

MID ILLINOIS COMPUTER RESOURCE
ORGANIZATION
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MICRO/99 Newsletter
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MICRO/99 is a not-for-profit group dedicated to the sharing of information and public domain software for the Texas Instruments 99/4A home computer. Meetings are held the third Thursday of each month at the Illinois Agriculture Association building, 1701 Towanda Avenue, Bloomington. Attendees sign in with the guard at employee entrance number 4 at the rear of the building. Visitors are especially welcome.

*** JANUARY 16 MEETING ***

The program for the January 16, 1986 meeting will include a buy/sell/swap meet. Bring any hardware, software, books, magazines, etc. that you would like to sell or exchange.

There will also be demonstrations of the GRAM KRACKER from Millers Graphics. See notes on this amazing new device on the next page.

**** SMART REMARKS ****

A new year has begun. As I start my presidency of MICRO, I hope you will all join me in a New Year's resolution to do your part to allow this group to realize its full potential. The first thing to do in this regard is to renew your membership! (Annual dues of \$15 per family will be accepted at the meeting.) But that is just the first step. Promote the club among your friends that have TI 99's. Volunteer to be our publicity contact with the news media. Submit an article for the newsletter. Suggest a meeting topic you would like to see or present.

The level of hardware and software support for our orphan computer continues to astound me, and more is coming. The New Year can be another exciting one for the TI 99 community.

Sid Smart

***** NEW OFFICERS *****

The following officers were elected at the December meeting:

Sid Smart, President (309) 962-9305 (home - LeRoy)
(309) 766-2320 (work - Bloomington)
Brian McFeeters, Vice Pres. (309) 263-8807 (home - Morton)
Ray Hinrichsen, Treasurer (309) 827-6965 (home - Bloomington)

***** GRAM KRACKER *****

Those of us who ordered Gram Crackers at the Chicago TI Faire received them in time for Christmas. This device from Millers Graphics fits into the cartridge port, and software cartridges plug into it. It contains 56K of battery powered RAM and GRAM (Graphics RAM), a routine to save any cartridge to tape or disk, a routine to load it back into the Gram Kracker to run from there. About 15 cartridges can be saved on one DSDD disk!

There is also a memory editor that can modify the reloaded program. Most of us will not have the programming expertise to do much of that on our own, but we can expect to see articles and software offerings which will allow us to extend Extended Basic, modify print file defaults, load multiple cartridges at once, etc. The preliminary utility disk supplied with the device enables some of this. The final version, yet to come, will have more.

With an optional 24K (total 80K) installed, modifications can be made to TI BASIC and even the operating system itself. I'll bet that some of the many TI technical wizards, in addition to Craig Miller himself, will be coming out with some amazing things based on the capabilities of this device.

The January 16 meeting will include a demo of the GRAM KRACKER.

***** FUTURE PRODUCT? *****

Pilgrims' Pride of Hatboro, PA announced their intention to market a module that will allow you to save any cartridge to disk, and reload it into their module to run. They estimate a March, 1986 release date and a tentative price of \$60 to \$70. They say it will expand your system by 8K and include a program loader package.

***** QUIET FANS *****

MICROpendium reports that Statco, Inc., P.O. Box 145, Townsend, MA 01469-0145 is offering a quiet, high efficiency muffin fan made by EG&G/ROTRON to replace the noise maker TI put in your expansion box. The price, including P&H, is \$17. We have an article in our newsletter exchange that describes how to install a replacement fan.

MYARC 128K CARD

Recently, I purchased a MYARC 128K memory expansion card to replace my TI 32K card. I had tried to buy a MYARC 512K card, but was unable to locate one. The 128K card can be upgraded to a maximum of 512K by plugging in memory chips. I have ordered the chips to do this.

The 128K card serves three functions. It's main function is in providing 32K of memory to run programs requiring extra memory such as TI-WRITER. It will replace a TI 32K expansion memory card. Secondly, it will work as a ram disk. Up to 400K can be allocated (if you have 512K). The ram disk can save and load programs the same as a floppy drive only much faster. Lastly, any memory not allocated to the ram disk can be used as a print spooler for quicker access to your computer while you are printing.

Below are some of the commands built into the 128K card that are available in basic or extended basic:

- CALL PART(X,Y) - for partitioning the ram disk and print spool; X = Kbytes for ram disk
Y = Kbytes for print spool
X + Y must equal 96 for 128K card
- CALL EMDK(N) - emulates any drive 1-5; if drive number used is same as floppy drive, the floppy becomes inactive
- CALL RDDIR - gives a directory of ram disk
- CALL VOL(name) - allows you to give ram disk a name; useful in programs like Multiplan where a disk name is needed

Ram disk can be referred to as RD.

SP is used for RS232 printing while SPP10 for parallel.

Another feature of the card is the ability to leave programs loaded in the card with the expansion box is turned off. A 9 volt power supply can be plugged in the back. This turns the card into a mini "hard drive". With 96K, you can load a full SS/SD disk. With 512K, you can load over four SS/SD disks (remember the max memory available for the ram disk is 400K).

I have loaded programs to the ram disk using a sector copy program such as DM-1000. However, you can only do this once as the second time will wipe out what is already there.

Printing one page thru TI-WRITER with 80K of print spool took only 4 seconds for the cursor to return. It took 23 seconds using only the printer's 2K buffer.

Below are the times (secs) to load programs from ramdisk and floppy:

PROGRAM	RAMDISK	FLOPPY	****	PROGRAM	RAMDISK	FLOPPY
load DM1000	2	12		catalog in DM1000	<1	2-3
MICRO PINBALL	1	8		E/A in GRAMKRACKER	2	8
(mailing labels)	74	109		(43 sector basic)	16	22
(39 records)				(to cursor return)		

All-in-all the 128K card is a great buy. Most dealers are selling them for \$199 which is a bargain considering what it does; provides 32K memory expansion, a ram disk to speed up file access, and a print spool to speed up computer access during printing. It also comes with a well written 24 page manual.

This article was written by Tom Kennedy and appeared in the DEC85 issue of the LEHIGH 99'ers newsletter.

TI-WRITER TUTORIAL

How many of you have a typewriter? Please raise your hand. Keep your hand up if your typewriter has interchangeable text. How about automatic bold and underline. Or some amount of memory storage (for letterheads, etc.). How about an erase key? Those of you left probably have a pretty expensive piece of machinery, but TI-WRITER has ten times the functions or features of the best typewriters. With TI-WRITER, your only limitation is your own creativity.

To start off with, what do you need to operate your word processor. You must have the 99/4A console (TI-WRITER won't work with the 99/4), a TV or monitor, the cartridge and disk package (or freeware program TK-WRITER), disk system, memory expansion, RS232 interface and a printer. In other words, the whole works. The printer is something you definitely want to be careful in choosing because all of your work will be in vain if you can't print out exactly what you type in.

This first tutorial will only deal with the text editor. After you load the text editor, you will get a blank screen with a line at the top. The line is called the command line. There are seven commands shown which have a total of sixteen sub-commands. The commands are selected by typing only the letters that are capitalized in the word. For instance: "F" for Files, "SH" for Search, or "LF" for LoadFile. That's an interesting point, you can access any of the sub-commands from the main command menu. In other words, to ShowDirectory (which is a disk catalog) you would enter the command mode (FCTN 9), and either type "F" for files and "SD" for ShowDirectory, or just type "SD" immediately. This feature saves a lot of time and keystrokes.

The first command is Edit. This simply enters you into the text-edit mode in which text is created.

Next is Tabs. When you hit "T", the top part of your text is shown with a scale across the top showing the current tabs and margins. Changes are made by simply typing over existing entries with the appropriate symbol (L,R,T, OR I).

"F" for files allows you to work with your text file as a whole, to Load, Save, Delete, Print, Purge or ShowDirectory. "PF" for PrintFile is not what you get when you print out through the text formatter, it just prints a "hard copy" of the file as you see it on the screen. It doesn't print with any of the modifications made by the format commands (more on those latter). "PF" is useful for making a fast copy of a long letter in order to check for errors without having to scroll back and forth or up and down. Purge simply erases the file from memory to prepare for a new entry. It is similar to the "NEW" command in basic.

Next is "L" for Lines. This allows you to work with whole lines or groups of lines by moving them to somewhere else in the text, copying to somewhere else and leaving the original intact, to delete groups of lines, or to quickly move the cursor to some line in the text with the ShowLines option.

Search (or "SH") gives you the option of either the FindString routine or the ReplaceString routine. FindString will move the cursor to the first and/or each successive use of the word string you give. ReplaceString searches the text for a given string and replaces all or one occurrence with the new string. This is great for correcting a repetitive spelling error.

RecoverEdit is a failsafe repair in case the text buffer was purged in either the File or Quit command. It will pull back everything but the first line and restore the file. I guess the loss of the first line is the penalty paid for accidentally erasing a file.

Finally, Quit, as the name implies, blows it all apart and leaves you with the title frame. But before it goes, all open files are closed (such as to disk or printer) so no data is lost. Fortunately, it first gives you the option of saving your file (in case you forgot to do so) or just purging the file and going back to the edit mode. But if you really want to quit, type "E" for Exit and it shuts down.

Now let's go over the keyboard. TI-WRITER makes extensive use of the FCTN and CTRL keys and uses every possible function of the top line of keys (the numbers). There are also many functions that have duplicate methods of keystrokes to activate them. For instance, to enter the command mode, you either press FCTN 9 or CTRL C. The reason for this duplication is to allow you to choose the easiest to use depending on where your fingers are at. The problem though, is that it can be very confusing trying to remember the fifty different key combinations that activate the thirty functions. A better method is to just pick which keys you're going to use for what function and ignore the rest. What I do is use the number line keys for anything shown on the overlay strip and just memorize the few functions hidden down in the keyboard. Review pages 130-132 in the TI-WRITER manual for all FCTN and CTRL key text editing commands.

Now, if you're still following along you may be quite confused with this onslaught of information. The point is, you can't learn all of this in one sitting, but after using TI-WRITER for a while you start to pick things up as you need them. Rest assured, you do spend the majority of your time typing. The purpose of most of the functions I've mentioned are to manipulate the text which is already in the file. I have simply tried to cover all of this in order to bring something to your attention that you might have missed, or to peak your interest in the capability of the TI-WRITER software.

To review, in the command mode we can choose between Edit, Tabs, Files, Lines, Search, RecoverEdit, or Quit. As sub-commands of those seven, we can choose LoadFile, SaveFile, PrintFile, DeleteFile, Purge, ShowDirectory, MoveLines, CopyLines, DeleteLines, ShowLines, FindString, ReplaceString, or Exit. Part II of the article will deal with the Text Formatter.


```

116 250:NN+3
470 DISPLAY AT(X+6,1):" C
hoice?" :: ACCEPT AT(X+6,16)
SIZE(-3)VALIDATE(DIGIT):K
480 IF FLAG=1 THEN 500
490 IF K=NN+2 THEN 840 ELSE
IF K=NN+3 THEN CLOSE #1 :: N
N=0 :: GOTO 190
500 IF K<>NN AND K<>NN+1 THE
N 590
510 IF K=NN THEN CALL CLEAR
:: CLOSE #1 :: END
520 DISPLAY AT(X+5,12)SIZE(1
2):" #?" :: ACCEPT AT(X+5,15
)SIZE(2)VALIDATE(DIGIT):KD :
: IF KD<1 OR KD>NN THEN 520
530 IF V(KD,1)>0 THEN 550
540 FOR J=1 TO 10 :: DISPLAY
AT(11,1):" " : " PROTECTED -
CANNOT DELETE:" " :: DISPL
AY AT(12,1):" " :: NEXT J ::
GOTO 570
550 DISPLAY AT(X+6,1)SIZE(27
)BEEP:" Verify - Delete ";PG
$(KD);"? " :: DISPLAY AT(X+6,
28)SIZE(1):"Y" :: ACCEPT AT(
X+6,28)SIZE(-1)VALIDATE("YN"
):Q$ :: IF Q$<>"Y" THEN 570
560 DELETE D$&P6$(KD)
570 CLOSE #1
580 CALL VCHAR(1,3,32,672)::
NN=0 :: X=0 :: FLAG=0 :: GO
TO 260
590 IF K<1 OR K>127 OR LEN(P
6$(K))=0 THEN 430
600 IF ABS(V(K,1))=5 OR ABS(
V(K,1))=4 AND V(K,2)=254 THE
N 640
610 DISPLAY AT(12,1)ERASE AL
L:"Print to ? S": "(P)rinte
r?": "(S)creen?" :: ACCEPT AT
(12,12)SIZE(-1)VALIDATE("PS"
):Q$ :: IF Q$="S" THEN PP=0
:: GOTO 630
620 DISPLAY AT(12,1)ERASE AL
L:"PRINTER? P10" :: ACCEPT A
T(12,10)SIZE(-18):P$ :: OPEN
#3:P$ :: PP=3
630 CALL CLEAR :: CALL SCREE
N(16):: ON ABS(V(K,1))GOTO 6
80,690,750,760
640 CLOSE #1 :: IF SEG$(P6$(
K),LEN(P6$(K)),1)="*" THEN D
ISPLAY AT(12,1)ERASE ALL:"RE
TURN TO BASIC AND LOAD BY:"
TYPING OLD ";D$&P6$(K):: STO
P
650 CALL PEEK(-31952,A,B)::
CALL PEEK(A*256+B-65534,A,B)
:: C=A*256+B-65534 :: A$=D$&

```

```

P6$(K):: CALL LOAD(C,LEN(A$
)
)
660 FOR I=1 TO LEN(A$):: CAL
L LOAD(C+1,ASC(SEG$(A$,I,1))
):: NEXT I :: CALL LOAD(C+1,
0)
670 CALL VCHAR(1,3,32,672)::
CALL SCREEN(8):: FOR S=0 TO
14 :: CALL COLOR(S,2,1):: N
EXT S :: DISPLAY AT(12,2):"L
OADING ";A$ :: GOTO 900
680 OPEN #2:D$&P6$(K),INPUT
,FIXED :: GOTO 700
690 OPEN #2:D$&P6$(K),INPUT
700 LINPUT #2:M$ :: PRINT #P
P:M$ :: IF EOF(2)THEN 730
710 CALL KEY(0,K,S):: IF S=0
THEN 700
720 CALL KEY(0,K2,S2):: IF S
2<1 THEN 720 ELSE 700
730 CLOSE #1 :: CLOSE #2 ::
PRINT " >>>press any key<<
" :: IF Q$="P" THEN CLOSE #
3
740 CALL KEY(0,K,ST):: IF ST
<1 THEN 740 ELSE 580
750 OPEN #2:D$&P6$(K),INPUT
,INTERNAL,FIXED :: J=0 :: GO
TO 770
760 OPEN #2:D$&P6$(K),INPUT
,INTERNAL :: J=0
770 IF EOF(2)=1 THEN 730 ::
J=J+1 :: INPUT #2:M$ :: IF L
EN(M$)=0 THEN 790
780 PRINT #PP:M$ :: GOTO 820
790 FOR Y=1 TO 8 :: @@=ASC(S
EG$(M$,Y,1)): IF @@<32 OR @
@>127 THEN 810
800 NEXT Y :: GOTO 780
810 RESTORE #2 :: FOR X=1 TO
J-1 :: INPUT #2:M$ :: NEXT
X :: INPUT #2:M :: PRINT #PP
:M
820 CALL KEY(0,K,S):: IF S=0
THEN 770
830 CALL KEY(0,K2,S2):: IF S
2<1 THEN 830 ELSE 770
840 DISPLAY AT(24,1):"PRINTE
R NAME? P10" :: ACCEPT AT(24
,15)SIZE(-14):PP$ :: OPEN #2
:PP$ :: PRINT #2:SEG$(D$,1,4
)&" - Diskname="&N$
850 PRINT #2:RPT$("=",28):"A
vailabale=";358-VT;"Used=";VT
:RPT$("""",28)
860 PRINT #2:"FILENAME SIZE
TYPE":RPT$("_",28)
870 FOR P=1 TO NN-1 :: PRINT
#2:P6$(P);TAB(15);V(P,3);TA
B(20);T$(ABS(V(P,1)));TAB(25

```

```

);V(P,2):: NEXT P :: CLOSE #
2
880 DISPLAY AT(12,3)ERASE AL
L:"(P) to print again:" (R
) to rescan:" (Q) to quit"
890 ACCEPT AT(15,4)VALIDATE(
"PQR")SIZE(-1)BEEP:Q$ :: IF
Q$="P" THEN 840 :: CLOSE #1
:: NN=0 :: IF Q$="R" THEN 19
0 ELSE END
900 RUN "DSKX.1234567890"

```

This version turns off the Quit key, restarts itself rather than crashing on an I/O error, and has pre-scan for faster start-up. It displays disk name, sectors available and sectors presumably used - it also totals up actual sectors used and sounds a warning if any sectors are not accounted for.

It lists up to 127 programs and files by number, filename, number of sectors, program or file type, file record length, and write-protection. It will stop for menu selection on any keypress or at the end of each screen, continuing on Enter. It will load and run any program that can run from Extended Basic, displaying its filename while loading. If the filename ends in an asterisk, it will warn you to return to Basic. It will delete any unprotected program or file, after first requiring verification by filename, or will inform you if the file is protected. It will read any readable file, including internal numeric, and list it to screen or printer. It will dump a catalog of the disk to your printer, and it will offer the option of quitting or rescanning the disk or another disk. And it's free, I don't even want a freeware donation - but I would appreciate if you would take a look at my catalog and see if,

somewhere among those 140 programs, there might be something you would be willing to pay \$3 for? The Menu Loader is included as a bonus on every disk I sell!

```

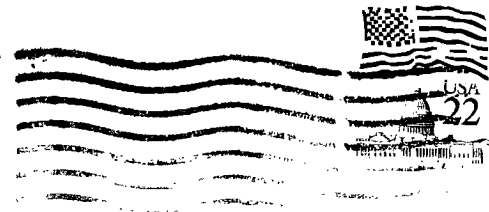
100 CALL CLEAR :: RANDOMIZE
:: DISPLAY AT(3,4):"TIGERCUB
MATH PUZZLE"
110 DISPLAY AT(6,1):"Insert
+, -, * (multiply) OR / (div
ide) between the digits
to equal the total": "Type
0 to give up"
120 DISPLAY AT(12,1):"Level
1 or 2?" :: ACCEPT AT(12,15)
VALIDATE("12"):L$
130 T,X=INT(9*RND+1):: M$=ST
R$(X): Z$=M$&" "
140 FOR J=1 TO 4 :: Y(J)=INT
(9*RND+1):: Z=INT(4*RND+1)::
ON Z 60SUB 240,250,260,270
:: Z$=Z$&STR$(Y(J))&" " :: M
EXT J
150 IF L$="1" AND T<>INT(T)T
HEN 130 :: Z$=Z$&"="&STR$(T)
160 DISPLAY AT(12,1):Z$ :: D
ISPLAY AT(18,1):" " :: DISPL
AY AT(20,1):" " :: DISPLAY A
T(22,1):" "
170 P=2 :: FOR J=1 TO 4 :: A
CCEPT AT(12,P)VALIDATE("Q+*
/")SIZE(1):S$
180 IF S$="Q" THEN 200 ELSE
IF S$="+" THEN X=X+Y(J)ELSE
IF S$="-" THEN X=X-Y(J)ELSE
IF S$="*" THEN X=X*Y(J)ELSE
X=X/Y(J)
190 P=P+2 :: NEXT J :: IF X=
T THEN 230 :: DISPLAY AT(18,
1):"WRONG!"
200 DISPLAY AT(20,1):"ANSWER
IS ";M$
210 DISPLAY AT(22,1):"PRESS
ANY KEY"
220 CALL KEY(0,K,ST):: IF ST
<1 THEN 220 :: GOTO 130
230 DISPLAY AT(18,1):"RIGHT!
" :: GOTO 210
240 M$=M$&"+"&STR$(Y(J)): T
=T+Y(J):: RETURN
250 M$=M$&"-"&STR$(Y(J)): T
=T-Y(J):: RETURN
260 M$=M$&"*"&STR$(Y(J)): T
=T*Y(J):: RETURN
270 M$=M$&"/"&STR$(Y(J)): T
=T/Y(J):: RETURN

```

Enjoy!

Jim Peterson

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```
*****  
*      MMM   MMM   IIIIII   CCCCCC   RRRRRRRR   00000000   *  
*      MM M M MM   II       CC       RR       RR   00   00   *  
*      MM M M MM   II       CC       RRRRRRRR   00   00   *  
*      MM  M  MM   II       CC       RR       RR   00   00   *  
*      MM      MM   II       CC       RR       RR   00   00   *  
*      MM      MM   IIIIII   CCCCCC   RR       RR   00000000   *  
*                                          *  
*                                          *  
*      The MID ILLINOIS COMPUTER RESOURCE ORGANIZATION   *  
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