PUGET SOUND 99ERS
PO BOX 6073
LYNNWOOD, WA 98036

Puget Sound Feb 86

SEATTLE, WA PM FEB 24 1986

Ø1-Ø1-99
EDMONTON USERS GROUP
P.O. BOX 11983
EDMONTON, CANADA T5J-3

FEBRUARY 1986 Vol. 5 No. Ø2

OFFICERS

PRESIDENT :	CHUCK WYNNE	745-3249	VICE PRESIDENT:	RICK LEWIS	568-Ø296
SECRETARY :	GEORGE SJAASTAD	522-11Ø1	TREASURER :	DENNIS WOOD	641-Ø298
NEWSLETTER:	GENE CHRISTIANSEN	641-1Ø32	LIBRARIAN :	JOHN UELAND	672-7593

NEXT MEETING

DATE: WEDNESDAY, February 26, 1986 TIME: 7:ØØ PM
PLACE: Bellevue Public Library, 115Ø1 Main St, Bellevue

AGENDA:
* Introduce new officers
* Extended Basic lessons
* Tips and news from Chuck
* Demo of Gram Kracker
* SIG group reports
* General discussion session

MARCH MEETING

DATE : THURSDAY, MARCH 2Ø, 1986
TIME : 7:ØØ PM
PLACE: Shoreline Public Library
345 NE 175th, Seattle

APRIL MEETING

DATE :
TIME :
PLACE:

NOT SCHEDULED YET

BELLEVUE LIBRARY NOT AVAILABLE!

JANUARY MINUTES

by Gene Christiansen

The nominations for officers were closed. Due to the parties running unopposed, no ballots were necessary. Rich Martin brought his new Cannon printer for demonstration and inspection--nice. Tom Wynne demoed the new Gram Kracker from Millers Graphics. Very nice. Expect to hear more of this in the future. Tom also showed his Graph Paper program, a freeware program for $2.ØØ. He sent it to other user groups. Dennis Wood demoed his TK writer modification which uses true indicators for emphasized, bold, condensed on CTRL U instead of hex symbols. Looks like a winner. We also ran the AXEL F (Beverly Hills Cop) music by Spectro-Graphics. Some of the best music I've heard on the TI.

Well, That is about it for now. See you at the next meeting!!!

BITS AND PIECES

by Gene Christiansen

Ballard Computer has 1/2 height Toshiba disk drives for $69.00. A 90 day warranty comes with them. They can be used with the PB power supply. A "Y" cord is required to power the second drive and a ribbon cable with two outlets is needed for the I/O. Pick these up at Queen Anne Computer.

Last word is that Jafco is still selling the Volksmodem at $40.00. They also have the Suncom joystick there at a discount.

The TI exchange center is closing down. This means in the future you will have to send your computer, calculator, or TI PRO to Lubbox for fixing. A very sad day for the people who work there. We will miss them and the service they have provided.

Pay N Pak wholesale outlet had 6-outlet surge protector strips for about $16.

See Queen Anne computer shop for a very good printer. The Canon demoed at the meeting is extremely good at $250.00.

I would like to hear your feed-back on a couple of new ideas. The first is a "Name the Newsletter" contest, sponsored by yours truly, with the prize being a box of the diskettes. This would include an appropriate logo for the front page.

The second is a contest for an ORIGINAL program. Again the prize would be the much-needed diskettes.

See me at the Bellevue meeting to input suggestions for standards for these contests or to volunteer to serve on the judging panels.

SUPPORT YOUR LOCAL DEALERS!!!!!

TAX PREPARATION by Chet Hoover
Review by Gene Christiansen

Well, it is that time of year again and as I waited for the W-2's to roll in (with a feeling of impending DOOM), I came across this nifty piece of software written by a local TI user. Chet is very familiar with Multiplan (you remeber that little-used goody some of you got with the P-code card?) and he has built his tax prep programs around its uses. His software not only does all of the calculations necessary for the more common used forms (1040, Schedules A, B, G), it does them correctly AND then prints out the finished forms, which are by the IRS. I found the software, after some initial instruction, easy to use for it was just a matter of plugging the numbers and then letting the programs "do their thing". If you wish, because of the enormity of the project, these programs let you spread your work over many sessions by "saving" the data to disk to be recalculated with additional information as you proceed. This is a nice feature and can be used at any point of the preparations to check on your progress. Anyone with even a little knowledge of Multiplan workings will have no trouble using this tax preparation package.

There, however lies, the problem. Mr. Hoover has assumed that everyone owning Multiplan has used it and is conversant with its set-ups, commands, etc. It is for this reason the he has not included ANY instructions to get one going. Not being a Multiplan user, this necessitated a phone call to Chet. In just 10 minutes I was "up and running". It is to his credit that Chet has included his phone number in the package for those, like me, may need a little help.

Since our government is in the process of a MAJOR tax revision, Mr. Hoover has not included all the forms possible and will wait until the new reforms have been completed to rewrite his software.

I highly recommend this package to anyone faced with this yearly drudgery and wants to save time (and money) by doing his own returns. I might also add that the $10.00 cost IS deductible.

This tax preparation package can be purchased at either of two local dealers:
Queen Anne Computers or Bits and Chips.

EXTENDED BASIC LEVEL II-Doug Rose

If your like me then your always excited when somthing new is comming out for our computer and are anxious to find out as much as possible. Last month we had a little bit on the new Mayarc computer which was 'looked upon' at the Chicago Faire, and if you would like to know more about other products shown at the fair then send for Peter Hoddie's excellent 22 page report. It's available by sending $2 to: Boston Computer Society Texas Instruments User Group Attn: J Peter Hoddie,One Center Plaza Boston, MA 02108 The following is an article taken from this report Myarc has recently released a new version of Extended Basic which they call Extended Basic II(XB II). Lou Phillips, president of Myarc, describes this product as a stop gap measure until they can get their new computer to the market. Which is to say, XB II is essentially the version of Basic that will be in the new machine with the exception of a few commands, such as the mouse support, which are not included in the 99/4A hardware. The biggest advantages XB II over TI's XB is that it runs between two and four times faster and it can use up to 512K for program storage. XB II will only work with a memory expansion/print spooler/ RAM disk card from Myarc with at least 128k of memory. The reason XB II is fast is that the entire interpreter is written in assembly language instead of both assembly and GPL (TI's slow, interpreted proprietary language). Furthermore, XB II uses CPU memory instead of VDP memory to store strings so that access time to string variables is drastically reduced. XB II is 100% compatable with TI's XB. Myarc uses the assembly loader from the Editor/Assembler cartridge instead of TI's XB loader so that not only is load time cut way down but assembly programs can be linked which simplifies writing assembly code for XB significantly. The XB II cartridge also includes an empty grom socket. Phillips said that this socket will allow you to put the GROM from your TI Writer, Editor/Assembler, or other GROM cartridge into the socket, thus creating, in effect, a dual purpose cartridge.

Now to describe some of the new commands in XB II that really make it shine. First off, in XB II you can use 40 column text mode and bit map graphics. Myarc made this possible by moving nearly all the data and tables that TI placed in VDP memory into CPU memory. Thus, nearly all the VDP memory is free and can be used for graphics. To support the graphics modes, Myarc has added a CALL GRAPHS command to set the new graphics mode, CALL DRAW, CIRCLE, RECT(angle), and FILL commands which Phillips says are similar to GW BASIC from Microsoft. The DCOLOR command will allow you to set the foregound and background colors of the dots being drawn in bit map mode. The gaphics routines were written by Mack McCormick, who said they were the most difficult to routines he ever had to write, but he now says they work flawlessly. Mack is one of the few people who could write these routines for the TI, so if he says they work, they work!

There is a CALL MARGINS command which allows you to scroll one of part of the screen while leaving the rest of the screen intact which will allow the creation of some pretty fancy windowing techniques.

To speed things up more there is a DEFINT command which lets you create integer variables which run faster and take up less memory. Integers will take up one full word of memory (2 bytes).

Myarc has been around for along time and worked closely with TI when TI was developing their XB. When TI asked Phillips what he thought of XB he told them (among other things) that he thought it could use a function he called TERMCHAR. This would allow you to know what key was used to terminate a line if input (i.e. ENTER,down arrow, up arrow, etc.). This would allow the programmer to make the program do different things (such as allow editing of the input field above if input was terminated with an up arrow) depending on how input was terminated. Thus XB II has this function and allows for eight different keys to terminate input.

The line editor has also been changed somewhat. Instead of having to hold down the right arrow key to get the fifth line of program line to make a change, you can now use the down arrow key which will now just go down one screen line and only go to the next program line after it passes the bottom of the current program line. The same idea applies to the up arrow key.

XB II uses the same tokens as XB so that they are fully compatable. The only difference is that XB II must obviously use some of the tokens that were left unused so that it could incorporate the new functions.

XB II will also let you run TI BASIC programs as character sets 15 and 16 are available for use due to some moving aound of things in VDP memory. This may mess up some programs that directly POKE or PEEK to VDP memory to control sprites, but otherwise should cause no problems.

Phillips said that there will probably not be be a compiler for XB II for the 99/4A but that there probably will be one for the new computer which will use an extension of XB II.

XB II is now available along with a 128K card from Myarc for around $250.

BASIC Programming: Using Logical Arithmetic
99ER 1 LINER-Tom Wynne

The following one line program will read a display variable 80 (TI Writer) and print it to screen, printer, or any other device. When you type this program in, it will not all fit on one line, so you must type until you hear the beep, then hit enter. Now press FCTN 8 (REDO) to get the line back, and go to the end of the line and continue typing it in. When you are finished typing it in, save it!! Always save your program before you run it-I know from experience. When you run the program, it will ask you for a file name, type in the name of a file that you wish to print. Now it will ask you for an output file name. If you just press 'ENTER' it will be displayed to screen, but if you enter a file name, it will output the file to that device.

```
1 INPUT "FILE TO PRINT:":I$ :: INPUT "OUTPUT FILE :":O$ :: I=ABS(NOT O$=""):: FOR J=1 TO I
:: OPEN #1:O$ :: NEXT J :: OPEN #2:I$,INPUT :: FOR J=1 TO 1 :: LINPUT #2:A$ :: J=EOF(2)*2
:: PRINT #1:A$ :: NEXT J :: RUN
```

Explanation of the program:

I$ is the input file name and O$ is the output file name. If O$ is nothing then the file will be output to screen. The statement: I=ABS(NOT O$="") determines if you have entered something for O$. This statement is using logical arithmetic. Whenever you have an '=' inside a function it will be computed as either a -1 when it is true or a 0 when it is false. If O$ is nothing ("") it will return a zero(false). The NOT will reverse it and make it a -1 (true) then the ABS (absolute value) function will change the -1 to a 1 by removing the negative sign. Now it will be assigned to I. 'I' will have the value of 1 if you entered a file name and it will have a value of 0 if you did not. The statement: FOR J=1 TO I will determine whether to do the next statement or not. If 'I' is 0 (O$=""), then the next statement: OPEN #2:I$,INPUT will not be executed because J cannot go from 1 to 0. This is because you do not want to open a file to output to the screen. If the value for 'I' is a 1, then the OPEN statement will be executed and will open the file O$ (output file). Now it will open the file for input with: OPEN #2:I$,INPUT. Now we want it to input and print the whole file. To do this we need another loop. The following statement: FOR J=1 TO 1 will do the next statement only once. But we can change the value of J within the loop to make it loop as long as we want it. The statement: LINPUT #2:A$ will input the record from your file you are printing. The EOF function will return a value of 1 if you have reached the end of the file, or it will return a value of 0 if the end of file has not been reached. The statement: J=EOF(2)*2 will check the input file #2. If the end of file has been reached, J will be assigned the value of 2 (1*2). It will then print the record to your device: PRINT #1:A$. If 'I' has the value of 0, it will print to the screen, a value of 1 will print to your output file. NEXT J will jump back to the FOR statement and check if the value of 'J' is greater than the number after the TO. If it is the end of file, J will have a value of 2. This value is greater than 1 in the FOR statement so it will jump to RUN, which will close all open files and starts the program over again. If it is not, the next record will be input and printed.

If you have any questions on this program, I will be glad to help you.

FORTH INTEREST GROUP-Tom Wynne

The next Forth Interest Group will meet:
March 8, 1986 from 4:00 to 6:00 PM at:

Queen Anne Computer Shoppe
6 1/2 Boston #4 (upstairs)
Seattle, Wa 98109

If you have any questions, please call Barbara: 283-0953 or call me at:745-3249

99'FEST-WEST'86

FIRST ANNUAL L.A. 99/4A EXPO
Hosted by
The Los Angeles 99er Computer Group
MARCH 1 & 2 1986
Mezzanine Level
SHRINE EXPOSITION HALL
700 WEST 32nd STREET
LOS ANGELES, CALIFORNIA
TWO FULL DAYS 10 AM-6PM

PRESENTATIONS — NEW PRODUCTS
SEMINARS — MINI-WORKSHOPS
VENDORS — FAIRWARE
HARDWARE — SOFTWARE
COMPUSERVE — USER GROUPS
PROGRAM VIDEO REVIEW AREA
COMMUNAL MEETING AREA

SOCIAL EVENING with DINNER & DOOR PRIZES MARCH 1
ADVANCE RESERVATIONS NECESSARY
MEET THE MOVERS AND SHAKERS OF THE COMMUNITY
SEE THE LATEST INNOVATIONS IN HARDWARE AND SOFTWARE
DISCOUNTED AIR, HOTEL and TOUR RATES

For early arrivals, DISNEYLAND, UNIVERSAL STUDIO TOUR, WHALE WATCHING
ADVANCE ADMISSION $4.00 for BOTH DAYS, $5 AT DOOR WITH COUPON BELOW
For information regarding Hotel location, Rates, and Tours contact,
T.A.MASTERS, 148 S. MAPLE DRIVE, BEVERLY HILLS, CA. 90212
PLEASE INCLUDE A STAMPED SELF-ADDRESSED ENVELOPE
99'FEST-WEST'86 is in conjunction with Computer Sellathon & Expo

---

99'FEST-WEST'86 DISCOUNT COUPON
SAVE $1 - DUPLICATION ACCEPTED
ONE PER PERSON

SPRITE-FEVER

BY BOB GAGLE

Here is a short program to give the simulated sine wave action to a sprite. Try it and see if you can improve upon it!

```
>100 REM SINE-WAVE SPRITE
>110 REM Written by:
>120 REM BOB GAGLE
>130 REM CIN-DAY USER GROUP
>140 CALL CLEAR
>150 CALL MAGNIFY(2)
>160 DIM A(30)
>170 FOR B=1 TO 30
>180 READ A(B)
>190 NEXT B
>200 DATA 0,-4,-8,-12,-16,-20
     ,-24,-28,-24,-20,-16,-12,-8
     ,-4,0,4,8,12,16,20,24,28,24
>210 CALL SPRITE(#1,42,5,89,1
     20)
>220 CALL JOYST(1,C,D)
>230 CALL KEY(1,F,G)
>240 IF F=18 THEN 250 ELSE 22
     0
>250 CALL POSITION(#1,H,I)
>260 FOR J=1 TO 30
>270 IF I>239 THEN I=1
>280 CALL LOCATE(#1,H+A(J),I+
     J)
>290 NEXT J
>300 GOTO 220
```

NEW NEWSLETTER FORMAT

The next month's newsletter will be in a different format than we have seen before. We are going to persue using 8 1/2" by 14" sheets folded into a magazine style format. This format will allow us to have more content, up to 16 pages!! We want to have the best newsletter possible!! If you have an article you wish to submit to the newsletter, the deadline is the 7th of the month to get it published in that month's newsletter, if not it will be put in next month's. You may call and send it to one of the officers by modem, mail it to our post office box, or give it to us at the meeting. The article can consist of a program, review, tips, and even a question for us to answer. When you submit an article, please have it in paragraph format. This is your chance to become famous!! Thanks for your input!

THE PREZ' SAYS-Chuck Wynne

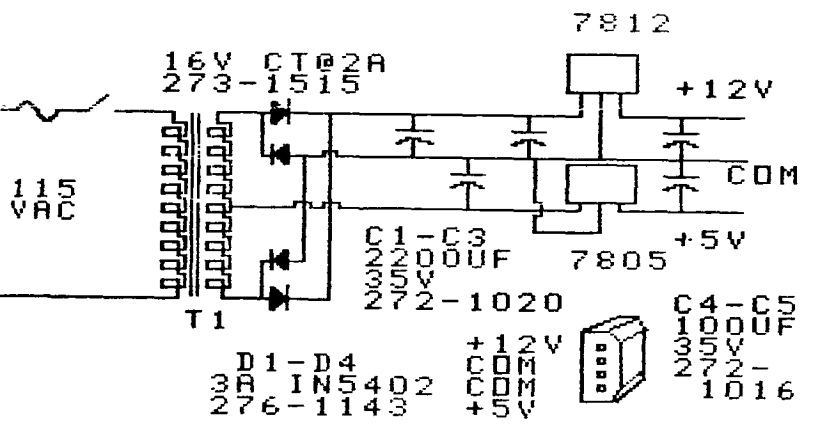
Looks like a good year ahead. The club is involved in many aspects of the TI computer you may not know of. I may be taking over the pinewood derby races for the Cub Scouts. This is where the cubs race small wooden cars down a ramp. They have a electronic trap at the end to tell which place the cars finished and a computer to set up the next race, etc. The computer? Well, its a basic TI with no expansion.

The club will try and have a mini fair if we can get some big names to come from the LA Fair. Ten of us from here are going. We hope to commit some of them.

I've been working on two projects. One combines TI Writer and Editor Assembler into one module with a switch. It's done and works great. The other is with a spare console. I will try and put the 32K inside using HML6264LP-15 chips from Hitatchi. Keep posted as to how it works.

We have new members from out of state and out of country too (Canada). We as a club will still support the basic TI. Our telephone numbers are on the news letter, so don't be shy about calling on problems. Thats what a club is all about. Also, your TI has to go to Lubbox now for repair. The exchange center is closing down. Barbara Wiederhold at Queen Anne computer shop will deal with exchanges if you would like.

Lets get some enthusiasm going out there! I'm sure we all need the support.



DISK DRIVE POWER SUPPLY

Financial Report for 1985
Submitted by Dennis W. Wood, Treasurer

The following is a summary of the income and expenses of the Puget Sound 99'ers. I hope to be able to establish a budget for 1986 next, and report on the clubs financial status monthly.

Balance as of January 1, 1985		$1,428.86
Income		$2,659.71
Dues	$ 870.00	
Library (S/W sales)	469.00	
Supply sales	1,168.41	
Equipment sales	135.30	
Misc.	17.00	
Expense		($3,665.60)
Newsletter	$ 755.28	
Supplies	1,231.57	
Library (S/W purchase)	48.00	
Phone (includes BBS	251.83	
Equipment (includes BBS)	1,012.78	
Television Set	279.46	
Post Office Box	22.00	
Misc.	64.68	
Balance as of December 31, 1985		$ 422.17

TIPS FROM THE TIGERCUB

#29

TIGERCUB SOFTWARE
156 Collingwood Ave.
Columbus, OH 43213

Distributed by Tigercub Software to TI-99/4A Users Groups for promotional purposes and in exchange for their newsletters. May be reprinted by non-profit users groups, with credit to Tigercub Software.

Over 130 original programs in Basic and Extended Basic, available on cassette or disk, only $3.00 each plus $1.50 per order for PPH. Entertainment, education, programmer's utilities.
Descriptive catalog $1.00, deductable from your first order.
Tips from The Tigercub, a full disk containing the complete contents of this newsletter Nos. 1 through 14, 50 original programs and files, just $15 postpaid.
Tips from the Tigercub Vol. 2, another diskfull, complete contents of Nos. 15 through 24, over 60 files and programs, also just $15 postpaid. Or, both for $27 postpaid.
Nuts & Bolts (No. 1), a full disk of 100 Extended Basic utility subprograms in merge format, ready to merge into your own programs. Plus the Tigercub Menuloader, a tutorial on using subprograms, and 5 pages of documentation with an example of the use of each subprogram. All for just $19.95 postpaid.
Nuts & Bolts No. 2, another full disk of 100 utility subprograms in merge format, all new and fully compatible with the last, and with 10 pages of documentation and examples. Also $19.95 postpaid, or both Nuts Bolts disks for $37 postpaid.
Tigercub Full Disk Collections, just $12 postpaid! Each of these contains either 5 or 6 of my regular $3 catalog programs, and the remaining disk space has been filled with some of the best public domain programs of the same category. I am NOT selling public domain programs - my own programs on these disks are greatly discounted from their usual price, and the public domain is a FREE bonus!
TIGERCUB'S BEST
PROGRAMMING TUTOR
PROGRAMMER'S UTILITIES
BRAIN GAMES
BRAIN TEASERS
BRAIN BUSTERS!
MANEUVERING GAMES
ACTION GAMES
REFLEX AND CONCENTRATION
TWO-PLAYER GAMES
KID'S GAMES
MORE GAMES
WORD GAMES
ELEMENTARY MATH
MIDDLE/HIGH SCHOOL MATH
VOCABULARY AND READING
MUSICAL EDUCATION
KALEIDOSCOPES AND DISPLAYS
For descriptions of these send a dollar for my catalog!
The offer made last month is still good until 1 January - a 10% rebate directly to the user group if one of their members mentions the user group when ordering from me. So far, I've had only 10 responses - and I suspect that 8 or 9 of those didn't even know about the offer!

I goofed again. In the I/O ERROR routine in Tips #28, the ON ERROR STOP will do no good in the place where I put it. It should be placed after the file is opened in line 190 so that it will become the current error trap if the file is opened correctly.

And the CALL KEY example in Tips #28 will look better if R=14. A couple of very knowledgeable programmers have written to tell me that I was wrong, and the manual is right, about CALL KEY status -1. They say that -1 simply means that the same key is being pressed as was pressed during the last keyscan, and that it could have been released and repressed in the interim. This may be, but try this routine and see if you can release and repress a key without getting a status code 0 (no key pressed) and status code 1 (different key pressed) before another status code -1.

```
100 CALL KEY(0,K,S):: PRINT
K,S :: GOTO 100
```

George Steffen has responded to the challenge in the last Tips, by publishing in the LA 99ers Topics a remarkably compact routine to translate the internal format string representation of numeric data back into numbers. The following lines will update the Menu Loader accordingly.

```
100 !by A. Kludge/M. Gordon/
T. Boisseau/J. Peterson/G. S
teffen/etc.Version 88, 11/85
140 @,@@,A,A$,B,C,D$,E,F,FLA
G,I,J,K,KD,KK,M,M$,N$,NN,P,P
$,PG$(),PP,PP$,Q$,S,ST,T$(),
TT,VT,V(,),W$,X,X$,Y,K2,S2
810 F=1 :: E=ASC(SEG$(M$,1,1
)):: M=ASC(SEG$(M$,2,1)):: I
F E=0 AND M=0 THEN GOTO 817
ELSE IF E>128 AND M>128 THEN
 F=-1 :: E=255-E :: M=256-M
815 FOR I=1 TO 6 :: M=M+(ASC
(SEG$(M$,I+2,1)))/100^I :: N
EXT I :: M=M*F*100^(E-64)
817 PRINT #PP:M
870 FOR P=1 TO NN-1 :: PRINT
 #2:PG$(P);TAB(15);V(P,3);TA
B(20);T$(ABS(V(P,1)));TAB(25
);V(P,2);TAB(31);CHR$(89*ABS
(V(P,1)<0)):: NEXT P :: CLOS
E #2
```

The change in the last line is my own, because it was pointed out to me that the catalog output to the printer did not indicate protected files.
That last line is a good example of the power of relational expressions to accomplish compact programming. The variable V(P,1) picks up its value from the variable A which is read from the disk directory in line 350. This is a number from 1 to 5, indicating the type of file, and if the file is write-protected the number is negative. A true expression has a relational value of -1. If the file is protected, V(P,1)<0 is true, and its value is -1, converted by ABS to +1 and multiplied by 89 to give ASCII 89, converted by CHR$ to "Y". If not protected, V(P,1) is a positive number, V(P,1)<0 is false and has a relational value of 0; 89 times 0 is still 0, and CHR$(0) prints nothing.

George also mentioned in a letter that my remarks on the UPDATE mode applied only to VARIABLE files; that RESTORE without a number,to return the record pointer to the beginning of a file, works only with VARIABLE files; that RESTORE with a number works only with RELATIVE files; and that therefore the only way to RESTORE a SEQUENTIAL FIXED file is to close it and reopen it.
On trying this out, I find that you can write to a FIXED SEQUENTIAL file and still be able to read the following records - but you can't simply "read a record, change it in some way, and then write the altered record back out on the file", as the Reference Guide indicates, because you will change the record FOLLOWING the one you read! It is possible to UPDATE a FIXED SEQUENTIAL file without reading it all into an array and writing it back out, but you must read sequentially to the record you want, close the file, reopen the file, read back to the record just before the one you want to update, then write in the updated record.

I have received several other suggestions regarding the Menu Loader, too many to describe here. You can all modify it to your own tastes and needs. Remember to turn off the pre-scan and ON ERROR while you're working on it, then add any new variable names or CALLs to the pre-scan. And remember, that last line MUST be the LAST line of the program! You can resequence it higher, and change the GOTO accordingly, but don't put anything after it!
I did change my version to slash the zero, since this will carry over into a program that is loaded. If you do this, be sure to add a CALL CHAR to the list in line 150!

```
190 CALL CLEAR :: FOR S=1 TO
 14 :: CALL COLOR(S,7,16):: 
NEXT S :: CALL COLOR(0,2,16)
:: CALL CHAR(48,"003A444C546
44400")
```

When you just want to load a program, waiting for it to be read from the disk directory can be a drag. And, you may have trouble recognizing the filename. So, here is the Tigercub Quickloader which I have placed on all my Collection Disks.
First you will need Catwriter, another program that writes a program. This

one will read the disk directory, ignore everything other than programs, ask you for a complete program name for each filename, and write all that into a MERGE format program called CATMERGE.

```
100 !CATWRITER by Jim Peters
on
110 OPEN #1:"DSK1.",INPUT ,R
ELATIVE,INTERNAL :: INPUT #1
:N$,A,J,K :: OPEN #2:"DSK1.C
ATMERGE",VARIABLE 163 :: LN=
1000 :: FN=1100
120 X=X+1 :: INPUT #1:P$,A,J
,B :: IF LEN(P$)=0 THEN 160
 :: IF ABS(A)=5 OR ABS(A)=4 A
ND B=254 THEN 130 ELSE X=X-1
 :: GOTO 120
130 DISPLAY AT(12,1)ERASE AL
L:P$;"    PROGRAM NAME?" ::
ACCEPT AT(14,1)SIZE(25):F$
140 PRINT #2:CHR$(INT(FN/256
))&CHR$(FN-256*INT(FN/256))&
CHR$(147)&CHR$(200)&CHR$(LEN
(F$))&F$&CHR$(0):: FN=FN+1
150 M$=M$&CHR$(200)&CHR$(LEN
(P$))&P$&CHR$(179):: IF X<11
 THEN 120
160 IF M$="" THEN 180
170 PRINT #2:CHR$(INT(LN/256
))&CHR$(LN-256*INT(LN/256))&
CHR$(147)&SEG$(M$,1,LEN(M$)-
1)&CHR$(0):: LN=LN+1 :: M$=
"" :: X=0 :: IF LEN(P$)<>0 TH
EN 120
180 PRINT #2:CHR$(INT(LN/256
))&CHR$(LN-256*INT(LN/256))&
CHR$(147)&CHR$(200)&CHR$(3)&
"END"&CHR$(0)
190 PRINT #2:CHR$(255)&CHR$(
255):: CLOSE #1 :: CLOSE #2
```

Next, key in the Quickloader. Do not change the line numbers, do not RESequence, because CATMERGE will be merged into the middle of it and that last line must be the last. Then, enter MERGE DSK1.CATMERGE and then SAVE DSK1.LOAD .

```
100 CALL CLEAR :: DIM M$(48)
:: CALL CHAR(94,"3C4299A1A19
9423C"):: CALL SCREEN(2):: F
OR SET=1 TO 14 :: CALL COLOR
(SET,15,1):: NEXT SET :: DIS
PLAY AT(1,4):"TIGERCUB QUICK
LOADER"
110 X=X+1 :: READ M$(X):: IF
 M$(X)<>"END" THEN 110
115 CALL PEEK(8198,A):: IF A
<>170 THEN CALL INIT
120 R=3 :: FOR J=1 TO X-1 ::
 READ X$ :: DISPLAY AT(R,1):
STR$(J);TAB(4);X$ :: R=R+1 :
: IF R<23 THEN 150
130 DISPLAY AT(24,1):"CHOICE
? OR 0 TO CONTINUE 0" :: ACC
EPT AT(24,26)VALIDATE(DIGIT)
SIZE(-2):N
140 IF N<>0 THEN 155 :: R=3
150 NEXT J :: DISPLAY AT(24,
1):"CHOICE?" :: ACCEPT AT(24
,9)VALIDATE(DIGIT):N
160 IF SEG$(M$(N),LEN(M$(N))
,1)="*" THEN DISPLAY AT(12,1
)ERASE ALL:"Return to BASIC"
: :"Type OLD DSK1."&M$(N)::
STOP
170 CALL CHARSET :: CALL CLE
AR :: CALL SCREEN(8):: CALL
PEEK(-31952,A,B):: CALL PEEK
(A*256+B-65534,A,B):: C=A*25
6+B-65534 :: A$="DSK1."&M$(N
):: CALL LOAD(C,LEN(A$))
180 FOR J=1 TO LEN(A$):: CAL
L LOAD(C+J,ASC(SEG$(A$,J,1))
):: NEXT J :: CALL LOAD(C+J,
0):: GOTO 30000
30000 RUN "DSK1.1234567890"
```

If you don't want to give your Basic-only programs a filename ending in an asterisk, you can leave out that warning routine, or you can modify it to warn of E/A or MiniMemory programs. If Catwriter has picked up any unloadable program-format files, etc., just delete them from the DATA lines.

The first issue of the GENIAL TRAVELER has arrived, and it is SUPERB! This is a magazine-on-a-disk, a SS/SD flippy loaded with 720 sectors of some of the finest articles and programs you'll ever see! And the programs are ready to run, you don't have to key anything in. The subscription price, until the end of 1985 at least, is $30 for 6 issues, which computes out to $5 per disk - many of you are paying your own user group that much for a one-sided disk of public domain!
If the subscribers will only have the guts to refuse to let their friends copy this for free, this venture will surely survive and contribute greatly to the advancement of the TI. The address is -
GENIAL COMPUTERWARE, 835 Green Valley Drive, Philadelphia PA 19128.

Gene Burchfield asked if I had a program to print banners vertically. I had never heard of such a thing, so I wrote one.

```
100 DISPLAY AT(12,1)ERASE AL
L:"TIGERCUB STREAMER PRINTER
" !by Jim Peterson
110 DATA 0000,0001,0010,0011
,0100,0101,0110,0111,1000,10
01,1010,1011,1100,1101,1110,
1111
120 RESTORE 110 :: DIM B$(16
):: FOR J=1 TO 16 :: READ B$
(J):: NEXT J :: P$(0)=" " ::
 P$(1)=CHR$(238)
130 INPUT "TEXT TO BE PRINTE
D? ":T$ :: PRINT :: INPUT "P
RINTER DESIGNATION? ":PD$ ::
 OPEN #1:PD$
140 PRINT :: INPUT "SIZE? (1
-10) ":Z :: IF Z<1 OR Z>10 T
HEN 140
150 FOR J=1 TO LEN(T$):: A=A
SC(SEG$(T$,J,1)):: IF A=32 T
HEN GOTO 200
160 CALL CHARPAT(A,H$):: FOR
 M=1 TO 15 STEP 2 :: K$=SEG$
(H$,M,2):: FOR L=1 TO 2 :: L
$=SEG$(K$,L,1):: B=POS("0123
456789ABCDEF",L$,1)
170 M$=B$(B):: FOR M=1 TO 4
:: N=VAL(SEG$(M$,M,1)):: N$=
N$&RPT$(P$(N),Z):: NEXT M
180 NEXT L :: FOR Q=1 TO Z/2
+.5 :: PRINT #1:TAB((81-Z*8)
/2+.5);N$ :: NEXT Q :: N$=""
 :: NEXT W :: FOR R=1 TO Z/2
+.5 :: PRINT #1:"" :: NEXT R
190 NEXT J :: STOP
200 FOR T=1 TO Z*4 :: PRINT
#1:"" :: NEXT T :: GOTO 190
210 CALL KEY(0,K,S):: IF S=0
 THEN 210 ELSE RETURN
```

If your printer doesn't have the special characters of the Genini, substitute 88 instead of 238 in line 120, to print X's, or whatever else you want. If you do have the special characters, try some others, such as 239, for this and other graphics printing programs. This routine will print a handy reference chart of them.

```
100 IMAGE ### #   ### #   ##
# #   ### #   ### #   ### #
110 P$=RPT$(CHR$(251)&CHR$(2
53),21):: X=0
120 OPEN #1:"PIO" :: PRINT #
1:CHR$(27);"E"
130 PRINT #1:P$;" ASCII COD
ES FOR GEMINI SPECIAL CHARAC
TERS":P$
140 FOR J=160 TO 175 :: K=J-
X
150 PRINT #1,USING 100:K,CHR
$(J),K+16,CHR$(J+16),K+32,CH
R$(J+32),K+48,CHR$(J+48),K+6
4,CHR$(J+64),K+80,CHR$(J+80)
:: NEXT J
160 IF FLAG=1 THEN STOP ELSE
 FLAG=1 :: PRINT #1:"":"":P$
:"TI-WRITER CODES FOR GEMINI
 SPECIAL CHARACTERS":P$ :: X
=128 :: GOTO 140
```

Another one that just looks pretty -

```
100 !KALEIDOSPRITES by Jim P
eterson
110 CALL CLEAR :: FOR CH=100
 TO 128 STEP 4 :: FOR L=1 TO
 4 :: RANDOMIZE :: X$=SEG$("
0018243C425A667E8199A5BDC3DB
E7FF",INT(16*RND+1)*2-1,2)
120 B$=B$&X$ :: C$=X$&C$ ::
NEXT L :: CALL CHAR(CH,RPT$(
B$&C$,4)):: B$,C$="" :: NEXT
 CH :: Z=2 :: CALL SCREEN(5)
130 CALL MAGNIFY(Z):: K=1 ::
 FOR J=1 TO 7 :: S=96+4*J ::
 R=16*J :: C=100*RND+20
140 IF J>5 AND Z=4 THEN T=5
:: GOTO 160
150 T=INT(15*RND+2):: IF T=5
 THEN 150
160 CALL SPRITE(#K,S,T,R,C,#
K+1,S,T,177-R,C,#K+2,S,T,R,2
41-C,#K+3,S,T,177-R,241-C)::
 K=K+4 :: NEXT J
170 Z=INT(2*RND+1)*2 :: GOTO
 130
```

```
100 !DISK MATCHER by Jim Pet
erson
110 DISPLAY AT(8,9)ERASE ALL
:"DISK MATCHER": : : :" To c
ompare a backup disk":"with
a master and list any":"file
s found on one but not"
120 DISPLAY AT(15,1):"on the
 other.": : : :"       Press
 any key"
130 CALL KEY(0,K,S):: IF S=0
 THEN 130
140 DISPLAY AT(12,1)ERASE AL
L:"INSERT MASTER - PRESS ENT
ER" :: CALL KEY(0,K,S):: IF
 S=0 THEN 140
150 OPEN #1:"DSK1.",INPUT ,R
ELATIVE,INTERNAL :: INPUT #1
:D1$,A,J,K :: DIM F1$(127)
160 X=X+1 :: INPUT #1:F1$(X)
,A,J,B :: IF LEN(F1$(X))<>0
THEN 160 ELSE CLOSE #1
170 DISPLAY AT(12,1)ERASE AL
L:"INSERT BACKUP DISK": :"PR
ESS ENTER" :: CALL KEY(0,K,S
):: IF S=0 THEN 170
180 OPEN #1:"DSK1.",INPUT ,R
ELATIVE,INTERNAL :: INPUT #1
:D2$,A,J,K :: DIM F2$(127)
190 Y=Y+1 :: INPUT #1:F2$(Y)
,A,J,B :: IF LEN(F2$(Y))<>0
THEN 190 ELSE CLOSE #1
200 DIM F(127):: FOR J=1 TO
X :: FOR L=1 TO Y :: IF F2$(
L)=F1$(J)THEN F(L)=1 :: GOTO
 220
210 NEXT L :: PRINT F1$(J);"
 NOT ON BACKUP"
220 NEXT J
230 FOR M=1 TO Y :: IF F(M)=
0 THEN PRINT F2$(M);" NOT ON
 MASTER"
240 NEXT M :: END
```

A very useful tip from Jim Swedlow, in the Orange County ROM newsletter - INPUT respects any trailing print separator on a preceding PRINT command. Try it -

```
100 PRINT TAB(20);:: INPUT 0
$
```

MEMORY FULL IN LINE 480
Jim Peterson