

TI - D - BITS

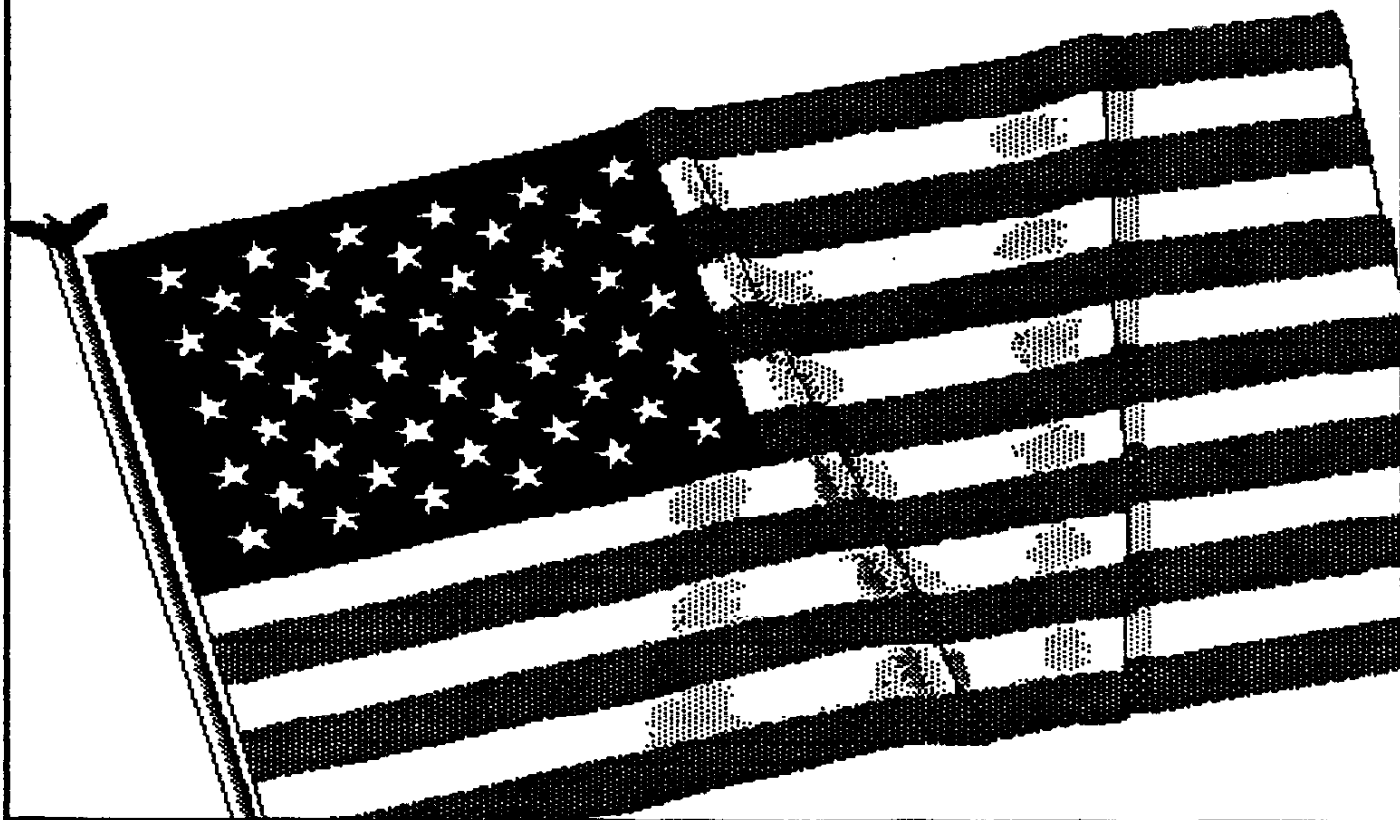
PHILADELPHIA AREA USERS GROUP NEWSLETTER
COVERING THE TI99/4A
AND MYARC 9640 COMPUTERS

MARCH 1991

Volume 11 Number 3

THIS MONTH IS A
FUNNELWEB SPECIAL

A SALUTE TO
OUR TROOPS



The Philadelphia Area TI-99/4A Users' Group meets twice a month. On the first Saturday of any given month, we meet at the Bucks County Youth Development Center, (YDC, which is next to Neshaminy Mall), Administration Building, beginning at 10:00 am. On the third Saturday of each month, we meet at Drexel University, in Matheson Hall at 34th and Marker St. Phila. Pa in Room M-412. Membership to The Philadelphia Area TI-99/4A Users' Group is available to all. We invite anyone that is interested in the TI-99/4A to visit us. Stop in and see what is available to you for your TI and how membership can benefit you!

Current executive board consists of:

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REMEMBER to be considerate when calling any of the above people. Limit your calls to the early evening hours. (6pm to 9pm)

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The editor of TI-d-Bits or the executive board of The Philadelphia area TI-99/4a Users' Group reserve the right to reject any material submitted for publication for any reasons.

The Philadelphia Area TI-99/4A Users' Group's program library is available to all active members at **NO CHARGE** for copying to your disk. A charge of \$2.00 per disk is made for club supplied disks for members. Non members may obtain copies of the library for a fee of \$5.00 per disk. A catalog of the library's contents is given to all new members upon request and updates will appear in this publication from time to time. To obtain material from the library, contact the librarian for the best procedure to obtain your requests.

NEW/AGE SPECIALBy Jack Suchrue

Taken from Nutmeg TI-99ers Jan/Feb 91

GOOD, BETTER, BEST!

There is only one program in the TI disk community that is (as my 5th-grade pupils would say) "totally wicked awesome rad to a gnarly degree." I agree with the sentiment, if not the mode of expression.

Nothing else in our world computer community has equalled the impact of the FUNNELWEB environment created for us by Tony McGovern and his son, Will. These two Australian geniuses (and I do not use the word lightly) put together what all of us deemed impossible for the TI.

FUNNELWEB just grew and grew. The original American release was a TIWRITER and EDITOR ASSEMBLER combo, more or less (actually more). Next version a few months later contained a bit more with lots of enhancements of what went on before. TIW, for example, does not contain a ruler or address recall or macro-key CAPS or LC. Tony put all these things in fairly early versions, all of which we take for granted in our word processing activities. The environment always loaded by either E/A or XB, thus making it ideal for supercards (again from earlier versions) or RAMs or whatever device hardwarers could devise. Then things like Disk Manager 1000 and Diskpatch were added and modified. As were loaders for c99, FORTH, etc. Each time Tony (primarily) would unravel the complexities caused by these needs and create new and better solutions than dreamed possible.

When he came up with the windowing effects for the CONFIG program, for example, which established a profound system configuration (still able to be ported {en masse} to any newer version, I felt he had reached his peak. Boy, was I ever wrong.

FUNNELWEB is not a program. It is an environment which gives you, the user, some great computing tools in such a complete package that it becomes almost impossible to do without them after using them.

Probably 80% or more of normal (non-programmer) use of computers -

especially the TI - is word processing. People need to communicate. FUNNELWEB turned TIW into a great word processor, adding so many features that should have been in the original cart/disk combo that when you go back to that combo you are appalled at its limitations. As I say, we have become spoiled by Tony and take for granted what is surely a remarkable achievement.

Much as I love my TI, I know that if FUNNELWEB did not exist I would no longer be TIing. I couldn't. FWB's a structure equal to the best that any home computer has to offer its users at any price.

Let's face it. It serves as a Master DOS. What does a Disk Operating System do? Well, it lets you load up other programs, primarily, or lets you handle some disk management tasks. FWB does all that as a sideline.

With the new 4.31 FUNNELWEB the console 99 disk user has just leaped quantumly into an exciting era. The 40-column (standard) TI computer fan now has available to him or her a package heretofore only available to non-standard 80-col upgraders.

Before I go on, I'd like to say:

STOP!

The bad news is this: Will went over to the Amiga a long while ago, and his father will be following shortly. This will mean that the greatest single piece of software for the TI will no longer grow; nor will we be seeing any other pieces come from Funnelweb Farm; nor will there be any more great tutorials (particularly those on exploring XB). This is not only BAD news, it is HORRIBLE news. Not that I can blame Tony. Although close to 100% of all TI disk users use FWB and its upgrades, an extremely small number has ever paid the author a penny - and a tinier number, still, has ever given a second contribution (thought the original to present upgrade is similar to the difference between my salary and Donald Trump's). And a tinier number, still, have ever written to Tony to tell him how much they use and appreciate FUNNELWEB and all the other great things he has done for us.

Remember, that is not commercialware. Fairware authors need

and deserve our support. Fairware authors of the stature of Tony McGovern have earned massive support financially and socially. They just don't get it.

I urge every user group to "charge" a minimum \$10 copying fee to each member for this upgrade and send the entire collected sum to Tony. send a group letter. Write him up in your newsletter. Let's let '91 be the Year of the McGovern. Even more, I urge every single reader to sit down at your first opportunity and write (probably using FUNNELWEB) a supporting letter, enclosing the largest cash (certified check, international coupon, money order) contribution you can really afford. It'll still be cheaper than anything you'd have to pay for that would be in the same league as FUNNELWEB (if such a thing exists). People couldn't wait, for example, to shell out \$60 for PRESS (sight unseen) or \$25 to \$60 for data bases. Many of our game cartridges cost at least five times what some consider a "fair" price to pay for the finest piece of software ever for the TI.

How about this for a rule of thumb? Take the most expensive piece of software you ever bought (and probably don't even use anymore) and double it. Send that as a donation. Remember what you paid in those pre-inflationary days for LOGO and MULTIPLAN and TI WRITER and DISK MANAGER II and E/A and whatever?

Well, the new FUNNELWEB has so many new features that most of those expensive cartridges and upgrade disks can be chucked in the basket.

What's your TI worth to you? What'll it be worth to you down the road with Tony McGovern gone? Decide soon about your commitment and make the investment today in your future.

So what are a few of these outstanding features? Well, for one, there is no more Disk Manager 1000 nor Disk Patch, because the new Disk Review performs all the functions of both (and then some) from within the FWB environment, including COPYING FILE BY FILE (to eliminate fractures) WHOLE DISKS TO MULTIPLE DRIVES! So stick a disk in Drive 1 and copy to Drive 2, 3, and 4, while you go comb your wallaby. Disks can be FORMATED

to Quad density, if you have the right controller. Any program can be RUN right out of DR, including the huge IV254s. The Quick Directory now lets you mark a file from WITHIN the FORMATER or ASSEMBLER. And the disk editing functions are plentiful and profound.

The whole FUNNELWEB 4.31 environment is profound. You'll realize this immediately when you see BOTH central menus displayed on the screen simultaneously and you just have to move the cursor around to either RUN the program (or VIEW and/or PRINT the text file).

This is a must for everyone!

Get it from your user group today, being aware that everything worthwhile in life costs.

FUNNELWEB TIPS

Fm NUTMEG NEWS

Ellington, CT.

1. To change screen color hit Control and 3 at the same time.
2. Control and (.) changes the letter under the cursor to lower case.
3. Control and (;) changes the letter under the cursor to UPPER CASE.
4. Control and (A) move screen down one screen.
5. Control and (B) moves screen back one screen.
6. Control (U) and then Shift (J) puts in a linefeed. Control (U) returns to original mode.
7. Control (M) can be used for a carriage return.
8. Control (C) returns you to top prompt line.
9. Control (E S D X H J) also act as arrow keys.
10. Control (Z) acts as the tab.
11. Control (T) acts as a back tab.
12. Control (G) places a blank line above the line you are on.
13. Control (L) places cursor in the top left corner of the screen.
14. Control (P) places a newpage mark
15. When using Show Directory using the arrow keys, moves the little lines up and down 1 file. Hitting the space bar places a carat beside the file and marks it. Then just hit enter and (LF), for Load file, the name of the marked file will now appear.

FORMATTER TIPS

16. When at the prompt for a file name. hit. Function (7) for a disk directory. Then proceed as above (except no carat). Control (=) brings you back to Formatter. Now hit Function (D) and the marked file will appear.

17. When at the TI Writer Menu or E/A Menu, Function (9) allows you to exit Funnelweb in a graceful manner. The error checking allows you to be sure that this is what you want to do.

YET ANOTHER TIP

When loading a file into the Funnelweb Editor, and you don't need to change the drive number, type LF space, space. After you hit <ENTER>, you will find the cursor to be over the file name instead of the drive number.

TI EXPRESS

CONFIGURING FUNNELWEB
THE QUICK AND DIRTY WAY
Fm The PUG PERIPHERAL
Pittsburgh, Pa.

First of all Function 9 and Control C both act as a return mode.

Secondly all prompts require just a single key press and are the first letter of the prompt name. (E for Edit etc...)

Okay now with that out of the way lets configure away!!!!

Loading: Load configure (filename CF) either from main Xbasic screen or Opt #5 from E/A module.

The first screen will be the Configure title screen. Already you have 3 options to contend with.

1. Is <?> which pops up a help screen. This command will also work at all other screens where you must make a choice.

2. Function 7 will display a Disk Directory of a drive.

And finally by hitting any other key you'll get to the next screen.

(NOTE THIS IS A STEP BY STEP INSTRUCTION. If you need more info I suggest you read the docs from the Funnelweb package.)

<S ysinfo>

Next you choose between <L oad>.

<E dit>, <S ave>

<L oad>, The info into memory.

Now you will be prompted for the location of the SYSCON file after this is filled in correctly hit enter.

<E dit>.

AND NOW THE FUN STARTS!!!!!!!

<L oading> - This will bring up a window for changing the loading info for Funnelweb.

<B oot> - Loading is used if you want Funnelweb to follow the disk drive from where you loaded FunnelWeb originally. If you intend for FunnelWeb to only look for specific files on specific drives then use B

<TI-Writer>, side and <E/A> side, These #'s should correspond to the drive that FunnelWeb files are located on. If The TI-Writer files are on a separate disk than the EA files then correct the # for these drives. If both sets of files are on the same drive then use the same # for both prompts.

<W orking Drive> - I usually leave this blank.

<I mmediate> - This tells FunnelWeb how a return to FunnelWeb it's wanted when coming back to the FunnelWeb environment (ie. returning from DSKU or DM-1000) this also is how FunnelWeb is entered when you load FunnelWeb from E/A (using FW or UTIL1 as the E/A loader). Hitting <I> cycles through 3 choices. 1: DR reloads Disk Review immediately. 2: UL loads the UL list that you create. 3: FW loads the TI Writer Menu. Choose whatever you like.

<H ard Disk> - Path is if you have a Hard Drive.

Now go Back (Control-C or Function-9)

<D evices>

This is where you set up your printer and file names.

<E dtr Printer>. Sets the parameters for the PF command of the editor as well as the P command of Disk Review.

<F rmat Printer>- Sets the parameters for the Formatter (I use PIO and PIO.LF respectively)

I generally leave <O bject File> and <P rogram File> blank. For <W ork file>, I enter DSK2, so that when I do a SF from the editor all I need to enter is the filename. Put whatever you like here.

After you finish here Control-C or Function-9.

<C olors> - Which sets up your screen and character colors for FunnelWeb. I like the ones that came with FunnelWeb, I left mine alone.

<M enu>

<TI Writer> - This sets up the TI Writer menu screen you have the choices of <E dit>, <B ack>, <R edo>, <N ext> in the remaining menus.

<E dit> - Allows you to change the info.

<R edo> - returns bar to top of menu.

<B ack> - Moves bar up one space

<Next> goes down one space.

Remember that these files must be E/A loaded and the actual filename should be 2 characters long.

<E dit title name> - Then hit <ENTER>, next enter Filename and <ENTER>, finally use arrow keys to move bar to the program type that loads your file then hit <ENTER> again

<FYI> - Anything that you want to appear on the F command of Disk Review should be in either the TI Writer menu or the E/A menu.

After you have made the changes you desire go back and choose <E/A menu>, make changes in the same way as above. Then go back 2 times to come to the selection screen.

<M ain Menu> - This is where you can change the Main title screen. Also this is where Extended Basic Programs load from.

Now you are given a couple of new options. You first should <F etch> the old menu, you will be prompted for the location of the LOAD Program for FunnelWeb. After this is loaded you can <R eserve> which puts into memory the original menu.

<X change> - Allows you to go back and forth between the menu you are editing and the one stored in memory.

<E> - brings up the menu. Using the arrow keys you can scan down the menu and when you come to something you want to change, press <E dit> - Now the first thing you need to do is to create a title name for your file (I'll use DM-1000) press <ENTER> and you need to choose <B oot Tracking>.

If OFF it will require you to specify what drive the file will be located in. If ON it will boot from the drive that FunnelWeb was loaded from.

Hitting <R eminder> - will cycle between YES and NO what this does is if you answer YES then FennelWeb will

ask you for the disk to be inverted for this program every time you try to load it (handy for those who have one drive or more than one FunnelWeb disk), if the answer is NO then FunnelWeb assumes that the file is located on the disk that FunnelWeb is Booted from.

<ENTER> moves you to the next part.

Here you enter the Filename for this particular file. Using DM-1000 I would enter MG If Boot Tracking was on or DSK#.MG where # is the drive that MG file is located. Notice that if Boot Tracking is ON there is no need to enter the DSK prompt. Hit <ENTER>. Now you use the arrow keys to move the bar to the file loading type. When you are in the correct area, (E/A Program for my MG file) hit <ENTER>.

NOTE: Only in this menu can you access the XBasic Loader.

When finished, you Control-C or Function-9 to go back.

<UL List> - This will allow you to change the UL file as well as the create any other UL file that you wish. The directions are the same as for the XB menu except you must <F etch> each list individually and must <S ave> each list individually. By creating more than one UL file and giving them different names you can string them together Using Next list as a File and calling the next file. Again only E/A files can be loaded from this file. And remember to <S ave> each list. After you are finished with the UL and saved the UL file(s) Control-C or Function-9 until you return to the Sysinfo Menu of <E dit>, <L oad>, <S ave>. Now you will want to <S ave> the changes so hit <S ave> and fill in the prompt for where the SYCON file is located. (Note the SYCON file should be on the Main FunnelWeb disk but after you are through configuring, you can leave off the CF and CG files to conserve disk space) Hit <ENTER> and wait for the screen to come back to the Sysinfo menu. Now Control-C or Function-9 to the <S ysinfo>, <Q uit>, <I nstall>.

You now will be asked for XB-Load or FW/UTIL1 -Load. <M ain>, XB and <ENTER> where the LOAD file is, <ENTER> again. When this is thought you should save the information to either a FW or UTIL1 file for E/A loading of FunnelWeb if you choose not

to then Control-C or Function-9 and hit <Q uit> then reset the computer and reboot FunnelWeb and see if it all works well. This text was written as a brief quick and dirty outline for configuring FunnelWeb 4.31 and by all means is not a complete tutorial. Basically I wrote this as a companion to my demo's of the Configuring of FunnelWeb for our Users Group. If any other group wishes to reprint this, then go for it. All I ask as for proper credit and send a copy of the newsletter that this is printed in.

Good luck and for more info read the FunnelWeb Docs. ALSO SHOW SOME \$\$\$\$ SUPPORT FOR THE AUTHERS OF FUNNELWEB. WILL AND TONY MCGOVERN. Patric Powell P.O. Box 496 Ocean park, Me. 04063-0496.

*** COMMING EVENTS ***

ON SAT MARCH 16th the 1991 COMPUTER FESTIVAL will be held at DREXEL UNIVERSITY. We will have a table with a "GENEVE SYSTEM" set up Demo'ing our latest Hardware and Software. There will not be a regular meeting that day. Come on out and support us and enjoy what the festival has to offer.

ON SAT APRIL 6th at Y.D.C.

**We will continue with the TI-BASE Tutorial.
We will continue with the MULTIPLAN Tutorial.
We will also have the Software Library on hand for your convenience.**

TIPS FROM THE TIGERCUB

#38

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* * * * *
* Tips from the Tigercub *
* Vol. 3 is now ready. *
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Nuts & Bolts (No. 1), a full disk of 100 Extended Basic utility subprograms in merge format, ready to merge into

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Tigercub Full Disk Collections, just \$12 postpaid! Each of these contains either 5 or 6 of my regular \$3 catalog programs, and the remaining disk space has been filled with some of the best public domain programs of the same category. I am NOT selling public domain programs - my own programs on these disks are greatly discounted from their usual price, and the public domain is a FREE bonus!

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For descriptions of these send a dollar for my catalog!

I have discovered a rare bug in the 28 Column Converter, published in Tips #18, which will cause an I/O 25 ERROR if the very last line of the program being converted happens to have exactly 80 characters. You can fix it by adding a line -

215 IF EOF(1)=1 THEN 260

There is also a rare bug in the SIDEWAYS subroutine on my Nuts & Bolts #2 disk, which prevents turning some redefined character sets sideways. If you are one of those who BOUGHT that disk from me, you can fix it by changing the L=LEN(B\$) in line 21639 to L=64.

I was in too much of a hurry to go fishing when I put the last couple of Tips together. In the Gordian Knot in Tips #35, I left out some essential instructions. Please add -
131 DISPLAY AT(11,1):" When you cross your track,": "press O to go over, U to go": "under, C to go across."

To make that fit, you will have to change the DISPLAY AT in line 130 to (8,1), in line 140 to (15,1) and in line 150 to (20,1), also the ACCEPT At in 160 to (20,11). And this change will prevent a lockup when you reach a border -
200 D=D-1 :: IF ABS(D-D2)=2 OR R+(D=1)=0 OR R-(D=3)=25 OR R C+(D=4)=2 OR C-(D=2)=31 THEN 180 :: GOSUB 510 :: IF D<>D2 THEN GOSUB 450

I wrote the dulcimer music in Tips #36 in Basic, but I forgot to test it in Basic. It actually runs much better in Extended Basic, but will run fairly well in Basic if you delete the delays in lines 280 and 300.

If you liked the ESCHER ART in Tips #37, these modifications will improve it considerably -

110 DISPLAY AT(12,1):"Press -: : " Q for new pattern": " B to change background": " F to change foreground": " R to reverse colors": : : "Any ke


```

y to start"
280 A=INT(6*RND+3):: H=INT(2
4/A):: RX=24-H*A :: HC=INT(2
8/A):: CX=28-HC*A :: W=ABS(H
C/2=INT(HC/2))-(RX>0):: DIM
M(8,8):: FOR P=1 TO A
330 IF K<>66 THEN 346
340 BC=BC+1+(BC=16)*15 :: IF
BC=F THEN 340 ELSE 347
346 IF K>70 THEN 360 :: F=F
+1+(F=16)*15 :: IF F=BC THEN
346
347 FOR S=7 TO 14 :: CALL CO
LOR(S,F,BC):: NEXT S :: GOTO
310
350 ! **DELETED LINE **
360 IF K<>ASC("R")THEN 310 :
: T=F :: F=BC :: BC=T :: GOT
O 347
600 GOSUB 900 :: FOR T=1 TO
A :: DISPLAY AT(R-1+T,C):M$(
V,T):: NEXT T :: NEXT C
601 IF CX>0 THEN AA=A :: GOS
UB 800
605 GOSUB 1000 :: NEXT R
606 IF RX=0 THEN 610
607 GOSUB 1000 :: FOR C=1 TO
A*HC STEP A :: GOSUB 900 ::
FOR T=1 TO RX :: DISPLAY AT
(R-1+T,C):M$(V,T):: NEXT T :
: NEXT C
608 IF CX>0 THEN AA=RX :: GO
SUB 800
800 GOSUB 900 :: FOR T=1 TO
AA :: DISPLAY AT(R-1+T,C):SE
G$(M$(V,T),1,CX):: NEXT T :
: RETURN
900 V=V+1+(V=4)*4 :: RETURN
1000 V=V+W :: V=V+(V>4)*4 ::
RETURN

```

I had a letter from a teacher who was using the PRK module to keep student grades, and wanted to know how to average them. It can be done, but is so impractical that I wrote this program. While I was at it, I speeded up the loading and saving to cassette greatly by converting the grades to an ASCII string and combine the student's name and all grades into one record.

```
100 DIM N$(50),I(50,20)
```

```

110 CALL CLEAR
120 PRINT "      TEACHER'S
HELPER": : : :
130 REM - by Jim Peterson
140 PRINT "(1)CREATE A FILE?
":"(2)ADD TO FILE?":"(3)LOAD
A FILE?":"(4)SAVE A FILE?":
"(5)PRINT A FILE?"
150 PRINT "(6)CORRECT A FILE
?":"(7)COMPUTE AVERAGES?":"(
8)QUIT?"
160 CALL KEY(O,K,S)
170 IF (S=0)+(K<49)+(K>56)TH
EN 160
180 ON K-48 GOTO 190,250,610
,800,380,990,1120,1510
190 X=0
200 INPUT "SUBJECT? ":S$
210 GOSUB 1370
220 INPUT "TEST #? ":N
230 GOSUB 1440
240 GOTO 140
250 PRINT :::"(1)ADD NAMES?"
:"(2)ADD GRADES?"
260 CALL KEY(O,K,S)
270 IF (S=0)+(K<49)+(K>50)TH
EN 260
280 ON K-48 GOTO 290,310
290 GOSUB 1370
300 GOTO 140
310 INPUT "TEST #? ":Q
320 IF T(1,Q)=0 THEN 350
330 PRINT :::"TEST #";STR$(Q
);" ALREADY RECORDED"
340 GOTO 140
350 N=Q
360 GOSUB 1440
370 GOTO 140
380 CALL CLEAR
390 PRINT "OUTPUT TO":"(1)SC
REEN?":"(2)PRINTER?"
400 CALL KEY(O,K,S)
410 IF (S=0)+(K<49)+(K>50)TH
EN 400
420 IF K=49 THEN 460
430 INPUT "PRINTER DESIGNATI
ON? ":P$
440 OPEN #2:P$
450 F@=2
460 PRINT "PRESS ANY KEY TO
PAUSE": :
470 PRINT F@:S$: :
480 FOR J=1 TO X
490 PRINT F@:"":N$(J)&" ";T
AB(10);
500 FOR K=1 TO HN
510 PRINT F@:T(J,K);

```

```

520 NEXT K
530 CALL KEY(O,K,S)
540 IF S<>0 THEN 530
550 NEXT J
560 PRINT #F@
570 IF F@=0 THEN 140
580 F@=0
590 CLOSE #2
600 GOTO 140
610 PRINT :::"(1)CASSETTE?":
(2)DISK?"
620 CALL KEY(O,K,S)
630 IF (S=0)+(K<49)+(K>50)TH
EN 620
640 ON K-48 GOTO 650,670
650 OPEN #2:"CS1",INPUT ,FIX
ED
660 GOTO 690
670 INPUT "FILENAME? DSK":F$
680 OPEN #2:"DSK"&F$,INPUT
690 INPUT #2:X,HN,S$
700 FOR J=1 TO X
710 INPUT #2:K$
720 N$(J)=SEG$(K$,1,POS(K$,C
HR$(255),1)-1)
730 K$=SEG$(K$,POS(K$,CHR$(2
55),1)+1,255)
740 FOR K=1 TO HN
750 T(J,K)=ASC(SEG$(K$,K,1))
-50
760 NEXT K
770 NEXT J
780 CLOSE #2
790 GOTO 140
800 PRINT :::"(1)CASSETTE?":
(2)DISK?"
810 CALL KEY(O,K,S)
820 IF (S=0)+(K<49)+(K>50)TH
EN 810
830 ON K-48 GOTO 840,860
840 OPEN #2:"CS1",OUTPUT,FIX
ED
850 GOTO 880
860 INPUT "FILENAME? DSK":F$
870 OPEN #2:"DSK"&F$,OUTPUT
880 PRINT #2:X:HN:S$
890 FOR J=1 TO X
900 K$=""
910 FOR K=1 TO HN
920 K$=K$&CHR$(T(J,K)+50)
930 NEXT K
940 PRINT #2:N$(J)&CHR$(255)
&K$
950 K$=""
960 NEXT J
970 CLOSE #2
980 GOTO 140

```

```

990 CALL CLEAR
1000 INPUT "STUDENT'S NAME?
":Q$
1010 FOR J=1 TO X
1020 IF N$(J)=Q$ THEN 1060
1030 NEXT J
1040 PRINT ;;"NAME NOT FOUN
D": :
1050 GOTO 140
1060 INPUT "CORRECT WHICH TE
ST? (0 TO QUIT) ":C
1070 IF C=0 THEN 1110
1080 PRINT ;:N$(J);"'S TEST
#";STR$(T(J,C)): :
1090 INPUT "CORRECT TO? ":T(
J,C)
1100 GOTO 1060
1110 GOTO 140
1120 CALL CLEAR
1130 PRINT "OUTPUT TO:"(1)S
CREEN?:"(2)PRINTER?"
1140 CALL KEY(O,K,S)
1150 IF (S=0)+(K<49)+(K>50)T
HEN 1140
1160 IF K=49 THEN 1200
1170 INPUT "PRINTER DESIGNAT
ION? ":P$
1180 OPEN #2:P$
1190 F@=2
1200 PRINT #F@:S$
1210 FOR J=1 TO X
1220 PRINT #F@:N$(J);" AVERA
GE ";
1230 FOR K=1 TO HN
1240 TT=TT+T(J,K)
1250 NEXT K
1260 AV=TT/HN
1270 TAV=TAV+AV
1280 PRINT #F@:AV
1290 TT=0
1300 NEXT J
1310 PRINT #F@:"CLASS AVERAG
E ";TAV/X
1320 TAV=0
1330 IF F@=0 THEN 1360
1340 F@=0
1350 CLOSE #2
1360 GOTO 140
1370 PRINT ;;"STUDENT'S NAM
ES - ":"type END when finish
ed": :
1380 X=X+1
1390 M$="NAME #"&STR$(X)&" "
1400 INPUT M$:N$(X)
1410 IF N$(X)<>"END" THEN 13
80
1420 X=X-1

```

```

1430 RETURN
1440 FOR J=1 TO X
1450 M$=N$(J)&"'S GRADE? "
1460 INPUT M$:T(J,N)
1470 NEXT J
1480 IF N<HN THEN 240
1490 HN=N
1500 RETURN
1510 END

```

The reason that 50 is added to the value in line 920, before saving, and subtracted again in line 750 after loading, is because of a quirk of the computer that I don't recall seeing in print anywhere. Did you know that INPUT will read a string beginning with ASCII 0, 2, 4, 7, 10, 12, 14, 18, 20, 26, 27, 31, 32, or 44 as a null string (a blank), and will drop these characters at the end of a string? And ASCII 32 will be dropped at the beginning or end of a string. And ASCII 0 within a string, or ASCII 34 anywhere, will crash, while ASCII 44 within a string will lose the rest of the string. I should have known what ASCII 0, 32 (the space), 34 (quotes) and 44 (comma) would do, but why the others?

LINPUT will accept anything, of course, but I wanted to keep this in BASIC for the teachers who are struggling along without the XBasic module or disk drive.

Chick De Marti published in LA 99ers TOPICS the surprising discovery that PRINT USING and DISPLAY USING can read the IMAGE format from a variable, array or string!

Which led me to some fooling around -

```

100 !PRINT USING DEMO by Jim
Peterson, based on a discov
ery by Chick De Marti
110 CALL CLEAR :: RANDOMIZE
:: CALL SCREEN(5):: FOR S=2

```

```

TO 14 :: CALL COLOR(S,S,S)::
NEXT S
120 N=INT(13*RND+1):: C$=CHR
$(8*N+32-(N=4)*11)
130 FOR J=N TO 12 :: A$=RPT$(
" ",J)&"#&RPT$(" ",26-J*2)
&"#" :: PRINT USING A$:C$,C$
:: NEXT J
140 FOR J=12 TO N STEP -1 ::
A$=RPT$(" ",J)&"#&RPT$(" "
,26-J*2)&"#" :: PRINT USING
A$:C$,C$ :: NEXT J :: GOTO 1
20

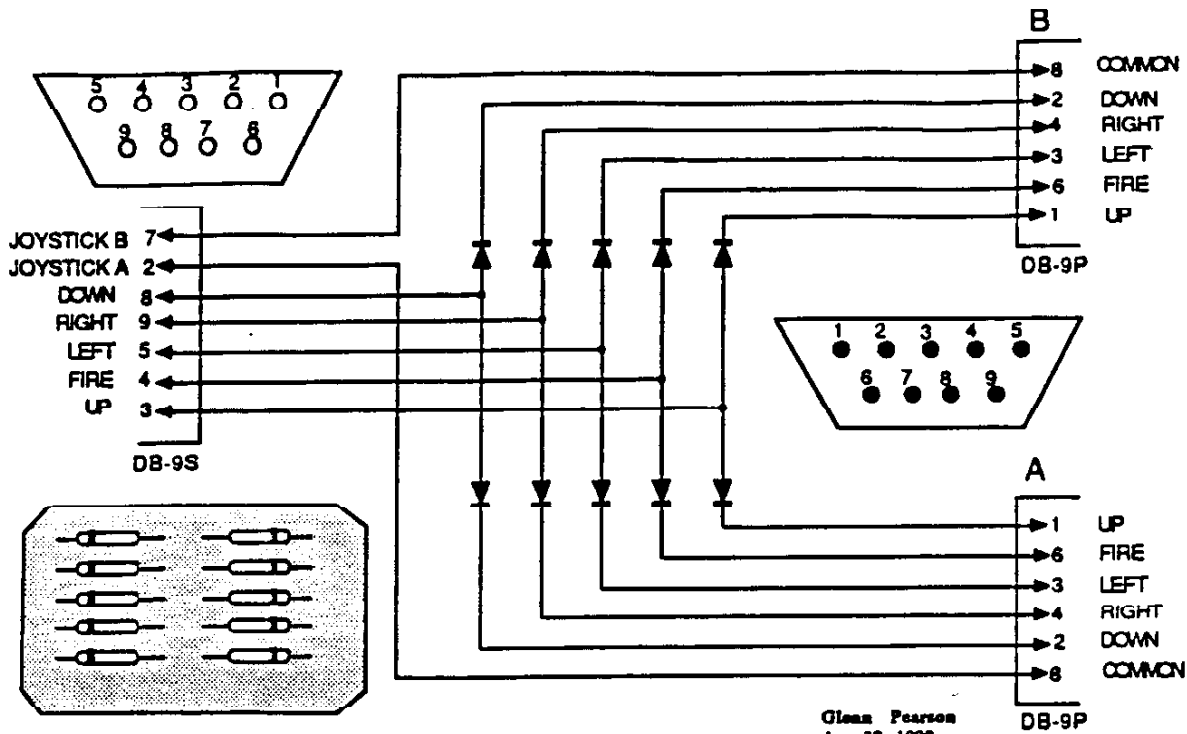
```

Here is one last Tigercub challenge. What is the longest possible one-liner? And what is the longest possible one-liner that actually does something?

MEMORY FULL

Jim Peterson

TI & GENEVE JOYSTICK ADAPTER



As virtually all TI users know, standard joysticks may not be used with the TI (or Geneve) without an adapter. The adapter is required to accommodate three things: the pinout of the DB-9 connector on the TI does not match the standard joystick pinout, secondly, two joystick connectors will not both fit into one chassis connector, and thirdly, series diodes are required to isolate the joysticks from each other, else one joystick will try to do the work of two.

I had a commercial adapter, which was made as a potted cable assembly. When the fire button stopped functioning on one of my joysticks, I traced the problem to an open diode in the cable assembly. The first step in determining the cause of the problem was to swap joysticks. Moving the joystick from one cable connector to another showed that the problem stayed at the cable location. By using an ohmmeter, and with the help of a schematic for the TI, I was able to quickly to determine that a diode in the cable assembly had opened. An attempt to non-destructively open the cable assembly failed, and I was left with no choice but to replace the adaptor, if I was to continue to use the joysticks in pairs.

While I believe that joystick adapters are still available commercially, I decided to build my own, which would be serviceable. All of the parts are readily available at stores like Radio Shack. I happened to have everything but the connectors in my "junkbox" of treasures accumulated during my more active ham radio days. The diodes are low current, signal type 1N914, or equivalent. I built this assembly on a perforated breadboard. I mounted the diodes to "fleecips", and used the wire from the original adapter. A small aluminum box was used to hold the perf-board assembly.

The three cables to the three connectors were brought out through existing holes on the box; two out one end, and one out the other end.

The unit worked immediately upon assembly, and is in use.

Another way of accomplishing the same end is to modify the joysticks themselves. This requires the disassembly of the joysticks to mount the diodes internally, and then the user must cut the original connectors off of the joysticks and run both joystick cables into one DB-9S connector. If you elect to use this approach, be aware that any warranty on the joysticks will be voided. Proceed with caution, and follow the wiring for the DB-9S connector in the above diagram.

I have used both methods successfully. I elected to put the diodes in the joysticks with some inexpensive units, but preferred an adapter for some more expensive joysticks.

Glenn Pearson 8/31/90