

PRESIDENT'S NOTES...by L. R. Livergood

Welcome to all our new members and thanks to those who renewed their dues for another year. This is the third straight month we have experienced growth in our membership. Hardly seems like the predicted pattern of a dying cause!

Speaking of dying, I'd also like to welcome the few thousand PCjr owners who were recently given word on national TV that their machine is slated for the closet. You say the software support will still be there along with new hardware products for future upgrading...? It all sounds too familiar.

Looks like it's back to Thursday evening for our April meeting. We're on the Library's calendar for April 11 and also May 9 for those of you who plan that far ahead.

While on the subject of the library, I want to remind you that they seem to have a steady stream of computer related books appearing on the bookshelf, many of which are either for, or indirectly related to the programming of the TI99/4A. If you haven't browsed around in that area lately then I'd suggest coming to the meeting early to take a look.

April's program should be a good one. We will again try to have a complete system available along with several programs to demonstrate. D + D Publishing has launched a hefty marketing campaign for one of their new adventure games. \$1000.00 goes to the lucky person who can solve SAXSAAN by midnight, November 1, 1985. They've even gone as far as sending us a demo of selective excerpts from the program so you can start generating some possible answers right away. Additional information will be available at the meeting.

There will be two other programs of interest at the meeting from Ramsoft Enterprises. One will be available to all members through the group library. Computer Craps, which formerly sold for \$14.95, is now free. No, we have not pirated the program. Ramsoft has turned it over as freeware to anyone interested. If after you have tried it and you truly like it then send them \$5.00 to show it, else give it to someone else. I have tested this program and found it to be well worth the price. System configuration requirements are heavy, however (Extended, 32K disk).

The other program called TC-MAIL also seems priced right. This is a high powered mailing list program written in FORTH for only \$9.95. You say you don't have FORTH? No problem because everything you need is included. To run TC-MAIL you have to have an expanded system and the E/A Module. Features include a 40-column display and fast multiple sorting of data fields to name a few. They have kept their price down in order to discourage copying. They also say there are more low cost FORTH programs on the way.

HARDWARE REVIEW...by Jay Seaberg

In our last newsletter, Larry revealed that I was one of the 'brave souls' who ordered a disk drive and controller from American Design Components in Moonachie, NJ. The price was \$99.95 for an original TI standalone drive and controller. I also ordered a spare keyboard for \$5.95. After waiting one month I finally received my order, and I'm glad to say the wait was worth it. This is a 'freight train' set-up, with the controller plugging into the console on the right end. The disk drive can be placed anywhere.

I never fully realized how slow cassette tapes are for computer use. I ran several benchmark trials with this system, and the numbers are surprising. On average, the cassette system loads at the rate of 70.5 bytes/second. The disk system loads at 990.5 bytes/second. This means data retrieval is 14 times faster. I don't know if double side/double density drives are faster.

In addition to the time saved in actually loading a program or data, there are other advantages. With disk, you don't have to hunt for the start of a program, interactive files are available, and you can back up programs quickly as you type.

However, you do give up some things when you switch to disk. You lose 2000 bytes of RAM memory if your disk drive is turned on. This has stopped me from running some of my favorite programs, especially if the dimension statements tie up a lot of memory. Another potential problem is the amount of time spent at the computer rediscovering all the neat programs you have forgotten. The third and last problem is the desire and need to find a 32K RAM stand alone memory...but I'll keep on hunting.

The last I heard, ADC was sold out of these drives, but hoped to get some more. We will keep you posted on the availability.

CONGRATULATIONS ! ! ! ! !

We wish to congratulate one of our younger members. Anthony 'Tony' Brummett, son of Dick and Mary Brummett, has received two prestigious awards recently.

Tony was named a National Award Winner in Science by the United States Achievement Academy. He was nominated for this honor by teacher Greg Evans.

He has also been selected as an Academic All-American Scholar.

Tony is a seventh grader at Johns Hill Middle School. He is very active in programming on the TI 99/4a. Congratulations, Tony, from everyone in the group!

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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) 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.

Come on now, folks, don't you support your local schools? And don't you support those who support

you? There are thousands of schools which have TI-99/4A computers in the classroom, usually without disk drive and without Extended Basic. They could use some educational programs in Basic on cassette. They could probably use some of the public domain software in your library. Maybe they could use some of the educational programs I sell for just \$3 (and I authorize schools to copy them for use within the school). There is probably such a school in your area - is your group supporting it? In the last Tips, I asked the members of 101 users groups to give me the addresses of schools that had TIs, so I could send them a free catalog. How many addresses did I get? Zero to the power of zero times zero!

More on the pestiferous asterisk bug in TI-Writer. Dr. Guy-Stefan Romano has confirmed and explained it. If you are printing out of the Foreatter mode and your text contains an asterisk followed by two or more numeric digits - the asterisk and two digits will disappear! For instance, A#256 becomes A6, and I've noticed that A6 in programs published in several newsletters recently.

The TI-Writer program misinterprets the asterisk and two digits as an instruction to input data from a "value file" (see Alternate Input on p. 111 of the manual).

The solution to this bug is to type two asterisks followed by two dummy digits, then the actual digits. For instance, instead of A#256 type A##25256. Trouble is, the bug usually shows up in a program which has been LISied to disk and then

MERGED into TI-Writer, and is usually not noticed. The solution? Run the program through my 28-Column Converter (see Tips #18!).

Dr. Romano informs me that there is an even worse bug in the Transliterate command coding, erratic and sometimes destructive. It is triggered by certain sequences of characters, but these have not been documented.

Dr. Romano says that he does not use transliteration.

I would suggest that you also avoid the use of the & and @. The & will only underline a single word, unless you tie words together with the ^ sign. If you tie words together, the Fill and Adjust will leave gaping blanks in your lines and if you tie too many together the line will extend beyond the right margin! Also, the underlining is a broken line. It is better to use the escape codes CTRL U, FCTN R, CTRL U, SHIFT -, CTRL U, SHIFT A, CTRL U, which will give a solid underline until you turn it off with CTRL U, FCTN R, CTRL U, SHIFT -, CTRL U, SHIFT @, CTRL U.

The @ is handy to emphasize a single word, but if you want to double-strike a whole sentence or paragraph it is better to use the escape code CTRL U, FCTN R, CTRL U, SHIFT G, and turn it off again with CTRL U, FCTN R, CTRL U, SHIFT H.

The period bug is another killer - the Foreatter thinks that any line which begins with a period is a foreatter command, and deletes the whole line! If your text contains a decimal value such as .11 and the wraparound puts it at the beginning of a line, the

line disappears! There are two ways around this - put a 0 in front of all your decimals, as 0.11, or transliterate all your periods.

In all, the TI-Writer foreatter is a temperamental and unpredictable piece of software, prone to unwanted line feeds and unexpected paper-wasting form feeds. I like to use it to right-justify text back to the disk, but from then on I prefer to print it out of the editor mode, or out of my own program.

Designing downloadable characters for the Gemini printer (see page 115 of the manual) is a bit tricky because it is hard to visualize how the expanded pattern will appear in print. The following program will enable you to experiment with designs, dump them directly to the printer for viewing, then save them as a file. When you later duap this file into printer RAM for use, you must activate the download characters with the escape code - CHR\$(27);CHR\$(36);CHR\$(1).

```
100 CALL CLEAR :: CALL SCREE
N(4):: CALL CHAR(128,"FFB1
81818181FF",129,RPT$( "F",16)
):: CALL COLOR(13,2,16)
110 FOR R=9 TO 15 :: CALL MC
HAR(R,11,128,9):: NEXT R
120 X=1 :: FOR R=9 TO 15 ::
DISPLAY AT(R,7)SIZE(2):STR$(
X):: X=X+2 :: NEXT R :: FOR
C=9 TO 17 :: DISPLAY AT(8,C)
SIZE(1):STR$(C-8):: NEXT C
130 DISPLAY AT(2,9):"TIGERCUB'S" :: DISPLAY AT(4,1):"GEMINI CHARACTER DOWNLOADER" :p
rogrammed by Jim Peterson fo
r the Public Domain
140 DISPLAY AT(17,1):" Move
cursor with W,E,R,S,D,"1,2,X
and C keys. Toggle on:"and
off with Q key. Press"Ent
er when finished." :: "Pres
```

```

5 any key"
150 CALL KEY(0,K,ST):: IF ST
=0 THEN 150 :: CALL MCHAR(17
,1,32,224)
160 R=9 :: C=11 :: CH=128
170 CALL MCHAR(R,C,32):: CAL
L MCHAR(R,C,CH):: FOR D=1 TO
10 :: NEXT D :: CALL KEY(3,
K,ST):: IF ST=0 THEN 170
180 ON PUS("MWERDCI2S"&CHRS(
13),CHRS(K),1)+1 GOTO 170,31
0,230,220,210,200,190,260,25
0,240,330
190 K=R+1
200 C=C+1 :: GOTO 270
210 C=C+1
220 R=R-1 :: GOTO 270
230 K=R-1
240 C=C-1 :: GOTO 270
250 C=C-1
260 R=K+1
270 R=R-(R<9)+(R<15):: C=C-(
C<11)+(C<19):: IF CH=128 THE
N 300 :: CALL MCHAR(R,C-1,6X
):: CALL MCHAR(R,C+1,6Z):: I
F (6X<>129)&(6Z<>129)THEN 30
0
280 DISPLAY AT(22,1):"You ca
n't have two in a row":hor:
zontally!" :: FOR D=1 TO 50
:: NEXT D :: DISPLAY AT(22,1
):: " "
290 CH=CH-1
300 CALL MCHAR(R,C,CH):: GUT
D 170
310 CH=CH+1+(CH=129)&2 :: IF
CH=128 THEN 320 :: CALL MCH
AR(K,C-1,6X):: CALL MCHAR(K,
C+1,6Z):: IF (6X<>129)&(6Z<>
129)THEN 320 ELSE 280
320 CALL MCHAR(R,C,CH):: GOTO
D 170
330 FOR C=11 TO 19 :: I=1 ::
FOR K=9 TO 15 :: CALL MCHAR
(R,C,6)
340 IF 6=129 THEN A=A+X
350 I=I+2 :: NEXT K
360 FOR J=1 TO LEN(STR$(A))
: CALL VCHAR(15+J,C,ASC(SEEK
(STR$(A),J,1))):: NEXT J ::
M=MS&CHRS(A):: A=0 :: NEXT
C :: A=0
370 DISPLAY AT(20,1):"Print?
Y/N Y" :: ACCEPT AT(20,12)V
ALIDATE("YN")SIZE(-1):Q# ::
IF Q#="N" THEN 470
380 IF F=1 THEN 390 :: F=1 :
: DISPLAY AT(20,1):"Printer
name?" :: ACCEPT AT(20,15):F
: :: OPEN #1:PS

```

```

390 DISPLAY AT(20,1):"ASCII
to redefine?" :: ACCEPT AT(2
0,20)VALIDATE(DIGIT)SIZE(3):
CH
400 DISPLAY AT(20,1):"Descen
der (0 or 1)? 0" :: ACCEPT A
T(20,21)VALIDATE("01")SIZE(-
1):D# :: D=VAL(D#)
410 M#=CHRS(27)&CHRS(42)&CHR
S(1)&CHRS(6)&CHRS(13)&MS
420 PRINT #1:M# :: PRINT #1:
CHRS(27);CHRS(36);CHRS(13)
430 PRINT #1:RPTS(CHRS(6),7
2):: PRINT #1:CHRS(14);RPTS(
CHRS(6),36)
440 DISPLAY AT(20,1):"Save (
Y/N)? Y" :: ACCEPT AT(20,13)
VALIDATE("YN")SIZE(-1):Q# ::
IF Q#="N" THEN 470
450 IF F3=1 THEN 460 :: F3=1
:: DISPLAY AT(20,1):"Filena
me? DSK" :: ACCEPT AT(20,14)
:F# :: OPEN #2:"DSK"&F#
460 PRINT #2:M#
470 M#="" :: DISPLAY AT(20,1
):"Another (Y/N)? Y" :: ACCE
PT AT(20,16)VALIDATE("YN")SI
ZE(-1):Q# :: IF Q#="Y" THEN
100
480 CLOSE #1 :: CLOSE #2 ::
END

```

Micropendium ran a contest to improve on a brief ingenious organ program. The winner was Michael Christianson, who wrote a superb program. You'll have to buy the January issue of the magazine to get it (you should be subscribing, anyhow!). I didn't enter the contest, of course, and my version is not nearly as good, but have fun -

```

90 CALL CLEAR
95 PRINT TAB(5):"MICROPENDIU
M ORGAN" : : : : : "Pl
ay bass with left hand": : "o
n left side of keyboard," : :
"melody on the right": : :
100 REM - MICROPENDIUM ORGAN
modified by Jim Peterson
110 OPTION BASE 0
120 DIM NOTE(20)
130 FOR A=0 TO 20
140 READ NOTE(A)
150 NEXT A

```

```

160 DATA 40000,220,247,242,2
94,330,349,392,440,494,523,5
87,659,698,784,880,988,1047,
1175,1319,1397
170 CALL KEY(1,K1,8)
180 CALL KEY(2,K2,8)
190 CALL SOUND(-1000,NOTE(K2
+1),0,NOTE(K2+1)&1.01,5,NOTE
(K1+1)&3.75-ABS(K1+1=0)&1100
00,30,-4,0+ABS(K1+1=0)&30)
200 GOTO 170

```

A sprite routine that doesn't do anything but look pretty. I call it Patches.

```

50 CALL CLEAR :: CALL SCREEN
(5)
100 A#RPTS("AA55",16):: B#
RPTS("F",64):: CALL MAGNIFY(
4):: RANDOMIZE
110 FOR CH=40 TO 136 STEP 8
:: CALL CHAR(CH,A#,CH+4,B#)::
: NEXT CH
120 C=2 :: S=40 :: R=1 :: FO
R T=1 TO 24 STEP 2 :: COL=15
O#RND+50 :: CALL SPRITE(8T,S
,C,R,COL,8T+1,S+4,C+1,R,COL)
:: S=S+8 :: C=C+1 :: R=R+15
:: NEXT T
140 FOR T=1 TO 50 :: CALL CO
LOR(8INT(24#RND+1),INT(16#RND
D+1)):: NEXT T :: GOTO 120

```

This is one that I fancied up, based on a sprite routine written by a youngster named Andrew Sorenson, published in the Sydney Newsdigest from Australia.

```

100 : WILL O' WISP
by Jim Peterson
based on
Andrew Sorenson's
sprite routine
110 CALL CLEAR :: CALL SCREE
N(2):: CR=48
120 FOR CH=48 TO 63 :: FOR L
=1 TO 4 :: RANDOMIZE :: X=IN
T(16#RND+1)&2-1 :: I#SEEK("
0018243C425A667E8199A5BDC3DB
E7FF",X,2):: B#B#&X :: C#
X#&C# :: NEXT L :: CALL CHAR
(CH,B#&C#):: B#,C#="" :: NEX
T CH
130 FOR N=1 TO 28 :: CALL SP
RITE(#N,CR,INT(14#RND+3),8#N
+20,120,S,0):: NEXT N :: IF

```

```

CR=64 THEN CR=48 :: T=T+1+(T
=2)&2 :: CALL MAGNIFY(T)
140 X=(INT(3#RND)-1)&4 :: Y=
(INT(3#RND)-1)&4
150 IF INT(10#RND+10)<>10 TH
EN 170
160 CR=CR+1 :: GOTO 130
170 FOR N=1 TO 28 :: CALL MO
TION(#N,-Y#20,X#20):: NEXT N
:: GOTO 140

```

Here are a few more enhancements to my Menu Loader, published in Tips #15. Delete line 150 and add

```

101 OPTION BASE 1 :: DIM P6#
(127):: ON WARNING NEXT :: G
OTO 110
105 @,A,A#,B,C,D#,FLAG,1,J,K
,KD,KK,M#,MN,P#,P6#(),Q#,S,S
T,T#(),TT,VT,X
CALL INIT :: CALL LOAD :: CA
LL LINK :: CALL PEEK :: CALL
KEY :: CALL SCREEN :: CALL
COLOR :: CALL CLEAR :: CALL
VCHAR :: CALL SOUND :: !@P-

```

The pre-scan will speed up run time by a worthwhile amount. The warning default will prevent a screen scroll on an erroneous Enter.

When you're finished printing strip labels, cut off the strip BEHIND the platen and roll it FORWARD! You'll waste a few labels that way, but if you try to roll backwards and get a gummy label stuck in the works, you've got trouble!

MEMORY FULL
Jim Peterson
the Tigercub

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```

100 REM SPEAK-N-PROOF
110 REM
120 REM PART ONE
130 REM
140 REM WRITTEN BY:
150 REM
160 REM ROY T. TAMASHIRO
170 REM
180 DISPLAY AT(4,6)ERASE ALL
: "% SPEAK-N-PROOF %" :: DIS
LAY AT(6,10): "PART ONE" ::
DISPLAY AT(12,1): "ENTER THE
FILE NAME BELOW:" : "DSK1."
190 ACCEPT AT(14,6)SIZE(10):
A$ :: B$="DSK1."&A$ :: DISPL
AY AT(16,1): "DOES THE TEXT F
ILE CONTAIN": "BOTH UPPER A
ND LOWER CASE"
200 DISPLAY AT(20,1): "LETTER
S? Y" :: ACCEPT AT(20,10)SIZ
E(-1)VALIDATE("YM"):C$ :: DI
SPLAY AT(10,4)ERASE ALL: "I A
M REFORMATTING THE"
210 DISPLAY AT(12,4): "FILE,
SO PLEASE WAIT." :: OPEN #1:
B$, INPUT , VARIABLE B0 :: OPE
N #2: "DSK1.PROOF-FILE", OUTPUT
T, INTERNAL, VARIABLE 90
220 IF C$="Y" THEN OPEN #3: "
DSK1.UPPER", OUTPUT, INTERNAL,
VARIABLE 90
230 LINPUT #1:D$ :: IF C$="N
" THEN 260
240 E$="" :: FOR A=1 TO LEN(
D$):: F$=SEG$(D$,A,1):: IF (
ASC(F$)>96)AND(ASC(F$)<123)T
HEN F$=CHR$(ASC(F$)-32)
250 E$=E$&F$ :: NEXT A :: PR
INT #3:E$
260 PRINT #2:D$ :: IF EOF(1)
=0 THEN 230
270 CLOSE #1 :: CLOSE #2 ::
IF C$="Y" THEN CLOSE #3
280 DISPLAY AT(10,6)ERASE AL
L: "THE FILE HAS NOW": : "
BEEN REFORMATTED."

```

```

100 REM SPEAK-N-PROOF
110 REM
120 REM PART TWO
130 REM
140 REM WRITTEN BY:
150 REM
160 REM ROY T. TAMASHIRO
170 REM
180 CALL CLEAR
190 PRINT TAB(6); "% SPEAK-N-
PROOF %": :
200 PRINT TAB(10); "PART TWO
": : :
210 PRINT "DOES THE TEXT FIL
E CONTAIN": :
220 PRINT "BOTH UPPER AND LO
WER CASE": :
230 PRINT "LETTERS?": : : :
: : :
240 CALL KEY(0,A,B)
250 IF (A<>89)+(A<>78)=-2 TH
EN 240
260 PRINT "SHALL I PAUSE A M
OMENT AFTER": "EACH LINE? Y
"
270 CALL KEY(3,C,B)
280 IF (C<>89)+(C<>78)=-2 TH
EN 270
290 CALL CLEAR
300 IF A=78 THEN 320
310 OPEN #3: "DSK1.UPPER", IMP
UT , INTERNAL, VARIABLE 90
320 OPEN #1: "DSK1.PROOF-FILE
", INPUT , INTERNAL, VARIABLE 9
0
330 OPEN #2: "SPEECH", OUTPUT
340 INPUT #1:A$
350 PRINT A$
360 IF A=78 THEN 380
370 INPUT #3:A$
380 PRINT #2:A$
390 IF C=78 THEN 440
400 PRINT : " PRESS ANY KEY T
O CONTINUE."
410 CALL KEY(0,D,E)
420 IF E=0 THEN 410
430 CALL HCHAR(23,1,32,32)
440 IF EOF(1)=0 THEN 340
450 CLOSE #1
460 CLOSE #2
470 IF A=78 THEN 490
480 CLOSE #3
490 END

```

```

100 ! TRANSLATOR
110 !
120 ! PROGRAM IDEA BY:
130 !
140 ! JOHN HAMILTON OF THE
150 !
160 ! CENTRAL IOWA 99/4A
170 !
180 ! USERS GROUP
190 !
200 ! PROGRAM MODIFIED BY:
210 !
220 ! FREDERICK HAWKINS
230 !
240 ! OF THE LEHIGH 99'ER
250 !
260 ! COMPUTER GROUP
270 !
280 ! PROGRAM MODIFIED BY:
290 !
300 ! ED YORK OF THE
310 !
320 ! CIN-DAY USER GROUP
330 !
340 DISPLAY AT(6,10)ERASE AL
L: "TRANSLATOR" :: DISPLAY AT
(10,1): "ENTER FILE TO BE CON
VERTED": : "DSK1." :: ACCEPT
AT(12,6)SIZE(10):A$
350 DISPLAY AT(14,1): "ENTER
FILE TO BE MERGED": : "DSK1.
" :: ACCEPT AT(16,6)SIZE(10)
:B$ :: OPEN #1: "DSK1."&A$ ::
OPEN #2: "DSK1."&B$, VARIABLE
163
360 LINPUT #1:C$ :: A=POS(C$
, " ",1):: ON ERROR 400 :: B=
VAL(SEG$(C$,1,A))
370 ON ERROR 390 :: C=INT(B/
256):: A$=CHR$(B-C*256)
380 PRINT #2:CHR$(C);A$;CHR$
(131);SEG$(C$,A+1,80);CHR$(0
):: GOTO 360
390 PRINT #2:CHR$(255);CHR$(
255):: CLOSE #2 :: DISPLAY A
T(22,6): "PROCESS COMPLETED!"
:: END
400 ON ERROR 390 :: RETURN 3
60

```


CALL KEY

THE CALL KEY PROGRAM IN EXTENDED BASIC IS A VALUABLE TOOL BUT I FOUND THAT IT HAS TAKEN ME A LONG TIME TO REALLY UNDERSTAND IT'S PROPER USAGE. ONE THING THAT HELPED ME WAS THE FOLLOWING QUICK REFERENCE CHART WHICH I PASTED INTO MY EXTENDED BASIC MANUAL FOR QUICK REFERENCE. Joyce Carter, Walham, Mass.

CALL KEY (0,KEY,STATUS)

0=becomes whatever mode was used by previous CALL KEY statement
KEY=is returned as ASC VALUE()
STATUS=-1 if NO KEY is pressed

CALL KEY(1,K,S)

Returns K values from LEFT SIDE of keyboard

CALL KEY(2,K,S)

Returns K values from RIGHT SIDE of keyboard

CALL KEY(3,KEY,STATUS)

3=TI/99 4 MODE (FORGIVING)
K=only UPPER CASE letter values are returned even if a lower case letter is pressed in error BUT only works with FUNCTIONS 1-15 - NO CONTROL KEYS

CALL KEY(4,K,S) PASCAL MODE

provides UPPER and LOWER case letter values
FUNCTIONS 129-143 - CONTROLS 1-31

CALL KEY(5,K,S)

5=BASIC mode for TI/994A
K=returns BOTH UPPER LOWER CASE letter values BUT if upper case answers are asked for and lower case are returned, the lower case answers won't be accepted.

STATUS KEY CHANGES (EXCEPT IN '0' MODE)

S=1 (NEW KEY PRESSED)
S=-1 (SAME KEY PRESSED)
S=0 (NO KEY PRESSED)

ACCESSING FUNCTION AND CONTROL KEYS AND ARROWS:

```
100 DISPLAY AT(3,3)ERASE ALL:"PRESS CONTROL KEY ,"  
110 FOR DELAY=1 TO 400 : NEXT DELAY  
120 CALL KEY(5,K,S)  
130 IF K=128 THEN PRINT "CONTROL,COMMA PRESSED"
```

```
OR: 100 DISPLAY AT(3,3)ERASE ALL:"PRESS FUNCTION RIGHT ARROW"  
130 IF K=9 THEN PRINT "RIGHT ARROW KEY PRESSED"
```

```
OR: 100 DISPLAY AT(3,3)ERASE ALL:"PRESS FUNCTION 0"  
130 IF K=6 THEN PRINT "FUNCTION 0 PRESSED"
```

CALL KEY COMBINATIONS

I ALSO KEEP A NOTEBOOK OF USEFUL (AND REUSEABLE) TIPS AND TRICKS FOR PROGRAMMING AND I'VE WORKED OUT A FEW USEFUL CALL KEY COMBINATIONS THAT I CAN PULL OUT AND USE WHEREVER I NEED THEM. OF COURSE, YOU CAN SUBSTITUTE LINE NUMBERS OR DIRECTIONS TO SUB PROGRAMS OR OTHER INSTRUCTIONS INTO THE LOGIC INSTRUCTIONS.

YES OR NO ANSWERS WITH CALL KEY 0

```
80 CALL CLEAR  
90 PRINT "Y OR N? "  
100 CALL KEY (0,K,S)  
110 IF K=78 THEN PRINT "NO" : STOP  
120 IF K<>89 THEN 100 ELSE PRINT "YES"  
130 STOP : END
```

SPACE BAR OR CARRIAGE RETURN (ENTER) ANSWERS WITH CALL KEY 5

```
100 DISPLAY AT(3,3)ERASE ALL:"PRESS SPACE BAR TO CONTINUE"  
: : "PRESS ENTER/CARRIAGE RETURN TO PRINT"  
110 FOR DELAY=1 TO 400 : NEXT DELAY  
120 CALL KEY(5,K,S)  
130 IF K=32 THEN PRINT "SPACE BAR PRESSED" ELSE IF K<>13  
THEN 120  
140 IF K=13 THEN PRINT "ENTER (C/R) WAS PRESSED"  
150 STOP : END
```

RIGIDLY CONTROLLED ANSWERS WITH CALL KEY 5

```
100 DISPLAY AT(3,3)ERASE ALL:"PRESS Y FOR YES" : " PRESS  
N FOR NO"  
110 FOR DELAY=1 TO 400 : NEXT DELAY  
120 CALL KEY(5,K,S)  
130 IF K=89 THEN PRINT "YES,YES" ELSE IF K<>78 THEN 120  
140 IF K=78 THEN PRINT "NO,NO"  
150 STOP : END
```

ALPHABET ANSWERS THAT ARE FORGIVING OF WRONG CASE ANSWERS WITH CALL KEY 3

```
100 DISPLAY AT(3,3)ERASE ALL:"PRESS R TO REPEAT" :  
: " PRESS P TO PRINT"  
110 FOR DELAY=1 TO 400 : NEXT DELAY  
120 CALL KEY(3,K,S)  
130 IF K=82 THEN PRINT "HERE YOU WOULD GO TO YOUR REPEAT  
SUBPROGRAM" ELSE IF K<>80 THEN 120  
140 IF K=80 THEN PRINT "HERE YOU WOULD GO TO YOUR PRINT  
SUB PROGRAM"  
150 STOP : END
```

YES OR NO ANSWERS WITH CALL KEY 3

THAT FORGIVE YOU IF YOU ANSWER AN UPPER CASE QUESTION WITH A LOWER CASE ANSWER.

```
100 DISPLAY AT(3,3)ERASE ALL:"PRESS Y FOR YES" : " PRESS N  
FOR NO"  
110 FOR DELAY=1 TO 400 : NEXT DELAY  
120 CALL KEY(3,K,S)  
130 IF K=89 THEN PRINT "YES, YES" ELSE IF K<>78 THEN 120  
140 IF K=78 THEN PRINT "NO,NO"  
150 STOP : END
```

GRP MIAMI CO. AREA 99/4A UG
163 WEST THIRD
PERU, IN 46970



DECATUR 99er HOME COMPUTER USERS' GROUP
P.O. BOX 726
DECATUR, ILLINOIS 62525

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*****
§
§ Who are the Decatur 99'ers?
§
§ We are an independant, nonprofit organization whose
§ primary goal is to aid our members in understanding
§ and using the TI99/4A Home Computer.
§
§ Membership dues are $15.00 per person per year.
§
§ Family memberships are $25.00 per year, however, we
§ we require all children under the age of 16 to be
§ accompanied by an adult.
§
§ For more information write to the return address or
§ contact:
§
§ President:                Vice-presidents:
§   Larry Livergood         Jay Seaberg
§   467 W William ST       41 Whippoorwill
§   Decatur, Illinois      Decatur, Illinois
§   62522                  62526
§   PH 217-422-6933        PH 217-877-1631
§
§
*****

```

NEXT MEETING DATE:
THURSDAY, APRIL 11, 1985

6:30 PM TO 8:30 PM
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>>>>APRIL MEETING DATE<<<<

S	M	T	W	T	F	S
	1	2	3	4	5	6
7	8	9	10>>	11<<	12	13
14	15	16>>	17<<	18	19	20
21	22	23	24	25	26	27
28	29	30				

PRIZES WILL BE GIVEN OUT
AT EACH MEETING TO BOTH
MEMBERS AND GUESTS.