



HUG

HOUSTON USERS' GROUP

JUNE
1986

MEETING SCHEDULE

FIRST SUNDAY OF EVERY MONTH

(2nd Sunday if 1st Sunday

is on a holiday weekend)

HUG TIBBS - (713) 475-8909

24-hour BULLETIN BOARD

THE NEXT MEETING IS ABOUT

The next meeting will be SUNDAY, JUNE 1, 1986 at 2:00 P.M. The program will be a demonstration of some of the more popular business packages written for the TI99/4A. by Futura Software. Wayne Wright, a past president of the Houston Users Group will demonstrate the business packages. Wayne will also be available for a question and answer session on this software. There will be a general question and answer session planned as part of every meeting, so come & bring your problems or solutions

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DISK TO TAPE AND TAPE TO DISK FILE CONVERSION PROGRAM

NUTS AND BOLTS PUT IT TOGETHER ADDENDUM

X-MODEM AVAILABLE ON HUG-TIBBS FAST TERM DEFAULT FILE

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*DISK TO TAPE AND TAPE TO DISK CONVERSION PROGRAM
*TOM FREEMAN
5 ALMA REAL DR.
*PACIFIC PALISADES, CA 90272
*FOR USE WITH PROGRAMS MEANT TO BE LOADED BY THE RUN
*PROGRAM FILE OPTION (#5) OF EDITOR/ASSEMBLER IT MAY BE USED FOR
*OTHER, NON-STANDARD, FILES, BUT IN THAT CASE THE TWO
*INSTANCES OF BL @CHANGE SHOULD BE DELETED, AND THE
*4TH WORD OF EACH PAB SHOULD BE REPLACED WITH >XX00,
*WHERE :XX IS THE HEX EQUIVALENT OF THE NUMBER OF
*SECTORS TAKEN UP BY THE PROGRAM (PER DISK CATALOG)
*MINUS 1. IF THE ORIGINAL FILE IS ON TAPE AND THIS
*NUMBER IS NOT KNOWN, USE >2F, THEN CHECK THE DISK
*FILE WITH A SECTOR EDITOR TO SEE WHERE THE 00'S BEGIN.
*THE PROGRAM CAN THEN BE RERUN WITH THE PROPER NUMBER.
*NOTE: BECAUSE OF THE REF'S TO GPLLNK AND DSRLNK, THE
*PROGRAM WILL ONLY WORK WITH E/A. IT IS CALLED FROM
*BASIC - LISTING FOLLOWS.

```

```

DEF DISTAP,TAPDIS
REF DSRLNK,GPLLNK,VMBW,VMBF
STATUS EQU >877C
FAC EQU >834A
PAB EQU >0F80
PNTR EQU >8356
WS EQU >8300
AORG >3000

```

```

*
* THE FOLLOWING IS THE DISK FILE
* AND HAS BEEN PREPARED FROM BASIC
*

```

```

PABDSK DATA >0500,>1000,0,>2000
BYTE 0
BYTE 0 LENGTH BYTE
BSS 15 FILE NAME

```

```

*
* THE FOLLOWING IS THE CASSETTE FILE
* NOTE: IF USING CS1 FOR INPUT IN "RUN PROGRAM FILE" IN E/A
* USE CS1.X AS DEVICE NAME, NOT CS1
*

```

```

PABCS DATA >0600,>1000,0,>2000,>6003 LAST WORD IS SCR OFFSET AND LEN BYTE
CS1 TEXT 'CS1'
SAVE BYTE >06
LOAD BYTE >05
SAVRTN DATA 0
DISK LI 0,PAB
LI 1,PABDSK LOAD PAB FOR DISK FILE
LI 2,25
BLWF @VMBW
LI 6,PAB+9
MOV 6,@PNTR
BLWF @DSRLNK
DATA 8 MOVE FILE TO VDF AT >1000
RT
CHANGE LI 0,1002 2ND WORD CONTAINS # BYTES IN FILE
LI 2,2 AND BELONGS IN 4TH WORD OF PAB(R1)
BLWF @VMBR
RT

```

```

TAPF  LI  0,PAB
      LI  1,PABCS
      LI  2,13
      BLWP @VMBW          SET UP CASSETTE PAB TO SAVE
      LI  1,PAB+13       1ST CHAR AFTER PAB MUST BE AT PNTR
      MOV  1,@PNTR
      LI  1>0900
      MOVB 1,@>834D      >834D MUST CONTAIN 8 (DSR CALL)
      LI  0,PAB+10
      LI  1,FAC
      LI  2,3
      MOV  2,@PNTR-2     >8345 - 5 MUST CONTAIN NAME LEN (3)
      BLWP @VMBR          FAC MUST CONTAIN DEVICE NAME
      CLR  @>83D0        >83D0 MUST CONTAIN 0
      MOVB @>83D0,@STATUS CLEAR STATUS BYTE
      BLWP @GPLLNK       BRANCH TO THE DSR
      DATA >3D
      RT
DISTAP MOV  11,@SAVRTN
      LWPI WS
      MOVB @LOAD,@PABDSK  PREPARE DISKFILE FOR LOAD
      MOVB @SAVE,@PABCS   PREPARE TAPEFILE FOR SAVE
      BL  @DISK
      LI  1,PABCS+6
      BL  @CHANGE
      BL  @TAPE
      JMP  RETURN
TAPDIS MOV  11,@SAVRTN
      LWPI WS
      MOVB @LOAD,@PABCS   PREPARE TAPEFILE FOR LOAD
      MOVB @SAVE,@PABDSK  PREPARE DISKFILE FOR SAVE
      BL  @TAPE
      LI  1,PABDSK+6
      BL  @CHANGE
      BL  @DISK
RETURN CLR  0
      MOVB 0,STATUS
      MOVB @SAVRTN,11
      RT          RETURN FROM THIS PROGRAM
      END

```

```

=====
This is the BASIC program that runs the above file.
if it is assembled under the name DISKTAPE/0
=====

```

```

100 DNAME=4096*3+9
110 CALL INIT
120 CALL LOAD("DSK1.DISKTAPE/0")
130 INPUT "DISKFILE TO SAVE/LOAD      ":NAME$
140 LE=LEN(NAME$)
150 CALL LOAD(DNAME,LE)
160 FOR X=1 TO LE
170 CALL LOAD(DNAME+X,ASC(SEG$(NAME$,X,1)))
180 NEXT X
190 PRINT "PRESS D DISK TO TAPE": " OR      T, TAPE TO DISK"
200 CALL KEY(0,K,S)
210 IF S=0 THEN 200
220 IF K=68 THEN 260
230 IF K<>84 THEN 200

```

```
240 CALL LINK("TAPDIS")
250 GOTO 270
260 CALL LINK("DISTAF")
270 PRINT : "DO ANOTHER? Y/N" : : :
280 CALL KEY(0,K,S)
290 IF S=0 THEN 280
300 IF K=89 THEN 130
310 IF K<>78 THEN 280
320 STOP
```

HUG TIBBS RUNNING NEW PROGRAM

HUG TIBBS, our club's electronic bulletin board system, now has the new program TIBBS Version 5. The main feature of this program is that it has both TE2 and XMODEM uploading and downloading.

In case you are not familiar with XMODEM protocols, it is about twice as fast as TE2. In other words, a program that use to take you 10 minutes to download can now be done in 5 minutes. This allows more time for downloading other programs, reading messages and looking at the textfiles.

Another good feature of this new program is that many HELP files are included and can be accessed with the [?] command. There is help for file transfers, help for the menus which explain what each command does, help for reading or entering messages.

The program also allows for multiple message bases, so you can check messages that deal with special categories, such as programming help, for sale, general interest, etc. As of the writing of this report, this feature has not been activated, but will as soon as we decide the categories.

Terminal Emulator programs that can be used on the TI-99/4A and HUG TIBBS include TE2 cartridge, FAST-TERM, TE-1200 and P-TERM99 and 4A/TALK. P-TERM99 does not allow downloading of programs and FAST-TERM is the ONLY program that will allow both XMODEM or TE2 downloading. FAST-TERM is available from the HUG library.

If you have a modem and have not called HUG TIBBS lately, why not do it and check out the many new features. Our number is 475-8909. And for you that do not have modems, might consider buying one...it is a way to keep up on the news and also get a lot of free programs.

Bill Knecht, SysOp

FAST-TERM DEFAULT,
by Duane Goodman
PUNN User's Group

It seems that there has been a number of individuals that have trouble setting up the Default Parameter file for Fast-Term. So I thought that I would take the time to set down and go through the default program with you step by step.

The first thing you need to do is load and run the program "DEFAULT". This will load & run in either Basic or Extended Basic.

1) The first entry that the program requires from you is the Parameter filename for your default file. This is where most people mess up. You need to enter the disk, (DSK1,) and you need to enter a single character filename such as "D" or "X". So what you would have is "DSK1.X". If you do not put in which disk to write to, the program will go thru the motions of setting up the file, but at the end when it is instructed to write the information to the disk, it will blow up because you didn't tell it where to go. Then you will get mad and tell it where to go and it won't understand, since it doesn't speak French!

2) The next thing you are asked to select is the modem port you use for your modem. You have two choices: RS232/1 or 2. From here on out when it tells you to use the arrow keys to make your selection, you just use the "E" or "X" key without the FCTN key. There is no difference in port 1 or 2. Just which ever one you have hooked to your cable.

3) Next you need to select the modem baud rate. The PUNN BBS has a maximum speed of 1200 baud. If you have a 1200 baud modem, use it. The speed is great. You have 4 choices here; 110, 300, 600 and 1200. The ONLY two choices available on the

PUNN BBS are 300 and 1200 baud.

4) Modem Parity: you have three choices. Even, Odd and None. Set yours at None. (Note: In Fast-Term, data with Even or Odd is automatically 7 bits; data with None for parity is automatically 8 bits.)

5) Printer Port. Lots of choices here. Pick the one that is compatible with your equipment. I use the CorComp PIO/1.

6) Duplex. Full or Half. If you are using this mostly for calling different boards, then you want to use Full duplex. For data or file transfers with another TI home computer use Half duplex.

7) Print spooler: Off or On. This is up to you. If you wish to have your copy of Fast Term automatically spool to the printer when it boots up the use ON. I use OFF, because with a CTRL-2 you can turn the printer off or on as needed.

8) Screen Wrap: 40 or 80. I use 40.

9) The number of characters the screen will jump left or right when you use the window function (FCTN-L). I have mine set at 1

10) Text and screen colors. Use the "E" and "X" keys to choose the text color, and the "R" and "C" keys to choose the screen color. You have a choice of 16 different colors to choose from, so try several different combinations to see which one suits you best. My personal choice is black text with a green screen.

11) Send a line feed? Yes or No. Answer this one No.

12) Stop character. This is asking for a character to send to the host computer, that you have logged onto, to tell it to stop until further notice. This will enable Fast Term to stop the input from the host computer and to log to a disk file and not loose any data. Most systems Use CTRL-S to stop the

input.

13) Restart input. After you have told the host computer to stop you need some way to tell it to restart. Most systems use CTRL-Q as a restart signal.

14) Auto repeat. If you wish to have your keys repeat automatically, then here is where you input how often you wish to have them repeat. If you do not want them to repeat, then enter 40000 here.

15) Delay time for Auto repeat. Works the same as item 14.

16) Bell select. The choice is between chimes and a "beep". I like the chimes, but if you have a dog, it may not like it.

After you have entered all of the above information the program will automatically write all of the information to the disk. Like I said at the beginning, if you get this far and it blows up on you, then you most likely forgot to enter the correct disk number and file name under item 1. I hope this helps those of you who have been having trouble with the default file.

CREDITS

In the May issue articles on "How to build a disk drive power supply", "Sorte to sorte coincidence in assembly language, and "Morningstar 128k card were down-

loaded from the Johnson User's Group TEXAS BULL BBS. The article "NUTS AND BOLTS PUT IT TOGETHER" was also downloaded from the TEXAS BULL BBS courtesy of Johnson User's Group. The articles on setting up a FastTerm Default file and programs for conversion from tape to disk and disk to tape are courtesy of Topics, Vol 5, No 3 March 1986 newsletter of the LAPPERS Computer Group. Tips from the Tigercub are from Tigercub software.

NUTS AND BOLTS PUTS IT TOGETHER!

By Darrell Ingold

In a recent issue of the NATIONAL NINETY-NINER I put together a review of Jim Peterson's latest release, "Nuts and Bolts". If you read the article you probably think that I liked Jim's software. Well, I did like it when I first experimented with it. Now that I've actually used it to enhance several new programs: I REALLY LOVE IT!

The latest programming of any real significance that I have done was a calendar program that not only generated a calendar (actually three separate calendars) but stored the calendar along with appointment data on disk for later retrieval and/or modification and reprinting if needed. It was indeed a challenge to me just to accomplish all the goals for the actual use of the program. It seemed that after all that hard work (and I do mean hours and hours) that the end product should have a classier look than it did. That's when I remembered Jim's disk "Nuts & Bolts". He has a subprogram on it that I merged into mine to give a real spiffy multicolor border around my menu....not only was it beautiful, it was different each time the sub-program ran! And as if that weren't enough, there was another sub-program that did a screen-wipe using the existing border design! If you have any doubts that the design was appealing just consider this. My wife thinks computers come from another world and refuses to even speak to one, much less touch it. Every time I ran the program when I was developing it, she would stop her sewing (we share a computer/sewing room) and rush over to the screen and "ooh" and "ahh" over the beautiful designs randomly created and say "Can you make it stay on the screen longer?". Now that's a true test of the quality of the "Chameleon" border and screen wipe from this disk!

After such a great success in this area, I pulled out to try the "Wipes" program in which the screen was wiped in a different direction each time. I'll have to admit that I began to get carried away with all the nifty things that I could do to enhance my calendar program with color, motion and pizzazz by simply merging a subprogram and "call"ing it at the appropriate time. The next thing I knew the menu title was parading across the screen from right to

left and bells would ring to announce the numbered selection. The normally bland stand-by type messages were "bill-boarded" diagonally across the screen in BIG letters, in multiple colors even!

By the time I had finished playing with all the alternatives I selected the best and found that my program now looked better than most commercial programs. I made it work; Jim made it professional. I, like most enthusiasts, would have stopped with a "working" program but "Nuts & Bolts" made it so easy to polish it up to look great too.

The price was mis-stated in the original article but the correct price is \$19.95 direct from Jim Peterson (the Tigercub Man).

EDITOR'S NOTE: You may obtain the disk of programs from Jim Peterson at the address below:

TIGERCUB SOFTWARE
156 COLLINGWOOD AVE.
COLUMBUS, OHIO 43213

TIPS FROM THE TIGERCUB

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Nuts & Bolts (No. 1), a full disk of 100 Extended Basic utility subprograms in merge format, ready to merge into your own programs. Plus the Tigercub Menuloader, a tutorial on using subprograms, and 5 pages of documentation with an example of the use of each subprogram. All for just \$19.95 postpaid.

Nuts & Bolts No. 2, another full disk of 100 utility subprograms in merge format, all new and fully compatible with the last, and with 10 pages of documentation and examples. Also \$19.95

postpaid, or both Nuts Bolts disks for \$37 postpaid. Tigercub Full Disk Collections, just \$12 postpaid! Each of these contains either 5 or 6 of my regular \$3 catalog programs, and the remaining disk space has been filled with some of the best public domain programs of the same category. I am NOT selling public domain programs - my own programs on these disks are greatly discounted from their usual price, and the public domain is a FREE bonus!

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WORD GAMES
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MIDDLE/HIGH SCHOOL MATH
VOCABULARY AND READING
MUSICAL EDUCATION
KALEIDOSCOPES AND DISPLAYS

For descriptions of these send a dollar for my catalog!

I found a bug in Nuts & Bolts #2 which prevents using HIGHCHAR after HEAVYCHAR. To fix it, remove the write-protect tab, MERGE DSK1.HEAVYCHAR RES 21000,1 SAVE DSK1.HEAVYCHAR, MERGE Replace write-protect tab.

While they last, and the supply is limited, I will sell a single Texas Instr. cassette interface cable for \$2.00 with any order for cassette software.

Did you ever wonder how a computer sort actually worked? This program will let you actually see it in

action. It will also show you the value being held in the temporary variable T\$, and the total number of swaps and comparisons made.

Then you can change any of the variables and resort. Try AAA in the last position or ZZZ in the first. You will find that some of the fastest sorts are not so fast when a list is already almost in sequence.

```
100 CALL CLEAR :: CALL SCREE
N(16):: FOR SET=2 TO 9 :: CA
LL COLOR(SET,5,16):: NEXT SE
T :: ON WARNING NEXT :: RAND
OMIZE
110 DISPLAY AT(21,1)ERASE AL
L:">>>TIGERCUB SORT WATCHER<
<<": "Wait, please - genera
ting":"random array...." ::
DIM A$(101),B$(101),ST(25,2)
120 FOR J=1 TO 100 :: FOR L=
1 TO 3 :: B$(J)=B$(J)&CHR$(I
NT(26*RND+65)):: NEXT L :: X
=J :: A$(X)=B$(X):: GOSUB 32
767 :: NEXT J
130 DISPLAY AT(3,1)ERASE ALL
:"(1) BUBBLE SORT": "(2) SH
AKER SORT": "(3) SWAP SORT"
:"(4) SHUTTLE SORT": "(5)
EASY SORT"
140 DISPLAY AT(13,1):"(6) QU
ICK SORT": "(7) RESORT SORT
": "(8) SHELL SORT": "(9)
RESERVED": "Type number of
choice"
150 ACCEPT AT(21,23)VALIDATE
(DIGIT)SIZE(2)BEEP:K :: IF K
<1 OR K>10 THEN 150
160 DISPLAY AT(24,1):"Size o
f array? (10-100)" :: ACCEPT
AT(24,25)VALIDATE(DIGIT)SIZ
E(3):G :: IF G<1 OR G>100 TH
EN 160
170 ON K GOSUB 230,300,430,5
00,550,650,850,910,25000 ::
DISPLAY AT(22,1):W;"SWAPS":C
;"COMPARISONS" :: C,W=0
180 DISPLAY AT(24,1):"Choose
(1)Menu or (2)Resort" :: AC
CEPT AT(24,7)VALIDATE("12")S
IZE(1):0 :: IF 0=1 THEN 130
190 DISPLAY AT(24,1):"Change
which position? 0" :: ACCEP
T AT(24,24)VALIDATE(DIGIT)SI
ZE(-3):P :: IF P=0 THEN 210
ELSE IF P<1 OR P>6 THEN 190
```

```
200 DISPLAY AT(24,1):"Change
to?" :: ACCEPT AT(24,12)SIZ
E(3):A$(P):: X=P :: GOSUB 10
20 :: GOTO 190
210 DISPLAY AT(22,1):" " "
" :: GOSUB 1010 :: N=6 :: ON
K GOSUB 240,310,440,510,560,
660,860,920,25010 :: DISPLAY
AT(22,1):W;"SWAPS":C;"COMPA
RISONS" :: C,W=0 :: GOTO 180
220 REM #BUBBLESORT#
230 CALL CLEAR :: GOSUB 980
240 FOR J=2 TO N :: C=C+1 ::
IF A$(J)>A$(J-1)THEN 260
250 T$=A$(J):: GOSUB 1050 ::
A$(J)=A$(J-1):: X=J :: GOSU
B 1020 :: A$(J-1)=T$ :: X=J-
1 :: GOSUB 1020 :: W=W+1 ::
F=1
260 NEXT J :: C=C+1 :: IF F=
0 THEN 280
270 W=W+1 :: F=0 :: W=W+1 ::
N=N-1 :: GOTO 240
280 RETURN
290 REM #SHAKERSORT#
300 CALL CLEAR :: GOSUB 980
310 W=W+1 :: L=1 :: W=W+1 ::
R=N
320 W=W+1 :: F=0 :: FOR J=L
TO R-1 :: C=C+1 :: IF A$(J)<
=A$(J+1)THEN 340
330 T$=A$(J):: GOSUB 1050 ::
A$(J)=A$(J+1):: X=J :: GOSU
B 1020 :: A$(J+1)=T$ :: X=J+
1 :: GOSUB 1020 :: W=W+1 ::
F=1
340 NEXT J :: C=C+1 :: IF F=
0 THEN 410
350 W=W+1 :: R=R-1 :: C=C+1
:: IF R=L THEN 410
360 W=W+1 :: F=0 :: FOR J=R
TO L+1 STEP -1 :: C=C+1 :: I
F A$(J)>A$(J-1)THEN 380
370 T$=A$(J):: GOSUB 1050 ::
A$(J)=A$(J-1):: X=J :: GOSU
B 1020 :: A$(J-1)=T$ :: X=J-
1 :: GOSUB 1020 :: W=W+1 ::
F=1
380 NEXT J :: C=C+1 :: IF F=
0 THEN 410
390 W=W+1 :: L=L+1 :: C=C+1
:: IF L=R THEN 410
400 GOTO 320
410 RETURN
420 REM #SWAPSORT#
430 CALL CLEAR :: GOSUB 980
440 FOR J=1 TO N-1 :: W=W+1
:: R=J :: FOR JJ=J+1 TO N ::
C=C+1 :: IF A$(R)<=A$(JJ)TH
EN 460
```

```

450 W=W+1 :: R=JJ
460 NEXT JJ :: C=C+1 :: IF R
=J THEN 480
470 T=A$(J):: GOSUB 1050 ::
A$(J)=A$(R):: X=J :: GOSUB
1020 :: A$(R)=T$ :: X=R :: G
OSUB 1020
480 NEXT J :: RETURN
490 REM ===SHUTTLE SORT=====
500 CALL CLEAR :: GOSUB 980
510 FOR J=1 TO N-1 :: FOR JJ
=J TO 1 STEP -1 :: C=C+1 ::
IF A$(JJ)<A$(JJ+1) THEN 530
:: T=A$(JJ):: GOSUB 1050 ::
A$(JJ)=A$(JJ+1):: X=JJ :: G
OSUB 1020
520 A$(JJ+1)=T$ :: X=JJ+1 ::
GOSUB 1020 :: NEXT JJ
530 NEXT J :: RETURN
540 REM ===EASY SORT=====
550 CALL CLEAR :: GOSUB 980
560 W=W+1 :: D=1
570 W=W+1 :: D=2*D :: C=C+1
:: IF D<N THEN 570
580 W=W+1 :: D=INT(D/2):: C=
C+1 :: IF D=0 THEN 630
590 FOR J=1 TO N-D :: W=W+1
:: Y=J
600 W=W+1 :: Z=Y+D :: C=C+1
:: IF A$(Y)<A$(Z) THEN 620 :
: T=A$(Y):: GOSUB 1050 :: A
$(Y)=A$(Z):: X=Y :: GOSUB 10
20 :: A$(Z)=T$ :: X=Z :: GOS
UB 1020
610 W=W+1 :: Y=Y-D :: C=C+1
:: IF Y>0 THEN 600
620 NEXT J :: GOTO 580
630 RETURN
640 REM #QUICKSORT#
650 CALL CLEAR :: GOSUB 980
660 W=W+1 :: L=1 :: W=W+1 ::
R=N :: W=W+1 :: T=0
670 T=A$(INT((L+R)/2)):: GOS
UB 1050 :: W=W+1 :: J=L ::
W=W+1 :: JJ=R
680 C=C+1 :: IF A$(J)>T$ TH
EN 710
690 W=W+1 :: J=J+1
700 GOTO 680
710 C=C+1 :: IF A$(JJ)<T$ T
HEN 730
720 W=W+1 :: JJ=JJ-1 :: GOTO
710
730 C=C+1 :: IF A$(J)<>A$(JJ
) THEN 760
740 C=C+1 :: IF J>=JJ THEN 7
60
750 W=W+1 :: J=J+1 :: GOTO 7
30
760 C=C+1 :: IF J>=JJ THEN 7

```

```

80
770 W=W+1 :: H=A$(J):: A$(J
)=A$(JJ):: X=J :: GOSUB 1020
:: A$(JJ)=H$ :: X=JJ :: GOS
UB 1020 :: GOTO 680
780 W=W+1 :: J=J+1 :: W=W+1
:: JJ=JJ-1 :: C=C+1 :: IF J>
=R THEN 800
790 W=W+1 :: T=T+1 :: W=W+1
:: ST(T,0)=J :: W=W+1 :: ST(
T,1)=R
800 W=W+1 :: R=JJ :: C=C+1 :
: IF L<R THEN 670
810 C=C+1 :: IF T=0 THEN 830
820 W=W+1 :: L=ST(T,0):: W=W
+1 :: R=ST(T,1):: W=W+1 :: T
=T-1 :: GOTO 670
830 RETURN
840 REM ===RESORT SORT=====
850 CALL CLEAR :: GOSUB 980
860 FOR J=2 TO N :: C=C+1 ::
IF A$(J)>A$(J-1) THEN 900
870 T=A$(J):: GOSUB 1050 ::
FOR L=J-1 TO 1 STEP -1 :: A
$(L+1)=A$(L):: X=L+1 :: GOSU
B 1020
880 C=C+1 :: IF A$(L-1)>T$
THEN 890 :: A$(L)=T$ :: X=L
:: GOSUB 1020 :: GOTO 900
890 NEXT L
900 NEXT J :: RETURN
910 REM #SHELLSORT#
920 CALL CLEAR :: GOSUB 980
930 W=W+1 :: M=N
940 W=W+1 :: M=INT(M/3)+1
950 FOR J=1 TO N-M :: FOR JJ
=J TO 1 STEP -M :: C=C+1 ::
IF A$(JJ)<A$(JJ+M) THEN 970
:: T=A$(JJ):: GOSUB 1050
960 A$(JJ)=A$(JJ+M):: X=JJ :
: GOSUB 1020 :: A$(JJ+M)=T$
:: X=JJ+M :: GOSUB 1020 :: N
EXT JJ
970 NEXT J :: C=C+1 :: IF M>
1 THEN 940 :: RETURN
980 REM #RENEW ARRAY#
990 FOR J=1 TO 6 :: A$(J)=B$
(J):: X=J :: M=A$(J):: GOSU
B 1020
1000 NEXT J :: N=6
1010 DISPLAY AT(24,1):"A to
abort P to pause" :: RETUR
N
1020 RR=X
1030 IF RR>20 THEN RR=RR-20
:: GOTO 1030
1040 CC=1-(X>20)*5-(X>40)*5-
(X>60)*5-(X>80)*5 :: DISPLAY
AT(RR,CC):A$(X):: W=W+1 ::
GOSUB 1060 :: RETURN

```

```

1050 DISPLAY AT(22,14):"T$="
;T$ :: W=W+1 :: GOSUB 1060 :
: RETURN
1060 CALL KEY(3,K1,SS):: IF
SS=0 THEN 1090
1070 IF K1=65 THEN 130
1080 CALL KEY(3,K2,SS):: IF
SS<1 THEN 1080
1090 RETURN

Don't try timing these
sorts, because the screen
display distorts the speed.
Option 9 has been left open
so that you can add your own
favorite sort routine, in
the same format, starting in
line 25000.

These routines may not be
the most efficient forms,
and their names may not be
correct. If you know better
ones, let me know!

100 !BASKET WEAVING by Jim P
eterson
110 CALL CLEAR :: W=11 :: T=
2 :: CH="A5A5A5A5A5A5A5FF
00FF0000FF00FF" :: CALL CHAR
(142,CH):: CALL COLOR(14,2,
W,13,2,W):: CALL SCREEN(W)
120 CALL HCHAR(1,1,143,768):
: CALL CHAR(134,CH):: CH=14
2
130 FOR C=1 TO 31 STEP T ::
FOR R=1 TO 23 STEP T :: CALL
HCHAR(R,C,CH):: NEXT R :: F
OR R=24 TO 2 STEP -T :: CALL
HCHAR(R,C+1,CH):: NEXT R ::
NEXT C
140 CH=ABS((CH=142)*135+(CH=
134)*143):: RANDOMIZE :: T=I
NT(3*RND+2)
150 FOR R=1 TO 23 STEP T ::
FOR C=2 TO 32 STEP T :: CALL
HCHAR(R,C,CH):: NEXT C
160 FOR C=31 TO 1 STEP -T ::
CALL HCHAR(R+1,C,CH):: NEXT
C :: NEXT R :: CH=CH-1 :: W
=INT(14*RND+3):: T=INT(3*RND
+2)
170 IF CH=134 THEN CALL COLO
R(13,2,W):: GOTO 130 ELSE CA
LL COLOR(14,2,W):: GOTO 130

The following routine will
create a D/V80 file named
GRAPHPAGE, to be loaded into
TI-Writer as a 77x57 grid
numbered along the left and

```

```

bottom. Arrow keys can then
be used to create a line
graph of asterisks or what-
ever, annotated with text as
desired.
100 OPEN #1:"DSK1.GRAPHPAGE"
,OUTPUT :: PRINT #1:TAB(4);R
PT$(" ",75):: FOR J=1 TO 57
:: J$=STR$(J)
105 IF J<10 THEN J$=" "&J$
110 PRINT #1:J$&RPT$(" ",38
)&" " :: NEXT J
120 FOR T=1 TO 2 :: PRINT #1
:" " :: FOR J=1 TO 77 :: J$
=STR$(J)&" " :: PRINT #1:SE6
$(J$,T,1):: NEXT J :: PRINT
#1 :: NEXT T :: CLOSE #1

1 !TO PRINT A HANDY REFERENC
E CHART OF ASCII TO HEX CODE
- MODIFIED FROM READING-BERK
S AUG 85
90 OPEN #1:"PIO" :: PRINT #1
:CHR$(27);CHR$(77);CHR$(5)
100 FOR X=32 TO 63 :: FOR Y=
X TO X+64 STEP 32 :: CALL CH
ARPAT(Y,Y$):: PRINT #1:Y;" "
;CHR$(Y);" ";Y$:: NEXT Y ::
PRINT #1:" " :: NEXT X

100 CALL CLEAR :: CALL MAGNI
FY(2):: RANDOMIZE :: DISPLAY
AT(3,2):"TIGERCUB SPEED TYP
ING TEST":TAB(12);"SPEED"
:: T=10
110 DISPLAY AT(5,18):100-T :
: X=INT(26*RND+65):: CALL SP
RITE(#1,X,2,96,120):: FOR D=
1 TO T :: CALL KEY(3,K,ST)::
ON (K=X)+2 GOTO 120,130
120 T=T-1 :: GOTO 110
130 NEXT D :: T=T+1 :: GOTO
110

The UG newsletters are
full of good editorials,
reminding people that they
had better pay for their
freeware or there won't be
anymore. I totally agree
with that - but I can't help
thinking that if there had
been as much emphasis on
paying for commercial
software instead of pirating
it, there would still be a
lot more good programmers
supporting the TI!

MEMORY FULL
Jim Peterson

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HUG LIBRARY CATALOG ADDENDUM

May 1986

- 0189** **SHOOSH BOOMERS**XB** Joysticks req. Speech Syn opt.
A cute program by Ray Kazner. This game will test your skiing skills. Super fun !!!
38 sectors
- 4162** **CCTRAC**D/F 80**
A "Freeware" track copier for Corcomp disk controller users. Written by Michael Ballman and modified by Coe Case. This program will provide a backup for any disk you now have. Loads through E/A Option 3. Program name is BACKUP.
56 sectors
- 4163** **TRACK COPY**E/A 5**
Another "Freeware" track copier by Michael Ballman that will provide backups for all disks. This copier is to be used only with TI disk controllers. Loads through E/A Option 5.
15 sectors
- 4164** **LABELER W/DOCS**XB** Printer req.
A label maker program by James Alan Brown that will print out numerous labels.
27 sectors
- 4165** **FILE-ALL**XB** Printer opt.
An excellent name and address program written by Dave Eisenfeldt. Great for keeping track of names & addresses. Allows them to be printed out also.
35 sectors
- 5235** **INDIAN RAIN MAKER**XB**
An excellent program by Bill Knecht that is guaranteed to cause rain to fall at your house. Excellent graphics.
17 sectors

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