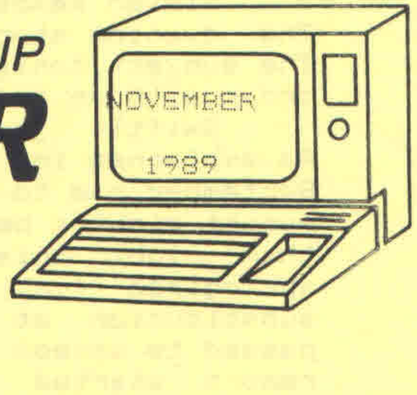
CEDAR VALLEY 99'ER USER GROUP NEWSLETTER



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****NEWSLETTER TOPICS****

1. Future Meeting Dates
2. Next Meeting Notes
3. Minutes from the October Mtg
4. News from the Library
5. Multi Entry Single Exit Assy Pgm
6. Mystery of CALL LOADS
7. Tips from the Tigercub #57
8. Membership Renewal Form

At the end of this NEWSLETTER is a form to be filled out for membership renewal. Please bring this with you to the meeting, or mail it to Bruce Winter at the above address.

****FUTURE MEETING DATES****

Please mark the following dates on your calendar for future meetings: NOVEMBER 13, DECEMBER 11, JAN. 8.

********NEXT MEETING********

The regular monthly meeting will be Monday, Nov. 13, at West Music, Cedar Rapids, with open discussion starting at 6:30 PM. Time to renew your membership, at the same low price! Bring your FOR SALE or TRADE items for a swap meet. Come hear about the Chicago Convention!

* MINUTES FROM THE OCTOBER MEETING *

Eleven members were in attendance at West Music on October 9, 1989. The evening started, as do many gatherings of people, with a discussion. The subject tonight was "graphics". Jerry finally called the meeting to order with an individual greeting to each one present.

Swiftly jumping to the subject of the minutes of previous meetings: As explained in the last NEWSLETTER, minutes from both August and September had to be approved. It was moved, seconded and passed that the August minutes be accepted as finally printed. Note to editor: You got them right this time, which was much appreciated by all! The secretary apologized for his part in this. He also thanked Bob for his substitution at the September meeting. It was then moved, seconded and passed to accept the September minutes as printed. The treasurer's report started out with the words "no bank statement" but we were given assurance that the UG funds were still in the black. We were reminded that the next meeting was our annual renewal time. The postage drain again came up for discussion. The price break we might use would require 100 NEWSLETTER's to be sent each month. With 25 members and 25 UG mailings each month it would not be practical at this time. Now is the time to enroll those TIers in the community in our group. If each of us could bring in just two new members we could take advantage of that postage price break.

OLD BUSINESS 1. The Chicago TI Faire will be history by next meeting. Five or six have indicated they wish to go. Since none of them have a van to use, the only option will be to use a car or cars depending on the number actually attending the faire. Jerry is coordinating the trip again this year. 2. A fall visit to Dubuque is still in the works. November seemed to be a good time. With the Chicago Faire on the 4th and Thanksgiving weekend on the 25th, we opted to try to set it up for the 18th. Ed will find out if this will be OK with Sister Pat.

NEW BUSINESS 1. No new business was forthcoming at this time.

DISCUSSION: 1. John informed us that there seems to be a misunderstanding with the program called VICIOUS printed in the October NEWSLETTER. Line 150 uses small letter l within the parenthesis following RPT$. When he typed it in he used the no. 1 and found it would not work. 2. Jim Reiss announced that he may be leaving us for employment in Colorado. Just in case, he brought his "swap meet" items early. He showed a demo of BOULDER DASH, a new offering from Asgard Software. It was written by a Belgium programmer and requires both minimemory AND 32k memory. It will be available soon. He thought the TRIS cartridge would be here soon for those who wanted it. 3. Ed has over 4000 instances available to use as clip art conversions. They are from MC PAINT environment. 4. John has two new programs in the UG library. They are FUNNEL PLUS and ZODIAC. Thanks to Ed, he also has a new library box to hold 100 discs.

PROGRAM REMINDERS: 1. The November meeting will be our annual membership renewal and swap meet. The meeting was adjourned.

Ed showed some of the new instances he has in his library.

Submitted by Bill Paeth, Secretary

The Library Blurb

Marty Kroll has answered my letter and said that the instructiuions for Catcom are in error and the type of sort I wished to do can't be done with that program. He is starting an XB program to do this kind of sort but doesn't have a date for its release yet.

Most of the new programs in the library are graphics related. They include some new pictures, translated pictures from other computers, and utilities to transfer from one type of format to another. Some of the ones that caught my eye were-Version 4.3 of TI Writer, RLE Mc Paint pictures. Also from Rag Software- a two disk Macro Assembler and a Librarian program.

Hopefully by the time you read this you will have seen an assembled file holder for our disks that Ed Edwards has found. I think that these will work perfectly for our library. If we don't use them for all our disks, I think we should purchase a couple for our latest disks that are brought to each meeting.

As librarian I get to see the many programs that come into our library. To allow the club members to see a few of them also I propose a 5-10 minute "quicky" demo of a library program each month. I found Ed's demo of a hard drive last month very interesting. Longer demos such as that are one of the backbones of our meetings but short demos can expose the club to the great variety of things this computer can do.

A Multi Entry Single Exit Assmy Program

While writing assembly sub programs for an XB program I looked for a way to combine the assmy prgs into one to allow sharing of workspace registers etc. A multiple entry program like the example on the next page worked very well for me. When the assembly program is loaded the address of any name in the DEF line will be loaded into the computer's reference table. This means that a call link to different names in the program will allow you to enter the sub program at different places but each section of the assembly program can use the same work space registers, data statements, etc.

Many lines for loading the work space registers etc. are still repeated but I have not found a way to avoid this yet without adding as many lines to steer thought them to the correct section as it takes to just repeat them.

The following short example program should (I hope) clarify this method. Save the assembled assembly program as MULTI. Then running the XB program should automatically load the assembly program from DSK1 and display the letter B flipping over and sidways as the program runs. Note that the call links determine where you enter the assembly program. Then it runs through that section until it branches to the FIN section and back to XB.

Admittedly this example is so simple, the benefits from this style of programing are minimal. I have done this on purpose. After acquiring a distinct dislike for complicated hard to understand examples in the editor assembler manual I operate on the KISS principal. (Keep It Simple Stupid) J Johnson CR

```
        DEF  UP.DWN.LFT.RT      ALL FOUR ENTRY POINTS ENTERD HERE
VMBW    EQU  >2024
WS      BSS  >20
UP1     DATA >0078,>2424,>3824,>2478     DATA FOR DIFFERENT KINDS OF B'S"
DWN1    DATA >1E24,>241C,>2424,>1E00
LFT1    DATA >0000,>3649,>497F,>4100
RT1     DATA >0082,>FE92,>926C,>0000
*
UP      LWPI WS                UP SECTION
        LI   R0,>510
        LI   R1,UP1
        LI   R2,8
        BLWP @VMBW
        B    @FIN
DWN     LWPI WS                DOWN SECTION
        LI   R0,>510
        LI   R1,DWN1
        LI   R2,8
        BLWP @VMBW
        B    @FIN
LFT     LWPI WS                LEFT SECTION
        LI   R0,>510
        LI   R1,LFT1
        LI   R2,8
        BLWP @VMBW
        B    @FIN
RT      LWPI WS                RIGHT SECTION
        LI   R1,>510
        LI   R1,RT1
        LI   R2,8
        BLWP @VMBW
*
FIN     CLR  @>837C            EXIT
        LWPI >83E0
        B    @>0070
        END
```

```
100 CALL CLEAR :: CALL INIT :: CALL LOAD("DSK1.MULTI")
110 PRINT "BBBBBBBBBBBBBB" :: FOR I=1 TO 10 :: PRINT :: NEXT I :: CALL LINK("UP
"):: CALL DLY
120 CALL LINK("RT"):: CALL DLY
130 CALL LINK("DWN"):: CALL DLY
140 CALL LINK("LFT"):: CALL DLY
150 CALL CLEAR :: FOR I=1 TO 10 :: PRINT "BBBBBBBBBYE" :: NEXT I
160 GOTO 160
170 SUB DLY :: FOR I=1 TO 500 :: NEXT I :: SUBEND
```

The Mystery of CALL LOADs

Here's some of the more useful CALL LOADs and what they do exactly. Remember to type and enter a CALL INIT first.

"USEFUL" XBASIC CALL LOADS

CALL PEEK(2,A,B):: CALL LOAD(-31804,A,B)..... Same as using the command "BYE".

CALL LOAD(-31961,51):: END..... Returns you to the title screen (with full graphics)

CALL LOAD(-32630,128)..... Returns you to the title screen (without graphics)

CALL PEEK(-28672,A)..... This checks to see if the speach synthesizer is attached. (Great for optional speech programs) If the synthesizer attached Variable A returns a value of 96, if not attached, 0.

CALL LOAD(-32699,2)..... Activates ON WARNING NEXT.

CALL LOAD(-32699,4)..... Activates ON WARNING STOP.

CALL LOAD(-32699,16)..... Activates TRACE.

CALL LOAD(-32699,64)..... Activates ON BREAK NEXT.

CALL LOAD(-31888,63,255):: NEW..... Type in this and then NEW to shut down your disk drives for those extra long basic programs to load in. See the next Call Load to turn then back on.

CALL LOAD(-31888,55,215)..... This when used with a CALL INIT first will do the opposite of the above CALL LOAD.

CALL LOAD(-32699,0) or (-31931,0)...... Deletes Extended Basic protection

CALL LOAD(-31931,128)...... Installs Extended Basic Protection

CALL PEEK(-31863,A)..... "A" will equal 231 if 32K is present.

CALL PEEK(-31952,A,B)..... Is the pointer to starting address on line number table, 4 bytes per entry, (2 for number line, 2 for start address.)

CALL LOAD(-31806,96)...... Disables Sprites and Sound.

CALL LOAD(-31806,0)....... Re-enables all of the above addresses using -31806.

CALL PEEK(-31974,A,B)..... In EA or MM Basic, type this command then type PRINT A256B-1776, now you should have the amount of memory left.

These will work with EA or Mini-Memory;
CALL POKEV(-37768,0) Normal Mode
CALL POKEV(-32352,0) Makes Screen Transparent
CALL POKEV(-32280,0) MultiColor Mode
CALL POKEV(-32766,0) Bit Map Mode
CALL POKEV(-32272,0,",-39945,0) 40 Column Mode
CALL POKEV(-32768,0) To Reset

CALL LOAD(-32729,0)..... This loads any program in disk one called "LOAD"

CALL LOAD(-31961,149):: END (or STOP)... Will reset the console and seacrh for a filename on disk one called "LOAD"

CALL PEEK(-31950,A,B)..... Is pointer to the ending address of the number line tables.

CALL PEEK(-31954,A,B)..... Is the current line being referenced in the table.
CALL LOAD(-31888,63,255)...... This will not reserve any room in the VDP RAM for Disk Buffers.

CALL LOAD(-31806,16)..... This will disable the FCTN QUIT key

CALL LOAD(-31868,0)..... When within the body of a program, and when FTCN 4 (CLEAR) is pressed, Listing the program is impossible.

CALL LOAD(-31878,X) or (-31806,X)....... Makes all sprites X stop

XBASIC CALL LOADS TO PLAY AROUND WITH (but don't really have much value)

CALL LOAD(-31740,A,B)..... A B equal Values you enter. Change the around to get different sounds. They will stay on until another sound is made (input and error beeps.)

CALL LOAD(-31748,X)..... If you make X equal 0 then all tones stop, and the cursor halts. X can equal from 0 to 18 with different results.

CALL LOAD(-32572,1)....... Produces a "Mushie" keyboard.

CALL LOAD(-31745,0)...... Produces a frozen screen for a second then blanks entirely. Restore by pressing FCTN -.

CALL LOAD(-32572,128)...... Disables Keyboard.

CALL LOAD(-31866,33,0):: SIZE...... Gives you some crazy stuff.

CALL LOAD(-32116,4)....... Turns XBASIC into Basic

CALL LOAD(-32700,0)....... Clears your screen for a second.

CALL LOAD(-32187,9)...... Does an CALL FILES(1).

CALL LOAD(-31748,N)...... Changes the speed of cursor and sound. N can equal 0 to 255

CALL LOAD(-31868,0)..... When used with a ON BREAK and GOTO (this call load) it will freeze the system.

CALL LOAD(-31806,128).... Disables Sounds, Sprites and Quit

CALL LOAD(-31806,64)..... Disables Sprites.

CALL LOAD(-31806,32)...... Disables Sound and causes Lock-Up

CALL LOAD(-31806,48)...... Disables Sound and Quit Key.

CALL LOAD(-31806,80)...... Disables Sprites and Quit Key.

TIPS FROM THE TIGERCUB

#57

Tigercub Software
156 Collingwood Ave.
Columbus OH 43213

I am still offering over 120 original and unique entertainment, educational and utility programs at just $1.00 each, or on collection disks at $5.00 per disk.

The contents of the first 52 issues of this newsletter are available as ready-to-run programs on 5 Tips Disks at $10 each.

And my three Nuts & Bolts Disk, $15 each, each contain over 100 subprograms for you to merge into your own programs to do all kinds of wonderful things.

My catalog is available for $1, deductable from your first order (specify TIGERCUB catalog).

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TI-PD LIBRARY

I have selected public domain programs, by category, to fill over 200 disks, as full as possible if I had enough programs of the category, with all the Basic-only programs converted to XBasic, with an E/A loader provided for assembly programs if possible, instructions added and any obvious bugs corrected, and with an autoloader by full program name on each disk. These are available as a copying service for just $1.50 postpaid in U.S. and Canada. No fairware will be offered without the author's permission. Send SASE for list or $1, refundable for 9-page catalog listing all titles and authors. Be sure to specify TI-PD catalog.

****

I like little programs that load quickly and do just what I want to do at the moment. And one of the things I wanted to do quickly was to find phone numbers. So, I used FUNLWEB to create a little file -

```
SMITH,JOHN (999) 111-2222
BUSH, GEO. (000) 123-1234
GHADDAFI, O. (666)66-6666
```

and all my other frequently called numbers. I SAVEd it as DSK1.PHONELIST and wrote this little routine to use it.

```
100 CALL CLEAR
110 OPEN #1:"DSK1.PHONELIST"
,INPUT
120 DISPLAY AT(12,1):"LAST N
AME?" :: ACCEPT AT(14,1):N$
130 LINPUT #1:M$ :: IF POS(M
$,N$,1)<>0 THEN DISPLAY AT(1
6,1):M$ :: RESTORE #1 :: GOT
O 120
140 IF EOF(1)<>1 THEN 130
150 DISPLAY AT(16,1):"NAME N
OT FOUND" :: RESTORE #1 :: G
OTO 120
```

Now actually, that was all I needed,(even though it did take several seconds to find a name at the end of the file), and it was easy enough to load the file into FUNLWEB when it needed updating. But, programmers are never satisfied, so I decided to write a self-contained program -

```
100 CALL CLEAR
200 DATA "ALDA, ALAN 888-999
9"
201 !@P-
300 DATA "BUSH, GEORGE 111-1
111"
400 DATA "PRESLEY, ELVIS 000
-0000"
499 !@P+
500 DISPLAY AT(12,1):"LAST N
AME?" :: ACCEPT AT(14,1):N$
600 READ M$ :: IF POS(M$,N$,
1)<>0 THEN DISPLAY AT(16,1):
M$ :: RESTORE 200 :: GOTO 50
0
700 ON ERROR 800 :: GOTO 600
800 DISPLAY AT(16,1):"NAME N
OT FOUND" :: RESTORE 200 ::
GOTO 500
```

That funny thing in line 201 turns off the prescan and speeds up initialization. This routine is no faster than the last, but can be updated by editing the program itself. It is limited to about 500 records due to the least-known and greatest weakness of the TI, that string storage is limited to console memory.

But, computer users are paranoid about speed, so I decided to put my data into a pre-loaded array with self incrementing subscript numbers, and find the data by a binary search.

```
100 !QUICKFINDER by Jim Pete
rson
200 DIM D$(50):: GOTO 300 ::
 D$(),X :: !@P-
300 X=X+1 :: D$(X)="ALDA, AL
AN (999) 666-1234"
400 X=X+1 :: D$(X)="BUSH, GE
ORGE (111) 111-1111"
500 X=X+1 :: D$(X)="GHADDAFI
, OMAR (999) 456-1234567"
600 X=X+1 :: D$(X)="KHOMEINI
, AYATOLLAH  (666) 666-6666"
700 !@P+
800 INPUT "NAME? ":M$
900 IF M$>D$(X)THEN PRINT "N
OT FOUND":"CLOSEST IS":D$(X)
:: GOTO 800
1000 IF M$<D$(1)THEN PRINT "
NOT FOUND":"CLOSEST IS":D$(1
):: GOTO 800
1100 H=X :: S=INT(X/2)
1200 S$=D$(S):: IF POS(S$,M$
,1)=1 THEN 1700
1300 S$=D$(S+1):: IF POS(S$,
M$,1)=1 THEN S=S+1 :: GOTO 1
700
1400 IF S$>M$ THEN H=S :: S=
INT(H/2):: GOTO 1600
1500 S=S+INT((H-S)/2)
1600 IF S=S2 THEN 1800 ELSE
S2=S :: GOTO 1200
1700 PRINT D$(S):: GOTO 800
1800 PRINT "NOT FOUND":"CLOS
EST ARE"
1900 IF D$(S2)>M$ THEN PRINT
 D$(S2-1):D$(S2+1):: GOTO 800
2000 PRINT D$(S2+1):D$(S2+2)
:: GOTO 800
```

Note that in this case the records must be in alphabetical sequence. New records can be inserted in intermediate line numbers, in alphabetic sequence, always preceded by X=X+1 :: D$(X)= . Obsolete records can be deleted, and records can be corrected in place if the correction does not change the alphabetic sequence.

This idea did not work out as well as I hoped. The maximum number of records is less than 300, for the reason mentioned above, and this leaves so little free memory that even a binary search is slow. However, for a smaller file this is perhaps the best method.

For a large file, the best method is certainly a fixed sequential disk file, accessed by a binary search routine. But, that requires other routines to delete, add or change records, and had best be the subject of another Tips.

There is apparently a mistaken belief that sprites cannot be used together with my BXB routine. Not so - you can use all 28 of them! However, you cannot change their color with CALL COLOR(#,N). The only other limitations of BXB that I can think of, are that a single CALL COLOR cannot be used for multiple character sets and a single CALL CHAR can only reidentify one character. CALL CHARPAT cannot return the hex code of an ASCII above 143 because those ASCII's were not supposed to be available in Extended Basic.

I have used BXB on hundreds of Basic-only programs and have had only two rare problems. If the program contains multiple line feed colons ::::::, the computer may rearrange them into pairs of double colons :: :: and lock up. Or, if the colons are before the text, as in PRINT :"something" you may get a puzzling error message.

Also on rare occasions you might get an error message indicating the subprogram was called from a line containing a CALL CHAR, if the programmer had inadvertently put more than 16 characters in the hex code. Basic just ignores any extra characters, and XBasic uses them to reidentify the following ASCII, but BXB crashes.

From the T*I*M*E*S newsletter from England, here is an extremely useful bit of assembly which should be assembled as ALPHA/O and placed on the disk of every joystick program, or imbedded in it with ALSAVE.

```
        DEF   ALPHA
* save old R12
ALPHA   MOV   R12,@>FFFC
* 9900 CRU base=0
        CLR   R12
* signal alphalock key line
        SBZ   21
* check alphalock other side
        TB    7
* jump if state=on
        JNE   STATE
*  state=off
        SETO  @>FFFE
* as off skip next line
        JMP   JUMPA
*  state=on
STATE   CLR   @>FFFE
* stop sending to alpha key
JUMPA   SBO   21
* restore R12
        MOV   @>FFFC,R12
* standard XB return now
* clear error for basic
        SB    @>837C,@>837C
* return to calling program
        B     @>0070
        END   ALPHA
```

Now, put this in the first lines of the joystick program -

```
1 ! by M. Gikow, Andover
  MA  August 1988
2 ! used with ALPHA/O,
  will detect whether
  Alpha Lock is up (A=
  255) or down (A=0)
3 CALL CLEAR :: CALL INIT ::
 CALL LOAD("DSK1.ALPHA/O")
4 CALL LINK("ALPHA"):: CALL
PEEK(-1,A):: IF A=0 THEN DIS
PLAY AT(12,1):"RELEASE ALPHA
LOCK" :: GOTO 4 ELSE CALL CL
EAR
```

I published this one in the C.O.N.N.I. newsletter. Barry Traver picked it up and put it in the TI Forum in Computer Shopper, but their typesetter garbled it, so here is how it was supposed to be -

According to the TI-Writer Reference Guide, page 77, when you select the PrintF command, then type C and space once and then the device name, any control characters with ASCII less than 32 are removed before the file is printed.

With Funlweb, at least, this is not quite true. A carriage return character, ASCII 13, or a line feed character, ASCII 10, at the end of a line is actually not deleted but is changed to the space bar character, ASCII 32. This can be proved by running this little routine -

```
100 OPEN #1:"DSK1.(filename)
",INPUT
110 LINPUT #1:M$ :: PRINT M$
:LEN(M$):: IF LEN(M$)>0 THEN
 PRINT ASC(SEG$(M$,LEN(M$),1
))
120 CALL KEY(0,K,S):: IF S=0
 THEN 120 ELSE 110
```

Therefore, when a file is Filled/Adjusted and the line feed characters are stripped ith the C option, the lines are one character longer than they appear to be. An apparently blank line also contains ASCII 32.

Since these characters are blank, they normally do no harm. However, they can create problems when records are read into programs for multiple column printing or concatenation of strings. In these cases, this routine can be used to strip out any ASCII below 33 at the ends of records.

```
100 DATA INPUT,OUTPUT
110 FOR J=1 TO 2 :: READ J$
:: DISPLAY AT(12,1)ERASE ALL
:J$&" FILENAME?":"DSK" :: AC
CEPT AT(13,4):F$(J):: OPEN #
J:"DSK"&F$(J),UPDATE :: NEXT
 J
120 LINPUT #1:M$
130 IF ASC(SEG$(M$,LEN(M$),1
))<33 THEN M$=SEG$(M$,1,LEN(
M$)-1):: IF LEN(M$)>0 THEN 1
30
140 PRINT #2:M$ :: IF EOF(1)
<>1 THEN 120 :: CLOSE #1 ::
CLOSE #2
```

Attention all newsletter editors! If you are going to print my Tips (or anything else that contains program listings!) through the Formatter, PLEASE first replace and transliterate the ampersand, asterisk, period, carat and "@" sign!

Print this one through the Formatter and see why -

```
100 A=A*264 :: @=1
110 PRINT "1 . . . 2 . . . 3
. . .4 . . . 5 . . . 6 . . .
7 . . . 8 . . . 9 . . . 0"
120 M$=M$&A$&B$&C$ :: K=K^3
```

Here's how you do it. Load the above in the Editor, position the cursor at the beginning of the 1st line, hit FCTN 9, type RS and Enter, then /&/}/ and Enter. At the prompt, type A. Now get the cursor back to the beginning, repeat the above with /*/|/, and then /./\/ and /^/~/ and /@/{/ and the file should now look like this -

```
100 A=A|264 :: {=1
110 PRINT "1 \ \ \ 2 \ \ \ 3
 \ \ \ 4 \ \ \ 5 \ \ \ 6 \ \
 \ 7 \ \ \ 8 \ \ \ 9 \
\ \ 0"
120 M$=M$}A$}B$}C$ :: K=K~3
```

Now use FCTN 8 to open 5 lines at the top and add this transliteration -

```
.TL 92:46
.TL 123:64
.TL 124:42
.TL 125:38
.TL 126:94
```

Save the result, go to the Formatter and print it.

If my multi-column Printall program (Tips from the Tigercub #45) won't run on your Epson-compatible printer, try changing line 250 to -

```
250 ACCEPT AT(12,3)VALIDATE(
"123")SIZE(1):P :: IF P=2 TH
EN PRINT #1:CHR$(27);CHR$(77
)ELSE IF P=3 THEN PRINT #1:C
HR$(15)
```

You might also need to change the 136 in line 280 to 132.

If your printer offers the elite condensed option, you might want to add - :" (4) ELITE CONDENSED" to line 240, change the VALIDATE string in 250 to "1234", add ELSE IF P=4 THEN PRINT #1:CHR$(27);CHR$(77);CHR$(15) to the revised line 250 and add +(P=4)*160 to the first statement in line 280.

Memory almost full,

Jim Peterson