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CHATTANOOGA TI99/4A USERS GROUP  
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If you would like more information about the products or my personal preference of mail order houses, ask me. I've ordered from all of the above and a couple of others. (Kerry)

\*LIBRARY UPDATE\*

We now have several new FREEWARE additions to our program library thanks to THE MINES and Danny Michael of Florence, Al. A list and description of some of the programs follow:

- 1) DUMPKB - AN XB screen dump for an EPSON compatible printer. requires XB,32K,Prnt. A 9900 asm. language program that will center on printer,print double size, and rotate by 90 deg.

The pages of this month's newsletter contain some announcements of price reductions in hardware and software, a review of Miller Graphic's ADVANCED DIAGNOSTICS, and a contribution from the local MINES OF MORIA TIBBS Sysop, Robert Stone, Jr.

\*ITEMS OF INTEREST\*

For those of you who are not on TRITON's mailing list, their new catalog features price reductions on TI hardware and software. If you have been waiting to expand the 99/4A, but haven't purchased a PEB because "it is too expensive" good news follows. TRITON is offering PEB, 1 SSSD disk drive, and the TI SSSD controller and 32K RAM cards for \$299 (no this is not a misprint). This is a far cry from the \$500 to \$1000 that some of us paid for this equipment.

Another interesting price reduction is the cost of the graphics tablet, SUPER SKETCH. It is being offered by INFORMATION ASSOCIATES for \$39 and by TRITON for \$49. It can be used by anyone owning a console and tape recorder since it requires no special hardware. If you have special hardware other software packages can be purchased to dump the graphics to a printer.

Similar reductions also exist in the software market:

- TI-WRITER - \$69 (UNISOURCE)
- TI-MULTIPLAN - \$39
- TI-EXTENDED BASIC
  - \$49 (TRITON)
  - \$45 (INFORMATION ASC)

A listing of the addresses and tele phone numbers follows.

2) NEATLIST - An AL routine that provides a cross reference of variables in an XB program (At authors request, there will be no charge for this software. There will be a charge for the disk if one is not provided).

3) COM99 - An AL terminal program with a 16K RAM buffer for down loads.

4) XBFORTH - An AL loader that loads and runs FORTH from XB.

5) TK-WRITER - This routine will load and run the TI-WRITER editor & formatter from XB.

Contact our librarian, Bill Thibodeaux, if you wish to get a copy of any software in our library. (Charges: \$1 per program or an exchange of 2 for 1 - Media: \$2 disk, .50 cass)

**\*REVIEW OF ADVANCED DIAGNOSTICS\***

ADVANCED DIAGNOSTICS is an assembly language utility that performs numerous tasks from single line immediate commands or program command files. The command files are created with an editor or word processor that saves files in DIS/VAR 80 format. A command file contains any commands or keystrokes recognized by the software. The commands reconized are BEEP, CHANGE COLORS, CHECK DISK, CHECK MEMORY, CONVERT NUMBER, COPY READ, COPY WRITE, DISK DIRECTORY, EDIT SECTOR, FORMAT DISK, FIND FILE, HEAD STEP, MOTOR SPEED, PAUSE, READ TRACK, SEEK TRACK, WRITE TRACK, SELECT DRIVE, USE DSR, AND WRITE SECTOR.

Most of these commands are self-explanatory, but a few require a brief description. The CHECK MEMORY command performs a refresh and bit shift on scratch pad, VDP, memory expansion, and mini-memory RAM. COPY READ and COPY WRITE are complimentary commands that will read and write 1 to 36 sectors from the selected drive. The EDIT SECTOR command provides full screen editing

of any sector on the disk. FORMAT DISK will format the selected disk in the density selected. HEAD STEP sets the head step time from 3ms to 30ms for all disk operations. MOTOR SPEED uses the idex pulses to determine the drive speed. Read Track reads and displays every sector, gap, and address byte of the track. WRITE TRACK will format a single track on the disk in the specified density. That about covers the command options. An impressive piece of software for \$19.95. It is available from MILLERS GRAPHICS 1475 W. Cypress Avenue, San Dimas, CA. 91773.

**\*THE WORLD OF TELECOMMUNICATIONS\***

By: Robert Stone

If you are a TI user, and have yet of take advantage of your computer's ability to "talk" to the outside world, then you have really been missing a lot. Many local users are not aware that we run a Bulletin Board Service dedicated to the TI computer. My name is Robert Stone, and I am the System Operator of "The Mines Of Moria", a local board running on a TI-99/4A. I run the TIBBS software, written by Ralph Fowler of Kennesaw, Georgia. Our system supports all TE-2 functions, and includes downloadable programs usable only on the TI machine. Since I use a MYARC DS/DD disk controller, there are sometimes as many as 35 programs available for the taking. Just think...For a small investment in a modem, you can be online with TI users all over the country. This is probably the best way to find answers to technical problems or to trade software with other users. So, if you are bored with your computer, and want to find something new to explore?? Then give the MINES a call at:

(615) 267-1721

\*HARDWARE REVIEW\*

MYARC Double Density Drive  
Controller

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By: Robert Stone

Since the status of CORCOMP may be questionable in the near future, many TI users may be considering purchasing the new MYARC drive controller card. I recieved mine a few weeks ago, and am still basking in the glory of nearly unlimited disk space. Only two problems have arisen with the use of this card. First, there is a slight bug on one of the chips which causes certain sector copy utilities to not function properly. Second, the disk based manager system has not been shipped so I have yet to be able to take advantage of the resident manager commands. This is only a minor irritation since the card is shipped with a Disk Manager 2 module which works quite well. I hope to be able to review the disk based manager in the next newsletter. The hardware bug is another problem. MYARC will be providing a replacement chip, but it has yet to be determined how these chips will be distributed. I have found that while some user written copiers do not work, commercial copy programs such as "Copy-Cat"(tm) work very well. The drive card also has DIP switches that allow you to take advantage of the faster 6ms step times available on some of the newer drives. While this feature is not as versatile as CORCOMP's, it has substantially quieted the operation of my two TEAC drives. In all other respects, I have found the card to be an excellent replacement for the TI card, and highly recommend it.

GET OUT OF THE CLOSET!!!  
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By: Robert Stone

Do you have a cousin, uncle, aunt or maybe just a friend who has a TI-99/4A stashed away somewhere in the corner of a closet?? Let's encourage people who have TI equipment mothballed, to make this hardware available for the sale through their local user group. As the supply of consoles and cartridges begins to dry up, new sources will have to be found. I am sure there are a lot of KBASIC modules just sittting around gathering dust. Let's get this hardware into the hands of serious users, and maybe put a few dollars into the pockets of those who have downgraded to other computers or maybe just lost interest.

\*\*\*DUES\*\*\*  
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Check the "\$" on your mailing label. If you have three, this is your last newsletter unless you pay your dues. Dues are paid annually and are \$12. New members pay an additional \$5 initiation fee.

Mail dues to:

Larry Bryant  
549 Leafwood Drive  
Hixson, TN 37343

Library requests:

Bill Thibodeaux  
6234 Pine Marr Drive  
Hixson, TN 37343

The following articles are reprinted courtesy of the CIN-DAY USER GROUP.

Your Roving Editor,

Kerry Roach

## Fixing Blown Disks The Easier Way: by Donald M. Thomson III of M & T Utilityware

First, let me give you a little background on myself. I purchased my computer in June of 1983 with the hopes that I might learn something about computers. I have been working in the electronics field, with the United States Coast Guard, for ten years. Prior to June of 1983, I had never touched a computer keyboard. I saw the movie "WAR GAMES", on the big silver screen, and I was hooked. Since then, I can not seem to be able to get enough of this little fifty dollar computer. Since I could not justify to my wife, bless her heart, that this little machine might someday do something productive, I started my own business writing and marketing software for this powerful computer. Well, I think I have convinced her that my computer equipment spending sprees just might be paying off. In the past six months since I started the company, M & T Utilityware, I have paid for the computer plus quite an expansion system. I have a Peripheral Expansion System with only three slots left, four disk drives, all Double Sided/Double Density, with alot more ideas to expand further into the software end of things. I have also decided to branch into the world of the "Personal Computers". I have just purchased a SANYO MBC-550 computer and hope to take delivery in the near future. Well, enough rambling about me, permit me to begin the article. I recently received a copy of a review about "DISK FIXER", which is manufactured by NAVARONE INDUSTRIES, concerning the repairing of blown disks. The article appeared in the December 1984 issue of the "National Ninty-Niner", published by the 99er's Association, and was written by Miraj N. Shah and Mike Ballman. I would like to honestly say that the article was well written and the authors seem very knowledgeable about the way in which the Texas Instruments Disk Controller formats a disk. I hope this article will prove that there is an easier way, by using a more friendly program, to try and recover lost data from one of those illusive disks. One of the programs that I have written and market is called "DISK + AID". "DISK + AID" is more than just "another" single sectoring program. I wrote this program mainly with the novice computer user in mind. I have tried to make it as "user friendly" as possible, with most of the documentation appearing on the screen. The program and manual are dedicated to just one thing, making the recovery of lost data easier and faster. This is not a program that is a "jack of all trades" and a "master of none". The reason I wrote the program was that I wanted a true "user friendly" program that was powerful enough to recover lost data. The manual itself has a four page section that is dedicated to nothing but recovering lost data. First, if you come across a disk the gives you that famous message "DISK NOT INITIALIZED", don't be alarmed! I have found that about ninty-five percent of the disk I get, with that problem, can be repaired in about three minutes using "DISK + AID". I have also found, through alot of experimenting, that there is a code in sector one that the DISK MANAGER cartridge checks, to determine if the disk is initialized. This code is simply the letters "DSK". This is all that the DISK MANAGER cartridge seems to check. To find out if this is the problem on your disk, load in "DISK + AID". When you get to the command screen that displays all of the menu choices, simply press "1", "2", "3" or "4" depending on which drive your disk is in. Now press "R" and sector zero will be read in and all 256 bytes will be displayed, in HEX, on the screen. On the left side of the screen you will find the sector addresses. For ease of use in finding the initialization code, press "T" to give you an ASCII display. Now look for the code "DSK" starting at address >0D. If the code is not there, press "A" to go into the sector "ALTER" mode. Position the cursor at >0D and simply type in "D" "S" "K" and press "ENTER". To write the sector back to the disk, press "FCTN" and "W". This two key stroke command was used to reduce the chance of accidental write operations to disk. After you have written the revised sector zero out to the disk, press "FCTN" and "P" so you will get an idea of what the DISK MANAGER will show you when you do a catalog. This simple process turns all of the bits and bytes of sector zero into human readable form so you don't have to translate them yourself. You can even get a listing of exactly which sectors are being used and which ones are not. This function is called reading the BIT MAP. I will be covering disk layout in another article. If everything turns up in the right place when you do the MAP function, you are ready to go on to sector one to see if it is intact. Press "F" to advance the sector count by one and press "R" again to read in sector one. At this point, you should be getting some idea as to the user friendliness of "DISK + AID". You will want to view this sector in HEX, so press "T" again to go back to HEX. Sector one contains the DIRECTORY sector of every file on the disk. If you have a recent catalog of the disk, compare the number of directory sectors with the number of files on your catalog. They should match, but if not, don't panic. With "DISK + AID" you will be able to find the files without to much problem. If you have a printer and would like a hard copy of sector one, press "D" to do a screen dump. If sector one matches your catalog, your done and shouldn't have any more problems. However, if they don't match, continue reading. To find a directory sector of a file, you will want to use the SEARCH STRING function of "DISK + AID". "DISK + AID" has a very sophisticated search string routine, in that it will let you display each sector as it is searched or you can turn the display update off and search the disk much faster, with the Texas Instruments Disk Controller. It seems that the CorComp Disk Controller searches a bit slower because of the sector interlace pattern. I hope to have more on interlacing in the future. For now turn the display update off by pressing "U". You will see the little "^" after the sector number on the status line disappear. Now press "E" to enter the SEARCH ROUTINE. You will be prompted to enter the starting and ending sectors you want searched. If you have less then 25 files on the disk, select a search range starting at 0002 and ending at 0021. This is where the first set of file directories are placed on the disk. Now press "ENTER" and you will be prompted to enter either an ASCII or a HEX string. Select "A" since you are searching for file names. Now enter the actual file name you want to search for. Use the arrow keys to position the cursor for corrections. Once the file name has been input press "ENTER" and the program will start the search for you. If the string is found, it will be displayed regardless of the status of the screen update flag and since you are searching for an ASCII string, the sector will be displayed in ASCII regardless of what the screen toggle flag "T" is set to. When a file has been found make a note of what sector number it stopped at (status line). This sector number will have to be added to sector one to make it complete. If you are interested in finding out all of the characteristics of the file, press "FCTN" and "P" to map the directory. You will have displayed before you all of the information that comes up on DISK MANAGER plus alot more. One of the most important and powerful features of "DISK + AID" is the ability to show exactly where your file physically resides on the disk. This is know as the sector fragment table. Once you have found all of the file names, you are now ready to go in and update sector one. Reset the sector number to 0001 by using either the "F" and "B" keys or "N" to directly enter the sector number. Use "R" to read the sector in and get it displayed in HEX so you can go in and make the necessary changes. Remember that each directory sector takes two bytes in

nis table. Remember that any time you are using "DISK + AID" and wish to get a hard copy of a screen, simply press "D" for the screen dump. Now that you have all of the files on your disk entered in sector one, you are ready to plug in DISK MANAGER cartridge and do a non-selective backup. The DISK MANAGER cartridge has the unique feature of putting all of your files in alphabetical order for you, plus at the same time getting rid of any file fragmenting. After your non-selective backup is done, then you are done! The disk that was giving you problems should be completely intact. CONGRATULATIONS you have now recovered your blown disk. I hope that this article has given you a little more insight into the mysteries of the that item commonly termed the "floppy disk".

Navarone Industries Data Base Management: by Donald M. Thomson III of M & T Utilityware

In opening, I think that the Data Base Management cartridge by Navarone Industries is very powerful considering the limitations it faces in the TI-99/4A memory environment. Having a data base program for the TI-99/4A at all is a blessing. My original intentions for purchasing this data base program was to assist in the running of my business and maintain a mailing list. The entire data base is actually made up of four smaller dedicated programs that are executed from a plug in command module. Each of these smaller programs performs a different function in the overall operation. The first program you will most likely use is the "SETUP" program. I feel that this program is the best one of the four in ease of use and friendliness. It allows you to custom design your own data entry screens any way you want. It will even allow you to go in at a later time and make adjustments to your setup screen. However, I don't advise this because when you go to display your data on this screen at another time, the fields will not line up. It will allow you to designate up to six fields as "key" fields. At first I thought this would be a very powerful feature. However, I found out later that it can actually be a hindrance. If you establish a field as a "key" field, you will never be able to enter the same data in that field in different records. Let's suppose you establish a last name field as a "key" field. You will never be able to have two records with the same last name in this field. This is a little inconvenient if you have to search for someones name in a large data base file using some sort of a customer number, especially if that person doesn't know their customer number. This limits the record search power a bit. The "ENTRY" program is the next one you will probably use to enter data into your file. I feel that this program is pretty powerful at what it does. It will allow you to enter the information into the fields as you want. If you have entered data into a field and find out later down the screen that it is wrong, you can simply use the arrow keys to move the cursor back up and change it. This is much better than the usual prompt "ANY CHANGES?". Any time during use of the data entry program, you can search for a record by plugging a value into one of the key fields. If a record exists for that key it will be displayed. Having one program for data entry as well as record search is very handy to have. The next program is the "SORT" program. This is where I think Navarone really slipped on the quality. According to the manual, this program appears to be pretty powerful if you can figure out how to use it. I was getting prompts on the screen that were not mentioned in the manual. I didn't know how to answer them. The data entry is very inconvenient. If you are familiar with using either "DISK FIXER" or "SUPERDUPER", you know that the data entry is hard to get used to. There is no cursor to move around to make corrections. If you make a mistake on input and are used to using the arrow keys to back up and make a correction, you will end up entering the information all over again. The program does not except changes. You have to get it right the first time. Another problem with the "SORT" routine is, that you have to have at least as much disk space left as your file you want to sort. When the file is sorted, a new file is created that is exactly the same size as the original file. I know of a data base written in basic for the Radio Shack Color Computer that uses what are known as "sort indexes". With that particular program you can have up to eight different sort indexes on the disk with your file and each index only takes about three or four sectors. I contacted the folks at Navarone with this suggestion and their reply to me was that the data base was mainly targeted to people who owned a "hard disk" system. At that time they told me, there were about thirty-five hard disk owners. Using this program with a floppy disk system will limit your file sizes to about 175 records for Single Sided/Single Density, 358 records for Double Sided/Double Density and 715 for Double Sided/Double Density. I feel that that is not very many records when you consider the size of a mailing lists for some businesses. The last program I will be covering is the "REPORTS" program. Here is another place I think Navarone slipped again in quality. The first problem I ran into was, I couldn't enter my printer device name in because they did not allow for a device name length over fifteen characters. This is the first time I have ever used a program that will not accept longer output device names. My device name is RS232.BA=9600.DA=8. This will not fit into the allocated space. I again contacted Navarone on this point and they suggested that I change my printer device name or go to the parallel port. Well, first of all, I have about ninety-five Double Sided/Single Density disks full of software that I have defaulted to my device name. Second of all, if I go with the parallel port on the TI-99/4 Impact Printer, I loose my 2K byte print buffer. I can honestly say that neither suggestion appealed to me very much. I went ahead and changed it to see if it would be worthwhile to change the name for the possible powers of this program. I honestly found that it was not. The manual mentions that you can load your "SETUP" file into the report generator program and start getting printouts. I followed the manual to the letter. However, when I went to get my printout, I found that data was scattered all over the page and didn't line up with any of my fields. In fact, I had fields where data had been mixed from a couple of different fields. I went over and over again, following the manual and the same thing kept happening. The last thing I want to cover is the manual, or for the lack of a better phrase, the lack of a manual. As I mentioned before, I was getting prompts that are not mentioned in the manual, the inability of the manual to help me to get printouts, plus the large amounts of spelling errors and punctuation errors. Navarone assured me they were developing a new manual. I have had the program for about eight weeks now and haven't seen a new manual yet. I don't know if the updated manual is going to cost anything. I have heard rumors that it will and rumors that it won't. I sincerely hope that Navarone does not charge for something that should have accompanied the program in the first place. One last note, if you do not have a color monitor, you will have a hard time distinguishing the color codings on the screen that are used quite frequently. Here is my "report card" for the Data Base Management cartridge by Navarone Industries: the performance rates a "C-", the ease of use rates a "C-", the documentation rates a "D-", the value of the program rates a "C" and my overall final grade is a "C-". You may purchase Data Base Management cartridge directly from Navarone Industries / 17960 Lucky Strike Trail / Sonora, California / 95370 / 209-586-1766 for \$69.00. The system requirements for using the Data Base Management cartridge are as follows: TI-99/4A Home Computer, a color monitor (recommended) or television set, a disk memory system, at least 32K of additional memory and a printer (optional).

Software Piracy and the Death of a Computer: by Donald M. Thomson III of M & T Utilityware

I would like to address a problem that is continually plaguing our fantastic computer. This problem, as just about everyone knows, is called "piracy". I currently market three programs for the TI-99/4A, of which are considered by many to be pretty good programs and not the "ripoffs" that quite a few people have mentioned to me, seem to keep coming down the pike. Contrary to popular "piracy" beliefs, my software is not "public domain" and is not supposed to be distributed by unauthorized persons. I know however, my software has entered the dreaded "piracy pipeline", and is now in the hands of many people who have obtained it illegally. I would like to say something to the people who are doing it: "I sincerely hope that a burglar breaks into your house and steals something that is very valuable to you, since it is the same thing you are doing to me!" I started out in this business with the idea that I had some unique programs that I thought were pretty good and might be of some value to other people. I have quite a few ideas for other utility programs written in both Assembly Language and Pascal. I purchased the Pascal System in hopes that some day software would be available for it. So far, nothing has happened, so I will be writing some myself. So, those of you who have purchased the Pascal System, don't give up on it yet. I decided to market my utility programs, with the idea that it would be very nice to have all of your utility software on one disk. That way you don't have to keep swapping disks in and out of your disk drives. Armed with that idea, I did not spend the time dreaming up some elaborate protection system that would have been broken anyway. I felt it would be more worthwhile to the TI-99/4A owners for me to spend my time writing programs they could use. I figured that it would take quite a long time to write protection scheme just to outsmart the pirates. So much for good will. The pirates have decided, to take it upon themselves, to distribute my software illegally for me. I even went so far as to include the source code with my programs, so that people might be able to learn "assembly language" a little easier. I would like to repeat a comment that was made to me by a "pirate" who approached me at the "TI FAIRE", which was held in Chicago on November 10, 1984. He told me that "his pirating of software, software that someone had spent many hours of their life creating, actually stimulates the market". How can software piracy possibly stimulate a market? All it does is contribute to the premature "death" of a computer. He told me that if people get software, then they will buy hardware. All I have to say about this is "hogwash"! The only thing software piracy accomplishes is to make programmers, like myself and others, say "TO HELL WITH IT". At that time a major void has been created in an area that makes computers tick, the software. Can you imagine what it would be like if programmers started saying "TO HELL WITH IT"? Well there would be no new and better software. The next logical chain of events is that people would start dumping their computers! The outcome is simple: "the premature death of a computer due to the selfishness of people who think they are stimulating the market!". The only reason this fantastic computer has held on so long, after being abandoned by Texas Instruments, is because of the good will, hard work and grace of honest people. I think that we should thank GOD that there are more "honest" people than there are "computer killers". I feel that software for the TI-99/4A is already relatively low priced. I am beginning to see better quality software coming out, on a regular basis, and with lower price tags. I simply can not understand why the "pirates" find it necessary to try and ruin a good thing? Why are you folks trying to kill our computer? I simply do not understand it! The mad Texas Instruments bailout panic is over. There is now a lot of good quality software available for our machine. I think that instead of trying to kill it, why don't you folks try and do something constructive, like contribute to the long life of the machine instead of its premature death? Those who have purchased my software legally will find that they will receive full technical and update support, as well as, a money back guarantee. I don't know, at this time, of any software company for any other computer that makes this offer. A note to all of the honest TI-99/4A owners: Think about that when you are offered a "pirated" copy of software. If you buy my programs from a pirate, you will get no support, as well as, no money back guarantee. I don't know of any "pirates" who guarantee stuff they steal! In conclusion, we don't want to prove the industry right by letting the "pirates" kill our computer. Ignore the "pirates" and support those people who are working to make one of the most powerful home computers around survive!



MEETING ANNOUNCEMENT

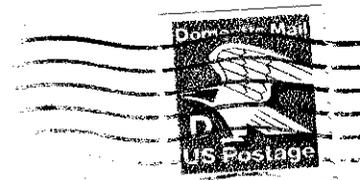
MONDAY MAY 13 AT 7:00 PM  
ROOM 214 STUDENT CENTER  
CHATTANOOGA STATE TECHNICAL  
COMMUNITY COLLEGE

COME A LITTLE EARLY IF YOU WISH TO GET SOFTWARE FROM THE LIBRARY.

BEGINNERS TOPIC: GRAPHIC COMMANDS  
by Ron Mitchell

CASSETTE FILE I/O  
by Kerry Roach

CHUG  
P.O. BOX 136  
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