(006) 8406

BAYOU 99 USERS' GROUP
P.O. Box 921
LAKE CHARLES, LA 70602

May 30, 1984

Hello Neighbor,

To the prairies of Western Canada from the swamps of South Louisiana, the message of 99 Power is still loud and clear. It sounds as though you have an active group in Edmonton. The Bayou 99 Users' Group will soon be one year old with two special interest groups: Console Basic and Extended Basic. A few of our members meet to learn FORTH together and we also have a few Assembly Language enthusiasts.

Presently the Basic group is helping conduct instruction classes for newcomers to computing. We believe the 99/4A will remain the best and most versatile home computer available for several months and considering cost, for several additional months. FORTH capabilities continue to amaze each of us and we are just scratching the surface.

As stated in our Newsletter, permission is granted to reprint articles in the BAYOU BYTE, with appropriate credits, to all User Groups granting reciprocal privileges. We are pleased to exchange Newsletters. The BAYOU BYTE is published monthly with the right reserved to suspend printing during hurricanes. Let's work out a one-for-one exchange with our libraries.

Congratulations to those Oilers for their winning of the Stanley Cup.

Sincerely,

Roger Hickerson

Roger Hickerson, President
BAYOU 99 USERS' GROUP

RNH/dmh
Attached: June BAYOU BYTE

VOLUME NO. 2 ISSUE 5 JUNE 1984

Bayou 99 User's Group, P.O. Box 921, Lake Charles, La. 70602

BAYOU BYTE

Price One Dollar Distribution: 150 copies

MEETING NOTICE

The June meeting of the Bayou 99 Users' Group will be at 7:00 P.M. June 14th at the Nelson Elementary School. Anyone interested in learning to use the capabilities of the 99/4A is invited.

PRESIDENT'S LETTER

The future has taken shape. With the Federal Trade Commission looking on, TI is now completely out of the Home Computer business. Well, almost out of it. Texas Instruments will no longer manufacture any peripherals or software. At our last meeting, John Miller, of Computer Corner, told us how TI has cleared their stocks of software. Distributors were asked to place their orders for the rest of 1984 and in some cases shipments were made on consignment with the dealers able to return any unsold merchandise anytime they chose to discontinue the line. Many multiple outlet firms such as Sears declined to take on any more TI products. Sears stated they were concerned with possible price cutting by other dealers.

In answer to my letter to Texas Instruments, Carl Grundlach replied that Triton Products Company "has acquired all the TI software inventories not purchased by retailers". It is expected that Triton will also acquire any of the stocks returned by dealers between now and the end of '84.

In reply to other questions such as, "Will the market place ever see the 99/8?"; "Will manufacturing rights for Extended BASIC, Editor/Assembler, p-Code, etc. be obtained by a third-party manufacturer?" The answers were "Many of the questions...deal in areas that are being covered by contractual negotiations. Until such time as negotiations are complete, it would be unethical to speculate on them". In answer to my reference to TI owners receiving the "mushroom treatment", Mr. Grundlach stated he assures us "that nothing is being withheld.....as licensing agreements, third-party negotiations, and additional support arrangements are complete, that information will be available".

What does all this mean? For the present, TI software, with a few exceptions should be in good supply. We can probably expect some price cutting in educational and entertainment software, while the most popular items will remain firm at the prices seen in the Triton catalog mailed to TI users. And, unless agreements are soon reached for third-party manufacture of Extended BASIC and Editor/Assembler command modules, these will disappear.

What should TI owners do? I don't think anyone can say for sure, but those 99/4A owners with Extended BASIC cartridges can enjoy the increase capabilities provided immediately and add other items from third-party producers. Remember, the 99/4A has no equal among the under $500 computers on the market today.

With the summer Consumer Electronics Show just a few days away, we may obtain a better view of what the future holds. Will there be a 99/8 in the future and will CorComp's 99/64 be available for this years Christmas season?

EDITOR'S COLUMN

The full capabilities of the TI-99/4A cannot be tapped when programmers are restricted to using console BASIC. The power of console BASIC is denied the additional RAM available with the 32K memory expansion and graphics programming only available to the user of Extended BASIC, FORTH, Pascal, and Assembly Language. The smooth three-dimensional motion of several sprites moving independently and access to the 32K memory expansion are capabilities all home computer enthusiasts will want to explore as they improve their skills.

It is not certain that these alternates will continue to be available. The Extended BASIC and Editor/Assembler command modules are no logner in production and will become increasingly difficult to find. TI has said they will encourage third-party software products, but no one has yet acquired the manufacturing rights for these command modules. Without either of these cartridges the versatile TI-99/4A will be severely handicapped.

Most owners of Home Computers must examine the expansion of their systems with care. Costs for peripherals, software, and accessories can soon increase beyond the resources of the individual's pocketbook. However, a relatively modest amount will obtain an Extended BASIC Module and an Editor/Assembler Module costs even less. With either or both of these Command Modules, the 32K memory expansion can be added later. Several third-party owners produce quality memory expansions, P-Boxes, RS-232, Disk Controllers and Disk Drives for the next step in expanding your system.

WIDGET
R. Hickerson

I have very recently acquired the Widget Cartridge Expansion Board marketed by Navarone Industries. My unit was purchased from Home Computer and Software Sales. The Cartridge Expander slides into the game (command module) port. Three sockets are available for your favorite command modules and a slide switch is provided for your use in selecting the module you want to use. A reset button is also provided which takes you to the Title Screen when you need to use a different command module.

The convenience in having the command modules ready for use with a flick of the three-position slide switch is worth the price. The reduced wear and tear on the 99/4A command module slot could well extend the life of the computer.

Hunt-and-peck keyboard operators may find the length of the Widget noticeable as they key imputs on the right side of the keyboard. Touch typists will have no problem since their right hand will remain over the keyboard and will not notice this obstruction. Another problem will arise when you put your dust cover on the console. You will need to purchase a new cover or be content with draping the cover over the keyboard the best you can.

SHIFTING INTO FORTH

Now that you have your FORTH disk and have read the instruction manual and "Starting Forth" by Leo Brodie, or another introductory text,you are ready to put it all to work. I hope the first thing you decided to do was to make a back-up copy of your disk. If you used a single-sided copy disk and the Disk Manager cartridge, you should have been able to copy the Forth disk without any problem. Two disk drives saves the 8 or 9 trips with each disk which is required when only one disk drive is used. It is possible to copy onto double-sided disks; however, some changes are required to Screens 3 and 39. This will be covered later.

With your original FORTH disk safely stored away, the Editor/Assembler module in the console and your copy of the FORTH system disk in Drive #1, choose the Editor/Assembler option from the title screen and then Option 3, "Load and Run" from the Editor/Assembler menu. The "Load and Run" option will request a filename and the correct reponse is: DSK1.FORTH. From now on you will refer to your disk drives starting with Drive #0, Drive #1 and so on.

If you have a disk formatted with the Disk Manager you can skip this paragraph. Disks may be formatted in FORTH. It will be necessary to load -SYNONYMS from the list of load options which appeared on your screen. Just type in -SYNONYMS (don't forget the hyphen) and enter. When loaded, FORTH will display OK on the screen and a flashing cursor indicating FORTH is ready for your next entry. If you make an erroneous entry, FORTH will repeat the last word followed by a question mark. After receiving your OK and the flashing cursor, place your unformatted disk in Drive #1. Next, type

```
0 FORMAT-DISK (ENTER)
```

This will initialize the disk in Drive #1; A "1" would have initialized any disk in Drive #2. Now, replace your formatted disk with the FORTH disk.

SCREENS 4 and 5, containing error messages, should be copied from the System Disk to our FORTH disk. The FORTH words are in the RESIDENT vocabulary, so copying may proceed before selecting an option from the System Menu. With the System Disk in Drive #1, enter the following statements:

```
EMPTY-BUFFERS (ENTER)
FLUSH  (ENTER)
4 BLOCK DROP UPDATE (ENTER)
5 BLOCK DROP UPDATE (ENTER)
```

Now remove the System Disk and insert your FORTH disk.

```
FLUSH (ENTER)
```

Your FORTH disk now contains SCREENS 4 and 5; remove your FORTH disk and reinsert the System Disk. Type -EDITOR and ENTER. Be sure to wait for the OK before going any further. When you receive the OK, remove the System Disk and insert your FORTH disk. Now select any screen number from 6 to 90 for your program. If you selected SCREEN 65, for example, enter:

65 CLEAR

Then, enter: 65 EDIT

SCREEN 65 will now appear on your screen with the character count across the top and line numbers down the left side. The cursor will be on line 0 ready to begin entering or editing a program.

The following program is provided without explanation at the present to illustrate some of the features of FORTH. A similar program can be found fully explained in STARTING FORTH by Leo Brodie, pages 12 and 13. The BAYOU BYTE will publish the best improved program it receives. Here's your chance to use your skills -- there are several improvements which will shorten the following program using the same type of instructions.

```
SCR #155
  0 ( TEST PROGRAM BAYOU 99 U.G)
  1 DECIMAL CLS : STAR 42 EMIT ; : 3STAR  3 0 DO STAR LOOP ;
  2 : 4STAR 4 0 DO STAR LOOP ; : MARGIN 6 SPACES ; : 2SPACE 2 SPACES
  3  ; : 3SPACE 3 SPACES ; : 4SPACE 4 SPACES ; : 2SS 2SPACE STAR ;
  4 : 3SS 3SPACE STAR ; : 4SS 4SPACE STAR ; : MS MARGIN STAR ;
  5 : 1LINE     MARGIN 3STAR 3SPACE 2SS 4SS 3SS
  6             3SS  STAR  3SS   2SS CR ;
  7 : 2LINE     MS  2SS  3SS  SPACE  STAR 4SS
  8             SPACE STAR 3SS  2SS 2SS 2SS CR ;
  9 : 3LINE     MS  2SS  2SS 3SS 4SS
 10             4SS  2SS  2SS 2SS  CR ;
 11 : 4LINE     MARGIN 3STAR 3SPACE 4STAR STAR 4SS  4SS
 12             2SS  2SS  2SS  CR ;
 13 : 5LINE     MS  2SS  2SS  3SS 4SS
 14             4SS  2SS 2SS  2SS CR ;
 15 156 LOAD
```

CONTINUED

```
SCR #156
  0 ( PAGE 2 TEST B99UG)
  1 : 6LINE     MARGIN 3STAR 3SS  3SS  4SS  3SPACE
  2             2SS  STAR 4SS  STAR CR ;
  3 : 7LINE     MARGIN MARGIN 3SPACE 3STAR 4SPACE 3STAR CR ;
  4 : 8LINE     MARGIN MARGIN 2SS 3SS 2SS  3SS  CR ;
  5
  6 : 9LINE     MARGIN MARGIN 3SS  3STAR 3SS  3STAR CR ;
  7 : ALINE     MARGIN MARGIN 3SPACE 3SS MARGIN  STAR CR ;
  8
  9 : BLINE     MARGIN MARGIN 3SPACE 2SS MARGIN  STAR CR ;
 10
 11 : CLINE     MARGIN MARGIN 2SPACE 3STAR 4SPACE 3STAR CR ;
 12 : FIGURE    CR 1LINE 2LINE 3LINE 4LINE 5LINE 5LINE 6LINE CR CR
 13             7LINE  8LINE 8LINE 9LINE ALINE BLINE CLINE ;
 14
 15 FIGURE     FORGET STAR
```

After you have completed entering your program, type FLUSH and enter. Your program is now recorded on your FORTH disk in Drive #1.

The material in this article is contained in your instruction manual. Perhaps it will be a little easier to follow. To simplify getting started and to issue a challenge was the purpose of this article.

MEETING MINUTES

The May meeting started with everyone present introducing themselves followed by discussions on the availability of peripherals and software for the 99/4A. From the discussion it was apparent that all the members needs were available in the immediate area.

Following the discussion the BASIC class with Richard Mitchell and the FORTH group with Roger Hickerson met separately. Richard and the BASIC class discussed FOR...NEXT and IF...THEN statements while the FORTH group got into program structure, EDIT and LOAD functions.

-xxxxxxxxxxxxx-

NOTICE

Members are urged to patronize the firms whose advertisements appear in our Newsletter. All ads published have been paid by cash or services.

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Tim Hill	-	Equipment
Ted Baehr	-	Library

LAGNIAPPE

* The BAYOU BYTE does not usually list names of new members, but this month we want to welcome Kenneth Steed. Kenneth lives in McComb, Mississippi and has added a modem to his 99/4A equipment and is interested in accessing a BBS. If any of our readers can help, please contact Kenneth at 601/684-3775.

* We may have some news from the Summer Consumer Electronics Show being held in Chicago the first week of June by our next meeting. News of new computers with 99/4A compatability would certainly stir up some more third-party software activity.

* The Bayou 99 Users' Group has acquired a few Editor/Assemblers for members who want to start with FORTH. FORTH system disks and a bound copy of the instruction manual are available to members for $15. This package is available to non-members for $20 plus postage.

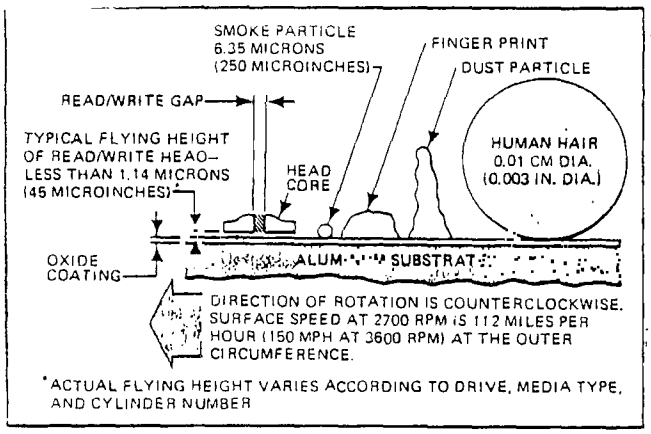
* Our Vice-President, Richard Mitchell, is making plans to introduce a newsletter to be available by subscription to 99/4A users nationwide.

* For those using electronic typewriters available from Brothers and others, continuous roll paper can be fed in place of single sheets. If anyone has questions on how to set up the paper feeding arrangement, contact Mr. Lowery at our next meeting. He may have solved the skewing problem as the paper is advanced before the next meeting.

* We have a few more CALL LOADS thanks to the Atlanta 99/4A Computer Users Group and their publication "CALL NEWSLETTER". Don't forget CALL INIT and CALL LOAD before the location, value in parenthesis:

(-31962, 255)	Restart Extended BASIC; will load and run a program called Load on the disk in Drive #1.
(-32116, 4)	Enters BASIC from Extended BASIC WITHOUT loss of the program in memory.
(-32730, 32)	Returns display to the Title Screen (I have been using this one at the end of my programs -Ed.).

* Keep those drives and disks clean, free of dust and fingerprints. The following illustration applies to hard disks, but the advice is good for all disk drives even at 300 rev/min.



* The Library Committee is working on a "best program" contest to be run in the near future. A Novice Programmer category and Best Program Idea is expected so that all members can participate.

-xxxxxxxxxxxx-

-xxxxxxxxxxxx-

THE ADVANCING PROGRAMMER
By Richard M. Mitchell

Last month we left off with a discussion of user-friendly screen graphics. Continuing in that vein, this month we will concentrate on user-friendly programming as related to displaying numbers.

Numbers should be displayed in a manner that is easy to read. Two factors are important. First, the decimal points should align vertically. Secondly, the number of digits to the right of the decimal point should be equal for all numbers displayed. In EXTENDED BASIC, these two requirements are easily accommodated by using PRINT USING or DISPLAY USING. The remainder of this article will show how to simulate PRINT USING in console BASIC.

Mr. Jim Peterson's fine article in last month's BAYOU BYTE showed how to align decimals vertically. I will add two features to his ideas. First, the capability of repeating the number of columns a number is to be tabbed without calculating the tab each time. Second, the establishment of a specific number of digits to the right of the decimal point. As the most popular use of this second feature is monetary calculations, such as for bookkeeping, our example will round and display to 2 digits to the right of the decimal.

```
100 CALL CLEAR
110 REM NUMBERS TO BE USED I
N THE PROGRAM
120 A(1)=1410.135
130 A(2)=25
140 REM LOOP TO ESTABLISH VA
LUES FOR LATER USE
150 FOR I=1 TO 2
160 REM ROUND TO NEAREST PEN
NY
170 A(I)=INT(100*A(I)+.5)/10
0
180 REM CHANGE NUMBER FOR DI
SPLAY WITH 2 DIGITS TO THE R
IGHT OF THE DECIMAL
190 A$(I)=SEG$(STR$(A(I))&".
",1,POS(STR$(A(I))&".","."),1
))&SEG$(STR$(A(I))&"000",POS
(STR$(A(I))&".","."),1)+1,2)
200 REM INSERT A COMMA FOR #
'S TO 999,999.99
210 IF LEN(A$(I))>6 THEN 220
ELSE 230
220 A$(I)=SEG$(A$(I),1,LEN(A
$(I))-6)&","&SEG$(A$(I),LEN(
(A$(I))-5,6)
230 REM SET THE COLUMN IN WH
ICH THE DECIMAL IS TO BE PLA
CED
240 C=14
250 REM ESTABLISH AND HOLD T
HE NUMBER OF COLUMNS TO TAB
A NUMBER
260 T(I)=C-LEN(A$(I))+3
270 REM LOOP FINISHED
280 NEXT I
290 REM DISPLAY YOUR NUMBERS
AS MANY TIMES AS YOU REQUIRE
AS FOLLOWS
300 FOR I=1 TO 2
310 PRINT TAB(T(I));A$(I)
320 NEXT I
```

Now, for MiniMemory Module (MMM) users, we'll go one step further. Key in the assembly language program in the MMM manual. The following is a list of corrections to that program:

Line No.	Typo	Correction
>7E60	MOVE	MOV
>7E90	A1	AI
>7E94	L1	LI
>7EC4	A1	AI
>7EC8	A1	AI

Going back to our example, you MMM users can now change line 310 to the following:

```
310 CALL LINK("DISP$",I,T(I),A$(I))
```

That gives you most of the capabilities of the EXTENDED BASIC statement DISPLAY AT...USING in as short a "run time" as I've yet accomplished in MMM BASIC.

Questions on this article can be presented at the next BAYOU 99 Meeting.

99 POWER
RICHARD

* TIGERCUB SOFTWARE *

156 Collingwood Av
Columbus, Ohio 432

(614) 235-35

TIPS FROM THE TIGERCUB #3

HELLO - IS ANYBODY ALIVE OUT THERE? I WONDER! ALMOST EVERY USER'S GROUP NEWSLETTER I'VE SEEN IS BEGGING FOR CONTRIBUTIONS OF MATERIAL TO PUBLISH. SO, I TYPED UP TWO PAGES OF TIPS FROM THE TIGERCUB, MAILED THEM TO 101 TI USER'S GROUPS, OFFERED TO SEND MORE TO ANYONE WHO SENT ME A COPY OF THEIR NEWSLETTER - AND RECEIVED EXACTLY 5 REPLIES! I'LL TRY ONCE MORE, BUT IF THIS EXPLORATORY MISSION DOESN'T DETECT SOME SIGNS OF TI LIFE OUT THERE IN SPACE, THAT'S IT!

IN CASE YOU WERE WONDERING, WHICH IS UNLIKELY, TIGERCUB SOFTWARE IS A KITCHEN TABLE ENTERPRISE, MOM & POP DIVISION - AND ALL THAT MOM DOES IS MAKE THE COFFEE. I HAVE 110 ABSOLUTELY ORIGINAL PROGRAMS TO SELL FOR ONLY $3.00 EACH, AND I WILL BE MOST HAPPY TO SEND YOU A CATALOG FOR ONE MEASLY DOLLAR WHICH IS REFUNDABLE ON YOUR FIRST ORDER. FRANKLY, BUSINESS HAS BEEN LOUSY - WHICH ALSO CAUSES ME TO WONDER IF THERE IS LIFE OUT THERE!

I'M JUST A ONE-MAN USER'S GROUP PRETENDING TO BE A BUSINESS - NOT A BUSINESS PRETENDING TO BE A USER'S GROUP!

HERE'S A LIFESAVER THAT WAS PASSED ON TO ME VERBALLY, SO I DON'T KNOW WHO TO CREDIT FOR DISCOVERING IT....IT'S 2 A.M., YOU JUST GOT THE LAST BUG OUT OF YOUR NEW PROGRAM, YOU SLEEPILY PUT A NEW CASETTE IN THE RECORDER, TYPE OLD CS1, HIT ENTER AND...OOOOH!, YOU MEANT TO TYPE SAVE CS1!! BUT ALL IS NOT LOST - JUST TYPE SHIFT E, HIT ENTER, GET AN IO ERROR MESSAGE, AND START OVER.

```
100 CALL CLEAR
110 RANDOMIZE
120 DATA TIGERCUB SOFTWARE,P
RESENTS,THE,CHAMELEON,SCREEN
BORDER,AND,WIPE,BY JIM PETE
RSON," ","        TOUCH ANY
KEY"
130 REM - M$ COMPOSED OF PA
IRS OF HEX CODES WHICH ARE M
IRROR IMAGES OF EACH OTHER
140 M$="1800665AC342DB667E18
8100995AC3A5E78142BD240B6600
81429924007E5AC3A53C241800FF
DB5AFF7EFF00991881006600 18"
150 RESTORE 120
160 REM - PRINTS TEXT FOR D
EMONSTRATION
170 FOR P=1 TO 10
180 READ A$
190 REM - TAB TO CENTER TEXT
200 PRINT TAB(15-LEN(A$)/2);
A$:" "
210 NEXT P
220 GOSUB 300
230 REM - PAUSE, WAIT FOR AN
Y KEY
240 CALL KEY(0,K,ST)
250 IF ST=0 THEN 240
260 GOSUB 440
270 GOTO 150
280 REM - SUBROUTINE TO PICK
PATTERN AND COLORS, DRAW BOR
DER
290 REM - RANDOMLY SELECT AN
Y STRING OF 8 SYMMETRICAL PA
IRS FOR HEX CODE, DEFINE CHA
RACTER
300 CALL CHAR(128,SEG$(M$,IN
T(43*RND+1)*2-1,16))
310 REM - RANDOMLY SELECT FO
REGROUND AND BACKGROUND COLO
RS BETWEEN 3 AND 16
320 X=INT(14*RND+3)
330 Y=INT(14*RND+3)
340 REM - IF BACKGROUND IS S
AME COLOR AS FOREGROUND, PIC
K ANOTHER
350 IF Y=X THEN 330
360 REM - DRAW THE BORDER
370 CALL COLOR(13,X,Y)
380 CALL HCHAR(1,2,128,31)
390 CALL HCHAR(24,2,128,31)
400 CALL VCHAR(1,2,128,24)
410 CALL VCHAR(1,31,128,24)
420 RETURN
430 REM - SUBROUTINE FOR ALT
ERNATING WIPES. VALUE OF T A
LTERNATES BETWEEN 1 AND 2
440 T=T+1-ABS(T=2)*2
450 ON T GOTO 470,510
460 REM - LEFT TO RIGHT WIPE
470 CALL VCHAR(1,3,128,768)
480 CALL CLEAR
490 GOTO 530
500 REM - TOP TO BOTTOM WIPE
510 CALL HCHAR(1,1,128,768)
520 CALL CLEAR
530 RETURN
```

OF COURSE, THAT ROUTINE CAN BE VARIED IN MANY WAYS. FOR EXAMPLE, TRY CHANGING LINE 300 CALL CHAR(123,"FF"&SEG$(M$,INT(43*RND+1)*2-1,12)&"FF") . THE BASIC ALGORITHM OF LINE 140 (WHICH CAN BE ANY COMBINATION OF THE MIRROR-IMAGE PAIRS) AND LINES 300-350, HAS ENDLESS USES FOR PUTTING COLORFUL GRAPHICS ON YOUR SCREEN. FOR INSTANCE -

```
100 REM - TIGERCUB RANDOM 8
ARS, BY JIM PETERSON
110 CALL CLEAR
120 RANDOMIZE
130 M$="0018243C425A667E8199
00A5BDC3DBE7FFFFE7DBC3BDA500
817E665A423C2418001824 3C425A
667E8199A5BDC3DBE7FFFFE7DB"
140 FOR CH=40 TO 152 STEP 8
150 CALL CHAR(CH,SEG$(M$,INT
(43*RND+1)*2-1,16))
160 X=INT(14*RND+3)
170 Y=INT(14*RND+3)
180 IF Y=X THEN 170
190 CALL COLOR(CH/8-3,X,Y)
200 CALL HCHAR(23*RND+1,31*R
ND+1,CH,10*RND+1)
210 CALL VCHAR(23*RND+1,31*R
ND+1,CH,10*RND+1)
220 Z=INT(10*RND)
230 IF Z<>0 THEN 250
240 CALL CLEAR
250 IF Z<>1 THEN 270
260 CALL SCREEN(INT(15*RND+2))
270 NEXT CH
280 GOTO 140
```

HEY, I JUST THOUGHT OF SOMETHING ELSE TO TRY WITH THAT CHAMELEON SCREEN BORDER AND WIPE. TRY CHANGING -

```
250 IF ST=0 THEN 220
```

A TIP FOR BEGINNING PROGRAMMERS: DON'T USE CHARACTER SETS 15 AND 16 (ASCII CODES 144-159) UNLESS YOU REALLY NEED TO. AND IF YOU USE MULTIPLE COLONS :: AS PRINT SEPARATORS, PUT A SPACE BETWEEN THEM : : : THEN, WHEN YOU GET EXTENDED BASIC, YOUR PROGRAM WILL RUN WITHOUT MODIFICATION IN EXTENDED BASIC, AND USUALLY FASTER AND BETTER.

OUT OF MEMORY ...SO THAT'S ALL FOR NOW. YOU WON'T HURT MY FEELINGS IF YOU MENTION TIGERCUB SOFTWARE TO YOUR FRIENDS. I HAVE SOME BARGAIN PROGRAMS THEY MIGHT LIKE. JUST TELL THEM I'D LIKE A DOLLAR FOR MY CATALOG, TO COVER BANKRUPTCY COURT FEES.

THE PREVIOUS ROUTINE GENERATED RANDOM REDEFINED CHARACTERS WHICH HAVE 2-WAY SYMMETRY, LEFT AND RIGHT. THE FOLLOWING ROUTINE GENERATES CHARACTERS WHICH HAVE 4-WAY SYMMETRY AND ARE EVEN MORE INTERESTING, ALTHOUGH THE ROUTINE IS A BIT SLOWER.

```
100 CALL CLEAR
110 RANDOMIZE
120 DIM A$(16)
130 DATA 00,18,24,3C,42,5A,6
6,7E,81,99,A5,BD,C3,DB,E7,FF
140 FOR J=1 TO 16
150 READ A$(J)
160 NEXT J
170 FOR CH=40 TO 152 STEP 8
180 FOR L=1 TO 4
190 X=INT(16*RND+1)
200 B$=B$&A$(X)
210 C$=A$(X)&C$
220 NEXT L
230 CALL CHAR(CH,B$&C$)
240 B$=NUL$
250 C$=NUL$
260 NEXT CH
270 FOR S=2 TO 16
280 Y=INT(15*RND+2)
290 Z=INT(15*RND+2)
300 IF Z=Y THEN 290
310 CALL COLOR(S,Y,Z)
320 NEXT S
```

THAT'S THE ROUTINE. NOW, TO TRY IT OUT...

```
330 T=T+1
340 IF T>1 THEN 170
350 CH=40
360 TX=0
370 FOR X=1 TO 12
380 CALL HCHAR(X,1+X,CH,29-X
-TX)
390 CALL HCHAR(25-X,1+X,CH,2
9-X-TX)
400 CALL VCHAR(X,1+X,CH,25-X
-TX)
410 CALL VCHAR(X,31-X,CH,25-
X-TX)
420 CH=CH+8
430 TX=TX+1
440 NEXT X
450 GOTO 170
```

FOR A DIFFERENT EFFECT, TRY CHANGING.....

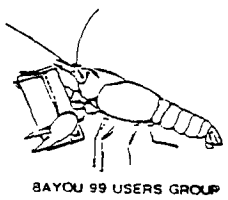
```
180 FOR L=1 TO 3
190 X=INT(8*RND+1)
230 CALL CHAR(CH,"00"&B$&C$&"00")
```

.....EXPERIMENT!

WILL THERE BE A TIPS FROM THE TIGERCUB #4? IT'S UP TO YOU!

HAPPY HACKIN'

JIM PETERSON



"NOTICE"

BAYOU 99 USERS GROUP
P.O. BOX 921
LAKE CHARLES, LA. 70602

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13	11	8	13

//

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POST OFFICE BOX 921
LAKE CHARLES, LA 70602

EDMONTON USER'S GROUP
P.O. BOX 11983
EDMONTON, ALBERTA, CANADA T5J-