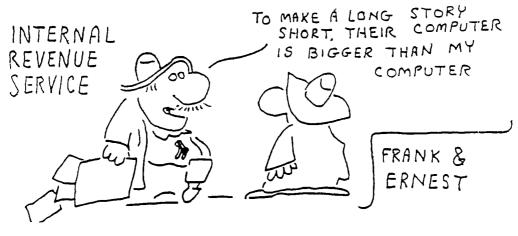


Computer Home Users Spotlight

a monthly publication of the Milwaukee Area 99/4 Users Group



1

Routine to put TE2 into 1200 BAUD by FAUL CHARLTON Routine requires Load Interrupt Switch

1. Assemble source code

1. Assemble source code
2. Load program with E/A option 3
3. Switch modules from E/A to TE2
4. Run TE2 normally with cursor in upper left hand screen corner
5. Press Load Interrupt Switch

* Load Interrupt Routine * to convert TE2 to 1200 BAUD

REGS ENTER E1	PROBLESS I FROM THE PROBLEM OF THE P	32 9LOADWP RESS RO E1 0 02, >1340 31 9CNTRL, 8 9INTVL, 8	EZ CNTRL INTVL RDR XDR *	RTWP BYTE BYTE DATA AORG DATA	RO, &LDADWP >83 1600/64 >1A1 >FFFC RESS
	LDCR LDCR LDCR	@INTVL.8 @RDR.11 @XDR.12	: LOADWP	DATA DATA END	REDE Enter

4122 No. Blenway - Wauwatosa WI 50222

327-0170 264-4735 President......Jarry Trinkl Vice-President...James Schroeder Treasurer......Phil Norton 462-9954 475-9028 Secretary.....Jim Steinhardt Librarians....E.J. VonDerEhe Fred Pabian 549-0593 Newsletter.....Sene Hitz Assembly SI5....lim Vincent FORTH Info.....Sens Hitz

Membership in the Milwaukee Area 99/4 Users Group is open to all interested in using, playing with, learning about or programming in the still-kicking ### Texas Instruments 99/4(A) Home Computer ###

Annual Dues...Individuals - \$10.00 Families - \$15.00

Meeting dates are the SECOND SATIFIAY each month in the lower level of WAUWATOSA E--INSS & LOAN 7500 W. State Street 1:00 til 4:00 P.M.

MIDS # Do you want your children to learn to play the piano, but can't afford one right now? Here is an inexpensive substitute: the TI-99/4A piano.

You play only the bottom three rows, essentially all of the letter keys. You can play

them with the shift key up or down. In one case you play whole notes, in the other one you play half notes, which repeat when you hold down the key.

The very bottom row plays noise tones when the shift key is locked down, very amusing to little children.

To keep the program simple, the screen is left blank. But that does not impede all you budding programmers to create some nice graphics to enliven this music program, and make it even more attractive to children.

This program was published in Mittinian, the Swedish newsletter for 99-ers, by an unknown author. The translation was done by Maurica E.T. Swinnen of the Washington DC Area 99-er Computer Club.

58 REM PIANO, NITTINIAN 84-2 188 CALL KEY(0,K,S):: IF S-8 THEN 188 118 IF K=45 THEN 188 128 IF K<44 THEN 188 ELSE IF K>46 AND K< 58 THEN 188 ELSE IF KORR AND KKRS THEN 1 138 IF KASE AND KKSE THEN 188 ELSE IF KA 36 THEN 200 ICHECK IF LOWER OR UPPER CAS E LETTER HAS BEEN PRESSED 148 IF K=44 THEN CALL SOUNC(-198,1568,8) :: GOTO 188 158 IF K=46 THEN CALL SOUND(-188,1768,8) :: GOTO 199 168 IF K=59 THEN CALL SOUND(-188,898,8): : GOTO 188 178 IF K=58 THEN CALL, SOUND(-188,1881,83 :: GOTO 188 188 IF K-68 THEN CALL SOUND(-128,-8,8):: GOTO 188 185 REM UPPER CASE LETTERS ASCII=65-)98 198 ON K-64 GOTO 218,228,238,248,258,268 , 278, 288, 258, 388, 318, 328, 338, 348, 358, 368 , 370, 380, 398, 408, 418, 428, 438, 440, 450, 460 195 RETI LOWER CASE LETTERS ASCII=97->122 288 ON K-96 GOTO 478,488,498,588,518,528 ,538,549,559,569,579,589,539,699,619,629 ,630,640,650,660,670,680,690,700,719,720 285 RETI UPPER CASE LETTERS-HALF TONES+NO ISE 218 CALL SOUNC (-128, 466, 8): GOTO 188 228 CALL SOUND(-128,-6,8):: GOTO 188 238 CALL SOUNG(-128,-1,8):: GOTO 188 240 CALL SOUND(-128,522,8):: GOTO 188 258 CALL SOUND(-128,156,8):: GOTO 188 288 CALL SOUND(-128,748,8):: GOTO 188 278 CALL SOUNG(-128,831,9):: GOTO 188 200 CALL SOUNG(-129,332,8):: GOTO 188 250 CALL SOUND(-128,311,83:1 GOTO 188 388 CALL SOUNC(-128,1189,8):: GOTG 188 318 CALL SOUNO(-128,1245,8):: GOTO 108 328 CALL SOUND(-128,1488,8):: GGTO 188 338 CALL SOUND(-128,-4,8):: GOTO 108

7

E

R

348 CALL SOUNG(-128,-5,8):: GOTO 188 359 CALL SOUND(-120,378,8):: GOTO 188 368 CALL SOUND(-120,415,8):: GOTO 180 378 CALL SOUND(-120,177,8):: GOTO 188 389 CALL SOUNO(-128,185,8):: GOTO 188 398 CALL SOUND(-128,554,8):: GOTO 188 488 CALL SOUNG(-128, 288, 8):: GOTO 188 418 CALL SOUND(-120,277,8):: GOTO 100 428 CALL SOUNG(-120,-7,8):: GOTO 188 439 CALL SOUNO(-120,139,8):: GOTO 188 448 CALL SOUND(-128,-2,8):: GOTO 188 458 CALL SOUND(-129,233,0):: GOTO 100 460 CALL SOUNG(-120, -3, 8):: GOTO 198 465 REM LOWER CASE LETTERS # WHOLE TONES 479 CMLL SOUNG(-188, 294, 8):: GOTO 188 488 CALL SOUND(-199,1175,8):: GDTO 188 450 CALL SOUNG(-100,988,0):: GOTO 100 589 CALL SOUND(-188,349,8):: GOTO 188 518 CALL SOUNG(-108,131,0):: GOTO 100 529 CALL SOUND(-100,392,0):: GOTO 100 538 CALL SOUND(-100,440,0):: GOTO 100 540 CALL SOUND(-100,454,0): GOTO 180 558 CALL SOUND(-100, 220, 0):: GOTO 100 368 CALL SOUNG(-100,523,0):: GOTO 100 578 CALL SOUNG(-100,587,0):: GOTO 188 588 CALL SOUND(-100,659,0):: GOTO 100 599 CALL SOUNG(-188,1397,8):: GOTO 198 689 CALL SOUNG(-188,1319,8):: GOTO 188 818 CALL SOUNG(-188,247,8):: GOTO 108 528 CALL SOUNO(-100,262,8):: GOTO 100 638 CALL SOUNG(-108,110,8):: GOTO 100 648 CALL SOUNG(-188, 147,8):: GOTO 188 558 CALL SOUNG(-108,338,8):: GOTO 108 668 CALL SOUND(-198,165,8):: GOTO 188 878 CALL SOUND(-188,195,8):: GOTO 188 688 CALL SOUND(-188,1847,8):: GOTO 188 650 CALL SOUND(-100,123,8):: GOTO 100 788 CALL SOUND(-188,888,8):: GOTO 188 718 CALL SOUNG(-188,175,8):: GOTG 188 729 CALL SOUNG (-188,784,8):: GOTO 188

HARRY NEW YEAR 1986

DOCUMENT PRINTER

By: George Cekis

420 END

The following extended basic program allows you to print out instruction or help files without using E/A or TI-Writer. Simply place the disk containing the files into your drive after loading the program. This program will scan the disk for DVBO type files and offers a menu selection for the files to be printed.

EDITORS NOTE: If you do not wish to type this program in, it will be available on the Disk of the Month.

```
100 DIM PN$(127)
101 REM RESERVE SPACE FOR MAX NUMBER OF FILES ON DISKETTE
110 DISPLAY AT (5,3) ERASE ALL: "ENTER DISK DRIVE WHERE
                                                       FILE IS LOCATED: 1"
120 ACCEPT AT (7,19) VALIDATE ("1234") SIZE (-1): N
170 CALL CLEAR
140 D$="DSK"&STR$(N)&"."
150 OPEN #1:D$, INPUT , RELATIVE, INTERNAL
160 INPUT #1:G$,G,G,G
161 REM READ RECORD #0 ON DISK WHICH IS DISK NAME ETC
170 I=1
                                                                         from WILL COUNTY U.G.
180 INPUT #1:A$, T, X, X
181 REM READ FILENAME, TYPE, SIZE AND # OF RECORDS NOT USED
190 IF LEN(A$)=0 THEN 231
191 REM TEST FOR LAST FILENAME
200 IF T=2 THEN PN$(I)=A$
201 REM TEST FOR DISPLAY/VARIABLE FILES, ONLY ACCEPT DV FILES
210 DISPLAY AT(I+3,3):I;".";PN$(I)
220 IF T=2 THEN I=I+1
230 GDTD 180
231 CLOSE #1
239 DISPLAY AT(23,3): "CHOOSE FILE TO FRINT BY #"
240 ACCEPT AT (24,3) BEEP VALIDATE (NUMERIC): CHOICE
241 F$=PN$(CHOICE)
260 D$="DSK"&STR$(N)&"."&F$
270 OPEN #1:D$, DISPLAY , VARIABLE 80, INPUT
280 DISPLAY AT(5,3) ERASE ALL: "PRINTER DECRIPTION"
284 REM INSERT DEFAULT PRINTER IN LINE 285
285 R$="R$232/2.BA=4800.DA=8"
290 DISPLAY AT(6.3):R$
300 ACCEPT AT(6,3)SIZE(-LEN(R$)):P$
310 OPEN #2:P$,OUTPUT
320 PRINT #2:"":"":""
330 LD=3
340 LINPUT #1:A$
350 PRINT #2:A$
360 LC=LC+1
361 REM SETUP PRINTER OUTPUT FOR 66 LINES PER PAGE, 3 BLANK LINES AT TOP
362 REM 55 LINES OF TEXT, SKIP PERFORATION
363 REM CAN BE DEFEATED BY FILES CONTAINING PRINTER CONTROL CODES
370 IF LC=58 THEN 380 ELSE 400
380 FOR I=1 TO 11 :: PRINT #2:"" :: NEXT I
390 LC=3
400 IF EOF(1)=1 THEN 410 ELSE 340
401 REM TEST FOR END OF FILE
410 CLOSE #1 :: CLOSE #2
```

POOR MANS DS-DD DISK CONTROLLER

or how to get 350% per drive using the TI disk controller card and 96 tps double side drives. (e.g. TEAC 55F, TANDON TM189-4)

The following code, when substituted for the existing DSR code, converts disk #1 and disk #2 into 40/80 track interlace mode and disk \$3 to 40/80 track non-interlace (single-side). The modification has been completely compatible with all software tested including P-System, Disk Manager, Editor/Assembler and BASIC. Note however that files can only be exchanged with "normal" format disks using the disk copy routines or DSK3.

Any Questions way be directed to the author at:

Andy Cooper 121 Clearview Drive Downington, Pa. 19335

Cosouserie 71816,1743 Delphi Andy 4828

from remoletten

CLR R7 :EXISTING CODE CI R1.1440 ;1440 IS MAX SECTOR # JHE \$+152 ; JUMP TO ERROR IF GREATER R1.1 :CHECK FOR SECTOR=0

JH \$5 ; JUMP IF NOT BL 0:4524

CLR RO

CB @2004C(R9),0248A6 ; COMPARE DRIVE # 10 3 \$18 ; JUMP IF 1 OR 2 JI

DIV 8>441E.RB ; IF DRIVE=3 USE 9 SECTORS PER TRACK

: IF SECTOR=0 THEN RESTORE

JMP \$28

\$16 DIV #3547C.Rb : IF DRIVE < 3 USE 18 SECTORS PER TRACK

\$28 SWPB 88

INV RO : RB MSE CONTAINS INVERTED TRACK #

:SET UP VOP WRITE BL 0:4614

HOVE RO. 8) FFFE (R15) STORE NEW TRACK #

MOVE RELESSIFE :WRITE TRACK # TO 1771 DISK CONTROLLER

CI RI.9 ; CHECK FOR SECTOR >8 (SIDE TWO)

Ji \$33

ΑI 81.-9 : IF >9 SUBTRACT NINE AND....

SBO 7

; SELECT SIDE TWO (HEAD 2) LI R7, 8:0180

\$38 SWPB RI

INV RI

MOVE RI. E) SFFC

JMP \$48

:WASTE A WORD !!!!!! \$40 CB R0.2)5FF2

: BACK TO ORIGINAL CODE.

;RI MSP CONTAINS INVERTED SECTOR #

:WRITE TO 1771 SECTOR REGISTER

In install a 2732 or 2732A PROM on the II disk controller card with the above changes perform the following steps.

Remove the ROM at Incation U26.

On the back (non-component) of the board cut the wide (+5v) etch between U26 pins 21 and 24.

On the front of the board cut the wide etch going to U26 pin 21

On the front (component side) of the board cut the etch going to U25 pin 18.

NOTE: to ensure that the etch is cut I recommend that two cuts 1'18 inch apart be made and the copper trace be removed between the cuts.

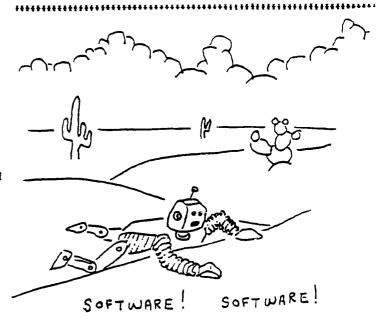
Install a 24 pin socket at U26

On the back (non-component) side of the board add the following wire

U25 pin 18 to U26 pin 28 U27 pin 18 to U26 pin 21

Via hole in center of chip area between U26 pin 21,22 to junction of C26 and U36 oin 24 (+5v)

Install prom in socket and thats all!!!





100 CALL SERSEN(15)::PRINT: : : "THIS PROGRAM WILL ACCEPT ANYINGUT AND SCROLL

UP 1 LINE. 110 FFINT: PART CALLY THE BOTTOM HALF OF THE SCREEN WILL SCROLL. THE TOP HALF WILL STAF INTACT."

UO ACCEPT AT(24.1)SIZE(28):A\$::A\$=A\$&RPT\$(" ".282)

39 (85.29.244) LA3:: DISFLAY AT(15.1): 50:: 60T0 170

140 REN by Edwin McFall

UNE- 9 pin D-plug (joystick plug)

TWO- lengths (your choice) of 2 conductor wire

TWO- CDS photocells

TWO- junk Flair pen w/cap (or anything big enough to hold the CDS cells

Now that you have the above, lets get to the fun part. First off gut the pens out and cut off the end that the tip was in, and then punch out the end of the cap. Feed the wire thru the bottom of the pen out the tip. Solder the the two wires to the leads of the CDS cell, and place the cell into the cap and put it on the old pen body. Tape the wire around the pen to help prevent it from pulling out by accident.

Grab the D-plug and hard wire the leads (pin layout 1s below) for pen #1 to pin #7 and #9 (this would be the right direction with CALL JOYST), with pen #2 solder it to pins #2 and #5 (CALL JOYST left direction). If you have not figured it out yet, you can add up to four more pens using the other moves of the joystick routine. Wrap tape around the plug to protect the wiring.

Now if you have not yet converted the included program get with it. so you can test your new light pens. As you can tell the program name is "DOT" and you just touch the dots on the screen with the pen. Depending upon your TV/monitor, you may need to adjust the iontrast/brightness.

One more thing before you get too busy with the pens I have to give credit to Edwin McFall of Aberdeen, Wash. Thru his work this is possible. Hopefuly he will be joining us here soon. If you have any questions direct them to me: Garry Noel ID# 75156, 324

JOYSTICK FORT FINOUT

\ 1 2 3 4 5 / \ 6 7 8 9 /

USE		
NOT USED COMMON LINE UP FIRE	JUYST	#2
LEFT		
COMMON LINE	JOYST	#1
RIGHT	:=====	:=:
	NOT USED COMMON LINE UP FIRE LEFT NOT USED COMMON LINE DOWN RIGHT	NOT USED COMMON LINE JOYST UP FIRE LEFT NOT USED COMMON LINE JOYST DOWN RIGHT

```
-----
100 !----!
110 !
       00000 000 00000
120 !
130 !
        0 0 0 0 0
140 1
        0 0 0
                0
                    O
               ò
150 !
        0 0 0
                    0
               0 0
160 !
        0 0 0
        0 0 0
                0
170 1
                    O
       0000 0000
180 :
                    O
190 !
200 !
        by: Edwin McFall
210 REM
            2005 W. Ath
220 REM
230 REM
             ABERDEEN WA.
                     98520
240 REM
250 REM
        TI 99/4A VER. 1.1
        REQUIRES LIGHTPEN
260 REM
270 REM
         AND EXTENDED BASIC
280 REM
290 REM
300 CALL CLEAR :: CALL SCREE
N(2)
310 FOR X=1 TO 10 :: CALL CO
LDR(X,5-11*(X>8),1):: NEXT X
320 RANDOMIZE
330 FDR X=0 TD 2
340 CALL CHAR (96+8*X, "3C7EFF
FFFFFF7E3C")
350 CALL COLOR(9+X,1,1)
JAO NEXT X
370 PRINT "
                       'hp
            'hp 'hp
   'hp'hp'
            hp' h h'
                      p'h'
    p'h
   h p'h
h p'h"
               hp'
                     h hp*
  h
380 PRINT " hp' h hp'
            hp' 'h
ħ
    p'h
    p "h"
2.90 PRINT " 'hp'hp
                      *hp
     p'h": : : : :
400 PRINT : : " 'hp 'hp 'hp 'h
p'hp'hp'hp'p BY: EDWI
N MCFALL hh TOUCHOT
 TO CONTINUE. p'ph'ph'ph
'ph'ph'ph'ph'ph'"
410 CALL JOYST(1, X, Y):: IF X
420 FOR C=1 TO 3
430 CALL COLOR (9, 7-4*(C=1)-8
*(C=2),1)
440 CALL COLOR (10,7-4*(C=2)-
8*(C=3),1)
450 CALL COLOR(11.7-4*(C=3)-
8*(C=1),1)
460 NEXT C
470 GDTO 410
480 CALL SOUND (100, 440, 0) ::
CALL CLEAR :: SC=0
490 DISPLAY AT(12,9): "EASY
    HARD"
500 DISPLAY AT(16,7): "SELECT
DFFICULTY" :: DISPLAY AT(18
,1): "EASY=LARGE DOTS, HR
D=SMALL."
510 CALL HCHAR (12, 9, 112):: C
ALL HCHAR (12, 19, 104)
520 CALL COLOR(11,16,16,10,2
,2)
530 FOR I=1 TO 10
540 CALL JOYST(1,X,Y):: IF X
=4 THEN CALL MAGNIFY(2):: GO
TO 610
550 NEXT I
560 CALL COLOR111,2,2,10,16,
16)
570 FOR I=1 TO 10
580 CALL JOYST(1, X, Y):: IF X
```

```
*4 THEN CALL MAGNIFY(1):: GO
TD 610
590 NEXT 1
600 GOTO 520
610 CALL CLEAR
620 CALL SPRITE(#1, 96, 16, 92,
124)
630 DISPLAY AT (16,6) BEEP: "TO
UCH DOT TO START.
640 CALL JOYST (1, X, Y) :: IF X
<4 THEN 640
650 CALL SOUND (-100, 220, 5) ::
CALL SOUND (-100.880.0)
660 CALL CLEAR
670 FDR: L=1 TO 20
680 CALL SPRITE (#1, 96, 16, INT
(RNDO) +1, INT (RNDO) +10)
690 N=0
700 CALL JOYST(1,X,Y)
710 IF X=4 THEN 730
720 N=N+1 :: 60T0 700
730 SC=SC+N :: CALL SOUND(-1
00,440,5)
740 DISPLAY AT(1,1): "SCORE "
; SC
750 FOR X=1 TO 100 :: NEXT X
760 NEXT L
770 FOR Z=1 TO SC STEP 10
780 CALL SOUND (-100, Z+110, 0)
790 NEXT Z
800 CALL CLEAR :: CALL SPRIT
E(#1,96,16,150,123)
810 DISPLAY AT(10,6): "YOUR S
CORE IS "; SC :: DISPLAY AT(1
8.3): "TOUCH DOT TO PLAYA
GAIN."
820 IF SC>150 THEN 830 ELSE
DISPLAY AT (12,6): YOU CA
N'T FOOL ME! YOU CHEATED
 !" :: GOTO 900
830 IF SC>200 THEN 840 ELSE
DISPLAY AT(12,1):" VERY GOOD
 ! YOU" VE MASTERED
                     THE
DOTS." :: GOTO 900
 840 IF SC>225 THEN 850 ELSE
 DISPLAY AT(12,1): "GEE WIZ! I
 DIDN'T KNOW THAT HUMAN
 COULD MOVE THAT FAST! " :: GO
 TD 900
 850 IF SC>250 THEN 860 ELSE
 DISPLAY AT(12,1): "NOT BAD, B
 UT YOU'LL NEVER SWAT F
 LY AT THAT SPEED. " :: GOTO 9
 00
 860 IF SC>300 THEN 870 ELSE
 DISPLAY AT(12,1): "YOU NEED A
 LOT MORE PRACTICE" :: GT
 D 900
 870 IF SC>350 THEN 880 ELSE
 DISFLAY AT (12,1):"I THINK YO
 U NEED A SLOWER GAME.M
AYBE CHECKERS. 1 1 60TO 900
 880 IF SC>400 THEN 890 ELSE
 DISFLAY AT(12, 1): "DIDN'T ANY
 ONE TELL YOU THAT YOURRY
 ING FOR A LOW SCORE!" :: GOT
 0.900
 890 DISPLAY AT (12,1); "LOOKS
 LIKE YOU NEED HELP. TRY PO
 INTING THE PEN AT THE DT
  STUPID!"
 900 FOR Z=1 TO 500 :: CALL J
 OYST(1, X, Y):: IF X=4 THEN 93 .
 910 NEXT Z
 920 CALL CLEAR :: DISPLAY AT
 (12.1):" DOTS ALL FOLKS..."
 :: END
 930 CALL DELSFRITE(ALL):: GO
 TO 480
```

- FAIRWARE
 [1] DM1000 Bruce Caron ... 25 Sttawa St. Armprior,
 Untario, Canada K7S 1M7 A marvelous disk-based Disk Manager which rivals CorComps manager.
- [2] MASSCOPY Steve Lawless 2514 Maple Avenue, Wilaington. Delaware 19808 EXCELLENT disk cloner; features ability to copy to 2 drives at once and uses the Foundation 129K card to copy a disk in ONE PASS!
- [3] X_DISASM Fred Hawkins 1020 North 5th Street, Allentown, PA. 18102 An XB disassembler with many unique features and terrific documentation for those that PAY!
- [4] SUFER DISK DUFLICATOR Tom Knight 7266 Bunion Drive, Jacksonville, FL. 32222 Allows inputting start and stop sector number for copying disks.
- 15) TK WRITER Tom Knight (See Above) Loads TI WRITER from XB or E/A. No cartridge needed!
- [6] NEATLIST Danny Michaels Route 9, Box 460 Florence, AL. 33630 IB stility to list multi-statement lines to printer or disk for easy reading and references program variables to line number used.
- [7] SCREENDUMP Danny Michaels (See Above) Screen dump to EPSON compatable printer with double or single size and vertical or horizontal page printout.
- 183 The DIRECTOR Rom Rutledge 1020 3rd Street Waukee, IA 50363 X8 program database that allows cataloging disk-based programs.
- [9] FAST TERM Paul Charlton 1110 Pinehurst Court Chalotteeville, VA 22901 Simply, THE BEST TERMINAL EMULATOR IN THE WORLD!
- [10] SPRITE BUILDER John Taylor 2170 Estaline Drive Florence, AL. 35630 XB graphics generating program with assembly language routines for speed at crucial places. Includes a full disk of preformed graphics.
- [11] PILOT 99 Thomas Weithofer 1000 Harbury Drive Cincinnati, OH. 45220 An ENTIRE Language for the TI that is the simplest programming language known to us (or anyone else!)
- [12] TEATH Ken Carruthers 3537 Faberge Way, Sacramentu, Ca. 95826. A Terbinal Emulator Program written in Forth Language. A must for persons interested in Forth Language. \$5.00 plus diskette and stamped mailer.
- [13] EASYSPRITE Tom Freeman 515 Alma Real Dr., Pacific Palisades, CA 90272 An extremely fast XB program with assembly routines to create graphics sprites with easy cursor control saving for program insertion.
- [141 DISASSEMBLER Marty Kroll 218 Kaplan Avenue Pittsburg, P. 15227 Super-fast disassembler, 1002 assembly and full featured.

FAIRWARE

- [15] TECHIE BBS Monty Schaidt 121 N. Blair, Madison, WI. 53703 Freeware BBS system for the 99/4A.
- [16] COMPACTOR Monty Schmidt (see above) Assembly langauce program that takes an uncompressed 0/F80 AL program and will compress to about 2/3 the disk space and yield faster load times.
- [17] UNCOMPACTOR Monty Schmidt (see above) Opposite of above.
- [18] PRO 99er BBS Mark Hoogendoorne 21 Long Street. Burlington, MA. 01803 TI BBS system with TFUE TE2 transfer capabilities.
- [19] DISK MANAGER Todd Kaplan, 5802 N. Western Apt. 38. Chicago, IL. 50659 INCREDIBLE Disk Manager on disk; forget TI'S DM2
- [20] ASSAULT THE CITY, John Behnke 5755 W. Grace. Chicago, 11. 60634 An original Tunnels of Doom Game.
- [21] HBMPRINT, Bob Lawson 16223 Mill Forat Ir., Houston. Tr. 77059. A utility to print Household Budget Management Module Files.
- [22] DISK FILE CATALOGER, Jis Williams, 5217 122 PL. SE, Bellevos. Wa. 67115. A disk cataloger, adoitional information later.
- [23] TRIVIA, Robert Wessler, 4300 Frazier, Ft. Worth. Tr. 67115. A Trivia style game, of great interest to Trivia fans.
- EC41 2D GRAPHICS, Jean-Pierre Morin Ottawa U.G. 25 Arnprior, Ontario. Canada K7S 1H7. An incredible graphics drawing program written in Forth, with an outstanding demo, and documentation.
- [25] CATLIB, Marty Kroll, 210 Kaplan Ave. Pittsburgh. Pa. 15227. A cataloging libray program, capacity 123 disks, 900 files with many good teatures.
- [26] MASS-TRANSFER, Stuart Olson. 25322 W. Wayside Place, Lake Villa, II. 60046. Assembly language Terminal Emulator, menu driven, x-modem transfers, capable of aultiple and transfers at once. \$10.00 plus disk and stamped mailer.
- 1271 CHECKBOOK and BUDSET MANAGER, John Taylor, 2170 Estaline Drive, Florence, Al. 35630. An extremely efficient program for both check book and budget maintenance. \$10.00 plus disk and stamped mailer.
- [29] SUPERBUG II, Edgar L. Dohaann, Route 5, Sox 64. Alvin, Tx. 77511. Enhancement of TI's Superbug, includes changeof output device from screen, color toggles, added commands, and more. \$10



TIPS FROM THE TIGERCUB

#26

Copyright 1985

TIGERCUB SOFTWARE 156 Collingwood Ave. Columbus, OH 43213

Distributed by Tigercub Software to TI-99/4A Users Groups for promotional purposes and in exchange for their newsletters. May be reprinted by non-profit users groups, with credit to Tigercub Software.

The entire contents of Tips from the Tigercub Nos. 1 through 14, with more added, are available as a full disk of 59 programs, routines and files for just \$15.00 postpaid.

>>>>>NOW AVAILABLE<

Tips from the Tigercub VOLUME 2 The entire contents of Tips Nos. 15 through 24, with 64 routines and files, also \$15.00 postpaid.

Or both for \$27 postpaid.

>>>>ALSO NOW AVAILABLE<

New Catalog \$6, for \$1 which is deductable from your first order. Describes 140 original programs for only \$3 each (plus \$1.50 per order for casette or disk, package and postage).

If you have my previous catalog, the following are now available in Extended Basic versions -Fast Addition Practice, Submarine Hunt, Rithmatik, Wawaland (also now available in Basic with Speech), Long Division Cryptograms, Miss Spell. Scrambulation, Bargraffer, Squinch, Dry Gulch, Name That Tune, Scrum, Midnight Trail, Nimbo, Kindertimes, Optical Illusion. Bazoo. Synonymy, Speeder Reader, Changeroo, Glunk, Fraction Math, Three Buckets Puzzle, Roman Numbers, Match A Patch, Kinderminus, I E Spelling, Casting Out Nines, Haunted Graveyard, Spalling Teecher, Homonymy, Antonymy, Old -Timer Puzzle, Ten Thousand Sights, Mechanical Aptitude Test, Junior Speeder Reader, and Bars and Balls.

Due to reduced prices for disks and mailers, the PPM charge is now \$1.50 for either disk or casette - BUT PLEASE BE SURE TO SPECIFY WHICH!

And my best seller -NUTS & BOLTS, a full disk of 188 (yes, I said 188) utility subprograms in MERGE format, ready for you to into merge vour programs. 13 type fonts. 14 text display routines, 9 wipes, 8 pauses, programming aids, 9 data saving and reading routines. 5 graphics routines, 4 time and date, 6 music, 12 sorts and shuffles, 2 printer aids, 4 key and joystick, 4 math, 2 protection and 7 miscellaneous. plus tutorial on subprograms. With documentation, example of using each subprogram. for only \$19.95 postpaid.

Now for the old business -

I was mortified to find an error in the Unprintable Unkeyable Program in Tips #22. The last line should end with ELSE 188, not ELSE 138. In the Grocery Shopping program in Tips #21, your wife will never get to the zucchini unless you delete line 148 and change line 288 to -288 IF EOF(1)<>1 THEN 138

Sorry about that. And the update to the Menu Loader in Tips #22 will not list all listable files, just D/V8# files. I now have a version to really list all listable files, I think, plus show protection,

dump the catalog to the printer, rescan, etc., but am not sure all the bugs are out so will publish it next month.

Folks have been asking why their orders for TI-WRITER COMPANION, mentioned in Tips #22, were being returned unopened, so I called Bill Browning. He said he found he was going broke selling it for \$2.59, but he is now prepared to supply it for \$6.59. Still a, bargain, in my opinion.

Barry Ensley warns that when FCTN V is used for a blank in a filename, as mentioned in Tips #25, it is not recognized by the Disk Manager.

In Tips #21, I said that the special characters available on the Gemini printer could not be accessed from TI-Writer. I have since learned that Star Micronics hid a valuable feature of their printer in a paragraph of gobbledegook computerese in the manual. See "Other Function Codes", ESC ">". ESC "=" and ESC "#". In plain English, you can access these codes by CTRL U, FCTN R, CTRL U, SHIFT >, then type the character with an ASCII 128 less than the character you want. In other words, if you want CHR\$(168), hit the space bar (ASCII 32), etc. To get back to the normal character mode, use CTRL U. FCTN R, CTRL U, SHIFT #. Many thanks to David Aragon (San Antonio Area 99ers newsletter, Aug. 1985), who described how to do the same by transliteration.

In Tips #25, I said that a program which had been converted to I/V 254 format by adding REM lines could be converted back to program format by deleting

the REM lines and reSAVing. Well, it usually can - but not always!

I have been receiving inquiries as to whether my programs published in the Tips are public domain programs which can be placed in user group libraries and on BBS's. Well. the copyright notice on this newsletter is really only intended to keep anyone from reprinting it for personal orofit. I have always thought that programs published for the purpose of being keyed in should be OK to copy, and I don't intend to claim that "you must own the magazine"! However, a neculiar situation has The developed. short programs which I wrote to give away to promote my other programs, have become the bread and butter of my business! If it was not for the sales of the Tips disk and the Nuts & Bolts disk. I would long ago have gone out of business. So, I would appreciate it if you would exercise some restraint in putting my Tips programs in vour libraries or in downloadable form on your

And I do consider my two Tips disks, as complete collections of programs, to be copyrighted material which should not be placed in libraries for copying.

In the Automatic Mouse Maze in Tips #23, you can improve the maze by adding these lines - 475 IF (C>20) ± (X<10) THEN 500 515 X=X+1 555 X=X+1 1325 X=0

And the last word - I think - on the challenge to quickly scramble the numbers 1 to 255. Ian Swales sent me, from Belgium, two

routines which beat everyone else - and then sent me two more which beat his first ones! His PEEK version - 199 DIM A(255),C(255):: FOR K=255 TO 1 STEP -1:: RANDOM IZE:: CALL PEEK(-31898,B):: J=INT(B*K/256+1):: C(K)=MAX(J,A(J)):: A(J)=MAX(K,A(K)): NEXT K

And see if you can unravel the logic of this truly elegant bit of code!
199 DIM A(255):: RANDOMIZE:
: FOR K=255 TO 1 STEP -1::
J=INT(RND±K+1):: T=MAX(J,A(J)):: A(J)=MAX(K,A(K)):: A(K)
=T:: NEXT K

So, on to new business -

ANNOUNCING
The TI-99/4A TRAVelER
a magazine-on-disk!
788 sectors of articles
and programs in each issue

(SS/SD or DS/DD)!

with contributions by Mack McCormick, Ron Albright, and many others!

Special pre-publication prices - \$30 for 6 issues; \$7 for sample issue (first issue will be Sept 85)

Send your check now to Barry A. Traver, Editor 835 Green Valley Drive, Philadelphia PA 19128 phone (215) 483-1379

To give you an idea of Barry Traver's knowledge of our computer, try this one. I've figured out the why, but I'll have to ask Barry to explain the why of the why!

100 ! LINPUT PUZZLE/BUG by B.A. Traver

110 ! QUESTIONS? Send SASE to Barry Traver

128 ! 552 Seville St. Phila. PA 19128

130 CALL CLEAR :: PRINT "LIN PUT PUZZLE/BUG": "BY BARRY TR AVER"

140 PRINT "Can you figure ou t why your computer will not obey?" 150 PRINT "Why won't it stop when you tell it to?": :: 168 LINPUT "Want me to stop? (YES/NO)":W\$
178 IF W\$="YES" THEN STOP EL
SE 168
188 FND

It seems that many of you still haven't heard of Super 99 Monthly, published monthly (and on time!) by Bytemaster Computer 171 Services. Mustang Street, Sulphur, LA 70663. for \$12 per year. The May issue contained a Word Processor Dump, to dump a oraphics/text screen into a D/V80 file which can be printed out of the TI-Writer Formatter - that program alone is worth the annual subscription price!

I've said it before. there is more than one way to skin that poor cat. This is av routine to alternate between the #1 and #2 invsticks. Z=Z+1+(Z=2) #2 :: CALL (JOYST (Z,X,Y)Compact, isn't it? Now, the Reading-Berks 99ers publish a newsletter called "A Byte of Info", which is hardly more than a byte long, but August byte was a mouthful! Check this -100 Z=2 110 Z=1/Z#2 :: CALL JOYST(Z,

Here is another of those programs that write a program. This one will read a screen of graphics and/or text and convert it into a RUNable program of DISPLAY AT statements which will recreate the screen.

Z=Z=0 :: CALL JOYST(Z+2,X,Y)

And this! Elegant!

First, we need a file of the hex codes of all the normal characters, to check against to see if any have been redefined. Rather than key in all 95 of the 16-digit codes, let's write

a program to write a program of them - 11# OPEN #1:"DSK1.HEXCODES".

VARIABLE 163 :: LN=388889 ::
FOR D=32 TO 124 STEP 8 :: FO
R CH=D TO D+7 :: CALL CHARPA
T(CH,CH\$)
128 D\$=D\$&CHR\$(179)&CHR\$(288
)&CHR\$(16)&CH\$:: NEXT CH
138 PRINT #1:CHR\$(INT(LN/256))&
CHR\$(LN-256±INT(LN/256))&
CHR\$(147)&SE6\$(D\$,2,LEN(D\$))
&CHR\$(9):: LN=LN+1 :: D\$=**
:: NEXT D

148 PRINT #1:CHR\$(255)&CHR\$(255):: CLOSE #1 :: END

RUN that to create a MERGE format program of DATA statements. Now, key in the 6RAFWRITER program -31000 SUB GRAFWRITER 31991 OPEN #1: "DSK1.P6".OUTP UT, DISPLAY , VARIABLE 163 31002 RESTORE 30000 :: L=300 00 :: GOSUB 31018 31993 FOR CH=32 TO 127 :: CA LL CHARPAT(CH.CH\$):: READ A\$:: IF CH\$=A\$ THEN 31884 ELS E GOSUB 31019 :: GOSUB 31018 31884 NEXT CH 31885 FOR CH=128 TO 143 :: C ALL CHARPAT(CH, CH\$):: IF CH\$ =RPT\$("0".16)THEN 31006 ELSE

GOSUB 31919 :: GOSUB 31918
31996 NEXT CH
31997 PRINT #1:L\$&CHR\$(157)&CHR\$(299)&CHR\$(5)&"CLEAR"&CHR\$(9):: GOSUB 31918
31998 FOR R=1 TO 24
31999 M\$=L\$&CHR\$(162)&CHR\$(2

48) &CHR\$(183) &CHR\$(288) &CHR\$ (LEN(STR\$(R))) &STR\$(R) &CHR\$(179)

31818 FOR C=3 TO 38 :: CALL GCHAR(R,C,6):: CALL HCHAR(R, C,42):: IF F=8 AND G=32 THEN 31813

31811 F=1 :: IF FF=1 THEN 31 812 ELSE CC=C-2 :: FF=1 31812 A\$=A\$&CHR\$(6)

31813 NEXT C :: IF CC=8 THEN CC=1 :: A\$=" " 31814 PRINT #1:M\$&CHR\$(288)&

CHR\$(LEN(STR\$(CC)))&STR\$(CC) &CHR\$(182)&CHR\$(181)&CHR\$(19 9)&CHR\$(LEN(A\$))&A\$&CHR\$(8) 31815 L=L+18 :: F,FF,CC=8 :: M\$ A\$="" .. GDCHB 31818 ...

M\$,A\$="" :: 60SUB 31#18 :: NEXT R

31816 PRINT #1:L\$&CHR\$(134)&

CHR\$(291)&L\$&CHR\$(8):: GOSUB 31418

31817 PRINT #1:CHR\$(255)&CHR \$(255):: CLOSE #1 :: SUBEXIT 31818 L1=INT(L/256):: L2=L-2 56±L1 :: L\$=CHR\$(L1)&CHR\$(L2):: L=L+18 :: RETURN 31819 PRINT #1:L\$&CHR\$(157)& CHR\$(288)&CHR\$(4)&"CHAR"&CHR \$(183)&CHR\$(288)&CHR\$(LEN(ST R\$(CH)))&STR\$(CH)&CHR\$(179)& CHR\$(199)&CHR\$(16)&CHR\$(179)& CHR\$(199)&CHR\$(16)&CHR\$CHR\$(182)&CHR\$(8):: RETURN 31828 SUBEND

Next, Enter MERGE DSK1.
HEXCODES to merge in those
DATA statements. Then save
the program by SAVE
DSK1.GRAFWRITER, MERGE

Now, load any program which has a screen you would like to copy. Run the program to the point where the screen display is ready, then break it with FCTN 4. Put in a temporary line going to itself, such as 1881 60TO 1881, and run the program again to be sure you found the right place. Then replace that temporary line with CALL GRAFWRITER:: STOP

Put in the disk containing the Grafwriter program and enter MERGE DSK1.GRAFWRITER. Then RUN the program. When it stops, type NEW, then MERGE DSK1.PG and then RUN!

Now for a Tigercub challenge that I can't answer! Can one of you assembly programmers tell me how to PEEK out of Extended Basicfor screen color and character set colors, so I can reproduce them in that program?

And, thanks to Jerry Glaze in the Southern Nevada UG newsletter, by way of the Tidewater newsletter - you don't need SIZE with DISPLAY AT - just a semicolon! 188 DISPLAY AT(12,1):RPT\$("#",28):: DISPLAY AT(12,1):"SE E?";

MEMORY FULL! - Jim Peterson