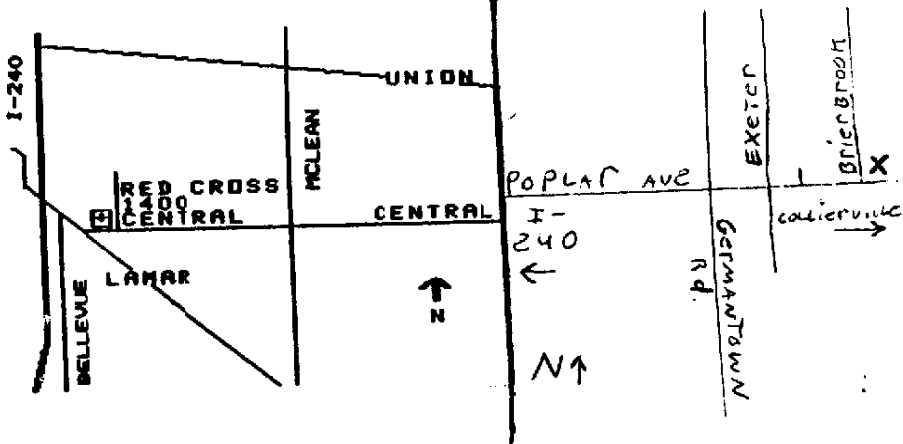


**NOTICES**

**MEETING**  
7:00 P.M.  
Thursday, January 16  
Red Cross Building  
1400 Central Av.

**WORKSHOP**  
9:00 - 12:00  
Saturday, January 18  
CLUB ROOM AT FARMINGTON  
GATES APARTMENTS IN GERMANTOWN  
2216 Brierbrook Rd.



**MEMBERSHIP APPLICATION**

NAME \_\_\_\_\_  
ADDRESS \_\_\_\_\_  
CITY \_\_\_\_\_ ST \_\_\_\_\_ ZIP \_\_\_\_\_ INTERESTS \_\_\_\_\_  
PHONE ( ) \_\_\_\_\_  
EQUIPMENT & SOFTWARE: \_\_\_\_\_

- \$15.00 FAMILY
- \$10.00 JUNIOR (under 18)
- \$10.00 ASSOCIATE



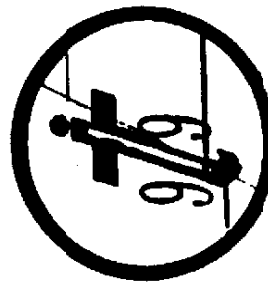
Detach and mail with check payable to: Mid-South 99 Users Group,  
P.O. Box 38522, Germantown, Tn, 38183-0522.

**MID-SOUTH  
USERS GROUP**

38138

Germantown, Tn

P.O. Box 38522



(new)  
DALLAS TX U.G.  
1221 MOSSWOOD  
IRVING, TX 75061



# t i b b s

## PRESIDENTS BIT

I made a slight error in stating last month that that was my last article as President. Well, it is this article as the new officers do not take office until this meeting.

Congratulations goes out to Dick Vandenberg on his first addition to his family. I believe it was the day after Christmas when they had a baby boy! It will be no time before he is grown up and rewriting his Dad's programs...

I received some information from Jim Peterson of TIGERCUB Software that a new disk magazine (a magazine on a disk) is out for the TI, which he highly recommends, called GENIAL TRAVELER available from Genial Computerware, 835 Green Valley Drive, Philadelphia, PA. 19128. Subscription is 6 issues for \$30. I would write to Genial Computer for more information.

I would like to say good luck to the new officers as they take office. I will of course help Gerald out any way I can... I have been receiving many long distance calls from all over the southern US lately with questions etc... Please continue to feel free to call on me for help as I will do whatever I can to help. I do not know all the answers but I will try.. We have one of the bigger clubs in our area so lets stick together and make our group the best in the country.

Also if you are looking for answers to questions or need assistance an excellent source of free help is from the Amnion Helpline where on the other end is Guy Romono. He can be reached by phone from 9 a.m. to 4 p.m. (Pacific time) at (415) 753-5581 or write to him at:

Guy Romono  
C/O Amnion Helpline  
116 Carl St.  
San Francisco, CA. 94117

About TIBBS, we have now ordered our 1200 baud modem for our TIBBS bulletin board. It is a new Myarc 1200 baud Hayes compatible modem 300/1200 baud. This will mean those people with 1200 baud modems may now access the board at 4 times the regular

speed. Of course, those with only 300 baud (myself included) can still access the board at 300 baud. The 1200 baud modem will benefit both 300 and 1200 baud users. Those using 1200 baud will not take up as long of connect time therefore making it easier to get on TIBBS. Also 1200 baud will attract more long distance callers many of which will upload programs to our board. The modem was paid for through donations to TIBBS and the sale of diskettes. We should all give Pierre (System Operator and Librarian) a BIG thanks for the tremendous work that he does to maintain the board and the library. Running TIBBS and the library both require a tremendous amount of time and we should be thankful to Pierre for doing it all so well...

A friend of mine in Florida has put up a TIBBS called TI Unlimited. It is up 24 hours a day, give it a call at 904-453-4667.

The video tape of the Chicago Faire is now available in our library. Also we may start video taping the meetings for those who can not attend.

At the last meeting we took up orders for replacement cables for the flex cable interface cable going to the PEB. This cable gets rid of the big fire hose sticking out of the side of the computer. They have come in and those who ordered one may pick them up at the meeting. I ordered 2 extra cables for the group in case others want to buy one. These are the same cables that Tenex sells for \$24 and we have them for \$17.50. Thanks goes to Bob Teague of the Nashville TI users group for offering these cables to our group for this special price. The cables are, by the way, 36 inches long, six inches longer than the ones from Tenex. This is one of the advantages of being a member of the group and attending the meetings.

For those out of town members and for those user groups that receive our newsletter and wish to obtain some of the programs mentioned in the newsletter etc... You may write to me directly at my home address and I will try to help you out in any way that I can. Please allow several weeks for a reply as I receive quite a lot of mail from across the country requesting my FREeware

GARY COX  
3174 MELBOURNE  
MEMPHIS, TN. 38127  
901-358-0667

I would like to thank the very small few who have contributed a few newsletter articles so that I do not have to type all of them in! THANKS GUYS!

Gary Cox - President, Editor, PR...

## ELECTION RESULTS

Here are the results of last months elections. The officers

will take office as of the January meeting.

|                 |                 |           |
|-----------------|-----------------|-----------|
| PRESIDENT=      | Gerald Smith    | 363-6273  |
| VICE-PRESIDNET= | Dick Vandenberg | 274-11892 |
| SECRETARY=      | Ralph Wilson    | ?         |
| TREASURER=      | Mac Swope       | 363-3880  |

Good luck to the new officers, they will need it!

Gary Cox - President, Editor, PR...

### ERROR CORRECTIONS

I had a couple of errors in the last newsletter. First of all I left out the number of which you can obtain a free book called "Modems a Users Handbook" from East Inc. The toll free number is 1-800-631-6794. Also the BBS number for the board to order a quiet cooling fan from Douglas Davis is (818) 361-9294 not 331-9294. I apologize for the errors, however, with almost no help whatsoever in typing the newsletter I have no time to proof read the newsletter and therefore many errors will slip through...

Gary Cox - President, Editor, PR...

### IMPORTANT INFO!

This month our newsletter will be mailed out to many old members of our group that have long since been deleted from our active member files in an effort to let everyone know that we are still out here to help. You can tell if you were one of these people by looking on the top of your address label. If you see a D you are deleted from the file and this is the only newsletter you will receive unless, of course, you join the group. For non members you will see an N and then a month and a year (for example N 11/85 ). The N means you are not a member and will only receive 3 free newsletters while you decide if you wish to join. 3 months from the date shown you will be deleted from the file. You can tell if your 3 months are up by seeing 3 dollar (\$\$\$) signs. As for members you will see a Y and a date (for example Y 1/85 ). The Y means you are a member and the date shown was the date you last paid your dues. One year from the date shown your dues are due. At that time you will receive a green newsletter and/or dollar (\$\$) signs on your newsletter. You will need to rejoin in order to continue to receive the newsletter and benefits of the group. Dues is the only funding for the group (besides a few donations and sales of assorted items..) which pays the groups expenses etc... None of the members or officers receive any of this money as we all do this on a vounteer basis and we have to pay our dues like everyone else. If you see any \$'s on your mailing label your dues are due!

Thank you..

Gary Cox - President, Editor, PR...

### A MODEM FOR \$18!

In the last few months I have seen an ad in The Computer Shopper for a direct connect modem for only \$18! (plus shipping) They are new modems not used. They are a Mura MM-100 modem #105. It has selectable Originate/Answer, Full Duplex operation, direct connect to phone line, Bell 103 compatible, 300 baud and comes with an AC adapter. However, it does not come with a modem cable therefore, one will have to be purchased for around \$10. The modem is compatible with any computers having a RS232 port. I have not seen the modem and therefore do not know how well it works, however, I have heard from a friend that it works fine. I plan to order one for the club for review purposes soon and will demonstrate it in a few months when I get it. The modem is available from The Wholesale Outlet, Dept CS, 1 Interstate Avenue, Albany, NY 12205. For information call them at 518-459-7883 or to order only call 1-800-344-4387. (Minimum order \$25) You will of course also need an RS232 and a terminal program such as the Terminal Emulator II cartridge and you will be all set for modem communications.

NOTE: Some cables for the RS232 will sometimes need a couple of pins switched in order for it to work on the TI unless the cable is made for the TI. To see the ad look up The Wholesale Outlet in the advertisers index in The Computer Shopper.

Gary Cox - President

### ASGARD SOFTWARE

Our group recently received a very generous donation by Ashgard Software of 2 of their new programs for review. They are Volcano Fortress and Tunnels of Doom editor. Volcano Fortress is the one of the few quests that I know of for the Tunnels of Doom cartridge besides the ones that come with it. Volcano Fortress sells for the unbelievable price of only \$8! (requires Tunnels of Doom cartridge and disk system.) Tunnels of Doom editor will allow user to make his own Tunnels of Doom quest! You create your monsters etc... for your own made up game. Ashgard Software will even evaluate your quest for market potential. The editor comes with a sample game created with the editor. The editor requires Extended BASIC, 32k and disk system and sells for \$20. Texas Instruments promised more quests for the TOD cartridge, but none ever materialized. Now we have some more quests finally and can even create our own! Besides the free copy of the 2 programs they are sending us 9 disks of their public domain software for our library! These people at Ashgard Software have bent over backwards to help out TI users with very low pricing on their software and we should in turn support them. They also mentioned they would give our group a discount on quantities of 10 or more. For 10 orders we get a 25% discount, for more than 25 a 40% discount and for more than 50 a 50% discount off of the retail price!

Ashgard Software also has for sale by special order a numeric keypad for the TI-99/4A. This device, compatible with all TI

software, features a complete set of digits, as well as a "+", "-", "#", "Y", "N" and "ENTER" key. This includes a complete replacement keyboard for your 99/4A (the keypad is connected via a ribbon cable that you simply string out the side of the console when you install the new keyboard). This item is available for \$65.00 and is warranted for a standard 90 days (as well as returnable for a full refund within 10 days of purchase).

Also those who have purchased their DISK DATABASE you may send your copy back for a new version with full error checking...

A review of Volcano Fortress and TOD editor will be in the next newsletter.

Their address is:

Asgard Software  
P.O. Box 10306  
Rockville, MD 20850

Gary Cox - President, Editor, PR...

### SUPPLIER UPDATE

When I listed a list of some of the suppliers of hardware and software for the TI I left out a very important one, TIGERCUB Software! They are one of the few companies that still gives good support to those with only BASIC or Extended BASIC and a cassette recorder, but their programs are also of interest to those with complete systems. If interested send \$1 to pay for postage and printing and you can obtain a catalog of what Jim Peterson of TIGERCUB Software offers. I believe the \$1 is refundable with your first order. I highly recommend contacting him as he has some software at very low prices! Write to:

TIGERCUB SOFTWARE  
156 Collingwood Ave.  
Columbus, OH 43213

My apologies to Jim Peterson for accidentally leaving him off of the list.

Gary Cox - President, Editor, PR...

### NEW COOLING FAN

In the last newsletter I listed a place to obtain a quiet cooling fan for \$25. In the December issue of MICROpendium magazine I found someone else offering a quiet cooling fan for \$17 + \$1.50 shipping and handling. The fans are made by EG&G/Rotron available from:

STATCO INC  
P.O. BOX 145

Townsend MA. 01469-0145  
(617) 433-2070

Gary Cox - President, Editor, PR...

### PLOTTING CIRCLES

How do you draw a circle in BASIC? According to the Cin-Day (Ohio) Users Group, you can do it on paper or use the following program to plot it using CALL HCHARs. While the program doesn't actually draw a "circle" it does calculate and draw the closest approximation based on X,Y and radius coordinates. And it runs in BASIC with nothing added.

RC equals the center row of the circle. CC equals the center column of the circle and "radius" equals the distance in blocks or tiles on the screen of the circumference from the row and column center of the circle. Thus, you would enter the following numbers when prompted: 10,12,16, for radius, RC and CC, respectively, Row 12 and column 16 are the approximate center of the screen.

```
100 CALL CLEAR
110 INPUT "RADIUS,RC,CC? ":RADIUS,RC,CC
120 CALL HCHAR(1,1,32,704)
130 FOR X=-RADIUS TO RADIUS STEP 1/RADIUS
140 R=X+RC
150 C=SOR(RADIUS^2-X^2)+CC
160 IF (R<1)+(R>24) THEN 220
170 IF (C<1)+(C>32) THEN 190
180 CALL HCHAR(R,C,42)
190 C=2*CC-C
200 IF (C<1)+(C>32) THEN 220
210 CALL HCHAR(R,C,42)
220 NEXT X
230 GOTO 110
```

From MICROpendium December 1985 issue.

### GRAM KRACKER REVIEW

Just before Christmas the first shipment of the Gram Crackers from Millers Graphics were sent out. I received mine 2 days before Christmas. The first shipment was sold out several weeks before and I was one of the lucky ones who was in the first shipment.

A few changes were made in the Gram Kracker since the TI Faire in Chicago which several people in our group attended including myself. The GK (short for Gram Kracker) is in a different casing, the printing on it is a little different and I believe they are using different type switches. The contacts are all gold plated to prevent corrosion etc... and on the front of the GK are 5 switches which perform various functions. The GK fits into the module port and is about the size of a Navarone

Widget. At the back top of it is a place to plug any cartridges into. The GK comes as a 56K unit expandable to 80K. I have a full 80K unit. The additional memory chips are user installable, however, I requested to have the additional memory chips installed as they were cheaper from Millers Graphics than if I tried to buy them myself and I did not have to fool with putting them in besides they tested my unit with the additional chips before they sent it.

The first thing I did when I started up my GK was to save Extended BASIC to disk as this was the simplest thing to do. By selecting load module on the screen and then a file name for the disk the XB cartridge was then saved in about 1 minute. To load the cartridge back into memory I simply select load module (and the file name on disk) and it then starts loading it back into memory. Prompts on the screen tell me to turn off the write protect switch (which prevents me from accidentally erasing something...) and to select either bank 1 or 2 as it loads in. When loaded I then have the selection of Extended BASIC on the cartridge selection screen.. The selection of Extended BASIC stays on the menu until I erase it out of memory by selecting the INIT MODULE command or by loading something over it. The unit is battery backed therefore Extended BASIC or any other cartridge or program is retained in memory when I turn off the system. The GK will copy to disk any module made for TI. However, I did encounter a slight problem in copying the Plato Interpreter cartridge since it has an auto boot (goes automatically into the program when I press any key to begin) I therefore did not have a Gram Kracker selection on the menu to copy it. After a phone call to Craig Miller (who was very helpful) he told me what bytes to change in the operating system in order to bypass the auto boot of the cartridge and then I would be able to copy it. A few other auto boot cartridges also exist. To answer everyone's question (which everybody asks me when I mention copying a module) you must have the Gram Kracker to load the copy of a module that you have sent to disk as far as I can determine.

The GK also has a memory editor in which I may edit the contents of anything in memory including the console operating system and any cartridges I have saved to disk. For example, the Tax Investment/Record keeping cartridge will not print to PIO but only TP or RS232. I can go into the actual machine language and change it to PIO. The manual gives you the exact steps necessary to do this. I have modified my copy of the Terminal Emulator II cartridge where it will now have a selection at communications setup for 300/1200 baud. I did this by following the instructions in the manual. Furthermore, I can use the memory editor to find the error message section of Extended BASIC by having it search through memory for the word ERROR (I can have it search for any binary codes or words in memory). When I find the section I then can retype the error messages to something I want. For example, instead of SYNTAX ERROR I changed it to say STUPID ERROR. I can also change default colors of modules or BASIC or even the cursor shape and save my changes out to disk. This I can do without knowing how memory is setup or without knowing machine or assembly language.

The Gram Kracker opens up a whole new area for use. We could

actually build a machine around the processor as we have access to almost all areas of memory if not all of them. Of course, you will have to know what your doing to do this. I do not.

As I mentioned I can modify or rewrite the operating system, therefore, I can also copy it. For example, if I have a console that does not run Atari Soft cartridges I can copy the operating system from a console that does and then have it in the Gram Krackers memory for my use in my system, therefore, bypassing TI's provisions for the 3 party software for those consoles.

A few calls were also added to Extended BASIC. Since, BYE and NEW can not be in a program CALL BYE and CALL NEW are some new calls for XB. CALL CLSALL will now clear all open files no file numbers are needed. CALL CLOCK will start a load interrupt driven clock in the top right corner of the screen which is not effected by the running of a program or by typing NEW. To stop the clock you type CALL CLKOFF or just go back to the title screen. You can add these calls into your copy of Extended BASIC that you sent to disk.

Besides the new calls for XB which comes on a utility disk is a statement MSAVE. This will allow you to save a TI BASIC (not Extended BASIC) program to the Gram Kracker (or actually to the module space) and then it will be displayed on the cartridge selection menu. After pressing any key to begin from the title screen you have your TI BASIC program on the menu (besides any cartridges you have loaded in, limit of 9 on the menu). By pressing the the selection you want the program is then run and when finished you are returned to the title screen. This is useful if you have hex converters etc... that you use often so you can now have it ready for recall and do not need to load it off of a disk... What we are actually doing here is running a BASIC program in the module space.

Another utility included is a conversion program to convert the Explorer program also by Millers Graphics to read 2 types of GRAM. I might add that the Gram Krackers memory editor is similar to the Explorers memory editor. The memory editor of the Gram Kracker is built into it and it totally independent so you mess up the operating system and everything else with the memory editor but the memory editor will still operate (you do not actually make a permanent change to the chips in the console they are permanent you are just bypassing them with the Gram Kracker so do not worry about damaging the console).

The last utility is one to have both the Editor/Assembler along with it's assembler and editor all in memory at once so you do not need to load the editor or assembler. You are using the Gram Kracker as a Gram disk when you do this.

As I mentioned to several people I can load several modules into the GK at once, however, I can not currently do it. In order for Millers Graphics to get the GK out in time for Christmas they had to send it out with a temporary manual and temporary utility disk although the GK was ready for shipment. Therefore, the utility I need to have several cartridges in the GK at once will be on the second utility disk which will be coming by the middle

of January along with the second shipment. The actually manual was still in the process of being printed when the GK's were mailed. Those who currently have the the GK will receive this new utility disk and manual free of charge and it of course will be included in future shipments of the GK. The problem with loading more than one cartridge into the GK at this time as most cartridges occupy the same memory locations therefore one will write over the other when I load another except for a very few cartridges. So on the new utility disk the utilities I have already described will be on there along with the utility to load multiple cartridges, additional Extended BASIC utilities, Editor/Assembler utilities and TI-Writer utilities. On the second disk will also be a utility to load the Editor, Formatter and optionally the charal file along with TI-Writer into the GK so I will no longer need the system disk of TI-Writer.

With the additional utilities I will be able to load a possible 3 to 4 cartridges into the GK. I can also have a cartridge plugged on top of the GK without loosing the other modules in memory. However, the cartridge plugged on top disables the selection of selecting the modules in the GK when you have the cartridge plugged onto the top. Possibly in the future Millers Graphics will have a module library capable of retaining 16 cartridges! Hopfully I will have these new utilities by the meeting so I can give a complete demo of the GK. Even without them I will have a long demo and will probably give a 2 part demonstration. One this month and another next month. I will also write a more complete review when the new manual and utilities come.

Many cartridges for the TI are written in GPL (Graphics Programming language). In a phone conversation with Craig Miller he said that very soon Millers Graphics will be releasing a GPL assembler and disassembler for the Gram Kracker!

I might also add that the Gram Kracker will work with only a basic system of a console and cassette recorder. However, you will be limited to only saving and loading cartridges and you will not be able to use any of the utilities on disk since you do not have a disk drive. I do not know if the utilities are available on cassette or not. You will also not be able to edit memory or load or save the console operating system. Also in order to load and save as well as edit the console operating system a full BOK GK unit with 32k memory expansion is required. Memory expansion (32K) is also required for the operation of the memory editor.

The only problem I found was in the temporary manual. It does not go into much detail of explanations etc... for someone like me who does not know much about the inside workings of the computer. In a phone conversation with Craig Miller he said the new manual will have complete examples on how to do everything. I hope it will also have good explanations on what is actually happening when I flip these switches etc... I am sure the manual will be excellent as any manual or program I have ever seen from Millers Graphics has been top quality. The possibilities for a knowledgable programmer are almost unlimited with the use of the Gram Kracker. As more people obtain a Gram Kracker I am sure more utilities and programs will be coming out for it... I am happy

with my Gram Kracker, but it is a little complicated to operate unless you are copying cartridges or editing their colors etc... This problem is only due to the temporary manual though, I will be looking forward to the new one to explain some of these things to you. Don't miss the demonstration at this meeting!

Price for the Gram Kracker is \$174.95 + \$4.00 shipping and handling. Add an additional \$13.50 if you want an BOK unit. Millers Graphics address is:

MILLERS GRAPHICS  
1475 W. CYPRESS AVE  
SAN DIMAS, CA 91773  
(714) 599-1431

Gary Cox - President

### New C-99 Language for TI!

This article was edited out of the Chicago Times newsletter of the Chicago TI User Group of Chicago Illinois.

I've just got a copy of a new computer language for the TI-99/4A - C. C was developed in Bell Laboratories in 1969 and was an extension of the language B. I know that means nothing to you but the point is that C is a major computer language that is usually only available on large mini-computers and main-frames. Now C is available for us on our little 4A. This is a MAJOR feat as I know of no other microcomputer in the lower price range that has C! Note the the author has made C available under the FREEMWARE agreement and is asking for a \$20 donation for his hard work. This has to be one of the BEST bargains I have ever heard of for the TI. I paid \$40 for TI-Forth!

Most people have never heard of C. This is very understandable as most people do not use a main-frame computer. I'll now go over some of the pros and cons of the C-99 language and explain why I'm so excited about it:

First off, C is a compiled language. That means that it is almost as fast as assembly language. In fact, C generates Assembly source code and you must then use E/A module and Assemble it. The reason that C is not as fast as compared to if you wrote the Assembly source code yourself is that a machine (with limited memory such as the TI has) cannot write code as efficiently as you could in Assembly. As C is 10 times easier to learn than Assembly, I'm sure you will not mind. C is very close to Basic format. Here's some equates:

| Basic                   | C-99                        |
|-------------------------|-----------------------------|
| =====                   | =====                       |
| CALL CLEAR              | putchar (12)                |
| REM This is a REMark    | /* This is a REMark */      |
| PRINT                   | Not currently available     |
| DISPLAY AT(1,1):"Hello" | locate(1,1); puts("Hello"); |
| ACCEPT AT(1,1):A        | locate(1,1); gets(A);       |

```
CALL KEY(0,K,S)
FOR I=1 TO 10
IF A=0 THEN A=2
```

```
poll(K);
I=0 while (++i<11)
IF (A==0) ( A=2; )
```

This is not all but just an example. C-99 has some serious limitations at this time. You can only access VAR/80 files and many of the nice features of C are left out. This understandable due to memory limitations. The most important aspect that is left out are the VDP routines such as CALL COLOR, CALL SCREEN, etc.. It should be noted that these problems are currently being worked on and should be corrected very soon. The author has made it very easy to interface straight Assembly code with the C text so once these routines are written, you can save them in a library to be used as needed. I have made some functions such as HCHAR, VCHAR, WAIT, and CLEAR that do the equivalent of their BASIC counterparts. WAIT is just a delay that is often needed to slow down a C program. WHAT? Slow a program down! Well just take a look at the speed of C in the table below and see why you may need to slow a C program. The example program is designed to put the letters of the alphabet on the screen one character position at a time. The second BASIC program uses the auto repeat method of HCHAR that C does not have so the fair comparison is with the first BASIC program.

#### PROGRAM #1

```
1 FOR I=65 TO 90
2 FOR J=1 TO 24
3 FOR K=1 TO 32
4 CALL HCHAR(J,K,I)
5 NEXT K
6 NEXT J
7 NEXT I
8 END
```

#### PROGRAM #2

```
1 FOR I=65 TO 90
2 CALL HCHAR(1,1,I,768)
3 NEXT I
4 END
```

If the above programs were written in, BASIC, X-BASIC, C-99 and ASSEMBLY here is the time table for it's time to execute in the different languages:

```
BASIC PROGRAM #1= 17:07
X-BASIC PROGRAM #1= 7:57
BASIC PROGRAM #2= 0:24
X-BASIC PROGRAM #2= 0:23
C-99= 0:14
ASSEMBLY= 0:05
```

By John Behnke of the Chicago Users Group

EDITORS NOTE: I have written to the Chicago Users Group on information on how to obtain this language. Hopfully I will know soon. G.C.

## TI WRITER

Here's a handy reference sheet for TI-Writer.

Here's a handy reference sheet for TI-Writer.

| EDITOR COMMAND   | IFCTNICTRL | EDITOR COMMAND | IFCTNICTRL       | EDITOR COMMAND | IFCTNICTRL |                 |  |       |      |
|------------------|------------|----------------|------------------|----------------|------------|-----------------|--|-------|------|
| Back tab         |            | T              | Ins. Blank line  | 8              | 0          | Quit            |  | =     | 1    |
| Beginning/line   |            | V              | Insert character | 2              | 8          | Reformat        |  | {     | ZorR |
| Command/escape   | 9          | C              | Last paragraph   |                | 6orH       | Right arrow     |  |       |      |
| Delete character | 1          | F              | Left arrow       | 8              | 8          | Roll down       |  | 4     | A    |
| Del. end of line |            | K              | Left margin rel  |                | Y          | Roll up         |  | 6     | B    |
| Delete line      | 3          | N              | New page         |                | 7orP       | Screen color    |  | 1     | 3    |
| Line #*(on/off)  | 0          |                | New paragraph    |                | 6orM       | Tab             |  | 7     | I    |
| Down arrow       |            | X              | Next paragraph   |                | 4orJ       | Up arrow        |  | E     | E    |
| Duplicate line   |            | S              | Next window      | 5              |            | Word tab        |  | 17orN |      |
| Home cursor      |            | L              | Oops!            |                | 1orZ       | Word wrap/fixed |  | 1     | 0    |

LOAD FILES: LF (enter) DSK1.FILENAME (load entire file)  
 LF (enter) 3 DSK1.FILENAME (merges filename with data in memory after line 3)  
 LF (enter) 3 1 10 DSK1.FILENAME (lines 1-10 of the filename are merged after line 3 in memory)  
 LF (enter) 1 10 DSK1.FILENAME (loads lines 1 thru 10 of filename)

Save files: SF (enter) DSK1.FILENAME (save entire file)  
 SF (enter) 1 10 DSK1.FILENAME (save lines 1 thru 10)

Print Files: PF (enter) P10 (prints control characters and line numbers)  
 PF (enter) C P10 (prints with no control characters)  
 PF (enter) L P10 (prints 74 characters with line numbers)  
 PF (enter) F P10 (prints fixed 80 format)  
 PF (enter) 1 10 P10 (prints lines 1 thru 10)

NOTE: The above assumes P10 DSK1.FILENAME, AND RS232 ARE ALSO VALID!  
 TO CANCEL THE PRINT COMMAND PRESS FCTN 4.

Delete files: DF (enter) DSK1.FILENAME

Setting Margins and Tabs: (16 tabe maximum)  
 L-Left margin R-Right margin I-indent T-Tab  
 Use ENTER to execute or COMMAND/ESCAPE to terminate command.

Recover Edit: RE (enter) Y or N

Line moves: M (enter) 2 6 10 (moves lines 2 thru 6 after line 10)  
 M (enter) 2 2 10 (moves line 2 after line 10)

Copy: same as move except use C instead of M.

Find Strings: FB (enter) /string/ (will look for string in entire file)  
 FB (enter) 1 15 /string/ (will look for string in lines 2 thru 15)

Delete: D (enter) 10 15 (deletes lines 10 thru 15 in memory)

The above taken from LEHIGH 99'ER COMPUTER GROUP NOV. NEWS LTR.  
 A.E.

## MULTIPLAN TIP

After getting a copy of the TI enhancements to Multiplan I tried it out on my System and it worked for a few times and then it wouldn't work. I thought that the problem was Dick Vandenberg's disk drive alignment (who I got the copy from). However, after getting a copy from the club's library (Pierre's system) and it worked for a while and then it crashed, so I figured it was a problem with my system. I obtained a copy of the Multiplan enhancements from Gary Cox and at the same time borrowed some back issues of MICROpendium. While reading an article in the April 85 MICROpendium it showed me what the real problem was. The Multiplan module looks for the disk named TIMP when loading Multiplan. In the process of getting another copy I changed the disk name to MPEHANCED rather than TIMP and then the disk would not work. After getting a copy from Gary I tried it with the disk name of TIMP and it worked and when I changed the disk name to TIMP it wouldn't work. So, keep TIMP as the disk name even for the enhanced version and you will not have the same problems that I did.

Clem Wixted Jonesboro ARK.

## EXPLORER

Explorer, available for \$24.95 from Millers Graphics, is an assembly language program that will let you monitor the progress of any other program as it is running. For instance, you can execute the power up routine, and see exactly what it does as it's running. You can change the contents of CPU and VDP RAM and examine ROM and GROM. The program actually treats all memory the same, so if you ever add GRAM chips to your system (such as GRAM KRACKER) you can edit the contents of it. The data in the CPU and VDP registers are on the screen at all times, and can be changed. You can step one instruction at a time, or go into continuous execution mode. You can toggle between the application program's screen and the Explorers main screen. It will also display the disassembled instruction that it will execute next. There is also a number converter that will perform +, -, \*, /, and, or, xor, + not operations on any two numbers in hex, decimal, and binary. You can set and examine any CRU bit. You can set breakpoints to any CPU, VDP, or GROM location, even ROM. It comes with 105 page manual that comes with sample explorations to let you get the feel of the program. It also includes memory maps of the console ROM+GROM, and X-BASIC's use of VDP, Memory Expansion, and scratchpad RAM. If you have a Myarc or CorComp disk controller card, or a Navarone Widget, you can explore through cartridges. You should note that, due to low-level hardware differences, Explorer is not currently compatible with Myarc's MPES (mini peripheral expansion system), only the card.

By Mike Dodd out of the Dec 85 K-Town newsletter of Knoxville, TN.

## PROGRAM BIT

The demonstration this month will be the Gram Kracker from Millers Graphics. You will not want to miss this demonstration as the Gram Kracker is the most fantastic device ever made for the TI! It is usable by people with a full system or just a cassette system. I apologize for those who wanted to see the 1200 baud demonstration last month. However, due to Gerald having the flu and he had the 1200 baud modem, term programs, Compuserve ID etc... we were not able to do the demonstration as he was the only one who could do it. This will be rescheduled for a future meeting. We will also have at the meeting a TI99/4 (not a 99/4A) computer! This is the computer that was out before the 99/4A. You may notice that some software will say that it will not work on the 99/4 and this is the computer it is talking about. I myself have never seen one, but from the descriptions of a friend it really looks weird with some strange features. The new officers will also be taking office and the BASIC programming class will be meeting as usual, Adolph will be there with the cassette tape library, Pierre with the disk library and much more.... See you there...

Gary Cox - President, Editor, PR...

## SHOPPERS CORNER

John Craig has the following for sale:  
2 TI99/4A (black and silver) consoles= \$40 each!

For \$3 a piece:  
HOUSEHOLD BUDGET MANAGEMENT      PERSONAL REAL ESTATE  
CHISHOLM TRAIL                      HOME FINANCIAL DECISIONS  
MUNCHMAN                      TOMBSTONE CITY              HUNT THE WUMPUS

He can be reached in Atoka, TN at 837-0941 (must dial 1 for long distance from Memphis) or at work at 872-5763 (not long distance)

Ronald Howell has the following unused brand new cartridges for sale. If interested call Ronald at 754-6801 and he will bring the one you want to the meeting.

|                          |                              |
|--------------------------|------------------------------|
| EXTENDED BASIC=\$50      | TERMINAL EMULATOR II=\$20    |
| PERSONAL REAL ESTATE=\$5 | PERSONAL RECORD KEEPING=\$10 |
| CHECKBOOK MANAGER=\$5    | HOUSEHOLD BUDGET=\$5         |
| EARLY LEARNING FUN=\$5   | EARLY READING=\$10           |
| NUMBER MAGIC=\$5         | ADVENTURE=\$12               |
| FOOTBALL=\$7             | BLASTO=\$5                   |
| PARSEC=\$5               | AMAZING=\$5                  |
| BLACKJACK=\$8            | VIDEO GAMES I=\$5            |
| CHISM TRAIL=\$5          | ALPINDER=\$5                 |
| TI INVADERS=\$5          | CAR WARS=\$5                 |
| MUNCHMAN=\$5             | THE ATTACK=\$5               |
| HUNT THE WUMPUS=\$5      | INDOOR SOCCER=\$7            |
| TOMBSTONE CITY=\$5       | VIDEO CHESS=\$10             |

I might add that the price of \$50 for Extended BASIC is the cheapest you will find it! Extended BASIC will GREATLY increase your programming capabilities and allow you to run a larger number



of programs.

Games "N" Gadgets in the Mall of Memphis has a few items as well as the Computer center at Poplar and I-240 including cassette cables. Then Stewart Software at 4646 Poplar has TI printer cables...

Gary Cox - President, Editor, PR...

CHRSET DISKNAMES

OLDEN63 SCRIPT5  
 SCRIPT4 PLAYBIL  
 FAREAST LED  
 FBLOCK PLAIN SCRIPT3  
 GOTHIC OLDEN6  
 GOTHIC2 ANBOAT  
 IBM OLDEN62  
 LEDGER ROMAN SLANT  
 ROUND TECH2  
 PLANE RODEO2



PINGO2



PUMKIN



REALTOR



REXIT

# 99 PUZZLE OF THE MONTH

R A B H S U A F O W W G M L M B C P V A  
 G K J R I X H R X J A L I L H O F F T X  
 B V Z B W Y C L T T L B L E U P W B Q X  
 P D U X T R O R R V E A U R S G K X D K  
 G P Q P E G O J Z L L D S S S T W A X O  
 M I V E O T O L I N N E O Y O E B R V D  
 F V D J I M N F O A W F N A H G H H Z Y  
 P O F N N J B I M A X T U S Q A O Z X O  
 C U O S Z U S M R A H D N N X S H S Z P  
 X M T G S N O E D E E U R D C F S K O H  
 A I C P A C Q T S E T Y B G H T E D X N  
 B W M P R U A I F R U T R D N Y I M O T  
 R L X X I O Z F O D G O I G B F I O B D  
 S E J T B E G T B L M S H O F I H L N E  
 W L H E T S S T X S K I A Y G T K J R H  
 K R U T Z L S R A E W R N V M V W H C U  
 L S H I U X C I T M D H R U O T Q H E E  
 T S B M U K V T C R G J K B V F A A C A  
 Q W E V X E E I P W X W K I U R U C W W  
 Z P S A L U F Z G F I C D D P O C P W J

### DIRECTIONS

There are 20 words hidden in the above puzzle. You may find them horizontally, vertically or diagonally, and they may be either frontward or backward.

The word list is at the right. Check each one off as you locate it in the puzzle. Good luck!

BITS  
 BYTES  
 CODE  
 COMMAND  
 COURSEWARE  
 DISKETTE  
 EMULATOR  
 EXPANSION  
 FUNCTION  
 GOSUB

GROM  
 HCHAR  
 KEYBOARD  
 LOGO  
 MONITOR  
 PROGRAM  
 QUIT  
 SUBFILE  
 SYNTHESIZER  
 XBASIC