REMarks® EXPANDING 99/4A HORIZONS

Volume 2 Number 4

PRESIDENTS MESSAGE

We would like to thank you for the tremendous number of positive responses that we have been receiving. We are certain that this is a result of the implementation of super-fast service and the aquisition of new, highly sophisticated recording equipment. Continuation and perfection of this super-fast service and updating our software library will have the utmost of priority in the future. The testimony that we have received clearly indicates that our fast, reliable and incredibly low cost service is second to none. We sincerely hope that you enjoy and benifit from our services like so many of these satisfied members have attested to.

Among new projects for the future is a large catalog expansion which will arrive with our next newsletter. In the past, we have noticed that with each succeeding expansion, programs have steadily become more and more complex and sophisticated. This is indicative of the fact that the 99/4A community has become more and more sophisticated. It certainly shows in our upcoming catalog expansion, and we hope that this trend will continue. In order to make exchanging an easier process, an article describing our revised Five for One Exchange policy has been included in this newsletter. If you program and wish to make an exchange, please read this article carefully.

Finally, we are now offering free programs for current members that can recruit new members to The 99/4A Program Exchange. With the fantastic benefits of our Users Group, that task shouldn't be difficult at all! Information on this special offer is on the lower portion of this page and on the Promotional Offer form enclosed along with this newsletter. We encourage you to participate in this program, as it will benifit you both directly and indirectly. The direct benifit is the free software and the indirect benifit is the overall expansion of the Users Group resulting in an even greater number of quality programs being available at the lowest possible cost.

PROMOTIONAL OFFER

The 99/4A Program Exchange is pleased to announce a new promotional offer to its members. Simply find us a new member, and we'll send you **five free programs!** Enclosed you will find a form that was designed specifically for this promotional offer. The reverse side of this form has been printed in the event that you find more than one new member. Please note the following information:

First, all required information must be filled out. Please print neatly and double check for accuracy. Second, the membership fee for the new member must be enlosed along with the form [unless he or she wishes to charge their Mastercard or Visa.] Finally, only use the Promotional Offer form enclosed with this newsletter.

It's as simple as one - two - three! Simply fill out the form, enclose payment for te new membership and mail it out. We'll ship out the membership materials and the free programs immediately. With the tremendous number of 99/4A owners out there, you must know a fellow 99'er that hasn't joined up yet. So don't delay, find a new member today! It will benifit you and the entire Users Group, not to mention the new found member.

PROGRAM REVIEW

Title: Piggy Bank
Author: Gerald Heine
Catalog Number: 4040
Language: T.I. BASIC
Type: Education/Money Addition
Requirements: Speech Synthesiser & Terminal Emulator II

DOCUMENTATION

The rules for game are displayed with the title screen. They are concise and understable.

GRAPHICS AND OPERATION

On the top of the screen is a rectangular block which displays up to five different sums of money. The shapes, sizes and colors of the money are delightfully programmed. The object is to add the displayed sums and enter the result into the space provided.

The center of the screen displays a piggy bank with a space which displays the accumulated total of the different money problems. The object is to save $10.00 in the bank. When the sums of a problem are totaled and the correct amount of money is entered, a short musical fanfare greets the user. The total accumulated in the bank is then displayed and the computer announces the answer to the problem. The user then continues to another problem. If the entry is not correct, the computer will give the user another chance. Otherwise, the program will display the correct total and proceed to the next problem without adding to the accumulated total in the piggy bank. When you reach the $10.00 objective, you win and are rewared with the piggy bank flashing colors and an announcement by the computer of the users success.

COMMENTS

We feel the program will keep the interest of the youthful user. It is an excellent way to teach money counting with randomly pennies, nickels, dimes, quarters, half dollars and dollar bills. Other important values include the concept of counting change and saving money.

PROGRAM REVIEW

Title: Fireball
Author: Cosmic Computer Corp.
Catalog Number: 4008
Language: Extended BASIC
Type: Arcade style educational
Requirement : Speech Synthesiser

DOCUMENTATION

Excellent text throughout the program makes it exceptionally user freindly. Clear, consise operating rules are given.

GRAPHICS AND OPERATION

The program begins in deep, dark outer space with stars and fireballs passing by your command screen as you navigate to the doomed planet Tara in a far away galaxy. Upon arrival, you find a futuristic city that you must defend with your missiles against falling meteorites. The usage of graphics is superb. All around fantastic graphics effects make this one of our best Extended BASIC programs.

Your object is to amass 350 points to save the city. The user may chose any one of three levels - beginner, daring or very difficult. You also have a choice of addition, subtraction and multiplication. A city skyline appears similiar to New York and a problem appears as a meteor starts to fall. If you answer the problem correctly [and quick enough!] you earn your points and a missile is fired that explodes the meteor. If answered too late or incorrectly, part of the city is destoyed leaving ruble in place of sky scrapers. The skyscapers and fireballs are realistic and quite professional. The explosions are super. Speech and sound are polished and appropriate.

COMMENTS

Fireball is a polished program that will keep the interest of the person learning his or her basic math skills. You will have to be really quick [not to say clever] to save the city when playing the most difficuly level. We feel this program is an excellent mix of education and gamesmanship.

HIGH RESOLUTION PLOTTING

The 99/4A Program Exchange has received quite a few inquiries regarding the High Resolution Plotting subroutines contained within our catalog. Contrary to many beliefs, these are not stand alone programs. They were designed for high resolution independent point plotting [256 by 192 pixels.] Our routine was one of the very first High Resolution Plotting routines available and is probably the fastest and most efficient one designed to operate in BASIC or Extended BASIC for the 99/4A. We have noticed several times when programmers have blatantly copied the routine and quite inappropriately given themselves the credit for it. Below is a line by line description of the routine and a small sample program:

1: Lines 1 through 10 are 'outside' of the routine. This line shows how the first use of CALL HPLOT initializes the routine for use with the first parameter representing the color of the pixels [points on tne screen] and the second parameter representing the background color of the screen. In this case, the pixels are black (2) and the screen is cyan (8). Any further use of CALL HPLOT 'outside' of the routine will plot a point on the screen dimensions of 256 by 192 independent pixels. Do not go out of range - 0 to 191 for row [first parameter] and 0 to 255 for column [second parameter.]

2: This line is optional. Keep this line if you have Version 100 Extended BASIC and the memory expansion. Otherwise, delete the line. You can figure the version of your Extended BASIC module by typing CALL VERSION(X):: PRINT X while in Extended BASIC.

110: Tests to see if the initialization portion of the routine (120 to 230) has been already accessed during the current RUN. If it has, the computer jumps to the plotting portion of the routine (240 to 290).

120 to 130: Sets up an array that acts as a pointer for the sixteen character string in the CALL CHAR statement. The computer uses this array to determine which digit in the sixteen character string must be changed for the definition or re-definition of a character.

140 to 170: Sets up an array which contains all possible replacements for the digit in the sixteen character string which is to be changed. There are sixteen possible current values for the digit and four possible bit changes (0 to 3), thus H$(16,3).

180 to 190: Sets up memory block for the 112 possible characters. An array was chosen over CALL CHARPAT to increase execution speed. The leading and trailing hyphens allow for quicker and easier access to the string functions.

200: HEX$ is used for reference to the sixteen hexadecimal digits. ASCII is used to reference the next character to be redefined.

210: Filling the screen with spaces is very important for this routine to operate properly. The computer will only plot properly on character 32 [in which case the computer will define and display a new character] or characters previously defined by the routine [not characters defined by the programmer using CALL CHAR.]

220: This line is absolutely unneseccary. It only serves to slow down the initialization process. We reccomend that you delete this line completely. A line of this sort would only be necessary if the routine used a CALL CHARPAT method for obtaining the sixteen character pattern identifiers [see lines 180 to 190 above.]

230: Sets flag variable V to 1 so that the initialization procedure is not repeated in the same RUN. The computer then exits to the 'outside' or 'main' program.

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240: R and C are the character row and column where the new pixel resides. These values are used for CALL HCHAR and CALL GCHAR. R1 and C1 are important values used for computing which of the four bits in the hexadecimal digit must be changed and which of the sixteen characters in the CALL CHAR string must be changed.

250: Scans a position on the screen and determines if a new character must be defined or if a character currently on the screen must be re-defined.

260: The character to be changed in the sixteen character string is computed and stored in the variable D.

270: Not as complicated as it looks. New hexadecimal digit is computed and replaced [based upon previously computed values.] The appropriate character is now redefined using the new string.

280: The character is displayed [only has significance if the computer is displaying a new character.]

290: Hyphens are placed around the sixteen character string and the computer returns to the 'outside' or 'main' program.

The following is a short program that is an excellent example of the capabilities of this routine. It will plot a series of sign waves on the screen. Please note that the High Resolution Plotting routine does not check if the computer is going out of bounds [Extended BASIC can only access character 32 through 143] and error will result if it does. Therefore, the programmer must have a proof in the program to prevent an error from occuring. A good idea is to use ON ERROR and a error subroutine. Be sure to load High Resolution Plotting(XB) first and delete all lines prior to 100. When you use the routine with your own programs, you'll probably want to RESequence the routine starting at a greater line number [be sure to delete all lines prior to 100 before RESequencing.]

```
10 CALL HPLOT(16,2)! SETS UP ROUTINE AND COLORS
20 ON ERROR 70 ! CHECKS FOR OUT OF BOUNDS
30 ROW=10 :: FOR X=0 TO 50 STEP .25
40 COL=INT(120+50*SIN(X))
50 CALL HPLOT(ROW,COL)! PLOTS A POINT ON THE SCREEN
60 ROW=ROW+1 :: NEXT X
70 GOTO 70
```

PROBLEMS?

If you experience a problem loading a program, please read the information page in our software catalog. This page covers just about every possible problem that may occur while loading or operating a program. However, if you received the wrong number of programs or you are absolutely sure that the problem can't be solved with the information page, please write us and we will promptly give you a solution or replacement programs. Do not send cassettes or diskettes back. If you require replacement programs, we will send you a new cassette or diskette promptly.

NEW TELEPHONE NUMBER

(2 1 3) 3 2 6 - 6 6 2 1