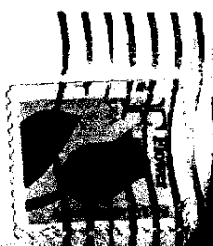




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NEWSNET99ER

Newsletter of the NET99ER TI 99/4a
 & Geneve 9640 Computer Users Group

VOL 9 NUM 4

April 1991

Next Meeting:
 Saturday
 May 4th

9:30 AM at the
 NRH Community Center
 Loop 820 at Rufe Snow Dr.

Club Officers

Barbara Massey	President
Jane Crosson	Vice Pres
Lee DeForest	Treasurer
Tom Collins	Secretary
Barbara Massey	NL Editor
Tom Collins	BBS SysOp
Gary Owens	BBS SysOp
Jeff Drinan	Librarian
Bill Duncan	M/S Chrmn

Call the **SUPERNET BBS**
 2400/1200/300 bps **457-7043**
 7E1 - 24 hours

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 the views of the NET99ERS User Group.
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 any way with Texas Instruments Inc

—BAM'S RABBLES—

Those who were unable to attend the picnic this month missed out on a good time. There was plenty of food for everyone. Jumbo hot dogs with all the trimmings including chili and cheese. Jo Nell brought a delicious potato salad that we had with our beans and cheese nachos. Jim Lesher brought a chocolate lovers chocolate cake, so for dessert we pigged out on chocolate cake and on chocolate pudding. Besides the good eats, there was plenty of good camaraderie. Even Mother Nature helped out by giving us a perfect day.

Supposedly the program is out for the new digitizer program for the 9640. Also there is word out that the program that uses the tape streamer backup is out for use with the HFDC. And, supposedly, someone has written a program that enables a light pen to be used with the 9640. An up and coming item of interest: another company is in the progress of developing a program that will enable the use of a scanner. Unfortunately, this is just for the 9640.

Thanks to Dr. James, my computer system is up and running again. I had been down and out for almost a whole month. The breakdown was my fault this time. Those of you who have witnessed my "touch" during the meetings will understand. Talk about withdrawal pains!!! Thank goodness my daughter's system was still working. This month I hope to have a demo of how to set up values using the samples I had before.

Our next meeting is Saturday, May 4th, at the North Richland Hills Community Center, Rufe Snow Road and 820. We start at 9:30 am - hope to see you there!***BAM***

—SysOp's RAMblings—

Don't know if it is due to Spring Fever or not, but the action on the BBS is down. Dust off your modem and give the BBS a call. It is open 24 hours a day, 7 days a week! Call 457-7043, 7E1, 310/1200/2400 bps for a good time!

—MINUTES OF NET99er MEETING of April 6, 1991—

The meeting was opened at 9:39 by the president Barbara Massey, with 14 members present. The previous minutes and treasury report were read and accepted. James Crosson then informed the club that NYARC is now shipping the HFDC with only a payment being the required action, and that there are several changes to the card (to be discussed later). The HFDC from EDI has now been released, the problems with chip suppliers being cleared up. The EDI HFDC is only TI-99/4a compatible. The prices for each card now stands at \$225 (as of this printing). James then described the purchase of hardware using club funds that was previously owned by past PIUG president and member Jim Louis.

The picnic was discussed, all plans have been confirmed, and directions to the location were described by James.

Jim Lesher then showed us how to use the little known feature of DW-1000 to write the disk catalog back to the disk in DV80 format. His second demo was a program that redefined the chars in the printer (Gemini 10X only), in Old English font. Jim carried on the demo handwagon by running a program that did permutations - for word puzzle fanciers, and his final demo was TASS.

James demo-ed the DOJ - Graphics Designer by D.Rose. A short auction of the leftover hardware from the Jim Louis systems was held and a buy sell and swap session followed.

After the break, Tom Collins did a demo of PagePro. The meeting ended shortly thereafter.***Tom Collins - Secretary***

—TREASURY REPORT—

We started the month with \$731.36 and had a deposit of \$539.82. Total expenses for the month were \$316.20, leaving the club with a balance of \$954.98. ** Lee De Forest - Treasurer**

—RENEWALS DUE—

The members who need to renew their membership in April are: Charlie Bathman, Peter Rokkas, Lou Stone, and Jo Nell Thompson. Please be sure to check your address label, if your membership expiration date is incorrect please let me know.

I want to thank all of those who have renewed. However, recently we have had to drop quite a few members who were over three months past due. If you are unable to attend a meeting, you may send your \$20.00 membership fee to NET99er NCOG, c/o Bill Duncan, PO Box 534, Hurst, Texas 76053.

Also, be sure to check with Lee De Forest for your expiration date of your MICROpendium subscription.

—TI-WRITER—

by Stan Katzman

PART 7

Well now let's discuss "A Moving Experience" (TI Writer Manual, page 36). Move (M) is a command that allows me to move blocks of text from one place in the document to another.

This command uses the line numbers also so it might be more convenient if there is a printed copy of the document with the line number printed also. (This was discussed earlier; L PIO.)

This is kind of a complicated process so let's start. First isolate the block of text you want to move. You do this by placing the cursor at the start of the text you want to move and then enter "Ins Char" (Fctn 2) and split the line, then do the same for the end of the text. Now place the cursor where you want the text to be moved and enter "Ins Char" again. (At this point it might be a good idea to print out the document with the line numbers.) Now go to the Command Mode and enter L. At this point you will see "Move, Copy, Delete, Showlines:", now enter M. At this point you will see "MOVE start line, stop line, after line:". Now you enter the line number of the start of the block of material you want to move, a space, the line number at the end of the text you want to move, a space, and the line number where you want the text block to be moved to. (If you remember they were defined by the "Ins Char" marker.) Now reformat the text accordingly and you have moved the text to where you wanted. There is a minor catch to this and that is you cannot have a real full text buffer because this text movement uses some memory while things are being moved.

This does not complete all the possible things that you can do in the Editor but I

think that they are the most important. If we can master these (when we need them) then I feel that the rest can be picked up just by reading the TI Writer Manual. This I feel is a good word processing program and to the best of my knowledge the only thing I would change in the Edit mode is to add a permanent display at the top or bottom of the screen showing the margin scale and their settings. Ed. Note: is included in PannelWeb 4.0.

This is a fairly short session. The next time we will start talking about the Text Formatter.

—USING A MODEM—

by Dick Berry

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This fourth, and final, episode in the modem series will be devoted to a variety of ways for expanding your modem usage beyond those of swapping with friends and calling local BBSes.

Several national networks exist. The two that I regularly access are Compu-Serve and Genie. Both are accessed via a local call from Columbus and other major US cities. The same is true of Delphi*, which I have not yet tried. All three require a start-up fee, usually including a large and comprehensive manual, ranging between ten and thirty dollars. Both Compu-Serve and Genie charge only for the time actually used; Delphi charges a monthly membership fee that includes an hour of usage time.

What do these networks offer? For a variety of computers, including the 99/41 and Geneve they offer downloads, information files (text) and RTC's. These latter are real-time conferences, pre-scheduled events that attract big-name programmers and covers and slakers for the particular computer. Often during these conferences participants leak tidbits of hitherto-unknown information about new products and/or updated versions of older ones.

Besides the computer-specific items already described, these networks offer online encyclopedias (it's midnight, the kids' term papers are due tomorrow? -- no problem!), information and files for special interests such as travel, photography, genealogy, graphics, health and fitness, help with your computer software applications, investments, and many others. One real plus is the capability of getting and receiving messages from friends and others across the nation and sometimes the world for no additional charge. Shopping by modem is also available -- a boon, I would think, to people living in remote areas, although these latter would probably pay long-distance rates to the nearest city hub for their particular network.

You don't have any hobbies or interests in the areas mentioned and would probably never use the variety of services offered? But you MIGHT like to communicate with people across great distances? There are still a couple of ways you can go. One is by accessing either IC-Pursuit or Starlink. Both charges a flat monthly rate that permits a specified number of hours of connect time. Additional time is available for an additional fee. You access computer BBSes in a variety of areas specifically covered by the company to which you subscribe. It is very interesting to chat with other SysOps, get and receive messages from members of other clubs or just people who call in, and read public messages that often reflect peoples' feelings about national and international policies and crises, entertainment personalities, etc. Personal information about the people you contact or others of their acquaintance can forge a

bond between you. And, of course, if the boards you call are of the same type computer as the one you are using, you can upload and download. In all cases you can read, upload and download text files, and send and receive messages.

Another option for those who don't want to try Compu-Serve and the others of its type, and probably much less expensive than the two options explained in the paragraph above, is to connect with a local BBS that has links to a national network, so that you can still communicate widely across great distances. I have not tried any of these personally, so you will have to get on an appropriate BBS and try this for yourself. It may be that in some cases, a slight charge applies for the use of the network. The two types of which I am aware are Fido-Net on boards running on IBM or clones, and another available through Apple boards. Atari boards may also offer such a system. Try downloading (or run off to your printer) the local BBS list from the Spirit of '99 BBS (614-261-3412) or Chuck's BBS (614-268-1994) and try calling several of these boards. You should be able to get complete details online for accessing these special services.

I hope that you have enjoyed, and in some measure profited from, this series. If you have questions, you may address them to me in care of this newsletter.

* For detailed information concerning Delphi, see NTCROpendium, August 1990, page 17. For startup kits for either Genie or Compu-Serve, contact most computer sales outlets or call the number listed in the yellow pages of your local phone directory.

—THE OTHER GUYS vs TI-99/4A—

by Richard Lynn Gilbertson

Little to most of us know just what we have in this TI-99/4A. So it made sense to write about it. First off just what do these other guys have, well more memory and a faster processor. They also have fantastically huge program packages to do their work. They have hundreds of companies with support lines and so many different versions of the same machines and software too, that it quite boggles the mind to count them. The other guys have years of major research invested into every software package and so many different operating systems for disk and processing data that it would take several books just to list the names.

OK, what does the TI-99/4A have to compete with that? Well, hold on to your hat, the 99 does have several things and none of these are by any means minor.

First off lets get into a little history. When one of the other guys store data onto a disk like say "STORE THIS" what you will find on the disk is "STORE THIS crlf". Now the "crlf" means it's universal among the other guys for Carriage Return and Line Feed. So every line of data on the disk has to have this at the end: "crlf" to tell the computer that this is the end of the string of data. Now the 99 has a simpler approach, "01STORE THIS" is how the 99 does the same thing. The "0A" stands for 10 in the hexadecimal and you can see being at the front instead of at the rear of the string means you don't have to read the whole line to see how long it is. The other guys have to load the whole line and make the computer count how long it is. If you are searching a disk you can see why it takes so long for the other guy.

The history of why that is comes from the concept the other guys system uses which was conceived in 1953. The 99 uses a concept from 1975. And yes, the other guys have not changed because if they did, all the software written would have to be totally

re-written. Also forget them doing it any time soon. I should also mention that this system of ours is already being used on newer main frames.

Today I was asked if the 99 was compatible with the other guy and as usual was quite insulted. Let me show you why. Go ahead and ask another guy when was the last time he got out his Soldering Iron and added something unique to his system. First off he will look at you like you are truly crazy. Then he will ask "What do you mean unique?!"

Say "Unique like an interrupt switch to halt everything and do something else previously loaded. Or just stop what you are doing and do nothing. Or do a total reset and start over." He will reply "Oh yeah, I can do that last one.", and he is right, he can only do the last one. His software has to do the others, the 99 is already built for those and doesn't care if hardware or software causes it to happen. Or ask the other guy to load and run his very best Telecommunications, Word Processor, Disk Manager, and Assembly Compiler from one disk without changing disks. Honestly we will say "You can't get all that on one disk!", reply "really! I can do it on nine, and still have room for almost a third more."

Also mention that most of the other guys you've shown your 99 to really love your telecommunications program. (Telco)

How about Operating Systems? The other guy on most of them has to load one before he can do anything. First off what are the advantages of this? One is for a particular application, this will allow you to have the fastest program loaded possible, and the second is it will be as small as possible for the application. Disadvantages? History should be explained now as the advantages are distorted. Back in 1950 the concept of loading a new Operating System to speed things up was the best solution to lack of memory. Also it had the other advantages mentioned and it made sure the system was running at peak ability. But that is also where all the trouble started. You see, if you want to run something else you'll load it someplace that is already being used. This means you will have to load a program that moves it out of the way, so you can load something else, then you can load the other program.

Does it require much thought to see it is similar to digging a hole, filling it with dirt from another hole so you can re-dig the original hole? That is not even without mentioning the fact that the other guy may on some systems have as many as three types of Operating Systems, and they are not compatible with each other even though they are all written for the same computer.

So the 99 doesn't have a problem of crashing while loading the third program because it is too large. It knows the 2nd program used all the space. The 99 uses what's called Relocatable Code, which means it just loads where there is space left, and knows how much memory is left. This is Artificial Intelligence. The 99 does not have to ruin everything in memory to see there is a problem, the other guy has to reboot from scratch.

Expansion of the system over time on the other guy also requires a history lesson. For lack of a better term we will say the other guy has a "HARD CODED" system. I got that term from a Computer Science Professor as he coined it on the air. Hard coded means that you can't run any programs for the area dedicated to the disks or the RS232 or other peripherals. You can't load anything there or even move anything there without special hardware and software. The 99 only has one Hard Coded area, the operating

system. The other guy has several and can't move them to another location, remember they are Hard coded (physically located by hardware).

Let us say we want to add 1 Meg of memory to a fully expanded system the other guy has. Sorry, no can do. Hard Coded. For the 99 that is no problem as it can without any modification at all talk to 128 devices, so just make it a device and add it on. An example is the 192K Video Display Processor (99)8 added to the 99. It can be upgraded and increased in size also. And the GRAM/GROM port for cartridges can talk to 640K of GRAM/GROM but turned into a device could be expanded to an unbelievable 4095 Meg or 4 Gigabytes. This is without even mentioning the RAVE Card which is an other guy approach to expansion, but that is only 3.5 Meg maximum for the 99.

Five years from now, I'll have my TI-99/4A and will still be adding devices and Cards to it. The other guy will have gone through two systems by then just to stay current with expansions. I mentioned one thing the Professor said. He also said that current Mini and Micro computers are similar to shoot-and-throw-away cameras.

The Tania, 990/10, TI-99/4A, and NIT are the only Memory to Memory transfer, Memory Mapped memory, and Memory to Memory Architecture computers ever built. So I don't think he knew about the TI-99/4A or it's relatives. All the rest are all like the "Hard Coded" machines he mentioned. Why do you suppose they have to replace the mother board for the simplest upgrade? 1950's concepts in the 1990's!! Does the other guy really have that much on the TI-99/4A? We shall see, we shall see!

—CEOTICS2/26/88—

by Jim Leshner

CEOTICS 11/26/88 SUPER COMPUTERS

The Cutting Edge Of Technology In Computer Science: Supercomputers today can do a calculation in one second, what the Supercomputer of 1940 would have taken a year. The definition of a Supercomputer is the most powerful computer at any given moment. At one point in history the alacus was the Supercomputer, then Pascal's adding machine, then Babbage's Difference Machine. In 1913 it was Harvards MARK I, known as the IBM automatic sequence controlled calculator. It was 51 feet long, 8 feet high, weighed 5 tons, contained 500 miles of wire, 750,000 components and 3000 relays. Today, Cray's CYBER 205 checks in at about 400 megabits per sec. NASA is looking for a computer that will run at 10 gigabits or 10,000,000,000 / sec.

From 1943 to 1988 computers have advanced in power one million times. The average human brain has increased imperceptibly, it's beginning to be scary.

—NEW-AGE/99—

by JACK SUXHRUE

Box 419, East Douglas, WA 01516

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CONPRODINE, Part One

Okay, I've been hearing about the JIFFY CLRD and ARTIST PRINT SHOP and JIFFY FLYER and GIANT ARTIST POSTERS for some time now, but I just never got around to demoing the materials for NEW-AGE/99! reviews. Not because I'm unfamiliar with the work of CONPRODINE owner Rodger Merritt. On the contrary, I own and use and thoroughly enjoy PICTURE IT and PRINT IT. They are two superb graphics/text packages that most fliers

could not want to be without once they got using them regularly (particularly the handy and very professional disk catalog printer program).

Sister Pat Taylor of Dulque, Iowa, has been the leading fan of COMPRODINE materials in the world the past few years. When I was in for repair last year following an accident, Sr. Pat and her contingent of TIing nuns at the hospital where she lives inundated me with unique and colorful "get well" cards and banners and signs. They also sent me a nice gift of a package of delightful greeting cards for all occasions. Everything was made on the TI with COMPRODINE software.

Now when Sr. Pat finds something useful, user friendly, and fun, it gets used and used. Her use of COMPRODINE goodies is the best review there is. But I've been lax in my reviewer duties.

So it was with great pleasure when Rodger Merritt called me from his home in California to see if I'd be interested in demoing some COMPRODINE software at the Boston Fayuh.

"YES! YES! YES!" I screamed before he changed his mind.

I had never met lodger, so he didn't know what kind of TI maniac he entrusted his masterpieces with. Phil Townsend of the Kawartha group in Canada knew I'd be at the Boston shindig and recommended me. (It's obvious that Phil, a fellow elementary teacher, had never met me, either.) Anyway, Rodger ran up a two-hour phone bill explaining each of the pieces of software.

I could hardly contain myself waiting for the mail the next few days.

Then ... THE DAY! When I came home from work, my wife informed me that the package had arrived from COMPRODINE. She did require my attendance at the dinner table under penalties of Doom, Death and Destruction (though not necessarily in that order). So I complied with She Who Must Be Obeyed and waited impatiently to open the treasures until after cleanup.

I'm not sure my little fifth-graders didn't suffer much the next day because of the Merritt fiend.

I took my package to my Computer Room, opened it, and played with the new toys - er, tools, I mean - until almost 4 AM. As I have to get up at 5 to go to work, I didn't get much of a beauty rest. (I was a real beauty at work the next day, I can tell you.) But did not learn a lesson. I was at it again when I got home; once again to the wee hours (this time 2 AM). But what fun!

Fortunately, I already owned PRINT IT and PICTURE IT and all of the Great Bales Software in the package also distributed by COMPRODINE; JOYPRINT 99, JOYPAINT PAL, CHIP ART, EXTENDED BUSINESS GRAPHS, BANNERS 99, and the super! CERTIFICATE 99 with its companions). Otherwise, I'd still be at it.

Because I'd like to spend next month's "Part Two" article entirely on the graphics' programs for which COMPRODINE is justifiably famous (ARTIST PRINT SHOP, JIFFY CARD and FLYER (including color versions), FORM SHOP, GIANT ARTIST POSTERS, and all the various companions). I'm going to use the rest of this article to examine a couple of COMPRODINE's other programs: LIVING TOMB and WAR ZONE.

These are games by a decidedly fiendish 14-year old lad, Quinton Torminen. Because both have permanent scoring systems built in (which I ♥), I'd suggest making backup copies and store the originals. Actually, I'd suggest you do that with all COMPRODINE materials, as they are unprotected.

These first auto-load assembly games are so good, so professional, that I have a hard time picturing anyone so young devising them.

WAR ZONE (\$10), a futuristic arcade game, is almost as fascinating for the instantaneous status and scoring boxes along the right side of the screen as the game itself. Not quite. But they are well designed and ingenious, if you have time to view them. ("P" gives you pause when you need it.) Mostly, your time will be taken up trying to get your M5 through 6 levels (each a 2500-mile flight over rough terrain - rough, because you are being attacked in 5 different ways by 5 different enemy vehicles) to the enemy bases which must be destroyed. This is no easy task. However, you will be rewarded with an extra craft added to your one-at-a-time fleet for every 1000 miles you survive (2 levels). There are color and attack pattern changes as you move over new terrain. The enemy gets more vicious the better (farther) you get.

Though you have unlimited firepower (including bombs for the land vehicles), your greatest asset is maneuverability. It's one of those frantic type games that raise havoc with your blood pressure.

LIVING TOMBS (\$15), a graphic adventure, is quite different. It's a "Tunnels of Doom" type game with lots of excellent differences. (If you don't like TOD, just wait a second. LIVING TOMBS has some interesting features, including an ability to view all kinds of stats and make all kinds of smart decisions BEFORE you make a fool of yourself by getting killed.) The multi-level tomb you travel through is a series of very complex 3-dimensional mazes. This 3D aspect is neat. Unless you make a map, you will get lost. I even had to drop some items along the way (like Hansel) to make sure I could find my way back to the trap doors to get to different levels. It is rich with menued features, windows, treasures, weapons, and monsters galore. You start with dead adventurers. And then only if you slay some demonic monsters to get them.

What are you doing in this tomb? Well, an evil Alchemist from days of yore was buried here. It is his tomb. A gem of suspected power was buried here, too. A curse was put upon this land of Hyder, and though many have tried to enter the tomb and remove the evil gem to stop the curse, all have failed. Your mission, succeed.

The windowing menus, alone, are worth the price of this user-friendly, addictive, satisfying adventure. LIVING TOMBS: an excellent investment in intellectual and visceral fun. I hope Quinton continues to program for the TI.

COMPRODINE (which, by the way, stands for COMputer PROGRAMmers' DISTRIBUTION Network) is at 1949 Evergreen Ave., Fullerton, CA 92635. Ask for a catalog. Shipping and handling is \$1.50 for one item \$3.00 for two or more.

*(If you use NEW/AGE99 please put me on your exchange list.)

—A LITTLE ABOUT FAST-TEEM—

by Ed Hall

July 1990

FAST-TEEM is a terminal emulator which was released to the fairware market in 1985 by Paul Charlton. It is an assembly language program and is capable of being run from several cartridges such as the EDITOR/ASSEMBLER, MINI-MEMORY, etc. A load file for XBSIC and a program to write a default file for parameters was also included. A smaller version for Supercart use has been released which seems to have most if not all the same features; the only noticeable difference is the brevity of prompts.

FAST-TERM, once loaded, is a self-contained program in that it needs no extra files to run. Although not needed, some additional files will be used by the program if present. Upon initial load it will search for a CHARI file and if found will load an alternate character set. It will also prompt for a default settings file which can contain changes to the normal defaults (baud, parity, etc.). This file can be skipped by simply pressing ENTER at the prompt. If the default file is skipped, but the standard defaults can't be used, all necessary changes can be made by CTRL and FCTN key combinations.

Even with as much flexibility as they allow, key combinations are actually a drawback of the program. It is almost a necessity to memorize all the CTRL and FCTN key combinations to be able to use the program effectively. And even then the documentation must be close at hand for those occasions when you need to remember something not often used. Some of the more common parameters controlled by key combinations are baud, parity, log file toggle, print spooler toggle and duplex toggle. Some less common are screen colors, timer enable, serial printer support and print screen. Let's look closer at a few.

One of the features of FAST-TERM, being in concord with its name, is that baud rates from 110 up to 19200 are supported. This allows for speedy transfers between systems when connected by RS232 ports. The parity settings are not quite as flexible in that eight bits is only available with no parity; even and odd parities have seven bits. This is apparently standard but if you are trying to change the parity bits to eight you must realize that it is automatically 8 only with NONE chosen, and becomes 7 otherwise. The baud and parity settings are made by either the default file or CTRL-key presses and will scroll through their respective values.

Other key combinations are used to initialize and toggle ON/OFF a logfile, a spooler, a window back mode and print screen. If the logfile is initialized and open all incoming and outgoing screen data is sent to the logfile as well. The logfile can be any valid device to include disk or printer. A printer spooler can also be used to send all data to the printer separate from the logfile. A window back option allows review of some data which has scrolled off the top of the screen and provides a screen dump to printer while enabled.

In addition to screen text input and output three protocols are supported in various ways. The first one is XMODEM which is a common type of transfer despite the increase in popularity of newer protocols. The next is TER2 protocol which allows transferring in the mode used by the Terminal Emulator II cartridge. The third is ASCII transfer and is handled in a different way from the others. In fact, incoming and outgoing are also different. To transfer an ASCII file you open up a log file and then start the transfer at the other end. The information is displayed on the screen and placed in the log file. The log file can be any valid device to include a printer.

An ASCII file is sent by first telling FAST-TERM the name and then initiating the send routine. The file can be sent either line-by-line or continuous. If line-by-line is chosen one line is sent with each space bar press. For continuous the entire file is sent using XON/XOFF protocol which allows the receiving system to cause a pause in transmission in case the file is being sent too fast to handle.

Actually XON/XOFF is used for incoming ASCII data when logging to a file as well. When the buffer fills up FAST-TERM automatically needs a signal to suspend the other

system and other signal to restart.

The XON/XOFF characters and many other features are changeable by the default file. Changing XON/XOFF would only be necessary if connecting to a system with other than the standard characters in use. Most parameters are changeable by key strokes, but some like XON/XOFF are only available in the default file. Some others only available in the default file are key repeat timing and support for alternate RS232 cards.

One thing not found in FAST-TERM is a built-in phone dialer feature, but this as well as a macro type function can be accomplished in a couple of ways. One popular dialer method is to run a phone dialer program which in turn runs FAST-TERM after the dialing is accomplished. Another is to build an ASCII file (D/V80) with the AT commands and the macros listed and then transfer the file via the ASCII transfer routine. This works well and allows you to see prompts from the remote system during the transfer operation. Line-by-line operation is normally necessary for this function so a command can be sent for the corresponding prompt.

FAST-TERM is still readily available from several sources such as bulletin boards and user group libraries. If you do pick it up make sure the docs and default writing program are included.

—HOW TO BUY NEW FLOPPY
DISKS DRIVES—
by Richard Roseen

1. Check for quality the main mechanical parts of the drive. They should be located on a solid die cast piece of metal. In other words solid metal structure throughout as the base of the drive that holds the motors, solenoids and other movable parts. Avoid any drive put together with metal plates.

2. New drives should be sold to you in antistatic plastic wrap (usually tinted looking) and may have a fitted styrofoam container, will always be half height, never full height, at least two sided, at least capable of 360k double sided double density. 720k 80 track drives are now getting rare due to the newer 1.2meg. drives. 1.2 meg. drives can be useable at 720k. (more on that later) New 3.5" drives are 720k or 1.44 meg. They should follow the rule of die cast body as above also. Newer 3.5" drives will have a thickness much less than a half height 360k drive. Only the new Nyarc HPDC has promise of possible drivers to support 1.44meg 3.5" or 1.2meg. 5.25" use. Certain CorComp controllers have floppy disk controller chips that can handle the 1.44 meg data rate, but the device drivers who knows. No older Nyarc disk controller will be fully capable of the 1.44 meg. data rate because of the PDC chips they use. The above also pretty much applies to the use of 1.2 meg 5.25" drives. The 5.25" 1.2meg and 3.5" 1.44 meg. drives can be used for 720k storage with the epron driver support of the two Nyarc controllers; however, if disk rotation speed cannot be jumped through lack of information on the drive options, you would be forced to live with odd ball 720k format disks only readable by someone else with 720k capability and 3.5" 1.44 meg. or 5.25" 1.2meg. drives.

3. Newest drives always have a directly driven disk rotation motor. This means you will not see any belt driven disk rotation.

4. Warranties: ask what the manufacture warranty is. The warranty should be at least one year from date of purchase. Also, check to see what the seller's guarantee is

on the drive. Typically the seller's guarantee is full replacement for 30 to 90 days, in addition to the one year manufacturer's warranty. The warranty will give you plenty of time to verify that you do not have a lemon drive.

5. Get the seller's business card with address and phone. Get a receipt in which you and the seller have a copy which must contain the serial number of drives bought and date as well as the cost. If the seller's address is on the receipt clearly that will substitute the business card. These requirements are necessary for the manufacturer's warranty and so you can later find the seller or manufacturer for information. It is not always possible that the seller has info on the drive but it will not hurt to ask for data manuals, or schematics.

6. For quality look for heads mounted on assemblies that are mounted to move solidly not jerkily such as on two rails instead of one. For low mechanical noise or low clattering (increased reliability and longer life) look for solid movement of the head assembly by a stepper motor through two following examples: stepper motor that drives a screw shaft or two straps that wind on or off the stepper motor shaft and on or off of the head assembly as the heads move in either direction. Heads take the biggest beating in floppies and more often involved in alignment of a drive. An example of the stepper motor that drives screw shaft is the 3.5" 720k Chinon and Fujitsu. An example of the strap that winds on or off the stepper motor shaft and on or off the head assembly is the Mitsumi 360k 5.25" drive.

7. 3.5" drives can be hooked up bare without the 5.25" bracket with 31 pin socket IDC (insertion displacement connector) connected to the square pins on the 3.5" drive. If this is done then the odd ball but findable 4 pin 3.5" drive power connector must be used. These are odd ball because they are not the same as the 5.25" drive power connectors. These connectors do not have a polarity tabs and can make difficult getting the proper polarity or orientation of the connector to plug in. Go for the works get the 5.25" bracket and the card edge adapter board that includes standard 5.25" power connector. These adapters may have a jumper for use on PC XT or AT clones, be sure to select IT.

8. Unless you have help from a Guru or user who has successfully installed and used the same drives, then get info from the seller or manufacturer on drive selects, other jumper options or features, and resistor packs. On some new drives the resistor pack is permanently soldered to a high density logic board with a jumper to disable or enable the use of the resistor pack for installation as lesser drive or drives on the chain. If such a drive is the last drive in a chain whose other resistor packs can be removed, there is no problem.

9. Buy or at least shop for any drive or power connectors or power supplies or cases as you may or may not need depending on what you already have.

10. The least expensive power supplies, drive connectors, cables, etc. are sold by vendors selling chips and electronic parts, not by the dealers of floppy drives. The chip parts dealer will have alot of the necessary parts for homebuilt linear supplies at the lowest total cost of parts. A general list for a linear supply is a transformer, AC line cord and plug, switch, filter capacitor rated above 2200uf (micro farads), bridge rectifier or diodes, linear regulators both 5 and 12 volt.

11. Power requirements: some 3.5" drives require less than 1 amp for 5 and 12 volts. Some 3.5" drives are very low power and some require only a 5 volt supply. 3.5"

drives require the least power. New 1.25" half height drives never require more than 1 amp on 5 and 12 volt lines and can be as low 1/2 amp. on the 5 and 12 volt line. Add the amperage required for each drive for each 5 and 12 volt line to check your power supply needs for your drives. Drives can be powered separately because the 34 pin cable will carry the common logic signal ground between all drives on the the train and the computer. If buying a linear supply be sure the transformer, bridge rectifier or diodes and linear regulator exceed your amperage needs. The transformer should be at least 12.6 VAC RMS and 6.3 VAC RMS (transformers are commonly rated with RMS voltage at their secondaries).

This information was kept as general as possible so as to guide the 4A buyer. Now to buy used floppy drives could never be this informative. Anyone wishing to document their experiences with a specific drive or drives is invited to do so by attaching this general article. An archived document.

My preferences are Mitsumi drives 3.5" and 5.25" any density. These drives are the most quiet drives you will ever hear. They have a jumper block to enable/disable the resistor pack though I have not verified the identity of the jumper as of yet. Another preference are the NEC 1036 3.5" 720k drives. They are small, quiet and durably solid, and like any other 3.5" drive lightweight and low power. Also, recommend Chinon 3.5" 720k drives. These are much the same as the NEC drives except for screw shaft stepper motor and extremely low power and 5 volt only operation make it better. These drives may be the lowest power in the industry.

Copied from the Central Westchester 99ers

—THE 99/4A GETS DOWN TO BUSINESS—

by Art Byers, CW-99'ers

I was very impressed by the short demonstration that Steve Nickerson, who has a very responsible job with the County Park Commission, gave at the May meeting. It was still another way he is using his TI-99/4A computer at work. This is about the fourth time Steve has shown us his ingenuity is making the TI useful on his job.

Al Trudeau and Will Soderman have also shown us their original programs that they use for business. I too have been using the TI-99/4A for my varied businesses. To somewhat paraphrase the poet, "Let me Count the ways" the 99/4A is earning money for me:

#1: Along with my modem and terminal software such as FAST-TERM or TELCO, I use it as a dumb terminal, to access the real estate multiple listing service data base. This is a very necessary part of one of my endeavors. I gave a demo of this at a past meeting and will do it again if there are enough members who are interested.

#2: I have a "Customer" for whom I do programming at \$25.00 per hour. Believe it or not, this customer uses a full house TI, in his retail store, for a miriade of business purposes from banners and price lists, to calculating markups and printing price labels for items in the store. He uses a 1/2" x 1" or 1" x 1" pin fed label and gets lots of info on it such as count of package contents, retail list, discount retail, percent of saving for the customer, etc. At one time he even did bookkeeping on the TI but switched to a "one write" manual system at the suggestion of his accountant as the store's requirements were simple enough that a computer was not needed.

It is for this customer that I have written several programs designed to manipulate

data from DV/80 files prepared on TI- WRITER. Simple versions of these programs have appeared in previous CALL SQUIDS Newsletters. One of the programs that he finds most useful will sort up to 252 full lines of DV/80 text, reprint it in ascending order and allow for calculation of varying price columns according to quantity purchased.

I'd like to mention that he bought his TI used, complete with TI Impact Printer, IB box and all cards and cables for less than \$250. At the time he bought it, he had considered an IBM which would have cost him well over \$1800. Now, after three years, he has yet to outgrow his TI -but this is a diversion. Let's go on

13: I do mailing list maintenance for another local business. The current list is about 4000 names and growing. My 99/4A prints out mailing labels by Zip code, by classification of customer, etc., - what ever my client requires.

14: I do considerable and varied word processing. This includes not only business letters, price lists, charts, outlines, etc. but also insurance claim forms, standard contracts, leases and so on. All this as part of on-going businesses.

Surprising as it may seem, I actually do "MULTI TASKING" with my 99/41. Of course it's because I have TWO of them. <<that's a joke, son!>>. One is usually used for word processing while the other is sorting a data base or printing out labels.

My TI-99/4A not only has "paid for itself" many times over but also it continues to do so, - and that's good business!!!

—THE BIT BUCKET 9/89—

by Art Byers CW99ers

As the Walrus said in Through the Looking Glass, "The time has come to talk of any things":

Of Sices and Ships and Sealing Wax

The other day I found myself with some free time and I idly rambled through three computer software stores. Two were on Central Park Avenue not too far from the Caldor Shopping center and the third one was in Jefferson Valley. What struck me most forcibly about all three was that 85% of the displays were devoted to GAMES!! The euphemistic term used was Software for Recreation!

Now I am not talking only Nintendo. I mean for EVERY machine on the current market: Commodore, Atari, IBM and Compatibles, Apple, Macintosh. Games Games Games and more Games. - Endless supply of games, bottomless supply of games. Shoot 'em up games, Auto race games, Gambling games, Adult games, Adventure games, you name it!

Remember retail stores live and die by sales. If major space is devoted to something, this is where sales have proven they bring in the most bread and butter dollars

You can draw your own conclusions, but I will tell you what conclusions I have drawn, and they are these:

First, The modern American public is composed mostly of MUSH-BRAINS! How nice to own a \$2500 Mac or AT, complete with 40 meg hard disk, and have it mainly used for zapping invading Martians! Yich!

Second, the kids in the wealthier segments of this society still rule the roost and a major portion of the family's software dollar goes for such educational things as Super Mario Bros. or Dungeons and Dragons chapter MCMXVIII. Is it any wonder that many educators who first welcomed computers are now saying they have yet to live up to even a

small part of their potential, and many learning studies are finding little difference in test scores in schools where computers are in constant use and schools without much computer assisted learning.

What is also exceedingly distressing is the exceptionally VIOLENT cruel scenarios of the software. Is this a reflection of our society??

Parents with Mush-brains allow and encourage their mush-brain children to become even mushier mush brains!!!

Last, isn't this where we came in with the TI over six years ago? Some of the games I saw on Demo were not as good as Q-Bert, Popeye, Burgertime, Pac Man or Shamus, - all of which were put out for the 99/41. If you are going to be a mush-brain, you can be one as well or better on the old reliable TI-88/4A!

Of Cabbages and Kings

Thanks, in part, to a recent demo at one of our club meetings by Bob Cataldo, I have made a direct RS231 to RS232 connection between my PC and my TI. This enables me to exchange data files, both ways, between computers. I ported over data from Data Base II on a 180k disk on the TI to the 720k drive on my PC. Then I loaded the data into a special mailing list program I had purchased, expecting that I could fit four (TI) disks of data on to one (PC) disk.

<<Sigh>> NO WAY!! files that took up 180k of disk space on the TI filled 360k of disk space using the PC's software. I have commented before that where space is plentiful, programmers get careless. stop writing tight code and stop looking for efficient ways to use disk space. I also suspect that the TI DOS (in ROM) is much more efficient, if used properly, in the way it allocates the available disk space. I also mentioned at a recent meeting that even though the PC has 640k of memory, only about 60k is available for GW Basic programming. Talk about overhead!

If the obsolete orphan TI is a "Cabbage" and the PC is the "King", the Cabbage turns out to be just as good or better than the King for many purposes.

And Why the Sea Is Boiling Hot

Let's go back for another look at those three software stores. SuperCalc 5, the newest, latest, and supposedly best of the modern spreadsheets sold from \$450 to \$495. I saw a half a dozen different pieces of what is now called "Productivity" software selling from \$295 to \$400. This is all very well and good if you own a big business and are IN to office automation at every desk. BUT, for us plain ordinary home users who can buy (as evidenced in recent mail order advertisements) Multiplan or TI WRITER for \$15 each and TI/DATABASE for \$20, there is ample cost incentive to stay with the 99/4A. Frankly I am horrified that buying four of the major pieces of PC compatible software can equal or exceed the cost of the PC itself!!

One of the results of this is that software piracy of these expensive tools is massive over in PC world, but that's a can of worms we won't open at present. We have been through that discussion many times at meetings. To go on...

And Whether Pigs have Wings

Wys-i-wyg: (pronounced Whiz-I-Wig) Is short for "What you see is what you get". One of the real deficiencies of word processing on the 99/4A is the limit of 40 columns on the screen. Before buying my PC, I considered both the Geneve and the Dijit IVPC card in order to get 80 column word processing, but after totalling up the various costs, and considering all the problems with the 9640, the lack of 80 column software, a

stable DOS, and more, I decided to go for whole new computer. I simply felt I got more bang for the buck with a PC. I bought, new, a 640 k compatible portable PC with two 720k drives and an internal 2400 baud modem, two serial ports and a parallel port at a cost of under \$800 and that included an extra mono monitor and all cables and shipping.

I then spent \$30 for a WYS-I-WYG type of word processor where I have instant formatting on the screen as I go along. It also has a very fast 100,000 word spell checker.

The end result is that when it comes to "Productivity" (See! I can use the current computer jargon along with the rest of you guys!) I am still using the TI actively but I do most of my word processing where I have the 40 column screen - and when I get text files just the way I like them, I often port them over to the TI for things like the newsletter on disk and because the WRITER formatter has a few features and wrinkles missing from the WYS-I-WYG.

Besides!!! When I have the two computers connected and running, what a sense of achievement I gain in that I have added to the capacity and usefulness of both machines by getting them to cooperate. Let the mush-brains out there continue their 500th session of Lord of the Rings. I'm doing real computing!!!

Copied from the Central Westchester 99er's

—JUST THE FAX, MA'AM—

by Carney Minns

Want to know what modem communication could have, and may yet, become? Just look at the FAX! Only a few years ago, facsimile machines were massive, specialized pieces of machinery seldom seen outside the back rooms of Fortune 500 companies. Now you can spot fax machines just about anywhere - your dentist's office, the corner gas station, the public library - although some, like those packaged with a telephone handset, are so small and inconspicuous that they pass unnoticed. And like every other consumer electronic device, they are getting smaller almost daily. Some catalogs offer a car fax that plugs into the cigarette lighter and, who knows, we may even see the wrist fax - perfect for sending post-it notes to our friends.

Now take another look around. How many modems do you see? Even if there were one out there for every computer and terminal, it would be a small fraction of the number of fax machines. This highlights the first major advantage of the fax machine, - all you need is the fax itself and a telephone line. This would cease to be an obstacle, of course, if every home and office had a computer or terminal. Remember The Home Computer (read TI 99/44)? Since this millennium is still some ways off, perhaps we should consider the French alternative. When the French government decided, about fifteen years ago that dial-up reference service should replace printed phone books, it distributed terminals to every subscriber at below cost. Although attacked by some as a costly boondoggle at the time, this subsidized system ultimately evolved into the highly successful Minitel telecommunication network, offering not only phone number reference, but also information services of all kind, including its most highly-publicized feature, sexual chat-chat on-line.

An inspiring idea, but now that Ma Bell has been disintegrated, don't look for the U.S. government to start giving out free terminals, let alone computers, any time soon. For that matter, don't look for major private enterprises to start subsidizing the use

of terminals and computers by consumers, either. The giants of the publishing and electronic industries still have vivid memories of the great videotext debacle and can be expected to move cautiously where the retail distribution of on-line services is concerned.

And even if terminals and real home computers started sprouting everywhere like weeds, the fax machine would still have some other crucial advantages, at least temporarily. These advantages are all the things the fax doesn't have: no protocols, no stop bits, no parity, no dialing commands, and no keyboard. Just stick a piece of paper in the machine and dial a phone number. Until modem communication begins to approach this level of simplicity, its use is going to be limited to people who are at least willing to cope with a certain level of technical arcane. As an industry spokesman put it recently in a different context, most on-line systems are at best "expert-tolerant", never mind "user-friendly" (whatever the latter means). Finally, even when these obstacles are removed by a simpler, less obscure interface--and there are already on-line systems, mostly using the Macintosh that have done this--there is still the keyboard itself. Although we seem to be living in a sea of keyboards, the sad truth is that any machine, even a typewriter, that requires people to type rather than simply speak, point or insert is going to be something less than a household appliance.

So despite all this, does the modem or its successor still have a future in the emerging world of instant communications? Watch this space and find out. In the meantime, feel free to disagree.

Copied from the Central Westchester 99er's

—PROTECT YOUR COMPUTER—

by Wayne Garrison

This article deals with something often overlooked in the home; power line impurities. Though this may not be the first article you have seen on this matter, I urge you not to take this potential problem lightly for they can be disastrous for electronic equipment. Spikes and transients can appear on your power line and at the backdoor to your computer at any time. And without warning your computer can go up in smoke, or maybe you'll be lucky and only lose some important data or possibly a program you've been working on for weeks. Computers are very susceptible to electrical noise. Although lightning is the most feared, it is not the only undesirable menace that can enter your home through the electrical power lines. Voltage transients can appear on your line in the form of severe sags or surges which are sometimes caused from heavy equipment in the service area being switched on or off and rapidly changing the demand on the power company, thus triggering compensation which in turn causes power line voltage to raise and fall. Your computer's power supply has been designed to withstand a small amount of change, usually no more than +/-10% without causing any damage.

Electromotive Interference, or EMI, is another thing which your computer doesn't like. It, like the voltage surges, snakes in through your computer's power cord. EMI usually doesn't enter your electrical wiring from outside the home, but on occasion it can. Maybe a neighbor is operating a heavy duty power tool or something of that nature. More often than not it comes from something in your house. Possibly the children are staging a big stockcar rally on their slotcar set, the eldest daughter may be using her hair dryer in preparation for that oh-so important date tonight, or the wife, in these

days, maybe the hubby is running the vacuum cleaner in the hall where junior knoed over that potted plant. You may have witnessed EMI when you were watching your favorite TV show with any of the above activity going on. Electromotive Interference is not necessarily hazardous to your computer's power supply, but it can interfere with the internal workings of your computer's Central Processing Unit (CPU), or your expansion cards causing loss or alteration of important data.

The final type of electrical noise I'm going to discuss is Radio-Frequency Interference, or RFI for short. This type of noise has the least effect on your computer except in extreme cases. Your computer is more likely to cause problems on other electronic items than the other way around. Radio energy is sometimes generated and emitted by high speed electronics such as the microwave oven, computer monitor, or other computer equipment. The microwave isn't really considered high speed electronics, however it is essentially a Radio-Frequency generator. Without getting too deeply into it's theory of operation it cooks food with high frequency radio waves. This RFI is radiated and is absorbed by the electrical wiring in the room by an electrical phenomenon known as induction. There are very strict guidelines set down by the Consumer Product Safety Council governing the amount of "stray" RF they are allowed to leak off due to the fact that exposure to too high a level of this RF can be hazardous to people, but it is hard to contain 100% of it without driving the cost of the oven clear out of reach of the average consumer. Much like the antenna for your TV, the waves are floating around and they are absorbed by the metallic antenna which is made of a similar type material used to make the wiring in your home. Whalla, your house wiring is a big antenna. Too bad we can't get satellite with it -- ha-ha. But anyway, it goes through the wiring and right into electronic equipment.

At this point some may be horrified and thinking, "Oh no! What can be done to protect my poor defenseless computer from such evil?". For those of you who know little of electronics, there is an electronic device called an MOV (metal-oxide-varistor) which can help keep your computer and other electronic investments alive and kicking. MOV's can be installed in your computer power strip in just a few minutes and at little cost. You may choose to purchase one of the many types of factory made power strip spike protectors that are for sale at all computer stores, Radio Shack, and some of the major electronic appliance stores. These devices usually already contain MOV's but if you have any question about it, ask the sales consultant. These devices come in several different forms. There is one that permanently attaches to your wall outlet. There is, of course, the standard power strip variety which usually has a switch to conveniently turn off and all of your computer equipment at once, and there are the little plug in "cube" types with only one outlet. There is even one that sits under your computer monitor and has a main switch and also individual switches for each of it's 6 outlets, and if that isn't enough, it offers tilt and swivel to your monitor. Some of these items, no all, have EMI filters. These are the best. They cost a couple bucks more, but they are worth it.

You may already have a power strip, but it doesn't have spike protection. Upgrading it isn't really a big job if you know how to use a soldering gun, learned your colors well in nursery school, and want to keep your wife happy by demonstrating your true concern for saving a little money. My wife has a couple of choice lines she throws at me at high velocity when the subject of additional computer related necessities comes

up. Both the MOV's and the line filters are available from Radio Shack or your local electronics parts store. When purchasing your MOV's and filter, pay particular attention to the amount of current they will handle, especially the filter. Keep in mind that the amount of current will consist of the total of your entire system. Before undertaking this project, be sure that your power strip has sufficient room inside to accommodate the added parts. I have noticed, some power strips are rather compact in size. If so, it could still be built into a small box and attached to your power strip with screws. Install your MOV's according to the drawing below; one across the "hot" and "neutral", one from the "hot" to ground, another from the "neutral" to ground. The filter is simple to connect. Sometimes the packaging has a little drawing showing proper connection. "Hot" to "hot", "neutral" to "neutral" and be sure to ground the case. In all cases, the "hot" wire is the black one, the "neutral" is the white one, and the green is the ground wire. If you are not quite sure you understand, consult someone who has experience with electricity.

Once your power strip has been modified, you can be confident that you have taken the right steps to protect your computer from the evils that lurk on the power line. With the stormy season right around the corner, now would be a good time to look into this if you haven't already. The only thing which can't be dealt with is lightning. A spike protector can help in an electrical storm, but nothing can protect it from a direct hit. There are a few other additions to your power strip which would offer even better protection such as avalanche and/or zener diodes, but the addition of MOV's will certainly do the job in most cases. Protect your investment; protect your computer. Good luck!

*Copied from the St. Louis Bridge 3/91

