIC subroutine in MERGE format. They can be merged into a program that is already in memory. To load these files, type MERGE DSKn.FILENAME and enter. You must do this to load these programs even if there is nothing in memory. You cannot OLD merge files. To save a program in MERGE format, type SAVE DSKn.FILENAME, MERGE. MERGE cannot be used in TI BASIC. Some Data Base programs use D/V 163 files for data storage. If you run into one of these disks it is easily recognizable by its name and format.

DIS/VAR 80 files are text files which can be read from the screen, edited, and sent to a printer via TI-WRITER either by using the module or an EXTENDED BASIC loader, loader, such as FUNLWRITER. The EDITOR/ASSEMBLER will also read, edit, and print these files from E/A option #1, "TO EDIT". DM 1000. Versions 2.0 and later, allow you to read these files. Many of the more sophisticated programs have documentation files on the program disk. These almost always have the letters DOC in the filename. For example, HARDDOC is probably the file of instructions for operating a program called HARD, HARDWARE, HARDWAY or something of the kind. Don MacClellan published the following 8 line Extended BASIC program which allows you to read D/V 80 files.

```
10 OPEN #1:"DSK1.DATFILE"  
20 OPEN #2:"PIO"  
30 IF EOF(1) THEN 70  
40 LINPUT #1:X$  
50 PRINT #2:X$  
60 GOTO 30  
70 CLOSE #1  
80 END
```

DIS/FIX 80 files are assembly language programs which must be loaded through the EDITOR/ASSEMBLER, the MINI MEMORY modules or by the use of a special loader program. When loading in the normal way, press #2 to load E/A or #3 to load MM then press the number that is indicated by the prompt, "LOAD AND RUN". When the FILENAME? prompt appears, type DSKn.FILENAME and enter. The DIS/FIX 80 file will load and, usually, run. If it doesn't start running, at the next "FILENAME" prompt press enter. When the prompt, "PROGRAM NAME", appears, type the access code to get the program going, then press enter. The correct startup name can be found in the program documentation, which may be on the disk as a DIS/VAR 80 file. If it is not, the problem may be that you don't know the access code. If that is the case, it will sometimes be the same as the filename. If that will not work you might try START, RUN, GO, RUN LOAD or, if it is a game, PLAY, etc. If none of these get it going you will have to try to locate it with a program such as DISKO. If 2 or 3 of these programs appear together they may all be the same program. If so, load all of them before entering the access code. This 3 liner will load a D/V 80 file if you know the program name:

```
10 CALL INIT  
20 CALL LOAD("DSKn.ANYFILE")  
21 REM USE THE PROPER FILENAME ABOVE.  
30 CALL LINK("START")
```

FINAL NOTE: Any format, not listed above, such as DIS/FIX 28, 64 or 254, INT/FIX 32, 63, 84, 127 will be a file that works in conjunction with another program and, in most cases, would be of no value without the parent program, even if you do get it loaded. Any of the file types, listed in this article, may also be used as data files to be loaded only from other programs. For example, if a file is an INT/VAR 254 and it is not longer than 45 sectors it cannot be loaded directly by EXTENDED BASIC. The computer recognizes that the data in the file is not a long EXTENDED BASIC program.

I fully realize that this program is not the final word on the subject so, if you have anything to add, write boldly or speak loudly and, pretty soon, we'll all know but, for now, my knowledge of the subject is exhausted but I'll be back next month so, 'Til then---



Copies of the articles/mailings summarized below may be obtained from any of the officers--but you have to ask!

Assembly source code for a disk cataloger; technical specs for the GRAND RAM card; a review of the Seattle TI Faire; hardware modifications for the Foundation ram disk card; another memory map for the TI; adding 8K memory to your E/A module; a schematic for an IEEE-488 interface card for the TI. (Forest Lane User Group, October 1987)

A review of the KBM/99 interface for an IBM/XT keyboard, from MLsystems; a review of Tom Freeman's UTILITY PROGRAMS. (Brandon TI U. G., October 1987)

A type-in program to display an animated "Ugly Duckling" with music; a tutorial on loops in c99; Tom Freeman's Checksum program; sorting numbers in Forth; a review/comparison of database programs; a review of Font Writer II; a review of the Star NP-10 printer; a review of Mechatronics 80 Column Card. (MICROpendium, October 1987)

A keyboard overlay for FAST TERM; reviews of the Sept. 12 computer expo in Harrisburg, PA; the beginnings of a make-your-own home security system; a type-in disk catalog program that makes room for comments. (Lehigh 99'ers, September and October, 1987)

Tigercub Software has reduced the prices on the many programs contained in his catalog, now \$1.00 each; other software still available, but Jim Peterson can no longer afford to advertise; worth your support.

Review of "Designer Labels"; a review of Font Writer II; transferring PRBASE files to a clone (IBM compatible PC); using the text Editor as a Formatter; printing multiple copies of pictures; TI Writer tips. (Cleveland Area 99ers, November 1987)

Multiplan tutorial; copying a cartridge to disk. (Byte-Line, Decatur 99ers, November 1987)

Setting up automatic log-on from Fast Term; tips for beginners; using Clyde Colledge's High-speed Cassette Loader; a review of The Label Machine. (Pittsburgh User Group, November 1987)

The latest Tenex catalog (Fall 1987) has been mailed; if you don't get one, please ask to see the club's copy.

A review of CSGD III; a review of XBASHER. (Aloha 99ers, November 1987)

A key-in program to calculate the time of sunrise, sunset, twilight; TI Writer tutorials for the formatter and the editor; an introduction to printers. (Cin-Day User Group, November 1987)

News of 3.5" disk drives that will work with the TI; Getting the Most from Your Cassette System #15, #16; TI Writer tutorial; a circuit mod to slow down the TI; first article of a Pascal series; a review of the Imagewise video digitizer(kit or preassembled). (West Penn 99'ers, October, November 1987)

A complete catalog from Blackship Computer Supply, disks, drives, PC and AT clones, modems, printers. Nothing TI specific.

DISKS BY THE POUND, or .00000000000156 cents per bit

I recently purchased 4 pounds of surplus disks from a disk broker in Creston, Iowa. At \$7 per pound, plus shipping and tax, the total was \$32.12. I received a total of 142 disks, not inserted in any sleeves. Also, there were 163 sleeves in the box. The ad stated they would all be double sided and double density (DSDD). This article is to provide guidance of what to expect from such a purchase.

I had to decide how to grade and format these, so I started with a thorough visual inspection.

The inspection started with the jacket. Items that can affect a disks' reliability are: nicks, cuts, creases, dimples, etc. The most common fault appears to be bowing of the jacket between the drive hub hole and the head access slot. When looking at the disk from the side, you should not be able to get a dime between the media and jacket in this area. Don't actually try to insert a dime, just judge the distance. Also check that all holes in the jacket are cut cleanly without any burrs or rough edges.

The next step was to inspect the media. I slowly turned each disk by hand while holding the jacket in the other. This requires a technique to keep the media from getting off center and binding, so some practice is required. Things to look for when spinning the media are:

1. Will it move at all? One of mine didn't because the media was off center when the jacket was sealed, and part of the media got folded right into the crease along the side of the jacket. If it doesn't move, discard it.
2. Look for defects on the media. These can appear as scratches, circular marks, creases, spots, cross hatch patterns from the fiber pad lining of the jacket. While you are at it, take notice of how many holes are going by the index hole. This is the smallest opening in the jacket, and is near the center hub hole. You should have only one hole per revolution of the disk. If you have a bunch, either 11 or 17, you have a hard sectored disk. Put it aside, or give it to one of your friends that has a H8. These are unusable for the TI. I didn't get any of these, but at this price, I wouldn't be surprised if a few crept in.
3. Carefully examine the disk while looking at it from the side. Any excessive bends, bowing, or warps should be discarded.

The result of my inspection: 45 "perfect" disks, 46 slightly warped, 1 nicked, 1 cut, 1 creased, 5 with dimples, one "crud" spot on the jacket. For media defects, I found 10 scratched, 6 with circular marks, 1 creased, 11 splotches, 19 scratched, 13 with a cross hatch pattern. I'm not sure if this pattern is the result of excessive pressure when the disk is assembled, or what. As it turned out, this pattern didn't seem to have much affect on the performance. These numbers don't add up to the total because several disks had more than one observable defect.

I had to discard a total of 5 disks based upon this inspection.

Now the fun starts, to format 137 disks. This took about a week of sporadic formatting. I used an IBM clone. The IBM will "spare" or mark as bad a whole side and track if it finds even one sector bad. This means the results of the formatting will be a bit pessimistic, because the TI spares bad sectors on a sector by sector basis.

Results of formatting: I kept the "perfect" disks and slightly marred disks separate for comparison purposes. Out of the 45 physically perfect ones, 40 formatted completely, with no problems. 4 had only 10 of 20 bad sectors, and one had over 180 bad sectors! This last one was obviously a defective media, so I set it aside for further tests.

Of the 93 slightly imperfect disks, 77 formatted perfectly the first time, 15 had a total of 320 bad sectors, and one had a defect on track 0 and could not be formatted. This is because track 0 is where the system data and directory information is stored, and if IBM can't format track 0, it quits immediately and says the disk is unusable for the IBM.

Conclusions: These disks were a good deal if you want to take the time to grade and select them. A careful inspection must be made to prevent damage to your drives. 117 disks formatted perfectly, 19 had some bad sectors, 5 were total junk, and one I can't really tell how bad it is due to the track 0 problem. I might as well call this one junk also, because I can't proceed with it.

Observations: The disks with bad sectors tend to have them near the upper track numbers, where the bit density is greatest. Track 0 is closer to the outer edge of the media, and track 39 is near the inner edge. This means track 39 has its data packed closer together, and a marginal magnetic coating will fail in this area. Also, the large number of disks with observed media defects formatted perfectly, meaning marks, scratches, splotches, and spots seem to have little affect upon performance. The one disk that had 180 bad sectors looked just like all the rest, no difference could be discerned. The disks with bowed jackets went in and out of the drive OK, and none hung or snagged on the drive hub, as I would have gussed. All in all, I was pleased with the performance of this group.

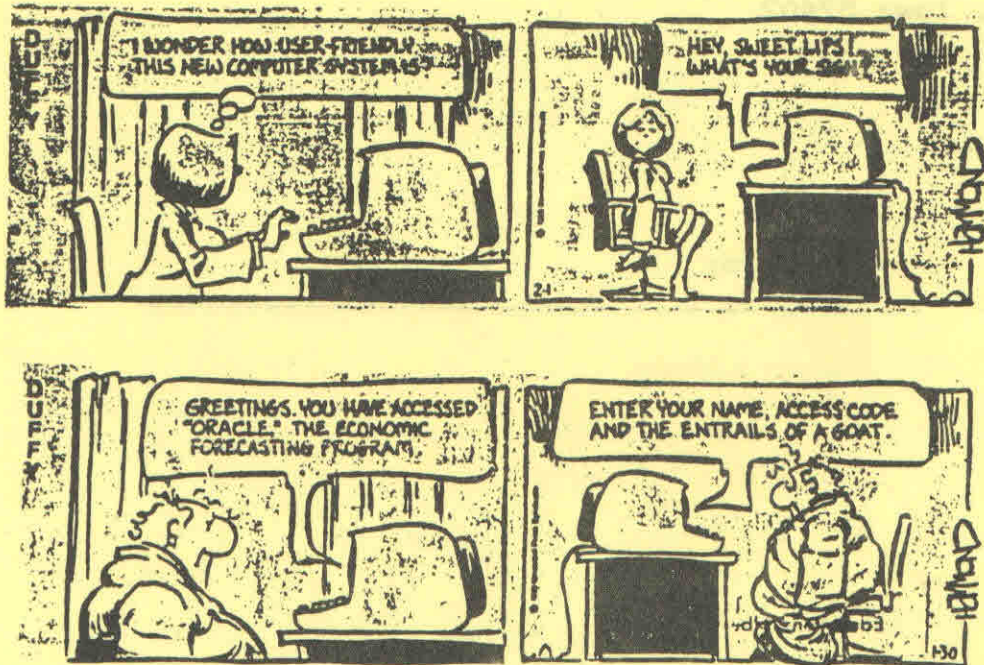
Post mortem on the disk with 180 bad sectors: This puzzling disk was erased with a strong bulk eraser, and reformatted. The same result: 180 bad sectors. However, after 20 or 30 attempts to format it, it now formats perfectly! I suspect that the burnishing was not complete. This is the process to smooth out the magnetic media in the area where the heads touch. This reduces head wear. I think I have removed any coating that may have been built up on this disk. I carefully inspected by disk drive head after this, and can see no noticeable wear or contamination. I still don't trust this one, but it has been in steady use for over a week with no hiccups. - Gary D. Bishop

CRAB CANON +++++*****	9 PRINT :::	22 READ A(D,1)	35 DATA 123,123,123,123,1500 0,15000,196,196,196,196,185, 185,185,185,175,175
by: J.S.Bach	10 PRINT TAB(5);"Program by Jim Beck"	23 A(145-D,2)=A(D,1)	
Programmed by: Jim Beck	11 PRINT :::::::::::	24 NEXT D	36 DATA 175,175,165,165,165, 165,156,156,156,156,147,147, 139,139,131,131
1 CALL CLEAR	12 FOR D=1 TO 13	25 FOR DE=1 TO 2	37 DATA 123,123,98,98,131,13 1,175,175,156,156,156,156,14 7,147,147,147
2 CALL SCREEN(16)	13 CALL COLOR(D,2,16)	26 FOR D=1 TO 144	38 DATA 131,131,131,131,156, 156,156,156,196,175,196,262, 196,156,147,156,175,196,220, 247,262,156,175,196
3 FOR D=1 TO 14	14 NEXT D	27 X=(D/10)+1	39 DATA 208,147,156,175,196, 175,156,147,156,175,196,208, 233,208,196,175,196
4 CALL COLOR(D,16,16)	15 CALL COLOR(14,5,5)	28 CALL COLOR(14,X,X)	40 DATA 208,233,262,277,233, 208,196,220,247,262,294,311, 262,247,220,247,262,294,311, 349,294,196,294,262,294
5 NEXT D	16 CALL HCHAR(1,1,136,32)	29 CALL SOUND(-200,A(D,1)*2, 0,A(D,2)*2,0)	
6 PRINT TAB(9);"Crab Canon"	17 CALL HCHAR(24,1,136,32)	30 NEXT D	
7 PRINT :::	18 CALL VCHAR(2,1,136,22)	31 NEXT DE	
8 PRINT TAB(9);"by J.S.Bach"	19 CALL VCHAR(2,32,136,22)	32 CALL CLEAR	
	20 DIM A(144,2)	33 END	
	21 FOR D=1 TO 144	34 DATA 131,131,131,131,156, 156,156,156,196,196,196,196, 208,208,208,208	

NOTES TO CRAB CANON

by: Jim Beck

An interesting feature of Bach's Crab Canon is that the harmony is exactly the same as the melody. But, it is played backwards! Listen to the background notes to here it. Saved a lot of programming; only half as many statements required! See if you can do as well as Bach.



NEXT MEETING

TUESDAY, DECEMBER 8

7:00 PM --- JA BUILDING

ASSEMBLY LANGUAGE CLASS AND

WHO KNOWS WHAT ELSE??!!

HAPPY HOLIDAYS!

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