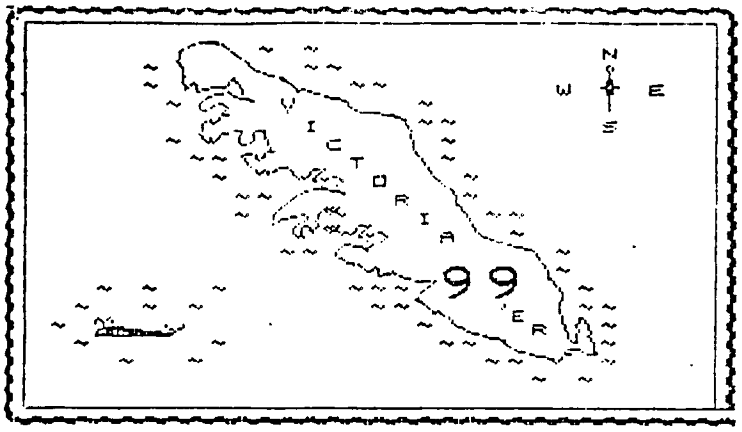

JULY 1984

FOR SALE :
From Peter Masterton @ 592-6245
1 TI99/4A CONSOL..... $75.00
2 Sets PROGRAM RECORDER CABLES.....offers

****

XBASIC SORT :

Here is a fast little sort for EXTENDED BASIC programers. It is a speedy sort with a rate of (N)^1.3

The array X must be dimensioned to the number of elements to be sorted +1. In this example 100 elements are sorted.

```
100 !****** SHELLSORT ******
110 DIM X(101):: N=100
120 D=2^INT(LOG(N)/LOG(2))-1
130 FOR I=1 TO N-D
140 FOR J=I TO 1 STEP -D
150 IF X(J)<=X(J+D)THEN 180
160 TX=X(J):: X(J)=X(J+D):: X(J+D)=TX
170 NEXT J
180 NEXT I
190 D=INT(D/2):: IF D>0 THEN 130
200 STOP
```

****

DISK FILE READER :

Are you tired of windowing the EDITOR/ASSM in files downloaded from BBS's ? The solution is to buy a printer and then you can read 80 columns on the page. Can't afford a printer you say but still can't stand to window your days away well here is a free solution for you. Simply type this program in and say goodbye to those window pains.

```
100 ! VARIABLE 80 FILE READER
110 CALL CLEAR
120 GOTO 140
130 DISPLAY AT(5.1):"DEVICE "" OPEN "" ERROR"
140 DISPLAY AT(20.1):"FILENAME ?  DSK1.MARS"
150 ACCEPT AT(20.18)SIZE(-10):FILENAME$
160 ON ERROR 130
170 OPEN #1:"DSK1."&FILENAME$.INPUT .DISPLAY .VARIABLE 80
180 ON ERROR STOP
190 DISPLAY AT(5.1):""
200 IF EOF(1)=0 THEN LINPUT #1:READ$ ELSE GOTO 240
210 COUNT=COUNT+1 :: DISPLAY AT(10.10):COUNT
220 CALL TICKER3(2,5,1.28.READ$)
230 GOTO 200
240 CLOSE #1
250 STOP
260 !RT=rate of letter shift,R=row,C=column.L=length of window.M$=string to writ
e
270 !max len of string       255 -(L+4). SIZE
280 SUB TICKER3(RT.R,C,L,M$)
290 IF TEMP$="" THEN TEMP$=RPT$(" ".28)
300 M$=TEMP$&M$&"  " :: FOR L2=1 TO LEN(M$)-27 STEP RT
310 CALL KEY(5,K.S):: IF S=0 THEN 340
320 FOR DELAY=1 TO 100 :: NEXT DELAY
330 CALL KEY(5.K.S):: IF S=0 THEN 330
340 DISPLAY AT(R.C)SIZE(L):SEG$(M$,L2,L)
350 NEXT L2
360 TEMP$=SEG$(M$.LEN(M$)-27.27):: SUBEND
```

TERMINAL EMULATOR IN FORTH (provisional)

****

```
( TERMINAL EMULATOR )        : <> = IF 0 ELSE I THEN ;
0 VARIABLE HOLDCHAR         50 VARIABLE KEYDELAY
0 VARIABLE BUFFET            : CL CLS 0 0 GOTOXY  ;
PABS @ 10 +  BUFFET  PABS @ 5 + FILE <>RS232 ( initialize
varaibles,make utilities,make perhiperal access block )
: CONVERSE  <>RS232 SET-PAB  1 REC-LEN  UPDT
  F-D" RS232.BA=300.EC.DA=7.PA=E      "      OPN  ;
( OPEN #1:"RS232.BA=300.EC.DA=7.PA=E",UPDATE,FIXED 1 )
: ?IN    4 2475 STCR 2 <  IF 0 ELSE 1 THEN ;
( check CRU status if character in port set true flag )
: ?OUT ?KEY DUP 0= IF DROP 0 ELSE 1 THEN    ;
( check for input from keyboard set flag )
: SET_TO_READ 7104 15 2480 LDCR 0 15 2464 LDCR ;
( restore CRU to ready to read )
: KEY_PAUSE KEYDELAY @ 0 DO LOOP ;
: WRITE  BUFFET C!  1 WRT SET_TO_READ ;
( write  1 character to RS232  )
: SHOW_CURSOR CURPOS @ VSBR HOLDCHAR ! 31 CURPOS @ VSBW :
: HIDE_CURSOR HOLDCHAR @ CURPOS @ VSBW :
( for flashing cursor )
: READ  RD DROP BUFFET C@ DUP 0= IF DROP ELSE  EMIT THEN :
( get character and print to screen )
: DISPLAY  CURPOS @ 919 > IF CL SET_TO_READ THEN ;
( if at end of screen clear screen and go to home )
: SETUP TEXT CONVERSE ;
( initialize to text mode . and open file )

: TERM  SETUP
BEGIN SHOW_CURSOR ?OUT  ( outgoing character ? )
IF  KEY_PAUSE WRITE     ( if yes the write to RS232 )
THEN  HIDE_CURSOR ?IN   ( incoming character ? )
IF  READ DISPLAY        ( if yes print on screen check display status )
THEN
?TERMINAL UNTIL :       ( check for break key if yes return to FORTH )
```

****

IN ADDITION -TEXT -CRU -FILE MUST BE LOADED IN YOUR SYSTEM

This program does not filter out unwanted control characters. I have not fully uncovered the workings of the CRU addresses in the RS232 card i have just applied a hacky trial and error method to the problem of the RS232 geting hung-up while waiting for a input which may never come. I do this by checking what appears to be the status nibble. I have also had some problems with timeing after a write opperation and again in a hacky manner have gotten around it with the code in SET_TO_READ this resets another 2 bytes on the CRU lines which seem to relate to RS232 readiness for send/receive. In a related timeing matter I have had problems whenever the screen scrolls in FORTH typically a I/O error would occur or characters would be lost at the time of scroll. In this version this is avoided by the word DISPLAY this checks the cursor position and when it nears the bottom line it clears the screen and returns the cursor to the upper lefthand corner.

On a side note this terminal will recognise both ctrl H and func S as the backspace. This has occured with no effort on my part as both of these key combinations have the same ASCII codes. The TERMINAL EMULATOR II does not recognize the func S as the backspace so they have purposely overridden the func S standard of the BASIC X-BASIC keyboard input editors.

Hopefully some of you will be able to unravel more of the mysterys relating to the CRU and the RS232. The TEII has many shortcomings for use with non TI bulletian boards and other computers. It is only with an easily flexiable termianl program that convenient communication with other systems.

****

MORE BUGS IN TI FORTH :

On screen #58 the definition for SSDT is wrong! If you use it you will crash your system ! Here is the correct definition.

```
: SSDT   ( addr--- ) ( Set Sprite Descriptor Table address )
  DUP ' SPDTAB ! 800 / 6 VWTR ( reset VDP register 6 )
  SATR 20 0 DO DUP >R D000 SP@ R> 2 VMBW DROP 4 +LOOP DROP
  VDPMDE @ 4 < IF SMTN 80 0 VFILL 300 ' SATR ! ENDIF
  ( initialize all sprites ) ;
```

In the example INTERUPT SERVICE ROUTINE in chapter 10 page 3 the code for the word DEMO is faulty. They forgot a DROP so at 60 interupts per second the stack overflows rapidly. To fix it change the last line to read.

```
    DROP DOWN ;
```

****

****

THINK ABOUT FORTH FOR YOUR NEXT GAMES PROGRAM :

FORTH offers speed total machine access mixed forth and assembly code ,easy debuging and interactive program segment development.
With FORTH you have avaible in GRAPHICS mode 256 custom characters
128 distinct characters for sprite definitions,32 sprites,32 color groups.
Including sprites 384 unique characters can be made compared with only 112 characters in EXTENDED BASIC.

****

THE TASK :

RUSS WATSON found the cleanest solution to the task of putting an X on the screen with one extended basic line. He used CALL HCHAR within a loop using the loop counter as the X,Y coordinates. This was much more efficient than my program which kept seperate counters for the X and Y values.

****

PROGRAM CONTEST :

Three entries were received for the program contest. The executive is now reviewing the entries and the winner will be announced in next months newsletter

****

WHY IS IT THAT MOST HACKERS CONFUSE HALLOWEEN AND CHRISTMAS ?
BECAUSE 31oct = 25dec .

****

STANDARD APPEAL FOR ARTICLES FOR THE NEWSLETTER :

Pleasssssssssssssssssssse send me something ,anything ! I know all your phone numbers and my phone has been repaired and my rabbit hopefully will let me keep it that way. So keep in touch. TONY BIGRAS 383-3946