

DALLAS 99 INTERFACE

Volume 13, Number 5

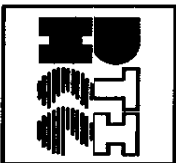
May, 1993

This newsletter is the official publication of the DALLAS TI HOME COMPUTER GROUP, a non-profit organization serving our members and other users of the Texas Instruments 99/4A HOME COMPUTER. For more information you are cordially invited to attend our next meeting or send a S.A.S.E. to:

DALLAS TI HOME COMPUTER GROUP
P.O. BOX 29863
DALLAS, TX 75229

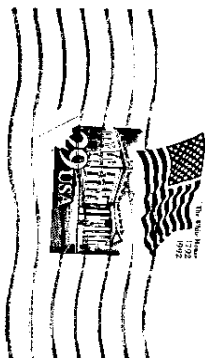
Reprints of our articles are allowed, but must give credit to DTIHCG and be complete.

NEXT MEETING
Saturday, May 15, 1993
at the Dallas INFOMART
I-35 E at the Oak Lawn Exit



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ADDRESS CORRECTION REQUESTED



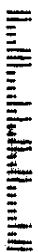
FIRST CLASS

PHONE THE 99ER CONNECTION BBS
24 Hours, 300/1200/2400 Baud
(214) 233-1750



Member of the
Computer Council of Dallas

CCD Information line (214) 234-2667



DTIHCG'S MAY EVENTS

- 1 Sidewalk Sale, Ross at Central, 5 am
7 NEXT-STEP
• JOJO'S On Stemmons at
• 1415 Motor Street, 5:15 pm
9 Mother's Day
15 SUPER SATURDAY AT INFOMART
• Oak Lawn @ Stemmons
• Time 9:00 am
• Program:cShell99 (Windows for the TI99/4A)
• by Dave Axberg
• 1:00 pm MiniSiG
EXECUTIVE COMMITTEE MEETING
Time and Date to be announced
21 NEWSLETTER DEADLINE



DTIHCG'S JUNE EVENTS

- 5 Sidewalk Sale, Ross at Central, 5 am
5 SUPER SATURDAY AT INFOMART
• Oak Lawn @ Stemmons
• Time 9:00 am
• Program: Page Pro by Butch Spill
• 1:00 pm MiniSiG
EXECUTIVE COMMITTEE MEETING
Time and Date to be announced
18 NEXT-STEP
• JOJO'S On Stemmons at
• 1415 Motor Street, 5:15 pm
20 Father's Day
21 First Day of Spring
25 NEWSLETTER DEADLINE

SHAKING THE BUSHES HAPPY MOTHER'S DAY!

Well here it is May and another month of activities are upon us. As I write this article I'm thinking of how that we need a Treasurer; Newsletter Editor. What is one to do?

I have been President 3 years now and at the present I'm holding down the office's of President-Treasurer- and substituting now as your Newsletter Editor. Most of the officers are holding down 3 and 4 positions and are keeping our group going. Does anyone in the group want to take some of these responsibilities from these people.

I as your President was diagnosed as also having Carpal Tunnel Syndrome. I know what our columnist Barry Traver is going through. I have had surgery on my right hand back in 1985 and now it is back. Now I'm waiting to have surgery on both hands and elbows the pain is so unbearable at times. The use of your hands and your wrists are at great risks, especially in women more than in men. I have taken Vitamin B6 and have for years, it helps some. So fellow TI'ers and computer users it's a never ending thing. To all who has this Carpal Tunnel Syndrome my prayers are with you and Good Luck to all.

I opened our April meeting at 10:00 o'clock. We had 27 present and were very glad that all could attend. Our program was given by Dave Axberg on FUNNELWEB SYSCON. This is a "How-To-" for the user. We used the booklet "THE SPIDERS OF FUNNELWEB" written by Larry Tippet. This is a very easy program to use. The intent is to take the mystery out of the menus, color options, internal programs such as DiskReview. The program is very easy one for those who are NEW in doing Funnelweb.

BEGINNER PRINTER
REDFINE CHARACTERS

Here's yet another way to get the code numbers into the program. As many of you have already thought of, we can combine some of the commands into one line. The reason we have done it this way is to make it simpler to understand. Remember this is for beginners. But let's go thru some of the familiar and some of the newer things in this pgm. Line 40 (the *1) prepares the printer to accept the redefined characters. Again line 60 and 90 is the counting loop which tell the pgm to read 9 numbers. Line 70 RANDOMIZES the numbers between 30 and 127. The +30 eliminates numbers 0 to 29 because there are control codes within that range which will make your printer do all sorts of strange things, like form feed, beep, stop the printer etc. Line 80 prints or feeds the codes to the printer RAM then line 100 tells the printer to print those redefined characters to the paper. I personally like this one because it will create random characters with about 988 followed by 13 zeros in variety. It would take over 4 million years to print all combinations.

```

10 CALL CLEAR
20 REM 93E/RND
30 OPEN #1:"PIO"
40 PRINT #1:CHR$(27);"*";CHR$(1);CHR$(035);CHR$(0);
50 RANDOMIZE
60 FOR M=1 TO 09
70 MM=INT(RND7)+30
80 PRINT #1:CHR$(MM);
90 NEXT M
100 PRINT #1:CHR$(27);"$";CHR$(1);"#####"
110 CLOSE #1
120 GOTO 30

```

Should you need any help call or write to:
Jim Leshar, 722 Huntley, Dallas Tx 75214.
or call 214 821 9274

DRIVE REPAIR TIPS

by Greg Hudson

Disk drives are for the most part more reliable than the family automobile, no one to my knowledge has been hurt by a defective disk drive.

The first thing to check is your power supply. Disk drives need +5v and +12v to operate properly. Power supplies are very important if there are two drives in the PEB. Try operating one drive and then the other. Do they both work alone? Perhaps there is just too much load on the internal power supply. If the power supply is not the culprit, then look closely at any jumpers. Make sure that mpx or mx is not jumpered. Make sure that drive one has a jumper on the first drive select position, this may be D0 or D1. Make sure that the second drive has a jumper on the second drive select position, this again may be D1 or D2 depending on the number for the first drive position on the drive. If the drives are external to the computer, make sure that you are not using the small interconnect board that TI sent as the way to connect external drives. The board puts a twist in the cable so that all drives can be selected as drive 1, but the board also leaves one of the control lines floating and it causes problems. If you must use the board then put a 2700 ohm resistor from pin 5 to pin 10 where the resistor pack was removed from lower numbered drives. The resistor is a pullup resistor for the drive and the drive must see one. With a straight cable, the resistor pack in the end drive is enough. Some half height drives have permanent pullup resistors installed. The resistors are large enough that they will not cause a problem when multiple drives are installed.

Some other possible jumpers you may find are HS and HL. Don't jumper HS; jumper HL if you

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see it. HS usually means that the motor will run when the drive is selected, HL means that the head load is selected when the drive is selected.

If the drive will write and read disks it has formatted but not other disks, the problem is alignment. Here you have to make a decision. Do you care if you can't read other disks? No? Then leave it alone but you will be in a non-interchange universe. Yes? Then you can send the drive out for alignment or try to align it yourself. To align a disk drive you will need a sector editor program and a disk formatted on a good drive. Put your "standard" disk in the bad drive and attempt to read sector 0. There is an adjustment for for stopping the disk on sector 0, usually a screw or a fixed stop to adjust. Once you have the drive reading sector 0 make sure that any sensors or switches are covered or actuated. Next try to read sector 359. Sector 359 is at the other end of the head travel. the head will travel back and forth looking for sector 0 so watch your fingers. To read sector 359, you will have to find the adjustment for head travel. You need to loosen a screw that holds the stepper motor. The motor is mounted on a plate, the plate will have a slot that mounts the plate to the drive frame but, when loosened will allow the motor position to change and change the head travel. If you get sector 359 to read, go back and check the sector 0 setting. Go back and forth several times till you get the best results trying to get centered on the track. Next step through all the sectors on the disk, both sides if double sided. You may have to compromise to get good reads in the center of the head travel. Try reading disks from several "good" drives until you are satisfied. Next format a disk with your aligned drive and try reading all sectors on other drives to make sure you have interchange. If all goes well you have a good drive, if not then nothing lost, the drive was no good when you started

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If you can read disks but not format disks it may be that the index sensor is mis-aligned. The sensor looks through the hole near the hub to tell where it wants to start sector 0. On the TI 99/4A, the computer only uses the sensor during write not read. The logic on the disk drive may use the sensor to tell if there is a disk in the drive, in which case the drive will lie to the computer.

If the drive will not read a good disk consistently look on the board for a small pot near the read amplifier. Most drives have a phase locked loop to recover data from the disk and there may be a pot to center the error voltage of the phase locked loop. You have nothing to lose if the drive was not working when you started.

If your sector editor program has a speed test, then check the motor speed. Check a good drive first and if there is a speed adjustment, set it to the same speed as the good drive. This is a good way to check the index sensor too as the speed test will measure time between pulses from the hole as it goes around 5% accuracy is good.

The TI controller card will allow you to try to write 80 tracks to a side. It will even try to read the disk. Just remember, 80 tracks per side means a high density disk must be used. I don't know if the TI controller will read a high-density disk or not since the only time I tried an 80 track per side drive, I did not have a high-density disk to try, I traded the drive for a low density drive that I knew I could use.

Repairing disk drives is not hard if you are willing to take the time. Just remember: don't put a wrench into an operating piece of equipment. Only try to adjust a drive that isn't working, where you have nothing to lose. I have been very lucky at finding good drives that did not work for others. This is not an all inclusive drive repair tutorial, just some

of the things I have found that SOMETIMES
WORK.

WANTED: EDITOR



This Newsletter will reward
you for your efforts.
Contact Mattie Bush to Apply!

T.V. TEST GENERATOR written in TI EXTENDED
BASIC for the TI99/4A.

BY: Greg Hudson

This is a general purpose program to check performance of the TMS9918A video display processor in your TI99/4A. You can also check the operation of your monitor or T.V. receiver.

The TMS9918A is a fairly good video processor, it is not perfect, but good. The color bar signals this program generates, when displayed on a professional waveform monitor and vectorscope, is very close to what you would see from a high-end generator. I have not figured out how to display I and Q signals so they are not displayed. The color bar signal is the most useful of the signals generated. The first bar is a 100 unit white bar, the second bar is yellow, the third bar is cyan, the fourth bar is green, the fifth bar is magenta, the sixth bar is red, the seventh bar is blue and the eighth bar is black. White is a mix of equal amounts of red, green and blue. Cyan is a mix of equal amounts of blue and green. Magenta is a mix of equal amounts of red and blue. Note that the lower 1/3 of the bar signal is different than the upper 2/3. The colors are blue, black, magenta, black, cyan, black, white and black.

Use the color bars to set the brightness, contrast (picture), phase (hue) and saturation (color) of the display on your monitor screen. To do this set the controls so that the bars look right. Set the brightness and contrast so that the black parts are black, the white bars are white and the colors are right. Now, if you want to do the setup right, you need a to have switches on the individual guns of the

picture tube so that you can turn off the red and green guns or you need a blue filter. The filter must be blue and dense enough to filter all but the blue light from your screen. Remember that white is a mix of equal levels of red, blue and green, magenta is a mix of equal levels of red and blue and cyan is a mix of equal levels of green and blue. Under the white bar is a blue bar, under the cyan bar is a magenta bar, under the magenta bar is a cyan bar, and under the blue bar is a white bar. Seen with only the gun on or through a dark blue filter, the screen will have only blue and black bars showing. Use the hue control to set the magenta and cyan bars to the same light level and the color control to set the blue and white bars to the same light levels. When you turn the red and green guns on again you can set the picture and brightness to suit yourself. You now have a monitor set as close as you can without expensive test equipment. The procedure is not at all complicated and you can set up your television set in the living room using your modulator.

The other signals are good to check for bowing (horizontal lines and vertical lines), linearity (crosshatch and dots), color purity (pure colors) smearing (window) and response (multiburst). These signals also tend to show the deficiencies of the TMS9918A processor in the TI99/4A. The colors on the vertical lines and dots are artifacts (things that shouldn't be there) attributable to the NTSC color system and the TMS9918A. Don't knock it through the TMS9918A generates a reasonable signal for such a small package.

The tone generated by the program is a 400HZ tone at maximum level. If you want another frequency, change it, line 400. If you have a better way of programming any part of the program, make changes.

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These people are DTIHCG officers and chairpersons. They help themselves and you, by giving much of their time in working to make this a better club for all of us. They attend the Executive Committee Meeting usually held on Tuesday afternoon following the INFOMART meeting. Any interested member is invited to join us for the next Chairperson's portion of the meeting.

If you'd like to become more involved in helping the group, please let our DTIHCG Executive Committee know what you'd like to do.

Please take the time to thank these people individually for their efforts. It makes their job easier.