

THE GUILFORD 99'ER NEWSLETTER

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OUR NEXT MEETING

DATE: June 7, 1988. TIME: 7:30 PM PLACE: Glenwood Recreation Center 2010
S. Chapman Street.

Program for this meeting will be a demonstration of the newly released 32K
QED cartridge from Australia. This cartridge can function as a mini
RAMdisk. It will also load any program designed for standard 8K expansion
cartridges.

MINUTES

BY: Mack Jones

The May 3rd. meeting of the Guilford 99er Users' Group was held at the home of Herman Geschwind at 1/14 Clarendon Drive,
Greensboro, N.C.

The meeting was called to order by VP Bob Carmany due to the absence of Pres. Janice Snider, at 7:45 PM. The minutes of
the April meeting were read and accepted as read. The disk of the month was offered and 4 were sold.

Old Business:

1. The power supply for the stand alone disk drive that was donated by Herman Geschwind was discussed. It was
determined that the 12.6 v. transformer must be swapped for a 18v. transformer or the 12 volts needed to run the disk drive
motor will not work properly. Bill said he would swap the transformer.

New Business:

1. Bob reported that he will demo the new QED 32K cart that his friends in Australia sent him at the June meeting.

2. Herman donated a VOLKSMODEM 12, which is a smart 300/1200 modem with auto dial and auto answer. This modem will be either auctioned off or members will be given a chance to buy chances for it in a raffle. Just which will be voted on at the next meeting. Also, Herman will donate many carts, such as mini-mem, E/A, and the like to be either auctioned off or raffled.

The meeting was then turned over to Herman, and what a wonderful meeting it was! Herman started with the basic concept of the workings of a modem and went to the present stage we are now enjoying. As he is the chief trouble shooter and systems expert for Burlington Industries, he told of some of his most trying experiences with different cases of modem problems. Then, a demo was given by accessing the Source, and Comuserve. Due to an early evening thunderstorm, the session was cut short. Refreshments were then provided.

The meeting was adjourned at 9:45 PM. There were 6 members present

Respectfully submitted, L.F. "Mac" Jones, Sect./Tres.

GED 32K

USING THE GED 32K MODULE

Version 2.1 ???.

Ron Kleinschafer. HV99ers.

In my last article on the GED Module I said that after I wrote my first Basic Program I looked at it later and thought, GOOD GRIEF!!, well after looking at my first effort for using the GED Module (Version 1.0) I thought something different, and that was "WHAT IS THAT CRUD??" Very user unfriendly to say the least, so back to the keyboard and out came Verion 2.0, what happened to that you ask?, it went into the crud basket as well.

So getting something closer to being something usefull (although still a little rough in places) emerges Version 2.1, why different versions you again ask?, well with a little tongue in cheek lets say it seems to be the flavour of the year!!, enough of the waffling down to details.

The first and major changes needed were to be able to branch straight from one program to another without having to go back to the title screen so in this version the changes now include in DM1000's file utilities two options, these being direct reentry to Funnlweb or return to the title screen also QUIT (FCTN =) automatically returns to Page 0. In Superbug the Program has been modified so that when "Q" is selected you are returned to S/Bugs Header with two more options added and these reenter Funnlweb direct or return to the title screen.

After discussions with Tony about Funnlweb it seemed that to add code in that program would cause to many ripples, besides there would not be enough room and it would not remain global, it would require deleting some of the screen text to make room for page switching code and that would make it impossible for anyone to reconfigure or load the Module direct from their Funnlweb disk with their own preferred options. Not being able to get in through the front door I decided to enter through the back door, so to speak.

By putting Funnlweb as the first option on the Header list then using code to load it to memory from the Module then switching the module back to Page 0 before entering Funnlweb directly in memory, this then leaves Funnlweb unmolested and a return from the central menu screen from option 7 RESET the 7 QUIT insures that you return to Page 0 ready for the next selection, Funnlweb had to be put as the first option in the header code (although it appears last on the selection list on screen) because if you invoke option 9 from the user list (CART ROM) it has a very sneaky way of locating and executing the first Program listed in the header, so the Program remains true.

The only casualty in doing it this way is that QD (directory) is not instantly available, when you select Funnlweb if you want the QD directory then select 7 RESET first before you try Function 7 and QD will be loaded from disk and is then instantly available WHILE YOU REMAIN IN FUNNLWEB, if RESET is not invoked LOCKUP WILL OCCUR, also if you want to use the directory in DISK PATCH then RESET then QD must be used. At this stage I dont think it worthwhile fixing that bug, my spys from the Black Hole country tell me that there may be another Version of FW in the pipeline, EHH!!!.

Because CPU scratch pad ram is used extensively and DM1000 is loaded at >A000 the mailbox will not remain totally unmolested but this is not a big drawback with the added speed of accessing files.

Loading the Module with your own Funnlweb preferred options and saving that Page back to the GED disk requires a little more care, I suggest you print out and follow the instructions carefully in the file READ/ME on the GED/32K/2 Disk, if you are interested ask the librarian for a copy. Although the Module is loaded with what I refer to as an E/A programmers Module I would like to hear from other owners of the Module what they would like to be able to use in it, so how about some feedback??.

A few tips in utilizing the Module is that when you want to QUIT and remove the Module select Option 3. EXIT MODULE from the main menu, this actually "parks" the module at page 1 which contains FUNNLWEB, it occasionally happens that the first byte in the header of the current page is corrupted on power down then the Module would normally require reloading, it was convenient to do it this way because FUNNLWEB does not require that first byte when used in the Module the way the program is entered and exited. After switching off the console wait a few seconds before removing the Module, also when installing it wait again a few seconds for the power in the console to drop, it doesn't like always being plugged into a powered up console. The worst culprit for corrupting the Module is using the common Reset button that pulls the reset line low, caution with that one.

ATRAx TRACKS

By: Bob Carmany

For the past few months, we have been looking at F'WEB --named after the species of poisonous spider that frequents the McGovern "homestead". We have discussed how the program is reconfigured and what each of the program segments can do. Now, it is time to put the whole program in perspective.

The best way to show you exactly what it will do for you is to use an example. In this case, we will take the customized version that I'm using. First of all, it will load from virtually any environment! The easiest is from XB with the automatic "DSK1.LOAD" that is executed when XB boots. It will load from the E/A cartridge or, with equal facility, with the Mini-Memory as well. But, if you want a real dazzler, install it in one of the "Super Carts" with CBTRAM and run it from there!

Anyway, with the F'WEB "shell" loaded, let's look at what you can do. Tonight, I want to spend some time uploading the latest programs from Australia onto the ROS board. I load F'WEB and get the main menu screen. I know that Herman appreciates having the programs archived and compressed to conserve space and save time when they are downloaded. I select ARCHIVER from the menu (having installed it as a choice) and in a few seconds it is loaded and ready to go. F'WEB is replaced in drive #1 by my source disk and a blank disk is in drive #2. First, I choose 'Pack Files' and output the lot to drive #2 under an appropriate filename. Luckily, there is enough space on the disk in drive #2 to go ahead and save the compressed file on the same disk. I choose 'Compress' and another filename. Once that is done, I use the utility function and delete the first filename (the one that is just packed) in drive #2. Now, I have my archived and compressed file ready to upload.

So far, so good!! <FCTN-9> brings me back to the main menu on ARCHIVER and I select "LOAD F'WEB 4.0". I follow the prompts and get back to the sub-menu with my chosen modem program (TELCO). When that is selected, TELCO loads and I'm ready to access ROS. Ah! I'm up on the board and ready to upload! Everything went fine and I'm through--no problems!

What have we accomplished with this little exercise? Well, for one thing, we did all of this without having to <FCTN=> and quit. Everything that was done was done with a minimum of activity. The programs were interactive and interfaced with each other so the computer didn't have to be reset or turned off. If you happen to have a RAMdisk, there would be NO disk accesses at all!

The amazing thing is that you can do the same thing with XB programs loaded from the main menu as well. Just set your XB programs up to load from "DSK2" and put them on an "options disk". Next, find the end of the XB program and add a "RUN DSK1.LOAD" in place of the "END". What happens then?

With the F'WEB disk in drive #1 and your "options disk" in drive #2, your XB program will load and run. Hopefully, you will use it a couple of times (like XLATE, maybe). After you are through with whatever you were doing, simply select the choice to bring you to the end of the program. F'WEB will reload from drive #1 and you are ready to continue with something else. It is a lot easier than hitting <FCTN=> and switching disks all the time!

Best of all, the only limitation to what you can do with F'WEB is your own imagination!

RAMBLING BYTES

By: Mack Jones

Those of you who saw fit to miss the May meeting at Herman's house will probably never know just how much you missed. If ever you wondered how the modem came about and what the trials of the early attempts at data transmission consisted of, now may never know. But at least 6 of us will! What a grand meeting it was. I sure learned quite a bit I never knew about the modem, and I am sure some day, some of it will pay off. At least I got to see what the SOURCE and COMPUSERVE looks like! Never been able to afford it before.

Bob and I were talking the other day by phone, and the subject of the lack of interest in the club came up. I really don't know the reason and neither does Bob. It seems this problem is not ours alone. In reading other newsletters, other clubs across the country are having the same problems as we are. I don't know whether the spring weather is the cause, or if

it is the fact that we just haven't hit on what the members want.

It is a fact that a club can not exist unless the members are there to take an interest in what is going on. Also, 4 or 5 can not do it all, and that is what all clubs boil down to. A member will decided to take a certain roll and before he or she knows it, more and more will be expected of them. The others just want to sit back and enjoy the free ride.

I have said once before and I will say it again, you just don't realize how fortunate we are here in Greensboro to have a steady meeting place. Some clubs have to meet in Schools, Librarys, and Churches. Some even in members homes. That alone gives us an advantage over one problem. We can store our material there and not have to carry it back and forth. Enough soap-boxing. We need you so try to start back with us at the June meet. After all, it's only one night a month and you are bound to find something to enjoy.

We are getting nice stuff from Australia via Bob Carmany, and most is going on the ROS board for us. You have no excuse now not to be able to download just about any type file you have ever wanted. I am trying to get the newsletter out a little later so it will be fresh in your mind and maybe you won't forget the meeting. Come on down, I bet you will have a good time!

FORTH TUTORIALS

BY: Lutz Winkler

FORTH TO YOU, TOO! SESSION 4

You now have a system disk which autoboots the options you selected and before you do anything else, again: MAKE A BACKUP DISK! Believe me, this is no idle chatter. I have messed up quite a few disks with some ill-defined or -used word. While you are in the learning stage, making a backup is perhaps as important as getting familiar with Forth words and how they work. Take it from one who has spent a lot of time starting over (and over). Unlike TI-WRITER, Forth does not have an OOPS!, only a Z!###. I use two drives with my write-protected system disk in drive 1 and do my programming on a disk in drive 2.

If you work with one disk drive, your best bet is to get a copy of Doug Smith's "3-PASS DISK COPIER". This clever 2-screen program was published in the June 84 issue of Miller's SMART PROGRAMMER. It's handy even if you have 2 drives, because it shortens the time required to copy a Forth disk. With 2 drives you can also use the word FORTH-COPY (provided you booted -COPY). The disk to be copied must be in drive 2 and the blank disk in 1. It takes approximately 1 sec/screen or a minute and a half to copy a disk. Since it is done a screen at a time your drives get a good workout. But be sure to initialize the disk first with n FORMAT-DISK, where n is the number of the drive you put the blank disk in. However, remember that Forth starts counting with 0 (zero). What you would normally call drive 1 is 0, 2 is 1, etc. 1 FORMAT-DISK initializes the disk in drive 2.

In the last session I touched briefly on the SWCH and UNSWCH words of the -PRINT option. I know you'll have no trouble remembering them. SWCH n LIST UNSWCH will soon be as familiar to you as n EDIT. Try SWCH 3 LIST UNSWCH. If you didn't forget to turn your printer on you got a listing of screen #3. This is much easier to read then 3 LIST, which puts the listing on your display, because the lines are not broken. Then there are TRIAD and TRIADS which are similar to LIST but have SWCH/UNSWCH built in. 31 TRIAD first looks for the next lower number than the one you gave which is divisible by three and then prints 3 screens. SWCH and UNSWCH are built in since you could not use TRIAD as a display command. TRIADS works the same way, except you specify a range of screens (n1 n2 TRIADS). It will print as many triads as are needed to cover the range you specified. Tricky, eh? But very neat: 3 screens per page. And one more: INDEX. It does not include SWCH/UNSWCH because it can be used on the display, too. But it is one of my favorites. n1 n2 INDEX lists the 0 (zero) lines of the screens from n1 to n2. (SWCH 0 89 INDEX UNSWCH will get you a printed index of your whole FORTH disk.) Like LIST it is really better in printed form, because of the display being limited to 40 columns which makes it harder to read and digest.

When you start programming, keep a printed INDEX of your disk on hand and make sure you use the Forth convention of identifying your screens on line zero. I prefer to not only put a program name on line 0 but to include the needed load option(s) as well. For example:

SCR 28
(TEXT MODE SCREEN-DUMP -PRINT)

```
HEX
: SCREEN-DUMP SWCH
      03C0 00 DD I DUP 28 MOD 0=
      IF CR THEN VSBR EMIT
      LOOP CR UNSWCH ;
DECIMAL
```

I wrote this little routine to save my trials and tribulations before they scrolled off the display when working in the interactive mode. One of the beauties of Forth is the opportunity to try definitions from the keyboard in the so-called I/A mode. You can define a word (: ----- ;) and, before you use it in a program, see if it will do what you had in mind. The problem is, as you keep goofing and trying again, they disappear off the top of your display. Unless your memory is a lot better than mine, you will find SCREEN-DUMP a helpful addition to your Forth vocabulary. Since we either don't need -64Support or made it part of our autoboot, I saved this routine on scr #28, then added 28 LOAD on scr #3. SCREEN-DUMP is booted along with the autoboot and available anytime I need it.

RECAP:

1. Make a backup of your working autoboot disk
2. -PRINT is one of the most useful load options. It provides some new words and makes some others more useful than they already are (LIST & INDEX)
3. Save and load the SCREEN-DUMP routine. It will help you by putting your experiments on paper for reference.

Get busy with Chapters 4 through 6 of STARTING FORTH. (You can skip 3 because the TI editor is much better than what Brodie describes.)

TI-WRITER

By: Jack Sughrue

You're excited! At last you have a word processor. You open the package and see a cartridge, a disk, a very large notebook. All of a sudden the whole thing seems rather overwhelming. "I'll never be able to learn all this stuff. I thought it was going to be like a typewriter. You just plug it in and type."

If you felt that way when you opened the package, join the club. I felt that way and, with the exception of a few techies who thrive on that sort of thing, so did most people.

Computer word processors for most people tend to be rather overwhelming when first encountered.

No sweat.

The T.I. Writer, besides having all the marvelous features contained in processors costing as much as five times its price, is a relatively easy and very powerful tool (or toy, depending upon your perspective).

Let's skip the manual for a while. Instead, let's dip write in and print something we've typed (the purpose of a word processor, after all).

Turn on your P-Box. Turn on your monitor. Insert the T.I.Writer cartridge into the computer. Turn on the computer. Turn on your printer. Place the T.I.Writer disk into your drive. Press enter to move from the logo screen. Press <2> for T.I.Writer. Press <2> again for the English version. And we're all set!

Now, we're going to do a couple things without explanation just to get you started. Once you see HOW to do these things, we'll come back to explain these choices to you.

First, type <T>. This is for TABS. You'll see a line of numbers beginning with L. L is the Left Margin. Leave. Move your cursor with the FCTN/S-combination to the first letter T. When you get there, change it to an I. This is an automatic Indentation. Then continue with your cursor beyond the Number 2 and beyond the Number 3 until you reach the 8 after the Number 3. Type an R. This, obviously, will be your (temporary) Right Margin. This will let you view all of your text right on the screen. We can quickly and very easily (in the same way you just made these changes) change the margins before we print.

We will not use the Formatter for our first few print jobs. No need.

Press <Enter>.

You are in the Edit mode. This is the mode on all word processors where you do the typing.

On the left you'll see Line Numbers. Let's get rid of them by pressing the FCTN/Zero combo.

At this point, if you haven't substituted your T.I.Writer Strip for the regular Command Strip above the number keys, do so.

That's better.

Now we can see the processes we'll need to use now and then. (The process we just did, for example, is defined as "LINE #'s" on the strip. To get them back just press FCTN/Zero again. Many of the commands go in and out like that. It's called Toggling.)

When you look at the strip you can see that some of the functions are exactly the same for BASIC (1-Delete Character; 2-Insert Character; 3-Delete Line; etc.), but most are new.

We also finally get to use that Control Key, which usually sits doing nothing in BASIC. The Red Dot Strip on the top row is a Control Command Strip. The Grey Dot Strip on the bottom row is the Function Command Strip.

Forget all that for now.

Press the enter key a few times. This will jump down a few lines, indenting along the way.

Still, you'll see the annoying "End of File Version 1.0" at the bottom. That's just there to let you know where your text ends. After a while you'll forget it's there. But I wish T.I. had used asterisks instead.

Ah, well.

Take the Alpha Lock Key off. Use the Shift Key to make caps, just as you would on a typewriter, and begin typing.

If you can't think of anything to write, type what you had for breakfast or lunch. JUST KEEP TYPING. DO NOT PRESS ENTER AS YOU WOULD IF YOU WERE ENTERING LINES IN BASIC. The T.I.Writer word-wraps automatically.

Type and type and type until you have 10 or 20 lines. And stop.

See the command on the Grey Dot Strip above #9 Key? THIS IS THE BIGGIE! The Command/EscapE Key on all word processors is the most important. It gets you back to the Command Menu.

Press FCTN/9.

Now we're back up to where we started with the cursor blinking under the Tabs statement.

This time type PF for Print File. And press <Enter>.

When it asks for Device, type <PIO> or RS232, if you're not using a Parallel printer. Press <Enter>.

What you've typed will print out immediately in the narrow screen width you've labbed.

Fast, eh?

Easy, too.

But you don't want that width, and you do want to learn how to do some of the neat things this processor has to offer.

My Old Pappy used to say, "Patience is a virtue that never can hurtue."

And you are back to exactly where you left off. With the cursor exactly where you ended. All commands when completed return you right to the exact location you finished. This is a powerful feature, as you'll soon learn.

Let's do one more thing before we get out of this "Get You Started On Your Processor" activity.

Press FCTN/9 again.

Then type T.

Where the I is change it to an L. Change the next T to an I. Then run the cursor through all the "Windows" until you get to the very end. Then back up to the 7 and type R and press <Enter>. When you get back to your text, run the cursor up to the first word in your text by using the FCTN/(arrow keys). Then press CTRL/2. This will Reformat your text into the new width. It'll do it right on the screen, creating those weird but marvelous "windows," and will do the same for your printer.

Let's try it.

FCTN/9 (the Command/Escape).

Type PF.

Now the PIO will appear with the cursor. Just press <Enter> and the printing will start immediately.

If you never learn another thing about your T.I.Writer, you can at least use it as a typewriter (and making those easy corrections word processors are most famous for).

You'll find, now that you are typing and printing with ease, that the manual will begin to make some sense. But the important thing is "You have started!"

For now, let's get out of the processor. FCTN/9 again. Type Q for Quit. Type E for Exit. YOUR MASTERPIECE WILL BE LOST FROM THE COMPUTER MEMORY, but you have a printed copy of it in two forms, anyway.

If you had wanted to save the file to disk, you would simply go back to the Command Mode with FCTN/9, type SF (for Save File). Then you would type DSK1.FILENAME (FILENAME being whatever YOU name it in 10 letters or less without spaces, commas, or periods). The next time you load T.I.WRITER you could type LF (for Load File) if you wanted this file again. Then type DSK1.FILENAME and your file will load back up automatically. CAUTION: Each file name SAVED on a disk must have a DIFFERENT filename. You will overwrite any file of the same name on the same disk.

Anyway, experiment a bit. Once you've used the T.I.WRITER for a while, you'll probably want to graduate to enhanced and more user-friendly versions. Some are commercial, some public domain. Some Fairware (You pay a modest sum if you decide to use it.) Examples of the last: BA WRITER (from Italy), TK WRITER from America, and FUNLWRITER (and the further updated FUNLPLUS!) from Australia (and Canada and America). They are all excellent and are superior to their excellent grandfather discussed in this article.

Check with your user group for these disks. I use exclusively the FUNLPLUS! update of FUNLWRITER, but any of the above would greatly increase the power of an already-powerful word processor.

A great part of the fun with a processor is discovering what it can do for you. Stay with it. Put in a half-hour a day for a month. After that, you will be changed for life. Never will you use a dinosaur (I mean, "typewriter") again.

MISC BYTES

By Bob Carmany

Over the past year there have been a number of programs that have appeared in columns throughout the newsletter. Very few of them were written with the idea of saving bytes of memory and optimizing code. Usually, there isn't much incentive to maximize memory usage. After all, how many of you have ever gotten a "memory full" message with XB and 32K (or more) attached?

Besides simply conserving bytes, compact code can have an added effect -- the program will run quicker and more efficiently. That can be a definite advantage when you rate the performance of that "revolutionary" application that you just finished writing.

Tony McGovern's fine set of XB tutorials explain how to conserve bytes of memory by replacing variables with constants, using subroutines to replace frequently used code, etc. There are, however, some more subtle methods for conserving memory that will actually speed up program execution.

One of the first things that I learned when I started programming in XB was to squeeze as many statements as I could on each program line. This saves memory by eliminating line numbers and speeds execution by similarly eliminating the need for the program to process extra lines of code.

By looking at what XB does when you press <ENTER>, we can easily see one way to conserve space and add a few more characters in each line. It doesn't matter if you have bothered to add a space between the last character in a statement and the statement separator (ie. "::"). When you press <ENTER>, XB automatically adds the space for you! So, when entering the code for multi-statement lines, there is no need to space between the statement and the double colon ("::") -- you can get more characters in each line that way.

Another way to fill up program lines to their full potential is to take advantage of <FCTN-8> (REDD) when you are typing in your lines of code. In one recent publication, there was a plaintive "letter to the editor" complaining that the program

lines in the magazine were too long and wouldn't fit the same way that they were listed. Hogwash!!

Try this with a long bit of text --- or more simply, just do the following:

Enter XB and type in "NUM 100".

When the line number appears, type in "DISPLAY AT(1,1):"

From this point, just hit the 'X' key until you get that obnoxious "honk" at the end of line 4.

Press <ENTER>. You will get an error message. Then press <FCTN-8> and the line that you just typed in will re-appear.

Use the cursor keys to go to the last 'X' and continue typing --- you now have another half line available!

That is one more subtle way to get the maximum use out of XB. It is just of of the things that TI "forgot" to tell us. It works every time!

Here are some "PEEKs" and "LOADs" that might be of interest to you.

```
CALL PEEK(8194,A,B,C,D)::(C-A)6+
D-B
```

Free space in low memory after CALL INIT or CALL LOAD(DSKx.xxx")

```
CALL PEEK(-31866,A,B)::A6+B- 41023
```

Free program space in high memory.

```
CALL PEEK(-31936,A,B)::A6+B-2487
```

Exact amount of free stack space while the program is running.

```
CALL LOAD(-31873,x)
```

Start printing at column x (x=3 to 30)

```
CALL LOAD(-31877,x)
```

32= Sprite coincidence, 64= 5 Sprites on a row.

```
CALL LOAD(-32187,9)
```

0 line number.

Since I have been using FUNNELWEB for its TI-Writer facility, I realised that unless you are either really enthusiastic about it or just plain bonkers, the only way that you can learn how to use TI-Writer is to wade through the rather lengthy manual. The fact is, it is almost as boring as the E/A manual (sorry guys, but it is BORING). Even the "quick reference" card isn't much help. There are a few items that aren't well documented in any case.

One of the most powerful of these is the (R)eplace(S)tring function. I first ran into it extensively when I was writing the "Forth Forum" column in our newsletter. Forth uses the "at" sign, @, quite frequently. This led to some interesting results when we ran my columns through the Formatter. The solution was to replace all of the single "@" signs with double "@@" signs.

Simply start at the beginning of the document and press <FCTN-9>. Then enter "SH" for search and "RS" for (R)eplace(s)tring. Then, using the slashes, enter:

```
/@/@/
```

The cursor will go to the first occurrence of the "@" sign that it finds (hence the reason for starting at the beginning of the document). If you wish to replace all of the "@" signs, just enter "A" and the job is done. Or, you can pick and choose by entering "Y" or "N" for each of the individual signs.

While we are on the subject of the FUNNELWEB editor, there maybe times when you would like to have all of the "CR's" and other control characters stripped out of a document as when using F'WEB to write XB programs. Although I mentioned it awhile back, here is the procedure once again. Use "PF" and then C DSKx.filename and the file will be "printed" to disk with all of the control characters ("CR's") removed.

The transliterate command was another one that gave me a real fit when I first started out using TI-Writer (and its clones). I finally figured out that not only can you use it to switch single characters, but it makes a fine MACRO command as well. For example: .TL 126:27,15,27,77 sets my printer to condensed, elite (168 characters/line) whenever the tilde "~" is encountered. There is another use for transliterate commands that you might not be aware of with single characters. For example, not all printers are able to print the "slash zero". I am fortunate that I can send mine a software command to do so but not everyone can. There is an easy way out with transliterate commands, though. Let's use the tilde again and type in: .TL 126,48,8,47. Now, when the tilde is encountered, your printer will print "0" (char 48), backspace (char 8), and then print the slash (char 47) over the zero making an admirable "slash zero".

There is only one restriction when using the "dot" commands. They must be at the beginning of the line. If you use more than one, you can separate them with a semi-colon (ex. .FI;AD;LM 4). By using this format, you can combine the formatting commands in one line. Remember to use a carriage return ("CR") after the last one.

The fact that the Formatter uses the period to denote a formatting command can lead to some peculiar problems. For example, if a line of text begins with a period, the Formatter will ignore it because it thinks that it has encountered a formatting command. For that reason, be careful when you switch from the Editor to the Formatter to print out documents. Generally, this isn't a serious problem because "word-wrap" will take care of the problem for you unless you put a space between the last letter in a word and the period.

This was hardly a course in using a word processor but there are shorter versions of the TI-Writer manual available. One that comes to mind is the tutorial written by Dick Altman of San Francisco (mentioned in F'WEB docs) and the manual from Dr. Bill Browning, 7541 Jersey Avenue North, Brooklyn Park, MN 55428 for \$6.50 (US).

Well, I'm rapidly getting a "Buffer Full" message and I'll close until next month. . . .

SWAP SHOP

Last month we allocated space for you to advertise anything you have for sale or swap, or anything that you are looking for. We will try to continue this space, but everyone's help is needed to keep it alive and interesting. Anything you want to advertise, please give to George von Seth - in note form with name and phone number.

At issue time, we have the following:

TI-MODEM W/CABLES.....\$35.00

ASSORTED CARTRIDGES (GAMES,ETC).....Priced Accordingly

WANTED: Standard Parallel Printer Cable (Bob Carmany)