CLEVELAND AREA TI994A USER GROUPS NEWSLETTER

FEBRUARY, 1988

We have received a nice note from Ron Albright of the TI FORUM in ComputerShopper thanking us for our support and wishing us the best for the new year. To quote from one paragraph "We hope you continue to support your TI FORUM. Even More, we hope you continue to enjoy it. We wish you, the Cleveland Area 99 U.G., continued success, and each member personal prosperity and happiness in the New Year (yes, I really am writing this New Year's Day). I marvel always at your ingenuity, courage, dedication, and generosity - both with your time and your talents. It is your gifts and skills that have kept the 99/4A community alive long past the funeral arrangements were made."

Unless you read as many newsletters as I do a month, you cannot start to appreciate some of the great ideas and projects coming from our two groups. Last month's feature by Matt Andel on changing Artist Instances to work on Certificate99 probably still has Great Lakes Software in appoplexy because you are no longer tied to their products. Two more innovative articles are in this newsletter. Paul Newmeyer has built one of the first Super-Cart loaders for Forth that has appeared in any newsletter I have seen as I write this. The work Glenn Bernasek is doing with a basic, and I do mean, basic, system is unbelievable. He tells you how to do graphics with the Miniwriter cartridge. What will you have for us next time, Glenn? Marty Smoley is walking you through the steps of setting up a ram disk. These are super-quality outstanding articles found nowhere else throughout the country and we should be justly proud of our people.

Speaking of Ram disks...I "borrowed" the NorthCoast's 256K CorComp card to see if I want to invest in it or one of the others on the market. I have only been using it a couple of hours with TI-Writer and don't know if I will ever want to go back to a regular disk drive. You hardly have time to blink for the loading of the editor and formatter. When you have to do this several times during a working session as I do when putting out the newsletter, it gets to be a real pain. The improvement with a ram disk cannot be described. You have to experience it for yourself. This card is very easy to use. It can be expanded to 512K with chips from Radio Shack (you just plug them in), and I think

that an AC adapter can be purchased for about $20. I use my machine so much, I think I will go with the Horizon 1meg, but someone could get a lot of use from this card with a very small outlay of $$$$.

FREE-NET. If you have not contributed, I would urge you to do so. I read the list of donors recently and saw almost as many on the list from New York, California, Illinois, Michigan, South Carolina, etc., as I did from Cleveland. I thought if these people feel strongly enough to contribute to our FREE-NET, we who live here can do no less. I immediately wrote out my check and sent it in. Also, we would like to get another SYSOP for our groups. It doesn't matter if you are from Chips or NorthCoast, if you are a teenager, or retired. If you like telecommunications and think you could enhance the TI SIG, give Terry Vacha a call and he can set the wheels in motion.

The Youngstown group is having its annual auction on Monday, March 14 at 7:30 p.m. Tom Nellis said there were some real bargains last year if you want to expand your system cheaply. I didn't have room to publish the directions, but call Tom and he will tell you how to get there.

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EXECUTIVE NOTES - NORTHCOAST 99ers·

The meeting was too long this month. I am trying to revamp the meetings slightly to streamline things a little, but things got out of control and ran long. We held our annual elections this month. All of the officers from last year were re-elected for another year except for Richard Johnson who declined the nomination. Rich said that due to work and other projects he could not be Vice President for another year. He did say that he had many things he wanted to do with the TI, and would still be active in that area. I'd like to thank Rich for being our Vice President for the past year and for the help he has given to our group. To fill the position of VP we now have Ernie Malnar. Ernie has been an active member in the past. He recently gave a demo on the RAVE 99/105 keyboard and has volunteered to do a CS6D Graphics Demo in March. The meeting got a little hectic, but for those who moved up close and watched the demo by Ernie Nitchke, the demo was interesting. Ernie went through a bowling program he purchased to keep score for his bowling league. At one point Ernie had to restart the program to go into another area of the software and while watching the speed with which he could move through the program it was apparent that he uses the program every week. For the forty-nine dollars that Ernie paid for the program, it is amazing to see the amount of calculations and in depth reports which this program will produce.

VOLUNTEERS NEEDED

We managed to get some badly needed help in the last few days. Chuck Poulin will take over some of the membership paper work. So if your renewal dues are due, you may be hearing from Chuck in the future. Ray Rapp is taking over the raffle. Ray seems to be perfect for the job. He's gregarious, and persistant. Also, Donald Owen has volunteered to do some of the transportation and record keeping involved with the disk library catalogs. I'd like to thank Chuck, Ray and Don for offering to help. I'd also like to say that there are still many areas where we can use more Volunteers. If you think you could help with the Disk Library, the Newsletter, or anywhere else please contact me or any executive soon.

SOMETHING NEW

Due to the fact that we have the Euclidean Room from 12:00 till 5:00 on meeting days, it was suggested that we hold some type of seminar from 12:00 to 1:00 or 12:15 to 1:15. The regular meeting doesn't start until 1:30 anyway. I can't get anything arranged by the February meeting, and many of you will not receive this newsletter by the meeting date, so, I will try to put something together for the March meeting and announce the program at the February meeting.

The Next NorthCoast Meeting

The next demo will be by Harry Hoffman. The demo will be on the Picasso software. This is similar to the graphics printing software that Deanna has worked with to produce the Newsletters and the Christmas Fonts.

See you all at the next meeting. Marty.

EXECUTIVE NOTE - TI-CHIPS
Mary Phillips

The new year got off to a good start with good attendance at the January meeting. Membership is doing well with new members and renewals coming in.

As usual there were some great demonstrations given, in many areas of interest. Any member can make a presentation to the group. Just let an officer know you are interested.

One of Mark McCauley's interests is utilities. He presented a Fairware program by John Birdwell. The program is better than anything else he has used. As Fairware, Mark plans to send a donation to the author for his work.

Ed Kennelly shared the printouts he had made from "Tickler 99". This program "tickles" your memory by printing memos, calendars, and reminders to keep your life organized.

Terry Vacha demonstrated Paragon Computing's "Enhanced Display" package, V.2.1. This program adds commands to the Extended Basic cartridge which are tied to an Extended Basic program with "Call Link".

Raffled off in January was a binder with TI-Writer directions and a cartridge for Disk Manager 2. Congratulations to Frank Bardy!.

The February meeting of TI-Chips will be VERY IMPORTANT! The time has come once again to elect four members to vital offices - President, Vice President, Treasurer, and Secretary. We are a democratic organization. Therefore, every effort is being made to have two candidates for each office. If you would like to contribute your time and talents, please contact Terry. This is your chance to shape the future of TI Chips.

NORTHCOAST TO COORDINATE WITH NATIONAL DATABASE
OF JOHNSON SPACE CENTER GROUP
Dick Alden - NorthCoast 99ers

As Deanna mentioned in the January newsletter, we have joined the JUG(Johnson Space Center UG) in their efforts to develop the UNITED 99/4 DATABASE. As your hardcopy librarian, I will be adopting this format for our newsletter library and at the same time try to cross reference such listings on their database we have immediately available in our own library.

The Johnson group indicated that copies are to be ordered directly from the source and not from Johnson itself. They have a suggested price of 10 cents per page and 25 cents postage for every five pages ordered. We likely have some of the copies, or reprints, in our own library which I will try to find for your digestion. It could be faster throughout than having to write to the original sources. Johnson indicates that most of the User Group addresses are in the May Through August, 1987 issues of MICROpendium. Also, we should have addresses of the clubs which which we exchange newsletters.

This could turn out to be a project larger than I should tackle, but if I need some help, I won't hesitate to ask. The start of this project got me involved with PRBASE to the point that I am beginning to understand the system. One of my biggest problems with this DB probably will be the lack of knowledge of 80% of the terminology involved with the computer field.

EZ-KEYS
by t.h.vacha - TI-CHIPS - Cleveland, OH

This is a program which helps you write programs and helps you while other programs are running. By itself, it doesn't do much of anything. It's a utility program. But its QUITE a utility as you'll pickup from the description.

Suppose you are writing an extended basic program, or just trying to fix one up. First load in EZ-Keys. Now load in the program you are trying to edit. Here are some new things you can do.

CTRL 3 now erases all characters to the right of the cursor.

FCTN 9 erases all characters to the left of the cursor

CTRL 6 cursor jumps to start of the line

CRTL 7 cursor jumps to the end of the line

CTRL E move straight up the screen one line

CTRL X move straight down the screen one line

CTRL 4 call clear (clears the screen)

CTRL = prints a disk catalog to the screen

CTRL S move the cursor to the left

CTRL F move the cursor to the right

FUNC 0 deletes a character and moves the cursor one character to the right

CTRL R runs a program if you just type the name-- type LOAD and it does: RUN "DSK1.LOAD"

FCTN 5 call the EZ-Keys Editor to define your own keys

I think I got all of them. But this program also:

---allows you to move the cursor all the way to the left so that you can edit the line number!

---write a program line that has 23 screen lines! (sometimes the TI doesn't like that one)

---just one control or function key can be designed as a whole program like CTRL R above!

---one key can run another key or even itself. you define the keys as you wish!

---EZ-Keys will automatically save the program you are designing every minute or so first to DSK1.BACKUP1 then to DSK1.BACKUP2 and then BACKUP1 etc. It will do this every 1 to 18 minutes, however you define it--or not do it at all. You can change default drives.

So you can see that the above is all quite useful to have when you are trying to build an XBASIC program. Imagine running a second small program without disturbing the one you are working on.

EVEN MORE! You can design your own function and control keys to work in any extended basic program you already own! Suppose you have a program which asks you 5 questions that you always answer the same. Just define one control key to answer all five questions for you! Immediately a previously tedious program in your file becomes easy.

OTHER SMALL PROGRAMS are on the EZ-Keys disk. They include LISTMACRO which gives you a print dump of your customized EZ-Keys version; POKER which will put a D/V80 disk file onto one of your keys(could be a PROGRAM more than one screen long); CURSOR allows you to redefine your cursor as a way to keep track of which of your custom versions of EZ-Keys that you are in; EZLOADER which allows you to attach EZ-KEYS to an extended basic program with assembly programs in it.

Also in the program are a few "CALL LINK"s:

CALL LINK("EZKEYS") turns on EZ-KEYS and gives a status report.

CALL LINK("OFF") turns off EZ-KEYS

CALL LINK("AUTO",number) turns on and off the autosave routine

CALL LINK("COLORS",fore.,back.,editor fore,editor back.,special char. fore, special char. back) (excuse my shorthand)

CALL LINK("RCOLOR", foreground, background) sets all characters to the same color--used while a program is running

CALL LINK("HILITE") emphasizes numbers and arithmatic operators--makes it easy to tell a zero from the letter O and the one from the lower case L.

I predict that this program will catch on like TI-ARTIST did when it came out. EZ-Keys comes as a great program and grows with your own imagination!

THERE ARE DRAWBACKS however, mainly that you can't use this with assembly programs. Even though programs can be loaded from XBASIC, like Fast-Term and MAXRLE, these are assembly programs and control the CPU, keeping EZ-KEYS out. This is straight from Jim Horn on Compuserve(who kindly answered my questions), who wrote the EZ-KEYS manual.

For myself, I bought the program and would do so again.

3

```
----------------------------------------
| I buy all my RAMDisk components from: |
| BUD MILLS SERVICES, 166 DARTMOUTH DRIVE |
| TOLEDO, OHIO 43614  Phone (419)385-5946 |
----------------------------------------
```

```
----------------------------------------
|   Place System Disk in Drive 1         |
|                                        |
|   1) CONFIG   Loader/Editor            |
|                                        |
|   2) DM-1000  Disk Manager             |
|                                        |
|   3) MEGTEST  Test Program             |
|                                        |
|        [ SCREEN ONE ]                  |
----------------------------------------
```

::

```
----------------------------------------
| Horizon Ver 7.1 (186k), Card at >1000 |
|                                        |
|                                        |
|        [ SCREEN TWO ] [A]              |
|                                        |
|                                        |
|                                        |
|Next Edit Save Load Configure Misc Quit|
----------------------------------------
Keep existing disk information (y/n)? [B]
----------------------------------------
Load from Filename: DSK1.ROS       [C]
```

::

Disk Name	W/P	Format
FP	N	1440
:	N	
:	N	
:	N	
:	N	
:	N	[SCREEN THREE]
:	N	
:	N	
:	N	
:	N	

Edit your ROS, or Press FCTN 9 to exit

```
1 Show Directory
2 Display a File
3 Run a Program
4 Your Option 1

5 Your Option 2

6 Your Option 3

7 Your Option 4

8 Your Option 5

9 Your Option 6

C (cartridge name)

[SCREEN FOUR]
```

```
1 Show Directory
2 Display a File
3 Run a Program
4 Your Option 1
   DSK#.PROGRAM1
5 Your Option 2
   DSK#.PROGRAM2
6 Your Option 3
   DSK#.PROGRAM3
7 Your Option 4
   DSK#.PROGRAM4
8 Your Option 5
   DSK#.PROGRAM5
9 Your Option 6
   DSK#.PROGRAM6
C (cartridge name)

[SCREEN FIVE]
```

I am writing this article because I have had many questions from friends concerning their newly purchased HORIZON RAMDisks on how to quickly get the ROS up and running. I have been thinking about this article for awhile and I don't know how to write it without making it as big or bigger than the Menu Docs, so I may have to do a series of articles. First, I would like to say that although there shouldn't be anything in this article that can hurt your hardware or software, that you proceed with caution and at your own risk. I will not be responsible for any inaccuracies in the articles, or problems you may have. I assume that your RAMdisk is completely assembled and in the PEB.

Using Ver. 7.1 place your RAMOP disk in drive one after turning your system on and select extended basic. A load program on the disk will bring up SCREEN ONE as shown. Select Option 1 from this screen to load the configuration program which displays SCREEN TWO [A]. Press L for load and the bottom line will change to line [B]. Press n for no because you don't have any existing information. When n is pressed, line [C] will appear with the cursor blinking over the 1 in DSK1.ROS. At a later time when you have your own customized ROS, which you have saved under a different name, you can type over this to load it. But for now press enter and the system will load ROS from the RAMOP disk you have in drive one. With Ver. 6.4 the procedure is the same except line [B] will not apppear and you will go directly to line [C]. After pressing enter and ROS has been loaded SCREEN SEVEN will appear. Now we get into some differences between 6.4 and 7.1 . If you're using 7.1, there will be a configure option in the bottom line and you will see "Drive Number: 5" and "Drive Number : 6" about mid screen on the right. For Ver. 6.4 you will see SCREEN SEVEN exactly. Let's go with Ver. 7.1 and assume you have a DS/SD or 192k disk and you are looking at SCREEN SEVEN. Pressing "C" for Configure will bring up SCREEN THREE, and the cursor will be in the far right column at the top. Enter a disk name like "RAM1" and hit enter. The cursor will jump to the column under W/P for Write Protect. Press enter again to leave it N. The cursor will now jump to the Format column. Press "Y" and enter to format or initialize your RAMDisk. The cursor will now jump to the last column where a number like 736 will flash. This number is the maximum number of sectors you have available on the disk. If you press Enter, the disk will be initialized at that total with the name RAM1. [Don't do this just think about it.] If you type 360 over that number and press enter, you will make the disk single sided single density. Now pressing enter or using FCTN arrow get back to the left most column over the name RAM1 and arrow down to the next line. You can now type "RAM2" <ENTER>, <ENTER>, "Y" <ENTER>, and that puts you over a flashing 736 in the right column again, but now you are on the second line. You can type 376 over that number and when you press enter the second disk will be initialized with 376 sectors. Remember this; you can have one disk name or you can fill this page with different disk names and sizes, but when all the sectors in the right column are added together they cannot be more than the total you have available, which in this case is 736 sectors. There are uses for this partitioning which I will explain later, but the main idea behind this feature is to allow people with 1440 sectors, or a megabite, and a TI controller to set up a bunch of DS/SD (720 sector) drives. "OK back to the doing part". After setting up one or more disks on this screen, press FCTN 9 to jump back to SCREEN SEVEN. With Ver. 7.1 you will see MENU, MG, and CFG in the left column. Your RAMdisk Ver. 7.1 is now initialized, but you can't do much with it so find section two of this article and we'll get into Editing and stuff.

NorthCoast 99er's
Cleveland, Ohio

```
1 MENU
2 MG
3 LOAD
4 U4TIL
5 U5TIL
6 U6TIL
7 U7TIL
8 U8TIL
9 U9TIL
C (cartridge name)

[SCREEN SIX]
```

Horizon Menu Sys (192k), Card at >1000

Len/Name	Len/Name	Len/Name
4 MENU	2 U4TIL	2 U7TIL
2 MG	2 U5TIL	2 U8TIL
2 LOAD	2 U6TIL	2 U9TIL

Screen Color: 5	Drive Number: 5
Text Color: 16	Max Sectors: 736
Write Protect? N	Power On? N

N)ext, E)dit, S)ave, L)oad, M)isc, Q)uit

[SCREEN SEVEN]

You should still be looking at SCREEN SEVEN, and the computer is waiting for you to decide what to do. This is a good time for a quick explanation of what you are looking at. This is the CALL section of your ROS. "What's that?". "OK, It's this." If you enter the name of a program in this section and place a copy of that program on your ramdisk, when you type CALL followed by the program name, the program will automatically load and run. This is a wonderful utility to have, but to have success with this utility, there are a few items you must understand and remember. First, the program name, which you can type into any of the 9 available positions under the Name heading, can be from 1 to 5 letters in length. The name must exactly match the name of the program you are calling from the RAMDisk. There are also several variations to this setup. Look at the SCREEN SEVEN display on the previous page. The MENU program is at the top leftmost position in the Name column. The number to its left is 4. This means to call MENU you need to use all four letters of the program's name, which would be "CALL MENU". However, the program LOAD has a 2 in the Len column. Therefore, you would type "CALL LO" to run the load program. Do not type the quotation marks. The idea is this. You can use all 5 letters for the program's name on the disk. This will make the name more distinguishable when you catalog the disk. You can, however, place a 1 or 2 in the Len column next to the name. Doing so tells the system that you will only use that number of letters when calling the program. This will cut down on the typing you must do to run your heavily used programs. Caution, don't confuse yourself or the computer. For example, if MENU and MG both used 1 letter in the call (CALL M), the computer wouldn't know which program to run. Here's something else to remember that's very important. You must have the proper cartridge in the console for the program you are loading to run properly. The menu program will load and run from console basic. However, if you call an extended basic program, and the extended basic cartridge is not plugged into your console, you will get an error. The situation is different with many assembly language programs. Most of the programs I am partial to will run using console basic, such as DM-1000 and several other utilities. "Alright enough talk, let's edit." If you press "E" while in SCREEN SEVEN, the cursor will jump to the upper left column over the number 4. You can change this number to anything from 1 to 5 or press enter to leave it unchanged and jump right to the Name column. While in the Name column you can type any program name you wish to use. The entry will appear in upper case whether you use the shift key or not. Pressing enter will move you to the Len column on the next line down. If you need to change a previous entry, the up and down arrows are active. For a moment use the FCTN arrow and enter keys to roam around this screen and see how they work. You won't do any damage, and if you do, you can retype and correct it. After all that's what this is for. While getting accustomed to this editor type in any programs you think you may be using and the number of characters you will use for the calls. Start adding your programs by typing over U4TIL. The three names in the left column should remain 4 MENU, 2 MG, and 3 CFG. These will allow you to load the Menu, DM-1000, and this configuration program. Write any names you use on a piece of paper. This will aid you if a program's name must be changed after you copy it to the disk and you have forgotten what you typed in the ROS. The last thing you need to do is change the Power On? Y to an "N", if necessary. Just keep pressing enter and you will keep going through every option on the screen. When you get to Power On? press "N" to make the change. To get out of the editor and save your changes press FCTN 9. Now press "Q" to quit the CFG program and you'll be back in extended basic.

Now press FCTN QUIT to restart the TI. Select 2 again for Extended Basic and let the load program in drive one bring up SCREEN ONE again. This time select number 2 to load DM-1000. "I am still reffering to Version 7.1". Use the file copy option to copy MENU, CFG, MGR1, and MGR2 to your RAMDisk which should be drive 5 at this time. After this is accomplished, use the same file option of DM-1000 to go into drive 5 and change the name of MGR1 and MGR2 to MG and MH respectively. The reason I do this is because Funnelweb Ver. 4.0 uses a copy of DM-1000 which loads via the name MG and MH. This means I can use a single copy of DM-1000, and run it with a CALL MG or as an option from Funnelweb. The awkwardness of typing CALL MG instead of CALL DM (which some people are accustomed to) goes away in about two hours. Now that you have completed these tasks you finally have things on your ROS that are usable. Take the RAMOP disk out of drive 1 and store it for now. Quit DM-1000 and select Basic or Extended Basic, either will work. Now type CALL MG and hopefully DM-1000 will load. If it does load, you will notice that it took less time than ever before. If it doesn't, type CALL MG again just to check. If it still doesn't load, try CALL CFG or CALL MENU. If nothing works, you may have to retrace your steps and look for the problem. If you were successful, quit whatever you managed to load and load the Menu program (CALL MENU). When it loads you will see SCREEN FOUR. This is the first Menu screen. If you press the spacebar once, you will see the second Menu screen, and pressing it once more will display Menu three, which I represent with SCREEN SIX. You will notice that it has the options we previously edited with the Configuration program. Pressing the spacebar again will take you back to Menu screen one. Option 1 will catalog a disk for you, Option 2 will display a file, and Option 3 will run a program. Because this is about editing I'm going to jump past these to the selections marked (Your Option). This is where you place the programs you want to run from the Menu screen by pressing that number selection. My representation of what you are looking at is SCREEN FOUR. If you press FCTN 5, you will jump to SCREEN FIVE and the cursor will be over the "Y" in Your Option 1. You can now type in the name of any program you want to run by pressing 4 from this screen. You can use any characters, and uppercase and lowercase are also available. After typing in a name you will recognize, you can press Enter or FCTN arrow down to the next line. The cursor will jump to the asterisk (#) in DSK#.PROGRAM?. You can type any disk drive number over the asterisk and Menu will look to that drive for the program you want to run. If you leave the asterisk, Menu will expect to load the program from your RAMDisk. Next type the name of the program over PROGRAM1. The name must exactly match the program's name, and follow normal name etiquette (all uppercase etc.). After entering as many names as you'd like, press FCTN 9 and the following message will appear. "Press Back to Abort, any other to Save." FCTN BACK will not save your modifications, but you will still see all the changes on the screen. In order to return to the pre-edited screen, you will have to quit the program and do another CALL MENU and the old screen will reappear. Pressing any other key will cause your changes to be saved until you modify them again later. Here's something to remember. You can only modify one Menu screen at a time. If you modify SCREEN ONE, you must use FCTN 9 to get out and save your changes. You can then press the spacebar to get to the second screen and press FCTN 5 to start editing that screen. "Note", You cannot edit SCREEN THREE in this manner. To edit SCREEN THREE you must either do a CALL CFG, or while in SCREEN THREE press the number which selects the CFG program. You would then be back in the part of the program I previously discussed as editing your ROS. With what you have learned here and some help from the DOCS7.1 you should be able to start using the MENU system. I'll try to get to some tips and tricks next month

Good luck.   Marty.

FORTH SUPER-CART
Paul Newmeyer - Northcoast UG - Cleveland, Ohio

The hottest thing in Forth innovations now avails itself to us. It's the Forth system that loads into the 8K Super-Cart module.

I have spent untold hours attempting to get this idea up and going. But now, persistence has paid off, and I'm excited about the results.

With the help of an excellent article by Glen Davis in Computer Shopper, and enhancement articles in Micropendium by Kurt Elliott and Lutz Winkler, I have compiled a disk for use with a DSSD drive configuration that you can punch into the Super-Cart module (it can easily be changed for any drive configuration).

Can you imagine having your favorite Forth Utilities at instant command? Can you conceive of no more grinding your drives and drinking unneeded coffee while waiting for Forth options to load? That's what Forth Super-Cart will do.

From the time you start at the title screen, go to E/A option 3, enter "DSK1.Forth", load all the options, BLOAD Forth-83 compatibility screens, and receive the blinking and twinking "ok", you will wait no more than 30 seconds (unless you type with your fingers in a fist). And from that point on, until you depart the system, you will have the options at instant command.

Features on this disk include the following:

‡ The options BLOADed into the Cart-Ram are -CODE -ASSEMBLER -SYNONYMS -FILE -DUMP -PRINT -TEXT -GRAPH1 -SPLIT and -FLOAT. The options loaded into the computer memory are -GRAPH -EDITOR - and -COPY. Lots of memory awaits your big program. In order to conserve memory, you could eliminate the computer memory options. Simply put parenthesis marks around them, on screen 89. However, I don't know how you'll get along without an editor.

‡ CHARA1 has been lifted from Funnel-Writer and transplanted onto this disk. This provides an editor with lower case letters and a slashed zero. Debugging will now be easier since the confusion between the letter "O" and the number zero has vanished.

‡ Auto-repeat keys have been included. Though I am not entirely pleased with the timing, it furnishes a nice feature.

‡ Forth-83 compatibility is now on the TI. Brodie's 1987 book StartingForth is written for Forth-83. Davis' compatibility screens reside on this disk and go into RAM so that the computer memory stays freer for larger programs. Without the Super-cart capability, the Forth system and Forth-83 screens would eat up most of the computer's memory, leaving little room to program.

While I would like to work more on my compiled disk, and many improvements and embellishments could be made, I think I'll stop for now. After all, I have spent most of my vacation on it already.

After my vacation ended, I felt like the silly fellow who drove 75 miles to save $2.00 at a K-Mart sale. I have spent 10,000 hours attempting to save two hours. But, then again, that's the fun of Forth, isn't it? That's also a commentary on the hypnotic effect the TI has on those who love it. So what if another machine is better, in some way, than my TI; it's not better for me and my creative juices. I'd rather feel alive on the TI than dead at the commands of the universe.

So much for the free philosophy. If you're genuinely interested in using this Super-Cart Forth-83 system, I'll copy one for you, for the exchange of a blank disk.

NOTE: Most of you probably do not know that Paul Newmeyer is also "REVEREND" Newmeyer. So, all I can say about his next to last paragraph, is "AMEN".

GRAPHICS SIG - WHAT YOU MISSED!!!
Deanna Sheridan - NorthCoast 99ers

Well, we finally got off the ground with our graphics SIG. There were 3 from Chips and 3 from Northcoast at my house on the 18th. We went over the graphics programs we each have and expressed what we would like to learn.

Matt Andel has agreed to more or less be in charge of the group and line up someone for the program each month. We will continue to meet at my house the Monday after the groups' meetings for the time being. Next month Matt is going to take us step-by-step on how to use TI-Artist.

We ALL learned how to slow down the joystick in the zoom mode of Artist. It's hard to believe "it's in the manual". Harry Hoffman found out why he spent an our building a new set of slides only to find they didn't save.

We all realized we are not as stupid as we think, as each of us has similar problems with the same programs. Our greatest lament is the quality of the manuals which come with the software. They do not tell you how to get the "most" out of your package. That is usually up to the end user to discover on his own and many of us do not have the time and patience for that. So, we get discouraged and don't use the program. Hopefully, those attending this SIG will be able to cut down on the frustration time as we can find common answers to common questions.

The game plan for the moment is to cover a specific graphic package each month with time for current questions on specific problems that someone in the group might help out with. Hope to see even more of you at my house on February 22 at 7 p.m. to about 10:00 p.m. (20311 Lake Road, Rocky River, OH (333)5986).

TPA and LABELS
by t.h.vacha TI-CHIPS - CLEVELAND, OHIO

In a recent issue of the newsletter, we learned that many drawing programs will not only "PRINT" pictures to paper, but will also "PRINT" them to disk. I recently tried this for the TOOLBOX and PRINTER'S APPRENTICE by McCann Software. It worked great. If you are a member of Chips, you got a label with this program announcing the Christmas meeting.

I made the border with the "border builder" of the TOOLBOX and the text with the "sign tool" of TOOLBOX and combined them with the "scheduler" of PRINTER'S APPRENTICE. After I got the label I wanted, I used the "scheduler" to pull the pieces together and give a hard copy. Then I used Tom Wynne's article(November Newsletter, p.8). Instead of using "PIO.CR" in the "scheduler" of TPA, I used "DSK2.LABEL". When I typed "60", TPA put the label on a disk. Using Tom's little program, I was able to quickly make 40 labels for the club's postcards. Once the label is on disk, the delay experienced in the drawing programs is eliminated.

MINIWRITER II AND II+ TECHNIQUES
(USING THE PRINTER CONTROL FUNCTIONS)
By Glenn Bernasek - TI-Chips - Cleveland, OHIO

At the end of my article which appeared in the December newsletter, I alluded to the possibility of using the MINIWRITER II+ for drawing pictures. Because this wordprocessor has the ability to address the graphics capability of most any dot matrix printer, you can produce some rather interesting results with the ESCAPE and CONTROL commands at your disposal.

Creating simple pictures and posters are just two of the many things that can be accomplished with the MINIWRITER II II+. The following are step-by-step instructions on how this can be done.

PICTURE MAKING:
1. Set up a full screen drawing area by setting the tabs to L=1 and R=42; then proceed to type in the following printer graphic commands. (Keep in mind that the commands I will use are addressed to the Axiom GP-100TI II printer; therefore, other printers may not respond to the same commands. Check your printer manual for the appropriate commands.) Press <CTRL/U> and place <SHIFT/O> in the first column (this sets the printer to NORMAL print mode). Press <CTRL/I> to tab over to column 42; then press <SHIFT/H> and press <ENTER>. (This sets the printer into a graphic linefeed so that the top of each succeeding line will meet smoothly with the bottom of the previous line.) Continue doing this until you have mapped out the entire screen area (23 rows X 42 columns). By the way, don't forget to press <CTRL/U> again to get out of the printer command mode when you are finished with your mapping.
2. How about a frame for the screen? Reset TABS to L=2 and R=41; then type in hyphens (-) across the top row, exclamations (!) in the columns 2 and r1 and then hyphens (-) across the bottom row (23)> Next

huh?
3. It would be a good idea to SAVE the drawing frame to tape at this time. Who knows when you might want to do this again?
4. Now let's draw a picture. Go back and reset the TABS to L=3 and R=40. (For best results, DO NOT USE WORD-WRAP). At this point, I recommend that you sketch out your picture on quadrangle lined graph paper FIRST. Then you will know which ASCII character to place where. When you're ready, go ahead and type in your picture using any letter, number or punctuation. The resulting picture is actually an optical illusion. The mind tends to fill in most voids; creating a perceived continuous curved line.
5. Save your picture to "CS!" and then print it to "PIO".

Give it a try. I think you'll be surprised how fast time flies while you're creating and editing your "masterpiece".

POSTERS:
1. Set the TABS to L=1 and R=43
2. Type in the following printer commands AFTER you've pressed <CTRL/U> (Once again, keep in mind that the following commands work on my AXIOM GP-100TI II.)

COLUMN	PRESS...	PRINTER COMMAND
1	<SHIFT/O>	NORMAL PRINT CODE
2	<SHIFT/N>	DOUBLE WIDTH PRINT
43	<SHIFT/H>	GRAPHICS LINE FEED

Continue entering the above column printer commands until you've mapped out the poster area you wish (92 rows X 43 columns for an 8.5 X 11 inch poster). The DUPLICATE LINE function will speed things up.
3. Press <CTRL/U> again. Now how about making a frame for the poster? Reset the TABS to L=3, I=20 and R=42; then pick a keyboard character (a little experimentation will give you an idea about which ones will produce the best effect). I use the TOP and BOTTOM three (3) rows and the LEFT and RIGHT two (2) columns to frame my posters.
4. This was the most tedious part. How about saving it it to cassette?
5. Now type in (with Word-Wrap OFF) your message (centered between the vertical frames by using the <CTRL/I> function). After you're through, save to "CS!" and THEN print to "PIO". You now have a poster for that GARAGE SALE.

Important hints for both PICTURE MAKING and POSTER techniques ...
1. DO NOT USE ANY INSERT OR DELETE Miniwriter II or II+ functions to edit your work! They will mess things up royally! USE THE <SPACE BAR> INSTEAD!
2. Add a <SHIFT/O> after the <SHIFT/N> on the LAST line of both mappings to avoid having your printer "hang-up" in the Graphics Linefeed Mode.

Depending on your printer, the results of these techniques can be quite interesting.

Oh, did you know the "FIND STRING" <CTRL/F> function enables the MINIWRITER II+ to perform as a pretty decent data base program?

With the abundance of very cheap or free software for the TI Home Computer , there is a real financial incentive to expand your TI rather than put it in the closet and purchase an IBM clone for home use. The sound, graphics and especially speech capabilities of the little old TI are usually better than those of the IBM clone at the office. With the $25 software package "PC Transfer" from Genial Computerware and a Myarc or CorComp disk controller , you can even take word processing ASCII files in IBM format home with you on a 5.5 inch disk, convert them from IBM format to D/V80 on your TI, and continue word processing at home with TI-Writer or Funnelweb. You can then, still at home on your TI, convert these D/V80 files back to IBM format and take them to the office with you the next day. Sure, you can get cheap clones from ads in Computer Shopper, but you will spend a fortune on software. Usually for less money than the cheapest IBM clone, you can expand your TI system so that it will do most things the big guys do. What follows are my personal recommendations for expanding your 99/4A into a powerful computer system for the least amount of money. Prices quoted were in effect in mid-December, 1987.

THE FIRST STEP--A DISK SYSTEM:

If you are still living in the dark ages with just a console, tape recorder, and maybe a sidecar 32K, now is a good time to acquire a good used basic disk system. If you are already a serious TI user, now may be the time to acquire a backup system. I recommend the TI peripheral expansion box over the CorComp expansion system because the PE box really is expandable. You can't hook the Geneve or Horizon Ramdisks to the CorComp "expansion" system because there are no expansion slots. I also recommend the TI disk controller over those by MYARC and CorComp. The TI card is compatible with almost all 99/4A software (with the important exception of the above mentioned "PC Transfer"), and it is RELIABLE. I have not heard of any TI controllers going bad (I am sure that some have, I just haven't heard), whereas I do know of MYARC & CorComp controllers that have been sent back for repairs.

With many former TI users moving on to IBM land, there are a lot of used systems available, and prices are going DOWN. My preferred basic expansion system (PE box, 32K, TI controller, one SSSD drive) could be purchased for $275 at the Nov 1987 Chicago Faire. Locally, this equipment AND a TI RS232 card AND a Gemini 10X printer sold for $400 in September of 1987. Check the classified ads in MICROpendium, Computer Shopper, and the newsletters for availability of used systems from private sales. Although the cost may be higher, there is an advantage to purchasing used systems from a dealer. Dealers offer 30-day guarantees and check their systems out prior to sale. You can reasonably expect to have everything in working order if you buy used from a dealer. I recently got a used TI system (PE box, 32K, TI controller, TI SSSD drive) from Competition Computer only to find that the drive would boot BASIC, but not assembly software. I knew it was the drive itself that was causing the problem because when I put another drive into the PE box, everything worked fine. "No problem," said Competition Computer over the phone, just send the defective drive back. One week later I received via UPS an exchange

used drive. The only thing I had to pay was postage to Competition. You cannot expect this kind of service with a private sale. Here is a by no means complete list of dealers who will sell you a used ti system. Phone for prices and availability.

Competition Computer
2629 W. National Ave.
Milwaukee, WI 53204

Queen Anne Computer Shoppe
6102 Roosevelt Way NE
Seattle, WA 98115
206-522-6558

L.L. Conner Enterprise
1521 Ferry St.
Lafayette, IN 47904
317-742-8146

Armadillo Bytes
Box 1816622
Dallas, TX 76218
214-328-92957

PRINTER AND PRINTER INTERFACE:

Once you get your disk system, you automatically become a serious TI user. Your next peripheral should be a printer and printer interface. You can get a printer interface with built-in cable from Tenex for $45 that plugs into the side of the console. This is by far the cheapest printer interface, but I don't personally recommend it. You can use the PE box with this device, but it adds to the width of your console and will not accept a modem. A PE box RS232 card is more expensive, but preferable because it looks neater and because it allows you to hook up both a printer and a modem. Tenex will sell you a MYARC or CorComp RS232 card for $80, a very good price.

Back in 1983 the STAR GEMINI 10X printer became the defacto standard printer for the 99/4A. This was because it was sold for less money than the TI impact printer and offered more features. I remember paying $310 for mine and thinking what a bargain it was. Many TI users still depend on this printer, including famous TI names like Jim Peterson. Almost all good TI software was, and still is, written to be compatible with the Gemini 10X. This includes graphics, word processing, and screen dump software.

In selecting a printer, it is important to choose a dot matrix model that uses the same control codes as the Gemini 10X so that the printer is compatible with our software. Daisy wheel printers are not compatible with any of our graphics software. The very important question to ask when purchasing a printer is "Is this printer EPSON compatible? This EPSON compatibility standard is what was used in the now out-of-production Gemini 10X. I believe all EPSON and STAR dot matrix printers still have this compatibility, as do some printers of other manufacturers. Printers designed for use with the Commodore 64/128 or IBM computers DO NOT have this Gemini 10X compatibility.

Based on my own experience with STAR printers, and what I have seen at the recent Chicago TI Faire, the STAR NX10 looks like it deserves very serious consideration. It is totally compatible with Gemini 10X control codes and will also print a superb Near Letter Quality typeface that is good enough for most business use. You need a good magnifying glass to prove that this NLQ was done with a dot matrix printer. With the NX10, you can select NLQ or other type fonts from buttons on the front panel. On many other printers, you need to send software codes or manipulate tiny out-of-the-way dip switches to do the same thing. Tenex sells the NX10 for $190 and the required cable (between the RS232 card and printer) for $25(5 foot) or $35 (10 foot). Triton has the 5-foot cable for $17. You need such a cable

no matter where you buy your printer, unless you are using the above-described $45 "plugs into the side of the console" interface with built-in cable. Midwest MICRO-Peripherals will sell you a star NX10 for $160. I have personally dealt with this dealer and was very impressed. Midwest is an authorized STAR service center. I know from personal experience that they will fix any STAR printer in or out of warranty, usually in just a few days. With many printers, if they break, you have to send them to the factory (in Japan?) for repair, and wait and wait and wait. If you do buy a printer from Midwest, you still need to get a parallel printer cable from a TI dealer such as Tenex or Competition.

TENEX COMPUTER EXPRESS
P.O. Box 6578
South Bend, IN 46660
219-259-7051

TRITON
P.O. Box 8123
San Francisco, CA 94128
800-277-6900

MidWest Micro-peripherals
6910 US Route 36 East
Fletcher, OH 45326
800-321-7731 (in Ohio)
800-423-8215 (outside Ohio)

EXPANDING BEYOND JUST ONE SSSD DRIVE:

You can do a lot more with two drives than with just one, and I recommend upgrading to a second drive as the next step in your system expansion after the printer. With two drives, disk copying is automatic. You don't have to switch disks back and forth. When doing serious word processing or database work, you can leave your system disk in drive one and put a data disk in drive two. With FUNNELWEB, 2 drives allow you fast menu access to lots of user programs. Double sided is also nice. You can have immediate access to all the data on both sides of the disk (720 sectors in DSSD format) and you won't have to make any more flippies in order to use the back side of the disk. Flippies for the TI are a real pain to make because you have to punch out the index hole in addition to the write protect hole. For apples and Commodores, all you need for a flippy is a second write protect hole! You can almost always get away with using cheap SSSD rate disks with a double sided drive and the TI controller. This is because the TI controller only puts 90K of data on each disk side (IBM squeezes 360K) and is thus much more tolerant of disk imperfections.

The fanciest way to expand, and the most expensive, is to install two half height double sided double density (DSSD) drives in the PE box. Lots of dealers will sell you half height drives, but it is important to also get the necessary cables for installation in the PEbox. C & G Drives will sell you the drives and all needed cables to install in the PEbox for about $240. TexComp has the same goodies for $190, the best price I have seen anywhere.

The cheap way to expand is to purchase a bare full height DSSD drive and slide it right into the PEbox in place of your original TI SSSD drive. It's easy! No additional cables or modifications are needed, but make sure the dealer configures your drive as DSK1. Such drives can be had for $75 from L.L. Conner or from C & G Drives and for $60 from L & M Systems. Then buy an external drive power supply box AND A CABLE to connect this power supply to the edge connector of your disk controller. CorComp controllers require a different cable than the one that is used for TI and MYARC controllers. Power supply boxes are $40 from TexComp. Competition Computer has the cable for $20.

TexComp and C & G Drives also probably sell this cable. Slide your original TI SSSD drive into the power supply (it's easy!), and plug your cable to the back of the disk controller of your PEbox. Another way to go is to purchase a stand alone DSSD drive with cables. TexComp has them for $119. The disadvantage here is that it is more convenient to have your DS drive as drive 1 rather than Drive 2, and you have to modify your original drive to make it work properly with a second drive. You now have, for an investment of about $120 plus shipping, a 2-drive system with ones of these drives double sided.

C & G DRIVES
1241 Landwehr Road
Northbrook, IL 60062
312-272-0468

TEXCOMP
P.O. Box 33064
Granada Hills, CA 91344
818-366-6631

L & M Systems
2330 East Ave. J-8 #173
Lancaster, CA 93535
804-948-1587

SUPER MEMORY EXPANSION:

After upgrading to multiple drives, I next recommend obtaining more PEbox memory for program and file storage. A disk system is required to use the various super memory cards.

The way TI designed our computer, the largest memory expansion that is DIRECTLY accessible to the computer via the right side expansion port is 32K. Playing lots of tricks, this directly accessible memory can be stretched to 64K, but this requires hardware modifications. For most practical purposes, no software can access more than 32K of CPU RAM outside of the console. So what about the various 256K, 512K and even 1Meg memory expansions you have read about? These devices DO NOT expand your TI's RAM to the size of a fully expanded IBM PC. No matter what the size of your memory expansion, the 99/4A will not handle software larger than what it can handle with the plain old 32K memory expansion, and your TI cannot be made to utilize huge software of a size usable by an IBM clone. Large memory expansion devices for the TI allow you to use the extra memory as a RAM disk and/or as a print spooler. As RAM disks, these devices function somewhat like hard disks, only faster, allowing you to move software and data very rapidly into and out of the TI's rather limited active memory. With FUNNELWEB on a ramdisk, you can almost instantaneously boot FUNNELWEB, shift from a central menu to the editor, then edit and save your text to the ramdisk, load the formatter and print your text. Each time you move a block of memory, it only takes 1 or 2 seconds. This isn't quite as good as having the editor, formatter, and text buffer all in CPU RAM at the same time as you do with the GENEVE, but you will hardly notice the difference. The difference between instantaneous and 1 or 2 seconds isn't much.

CorComp and MYARC both make 512K expansion cards that can be used as 32K CPU RAM with the rest (480K) available as ramdisk and/or print spooler. These are currently $240 at TENEX. Both require an AC adapter, similar to a pocket calculator AC adapter, if you want to keep data in the card after the computer is shut down. The CorComp card needs such an adapter to work even while the computer and PEbox are turned on. If the mains power is interrupted, or if the adapter jack slips out of the back of the card, or out of

the AC wall outlet, you lose all your data. This dependency on mains power to keep data after the rest of the system is shut down is the main limitation of these two cards. You cannot count on them safely holding data or programs for a long time.

I strongly recommend the Horizon Ramdisk in one of its several configurations. Horizon cards act EXACTLY like a floppy drive, but with lightning speed, and are backed up with rechargeable batteries that automatically charge every time the PEbox is turned on. With power off, your data is safe for months and is not affected by a mains power failure. You can pull a Horizon card out of your PEbox and put it in another PEbox, and the data will still be there. Horizon cards are available as kits or already built in sizes ranging from 192K (emulating a DSSD drive) up to 1 Meg. An assembled guaranteed 192K horizon costs $195 from Horizon Computer. An assembled one megabyte card costs $450 from Midwest Engineering. Complete kits are available from Bud Mills Services. You can fill every vacant slot in your PEbox with a Horizon card giving you the potential of several Megs RAM program and data storage. With V7.1 of the Johnson-Ballman RAM based Horizon operating system (public domain, available from Miami User Group), a single Horizon card can emulate several floppy drives. With this operating system, you can also get a menu, ON POWERUP, that will load programs from your ramdisk at the touch of a key. A similar, more secure Horizon ramdisk operating system is available as a ROM chip from Genial Computerware. More than any other single hardware device, the Horizon ramdisk can turn your 99/4A into a real power machine capable of doing anything you want at powerup without messing with floppy disks. I have FUNNELWEB and 15 frequently used programs on my Horizon ramdisks. I load and save my word processing text and financial data files directly to and from the Horizon cards quick as a wink. I back up my Horizon files to disk every couple of weeks, just to be sure, but have great confidence in the ability of my Horizon ramdisks to securely hold my programs and data files.

Other produces apparently similar to the Horizon ramdisk have been advertised by DataBioTics (the GrandRam) and Rave99. Horizon ramdisks have a proven track record of two years. I have not seen any bad newsletter comments about this product, and it exists NOW.

BUD MILLS SERVICES
166 DARTMOUTH DRIVE
TOLEDO, OH 43614
419-385-5846

HORIZON COMPUTER, LTD.
P.O. BOX 554
WALBRIDGE, OH 43465
419-666-8911

MIDWEST ENGINEERING CONSULTANTS
203 ACADIA DRIVE
VERNON HILLS, IL 60061

AND ON AND ON AND ON:

Other hardware upgrades are available, but for the most part they seem to be quite expensive for what you get. The exception is modems. Some are cheap, and some are expensive. You probably get what you pay for. Since I am not into telecommunications, I can't comment personally except to say that they plug into your PEbox RS232 serial port. Check out MICROpendium and the newsletters for comments on modem features and quality.

An IBM style keyboard is available from RAVE99 for $200 complete. This keyboard allows single key entry of TI-Writer and Multiplan commands.

How about an 80-column display with TI-Writer and Multiplan? The Mechatronic 80 column "card" (it plugs into the side of the console, not into the PEbox) available from Tenex, or the DIGIT Systems AVPC PEbox card will both do this for "only" $220. You need either a monochrome monitor ($100, maybe less) or an analog (not an IBM compatible TTL) RGB color monitor ($345 at L & M Systems) in order to see this 80-column display. A TV or composite color monitor just do not have the necessary resolution.

Because of cost, I can't recommend the fancy keyboard or 80-column cards. Together with a new monitor, their combined cost is at least $520. You can get an IBM clone complete with monochrome monitor, fancy keyboard, 80-column display, and 256K CPU memory for less than this from several dealers advertising in Computer Shopper. If you must have 80-columns and a fancy keyboard, then go with a clone, but be prepared to pay big bucks for the software.

Double density controllers by Myarc or CorComp are available from Tenex or L & M Systems for $150. These allow you to store twice as much data on a double sided disk as the old reliable TI controller and are needed to transfer IBM ASCII files to a TI 9/V80 format. A MYARC quadrouple density controller costs $190 from L & M and requires special 80-track drives to work in quad density. I still prefer the old TI controller .

How about a built-in clock accessible with software. The CorComp Triple Tech card (provides calendar/clock, 64K printer buffer, speech synthesizer in the box connector) costs $138 and the CorComp stand alone clock goes for $90, both at Tenex. If you have a Horizon Ramdisk, the MENU operating system can access these clocks with a single keypress from the BOOT menu. It's too bad there is no automatic way of dating files as they are saved to disk. Personally, I find that my $4 KMART cheapo quartz wrist watch is good enough for me. I just can't see paying $90 for a computer clock.

RAVE99
112 Rambling Road
Vernon, CT 06066
203-871-7824

DIGIT SYSTEMS
4345 Hortensia St.
San Diego, CA 92103
619-295-3301

SUMMARY - MY PREFFERED EXPANSION HARDWARE:
Console, Extended Basic, Tape Recorder--I assume you already have these items.

Item	Cost
Used PEBOX, 32K, TI Controller, SSSD drive.............	$275
RS232 card for PEBOX, new..............................	80
Star NX10 printer, new (now replaced by nx1000).......	160
Double sided drive and box for second drive...........	120
Assembled 192K (=DSSD drive) Horizon Ramdisk..........	195
TOTAL EXPANSION COST..................................	$840

plus and tax and postage.

PRBASE ENHANCEMENT: by Bill Zaebst
Via LA TOPICS who got it from BYTE-LINE

NOTE: The following looked interesting, and I decided to try it before putting it in the newsletter. I found a couple of problems and it took me quite some time to accomplish what looked to be a simple task. Number one, before you do anything, go in with DM1000 and "unprotect" the LOAD and PRBUTL/BAS programs or you cannot write to them after you make your changes. I tried just typing in the following as is and continually got an error message in line 290. The key may be "generated" in the REM statements. So, I loaded in the LOAD program from PRBASE, resequenced the lines to start at 100 and typed in the additional lines. I had to resequence a couple of times to get it to come out the same as shown. It ran without any problems. Also, since you are going to that much trouble, it would be nice that when you finished with the PRBUTL/BAS you could go back to the LOAD program if you so wished to get into PRBASE. On mine at line 250, I changed the reference to line 1230 to line 1229. I typed on line 1229, RUN "DSK1.LOAD" and it returns to the load program. You could insert a CALL KEY which would allow you to either quit or go to LOAD as you wish. Also, if it is your intention to go to the Utility Program instead of loading PRBASE, be sure to have your hand on the space bar as the LOAD program commences. Deanna Sheridan, NorthCoast 99ers, Cleveland, OH.

PRBASE is a nice program so nothing drastic needs changing. But since copy utilities were not included originally but added later in the form of an Extended Basic program. Nothing is provided to automatically load that part of the program.

The main menu is in assembly and cannot load XBASIC. However, the LOAD program that loads the assembly can be used to load the copy utilities before you get to the main menu. Another menu could be provided, but it is simpler to use a call key to detect depression of the space bar and as a result automatically load the copy utilities. Since the load program did not previously display anything, it has been changed to provide screen color to match the balance of the program and to display the loading message, as it takes about fifteen seconds to load.

```
100 !$$$$$$$$$$$$$$$$$$$$$$$$$$
110 !$                       $
120 !$     Generated By      $
130 !$     SysTex V1.0       $
140 !$       (C) 1985        $
150 !$     By Barry Boone    $
160 !$                       $
170 !$ Hold Space Bar To     $
180 !$ Load Copy Utility     $
190 !$                       $
200 !$$$$$$$$$$$$$$$$$$$$$$$$$$
210 CALL KEY(0,K,S)::IF S=0 THEN 270
220 FOR = 1 TO 8 :: CALL SCREEN (5)
230 CALL COLOR(2,16,1):: NEXT Z
240 DISPLAY AT(2,4):"PRBASE COPY UTILITIES"
250 DISPLAY AT(6,4):"LOADING, PLEASE WAIT"
260 IF K=32 THEN RUN "DSK1.PRBUTL/BAS"
270 CALL INIT :: CALL LOAD(8196,254,0)
280 CALL LINK("SLOAD")
290 CALL LINK("ENTRY")
```

The above program inserts the word copy in the title to more accurately describe it's function. Line 150 of the PRBUTL/BAS program should also have copy inserted and have column number adjusted accordingly.

In order for the title not to be cleared, the CALL CLEAR in Line 100 of PRBUTL/BAS must be changed to a DISPLAY AT():""(NOTHING) to only clear the one line on which the loading message is displayed.

Go To PRBUTL/BAS and change the following:

```
100 CALL LINK("CHARDF"):: CALL SCREEN(5):: DISPLAY
    AT(6,1):"" :: FOR A=0 TO 14 :: CALL COLOR(A,16,1)::
    NEXT A :: OPTION BASE 1 :: ON ERROR 1280
150 K=1 :: L=2 :: DISPLAY AT(2,4)ERASE ALL:"PRBASE COPY
    UTILITIES" :: CALL HCHAR(4,1,45,32):: CALL
    HCHAR(21,45,32)
```

TIPS FOR THE BEGINNER
BY FRANK M. ZIC - WEST PENN 99ERS

Much controversy surrounds the merits of the PRBASE program written by William Warren. Part of the dilemma stems from the problems found when trying to load the program or print out the data. I have concluded that most of these problems don't exist when using an unaltered copy of the original program, provided you follow the instructions . But, still you say, I am having trouble with it. Well, it seems there are a number of altered copies floating around that are not correct or complete. So let's first of all begin with the most recent version, 2.0. This program allows for use of double sided disks. It should contain files named PRBULT/BAS and PRBUTL/DOC. On the modified working copy that I have, I added a CALL KEY program that is a loader for the Utility Program. The LOAD program was found in the Dec. 1986 issue of BYTE-LINE.

Now, let's start separating the apples from the oranges. First, let's give due credit to Mr. Warren for his novel approach to a long-standing and difficult problem, that of authoring a really good Data Base program. He has indeed done this and more. The program is functional, versatile and fast (written in Assembly Language). It is written in a very unique manner that places all the header files in just the first ten sectors, thus leaving the rest of the sectors open for data storage. Data disks developed in this manner cannot be read using the Disk Manager cartridge, so mark them carefully. Then too, the sorting ability of the program is outstanding, recognizing both upper and lowercase characters.

My purpose in writing this article is to give some hints on how we can all better load and use this program. So, first print out, then read the DOCS (PRBASE and Utilities) included on the disk, several times and you're ready to experiment with, perhaps the best database program written for the TI computer. An important new proposal has just been announced that would seem to add great importance to the value of the PRBASE program. A group called the Johnson Space Center Users Group in Texas has plans to start a nationwide news article reference publication. They would catalog user group newsletter articles thus providing us with a quick reference to previously written articles. With this listing, you could find information on just about any subject, just so long as it was published in participating user's group newsletter. They will start with listings for January, 1987. Both our PUG and WEST PENN 99'ers will be

included in the first 30 groups represented. Aren't we lucky to have forward thinking officers in both our user's clubs? The Texas group has already sent out a sample disk of instructions along with a printed exhibit of how they would like the information prepared. They are asking that everyone that participates should use the PROBASE as the standard.

Continuing, first use the Create portion of the program to set up your desired format. It offers plenty of flexibility provided you stay within the parameters set forth in the documentation. Once you have made up the format desired, this section is not needed again until you want to make up a different format for your next project. A printed copy of your arrangement is made by using FCTN-6. Note here that the hard copy will be shown twice. The first pinout will have numbered rows and columns. The second will have the same numbered designations and also a (+) in all the non-used areas. This clever layout will help you should you want to modify this same format, or for a variation of it in your next layout. It should also be noted that any fancy border that you designed will appear with Asterisks in place of the fancy border you created. The data section allows you to insert all your important records, in areas called fields (32 max). While in this mode, you can edit to your heart's content, using up to a maximum of 255 characters. So that this article is not too long, I'll give some short hints: (1) Name all Data disks PROBASE (important); (2) Calling up the initial data file is done by inserting the No. after DSK and replacing the (.) with a (?). Subsequent files are called up by simply depressing the enter key; (3) Using a Super Extended Basic cartridge doesn't load the Utility program since the space bar is used to bypass the normal load feature on a disk; (4) there is no continuous erase or move function (FCTN S or D). Release and press the keys for each move desired. In this case, this restriction, looks like a good limiting condition; (5) to load the Utility portion of the disk, when the main computer title screen first comes on with No. 1 Basic and No 2. Extended Basic, hold down the space bar _before_ pressing No. 2 and continue holding it down until you see the utility screen come up.

Check the listings presented for the functions they can provide; (6) All program loadings are in XB; (7) the letter H is used to bring up the HELP screen, COMMAND SUMMARY. When selecting a Command Option, press the desired key twice. The first press selects and the second press executes the command. Give the program a try, it is very good.

ANOTHER PROBASE TIP
Deanna Sheridan - NorthCoast 99ers - Cleveland, OH

As a point of interest, The Cleveland Area User Groups has submitted a complete index of their 1987 articles to the United Database sponsored by the Johnson Space Center UG. There are only about 6 groups as of this writing who have responded to their request. Dick Alden and I both received a DSSD diskette of their first set of inputs. As noted in a short article below, Dick is going to develop a similar database for us for the newsletters we receive and cross reference them to the UNDB. (Are you sure you want to do that Dick?). By the time of the next meeting, I will break down the information onto a flippy and have it available in

the clubs' libraries. But in that diskette, the Johnson Space Center group posed a question about PROBASE. Just as some of us had printer problems, it seems that if you try to insert "DSKx.FILENAME" in the place of your printer code, you will get an error and will not be allowed to continue. I spent about an hour one night trying to figure this out. Finally after hitting almost all of the keys on the keyboard it worked. But once I left the program and came back I was unable to duplicate the feat.

After I read that others were having the same problem, I again tried with no success. I then remember the tip that if you hit FCTN3 before entering your printer code, it would allow you to use PIO.LF where it would not before. I reasoned that if FCTN3 (which erases some hidden codes) would work for "PIO" perhaps it would also work for "DSKx.FILENAME". Sure enough, it took my command and wrote the report to a DV80 file. Try it, it may work on your system too!

RAVE 99 MEMORY ENHANCEMENT SYSTEM NOW AVAILABLE
FROM WEST PENN 99ERS - JANUARY 1988

RAVE has introduced three models of their new Memory Enhancement Card which can be configured with up to 4 cards at 544K bytes each in a PEB, total of 2 MEG of battery backed memory. The card has been tested with, but not limited to, the TI RS232, TI Disk Controller, MYARC Disk Controller, HORIZON Ram Disk, and the RAVE 99 Speech Adapter.

It has special "memory mapping" of addresses >4000 to >7FFF which allows an extra 16K of memory for assembly programs for a total of 48K of transparent user memory. Two (2) 8K blocks of DSR's, one of the system software and one for the user. The unit will support the memory for up to five (5) days without any batteries, and beyond the 5-day period, optional litium batteries will support the unit for months.

Memory Management software is supplied which controls the memory bank switching on the card, GROM space access, and loading of programs into the DSR memories. System "CALLS" from (X)BASIC allow the selection of the 32K memory bank to map into the computer as well as enabling/disabling the "GROM" memory space (>6000 to >7FFF). Non/DSR space makes use of >4000 to >5FFF when a Peripheral Device Service Routine is not mapped in and this space will be made available to the user (8K).

All software that was written to run with TI 32K memory to run with TI 32K memory expansion will run on the Memory Enhancement System. NEW advanced software which already takes advantage of the additional memory space are: RYTE DATA's "COMMAND DOS", R.A. GREEN's "MACRO Assembler" and DataBioTic's "Software Support Loader".

The three models are: MX01/64 - 8K of Mem at >6000 to >7FFF, 8K non-DSR, 8K System DSR, 8K User DSR, and 32K Expansion memory and all socketing for upgrading to 544K...$199.95
MX01/288 - Same as above but with 256K of mem...... 299.95
MX01/544 - Same as above but with 512K of mem...... 399.95
To order, add 5% for shipping and handling for VISA and MASTERCARD, and if you are a resident of Connecticut, add 7.5% sales tax. RAVE 99 CO., 112 Rambling Road, Vernon, CT 06066. (203) 871-7824

PICASSO PUBLISHER

DEANNA SHERIDAN — CLEVELAND OH

Last month I referred to the new graphics/desktop publishing program Picasso Publisher. It has all the drawing features of GRAPHX, TI-ARTIST and JOYPAINT99, the current TI community favorites. Like JOYPAINT99 you are not drawing colorful pictures, but rather objects you want to print. It has a font editor for character high fonts. The BRUSH has 32 different shapes from which to choose. You draw a CIRCLE by placing the cursor where you want the CIRCLE, then press the button to vary the size. You can FILL, INVERT (turn the enclosed area upside down), REVERSE dots on and off, LINES, MIRROR, and as there are 32 shapes for the BRUSH, there are also 32 TEXTURES from which to choose; PRINT, RAYS, type TEXT on screen, WINDOW (it uses the entire screen similar to JOYPAINT), MOVE, COPY, JOYSPEED, UNDO. That is quite a list. ALL drawing is controlled by the Joystick. The instructions are brief but sufficient. For a non-artist such as myself it is one of the easiest programs for me to use outside of CSGD. When in the ZOOM mode, you have the same type of squares to work in as with CSGD so developing pixel accuracy is a snap. I have not tried to create graphics from scratch, but rather have been trying to see what possibilities it has for desktop publishing. For this, you will need a combination of TI-Writer(or equivalent), TI-ARTIST and PICASSO.

The program comes with 10 ready-made fonts and you can type directly on the screen if you wish. It is much faster and easier to prepare your text file in TI-Writer. Picasso uses a full page width. You can have a page width of up to 60 columns by 84 lines. When using graphics, your line spacing is decreased so there won't be lines within the graphics. When you have created your text file in TI-Writer, use the formatter to print it to disk. Then load back into the editor and delete any unnecessary garbage and print to disk again. You

now have a clean file for PICASSO. If you plan to import graphics, the only type PICASSO recognizes are the 24 sectors from TI-ARTIST. To do the graphics on this page, I went to TI-ARTIST, converted a couple of instances to program and placed where I was planning to use them here. I saved "Abe" in the upper left-hand corner of the screen and "George" in the lower right side so that when I loaded them into PICASSO, they would be close to the area where I planned to use them in the file. You load and print half a page at a time, so if you want graphics in the top and bottom, you should not have anything overlapping what would be line 42 from the top of the screen. You can window sideways and up and down so that you can see your creation before you print. In that manner it is a WYSISYG program.

I did my heading also in TI-Artist. When I went to PICASSO, I did the following: 1. Loaded the text which I had blank spaces at the top for the heading. 2. Loaded the headline using the overlay graphic option. Centered the heading manually. 3. Loaded "Abe" and made sure he was in the right position. 4. Loaded "George" and did the same.

I am not particularly impressed with the fonts. I find them difficult to read. However, the font editor is a dream as I cleaned up one of the existing fonts quickly to make it more readable for this review.

You cannot save the graphics in a form usable by other graphic programs. A disappointment. If I draw a picture and then load a text file it wipes it out. You have to load the text file and do the drawing on the screen. It would be nice to be able to "drop" in graphics where you want. You have to guess (although one you get the hang of it, isn't too bad. The feature for the double column is NOT in the program. I will give you until next month to try to find how I did it. You can do it in TI-Writer if you don't go over 80 columns.

As you can see, a major drawback of Picasso is the fact it does not print in double density. Most pages developed for "desktop" publishing are meant to be reproduced and you need a dark master to get suitable results.

I decided to take the same file and print it with a couple of my other programs. PRINT-IT did a beautiful job with dark readable print but the line spacing is different, and I could not get my graphics where I wanted them. I tried Fontwriter with which I am going to print this page, and you will be able to see the difference. However, I am not able to print the graphics at the same time as the text. What to do? PRINT-IT is very slow in the print ing process, but has a feature allowing you to place an instance where you wish.

I am able to go and make a small fil telling exactly on wha column and row I want an instance printed. It is easy to go back and have PRINT-IT insert the graphics.

CONCLUSION

My IBM group had speakers this past month on desktop publishing. It is supposed to take $6,000 to $10,000 worth of equipment to do desktop publishing. This isn't quite laser quality, but is readable and was fun. I learned a lot and recommend Picasso

ARTO HEINO
33/3 GUERNSEY AVE.
MINTO, 2566,
N.S.W., AUSTRALIA

NOTE: After formatting and writing the above, I found in actually printing out the entire file, I could do in in two passes in Fontwriter easier than with PRINT-IT. PRINT-IT was just "too slow".

DEANNA SHERIDAN
CLEVELAND AREA 994/A USER GROUPS
20311 LAKE ROAD
ROCKY RIVER, OH 44116

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this may be your last issue