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THE T. I. C. O. TOPICS

VOLUME 4 --- NOVEMBER 1988 --- NUMBER 11

FROM THE DESK OF
C. R. McDONALD

Well here it is October and we are back from our vacation. We were gone for five and one-half weeks and had a very good time. From Ventura we went to Las Vegas, NV the first night and saw a couple of shows. From there we went to Utah and saw Capital Reefs, Canyonlands and Arches National Parks, Salt Lake City and the Great Salt Lake. From there we went to Jackson Hole, WY and the Grand Tetons. Fished in Jackson Lake and caught our dinner and breakfast of lake trout. We were supposed to go to Yellowstone next, but the fires had closed the South entrance so we had to go to West Yellowstone to get in to see Old Faithful. Then on to Glacier National Park, Kansas City, MO, Independence, MO Topeka, KS, then on to Wichita, KS and visit with my mother. Labor Day weekend was spent in Kiowa, KS at my High School 50th Class Reunion. 36 graduated, 30 are still living and 26 were present! We then went to Durant, OK and fished in Lake Texhoma for strippers (caught a couple) then back to Wichita, KS for a visit with my brother from San Antonio, TX. We then went to

Abilene, KS, Raton, NM, Taos, NM and Four Corners then up through Zion back to Las Vegas for a couple more shows and so back to Ventura.

As you can see, I don't have much to write about this month. I do want to take this opportunity to thank Harley for the fine job he did as "substitute" editor while I was away from my desk. THANKS, Harley.

It would be nice if some of the other members would step up with some articles, cartoons, programs, reviews of programs or even personal data so that the other members could know a little more about you.

There is concern being expressed about the health of the TICD U6. The usual attendance at the meetings is 8-10 and it is always the same 8-10. Where are the other members? Where are all of the owners of TI99/4As? We know that there must be more of us than show up at the meeting. Why aren't you coming to the meetings? If nothing else call one of the officers or the editor and let us know your feelings, needs, desires, interests.



HAPPY HALLOWEEN

**MEMBERSHIP NEWS
BY: JEFF ASENAS**

In order to cut costs of the club, I have been reviewing the membership and newsletter exchange lists with editor, Charles McDonald. We have sorted out the newsletter part, but not the membership part. So here is the deal. If your name is on this listing you owe dues. If they are not paid at the next meeting (or at least contact Charles if you can't make the meeting) then the name will be dropped from the roster. It's that simple. We do hope though that all members will renew their memberships and continue with the club. We all need to stick together to survive.

Here is the list:

Since 1987: James C. Parker, William Coveny Jr., Dick Wolover

Since January '88: Deni Dinsmore, W.S. McPherson

Since February '88: Danny and Rhonda Cerda, Richard Parsons

Since May '88: Ray Wolff

Since June '88: Harley Harlinton, George Holod, Bob Martyn, Steve Mehr, Derek Wheeler

Since August '88: Goldie Illk

Since September '88: Gabriel and Jeff Asenas, John Caudell

Since October '88: Shirlee Smith

Dues may be mailed to the Treasurer: Richard Parsons
518 East Aliso St.
Ojai, CA 93023

or may be brought to the meeting. Thank you... Secretary, Jeff Asenas

The TICO newsletter is published monthly and is not affiliated with Texas Instruments in any way. It is supported by its subscribers and members. Subscriptions are free with paid membership in the TICO Users Group, and is also distributed free to any other users group that wish to reciprocate. Articles contained may be re-printed by other users group publications provided credit is given to the original source of the article. Comments and letters are welcome, as is submissin of original articles and programs.

TICO meets the first Wednesday of each month at 7:30 P.M. at the Red Baron Restaurant in the Oxnard airport on 5th Street, Oxnard. All are encouraged to come early and treat yourself to dinner, which allows for our "free" use of their banquet room.

All opinions expressed in this newsletter are the opinion of the author and not necessarily the opinion of the club or this newsletter.

ROM

SEPT 1988

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100 ! CONVERT
110 ! Version 1.0
120 ! 09 Aug 88
130 ! By Jim Swedlow
140 ! Based on XPREP
    By Carl Walters
150 !
160 DISPLAY ERASE ALL :: CAL
L SCREEN(5):: FOR A=0 TO 14
:: CALL COLOR(A,16,1):: NEXT
A
170 FOR A=1 TO 4 :: READ T$(
A):: NEXT A
180 N%=CHR$(13)&CHR$(10):: Z
%=CHR$(26):: C%=CHR$(13):: G
OTO 300
190 DATA DF128 -> DV80 add
CR's,DF128 -> DV80 no CR's,
DV80 -> DV80 add CR's,DV80
-> DF128
200 CALL KEY :: Q$,S,P,K,I$,
W$ :: !@P-
210 !
220 ! STRING CHECK SUB
230 !
240 P=1 :: IF I$=" " OR I$="
" THEN I$="" :: RETURN ELSE
IF ASC(I$)=46 THEN RETURN EL
SE P=0 :: RETURN
250 !
260 ! CLOSE FILES AND END
270 !
280 CLOSE #1 :: CLOSE #2 ::
DISPLAY AT(19,1)BEEP:"DONE"
290 FOR P=1 TO 100 :: NEXT P
300 !
310 ! TITLE SCREEN
320 !
330 DISPLAY AT(5,5):"CONVERT
Version 1.0": : : : :
:"Press For"
340 FOR S=1 TO 4 :: DISPLAY
AT(14+S,1):STR$(S);" ";T$(S)
:: NEXT S :: DISPLAY AT(19,1
)BEEP:"5 End Program"
350 !
360 ! PICK FUNCTION
370 !
380 CALL KEY(0,K,S):: IF K<4
9 OR K>53 THEN 380 ELSE K=K-
48 :: IF K=5 THEN DISPLAY ER
ASE ALL :: STOP
390 DISPLAY AT(13,1):T$(K):
:"Input File: DSK"::"Outp
ut File: DSK": : :
400 ACCEPT AT(15,18)BEEP:I$
410 ACCEPT AT(17,18)BEEP:W$
420 !
430 ! OPEN FILES & INIT
440 !
450 DISPLAY AT(19,1):"Workin
g . . . ."
460 IF K>2 THEN OPEN #1:"DSK
"&I$,INPUT ELSE OPEN #1:"DSK
"&I$,INPUT ,FIXED 128
470 IF K=4 THEN OPEN #2:"DSK
"&W$,OUTPUT,FIXED 128 ELSE O
PEN #2:"DSK"&W$,OUTPUT
480 A=1 :: W$="" :: ON K GOT
O 720,570,490,650
490 !
500 ! DV80 -> DV80 ADD CR's

```

```

520 LINPUT #1:I$ :: GOSUB 21
0 :: IF EOF(1)THEN 550
530 IF A THEN IF P THEN PRIN
T #2:I$;C$ :: GOTO 520 ELSE
Q$=I$ :: A=0 :: GOTO 520
540 IF P THEN PRINT #2:Q$;C$
:I$;C$ :: A=1 :: GOTO 520 EL
SE PRINT #2:Q$ :: Q$=I$ :: G
OTO 520
550 IF A=0 THEN IF P THEN PR
INT #2:Q$;C$ ELSE PRINT #2:Q
$
560 PRINT #2:I$;C$;C$ :: GOT
O 250
570 !
580 ! DF128 -> DV80 NO CR'S
590 !
600 LINPUT #1:I$ :: W$=W$&I$
:: K=1 :: S=LEN(W$)
610 IF SEG$(W$,K,1)=Z$ THEN
250 ELSE IF K>S THEN IF EOF(
1)THEN 250 ELSE W$="" :: GOT
O 600
620 P=POS(W$,N$,K):: IF P TH
EN PRINT #2:SEG$(W$,K,P-K)::
K=P+2 :: GOTO 610
630 P=POS(W$,Z$,K):: IF P TH
EN PRINT #2:SEG$(W$,K,P-K)::
GOTO 250
640 W$=SEG$(W$,K,255):: IF E
OF(1)THEN PRINT #2:W$ :: GOT
O 250 ELSE 600
650 !
660 ! DV80 -> DF128
670 !
680 LINPUT #1:I$ :: IF ASC(I
$)=128 THEN I$=" "
690 W$=W$&I$&N$ :: P=LEN(W$)
700 IF P>128 THEN PRINT #2:S
EG$(W$,1,128):: W$=SEG$(W$,1
29,255)
710 IF EOF(1)THEN PRINT #2:W
&Z$ :: GOTO 250 ELSE 680
720 !
730 ! DF128 -> DV80 ADD CR'S
740 !
750 LINPUT #1:I$ :: W$=W$&I$
:: K=1 :: S=LEN(W$)
760 IF SEG$(W$,K,1)=Z$ THEN
820 ELSE IF K>S THEN IF EOF(
1)THEN 820 ELSE W$="" :: GOT
O 750
770 P=POS(W$,N$,K):: IF P TH
EN I$=SEG$(W$,K,P-K):: K=P+2
ELSE 800
780 GOSUB 210 :: IF A THEN I
F P THEN PRINT #2:I$;C$ :: G
OTO 760 ELSE Q$=I$ :: A=0 ::
GOTO 760
790 IF P THEN PRINT #2:Q$;C$
:I$;C$ :: A=1 :: GOTO 760 EL
SE PRINT #2:Q$ :: Q$=I$ :: G
OTO 760
800 P=POS(W$,Z$,K):: IF P TH
EN I$=SEG$(W$,K,P-K):: GOTO
820
810 W$=SEG$(W$,K,255):: IF E
OF(1)THEN I$=W$ ELSE 750
820 IF A=0 THEN GOSUB 210 ::
IF P THEN PRINT #2:Q$;C$ EL
SE PRINT #2:Q$
830 PRINT #2:I$;C$;C$ :: GOT

```

DELAWARE VALLEY USERS GROUP: OCT 1986

EXTENDED BASIC ERRORS SORTED BY *
R suffix- RS232 card errors

This is just a few of the dealers who supply the
TI 99/4(A) community. Pretty good support for an
"orphan" computer!

Regard Software
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Disk Only Software
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Triton Products Company
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San Francisco, CA 94128
(800)227-6900

00R CAN'T OPEN DEVICE (OPEN)
02R BAD OPTION (OPEN)
06R HARDWARE ERROR, CAN'T OPEN (OPEN)
10 NUMERIC OVERFLOW
14 SYNTAX ERROR
16 ILLEGAL AFTER SUBPROGRAM
17 UNMATCHED QUOTES
19 NAME TOO LONG
20 UNRECOGNIZED CHARACTER
24 STRING-NUMBER MISMATCH
24R BUFFER TOO SMALL (INPUT)
25 OPTION BASE ERROR
26R HARDWARE ERROR OR "CLEAR" (INPUT)
28 IMPROPERLY USED NAME
36 IMAGE ERROR
36R HARDWARE ERROR (PRINT)
39 MEMORY FULL
40 STACK OVERFLOW
43 NEXT WITHOUT FOR
43R ILLEGAL COMMAND
44 FOR-NEXT NESTING
47 MUST BE IN SUBPROGRAM
48 RECURSIVE SUBPROGRAM CALL
49 MISSING SUBEND
50R CAN'T LOAD (OLD)
51 RETURN WITHOUT GOSUB
52R BAD OPTION (OLD)
54 STRING TRUNCATED
54R PROGRAM TOO LARGE (OLD)
56 SPEECH STRING TOO LONG
56R HARDWARE ERROR (OLD)
57 BAD SUBSCRIPT
60 LINE NOT FOUND
60R CAN'T SAVE TO DEVICE (SAVE)
61 BAD LINE NUMBER
62 LINE TOO LONG
62R BAD OPTION (SAVE)
66R HARDWARE ERROR (SAVE)
67 CAN'T CONTINUE
69 COMMAND ILLEGAL IN PROGRAM
70 ONLY LEGAL IN A PROGRAM
73R ILLEGAL COMMAND
74 BAD ARGUMENT
78 NO PROGRAM PRESENT
79 BAD VALUE
81 INCORRECT ARGUMENT LIST
83 INPUT ERROR
83R ILLEGAL COMMAND
84 DATA ERROR
93R ILLEGAL COMMAND
97 PROTECTION VIOLATION
109 FILE ERROR
130 I/O ERROR
135 SUBPROGRAM NOT FOUND

DISK ERROR CODES

FIRST DIGIT

0 OPEN
1 CLOSE
2 INPUT
3 PRINT
4 RESTORE
5 OLD
6 SAVE
7 DELETE
9 EOF

SECOND DIGIT

0 DISK DRIVE NOT FOUND
1 WRITE PROTECTED
2 BAD OPTION
3 ILLEGAL OPERATION
4 FULL (DISKETTE OR # FILES)
5 ATTEMPT TO READ PAST EOF
6 DEVICE ERROR (NOT INITIALIZED OR HARDWARE)
7 BAD FILE, DISKETTE NAME, OR FILE TYPE

150 6010 150

Here's another tinygram that might help you editors who reformat my Tips to wider column widths.

100 DISPLAY AT(3,6)ERASE ALL
:"TIGERCUB UNFILLER": "" To
remove extra spaces from:"

a TI-Writer text which has"
"been Filled and Adjusted by
"

110 DISPLAY AT(8,1):"the For
matter, prior to:"reformat
ing." It will, however, al
so:"remove paragraph indent
a-:"tions and other intende
d":"spacings."

120 DISPLAY AT(15,1):"Input

file? DSK" :: ACCEPT AT(15,1
6):IF\$:: OPEN #1:"DSK"&IF\$,
INPUT

130 DISPLAY AT(17,1):"Output
file? DSK" :: ACCEPT AT(17,
17):OF\$:: OPEN #2:"DSK"&OF\$,
140 LINPUT #1:M\$

150 X=POS(M\$, " ",1):: IF X=
0 THEN PRINT #2:M\$:: GOTO 1
70

160 M\$=SEG\$(M\$,1,X)&SEG\$(M\$,
X+2,255):: GOTO 150
170 IF EOF(1)<>1 THEN 140 ::
CLOSE #1 :: CLOSE #2

MEMORY AMOST FULL....

Jim Peterson

=====

THE MAKING OF ORION - BY DAVID RAINES
=====

I would like to tell you a little bit about a program I wrote called ORION. This is an astronomy program that provides information on the stars in the constellation of Orion that can be seen with the unaided eye. I will discuss the the graphics portion of the program in this article.

To plot graphics on the TI-99/4A I drew a 256 X 192 grid with index lines at 32 X 24. I then used a copy machine to size my grid to fit a standard 11 X 17 inch sheet of paper. Next, I took a book of astronomical star charts and used the copy machine to copy the constellation of Orion and sized it to fit my 11 x 17 grid. Now with a copy of my grid and a copy of my star chart, I overlayed the grid onto the star chart. Using a light table, I traced the stars I wanted for my program onto the grid. The conventional method for representing brightness or magnitude on a star chart is to make larger dots for the brighter stars. I worked out designs within an 8 X 8 grid (corresponding to one char position) for six different size syabols. Each one approximating a solid filled circle. I then used a pattern-identifier conversion table to convert the block patterns into hexadecimal codes. The codes were then used in CALL CHAR statements to produce graphics on the screen.

I now had graphics to represent star\$ FROM ZERO MAGNITUDE TO FIFTH magnitude (zero being the brightest and fifth being the faintest that can be seen by the naked eye). At first the placement of the stars on the screen seemed straight forward. Place one star symbol in each char position. But I soon realized that 32 X 24 would not be enough resolution to accurately map the star positions. So I reconfigured all the characters from 91 to 127 to plot stars in the correct position on my star map. But this was still not good enough and I would be required to reconfigure all the characters including all the letters and

numbers. This would not do either, as I wanted to include text information on my star chart. So I compromised the positions slightly of some of the lesser stars and therefore was able to repeat some of the characters I was using. I also plotted all the brightest stars using stationary sprites. I could then repeat my star symbols at any point on the grid.

Once I had my star chart plotted I wanted to add text information. I used the display at command to place the name ORION in the upper left hand corner of the screen. I also put a legend of symbols on the left side of the screen for the star magnitudes.

The next thing for the star chart was to have some way of identifying stars and providing some information about them. For this I used the call position subprogram and the joystick. I created a sprite in the shape of an arrow and then gave control of it to the joystick. I assigned the coordinates of the stars to the call position routine and the joystick. I could now branch the IF-THEN statements to a series of subroutines that would display information about each star. For example when the upper left hand corner of the arrow sprite falls within the coordinate parameters I have set for the brightest star in Orion, the following is displayed in the lower left hand corner of the screen:

```
BETELGEUSE DIST=520 L.Y.  
MAG=0.70  
SPEC=M2 ALPHA ORIONUS
```

When the arrow is moved away from the star, a separate routine clears the data from the screen.

While only a brief overview has been given, it is hoped that this article has presented methods for graphic representation that will help others with their own graphic programs.

```

320 DISPLAY AT(3,1):"INPUT FILENAME?:"DSK" :: ACCEPT AT(4,4):IF$ :: ON ERROR 330 :: OPEN #1:"DSK"&IF$,INPUT :: GOTO 340
330 CALL SOUND(300,110,0,-4,0):: DISPLAY AT(6,1):"CANNOT OPEN FILE!" :: RETURN 320
340 DISPLAY AT(6,1):"OUTPUT FILENAME?:"DSK" :: ACCEPT AT(7,4):OF$ :: ON ERROR 350 :: OPEN #2:"DSK"&OF$,VARIABLE 163,OUTPUT :: ON ERROR STOP :: GOTO 355
350 CALL SOUND(300,110,0,-4,0):: DISPLAY AT(9,1):"CANNOT OPEN FILE!" :: RETURN 340
355 DISPLAY AT(9,1):"Programs of more than 50":sectors in length may become:"too long to run if you break":and trace all lines."
- 360 DISPLAY AT(15,1):"Break all lines? (Y/N)" :: ACCEPT AT(15,24)SIZE(1)VALIDATE("YN"):Q$ :: IF Q$="Y" THEN 390
370 DISPLAY AT(17,1):"From line?" :: ACCEPT AT(17,12)VALIDATE(DIGIT):FL
380 DISPLAY AT(17,18):"To?" :: ACCEPT AT(17,22):TL
390 DISPLAY AT(15,1):"TRACE to 1:"": (1) Screen" (2) Printer" (3) Both" :: ACCEPT AT(15,10)SIZE(-1)VALIDATE("123"):QQ :: IF QQ=1 THEN 405
400 DISPLAY AT(21,1):"Printer? P10" :: ACCEPT AT(21,10)SIZE(-18):POS$
405 DISPLAY AT(3,1)ERASE ALL : " Key code 1 allows the program to run until you hold":down any key. It will be"
406 DISPLAY AT(6,1):"difficult to execute CALL":KEYS in the program.:"": Key code 2 requires a key":to be pressed to execute"
407 DISPLAY AT(11,1):"each program line. You can":step through the program":line by line, but this way":be very slow if all lines"
408 DISPLAY AT(15,1):"are being traced.:"": Key code 3 does not allow":stopping the program."
409 DISPLAY AT(20,1):"Key code? 1" :: ACCEPT AT(20,11)SIZE(-1)VALIDATE("123"):KC410
IF KC=1 THEN KC$=CHR$(191)&CHR$(192)&CHR$(200)&CHR$(1)&"0" ELSE KC$=CHR$(191)&CHR$(200)&CHR$(1)&"1"
411 DISPLAY AT(12,7)ERASE ALL:"Working line"
420 LINPUT #1:M$ :: IF M$=END$ THEN 570
430 LN=ASC(SEG$(M$,1,1))*256+ASC(SEG$(M$,2,1)): IF Q$="Y" THEN 440 :: IF LN<FL OR LN>TL THEN PRINT #2:M$ :: GOTO 420
440 IF LN=LN2 THEN 460
450 DISPLAY AT(12,1)ERASE ALL BEEP:"ERROR! RESEQUENCE PROGRAM TO":GREATER INCREMENTS AND TRY":AGAIN." :: CLOSE #1 :: CLOSE #2 :: STOP
460 LN2=LN :: IF POS(Z$,SEG$(M$,3,1),1)<>0 THEN PRINT #2:M$ :: DISPLAY AT(12,19):LN :: GOTO 420
470 P=POS(M$,S$,3):: T=POS(M$,CHR$(161),3):: IF T=0 THEN 500
480 IF P=0 THEN PRINT #2:SEG$(M$,1,LEN(M$)-1)&S$&C$&CHR$(LEN(STR$(LN)))&STR$(LN)&K$&E$ :: DISPLAY AT(12,19):LN :: GOTO 420
490 PRINT #2:SEG$(M$,1,P)&C$&CHR$(LEN(STR$(LN)))&STR$(LN)&K$&E$ :: DISPLAY AT(12,19):LN :: LN=LN+1 :: GOSUB 690 :: M$=LN$&SEG$(M$,P+1,255):: GOTO 430
500 IF P=0 THEN PRINT #2:SEG$(M$,1,2)&C$&CHR$(LEN(STR$(LN)))&STR$(LN)&K$&S$&SEG$(M$,3,255):: DISPLAY AT(12,19):LN :: GOTO 420
510 A$=SEG$(M$,1,P-1):: R=POS(S(A$,CHR$(132),3):: S=POS(A$,CHR$(201),3)
520 IF R=0 THEN GOSUB 750 :: GOTO 560
530 IF S=0 AND R<>0 THEN GOSUB 700 :: GOTO 420
540 IF S<>0 THEN IF S-R<3 THEN GOSUB 750 :: GOTO 560
550 GOSUB 700 :: GOTO 420
560 LN=LN+1 :: LN2=LN :: GOSUB 690 :: M$=LN$&SEG$(M$,P+1,255):: P=POS(M$,S$,3):: GOTO 500
570 LN=29999 :: GOSUB 690 :: PRINT #2:LN$&CHR$(131)&CHR$(64)&CHR$(80)&CHR$(43)&CHR$(0)
580 LN=30000 :: GOSUB 690 :: PRINT #2:LN$&CHR$(161)&CHR$(200)&CHR$(1)&"A"&CHR$(183)&"X"&K$&E$ :: IF QQ=1 THEN 630
590 LN=30001 :: GOSUB 690 :: P$=LN$&CHR$(132)&"F"&CHR$(190)&CHR$(200)&CHR$(1)&"0"&CHR$(176)&CHR$(159)&CHR$(253)&CHR$(200)&CHR$(3)&"250"
600 P$=P$&CHR$(181)&CHR$(199)&CHR$(LEN(POS$))&POS$&CHR$(130)&"F"&CHR$(190)&CHR$(200)&CHR$(1)&"1"&S$&CHR$(156)&CHR$(253)&CHR$(200)&CHR$(3)&"250"&CHR$(181)&CHR$(214)
610 P$=P$&CHR$(183)&CHR$(200)&CHR$(2)&"27"&K$&CHR$(184)&CHR$(199)&CHR$(1)&"M"&CHR$(184)&CHR$(214)&CHR$(183)&CHR$(200)&CHR$(1)&"6"&K$&E$ :: PRINT #2:P$
620 LN=30002 :: GOSUB 690 :: PRINT #2:LN$&CHR$(156)&CHR$(253)&CHR$(200)&CHR$(3)&"250"&CHR$(181)&"X"&CHR$(180)&E$
630 IF QQ=2 THEN 650
640 LN=30003 :: GOSUB 690 :: PRINT #2:LN$&CHR$(162)&CHR$(240)&CHR$(183)&CHR$(200)&CHR$(2)&"24"&CHR$(179)&CHR$(200)&CHR$(1)&"1"&K$&CHR$(181)&"X"&CHR$(180)&E$
645 IF KC=3 THEN 670
650 LN=30004 :: GOSUB 690 :: P$=LN$&CHR$(157)&CHR$(200)&CHR$(3)&"KEY"&CHR$(183)&CHR$(200)&CHR$(1)&"0"&CHR$(179)&"K"&CHR$(179)&"S"&K$
660 P$=P$&CHR$(130)&CHR$(132)&"S"&K$&CHR$(176)&CHR$(201)&CHR$(INT(LN/256))&CHR$(LN-256*INT(LN/256))&E$ :: PRINT #2:P$
670 LN=30005 :: GOSUB 690 :: PRINT #2:LN$&CHR$(168)&CHR$(0):: PRINT #2:CHR$(255)&CHR$(253)
680 CLOSE #1 :: CLOSE #2 :: DISPLAY AT(12,1)ERASE ALL:"Enter NEW" : "Then Enter" : MERGE DSK"&OF$ :: END
690 LN$=CHR$(INT(LN/256))&CHR$(LN-256*INT(LN/256)):: RETURN
700 IF LEN(M$)>150 THEN 720 :: PRINT #2:SEG$(M$,1,2)&C$&CHR$(LEN(STR$(LN)))&STR$(LN)&K$&S$&SEG$(M$,3,255)
710 DISPLAY AT(12,19):LN :: RETURN
720 PRINT #2:SEG$(M$,1,2)&C$&CHR$(LEN(STR$(LN+1)))&STR$(LN+1)&K$&E$
730 DISPLAY AT(12,19):LN
740 LN=LN+1 :: PRINT #2:CHR$(INT(LN/256))&CHR$(LN-256*INT(LN/256))&SEG$(M$,3,255):: DISPLAY AT(12,19):LN :: LN2=LN :: RETURN
750 PRINT #2:SEG$(M$,1,2)&C$&CHR$(LEN(STR$(LN)))&STR$(LN)&K$&S$&SEG$(M$,3,255)&E$ :: DISPLAY AT(12,19):LN :: RETURN
This "tinygram" might give you a surprise. SAVE it before you run it.
100 CALL CLEAR :: CALL KEY(3,K,S):: ON BREAK NEXT ! by Jim Peterson
110 DIM CH$(26):: FOR J=1 TO 26 :: CALL CHARPAT(J+64,CH$(J)):: NEXT J :: FOR J=1 TO 26 :: CALL CHAR(J+64,CH$(27-J)):: NEXT J
120 DISPLAY AT(3,0):"MIZV ZH ZOBAVI" : "SRH KILIZM DRD O ZHOBV BLFI MZNV."
130 INPUT "BLFI MZNV? " : M$ :: CALL SOUND(200,110,0,-4,0) :: X=X+1 :: IF X<2 THEN 130
140 DISPLAY AT(12,1):"ZHZOBH RH - " : "VRGVI BLF XZM G HKVOD BLFI LDM MZNV LI MLYLV B XZM KILMLFMXV RG."

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TIPS FROM THE TIGERCUB

#48

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These are full disks which contain the programs and routines from the Tips from the Tigercub newsletters, in ready-to-run program format, plus text files of tips and instructions.

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TIPS FROM TIGERCUB VOL.5
Another 49 programs and
files from issues No. 42

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TIGERCUB CARE DISKS #1,#2,#3 and #4. Full disks of text files (printer required). No. 1 contains the Tips news letters #42 thru #45, etc. Nos. 2 and 3 have articles mostly on Extended Basic programming. No. 4 contains Tips newsletters Nos. 46-52. These were prepared for user group newsletter editors but are available to anyone else for \$5 each postpaid.

If you have ever used TRACE to debug a program, you know that it won't dump to a printer, and that it messes up the screen format. The new Super Extended Basic, or the Gram Kracker, will dump to the printer, but you still won't know what is going on line by line or within multiple-statement lines. Now, Supertrace will break the program into single-statement lines and TRACE each statement in the corner of the screen, or dump it to the printer, or both - and you can also pause at any time, or step through line by line.

100 GOTO 140
110 SET,C\$,FND\$,7\$,F\$,K\$,S\$,K,S,IF\$,OF\$,Q\$,FL,IL,M\$,LN,LN2,P,T,LN\$,A\$,R,P\$,Q\$,PD\$,KC,KC\$
120 CALL CHAR :: CALL CLEAR :: CALL COLOR :: CALL SCREEN :: CALL KEY :: CALL SOUND
130 !@P-
140 CALL CHAR(94,"3C4299A1A199423C"):: CALL CLEAR :: FOR SET=1 TO 14 :: CALL COLOR(SET,13,15):: NEXT SET :: CALL SCREEN(13)
150 C\$=CHR\$(157)&CHR\$(200)&CHR\$(1)&"A"&CHR\$(183)&CHR\$(200):: END\$=CHR\$(255)&CHR\$(255

:: Z\$=CHR\$(131)&CHR\$(147)&CHR\$(154)&CHR\$(163)
160 E\$=CHR\$(0):: K\$=CHR\$(182)
):: S\$=CHR\$(130)
170 DISPLAY AT(2,5)ERASE ALL : "TIGERCUB SUPERTRACE": : "^ Tigercub Software for free": "distribution but no price or copying fee may be charged. " !programmed by Jim Peterson 1/88
180 DISPLAY AT(8,1): " However, if anyone should feel moved to send me a few bucks for the use of this program, I would not be": "offended!"
190 DISPLAY AT(15,1): "Jim Peterson": "156 Collingwood Ave.": "Columbus, OH 43213"
200 DISPLAY AT(23,8): "PRESS ANY KEY" :: DISPLAY AT(23,8) : "press any key" :: CALL KEY (0,K,S):: IF S=0 THEN 200
210 DISPLAY AT(2,1)ERASE ALL : " Will break each program": "line into single statement": "lines, unless they contain "
220 DISPLAY AT(5,1): "an IF, and add a CALL to a": "subprogram which will": "display each line number in": "the corner of the screen as"
230 DISPLAY AT(9,1): "it is being executed, or": "will output it to a printer."
240 DISPLAY AT(13,1): "Program must first be -": "RESeq uenced to greater in-": "crements than the number"
250 DISPLAY AT(17,1): "of statements in any one": "line. (recommend RES 100,20)": "and SAVED by": " SAVE DSK(file name),MERGE"
270 DISPLAY AT(23,8): "PRESS ANY KEY" :: DISPLAY AT(23,8) : "press any key" :: CALL KEY (0,K,S):: IF S=0 THEN 270
310 DISPLAY AT(23,8): "PRESS ANY KEY" :: DISPLAY AT(23,8) : "press any key" :: CALL KEY (0,K,S):: IF S=0 THEN 310 ELSE CALL CLEAR

**NEXT MEETING: NOVEMBER 2ND, 1988
7: 30 P. M. - RED BARON RESTAURANT
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