THE GUILFORD 99'ER NEWSLETTER

Carl Foster, President   Robert Dobo, Program Library
Joseph Martin, Vice President   Bob Carmany, Program Chairman
Mike Garrett, Secretary/Treasurer   Sandy Carmany, Education

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OUR NEXT MEETING

DATE: July 1, 1986. TIME: 7:00 PM PLACE: Glenwood Recreation Center
2010 S. Chapman Street.

There are now a number of real excellent drawing packages for the 4A on
the market. Bob Carmany will give us a demonstration of such goodies as
GRAPHX, JP Graphics, etc. This is a change from our previously announced
schedule but should be well worth your time to see the capabilities of
these new products.

TI FAIR

Carl has made the arrangements with Forum VI to hold our first annual TI FAIRE at the FORUM VI on Saturday, July 12 from 10 AM to 2 PM. George and Bob have agreed to work out the details and announce our schedule at our July meeting.

As you may recall, the intent of the FAIRE is to demonstrate to the public that the 4A is still very much alive and capable of doing many things that TI never envisioned. PLEASE MAKE YOUR PLANS NOW TO HELP WITH THIS EFFORT!!

TI SHOPPER
by Bob Carmany

About a year ago, an exciting new product was developed for the TI market from "down under". The Australian entry, GRAPHX, remains the premier graphics program for the TI-99/4A. Since its introduction, Asgard Loftware has come up with several ancilliary disks of character fonts, slides, and other clipart. First we had GRAPHX COMPANION I which was soon followed by GRAPHX COMPANION II. At $7.00 each, these "flippies" are certainly well worth the money. Now, Asgard has introduced a new series of pictures for GRAPHX. The GRAPHX PICTURES package is a four disk packing containing 24 pictures as well as the program GRAPHX SLIDESHOW. This newest package retails for $16.50 and is certainly worth the investment. You will, of course, need GRAPHX and the system requirements for your particular version!

Ever since the introduction of the MG GRAM KRACKER, there has been a flood of programs and devices to copy the contents of cartridges to disk. We have GRAM KARTE, MAXIMEM, a program called ROMERAID that works with a load interrupt switch, and now we have MODULE EMULATOR from PILGRIM'S PRIDE, 5 Hatboro Lane, Hatboro, PA 19040. This is a software/cartridge combination that the manufacturer says will back up 85% of the TI cartridges on the market. It will NOT, however, back up either the MBX cartridges or XB. The package retails for $69.95 and is available only from the manufacturer.

Asgard also has introduced version 2.1 of the Tunnels of Doom Editor for $20. It includes two sample games on the disk as well. There are instructions for altering version 2.0 in the May MICROpendium and they are so brief that HERE THEY ARE:

```
5271 IF @<>3 THEN 5280
5272 IF S$="D" THEN CALL LINK("HS",B$(Z)) ELSE CALL LINK("HS",C$(Z))
```

Simply re-save the EDITOR program (try it on a copy first!).

Everyone is still waiting for the next issue of THE SMART PROGRAMMER. Ever since Craig Miller sold the rights to the publication, we have been anticipating the first issue published by Bytemaster. Well, we are still waiting. In a phone conversation with Craig, he mentioned that the anticipated two day conversion of his subscriber data base took much longer than Bytemaster had planned for. It seems that they didn't realize that there were so many to THE SMART PROGRAMMER. Anyway, the first copy was supposed to have been printed at the beginning of June so maybe it will come out soon. Remember, Bytemaster promised THE SMART PROGRAMMER in April. Oh well, let's hope that they are not another HCM!

SHORT BYTES
by Bob Carmany

Here are a couple of programs that appeared in the pages of MICROpendium and other sources. The first one generates sound effects and the author's attribution is in the program. The second is a color generator that is from Ed York of the Cin-Day UG.

```
100 REM *** WEIRD SOUNDS ***
110 REM BY DAVID HUGGETT
120 REM
130 REM 9T9ER USERS GROUP, TORONTO
140 REM The word INSTRUCTIONS in line 160 may be changed to any word in the resident vocabulary for different effects
150 FOR Y=1 TO 88 :: IF Y=4 THEN Y=7
160 CALL SPGET("INSTRUCTIONS",D$)
170 D=LEN(D$):: PRINT Y
180 D$=SEG$(D$,1,2)&CHR$(D)&SEG$(D$,Y,D)
190 FOR X=1 TO 6 :: CALL SAY(,D$):: NEXT X :: NEXT Y
```

```
100 REM COLOR BONANZA BY ED YORK
110 REM CIN-DAY USER GROUP
120 REM TI BASIC
130 CALL CLEAR
140 FOR A=40 TO 136 STEP 8
150 CALL CHAR(A,"55AA55AA55AA55AA")
160 NEXT A
170 FOR B=2 TO 14
180 CALL COLOR(B,1,1)
190 CALL VCHAR(1,2*B,24+8*B,22)
200 CALL VCHAR(1,2*B+1,24+8*B,22)
210 NEXT B
220 FOR C=2 TO 14
230 CALL SCREEN(INT(16*RND)+1)
240 FOR D=2 TO 14
250 CALL COLOR(D,D,C)
260 NEXT D
270 CALL KEY(0,E,F)
280 IF F<1 THEN 270
290 NEXT C
300 GOTO 220
```

THE NEW COMPUTER

It's here and it's...GENEVE from Myarc. It is true! It is here! It works! I saw it! Just as he promised to do, Lou Phillips of Myarc showed up at the Chicago Consumer Electronics Show on Sunday with several working Peripheral Expansion Boxes running his "computer- on-a-card." These were fully functioning printed circuit boards running 80-column and hi-res graphics

I spoke to Mr. Phillips for over an hour at the show, and yet I almost missed him entirely. His small booth was unmarked, and I only spotted it by recognizing him, having seen him at our Chicago TI Faire last November. He was even wearing a badge with someone else's name on it, but denied that he was here incognito. The booth was not shared, it was entirely Myarc's. With Phillips behind the table was John Keown, author of Module Emulator, who is now doing extensive work with Myarc. The new computer is named GENEVE, but will also be known as the "Model 9640 Family Computer". Phillips stated that Texas Instruments asked him not to use "9900" in the name, but he retained the "9" and added the "640" because that is the amount of RAM which comes with the machine. The following is directly from the one-page information sheet which was handed out:

TI-WRITER, now a full 80-columns. # Multiplan, also 80 columns. FASTER At least 2-3 times. LARGER Standard 640K RAM 2 MEGABYTES Addressable RAM MYARC Memory Card Compatible With Myarc 512K Card, Supplies 1.1 MEGABYTES RAM. IBM TYPE KEYBOARD included. PHONE TYPE CABLE Replaces Old Hex Bus Cable. MOUSE SUPPORT

On the back of the page was a list of more features, including: Composite Video Output. RGB Output (Note: I was informed this is Analog RGB, with "thousands" of colors available). 40 column display. 80 column display. Mouse Output Port. Joystick port. 128K VDP RAM memory

Phillips stated that you will no longer need the flex cable or even the TI console. The card plugs into the PE Box, and a cable goes from there to the IBM type keyboard. Your other cards will work as usual. When asked about using cartridge software with a machine which has no such port, Keown stated that a copy of his program, Module Emulator, will be included with each machine, and you will be expected to dump whichever cartridges you want. They will then run from disk on the new machine. The only cartridges they have been unable to use are those which call console BASIC routines, such as Personal Record Keeping, Statistics, Tax/Investment Record Keeping, and a few others. They are not sure whether they will attempt to correct this. Everything else, including the present Extended BASIC, will dump and run on the new machine.

You probably won't need XB anyway, since the machine will come with Myarc's BASIC 3.0, as well as 80 column versions of TI-Writer and Multiplan. Myarc plans at this time to include the keyboard, and the suggested retail for all of the above is $495.00. When asked if they would sell the machine without a keyboard for less, Phillips quickly added that it was likely they would do so.

Availability of the machine is planned for "about mid-July". Phillips stated he has been told to expect completed components from his suppliers "around the end of June". (Sounds like too tight a schedule to me). The initial production run is for "about 1,000 units".

Phillips stated that he considers the hardware, the card itself, "done". Several beta testers already have the card. He is presently working on the native, or boot-up, DOS. Among other things, he is trying to decide whether to use a TI-like directory system, perhaps with a boot-up menu which can call TI emulation, or presumably something similar to MS-DOS, where TI emulation must be called in by the user from disk. Either way, once in "TI mode" the machine will function as your TI does now, except with all the new "goodies" added.

There are still plans to produce a stand-alone new computer, but this seemed, at least to me, somewhat vague. Phillips also hinted that Myarc will probably be producing the equivalent of a Peripheral Expansion box of their own, which would also seem to me to remove the need for a self-contained machine.

In wrapping up, Phillips noted that the quad density chip upgrade which has been talked about at other shows is now ready, and to contact dealers for info. He also stated that the fine hi-res demos which were running at the CES were written by Chris Faherty of Inscebot, and that copies of the demos would be included with Myarc's release of BASIC 2.1 free of charge.

I would like to conclude by noting that there have been those, even on this bulletin board, who have publicly doubted the intentions of Myarc with regards to this machine. After waiting over 2.5 years for a replacement/upgrade machine, perhaps such skepticism is understandable among TI owners. I will say that Lou Phillips comes across as a sincere, straight forward guy. For those who, also quite understandably doubt appearances, I will tell you both that the machine DOES exist, and whatever else he is doing, Lou Phillips just spent one HECK of a lot of money for a table at this CES to show it.

I apologize for any editorializing I may have done in this article, and for anything I may have omitted. I believe I have outlined everything of importance I spoke about with Phillips, but if you have questions I haven't anticipated, by all

means contact Myarc, or, as a last resort, SMAIL me.

FORTH FORUM
by Bob Carmany

Last month, we "debugged" and improved the TI-Forth editor screens. This month, we are going to take a look at Wycove Forth (Version 2.0) and upgrade it to version 2.1 by incorporating a list of changes and addenda that were supplied by Tim MacEachern. He points out that most of the errors were corrected and only the manual is incorrect in most cases. I found that my copy did NOT have all of the errors corrected so here is the list.

In the file control words, screen 12, the code is incorrect for files with fixed length records that are completely filled. Here is the changed code for the word WRITE -- just substitute this definition for the one that you have.

```
: WRITE ( pabadr -- ) .R R BUF R @ + R 6
- C@ R @ - -DUP IF R ?INTERNAL IF
ERASE ELSE BLANKS ENDIF ELSE DROP
ENDIF R @ R 7 + C! 0 R ! R 3 FILEDO
1 R> REC# +! ;
```

The assembler screen number 39 needs to have the following definitions substituted for those that are currently in place:

```
: 16CNT? DUP 16 = IF DROP 0 ENDIF ;
: STCR, 16CNT? >34 FMT4 ;
: LDCR, 16CNT? >30 FMT4 ;
```

also where the definition of FMT4 now says ">R , D-OP S-OP FLAGS" it should be changed to ">R , S-OP D-OP FLAGS" (it was correct on my copy).

Screen 13, disk directory, needs to be completely re-written. Here is the new screen:

```
0 : TASK ; 11 -LOAD PAB: 16 -LOAD F.R
1 38 >D PAB: DIRPAB DSK1.
2 : FLTYPE CASE 5 OF ." PROG" ENDOF 1
3 OF ." D/F " ENDOF 2 OF ." D/V " ENDOF
4 3 OF ." I/F " ENDOF ." I/V " ENDCASE ;
5 : DITEM DIRPAB RITEM ;
6 : S.R >R F->S R> .R ;
7 : FTYPE >R DITEM DROP R> S.R ;
8 : DIR R/W-CLOSE >R R 48+ DIRPAB 15 + C!
9 DIRPAB OPEN DIRPAB READ DITEM
10 CR 18 OVER - 2 / SPACES ." DISK" R>
11 2 .R ." IS " TYPE DITEM DRO DROP
12 CR ." USED=" DITEM DROP DITEM DROP
13 SWAP OVER F- 4 S.R ." FREE=" 4 S.R
14 CR CR ." FILENAME TYPE P SIZE RECL"
15 CR ." -------- ---- - ---- ----"
16 BEGIN DIRPAB READ DITEM
17 DUP CR -PAUSE ?TERMINAL 0= # WHILE
18 SWAP OVER TYPE 11 SWAP - SPACES
19 DITEM DROP 1+ C@ DUP 9 > DUP 256 #
20 ROT - ABS FLTYPE IF ." Y"
21 ELSE ." " ENDIF 5 FTYPE 5 FTYPE
22 REPEAT DROP DROP DIRPAB CLOSE ;
```

In the BREAKOUT game, the last few lines of the definition of INIT2 should read:
```
0 LINE ." Score:" SCORE @ 6 .R ." Best:" BEST @ 6 .R
1 LINE ." Ball: " ;
```
and after "22 LINE the following line should have appeared:
```
" Do you want to play again (Y/N)?"
```

The following is a list of corrections to the manual:
Sound volumes are from 0 (loudest) to 15 (softest)

Page 84: First line of the sprite example should read >42C3 >1824 >FF99 8 0 $PATERN
Page 81: Discussion of sprite sizes should say 16 X 16 wherever it says 32 X 32
Page 120: Should read " Where the phrase LABEL XXX is used"
Page 89: The definition of BIT-MAP should be changed from "0 >834A C!" to "0 >837A C!" (also on screen 27)
Page 22: The stack contents should be changed from 8 to 16

INSTRUCTIONS AND HINTS
FOR TI-WRITER
Dick Altmann

IT CAN BE MASTERED! It just takes perseverance and determination and a desire. I have been using it since January 1985 and I don't have it all yet, but I can use it to my immense satisfaction. This came from months of sitting with the large manual in my lap flipping pages back and forth until I had practically memorized the #$% thing! I was at the point where when I had a problem I could say "Oh that is on page 146" or whatever. For instance: this article was done on the TI-WRITER and I now do ALL of my correspondence with it also.

If you received the disk with this article, load it up in TI-WRITER and call it up on the screen so that you can see which commands-and where they were used-to cause the different effects shown in this article. If you received the disk only, then you aren't reading this unless you have already booted it up. It is suggested that you run off a printed copy then reboot this back up so that you can see the commands in use as you read the article. There are comments in the program just below or above the commands that don't show in the printout! This is another 'FREEWARE' item. There is no price set for it. Feel free to pass a copy on to whoever wants it. If it will help only one or two people that are struggling to learn TI-WRITER I will be pleased. If you learn anything from it, and are inclined to fairness, send a few bucks when you can afford it to Dick Altman, 1053 Shrader St., San Francisco, CA 94117. There's no big deal if you don't-only your conscience will know. At least drop me a note and let me know it helped someone.

This is gonna be loo-o-ng, but still much shorter than the 175 page instruction manual!

FIRST RULE: Read the TI-WRITER Quick Reference card and reread it. Of course this means after you read this article. Do all of the operations shown on the card-at least once-even though you might think you will never need that particular one. You will find you have to open up the big manual probably, to accomplish some of the operations. After you have almost 'memorized' the card (literally!) then you will find yourself using it almost exclusively and very seldom having to refer to the cumbersome manual. Personally I think the manual is poorly written.

You will find 3 'windows'-from left to right-to obtain the 80 columns (80 normal characters) width. Each window is 40 columns wide. The first one is from 0 to 40, second one is from 20 to 60, and the third is from 40 to 80. The first thing I do upon booting up TI-WRITER is to set my limits to 37 characters wide. If I take a whole window of 40 characters, it seems to crowd my screen, and I don't like to window back and forth to read my work. I do this by pressing "T" (for TABS), then press ENTER, then placing an "L" on the second dot, and an "R" on the 39th dot, then pressing ENTER again. Now I find my cursor blinking at me from line #0001. Here is where I tell the printer what margins I want it to print my work within. It's also at this point that I select condensed type because I like it better than the normal size type, and I can get 132 characters per line if I wish. It just looks better in my opinion. I normally do this on line 0002 because I used 0001 to set up the formatting (margins, etc.) commands to the printer.

So, on line 0001 I put in the following 'dot' command (a dot command is merely starting with a period): .LM 20;RM 120;FI;AD (AND END ALL DOT COMMANDS WITH A 'carriage return'). The semicolons are necessary, and the spaces, just as I listed it here. I'll do it again: .LM 20;RM 120;FI;AD(c/r). You of course don't put in the line number 0001. That is already there.

That tells the printer to set the Left Margin at 20, the Right Margin at 120, then Fill each line, and Adust (justify) the right margin. The 'FILL' command tells the program to put in as many whole words on a line, within your predetermined margins, as possible. The 'ADJUST' tells it to add extra blanks

between words to cause the even right margin as this article has.

I changed the margin settings on the last two paragraphs just to show you that you can enter your 'commands' just about
anywhere within your work!

Just pressing ENTER will normally automatically put in the 'carriage return' symbol, but sometimes it doesn't. It depends on
what you were doing last. In that case, use Control and 8 to put in a carriage return.

On line 0002 I put in a 'Control' command thusly: Control U Shift 0 Control U. Neither a 'dot' at the beginning, nor a
'carriage return' at the end is necessary. This command throws the printer into 'condensed' type. Neither of these two line
numbers will be printed on paper. They are merely forematting commands. Most of the 'Control' commands are listed at the
bottom of this article.

Then if I want to center a title (or date) or some other heading at the top of my article, on line 0003 I put in another dot
command like this: .CE (remember a carriage return is required at the end of all dot commands). If my title is say three
lines of type, then make that dot command thusly: .CE3(c/r) otherwise it will 'center' only one line. The centering command
at the top of this article was '.CE5' because of the blank line in it. The lines you wish centered have to immediately follow
the centering command.

The automatic page length is 66 lines. This gives you about six blank lines at the top and bottom of your page, and only
fifty some actual lines of type. You can, with a dot command change your page length with this: '.PL ##' as I did in line
0002 of this article. (Not enough room in 0001)

Then you start typing your article, letter, whatever. If you wish each paragraph to be indented, it takes another dot command
of: .IN(number). If, as in my suggested margin settings of .LM 20;RM 120, you wished to indent each paragraph five spaces,
the command would be: .IN 25 because the counting starts at zero or left edge of the paper. If you include the indent command
with others in line 0001, the semicolon replaces all but the first dot, thus .LM 20;RM 120;IN 25. You may put more than one
dot command on one line, or the Control commands, but never both of them on the same line.

The fun part of a word processor is the capability of inserting or deleting a word or an entire phrase without having to
retype the entire page or article. Another fun thing is the ability to move a sentence or an entire paragraph to another
place in your work. This is all done very simply. Just place your cursor in the last space before where you wish to insert
another word and press the FCTN key and the number 2. This causes everything beyond your cursor to move down one line, then
type in your new word or sentence and after the space at the end of it press the Control and the 2 (just once) and everything
will jump back up to your cursor! If you are near the beginning of a long paragraph it takes a little longer (a couple or
three seconds) to reformat the paragraph, than it does if you are near the bottom of that same paragraph-DON'T GET IMPATIENT
AND HIT THE KEYS AGAIN, JUST WAIT A COUPLE OF SECONDS!

To move let's say paragraph #10 into the #3 spot is just as easy. First look at paragraph #10 and make a note (mental??) of
the line numbers on the first and last line. Function and zero shows the line numbers or moves them off the screen. Suppose
they were 0076 and 0093. Then determine what line number you wish it to be after. Let's suppose it was 0023. Then with FCTN
9 go to the 'command' line, type M (for Move) and hit ENTER. Then type in 0076 0093 0023 and hit ENTER again. Look at those
numbers and read the instructions on the Quick Reference Card for MOVE.

On most dot matrix printers, there are two different commands to make neat printing. They are called 'emphasized' and
'double strike'. You can't use (on my printer at least) the emphasized method while in condensed size of type. But I can use
double strike. The difference is basically this. Both commands print each letter twice, but in two different ways.   One of
them (emphasized) moves the head slightly to the right so that each letter is a little thicker. Double strike just prints the
line twice. I think emphasized is slightly faster than double strike, but I've never timed either of them.   Since I use
condensed printing almost exclusively, and can't use emphasized, I don't worry about it. Incidentally, you may enter these
commands throughout your article. You just have to have them begin at the left margin of your work. As long as you begin dot
commands with a period, and the control commands with Control U (and end dot commands with a carriage return, and control
commands with Control U and/or a capital letter) you'll be O.K. Only this paragraph was using 'double strike', look at the
difference.

An interesting fact about most printers is that it not only inserts unobtrusive spaces here and there to ADJUST each line to
the predetermined right margin, IT PRINTS EVERY OTHER LINE FROM THE RIGHT TO THE LEFT while doing all that FILLING and

..JUSTING. It will also correctly number your pages if you give it the FO command, which is another dot command.

I find once in awhile, some one command (never the same one twice) seems to falter. Just redo it. sometimes I think some command must be there that is invisible (this is possible!) so when you run into an unexplainable problem, go back to your formatting command line(s)-which are usually lines 0001 and 0002-put the cursor at the end of each of your commands then press FCTN and 1 and hold them for a couple of seconds to delete any possible typing errors that placed some sort of 'hidden' command in that line.

Another good command to learn is the 'OOOPS' command. Merely Control and the figure one. This eliminates only your last change just now typed in, and returns your work to its former self (hopefully!).

Another good habit to get yourself into, is 'SAVING' your work every few minutes (or every few pages). Power glitches do occur from any power company. Either surges, or stumbles. Sometimes just an electric motor in your home (refrigerator, etc.) kicking in will cause a momentary change in the power supplied to your computer (you've seen your lights flicker). If you save your work every once in awhile, you someday will be glad you were in the habit. Especially if you have just put in to the word processor a 20,000 word story. The power glitch could cause you to lose it all! If you have been saving it on a disk, when that glitch occurs you will have all but a small part of it saved. When you save something to a disk, then come back to that same disk and save something else with the same name, it replaces the first item with the second. It does not become two seperate items on the disk. Of course, if you are really a worry-wart, you will do the saving on two disks, alternating back and forth, just in case that glitch comes while you are in the act of saving your work.

When you wish to reload a file from a disk back into the word processor, it's EASY! When you first bring up the word processor in the Editor mode, you are automatically in the command line. Just type LF (for Load File) and hit ENTER, then type in DSK1.(and the name you gave it) then hit ENTER again and wait a few seconds for the work to be loaded into your computer from the disk.

If you want a rough draft of your work on paper (I find it easier to proof than on the screen) just remove your commands for double strike or emphasizing to conserve your printer ribbon. It will not be so easy to read, unless your ribbon is new, but it will be done faster, as well as not using up ribbon ink unnecessarily.

In the book you will find two methods of going to the disk, then to your printer. Printing should be done from the disk, not from the computer. You will find a command of 'Print File'. That's not the one I use! The one I have become accustomed to using may take a few seconds longer, but it is the one I learned first, and I have just stuck with it. It is as follows. After I have finished typing my letter or whatever, return to the command line with FCTN 9, there type a Q (for Quit) hit ENTER, then S (for Save) and ENTER, then DSK1.TERRY or whatever name I want to give the file instead of TERRY, then ENTER. I usually use a short two or three character name. I have even been known to use #1, or #2, or something like that (the file name cannot be more than 10 characters long, and you can't have any spaces in a file name). Then, after the work goes from the computer to the disk, you can either print it now or sometime next week. The command to go to the printer at this point is like this: Q (for Quit) ENTER, then E (for Exit) and ENTER again. This takes you back to the master menu. This time, you select #2, or THE FORMATTER. After it comes up, you have to type in DSK1.(filename) and hit ENTER. Then you have to type in the command telling it to go from the disk to the printer, instead of to the screen. (With the use of DISKU or some such assembly language repair program, you can insert the command to your printer so that it is a default just like all the other selections on the screen. It is in 'EDITA1' of your TI-WRITER disk.) Without knowing what kind of printer you have, I can't give exactly the correct command here, but it will be something like this: PIO or RS232.BA=4800.LF, then you will have five more choices, mostly for which you will just press ENTER for each of them. Perhaps you might wish more than one copy, so on the correct one you would punch in that number. Be sure your printer is turned 'on' before hitting the last ENTER,(the one that says "PAUSE AT END OF THE PAGE?) because you will be printing immediately.

For your purposes (manuscript writing) you will want it double spaced. That is simply a dot command of '.LS 2' (LS for Line

Spacing of course!) and if you want it triple spaced, just change the 2 to a 3. Or of course use it for a rough draft or some

such. I'm mostly just rambling here, to give this particular paragraph some length, so that you can see double spacing at

work. I can't seem to think of anything else to say, so I will just end it here.

There are many, many more commands available, such as merging either parts of two different files, or merging a whole file

into the middle of another, or putting in headers at the tops of every page, and footers at the bottom, all automatically. Such things as page numbers, or requirements for manuscripts, etc., but those can be found as you need em.

The word processor does have a capacity beyond which you have to save your work to disk, and start with a clean slate. It is approximately 20,000 characters including blanks. I have only run into it when transferring a long story to disk. I was entering a 10,000 word story, and I got 'MEMORY FULL-SAVE OR PURGE' flashing at me at the top or command line after about 4,000 words (I wish it would ring a bell or something). At that point 'save' your work and retire that file name. Perhaps in this article I am writing for you I will reach that point again. Right now I am typing on line number 466. I think it was at about line 400 plus (but I was using 80 column width that time for a special project, I think) that the MEMORY FULL thing happened to me. You will just have to trial and error it for your job! Of course, the length canNOT be judged just by the line numbers on the left side of your screen. Think about whether you are using only one window, or two, or the maximum of three. I am using just one window while I do this work, as I explained earlier, so that will make my capacity come much farther down the line numbers than if I were using all three windows! 80 characters (or columns) wide, instead of the 37 I am using. If and when the MEMORY FULL bit happens to you, remember that when you save it this time to a disk, then for pete's sake don't save the next time to the same file name! In other words, my name for this file at the moment is TI-WRITER. If I need to make a new file, it will become TI-WRITER2.

The little 25 page booklet from Dr. Bill Browning is very good, don't ignore it when you are trying to learn the TI-WRITER word processor. 7541 Jersey Avenue North, Brooklyn Park, MN 55428. Price just $6.50 and worth every penny.

There is also available in 'FREEWARE' circles an excellent disk called "TK-WRITER" which was done by TOM KNIGHT, thus the 'TK'. It replaces the need for a cartridge to have TI-WRITER word processing capabilities. As far as I can tell, it does exactly the same things the cartridge does, except for Show Directory-which is inconsequential, and won't go direct from the Editor stage to the Formatting stage. You can probably find it in the same library you obtained this disk from.

The command for the underscore is merely the ampersand (Shift 7) and it can be used anywhere. Note even in the middle of the word 'cannot'. If you want to underline more than one word you have to connect them with what is called a caret. It is above the 6, or Shift 6. If you wish, the AMPERSAND can be printed in your work, but not the caret. Merely type in two ampersands and only one of them will be printed! & & &

Believe me, all of this will become easy and second nature to a good typist in a very short time! But if you don't use it for a month or two, you will find yourself going back and back and back to the big book!

!!!!!!!!!!!
CONTROL COMMANDS

****
ASCII
CODES	FUNCTION	FORMAT
0	Terminate Tabulation	CTRL U, SHIFT 2, CTRL U
7	Sound the buzzer	CTRL U, SHIFT G, CTRL U
8	Backspace	CTRL U, SHIFT H, CTRL U
9	Horizontal tabulation	CTRL U, SHIFT I, CTRL U
10	Line feed	CTRL U, SHIFT J, CTRL U
11	Vertical tabulation	CTRL U, SHIFT K, CTRL U
12	Form feed	CTRL U, SHIFT L, CTRL U
13	Carriage return	CTRL U, SHIFT M, CTRL U
14	Print enlarged characters	CTRL U, SHIFT N, CTRL U
15	Print condensed characters	CTRL U, SHIFT O, CTRL U
17	Select printer	CTRL U, SHIFT Q, CTRL U

18	Turn off condensed printing	CTRL U, SHIFT R, CTRL U
19	Disable printer	CTRL U, SHIFT S, CTRL U
20	Turn off enlarged printing	CTRL U, SHIFT T, CTRL U
27	Escape	CTRL U, FCTN R, CTRL U
27;48	Set line spacing 8 per inch	CTRL U, FCTN R, CTRL U, 0
27;50	Set line spacing 6 per inch	CTRL U, FCTN R, CTRL U, 2
27;51	Set line spacing n/216 per inch	CTRL U, FCTN R, CTRL U, 3,n
27;52	Turn Italic Character set on	CTRL U, FCTN R, CTRL U, 4
27;53	Turn Italic Character set off	CTRL U, FCTN R, CTRL U, 5
27;56	Disable paper-end detector	CTRL U, FCTN R, CTRL U, 8
27;57	Select paper-end detector	CTRL U, FCTN R, CTRL U, 9
27;65	Set line spacing(1/72 to 85/72 inch)	CTRL U, FCTN R, CTRL U, A,n
27;66	Set up 8 vertical tab pos.	CTRL U, FCTN R, CTRL U, B
27;67	Set form length up to 127 lines	CTRL U, FCTN R, CTRL U, C,n
27;68	Set up to 12 horizontal tab positions	CTRL U, FCTN R, CTRL U, D
27;69	Turn on emphasized printing	CTRL U, FCTN R, CTRL U, E
27;70	Turn off emphasized printing	CTRL U, FCTN R, CTRL U, F
27;71	Turn on double printing	CTRL U, FCTN R, CTRL U, G
27;72	Turn off double printing	CTRL U, FCTN R, CTRL U, H
27;75	Turn on normal density graphic printing	CTRL U, FCTN R, CTRL U, K
27;76	Turn on dual density graphic printing	CTRL U, FCTN R, CTRL U, L
27;77	Turn Elite mode ON	CTRL U, FCTN R, CTRL U, M
27;78	Set skip-over perforation	CTRL U, FCTN R, CTRL U, N
27;79	Release skip-over perforations	CTRL U, FCTN R, CTRL U, O
27;80	Turn Elite mode OFF	CTRL U, FCTN R, CTRL U, P
27;81	Set a column width	CTRL U, FCTN R, CTRL U, U
27;82	Select 1 of 8 int'l char.sets	CTRL U, FCTN R, CTRL U, R