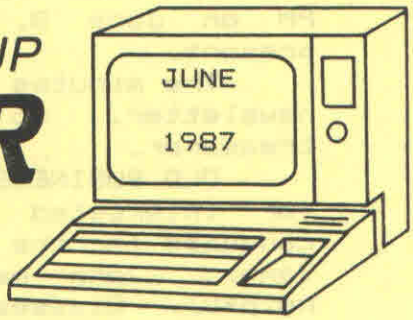
CEDAR VALLEY 99'ER USER GROUP NEWSLETTER



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****NEWSLETTER TOPICS****

****FUTURE MEETING DATES****

Please mark the following dates on your calendar for future meetings: JULY 13, AUGUST 10, SEPTEMBER 14.

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

Monday, July 13, 7:00 PM at the JA building, 330 Collins Rd. NE. Ed will demonstrate Funl Plus, a new program that adds even more capability to Funnlwriter. John Johnson will start the first class of assembly language instruction, also. Don't let the warm weather keep you away!

****MINUTES FROM THE JUNE MEETING****

The Cedar Valley 99er User Group meeting was called to order at 7:06 PM on June 8, 1987 by President Jerry Canady. Fifteen members were present.

The minutes of the May meeting were approved as printed in the newsletter. No treasurer's report was given due to the absence of the treasurer.

OLD BUSINESS--John Johnson will begin a new assembly language class for interested members. The text will be "Introduction to Assembly Language for the TI Home Computer" by Ralph Molesworth, available from Tenex. John mentioned that the Editor/Assembler manual would also be helpful. Classes will be held during or after the regular club meeting on each second Monday. A short discussion was held on the details of the class and on the speed of assembly language.

All software from the IUG collection that we purchased has now been reviewed. Bruce will try to have complete printed software catalogs available at the July 13 meeting.

NEW BUSINESS--Jim Green mentioned some correspondence shared recently from Sister Pat Taylor of Dubuque. She is seeking advice and help from our group because she is now ready to expand her system and add a disk system. Options were discussed, and Jim asked for input from any members that might know of good disk drive bargains.

Load interrupt software was discussed; apparently, the load interrupt routine only prints standard ASCII characters, but no sprites.

Jim Green reviewed the collection of mail and newsletters received from other groups during the month. He also showed a new products flyer from CorComp.

The group has received a questionnaire, copies of which will be printed in the next newsletter. This is part of an independent TI community survey, and each member is encouraged to fill out the form and mail it in soon.

Our (absent) treasurer, Jim Harrington, has had some problems with his disk system. TI gave his disk controller card a clean bill of health (for the standard repair charge), and now he suspects the memory card. The TI diagnostic program confirms that the memory card has a problem. Jerry Canady offered to swap cards with Jim for final proof.

The user group will be hosting a booth at this fall's Hamfest/Computer fest at the Five Seasons Center. Tickets are available for members to sell, see Gary Bishop, our representative to the planning committee. Our group may extend an invitation to Ann Dhein to attend the fest and show the new Myarc computer.

Jim Peterson, of Tigercub Software, recently sent our group additional files and Tips from the Tigercub. A motion was made and passed to send Jim $10.00 from the group treasury in thanks for his contribution to the TI world.

The newsletter editor asked (pleaded) for more articles from our members for the group newsletter. Specifically mentioned was the need for a review of Clyde College's fast cassette loader program.

Business meeting adjouned at 8:10 PM.

Program for the evening--Ed Edwards demonstrated the program Prescan-it, which speeds the loading and running of Extended Basic programs.

Submitted by Gary Bishop, Past Secretary

This article was gleaned from TOPICS the LA 99ers newsletter. With our THANKS!!!

IMPROVED UNRUNNABLE BASIC by Richard Heath

[Ed. Note by Tom Freeman]

The "Unrunnable Basic" program By Stephen Shaw published in our July, 1986 issue of TopIcs was relatively long. Richard took the time to analyze it and shorten it considerably, then was kind enough to send it to us. I have tried it out and it works well. Youmust type it in, save in MERGE format, then merge it into your Basic program that uses the unallowed character sets. I had not realized that already defined subprograms in XBasic could be redefined, but they can! To see what I mean, try typing in: 100 FOR X=1 TO 16::CALL SCREEN(X):: NEXT X, and run it. Now add the line: 200 SUB SCREEN(A):: PRINT A :: SUBEND, run again, and watch the difference!

To see how this program works, try the following in XBasic:

```
100 CALL CHAR(144,"FF")
110 CALL CHAR(152,"8080808080808080")
120 CALL COLOR(15,16,5)
130 CALL COLOR(16,5,16)
140 CALL HCHAR(1,1,144,384)
150 CALL HCHAR(13,1,152,384)
160 GOTO 160
```

Lińes 110 through 130 will all give "BAD VALUE" error statements in XBasic. Run it also in Basic to see what happens. Now merge in Richard's program and see how it works exactly like Basic.

CAUTION: No error checking is done for the parameter values, so be careful you don't go outside the range. Also, in contrast to XB, you can define only one color set or character at a time.

```
1 ! "IMPROVED" UnRUNABLE BASIC PROGRAMS IN XBASIC by Richard Heath, Tor. Ca.
     (Improved from Stephan Shaw-John Behnke program.)
2 ! Enables you to run TI BASIC in 32K using all 16 character sets.
3 ! MERGE THIS PROGRAM INTO YOUR BASIC PROGRAM. (Alternate method: Run this
   prgm thru 32680, then run your prgm with 32690-32710 included in it.)
4 ! THIS NEXT LINE IS VITAL:
5 CALL LOADUTIL
6 ! TI BASIC PROGRAM FITS IN HERE. (Alternate method: 6 RUN "DSK1.YOURPGM+3")
7 ! ............
8 ! ............
32600 SUB LOADUTIL :: CALL INIT :: CALL LOAD(8194,37,194,63,240)
32610 CALL LOAD(16368,80,79,67,72,65,82,37,58,80,79,75,69,86,32,37,168)
32620 CALL LOAD(9530,2,224,37,20,3,0,0,0,2,5,48,48,2,6,37,2,205,133,2,134,37,17)
32630 CALL LOAD(9552,17,252,4,192,2,1,0,1,2,2,37,1,2,3,18,0,212,131,4,32,32,20)
32640 CALL LOAD(9574,208,4,9,80,2,32,3,0,2,1,37,2,2,2,0,8,2,7,11,0,2,8,7,0,193)
32650 CALL LOAD(9599,1,192,193,193,180,97,133,145,135,21,1,113,136,6,198,145)
32660 CALL LOAD(9615,135,21,1,113,136,210,70,10,198,177,137,220,198,2,131,37,10)
32670 CALL LOAD(9632,17,240,4,32,32,36,16,6,2,224,37,20,3,0,0,0,4,32,32,32,4)
32680 CALL LOAD(9653,192,216,0,131,124,2,224,131,224,4,96,0,112):: SUBEND
32690 SUB CHAR(A,A$):: CALL LOAD(9500,A):: CALL LINK("POCHAR",A$):: SUBEND
32700 SUB COLOR(A,B,C):: CALL LOAD(9492,8,15+A,(B-1)+C-1)
32710 CALL LINK("POKEV"):: SUBEND
```

THE LIBRARY CORNER

Software reviews; programs available from the club library.

MASTER SOLITAIRE: Master Solitaire is an excellent Ex. Basic program. I've never played solitaire quite like this. This one is very challenging. The object is to build the cards in four piles, one for each suit, in sequence. All the cards are displayed in 4 rows of 13 columns. You can only move one card at a time from the bottom of a column to the bottom of another. The card you move must match the card it is moved below in suit and sequence (one up or one down). The computer will not let you make an illegal move. A very well done program, and very hard to quit playing once you start.

SORGON: Sorgon is an editor/assembler program that allows you to play notes and chord formations. The screen is very colorful and each time a not or chord is played, adifferent color is displayed on a triangular mountain. A two octave keyboard is also displayed (24 keys). It also has a 25th key which is used for special effects. It comes with good documentation that can be printed using TI Writer.

BERT AND ERNIE: An Ex. Basic program that is an excellant demonstration of the graphics and speech capabilities of our computer. It shows a picture of Bert and Ernie (from Sesame Street, of course) talking to each other, and it really looks and sounds like the real thing! You must have the speech synthesizer to use this program.

These three programs have been briefly demonstrated at our monthly meetings. I hope these mini-reviews help describe these programs for those of you that didn't see them. I will continue to try and do this type of review for tuture editions of the newsletter. If you have any comments or would like to order these programs, please let me know.

Bruce Winter

FROM THE MAILBOX

A review of Computer Wars; differences between ED-ASSM and MINI-MEM assembly language programs. (SNUGLETter, June 1987).

Reprint of a comprehensive description of the new Myarc 9640 computer. (SFV 99ER TImes, June 1987)

Transferring data from a basic program to Multiplan; Utilizing the MERGE format; a list of XB enhancements included in the Super Extended Basic module from Triton. (Byte-Line, Decatur 99ers, June 1987)

Tips for beginners (filing system hints); TI Writer Part 10; a list of vendors who sell TI-related products. (West Penn 99'ers Club, June 1987)

Hardware review of the new Myarc 9640 computer. (Club 99, June 1987)

TI Artist Font format; XB screens converted to TI Artist; examples of using TI Artist instances in word processing; review of procedures for loading files from disk and cassette; review of a new adventure game "Legends". (Cleveland Area 99-4A Users Groups, June 1987)

Tutorial on the C language; Basic tutorial on HCHAR, VCHAR; Review of the Ottawa Faire; How to put 32K memory expansion on the 16 bit bus; a review of XBASHER, a program designed to speed up any XB program. (Forest Lane TI User Group, June 1987)

ASSEMBLY LANGUAGE SOUND PROGRAMMING

My first reading of the Editor/Assembler chaper on sound gave me the ominous impression that I would have to work at the bit level in binary. Happily, due to the unique relationship between hexadecimal and binary, this is not true. Going down to the nibble level (half a byte) in hex is all that is necessary. (Example: In the hex number >9B, the left nibble is 9 and the right nibble is B.)

The following charts show the sound callouts in Hex nibbles.

#1 Code	Function
>8	Tone frequency of generator #1
>9	Tone attenuation of generator #1
>A	Tone freq of gen #2
>B	Tone atten of gen #2
>C	Tone freq of gen #3
>D	Tone atten of gen #3
>E	Noise control
>F	Noise attenuation

The chart #1 nibbles will be the left nibble of byte #1 in the case of tone frequencies, and the left nibble of the one byte used for noise control and attenuations.

To get the tone frequency nibbles, put the least significant nibble in the right half of byte #1 and the two most significant nibbles in byte #2.

The attenuation nibble goes in the right side of that byte. See chart #2 for data.

#2 Nibble value in hex:	>1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
Attenuation in DB:	2	4	6	8	10	12	14	16	18	20	22	24	26	28	30

Noise control data is as follows:

#3 Shift Rate	Periodic Noise Code	White Noise Code
6991	0	8
3496	2	A
1738	4	C
same as gen #3	6	E

Finally, I feel I should warn you about the example in the second paragraph on page 316. This example reminds me of the story I heard in my short six month college career about three math teachers. If professor Jones gave you an equation to use, you probably could figure out how he got it in about a half hour. If professor Smith gave you one, it would take a couple of days. If professor Brown gave you one, you would never figure it out because it was wrong! So is this example. The left nibble should be an E per page 314 and the right nibble should be an A per the paragraph right above it.

John Johnson

Improved Video

by, Bob Lawson

In my travels through the Texas Instruments Manuals, specifically the TMS-9918,28,29 Manual, I read,"The load resistor (RL, pin 36 to ground) defines the sharpness of the edges on the video signals. A lower resistor value gives faster fall times and a sharper picture." Hmmm! I don't remember any 330 ohm resistors.

Well, I pulled out the "TI Console and Peripheral Manual, and sure enough, R212 pin 36 to ground was 560 ohms per the schematic. The next step was to check out a console, and well you guessed it, R212 was 560 ohms, not 330 ohms as recommended in the TI Manual!

Next step was to try some different value resistors, 330 ohms seems to be about the best common value resistor to use. I wonder why TI chose to use 560 ohms. I did find one old TI Manual which recommended 390 ohms (1979), but they're sometimes hard to find in 1/4 watt. This 30 cent change gives about a 40%, that's right, I said 40% improvement in the picture. The improvement is so good, you'll wonder where the WHITE SHADOWS WENT.

EDITOR'S NOTE: Some of you may become confused by the designation " R212 pin 326 to ground", in the second paragraph above.

There are always differences between the hardware you are using and the schematics that you are referencing. Bob is giving you the most commonly use console layout in the drawing to the right. If your console does not match, follow the pin 36 from the VDP chip, through two devices called inductors to the resistor to ground. Replace that resistor with a 330 ohm resistor.

J.F.W. (West Penn 99'ers)