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**THE HUGger's**  
**HOOSIER USERS GROUP**  
**People Helping People**  
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SEPTEMBER, 1985

THE HUGger's NEWSLETTER

VOLUME 3, NUMBER 6

**THE OFFICER'S CORNER**

As you can see, we're going to have a raffle. The raffle is for a Myarc 128K Memory Expansion Card. Rules are as follows:

1. You must be an active member of H.U.G. whose dues are current to participate.
2. Tickets are \$1 each or 6 for \$5. There is no limit on the amount of tickets purchased.

The drawing will be held at the December, 1985 Monthly Meeting if sufficient tickets are sold. \$250 in tickets must be collected before drawing will be held. If the goal of \$250 is not met, the drawing date will be extended or money refunded, depending on how many tickets are sold by November 30. The ticket order form is to the right. You may copy it if you don't want to cut up your Newsletter. There will also blank order forms at the meetings. (The Officers of H.U.G. and their families are not eligible to purchase tickets.)

You've already noticed that our Newsletter has a new back page. Carl Walters, one of our Terre Haute members, (who works for a company which does typesetting) donated his typesetting services to the group. A special thanks to Carl Walters, and his employer, American Visuals, Inc. of Terre Haute for their generosity in offering their typesetting services to H.U.G.

See you at the September 8th meeting! J. Steven Sims

THE NEXT MONTHLY MEETING WILL BE  
 SEPTEMBER 8, 1985  
 STARTING AT 2:00 PM AT CREATIVE LOGIC.  
 SEE YOU THERE!

WORKSHOPS: DATA BASE MANAGEMENT  
 CHARACTER SETS GRAPHICS DESIGN

**Regional Meetings**

South  
 August 29th at 7:00 pm.

Terre Haute  
 See Page 2 for details.

**TI WRITER SERIES**  
 by Pam Sims

Several months back I published a request for questions and topics to cover in an upcoming TI Writer series. Since that time I have not had any response from the members on what subjects they would like to see in the articles. Due to the lack of response, I have decided not begin the series of articles which were scheduled to start next month. I will continue reprint articles pertinent to TI Writer from other Users Groups Newsletters.

**BIG SALE AT MICROCOMPUTERS!**

MicroComputers, Inc. will be disposing of most of stock of TI software by October 15, and therefore offering the discount price of \$5.00 on most titles to members of Users Groups. MicroComputers will continue to support the TI Home Computer user and will make special orders of merchandise for their customers.

**OCTOBER NEWSLETTER DEADLINE**  
**SEPTEMBER 22, 1985**

\$1 EACH RAFFLE TICKET ORDER FORM 6 FOR \$5

NAME \_\_\_\_\_

ADDRESS \_\_\_\_\_

CITY \_\_\_\_\_ STATE \_\_\_\_\_ ZIP \_\_\_\_\_

TICKETS ORDERED \_\_\_\_\_ AMOUNT ENCLOSED \$ \_\_\_\_\_

### HAPPY BIRTHDAY!

A Happy HUGger Birthday to these members who joined the Hoosier Users Group in September, 1984! Tony Memmer, Jim Acord, Howard Miller, Steve Hodnett, Greg Larson, Tom Allington, Earl Brandhoefer, Helen Chastain, Steve Wilkins, George Lett, Sr., Phyllis Bush, Douglas Eble, and J. R. Ellis. Its time to renew!

### WELCOME!

The Hoosier Users Group welcomes Larry Vaughn, David Collom, and Rex Kemple, who joined in the past month.

### WELCOME BACK!

We would also like to welcome back these renewing HUGgers: Don Donlan, David Johnson, and Sheila Smith.

## REGIONAL NEWS

### SOUTH REGIONAL MEETING

The South Regional meeting will be on Thursday, Sept. 19, 1985. The location is 4582 Moccasin Pl. (call 881-5918 for directions). The meeting will begin at 7:00 P.M. The club library will be available for members.

### TERRE HAUTE NEWS

Interest in a Terre Haute meeting has been less than anticipated. Several of who live in the area will still get together occasionally, but there will be no regularly scheduled Terre Haute meeting unless interest picks up.

## TE3 VERSION 3, A REVIEW

by Andy Armstrong

An updated version of TE3 has been added to our library. This one is version 3.3 (TE3V3). For those of you unfamiliar with TE3 it was a half finished TERMINAL EMULATOR PROGRAM from TI that Joe Freeman and Dick Dunbar added to to make it more usable. For those that have used TE3, this version has several improvements. It now automatically loads the default configuration file. It also contains a buffer full warning. When the buffer is almost full the screen will turn red and the host system stops sending data. You can then press FCTN 6 and the program will prompt you for a device name, usually a disk drive, then the data will be dumped to the selected device. After the dump you then can use FNCT 5 to clear the buffer. You have the option of toggling the buffer on and off with FCTN 2. You can choose either 40 or 80 column mode with FCTN 3 and a message telling you wich mode was selected will be briefly displayed on the screen. With this version you can select the screen color you want to use. Pressing CTRL 3 will step thru 8 combinations of screen and text colors. If you use the BBS often, the upload section will be useful. You can compose your message off line using TI-WRITER or EDITOR ASSEMBLER. When using the MESSAGE ENTRY section, enter everything from the keyboard until you get to the "1:" prompt, for line 1 entry, then press FCTN 8 (REDO). You will be prompted for the filename that you saved your composed message to. The next prompt asks if you need <CR's> added, this will depend on how you composed your message. Next will be the "Upline Flow Control" choice. Select 3. Prompt, and ":" for the prompt character. Upon pressing enter, the file should transfer a line after every line number prompt, 1:, 2: 3:, ect. You don't have to remember all the commands, by pressing FCTN 7 "AID" the program will display a list of the important cammands without loss of data. I have used this program on both our BBS and Compuserve with no problems and I found it to be an excellent program. Included with the source code is a history of the development of this program.



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## LIBRARY BITS

by Dennis Sherfy

One of the valuable benefits of membership in the Hoosier Users Group is the library of programs. Since I have been a member of the group, I've seen the library grow from about 15 disks to 54 disks today. There has been a corresponding growth in quality also. Initially, all of the programs were BASIC or EXTENDED BASIC. Now, there are disks of programs for Terminal Emulators, Mini Memory, Pascal, Forth, Personal Record Keeping, Speech Synthesizer, Logo, and Editor-Assembler. There are six disks from Texas Instruments of programs they have released to user's groups for the benefit of members. In addition, there are seven disks of FREEWARE which are for sale on a "Pay if you like it." basis. Thoughtful people have recognized that most TI-994A owners do not have the Editor/Assembler Cartridge, and they have designed programs in Forth and Assembly language which will run in Extended Basic or with the TI-WRITER cartridge. (Ever wonder what the Utility option was for?)

HUG members have access to the group's library at the monthly meetings and at the Southside Regional meetings. Members may copy any programs from the library to their own disks or cassettes.

In the immediate mode, your computer is capable of out-performing even the costliest hand-held calculators. It can handle thousands of memory values and perform complex mathematical and scientific operations. If, however, you have a fond attachment to the basic four-function calculator, Extended-10 contains a program called MAC/CALC. This program displays an image of a calculator on your monitor and allows you to move a pointer with your joystick and "press" keys with the fire button. There are no instructions with this program. You must position the pointer over the ON/OFF switch on the side of the calculator and press the fire button to "turn on" the unit. The display is a bit slow to respond, so the fire button must only be pressed momentarily for your entry to register. Now you have an alternative if the batteries have died in your hand-held calculator.

How many of you use TI-WRITER for correspondence only? Every office with computer or word processing equipment contains a creative person who is using the equipment to make pictures or create enlarged alphabets and numerals. The TI-WRITER-1 disk contains two "word processing" pictures. One is called ENTRPRISE1, a picture of the star ship Enterprise, and the other is ODIE, a picture of Garfield's hapless friend. Perhaps one of these pictures will start your creative juices flowing, and you will create pictures of your own.

Finally, BASIC-3 contains HANG/SPELL. This is a well written program which features the game of Hang Man and a spelling drill. For Hang Man, words are randomly selected from a series of DATA statements to challenge your ability to guess the word. Once you have become familiar with all of the words, you or a friend can change them by substituting new words in the DATA statements. The second option is not as useful as it sounds. The program very briefly prints a word from the DATA statements then asks you to type the word. It is perhaps a better drill for speed reading than spelling.

### WORDSEARCH ANSWERS

.....CALLHCHAR.....	CALLCHAR
.C.....N.....	CALLCHARPAT
C.A...TAPRAHCLLAC...E.....	CALLCHARSET
A..I.....E.....	CALLCLEAR
L.K.L.....R.....C	CALLCOINC
LONIUCLLAC.C..Y..C.....AA	CALLCOLOR
V.I...O.....A.A.SA.....L.L	CALLERR
C.L....L.....LSL.L....L..L	CALLGCHAR
H.L.....O.....L..L....C...C	CALLHCHAR
A.L...C..R...ALJ.K...H...H	CALLINIT
R.A...A.....C.A.OE..A....A	CALLJOYST
..CCALLGCHAR..C..Y.R.....R	CALLKEY
...T..L.....S.....R	CALLLINK
...E..L.....E.T....AR	CALLLOAD
E..G..O..CALLINIT.....E.E	CALLLOCATE
T..P..A.....K.....L..L	CALLPEEK
A..S..D...NOISREVLAC.C...L	CALLSAY
C..L.....E.....L....A	CALLSCREEN
O..A.....P.....L....C	CALLSOUND
L..C.....L.....A.....	CALLSPGET
L.....L.....C.....	CALLSPRITE
L.....A.DNUOSLLAC.....	CALLVCHAR
A.....C.....	CALLVERSION
C.....ETIRPSLLACC	

# A HANDY DANDY TI-WRITER USERS REFERENCE GUIDE

SUBMITTED BY BOB STEPHENS

The following handy TI-WRITER commands are reprinted for the June issue of the 99'er News published by the TI Users Group of Will County, Romeoville, IL. This puts the most used commands on one page for handy access at your computer.

=====		EDITOR COMMAND  FCTN CTRL		EDITOR COMMAND  FCTN CTRL		EDITOR COMMAND  FCTN CTRL		=====	
Back tab		T	Ins. Blank line	B	O	Quit	=		
Beginning/line		V	Insert character	2	G	Reformat			2orR
Command/escape	9	C	Last paragraph		6orH	Right arrow	D		D
Delete character	1	F	Left arrow	S	S	Roll down	4		A
Del. end of line		K	Left margin rel.		Y	Roll up	6		B
Delete line	3	N	New page		9orF	Screen color			3
Line #'s(on/off)	0		New paragraph		8orM	Tab	7		I
Down arrow	X	A	Next paragraph		4orJ	Up arrow	E		E
Duplicate line		S	Next window	5		Word tab			7orW
Home cursor		L	Oops!		1orZ	Word wrap/fixe			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 thru 10 of 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) PIO (prints control characters and line numbers)									
PF (enter) C PIO (prints with no control characters)									
PF (enter) L PIO (prints 74 characters with line numbers)									
PF (enter) F PIO (prints fixed 80 format)									
PF (enter) 1 10 PIO (prints lines 1 thru 10)									
NOTE: The above assumes PIO, DSK1.FILENAME, and RS232 are also valid!									
To cancel the print command press FCTN 4.									
=====									
Delete file: DF (enter) DSK1.FILENAME									
=====									
Setting Margins and Tabs: (16 tabs 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 move: 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 String: FS (enter) /string/ (will look for string in entire file)									
FS (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)									
=====									

E. Z. WRITER

HELLO- I'M ROBERT (BOB) SUMMERS AND WAS PLEASED TO SEE YOU FOLKS AT THE INDY HAMFEST. LARRY CONNOR (HAVING DEFLATED MY WALLET) THEN LED ME OVER TO PAM SIMS BOOTH WHEREBY SHE STRUCK THE KILLING BLOW AND SIGNED ME UP.

HAVING BEEN INTO 'HAM' RADIO FOR NEARLY 30 YEARS A COMPUTER WAS THE NEXT LOGICAL PROGRESSION. IT HAS BEEN A REAL LEARNING EXPERIENCE. OVER THIS PERIOD OF TIME I'VE ATTEMPTED TO INTEREST MY XYL (EX-YOUNG LADY-(WIFE)) IN THE RADIO AND LATELY IN THE COMPUTER BUT WITH LITTLE OR NO SUCCESS. BUT WITH THE ACQUISITION OF AN RS232 AND PRINTER AND THE MINIWRITER SOFTWARE SHE EVINCED A BIT OF INTEREST AS SHE IS A LETTER WRITER. BUT WOE!! WITH NO BACKGROUND SHE FOUND THE CONTROL FUNCTIONS TOO CONFUSING. WITH A SPARK OF INTEREST VISIBLE I WROTE THE FOLLOWING SHORT (AND POSSIBLY TOO SIMPLE TO BE OF INTEREST) PROGRAM FOR HER. USING THE SHIFT-5 WILL ALLOW HER TO CALL UP THE DOUBLE WIDTH/ELONGATED CHARACTERS FOR DATES/HEADINGS/ETC. WHILE SHIFT-6 RETURNS THE PRINTER TO THE STANDARD PRINT. IT WAS EASY TO EXPLAIN THE QUOTES TO INDENT-USE OF THE "DATA" LINES AND COMMAS TO SET UP NEW LINES OR SPACE BETWEEN LINES. NOW I'M GOING BROKE BUYING PAPER!! SHE STARTS WITH NUM AND USES 3 SCREEN LINES PER PAGE LINE AND MY 'COMPUTIN TIME HAS BEEN DRASTICALLY REDUCED.

THX FER FB QSO GUD LUK ES 73 DE K9CXS  
(THANK YOU FOR LISTENING AND GOOD LUCK-BEST REGARDS-BOB)

```
10 CALL CLEAR
20 PRINT "E.Z.WRITER": : "PRINTING...": : : : : : : : : : :
4999 DATA 99,99
5000 OPEN #1:"PIO.HS"
5010 FOR I=1 TO 1000
5020 READ A$
5030 IF A$="99" THEN 5090
5031 IF A$="%" THEN PRINT #1:CHR$(27);"W";CHR$(1);: : GOTO 5050
5032 IF A$="^" THEN PRINT #1:CHR$(27);"W";CHR$(0);: : GOTO 5050
5040 PRINT #1:A$
5050 NEXT I
5090 CLOSE #1
5095 END
```

TIPS FROM THE TIGERCUB

#23

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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.

The entire contents of Tips from the Tigercub Nos. 1 through 14, with more added, are now available as a full disk of 50 programs, routines and files for just \$15.00 postpaid!

Nuts & Bolts is a diskfull of 100 (that's right, 100!) XBasic utility subprograms in MERGE format, ready for you to merge into your own programs. Contents include 13 type fonts, 14 text display routines, 12 sorts and shuffles, 9 data saving and reading routines, 9 wipes, 8 pauses, 6 music, 2 protection, etc., and now also a tutorial on using subprograms, all for just \$19.95 postpaid!

And I have about 140 other absolutely original programs in Basic and XBasic at only \$3.00 each! (plus \$1.50 per order for cassette, packing and postage, or \$3.00 for diskette, PPM) I will send you my descriptive catalog for a dollar, which you can then deduct from your first order.

Several different routines have been published which will extract and save a specified series of lines out of a program, but this one by George Steffen of the L.A. 99ers is certainly the

best.

```

1 !SUBROUTINE EXTRACTOR by George F. Steffen. SAVE in MERGE format. MERGE into any program (with line # starting above 0). RUN to extract selected lines. Deletes itself. Then BE SURE to SAVE the selected lines in MERGE format because the remaining lines are still in memory!
3 CALL CLEAR :: CALL INIT :: INPUT "Line numbers of routine to be saved: First,Last?":L,M :: G=256 :: CALL PEEK(-31952,H,I,J,K)
4 C=INT(N/6):: B=N-C*6 :: F=(J-G)*6+K :: FOR E=(H-G)*6+1 TO F STEP 4 :: CALL PEEK(E,A,B):: IF A=C AND B=D THEN 6
5 NEXT E :: PRINT "LINE";M;"NOT FOUND!" :: STOP !@P-
6 H=INT(E/6):: I=E-(6*H):: H=H+6 :: C=INT(L/6):: D=L-C*6 :: FOR E=E+4 TO F STEP 4 :: CALL PEEK(E,A,B):: IF A=C AND B=D THEN 8 !@P-
7 NEXT E :: PRINT "LINE";L;"not found!" :: STOP !@P-
8 E=E+3 :: J=INT(E/6):: K=E-(6*J):: J=J+6 :: CALL LOAD(-31952,H,I,J,K):: STOP !@P-
    
```

The enhancements to my Menu Loader, published in Tips #22, contained an error. Please change line 413 to read -  
413 LINPUT #2:W\$ :: PRINT W\$ :: IF EOF(2) THEN 416

Some folks were interested in the idea of a program that writes a program, so let's write a program that will write a program to list the token codes that you need to use to write a program that will write a program -

```

100 OPEN #1:"DSK1.TOKENLIST",OUTPUT,DISPLAY,VARIABLE 16
3 :: FOR N=129 TO 254 :: L1=INT(N/256):: L2=N-256*L1
110 PRINT #1:CHR$(L1)&CHR$(L2)&CHR$(131)&CHR$(N)&CHR$(0) :: NEXT N
120 PRINT #1:CHR$(255)&CHR$(
    
```

255):: CLOSE #1 :: END

Key that in and SAVE it just in case, then RUN it. When READY, type NEN, then MERGE DSK1.TOKENLIST. Now LIST it and you will see a list of ASCII codes 129 through 254 and their token meanings. Delete lines 171 through 175, 185, 198, 226 through 231, and 242. Change the definition of 199 to QUOTED STRING, of 200 to UNQUOTED STRING, and add line 255 END OF FILE.

You don't need all those exclamation points, so change the program to a DIS/VAR 00 file by LIST "DSK1.TOKENLIST". Then key in this little routine.

```

100 OPEN #1:"DSK1.TOKENLIST" :: OPEN #2:"PI0"
110 LINPUT #1:A$ :: PRINT #2:SEG$(A$,1,4)&SEG$(A$,6,LEN(A$)) :: IF EOF(1)<>1 THEN 110
120 CLOSE #1 :: CLOSE #2 :: END
    
```

RUN it, and print out a list of all the token codes. More on this next month - if someone buys a few programs so that I can afford another month.

Now that we've done about all that we can with the Menu Loader, here is another version to use on your finalized library disks of programs. It lacks the features that you will no longer need, but will list your programs by their full names, up to 24 characters long.

```

100 !NAMELOADER by A. Kludge /M. Gordon/T. Boisseau/J. Peterson/etc.
110 CALL CLEAR :: CALL SCREEN(5):: FOR S=1 TO 14 :: CALL COLOR(S,7,16):: NEXT S :: CALL VCHAR(1,31,1,96):: CALL COLOR(0,2,16)
120 OPTION BASE 1 :: DIM P$(99),M$(99)
    
```

130 ! List the full names of the programs on the disk in the DATA statements, in the sequence in which they are listed by an ordinary disk cataloger program

```

140 !Then SAVE this program under the filename LOAD
150 DATA
160 DATA
170 DATA
180 DATA
190 DATA END
200 FOR J=1 TO 99 :: READ M$(J):: M$(J)=SEG$(M$(J),1,24)
210 IF M$(J)="END" THEN M$(J)=" " :: GOTO 230
220 NEXT J
230 IMAGE 00
240 DISPLAY AT(1,4):"TIGERCUB NAMELOADER"
250 D$="DSK1." :: OPEN #1:D$,INPUT,RELATIVE,INTERNAL :: INPUT #1:P$
260 FOR I=1 TO 99 :: IF I/20 <>INT(I/20) THEN 290
270 DISPLAY AT(24,I):"Type # of choice or Enter 0" :: ACCEPT AT(24,27)VALIDATE(DIGIT)SIZE(-3):K :: IF K=0 THEN 280 :: IF K>0 AND K<NN+1 THEN 390 ELSE 270
280 I=I+1 :: IF I>127 THEN K=I :: GOTO 370
300 INPUT #1:P$ :: NN=NN+1
310 IF LEN(P$)=0 THEN 350
320 DISPLAY AT(X+3,2):USING 230:NN :: DISPLAY AT(X+3,3):M$(NN):: P$(NN)=P$
330 CALL KEY(0,KK,ST):: IF ST=0 THEN 340 :: FLAG=1 :: GO TO 350
340 NEXT X
350 DISPLAY AT(X+4,1):" " :: DISPLAY AT(X+5,2):USING 230:NN+1 :: DISPLAY AT(X+5,6):"Terminate"
360 DISPLAY AT(X+6,1):" Choice?" :: ACCEPT AT(X+6,16)SIZE(2)VALIDATE(DIGIT):K :: IF K>NN AND K<NN+1 THEN 380
370 IF K=NN+1 THEN CALL CLEAR :: CLOSE #1 :: END
380 !IF K(1 OR K)99 OR LEN(P$(K))=0 THEN 350
390 CLOSE #1
400 CALL INIT :: CALL PEEK(-31952,A,0):: CALL PEEK(A*256
    
```

```

+B-65534,A,B):: C=A*256+B-65
534 :: A=B*65&P65(K):: CALL L
UAD(C,LEN(A*))
410 FOR I=1 TO LEN(A*): CAL
L LOAD(C+I,ASC(SEG$(A$,I,1))
):: NEXT I :: CALL LOAD(C+1,
0)
420 CALL VCHAR(1,3,32,672)::
CALL SCREEN(0):: FOR S=0 TO
14 :: CALL COLOR(S,2,1):: N
EXT S :: DISPLAY AT(12,2):"L
OADING ":N$(K)
430 RUN "DSK1.1234567890"

```

Last month I forgot to have anything for the kids, or anything in Basic, so -

```

100 CALL CLEAR
110 REM by Jim Peterson of
Tigercub Software
120 PRINT TAB(1):"#####AUTOMA
TIC MOUSE MAZE####": : : "
Choose your mouse and" *wa
tch it try to find its way"
130 PRINT "through the maze.
": : " When one of the mice
has": "taken 50 extra steps,
the": "cat gets it!"
140 PRINT : : "Touch any key"
150 CALL KEY(0,K,ST)
160 IF ST<1 THEN 150
170 CALL CLEAR
180 CALL CHAR(120,"0078FEFF
E78")
190 CALL CHAR(121,"1038387C7
C7C7C38")
200 CALL CHAR(122,"387C7C7C7
C383810")
210 CALL CHAR(123,"001E7FFF7
F1E")
220 CALL CHAR(128,"001E61816
11E")
230 CALL CHAR(129,"384444444
4242410")
240 CALL CHAR(130,"102828444
4444430")
250 CALL CHAR(131,"007886818
678")
260 CALL SCREEN(5)
270 T1=610
280 T2=610
290 CALL CHAR(136,"FFFFFFF
FFFFFF")
300 CALL COLOR(14,16,16)
310 CALL COLOR(13,2,16)
320 CALL COLOR(12,2,16)
330 R=10
340 GOSUB 1460

```

```

350 R1=10
360 C=2
370 C1=2
380 CALL HCHAR(R,C,136,2)
390 C=C+1
400 M=120
410 M2=120
420 RANDOMIZE
430 A=(INT(2*RNDR)+1)*2
440 B=INT(10*RNDR)+1
450 ON B GOSUB 470,470,470,4
70,510,510,550,550,590,590
460 GOTO 420
470 IF C+A>30 THEN 630
480 CALL HCHAR(R,C,136,A)
490 C=C+A
500 RETURN
510 IF R+A>20 THEN 540
520 CALL VCHAR(R,C,136,A)
530 R=R+A
540 RETURN
550 IF R-A<2 THEN 500
560 CALL VCHAR(R-A+1,C,136,A
)
570 R=R-A
580 RETURN
590 IF C-A<3 THEN 620
600 CALL HCHAR(R,C-A+1,136,A
)
610 C=C-A
620 RETURN
630 CALL HCHAR(R,C,136)
640 C=C+1
650 IF C<31 THEN 630
660 R2=R
670 C2=C
680 CALL HCHAR(R1,C1,M)
690 CALL HCHAR(R2,C2,M2)
700 Y=Y+1+(Y=2)*2
710 IF Y=2 THEN 1020
720 CALL HCHAR(R1,C1,136)
730 ON M-119 GOTO 800,900,74
0,850
740 IF C1=31 THEN 950
750 CALL GCHAR(R1,C1+1,6)
760 IF 6=32 THEN 850
770 C1=C1+1
780 M=120
790 GOTO 950
800 CALL GCHAR(R1-1,C1,6)
810 IF 6=32 THEN 740
820 R1=R1-1
830 M=121
840 GOTO 950
850 CALL GCHAR(R1+1,C1,6)
860 IF 6=32 THEN 900
870 R1=R1+1
880 M=122
890 GOTO 950
900 CALL GCHAR(R1,C1-1,6)

```

```

910 IF 6=32 THEN 800
920 C1=C1-1
930 M=123
940 GOTO 950
950 CALL HCHAR(R1,C1,M)
960 IF (C1=31)*(C2=2) THEN 13
20
970 IF C1<31 THEN 700
980 T2=T2-10
990 CALL SOUND(50,T2,5)
1000 IF T2=110 THEN 1340
1010 GOTO 700
1020 CALL HCHAR(R2,C2,136)
1030 ON M2-127 GOTO 1040,120
0,1090,1150
1040 CALL GCHAR(R2+1,C2,6)
1050 IF 6=32 THEN 1090
1060 R2=R2+1
1070 M2=129
1080 GOTO 1250
1090 IF C2=2 THEN 1250
1100 CALL GCHAR(R2,C2-1,6)
1110 IF 6=32 THEN 1150
1120 C2=C2-1
1130 M2=128
1140 GOTO 1250
1150 CALL GCHAR(R2-1,C2,6)
1160 IF 6=32 THEN 1200
1170 R2=R2-1
1180 M2=130
1190 GOTO 1250
1200 CALL GCHAR(R2,C2+1,6)
1210 IF 6=32 THEN 1040
1220 C2=C2+1
1230 M2=131
1240 GOTO 1250
1250 CALL HCHAR(R2,C2,M2)
1260 IF (C2=2)*(C1=31) THEN 1
320
1270 IF C2>2 THEN 700
1280 T1=T1-10
1290 CALL SOUND(50,T1,5)
1300 IF T1=110 THEN 1370
1310 GOTO 700
1320 CALL HCHAR(1,1,32,768)
1330 GOTO 330
1340 GOSUB 1460
1350 PRINT "THE CAT GOT THE
WHITE MOUSE": :
1360 GOTO 1390
1370 GOSUB 1460
1380 PRINT "THE CAT GOT THE
BLACK MOUSE": :
1390 PRINT "TO PLAY AGAIN. T
OUCH ANY KEY"
1400 CALL KEY(0,K,ST)
1410 IF ST<1 THEN 1400
1420 T1=610
1430 T2=610
1440 CALL HCHAR(1,1,32,768)

```

```

1450 GOTO 330
1460 CALL HCHAR(23,1,32,32)
1470 PRINT CHR$(120);(610-T1
)/10;TAB(20);CHR$(128);(610
T2)/10
1480 RETURN

```

Did you know that ACCEPT AT(1,0) will accept a full line of 28 characters? Did you know that ACCEPT AT(R,0)SIZE(-28) and Enter will accept everything on row R? And did you know that ACCEPT M\$ will accept a string of 255 characters?

Need a filler, so -

```

100 !MUSICAL BARGRAPH by Jim
Peterson
110 CALL CLEAR :: CALL SCREE
N(5):: FOR J=2 TO 14 :: Y=J-
(J/4):: CALL COLOR(J,X,1)::
NEXT J
120 DIM M$(13),N(13):: M$="(
000HPX'hpX"&CHR$(128)&CHR$(1
36):: FOR J=1 TO 13 :: M$(J)
=SEG$(M$,J,1):: DISPLAY AT
+6,1)SIZE(1):M$(J):: NEXT J
130 X=110 :: FOR J=1 TO 13 :
: N(J)=I*1.059463094^(J-1)::
NEXT J
140 A=INT(13*RNDR+1):: B=INT(
25*RNDR+1):: DISPLAY AT(A+6,2
)SIZE(28):RPT$(M$(A),B):: CA
LL SOUND(B*40,N(A),0,N(A)*2+
4,B,N(A)*4+6,0)
150 DISPLAY AT(A+6,2):" ::
GOTO 140

```

MEMORY FULL

Jim Peterson



**HOOSIER USERS GROUP DIRECTORY**  
**HOOSIER USERS GROUP OFFICERS**

President.....Steve Sims 631-7255  
 Vice-President.....Bill Cagle  
 Secretary.....Barb Uhrig 357-8268  
 Treasurer.....Bill Jones

**COMMITTEE CHAIRPERSONS**

**Regional Centers:**

South.....Dennis Sherfy 881-5918  
 West Indiana..Vic Kelson 812-234-5533

Documents.....Don Donlan 882-4544  
 Membership.....Pam Sims 631-7255  
 Newsletter.....Pam Sims 631-7255

**MONTHLY MEETING LOCATION**

Creative Logic  
 8240 Indy Lane  
 Indianapolis, IN 46224

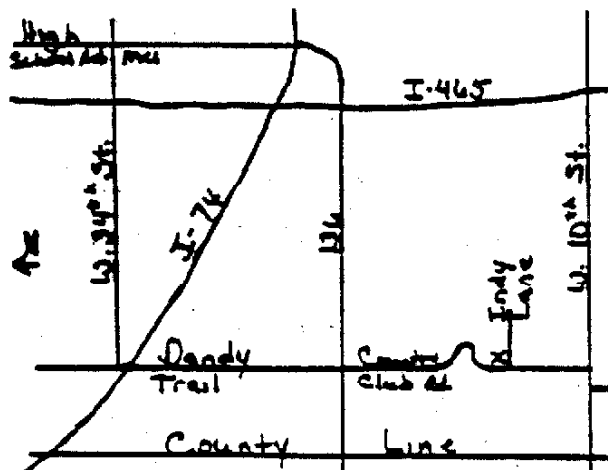
(About 1800 North Country Club Road)

**NEWSLETTER EXCHANGE**

The Hoosier Users is participating in a Newsletter Exchange program with other TI Users Groups. This offer is made with the understanding that, with proper credit, your Users Group can reprint articles from the Hoosier Users Group Newsletter, and with proper credit, we can reprint articles from other TI Users Groups Newsletters.

**PRINTOUTS**

Library listings can be ordered for \$.25 & a 6x9 self addressed envelope with \$.66 postage. The HUGbbs Reference Guide can be ordered for \$.50 and a 4x9 self addressed envelope with \$.22 postage. Please send orders to our P.O. Box. SORRY, PRINTOUTS WILL BE SENT TO ACTIVE MEMBERS ONLY!



**HUGbbs INFORMATION**

317-631-994A

The HUGbbs operates on a 24 hour basis.

**SPONSOR THE HUGbbs:** Any member or retail business can sponsor the HUGbbs. For a \$5.00 donation, you get 5 (40 column) lines on the Log-On Title Screen for a week (or for a \$10.00 donation, you get 10 (40 column) lines) plus a 24 line by 40 character ad in the Sales option of the File Module. To sponsor the HUGbbs, send a check or money order to our P.O. Box (or turn in at our Monthly Meeting) specifying how many weeks (and how many lines) you want to sponsor, your name (or company name), address, phone, what you want to say, and the week (and an alternate week) you want the ad to appear.\*

**BACK ISSUES**

Back Issues purchased at the monthly meeting is \$1.00 each. Mail order price is \$1.50 per Newsletter (postage included). Orders will be filled within 3 weeks of receipt by the Documents Committee.

**ADVERTISING POLICIES**

There will be no charge for advertisements submitted to the HUGger Newsletter by members (for private sale only). Format for the advertisements is 45 characters wide by 10 lines long. The Ad should be typed or hand printed exactly how it is to appear in the Newsletter. Deadline for an ad to appear in next month's Newsletter is the 2nd Saturday of the month.\*

For companies who wish to advertise in the HUGger Newsletter, our rates are as follows:

- Pre-Printed Inserts (one page) \$20.00
- One Full Page (one sided) Ad: \$25.00
- One Half Page Ad: \$13.00
- One Quarter Page Ad: \$7.00

All ads must be in a ready to print condition. Advertisements must be in our P.O. Box before the 2nd Saturday of the month to appear in the following month's Newsletter.\*

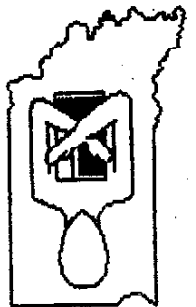
\*NOTE: The Officers of the Hoosier Users Group reserve final approval on all advertisements submitted for the HUGger Newsletter and the HUGbbs. The Officers and the Newsletter committee are not responsible for typographical errors due to illegible advertisements. All proceeds are accepted as donations to the Hoosier Users Group.

SEP. 4 1985

**TIME DATED**  
SEP. 4 1985  
**MATERIAL**

Bulk Rate  
U.S. Postage  
**PAID**  
Indianapolis, IN  
Permit No. 6440

**HOOSIER USERS GROUP**  
P.O. Box 2222  
Indianapolis, IN 46206-2222  
Forwarding and Address  
Correction Requested



### APPLICATION FOR MEMBERSHIP

Below you will find an application for membership to the Hoosier Users Group. Active membership entitles you to the Newsletter, up and download on the HUGbbs, attendance and voting rights at regular club meetings, access to the HUGger Library of Programs, special club activities and special guest speakers for one year. Subscribing members will receive the **NEWSLETTER** only.

Make check or money order payable to **Hoosier Users Group**. Send completed application to:

**HOOSIER USERS GROUP**  
P.O. Box 2222  
Indianapolis, IN 46206-2222

(Cut on dotted line)

Check One:

#### Active Member

New: \$20 \_\_\_\_\_  
Renewal: 15 \_\_\_\_\_

#### Subscribing Member

New: \$10 \_\_\_\_\_  
Renewal: 7.50 \_\_\_\_\_

Amount Enclosed: \$ \_\_\_\_\_

# \_\_\_\_\_ D \_\_\_\_\_  
S \_\_\_\_\_ O \_\_\_\_\_

Name: \_\_\_\_\_ Today's Date: \_\_\_\_\_

Address: \_\_\_\_\_ Apt. # \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

Phone: (\_\_\_\_\_) \_\_\_\_\_ - \_\_\_\_\_

Interests/Comments: \_\_\_\_\_  
\_\_\_\_\_

## HAPPY BIRTHDAY!

A Happy HUGger Birthday to these members who joined the Hoosier Users Group in August, 1984! Richard Johnson, Richard S. Griffith, Ted Allen, Sheila Smith, Don Donlan, John Ashton, Joseph & Charlotte Godsey, Randy Blackwood, Rich Sceniak, Bob Manville, Greg Goodwin, and Anthony Black.

## WELCOME!

The Hoosier Users Group welcomes Robert Summers, Bill Roland and Anthony Miller who joined the group in the past month.

## WELCOME BACK!

We would also like to welcome back these renewing HUGgers: Larry Conner, John Stobaugh, Dennis Sherfy, Phil Kurtz, Andy Armstrong, and Lawrence Wisthoff.

## REGIONAL NEWS

### TERRE HAUTE NEWS

The next Terre Haute regional meeting will be held on Friday, August 23, at 7:30 pm at Vic Kelson's house, 2401 College Ave., Terre Haute. We invite all HUGgers to come and invite a friend from this region.

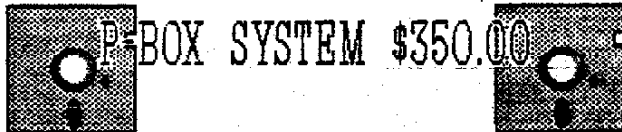
### SOUTH REGIONAL MEETING

The South Regional meeting is scheduled for Thursday evening, August 29th, starting at 7:00 pm at Dennis Sherfy's house. If anyone needs directions to the South meeting location, call me at 881-5918.

### WORDSEARCH

Here's a wordsearch which contains 23 BASIC or Extended Basic "CALL" words. Have fun!

DOSPGLHUDCALLHCHARBKJAFESMM  
ICDNOLACCWQDRSEXHXCNVNERUJJ  
CTALAJTAPRAHCLLACRYKEIUYESL  
ALPLIMZSWXMFUTHXOISEWSKQNOE  
LWKCLDRNOUJNXZGTIHRFGPXOLYC  
LCNIOCLLACTCYRYJGCI BKGNVTA  
VMIUDUOGGUPNAGACSAQKDFJLLZL  
CDLSDBBLGCLTWLSLPLJFEBALAXL  
HULMGYXUOYLROVLKKLDAFJCZTUC  
AMLSFICINRKUOALJGKQFVHNOGDH  
RDAAZWAQNEADACDALOERRARJPOYA  
XYCCALLGCHARSYCOEYLREDNICIR  
FCWTAALKDXEHZVZUTQXFPPEXVRR  
PGGEKBLTPDORGLBJLELTFDKEXAR  
EAGYYOEQCALLINITPZBOGEWEKE  
TYUPQTAKILFMXRQSKTYVAPFLRNL  
AIYSBCDXAMNOISREVLLACHCQOML  
CUDLSGZUZUSBOHESZNHGFLWKBFA  
QZFAFAFAQEWDPHOPTDDLYYYWOC  
LBHCECUSPWZFLJLWZJKAETHLGNA  
LIAYMHLVABQLCDJEZNCJNRRQJPL  
LKUPCLHEFXARDNUOSLLACMODNLL  
AFSRAVYFKCDJIKOIBHUVQJFYGMA  
COTCUPZELLZHSCOEETIRPSLLACC



P-BOX SYSTEM \$350.00

TILOGO2/WRITER/MULTIPLAN

\$50.00 EACH



ALL TI CARTRIDGES

\$4.00 AND UP

CASH AND CARRY



MICROCOMPUTERS, INC.

291-8882

## LIBRARY BITS

by Steve Moon

Here are some more programs that are on disk Extended-07. (Once again, please note that "B/" names are for programs that will run under both Console or Extended BASIC; "BC/" for Console BASIC only; and "BX/" for X-BASIC only.):

>>>Program name - BX/CARDFIL  
Hardware req. - X-BASIC, DISK, & 32K EXP. MEM.

This was taken from COMPUTE!'s Guide to Extended Basic Home Applications on the TI-99/4A - but has been largely re-written. You might like to read the above source, pp. 133-135 & 139-149 in your "local bookstore." Basically (pun?), it maintains a subject file for a bunch of notes of up to 480 characters each. There are sample files (CARDFILE/X (the index) & CARDFILE/D (the notes) on this disk.) Try the various menu options with a filename of "CARDFILE/" to see what happens.

Of special interest may be the SUB-programs: ADDSUBJ (starting line 2120); BLANKLINES (2410); READCARD (2700); GETKEY (3020); & DRAWBORDER (3220). Again, please see the above source for more info.

The BEGIN key can be used to prevent being trapped in most of the menu options (such as having to ADD a new record even though you change your mind). In case you wonder (as I did), the SUB-program at line 2840 removes from the input string those upside-down U's displayed on your screen.

One lacuna in the program is that you can't delete an entry. (You CAN revise the notes, (but not the Subject or Identifier fields)). This assumes you are never going to make a mistake and that your data will never change. I don't know about you, but for me that's nuts. Perhaps someone will accept the challenge to correct this omission.

Program - LOADCARDFIL.

This can be renamed "LOAD" and used to auto-load the above program. Both programs should be on the same disk with your ????????/X (Index) files.

>>>Program name - BX/DUMP  
Hardware req. - X/BASIC & Disk.  
As the name says, this is a file dumper. You may display just the printable ASCII characters or the ASCII or HEX codes for all the characters as well. To quit the program, enter a space as the first character after the file-name prompt. Entering BACK (FCTN 9) at a beep will return you to this prompt. Note that there is a beep in the CALL KEY subroutine and that even if you take the default response, that response is displayed (i.e., "Y" or "N").

>>>Program name - BX/MSTRDIR  
Hardware req. - X-BASIC, DISK, & 32K EXP. MEM.

This was retrieved from COMPUTE!'s TI Collection, Volume one, pp. 291-303. I made one hell-of-a-lot of changes & additions. Examples: A lot of redundant code removed; DISPLAY and ACCEPT AT's converted to sub-program's (lines 14000+ & 15000-); errors trapped so program doesn't croak when you screw up (lines 70 & 80); pre-scan made around 400% faster.) This program will (in a reasonable amount of time) maintain a master directory of all your disk files. An important feature: Entering a 0 (zero) for any number prompt will return you to the menu. (If you are at the menu, a 0 will quit the program.) You may catalog a maximum of 50 disks and 400 files, but more than 350 files or so will slow things down. If you are updating a disk's directory you will want to: 1) Delete old disk # (Menu #7); 2) Add changed disk # (#2); 3) Sort directory (#8); & 4) Save updated directory (#9). For printing, check the "OPEN" in line 10050 and the escape sequences in line 10060.

>>>DISKRUNNER (a fine program recently added to XTENDED-07) will do some things better and others worse than BX/MSTRDIR. Better is that you can print individual disk directories (BX/MSTRDIR could be modified to do this but I haven't had the energy or felt sufficient need); worse is that it will only hold 10 disks per file.

BITMAC disk media software was designed for use with the TI-99/4A home computer. It is written in TMS9900 machine language for the utmost in speed and program function. The program provides bit precision graphics generation and editing. Some of the features are:

Line, rectangle, circle, copy section, mirror, rotate, reverse video, free hand draw, 9 brush sizes, 16 colors, bit "on" color, bit "off" color, screen color, color test area, 40 column text, text on text, text on graphics, 16 color text, upper and lower case, 4 direction bit scrolling, dump to printer (two sizes), save to disk, boolean graphics enhancement, "LIFE" graphics enhancement, second computer input, X Y vector reporting, monochrome and color monitor support, trackball support, single bit erase, single bit placement, block erase, erase colors, erase all, fill, enlarge, reduce, "slide show", "oops" function.

BITMAC is icon driven and is simple to use. Included are extensive documentation, an example coprocessor program and one year warranty.

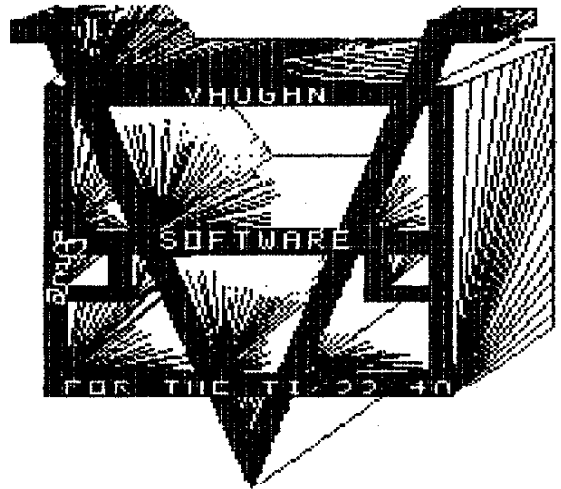
**REQUIRED EQUIPMENT:** Extended basic, Mini Memory or Editor Assembler module, a display monitor, joysticks, TI-99/4A computer, memory expansion and a disk drive system. THE PROGRAM MAY NOT BE COMPATIBLE WITH SOME VERSIONS OF THE MYARC DISK CONTROLLER.

**OPTIONAL EQUIPMENT:** TI, Gemini or Epson printer, RS232 card, trackball, up to 5 disk drives (limited by the disk controller), second computer (any make) with RS232 interface and cable.

To Order: Send check or money order for \$29.95 plus \$2.00 shipping and handling to:

VAUGHN SOFTWARE  
5460 Harlan #B4  
Arvada, CO 80002

For other inquiries please include a self addressed stamped envelope.



# BITMAC

By Vaughn Software

For the

# TI-99/4A COMPUTER

BITMAC is a trademark of Vaughn Software.  
The BITMAC program is a 1984 registered copyright of Vaughn Software.  
Vaughn Software is the only authorized manufacturer of BITMAC.

Magazines & the TI99/4A was reprinted from the July, 1985 Newsletter of the Airport Area Computer Club, P.O. Box 710, Coraopolis, PA 15108.

### MAGAZINES AND THE TI-99/4A by Bob Dudley

In the March issue of the Pittsburgh Users Group TI newsletter "Peripheral" the editor wrote a satirical review in which he called Home Computer Magazine "by far the worst magazine I have ever seen." Now that is exaggerated of course. The gentleman was expressing his extreme disappointment that the old 99er Magazine has evolved into Home Computer magazine treating the IBM-PC & PC Jr., the Commodore 64, the Apple II and the TI-99/4A. Naturally when the magazine was exclusively devoted to the TI there was a singleness of purpose which appealed to all of us TI-99/4A owners. But I suspect even more that the editor was missing the ads (Home Computer decided to go without ads) which were one of the greatest aids in the old magazine. But even if the magazine had not abandoned ads, it is deluding oneself to believe that there would be the same number of ads there once was. Fifty-five computer magazines went under in 1984! Some of these were definitely worse than Home Computer. The great "shakeout" in computer manufacturers and software publishers means that there is simply far less advertising in 1985. Still, Home Computer Magazine does provide programs for the TI-99/4A. In the latest issue (Volume 5 Number 3) there are 6 software programs and 4 articles on the TI plus a news column. An unusual feature of the magazine is that the programs are available from the publisher on disk or tape for those who do not wish to type them in. Ten issues by subscription cost \$25 with two "free" media presentations (choice of tape or disk) included and the others available by subscription if desired. Address: Emerald Valley Publishing Co., P. O. Box 70288, Eugene, OR 97401.

However, the disappearance of 99er Magazine does not mean that there are no magazines just for the TI-99/4A. There are 3 that I know of - all very young in age and much less "professional" in appearance than the old 99er. MICROpendium has worked its way into Volume 2 and perhaps should be treated as the next eldest. It is printed on 8 1/2 by 11 inch newsprint with each issue approximately 36 pages. There is a reasonable balance between advertising and editorial material and the ads do provide information about new products and sources for software and hardware enhancements. The contents of the April 1985 issue should provide some idea of the nature of this publication: Editorial, Letters, Cruising the Forum (column reviewing the online data services like CompuServe), The Ultimate Users Group (TI Forum on CompuServe), Graphics for beginners, 9900 Micro Expansion System by CorComp (review), Disk + Aid (review), Gemini Printers (review), Freeware (column), Newsbytes, User Notes (including a scroll demo program) and Classified Ads. The magazine costs \$15/year from MICROpendium, P. O. Box 1343, Round Rock, TX 78680.

Super 99 Monthly is printed from computer print-out without illustrations or advertising. There are 12 8 1/2 by 11 inch pages. The April 1985 issue (#8) included the following: a review of 9900 BASIC, an assembly language programming aid, a how-to-do-it article on adapting Atari/Commodore joysticks to work on the TI, a BASIC appointment reminder program, an XBASIC program to remove a subroutine from a program and merge it into another, a MULTIPLAN macro, a disk catalog for the CorComp controller, FORTH tips, a communications column and news. A subscription is \$12/year from Bytemaster Computer Services, 171 Mustang Street, Sulphur, LA 70663.

The newest publication is Mini-Mag 99, printed on 5 1/2 by 8 1/2 inch slick paper with illustrations and ads. The contents of the first issues have been a bit thin as they get started generating the material needed to fill a monthly magazine. The 30 page April issue had the following material: Letters, Plotting on the TI-99/4A Using the Radio Shack CGP-115 Plotter, TI-WRITER Labels and Mailing Lists, 9900 Expansion System (review), In-Out and In-Between (basics of communicating with your 99), a 99 word puzzle, new software releases, news column, and a review reprint from MICROpendium. The magazine costs \$20/year from S. O. S. Publishers, 21777 Ventura Blvd. #203, Woodland Hills, CA 91364.

COMPUTE! Magazine semi-regularly provides some material for the TI. The June issue has an original game (a spider tries to find his meals without getting eaten himself), a super-font program in XBASIC, and C. Regena's monthly column (this one has a multiple-choice test program). Other parts of the magazine (such as How To Buy The Right Printer) are of interest to all but the above were specifically for the TI. COMPUTE! costs \$24/year from COMPUTE!, P. O. Box 914, Farmingdale, NY 11737.

It should be noted that COMPUTE! is publishing some of the very best books on the TI and presently has 5 titles including game collections, graphics, and assembly languages. The books are new and very well produced - definitely a step ahead of some of the earlier products from other publishers.

In its June issue Family Computing announced it was dropping support for the TI but the July issue still had one small BASIC program for the TI. The magazine is directed at young school children and the programs are very simple.

I suppose that I should point out that I cannot guarantee that the TI-99/4A specific magazines will all survive. The fact that so many computer magazines failed to survive last year certainly points out that it is difficult to make ends meet in this field. Naturally it will require subscriber support for these to continue. If you enjoy reading about your TI give one or more of these a try.

Alphabet Recognition was reprinted from "Bug-Bytes of Australia" via the December, 1984 issue of Topics, Newsletter of the LA 99'ers, P.O. Box 3547, Gardena, CA 90247.

# KIDS CORNER

## ALPHABET RECOGNITION

This program was written by L.K. TUTCHINGS to help his son learn the alphabet. It proved to be a big hit at his pre-school too. I think that all the pre-schoolers out there will love it too. It requires Extended Basic and if you have a speech synthesizer, you will also get speech with it.



```

100 CALL SCREEN(8)
110 FOR COL=3 TO 8 : CALL C
    COLOR(COL,2,1):: NEXT COL
120 DISPLAY AT(4,4)ERASE ALL
: "ALPHABET RECOGNITION" :
    DISPLAY AT(6,4): "ALPHA AT
    TACK"
130 DISPLAY AT(8,4): "3 CLOSE
    OF PROGRAM" : DISPLAY AT(1
    8,2): "PUSH NO KEY OF YOUR CH
    OICE"
140 CALL KEY(O,K,S):: IF S=0
    THEN 140 : IF K=ASC("I")TH
    EN 150 : IF K=ASC("2")THEN
    470 : IF K=ASC("3")THEN 850
    ELSE 140
150 DISPLAY AT(12,4)ERASE AL
    L:"ALPHABET RECOGNITION" :
    FOR DE=1 TO 300 : NEXT DE
160 CALL CLEAR
170 PRINT "THE IDEA IS TO PR
    ESS THE KEY ON THE KEYBOARD
    THAT MATCHES THE LETTE
    R THAT IS GOING ACROSS THE
    SCREEN"
180 PRINT "THE COMPUTER WILL
    LET YOU KNOW IF IT IS COR
    RECT. IF IT IS CORRECT THEN
    ANOTHER LETTER IS RANDOM
    Y SELECTED"
190 PRINT "UNTIL YOU HAVE CO
    RRECTLY GOT 40 RIGHT" : "P
    RES ANY KEY TO START"
200 CALL KEY(O,K,S) : IF S=0
    THEN 200
210 CALL CLEAR
220 RANDOMIZE
230 FOR A=1 TO 40
240 X=INT(RND*25)+65
250 CALL SCREEN(2)
260 CALL MAGNIFY(2)
270 FOR C=5 TO 8
280 CALL COLOR(C,16,2):: NEX
    T C
290 FOR Q=4 TO 25 STEP 4
300 DISPLAY AT(24,Q):CHR$(X)
: : DISPLAY AT(1,Q):CHR$(X)::
    NEXT Q
310 CALL SPRITE(#1,X,16,86,2
    0,0,10)
320 CALL SAY(CHR$(X))
330 CALL KEY(O,K,S):: IF S=0
    THEN 330 : IF K(JK THEN 36
    0 ELSE 390
340 CALL DELSPRITE(#1):: NEX
    T A
350 GOTO 100
360 DISPLAY AT(20,7) "WRONG
    TRY AGAIN"
370 CALL SAY("UNOH, THAT IS N
    OT RIGHT, TRY AGAIN")
380 DISPLAY AT(20,7)SIZE(16)
: " : GOTO
    310
390 DISPLAY AT(20,12)SIZE(5)
: "RIGHT"
400 Z=INT(RND*5)+1 : ON Z G
    OTO 410,420,430,440,450
410 CALL SAY("GOOD WORK, GO S
    ONE MORE") : GOTO 460
420 CALL SAY("THAT IS CORREC
    T, CAN YOU DO IT AGAIN") : GOTO 46
  
```

```

430 CALL SAY("RIGHT. GO AGAI
    N") : GOTO 460
440 CALL SAY("GOOD, WHY STOP
    NOW") : GOTO 460
450 CALL SAY("YES, GO AGAIN")
460 DISPLAY AT(20,12)SIZE(5)
: " : GOTO 340
470 CALL CLEAR
480 DISPLAY AT(12,8): "ALPHA
    ATTACK" : DISPLAY AT(20,2):
    "WANT INSTRUCTIONS Y OR N?"
490 CALL KEY(O,K,S):: IF S=0
    THEN 490 : IF K(JASC("Y"))T
    HEN 550 ELSE 500
500 DISPLAY AT(2,2)ERASE ALL
: "THE OBJECT IS TO SHOOT DOW
    N" : "THE ALPHABET IN ORDER"
510 DISPLAY AT(6,2): "USE THE
    JOYSTICK AND FIRING" : "BUT
    TON, THERE ARE 52 BULLETS"
520 DISPLAY AT(11,1): "50 DO
    NOT WASTE THEM..." : DISPL
    AY AT(13,5): "GO TO IT! GOOD
    LUCK!"
530 DISPLAY AT(20,5): "PUSH A
    NY KEY TO START"
540 CALL KEY(O,K,S):: IF S=0
    THEN 540 ELSE 550
550 CALL CLEAR
560 CALL SCREEN(2)
570 CALL MAGNIFY(1)
580 RANDOMIZE
590 FOR S=1 TO 26
600 R=INT(RND*120)+1 : C=IN
    T(RND*246)+10 : CS=INT(RND*
    15)+1
610 CALL SPRITE(#S,64+S,INT(
    S/2)+3,R,C,0,CS)
620 NEXT S
630 CALL SPRITE(#27,94,16,17
    0,178)
640 AMMO=52
650 FOR I=1 TO 26
660 FOR CL=3 TO 8 : CALL CO
    LOR(CL,16,1):: NEXT CL
670 CALL POSITION(17,8,D)
680 CALL JOYST(1,X,Y):: Y=0
690 CALL KEY(I,K,S):: IF S=0
    THEN 730 : IF K=10 THEN CA
    LL SPRITE(#28,46,16,8,D,-25,
    0):: CALL SOUND(JUD,-1,0)::
    AMMO=AMMO-1
700 IF AMMO=0 THEN 820
710 CALL COINC(#I,#28,8,C)::
    CALL POSITION(#28,RI,DI)
720 IF C=-1 THEN 750 : IF R
    I[9 THEN CALL DELSPRITE(#28)
    ELSE 710
730 DISPLAY AT(23,2): "AMMO="
    :AMMO
740 CALL MOTION(#27,-Y,X*6):
    : GOTO 670
750 CALL SOUND(250,-7,0):: C
    ALL DELSPRITE(#I):: CALL DEL
    SPRITE(#28)
760 DISPLAY AT(24,1+I):CHR$(
    64+I)
770 IF I]26 THEN 790
780 NEXT I
790 CALL DELSPRITE(ALL):: CA
    LL CLEAR : CALL SCREEN(2)
800 DISPLAY AT(10,1): "WELL D
    ONE WANT TO PLAY AGAIN" : D
    ISPLAY AT(12,1): "Y OR N" :
    DISPLAY AT(14,1): "YOU HAD" :
    AMMO:"BULLETS LEFT"
810 CALL KEY(O,K,S):: IF S=0
    THEN 810 : IF K(JASC("Y"))T
    HEN 100 ELSE 550
820 CALL DELSPRITE(ALL):: CA
    LL CLEAR : CALL SCREEN(2)
830 DISPLAY AT(10,1): "SORRY-
    OUT OF AMMO PLAY AGAIN" : D
    ISPLAY AT(12,1): "Y OR N"
840 CALL KEY(O,K,S):: IF S=0
    THEN 840 : IF K(JASC("Y"))T
    HEN 100 ELSE 470
850 DISPLAY AT(12,1)ERASE A
    LL:"GOODBYE" : CALL SAY("GO
    ODBYE")
860 FOR DE=1 TO 1000 : NEXT
    DE : CALL CLEAR : END
  
```

## PRINTING FROM EARLY MODULES

Editor's Note: The following article was reprinted from the May, 1985 issue of The ROM Newsletter, Newsletter of the Users Group of Orange County, 17301 Santa Isabel Street, Fountain Valley, CA 92708 via the April, 1985 issue of "MINI-MAG 99".

"Kent Maxwell found a way to be able to print the Weight Control and Nutrition Module to a parallel printer. (Editor's note: TI produced these modules prior to the availability of an RS232 card with a PIO output, so their menus did not provide for same.)

The procedure is as follows:

1. When setting up your files, tell the computer that you will not be using a printer, then create your data files accordingly.

2. When reviewing the files, put in any fictitious printer device name (i.e., RS232/8) and the computer will indicate DEVICE NOT FOUND. At this time, enter PIO, and the computer will allow access to a parallel printer.

The procedure may vary slightly between the various early modules, but the key is to avoid a printer identification in the data unit process. Enter the device name when recalling and reviewing the previously entered data.

Kent Maxwell is an avid TI enthusiast who is employed with the VA Hospital in Sepulveda, California on the security force; and is also a member of Tex-Comp's Technical Consulting group."

## NOTES FROM A NEOPHYTE

By Sharon Martin

Editor's note: The following article was reprinted from the May, 1985 Newsletter of the Central Jersey 99 Computer Club, P.O. Box 673, Bricktown, NJ 08723.

Well, there are not enough articles for the newsletter and I don't have any other newsletters here to copy. So you lucky people will get a little note on my experiences in computing. The title is apt. I don't have very much knowledge about the computer and absolutely none in the technical area. Yesterday I stopped at Radio Shack and asked for a modem. They had two. One was \$60 and one was \$100. I asked if they would work with the TI. He said to bring in the manuals and he would tell me. He said he didn't understand very technical. Now, I can relate to that!! I asked which manual he would need. I have tons. They are all stored neatly away. Would he like the disk drive manual or the one for the PE box or the one for the RS232 or the TEII thing? He didn't know. I love it! He's the one who is supposed to know! Do I know? Of course not! I just explained how untechnical I am. And people ask why I'm in a computer club! That is a perfect example. I just go to the meeting and ask which modems are compatible( I'm picking up the lingo too!) and I can ever ask which is the best and where to get it. Members always know the best place for the best price.

So, what do I do with my computer? I can play games, of course,(my all time favorite is Tombstone City I think of them as couples who have babies. Split the couples and they'll never have those babies!)

I have always liked a challenge. Everything on the computer is a problem and you feel such satisfaction when you solve it! I am in the middle of programming a program to help in grocery shopping(which I hate). Of course, I have been in the middle of it for months now but that's ok. What's the hurry. I'll still hate grocery shopping next year. The program is based on the supermarket's list of where everything is located in the store. I will be able to keep inventory and also the weekly items (the ones that always need replacing). I should include coupons too, but my excuse of forgetting them is easier. It's such a waste--my husband and kids cut them out so carefully for me to use! Anyway, when done I should have a list of what I need to buy in order of the aisles starting with aisle one.

I also use a couple of the cartridges for home use. Financial Decisions is always fun to play with. Should we buy another house to save on taxes or take out a loan for the kids education etc. I like Personal Record Keeping for recording and printing out my programs and location and sometime I will get around to deleting all that I don't use. I do my checkbook on PRK and it works well.

I use TI-Writer for work (My son or I can type his reports on it and get an automatic A)and Multiplan too. I even made up my business letterhead using the transliterate command. Fun. Multiplan is great for payroll taxes and expenses incurred in my business. Every month I add more and at the end of the year have a record for tax returns.

Probably the best thing about my computing is a sense of accomplishment. I did it all-by-myself type of thing.

What are you doing on your computer? Write it up and give us a disk. People are interested!



REPRINT

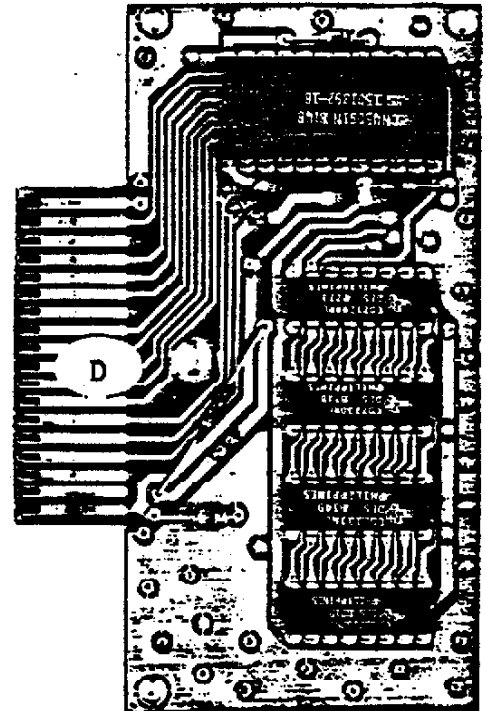
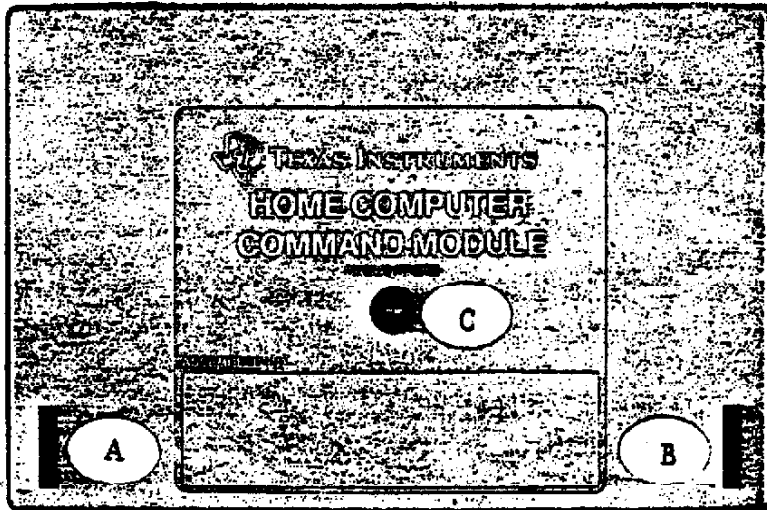
\*\*\*\*\*  
\$CIU6;0485 CARTRIDGE CLEANING - by Ron Rutledge \*  
\*\*\*\*\*

Dirty contacts can screw-up any electrical device and the 4A is not an exception. The only place you are fairly likely to run into this problem is in using command modules. Both the module contacts and the port itself can become dirty but cleaning the port itself is a big job as you have to disassemble the console. The good news is that cleaning the cartridge will almost always suffice and can be done quickly without any special tools or cleaners. All you need is a regular screwdriver, some sort of rag, a standard pencil eraser, and in some cases a medium phillips screwdriver.

Remove the screw from "C" if there is one. Then pry the clips in slots "A" and "B" outward to pop open the cartridge. If there is a clip in "C" pry it back after "A" and "B" are loose. If it should bend off don't worry, it won't affect the performance of your module.

The module board can now be removed. Do this carefully and note how the spring-loaded "door" is assembled if there is one so that you can put it back together if it pops out. Once you have the board removed take your rag (a kleenex will work but something cloth is much better) and rub off any residue from the contacts, shown as "D". Remember to do the contacts on both sides if that particular module has them. Once the worst is removed take any soft rubber eraser and "erase" the contacts until they become dry, clean and shiny. You need to do only about the outer half of the contacts as that is more than ever gets used (you can see the scratch marks in the picture below). Once this is done simply put the cartridge back together and go. Some symptoms of dirty contacts are the console locking-up, strange errors where no occurred before, etc (my XB cartridge giving me a syntax error when there was non for example). Don't jump to clean a cartridge on your first error, it could be alot of things like static, not having the module in tight, or a number of other things. But if you find you have a continuing problem cleaning the contacts is quick and free and may correct what was wrong.

Cartridge Cleaning was reprinted from the April, 1985 issue of The 4A Forum, Newsletter of the Central Iowa Users Group, P.O. Box 3043, Des Moines, Iowa 50316.



TIPS FROM THE TIGERCUB

022

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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.

The entire contents of Tips from the Tigercub Nos. 1 through 14, with more added, are now available as a full disk of 50 programs, routines and files for just \$15.00 postpaid!

Nuts Bolts is a diskfull of 100 (that's right, 100!) IBasic utility subprograms in MERGE format, ready for you to merge into your own programs. Contents include 13 type fonts, 14 text display routines, 12 sorts and shuffles, 9 data saving and reading routines, 9 wipes, 8 pauses, 6 music, 2 protection, etc., and now also a tutorial on using subprograms, all for just \$19.95 postpaid!

And I have about 140 other absolutely original programs in Basic and IBasic at only \$3.00 each! (plus \$1.50 per order for cassette, packing and postage, or \$3.00 for diskette, PPM) Some users groups charge their members that much for public domain programs! I will send you my descriptive catalog for a dollar, which you can then deduct from your first order.

This challenge was printed in Tips 021 -

100!The Unprintable Unkeyable Program!

110!To shuffle the numbers 1 to 255 into a random sequence without duplication

120!The strings contain the ASCII characters 1 to 127 and 128 to 255

130!Most of the ASCII characters below 32 or above 159 cannot be input from the keyboard

140!So how was this program programmed?

150 M\$=""

```
!""@%&'()*+,-./0
123456789;:(=>?@ABCDEFHIJKL
MNOPQRSTUVWXYZ[ ]^_`abcdefg
hijklmnopqrstuvwxyz{|}""
160 M20=""
```

170 M\$=M\$&M2\$

```
180 L=LEN(M$):: RANDOMIZE ::
X=INT(L/RND+1):: M=ASC(SEG$
(M$,X,1)):: M$=SEG$(M$,1,X-1
)&SEG$(M$,X+1,LEN(M$))
190 PRINT M$:: IF LEN(M$)=0
THEN STOP ELSE 180
```

And here is the answer - It was written by a program that writes a program!

Key this in and run it to create a MERGE format disk file. Then type NEW, then type MERGE DSKI.LONGSTRING and you will have a RUNable program consisting of lines 150-170 of the puzzle!

```
100 OPEN #1:"DSKI.LONGSTRING",VARIABLE 163
110 LN=100 :: GOSUB 190 :: A$=L$&"M$&CHR$(190)
120 FOR J=1 TO 127 :: C$=CHR$(J):: NEXT J :: A$=A$&CHR$(199)&CHR$(127)&C$&CHR$(0)
130 PRINT #1:A$
140 GOSUB 190 :: B$=L$&"M2$&CHR$(190)
150 FOR J=128 TO 255 :: B$=B$&CHR$(J):: NEXT J :: B$=B$&CHR$(199)&CHR$(128)&D$&CHR$(0)
160 PRINT #1:B$
170 GOSUB 190 :: F$=L$&"M$&CHR$(190)&"M$&CHR$(184)&"M2
```

```
$&CHR$(0)
180 PRINT #1:F$ :: PRINT #1:CHR$(255)&CHR$(255):: CLOSE #1 :: END
190 L$=CHR$(INT(LN/256))&CHR$(LN-256*INT(LN/256)):: LN=LN+10 :: RETURN
```

Now type in the remaining lines, and you will have a speeded-up version of the Tigercub Scramble which was published in Tips 010. It is still not as fast as the CALL PEEK versions but is much more useful because you can modify it to scramble a sequence of any length anywhere between 1 and 255. For example, to shuffle the numbers 100 to 150 into a random sequence without duplication, just add a line 175 M\$=SEG\$(M\$,100,50).

The method of writing a "program that writes a program" was fully explained by John Clulow in the 99er magazine Vol. 1 Nos. 3 and 4. It is a little-used but very valuable technique.

For instance, Tips09 contained the following routine to turn the alphabet upside-down.

```
100 FOR CH=33 TO 127 :: CALL CHARPAT(CH,CH):: FOR J=1 TO 16 STEP 2 :: I$=SEG$(CH,J,2)&I$ :: NEXT J :: CALL CHAR(CH,I$):: I$="" :: NEXT CH
110 INPUT A$ :: GOTO 110
```

The only trouble with that is that it takes about 50 seconds to run. Try this instead -

```
100 FOR CH=33 TO 127 :: CALL CHARPAT(CH,CH):: FOR J=1 TO 16 STEP 2 :: I$=SEG$(CH,J,2)&I$ :: NEXT J :: CALL WRITE(CH,I$):: I$="" :: NEXT CH
1000 SUB WRITE(CH,I$):: IF FLAG=1 THEN 1010 :: FLAG=1 :: OPEN #1:"DSKI.WRITE",OUTPUT,DISPLAY,VARIABLE 163 :: LN=3000 :: GOSUB 3000
1010 I=I+1 :: L$=L$&CHR$(200
```

```
&CHR$(16)&I$ :: IF I<5 AND CH<127 THEN L$=L$&CHR$(179):: SUBEXIT
1020 I=0 :: PRINT #1:L$&CHR$(0):: L$="" :: IF CH=127 THEN 1030 :: GOSUB 3000 :: SUBEXIT
1030 PRINT #1:CHR$(255)&CHR$(255):: CLOSE #1 :: GOTO 3010
3000 L1=INT(LN/256):: L2=LN-256*L1 :: L$=CHR$(L1)&CHR$(L2)&CHR$(147):: LN=LN+10 :: RETURN
3010 SUBEND
```

RUN that, type NEW, then MERGE DSKI.WRITE, and you will have a program consisting of DATA statements containing the hex codes for all the upside-down characters. Add a line 100 FOR CH=33 TO 127 :: READ CH :: CALL CHAR(CH,CH):: NEXT CH, and you can turn everything upside-down in only 12 seconds.

Someone sent me a classified ad, clipped from an unknown publication, which read -

TI-WRITER COMPANION. Loaded with ingenious ways to make your TI-Writer more effective. Well written. Send \$2.50 to Dr. Bill Browning, 7541 Jersey Avenue North, Brooklyn Park, MN 55428. Money back guarantee.

I sent off my money and have just received 29 pages, 3-hole punched, loaded with useful and ingenious tips and ideas for getting more out of TI-Writer. I recommend it - it's worth twice the money and then some!

The K-Town newsletter recently published a utility routine that is so useful that I want to pass it on to everyone. If a program is not resequenced after it is modified, this will compare

it with the original and prepare a MERGE format file of all the changes, for the use of others to update their copy.

```
100 !!!!!!!!!!!!!!!!!!!!!!!
110 !: COMPARE PROGRAM :
120 ! by Mike Dodd :
130 !!!!!!!!!!!!!!!!!!!!!!!
131 ! In k-Town 99'er V.2 #1
April 1985
140 !Version 85.0406.1XB
Requires disk drive.
Compares two programs,
gives list of all differences.
150 !SAVE old program in
MERGE format (SAVE DSK1.(ol
dfilename),MERGE). SAVE up-
dated program in MERGE for-
mat(SAVE DSK1.(newfilename)
,MERGE)
160 !RUN this program, answe
r prompts for OLD FILE name,
NEW FILE name, and a differ
ent OUTPUT FILE name.
170 !When finished, type NEW
, then MERGE DSK1.(outputfil
ename) and ENTER
180 !Can be MERGED into othe
r copies of OLD program to
update them
190 DEF @(@)=ASC(SEG$(@,1
,1))+256+ASC(SEG$(@,2,1))
200 A$=CHR$(255)&CHR$(255)::
DISPLAY AT(1,1)ERASE ALL:"O
LD FILE:" : "NEW FILE:"
: "OUTPUT FILE:"
210 ACCEPT AT(1,13)BEEP:B$ :
: ACCEPT AT(3,13)BEEP:C$ :
ACCEPT AT(5,13)BEEP:D$ : OP
EN @1:B$,INPUT ,VARIABLE 163
220 OPEN @2:C$,INPUT ,VARIABLE 163 :
OPEN @3:D$,OUTPUT,
VARIABLE 163
230 LINPUT @1:@$ : LINPUT @
2:E$ : F$=SEG$(@,1,2):: G$
=SEG$(@,1,2):: A=@(F$) : B=
@(G$)
240 IF F$=A$ AND G$=A$ THEN
CLOSE #1 : CLOSE #2 : PRIN
T @3:A$ : CLOSE #3 : STOP
250 IF B>A THEN PRINT @3:F$&
CHR$(131)& "DELETED LINE #
"&CHR$(@): LINPUT @1 : @#
: F$=SEG$(@,1,2):: A=@(F$
): GOTO 240
260 IF A>B THEN PRINT @3:E$
: LINPUT @2:E$ : G$=SEG$(E
```

```
@,1,2):: B=@(G$):: GOTO 240
270 IF @<E$ THEN PRINT @3:
E$
280 GOTO 230
```

Thanks to some ideas from Joyce Corker, I have made some more improvements to the Tigercub MenuLoader, and I have used the above utility routine to list all the changes made since it was published in Tips#15.

```
180 !by A. Kludge/M. Gordon/
T. Boisseau/J. Peterson/etc.
modified in Tips #22
182 OPTION BASE 1 : DIM P$
(127),VV(127),VX(127):: GOTO
110
185 @,A,A$,B,C,D$,FLAG,I,J,K
,KD,KK,N$,MM,P$,P$(),Q$,S,S
T,T$( ),TT,VT,VV(),VX(),N$,I
X$,K2,S2
186 CALL INIT : CALL LOAD :
: CALL LINK : CALL PEEK :
CALL KEY : CALL SCREEN : C
ALL COLOR : CALL CLEAR : C
ALL VCHAR : CALL SOUND : !
@P-
190 ! **DELETED LINE **
160 T$(1)="d/f" : T$(2)="d/
v" : T$(3)="i/f" : T$(4)="
i/v" : T$(5)="pro" : ON WA
RNING NEXT
170 IMAGE $$$
180 DISPLAY AT(1,4):"TIGERCU
B MENU LOADER"
210 D$="DSK1." : OPEN @1:D$
,INPUT ,RELATIVE,INTERNAL :
INPUT @1:N$,A,J,K : DISPLA
Y AT(1,2)SIZE(127):SEG$(D$,1,
4)&" - Diskname= "&N$;
230 FOR I=1 TO 127 : IF I/2
@<INT(I/2) THEN 260
240 DISPLAY AT(24,1):"Type c
hoice or 0 for more 0" : AC
CEPT AT(24,27)VALIDATE(DIGIT
)SIZE(-3):K : IF K=0 THEN 2
50 : IF VV(K)<>S THEN 411 :
: IF K>0 AND K<MM+1 THEN 420
ELSE 240
290 DISPLAY AT(I+4,2):USING
170:MM : DISPLAY AT(I+4,6):
P$ : P$(MM)=P$ : DISPLAY
AT(I+4,18):USING 170:J : DI
SPLAY AT(I+4,22):T$(ABS(A))
291 VV(MM)=ABS(A):: VX(MM)=A
BS(B)
295 I$=" "&STR$(B): DISPLA
```

```
Y AT(I+4,26):SEG$(I$,LEN(I$)
-2,3):: VT=VT+J
330 DISPLAY AT(I+6,1):" C
hoice?" : ACCEPT AT(I+6,16)
SIZE(3)VALIDATE(DIGIT):K :
IF K<MM AND K<MM+1 THEN 41
0
410 IF K<1 OR K>127 OR LEN(P
6$(K))=0 THEN 320
411 IF VV(K)=5 OR(VV(K)=4 AND
D VX(K)=254) THEN 420
412 ON ERROR 417 : CALL CLE
AR : OPEN @2:D$&P$$(K):: CA
LL SCREEN(16)
413 LINPUT @2:N$ : IF EOF(2
) THEN 416 : PRINT @#
414 CALL KEY(0,K,S) : IF S=0
THEN 413
415 CALL KEY(0,K2,S2) : IF S
2<1 THEN 415 ELSE 413
416 CLOSE #1 : CLOSE #2 :
END
417 DISPLAY AT(12,18):"UNLIS
TABLE" : CALL SOUND(200,110
,0) : RETURN 400
430 ON ERROR 417 : CALL INI
T : CALL PEEK(-31952,A,B)::
CALL PEEK(A+256+B-65534,A,B
):: C=A+256+B-65534 : A$=D$
&P$$(K) : CALL LOAD(C,LEN(A$
))
```

The Menu Loader will now list up to 127 programs and files, showing the number of sectors in each and the file type, record type and record length of each file. It will stop at the end of each page, and continue on a default value of 0, or will stop for selection when any key is pressed. It gives disk name, number of sectors used and available. It adds up sectors actually used and gives a warning if all sectors are not accounted for. It will load and run any program which can be loaded from Extended Basic, displaying the program being loaded. It will delete any program or file, after first displaying the filename and requesting verification. It will list any listable file to the screen, pausing on any key input, and can be

very easily modified to list to a printer. If a file is not listable, it will inform you so, and restart the menu selection. It has the pre-scan option to speed it up.

Fairly often, the disk directory will lose track of one or a few sectors during the process of loading records, even though the Disk Manager showed all 358 were initialized. That's why I put the checking routine in the Menu Loader. The figure shown as "used" is actually 358 minus the number of sectors still available, and is checked against the total sectors of all files.

The loss of a few sectors is no serious matter, but once in a great while you may notice that the "available" and "used" sector quantities have obviously been reversed. I have found that this is a signal that the disk is about to go haywire and you had best back it up immediately!

Programs and files are loaded in the first available sector, and continued in the next available sector. If a number of small files are deleted from a disk, and a long file is then loaded, it may thus be fractured into many parts. If you have a work disk on which you continually add and delete files of various lengths, it will become badly fractured. This can cause disk errors, and it also badly overworks your drive. It is a good idea to recopy your work disk occasionally - file by file, not sector by sector with a quick copier.

MEMORY FULL! - Jim Peterson

Gives the Definition of FORTH Words.

by Jim Ellis

by Bill Jones, Indy

Lots of times I've been testing out a program and created a test word in FORTH to try out what I'm working on. Since I usually enter it from the keyboard rather than store it on the disk, I sometimes forget how I invented the work. This little program can bring back the definition of the word I created or one that is already compiled in the system. It's a pretty neat trick that follows the words backward and gives them back to you. This particular procedure was written by Jim Vincent of the Milwaukee Area users group, but I found it listed in the L.A. 99ers group newsletter. I'm passing it along to the HUGGERS just as it was listed. Jim's style is pretty compressed and I haven't made any attempt to expand it for clarity.

Also this month, I've been working on a routine to convert FORTH screens into display 80 files that TI-WRITER can read. If you've ever wanted to send FORTH code to someone else via modem you know how useful that can be! I will be presenting that program to the FORTH interest group at the next meeting and you'll see the listing here next month. It features special instructions to strip carriage returns that TI-WRITER inserts as well as the end of file at the end. Along with it, I'll be giving a good tutorial on how to make FORTH read and write regular disk files.

Screen 150

```
( FORTH word decompiler - JWV 7-NOV-84 ) BASE->R HEX
-FIND (." ) DROP DROP 2- CONSTANT
ADQ -FIND LIT DROP DROP 2- CONSTANT ALIT -FIND BRANCH DROP DROP
2- CONSTANT ABRAN -FIND OBRANCH DROP DROP 2- CONSTANT AZBRAN
( DITTO )
: .DQ 2E EMIT 22 EMIT 20 EMIT ;
: .Q 22 EMIT 20 EMIT ;
: DQ? DUP 2+ @ ADQ = IF .DQ 4 + DUP COUNT TYPE DUP C@ + DUP 2 MOD IF 1- THEN .
THEN ;
: ;? DUP @ 8334 = ; ( TESTS IF WORD STARTS WITH DDCOLON )
: ;? DUP @ @ 8340 = ; ( TEST IF WORD IS SEMIS )
: P? DUP @ 2- = ; ( TEST IF WORD HAS @ AS A PRIMITIVE DEF )
: D? @ DUP @ 06A0 = SWAP 2+ @ 832E = AND ; ( TEST FOR DOES )
: .ID 2+ NFA ID. ; ( PRINT WORD NAME )
: UN: -FIND IF DROP 2- ;? IF CR . : " DUP .ID BEGIN 2+ ;? IF ." ; " CR DROP 0
ELSE DUP @ ;? OVER P? OR OVER D? OR IF .ID ELSE U. THEN DQ? THEN DUP 0= UNTIL
DROP ELSE ." Not a colon def'd word" THEN ELSE ." No such word" CR THEN ;

R->BASE ( ) ( ) ( ) ( )
```

I reviewed some of the newsletters, etc. that have arrived in the mail. All of them have something of interest to any and all. I had some difficulty, but think I have some info that will be of interest to several...

From the CHICAGO-AREA TI-99/4 USER'S GROUP comes the announcement of their third annual TI-Computer Faire, to be held in the Ironwood Room at Triton College 2000 N. 5th Av., River Grove, IL on Nov. 2, 1985 from 10:00 A.M. TO 5:00 P.M. Admission to members of TI-User's groups is \$1. General admission is \$2 at the door.

From Osram Industries of Victoria, Canada comes info about their RAMPORT (tm) that has 8K CMOS RAM with battery backup. It expands system memory to 40K. It also has a feature to back up non-banked ROM only cartridges to disk with some restrictions.

From 99 ASSEMBLY SOFTWARE comes a letter announcing their SOUND DIGITIZER program. It will allow ANY sound to stored on disk with the ability to be played through your tape recorder. It requires disk drive, 32K, cassette recorder.

From TEXTAMENTS of Patchogue, NY comes the ad for a drawing program called TI-ARTIST (tm) from INSCBOT Inc. It requires disk drive one of the usual modules for loading. It will dump a screen to Epson compatible, Okidata (standard or IBM), or GP-100 printers. It is priced at \$34.95 plus \$2 shipping and handling.

Also, from Myarc comes Extended Basic Level IV, in module form. It features, all TI XB features, execution up to 3 times faster, 40 COLUMN text mode, other commands, such as, DRAW, FILL, CIRCLE, many more.

Price not stated. For more info on any of these contact Pam Sims or myself.

QUICK REFERENCE SHEET

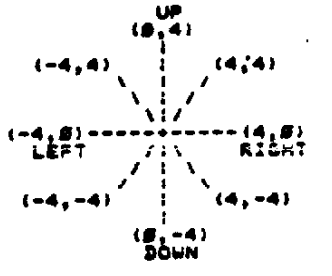
COLOR CODES		PATTERN IDENTIFIER CONVERSION TABLE		ERROR CODES	
COLOR	VALUE	FIRST	SECOND	COMMAND OR STATEMENT	TYPE OF ERROR
TRANSPARENT	1	0	0	0	OPEN
BLACK	2	0	0	1	CLOSE
RED, GREEN	3	0	0	2	INPUT
LT. GREEN	4	0	0	3	PRINT
DK. BLUE	5	0	0	4	RESTORE
LT. BLUE	6	0	0	5	OLD
DK. RED	7	0	0	6	SAVE
CYAN	8	0	0	7	DELETE
RED, RED	9	0	0	8	EOF
LT. RED	10	1	0	0	DRIVE NOT FOUND
DK. YELLOW	11	1	0	1	DEVICE or FILE WRITE
LT. YELLOW	12	1	0	1	PROTECTED
DK. GREEN	13	1	0	2	BAD OPEN ATTRIBUTE
MAGENTA	14	1	0	3	ILLEGAL OPERATION
GRAY	15	1	0	4	OUT OF SPACE
WHITE	16	1	0	5	ATTEMPT TO READ PAST
				6	END OF FILE
				6	DEVICE ERROR or
				7	HARDWARE ERROR
				7	FILE ERROR - File or
					disk does not exist

ASCII CODES

CODE	CODE	CODE	CODE	CODE	CODE	CODE	CODE
30	48	66	84	102	120	138	156
31	49	67	85	103	121	139	157
32	50	68	86	104	122	140	158
33	51	69	87	105	123	141	159
34	52	70	88	106	124	142	160
35	53	71	89	107	125	143	161
36	54	72	90	108	126	144	162
37	55	73	91	109	127	145	163
38	56	74	92	110	128	146	164
39	57	75	93	111	129	147	165
40	58	76	94	112	130	148	
41	59	77	95	113	131	149	
42	60	78	96	114	132		
43	61	79	97	115			
44	62	80	98				
45	63	81	99				
46	64						
47							

CALL KEY VALUE OF KEYSTROKES JOYSTICK RETURN VALUES

CHARACTER SETS	CODE	KEYSTROKE	FCN
SET 1	30-31		FCN 7
SET 2	32-39		FCN 4
SET 3	40-47		FCN 1
SET 4	48-55		FCN 2
SET 5	56-63		FCN 6
SET 6	64-71		FCN 3
SET 7	72-79		FCN 8
SET 8	80-87		FCN 0
SET 9	88-95		FCN X
SET 10	96-103		FCN R
SET 11	104-111		FCN 6
SET 12	112-119		ENTER
SET 13	120-127		FCN 5
SET 14	128-135		FCN 9
SET 15	136-143		
SET 16	144-151		
SET 17	152-159		



CONTROL CODES EXTENDED BASIC STATEMENTS

ARC	PRESS	COMMENTS	ACCEPT	DISTANCE	KEY	ON WARNING	SCREEN
1	CTRL A	START OF HEADING	CHAR	END	LET	OPEN	SOUND
2	CTRL B	START OF TEXT	CHARPAT	ERR	LINK	OPTION BASE	SPSET
3	CTRL C	END OF TEXT	CHARSET	FOR	LINPUT	PATTERN	SPRITE
4	CTRL D	END OF TRANS.	CLEAR	GCHAR	LOAD	PEEK	STOP
5	CTRL E	INQUIRY	CLOSE	GOSUB	LOCATE	POSITION	SUB
6	CTRL F	ACKNOWLEDGE	COINC	GOTO	MAGNIFY	PRINT	
7	CTRL G	BELL	COLOR	MCHAR	MOTION	RANDOMIZE	
8	CTRL H	BACKSPACE	DATA	IF THEN	READ	READ	
9	CTRL I	HORIZ. TAB	DEF	IMAGE	ON BREAK	REM	
10	SHFT/ENTR	LINE FEED	DELSPRITE	INIT	ON ERROR	RESTORE	
11	CTRL K	VERTICAL TAB	DIM	INPUT	ON GOSUB	RETURN	
12	CTRL L	FORM FEED	DISPLAY	JOYST	ON GOTO	SAY	
13	ENTER	CARRIAGE RETURN					
14	CTRL N	SHIFT OUT					
15	CTRL O	SHIFT IN					
16	CTRL P	DATA LINK ESCAPE					
17	CTRL Q	DEVICE CONTROL 1					
18	CTRL R	DEVICE CONTROL 2					
19	CTRL S	DEVICE CONTROL 3					
20	CTRL T	DEVICE CONTROL 4					
21	CTRL U	NEG. ACKNOWLEDGE					
22	CTRL V	SYNCHRONOUS IDLE					
23	CTRL W	END OF TRANSMIS.					
24	CTRL X	CANCEL					
25	CTRL Y	END OF MEDIUM					
26	CTRL Z	SUBSTITUTE					
27	CTRL [	ESCAPE					
28	CTRL \	FILE SEPARATOR					
29	CTRL ]	GROUP SEPARATOR					
30	CTRL ^	RECORD SEPARATOR					
31	CTRL _	UNIT SEPARATOR					
32	SHFT V	DELETE CHARACTER					

CALL LOADS

ADDRESS	PARAMETERS	DESCRIPTION
-32748	POKE 0-255	RATE of FLASH of CURSOR
-31788	POKE 192	DISABLE SPRITE action
-31884	PEEK X,Y	Returns to Title Screen.
-31886	POKE X,Y	DISABLE SUIT KEY(Fcfn =)
-31868	POKE 32	DISABLES SOUND
-31868	POKE 64	DISABLES AUTOSPRITE MOTION
-31868	POKE 4	Goes to Console BASIC after 'NEW' is typed
-31868	POKE 8	Runs BSKI.LOAD
-31876	POKE 0-26	Highest # SPRITE in motion
-31888	POKE 63,255	Disables Disk,NEW +re.mem
-31731	POKE 0/128	Unprotects/Protects program
-31942	POKE "2	Returns to TITLE SCREEN
-31942	POKE 55	Runs BSKI.LOAD
-31952	PEEK A,E,C,D	Recovers program with LOAD
-28672	PEEK A	Speech Syn. =No Speec

We wish to give credit to the PUGET SOUND 99'ERS who printed this All Purpose Handy Dandy Reference sheet in their APRIL 85 Newsletter.

**HOOSIER USERS GROUP DIRECTORY**  
**HOOSIER USERS GROUP OFFICERS**

President.....Steve Sims 631-7255  
 Vice-President.....Bill Lucid 291-3995  
 Secretary.....Barb Uhrig 357-8268  
 Treasurer.....Bill Jones

**COMMITTEE CHAIRPERSONS**

Regional Centers:  
 South.....Dennis Sherfy 881-5918  
 West Indiana..Vic Kelson 812-234-5533

Documents.....Don Donlan 882-4544  
 Membership.....Pam Sims 631-7255  
 Newsletter.....Pam Sims 631-7255

**MONTHLY MEETING LOCATION**

Creative Logic  
 8240 Indy Lane  
 Indianapolis, IN 46224

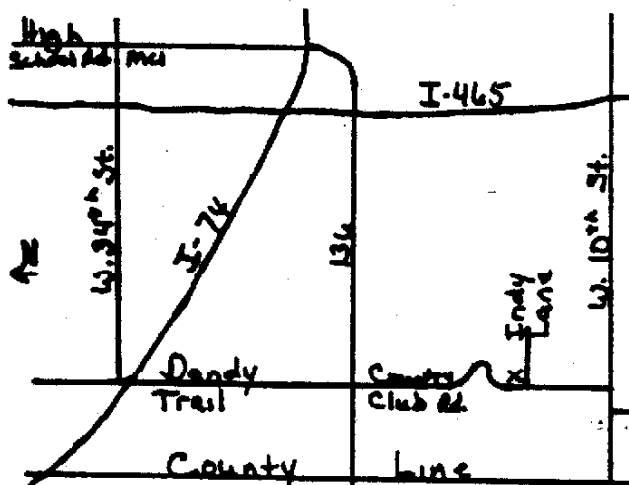
(About 1800 North Country Club Road)

**NEWSLETTER EXCHANGE**

The Hoosier Users is participating in a Newsletter Exchange program with other TI Users Groups. This offer is made with the understanding that, with proper credit, your Users Group can reprint articles from the Hoosier Users Group Newsletter, and with proper credit, we can reprint articles from other TI Users Groups Newsletters.

**PRINTOUTS**

Library listings can be ordered for \$.25 & a 6x9 self addressed envelope with \$.66 postage. The HUGbbs Reference Guide can be ordered for \$.50 and a 4x7 self addressed envelope with \$.22 postage. Please send orders to our P.O. Box. SORRY, PRINTOUTS WILL BE SENT TO ACTIVE MEMBERS ONLY!



**HUGbbs INFORMATION**

317-631-994A

The HUGbbs operates on a 24 hour basis.

**SPONSOR THE HUGbbs:** Any member or retail business can sponsor the HUGbbs. For a \$5.00 donation, you get 5 (40 column) lines on the Log-On Title Screen for a week (or for a \$10.00 donation, you get 10 (40 column) lines) plus a 24 line by 40 character ad in the Sales option of the File Module. To sponsor the HUGbbs, send a check or money order to our P.O. Box (or turn in at our Monthly Meeting) specifying how many weeks (and how many lines) you want to sponsor, your name (or company name), address, phone, what you want to say, and the week (and an alternate week) you want the ad to appear.\*

**BACK ISSUES**

Back Issues purchased at the monthly meeting is \$1.00 each. Mail order price is \$1.50 per Newsletter (postage included). Orders will be filled within 3 weeks of receipt by the Documents Committee.

**ADVERTISING POLICIES**

There will be no charge for advertisements submitted to the HUGger Newsletter by members (for private sale only). Format for the advertisements is 45 characters wide by 10 lines long. The Ad should be typed or hand printed exactly how it is to appear in the Newsletter. Deadline for an ad to appear in next month's Newsletter is the 2nd Saturday of the month.\*

For companies who wish to advertise in the HUGger Newsletter, our rates are as follows:  
 Pre-Printed Inserts (one page) \$20.00  
 One Full Page (one sided) Ad: \$25.00  
 One Half Page Ad: \$13.00  
 One Quarter Page Ad: \$7.00

All ads must be in a ready to print condition. Advertisements must be in our P.O. Box before the 2nd Saturday of the month to appear in the following month's Newsletter.\*

**\*NOTE:** The Officers of the Hoosier Users Group reserve final approval on all advertisements submitted for the HUGger Newsletter and the HUGbbs. The Officers and the Newsletter committee are not responsible for typographical errors due to illegible advertisements. All proceeds are accepted as donations to the Hoosier Users Group.

AUG. 6 1985

TIME DATED  
 AUG. 6 1985  
 MATERIAL



HOOSIER USERS GROUP  
 P. O. BOX 2222  
 INDIANAPOLIS, IN 46206-2222  
 FORWARDING AND ADDRESS  
 CORRECTION REQUESTED

Bulk Rate  
 U. S. Postage  
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 Indianapolis, IN  
 Permit No. 6440

**APPLICATION FOR MEMBERSHIP**

Below you will find an application for membership to the Hoosier Users Group. Active membership entitles you to the Newsletter, up and download on the HUGbbs, attendance and voting rights at regular club meetings, access to the HUGger Library of Programs, special club activities and special guest speakers for one year. Subscribing members will receive the NEWSLETTER only.

Make check or money order payable to HOOSIER USERS GROUP. Send completed application to:

HOOSIER USERS GROUP  
 P. O. Box 2222  
 Indianapolis, IN 46206-2222

----- please print ----- cut on dotted line -----

Check One:	<div style="text-align: right;">TODAY'S</div> NAME _____ DATE _____
<b>Active Member</b> New: \$20 _____ Renewal: \$15 _____	ADDRESS _____ APT # _____
<b>Subscribing Member</b> New: \$10 _____ Renewal: \$7.5 _____	CITY _____ STATE _____ ZIP _____
Amount Enclosed _____	PHONE (____) _____
# _____ D _____ \$ _____ O _____	INTERESTS/ COMMENTS _____