West Jax 99er News

JUN-JUL 1989

The WEST JAX 99'ERS is a non-profit computer users group for the TI-99/4A Home Computer. NOT affiliated in any way with Texas Instruments. The club's mailing address is PO BOX 176 Orange Park Florida 32067.

MEETINGS are held on the Second and Fourth Tuesday of each Month in the auditorium of the Webb Library. It is located two lights west of Blanding Boulevard on 103rd Street. The first meeting of the month is the Business meeting with workshop time after adjournment. The second meeting is strictly workshop time.

OFFICERS

President...Rick Felzien.....(904) 772-9162
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Librarian.....Zach Ziegler.....(904) 389-2194

For newsletter suggestions and submissions, contact Rick Felzien.

This month we have the usual Mail Box column along with the Basic Assembler installment.

I have also included a reprint of one of my previous articles on the Text To Speech Disk origionally designed and marketed by Texas Instruments.

Note from the President and newsletter editor!

As much as we regret it, [redacted]. The paid [redacted] to where we cannot do it on a monthly basis. It is a shame that there is not a way to get the information about our existance to the many TI owners who do not know, short of spending a small fortune on an ad campaign to get the word out.

Cin-Day news Apr 89
1. Utilizing Merge format
(R. Petrocome)
2. Style a line
(Ed Machonis)

Vast news Apr 89
1. Sounds abound
(Unknown)
2. FormShop review
(Mike Marfisi

TI-Dings Apr 89
1. Tech Talk (The TI system)
(Mike Maksimik)

Kansas City 99er Apr 89
1. Sound Chip accuracy chart

The computer bridge Apr 89
1. Program teaches color code
for resistors.
(H. C. Hoyt jr)

Ozark 99er news Mar 89
1. TI keyboard repair
(Ramon Brundridge)

1. Streamer tape program
(Charles Good)

LITI users Apr 89
1. Resetting the CPU
(Origional John Willforth
re-write by Paul Mulvaney)

SFU TImes Apr 89
1. Kens Korner(TPA tutorial)
(Ken Gilliland)

VAST newsletter Mar 89
1. Elements of Basic
(Erie 99ers)
2. Sounds Abound(Turbo speech)
(Stephen Shaw)

QB Monitor May 89
1. Article on Spell Checker
(Ed Machonis)

Houston users Mar 89
1. Info storage on disk
(Unknown)

Houston users Apr 89
1. Quick reference list
(Puget sound 99ers)
2. Error code reference
(BBBB BBS Clinton, Md)

ROM newsletter Apr 89
1. TI bits
(Jim Swedlow)

Cin-Day news May 89
1. File types explained
(J. A. Neess)

LA 99ers May 89
1. Four-A talk(sevral reviews)
(Bill Gaskill)

SFV TImes May 89
1. Kens Korner(TPA tutorial)
(Ken Gilliland)

Cleveland Area 99ers May 89
1. Designing characters
(Paul Scheidemantle)
2. TI-Base tutorial
(Martin Smoley)

WordPlay Jun 89
1. Moonlight Sonata
(Kevin Noesner)
2. Printout of Setup(Plus!)
(Jack Sughrue)
3. User defined functions
(Steve Karasek)

QB monitor May 89
1. Debugging
(Jim Peterson)

VAST 99ers Jun 89
1. TI-Artist for the beginner
(Don McCalla-Evelyn Pacinda)

Cleveland area 99ers
1. Convert Artist instaces for
use in TI-Base
(Wesley Richardson)

The Computer bridge Jun 89
1. TetrIs (game program)
(Steve Karasek)

T H E B A S I C A S S E M B L E R #10 By Steve Peacock

40 COLUMN TEXT MODE

This month I will change my basic format (no pun intended) and not have a BASIC program to go with the Assembly program. The reason for this is that I am demonstrating how to use the 40 column text mode. There is no easy way, that I know of, to do this in BASIC.

In text mode there are 960 screen positions, numbered 0 to 959. The screen has 24 rows of 40 columns. The top left position is numbered zero, with the bottom right numbered 959. As you recall in the regular (graphic) mode there are only 767 positions.

In the text mode sprites can not be used and you can only have one color for all of the letters and one screen color. These colors can be any of the 16 standard colors that the TI can produce. To control the colors VDP write only register 7 is used. The left digit is the text color and the right digit is the screen/background color. Whenever you change the value of VDP write only register 7, you should copy the byte and place it at CPU address >83D4.

In the text mode, the letters are not made up of an 8 X 8 grid. They are only 6 X 8. The TI will automatically set up the new set of letters for you. In a later Basic Assembler we will learn how to redefine this new set.

To put the TI in the text mode bit #3 of VDP write only register must be set. Bits 0, 1, and 3 are also set. They are left set most of the time. The correct value to be written into VDP write only register #1 would then be 11110000 or 128 + 64 + 32 + 16 + 0 + 0 + 0 + 0 or 240d >F0.

When a key is pressed and you are using KSCAN the ASCII value is placed in the address >8375. This can then be moved into register 1, and printed on the screen. Any printable character can thus be printed on the screen. In this months program I have put in a check to see if the enter key is pressed. This is ASCII code 13d. If it has then the program jumps to a clear screen section. The program could also have a check for the arrow keys to move the print position to any part of the screen. This would be done by checking the codes for FCTN/S,E,D, and X, then adjusting the value of register 0 as needed (-1, -40, +1, or +40).

```
100 REM PROGRAM BA10B==>Basic Assembler #10 Basic Version
110 REM 40 COLUMN MODE
120 REM (C)1986 S. PEACOCK
130 PRINT "NO BASIC COUNTERPART FOR 40 COLUMN MODE."
140 END
```

```
*****************************  ********
*
*PROGRAM BA10A==>Basic Assembler #10 Assembly Version
*40 COLUMN TEXT MODE
*(C)1986 S. PEACOCK
*
*****************************************************************
       REF  VWTR,KSCAN,VSBW *REFERENCES NEEDED IN PROGRAM
       DEF  START           *START OF PROGRAM
START  LI   R0,>0719        *BLACK TEXT (>1) ON A RED (>9) SCREEN
**************************WRITTEN TO REGISTER 7. CHANGE THE 1
**************************AND 9 TO ANY COLOR YOU WANT.
       BLWP @VWTR           *WRITE THE INFORMATION
       LI   R0,>01F0        *>F0 (240d) PUT INTO VDP REG. 1,
**************************SETS TEXT MODE.
       BLWP @VWTR           *WRITE THE INFORMATION
       SWPB R0              *PUT VALUE IN VDP REG. 1 INTO THE
**************************LEFT BYTE REG. 0
       MOVB R0,@>83D4       *PUT IT IN >83D4
       CLR  @>8374          *CLEAR\
       CLR  R0              *CLEAR =SET UP KEYBOARD SCAN
       CLR  R1              *CLEAR/
       JMP  CLSCN           *JUMP TO THE CLEAR SCREEN SECTION
LOOP   BLWP @KSCAN          *BRANCH TO THE KEYBOARD SCAN
       MOVB @>837C,R1       *PUT STATUS BYTE IN REG. 1
       COC  @NOKEY,R1       *COMPAIR ONE CORRESPONDING=>LEFT BYTE
**************************OF REG. 1 AND THE VALUE IN NOKEY
       LIMI 2               *ENABLE    !VDP INTERRUPTS
       LIMI 0               *DISABLE   !(FCTN/QUIT WILL WORK)
       JNE  LOOP            *IF NO KEY HAS BEEN PRESSED JUMP TO LOOP
       MOV  @>8375,R1       *PUT THE ASCII CODE OF THE KEY PRESSED
**************************IN REG. 1
       CI   R1,13           *COMPAIR IT TO 13 (ENTER KEY)
       JEQ  CLSCN           *IF ENTER PRESSED, THEN JUMP TO CLEAR SCREEN
       MOVB @>8375,R1       *MOVE THE ASCII CODE OF THE KEY PRESSED
**************************INTO THE LEFT BYTE OF REG. 1
       BLWP @VSBW           *PRINT THE LETTER ON THE SCREEN
       INC  R0              *ADD 1 TO REG. 0 (THE PRINTING POSITION)
       CI   R0,961          *SEE IF THE LAST POSITION HAS BEEN REACHED
       JLT  LOOP            *IF NOT JUMP TO MAIN LOOP
       CLR  R0              *IF IT HAS RESET PRINT POSITON TO TOP LEFT
       JMP  LOOP            *JUMP TO MAIN LOOP
CLSCN  LI   R0,0            ***
CLRS   LI   R1,>2000        *CLEAR SCREEN SECTION
       BLWP @VSBW           *
       INC  R0              *PRINT A SPACE TO ALL 959 POSITIONS
       CI   R0,959          *
       JLE  CLRS            *
       JMP  LOOP            ***
NOKEY  DATA >2000           *DATA FOR THE COC
**************************IF THE LABEL YOU USE TO START YOUR PROGRAM
**************************IS PUT IN THE OPERAND SECTION, OF THE END
**************************INSTRUCTION, THEN YOUR PROGRAM WILL AUTO START
       END  START
```

The Texas Instruments Text-To-Speech Diskette

Review by
Rick Felzien
West Jax 99ers

The Texas Instruments Text-To-Speech software diskette contains four main program packages which are assembly language sub-routines, and one Extended Basic Program called "PHRASE" which allows you to utilize the assembly routines to experiment with words and phrases, as well as play with the use of special symbols for inflection.

The assembly language routines are used from Extended Basic programing via CALL LINK. These routines allow you to do everything that can be done with TE-II from basic and more.

The required equipment includes the following:

(1) TI Home Computer.
(2) TI Speech Synthesizer.
(3) Memory Expansion System.
(4) Disk controller and one or more Disk Drives.
(5) Extended Basic Command Module.

There is a routine listed in the documentation that allows you to load the assembly routines without running the Phrase program. Once they are loaded, you can, using CALL LINK, access the Speech Synthesizer to experiment with such things as, pitch, slope, breaks, and inflection while in Command Mode.

The documentation for the package is considerably better than a lot of TI's traditional packages. It includes some information that is not available in the TE-II manual, such as all Allophone codes and the stress point, break, and the pitch and slope change codes. It also shows some of the speech contouring algorithms in chart form.

The recent Grenial Traveler contains a program by Barry Traver called CALL/SAY and a utility by Paul Charleton called PAULC/UTIL which they recommend adding to the Text-to-Speech disk and will allow you to create files of new vocabulary dictionary words and even possibly compose speeches for your TI.

I also recommend typing in the sub-routine set from the Extended Basic manual for adding suffixes to the vocabulary words and adding it to your disk also. With all of the resident Sub-routines and the ones from the Traveler and the Suffix adding program, your Text-To-Speech disk could become a very powerful and useful software package.

The Text-To-Speech package is available from TEX-COMP for nine dollars and ninety-five cents +S&H. If you are at all interested in the powerful speech capabilities of your TI-99/4A, the package is well worth the price.