



HOCUS

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

J U L Y - 1 9 8 6

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Group Meeting
Second Saturday
Wauwatosa S&L 7500 W. State
1:00-4:00
SIG Meeting
First Monday
National S&L 3670 S. Moorland
7:00-10:00
Membership dues
Individual - \$10
Family - \$15

NOTICE >--> September meeting will be the third Saturday <--< NOTICE

1 CALL VDPUTIL2	32718 CALL LOAD(9508,2,224,3 7,20,3,0,0,0,2,0,0,100,200,0 37,18,4,192,2,1,0,1,4,3,2,5 2,12,4,32)	32725 CALL LOAD(9680,4,192,1 92,57,4,32,32,12,4,32,32,24, 18,184,216,224,131,75,37,0,5 131,136,3)	32734 FOR I=1 TO 16 STEP 2
32700 !"VDP UTILITY"			32735 A1\$=SEG\$(A\$,I,1)
32701 !BY JOHN BEHNKE			32736 A2\$=SEG\$(A\$,I+1,1)
32702 !CHICAGO ILLINOIS	32719 CALL LOAD(9536,32,24,1 8,184,192,32,131,74,2,1,37,0 208,160,131,19,9,130,2,34,2 55,255,4,32,32,44)	32726 CALL LOAD(9704,37,18,2 2,242,192,32,37,0,2,1,37,2,1 92,131,2,34,255,254,4,32,32, 36)	32737 IF A1\$<" THEN A1=VAL (A1\$)*16 ELSE A1=(ASC(A1\$)-5 5)*16
32703 !WILL CONVERT A BASIC			32738 IF A2\$<" THEN A1=A1+ VAL(A2\$)ELSE A1=A1+ASC(A2\$)- 55
32704 !PROGRAM TO X-BASIC.	32720 CALL LOAD(9562,4,197,2 09,34,36,255,9,132,19,21,4,1 95,60,224,37,18,200,5,131,76 200,5,131,78,200,5)	32727 CALL LOAD(9725,4,192,2 16,0,131,124,2,224,131,224,4 96,0,112)	32739 CALL LINK("POKEV",767+ 8*A*(I+1)/2,A1)
32705 !LOAD BASIC PROGRAM			32740 NEXT I
32706 !INTO X-BASIC, THEN	32721 CALL LOAD(9588,131,80, 2,5,54,0,151,68,2,131,0,1,17 5,2,5,65,0,151,57,8,196,200 4,131,76)	32728 CALL LOAD(9740,3,0,0,0 4,192,2,1,0,1,4,32,32,12,20 0,32,131,74,37,18,2,1,0,2,4, 32,32,12,4,32)	32741 SUBEND
32707 !MERGE DSK1.VDPUTIL2"			32742 SUB COLOR(A,B,C)
32708 !AND RESAVE PROGRAM.			32743 CALL LINK("POKEV",2063 +A,(B-1)*16+C-1)
32714 SUB VDPUTIL2	32722 CALL LOAD(9614,200,5,1 31,74,4,192,192,66,5,129,4,3 7,254)	32729 CALL LOAD(9770,32,24,1 8,194,192,32,131,74,208,32,3 7,19,4,32,32,48,4,91)	32744 SUBEND
32715 CALL CLEAR :: CALL INI T :: CALL LOAD(9195,63,232)	32723 CALL LOAD(9636,2,224,3 7,20,3,0,0,0,4,192,2,1,0,1,2 00,1,37,13,4,32,32,12,4,32,3 2,24,18,13)	32730 CALL LOAD(8194,39,04)	
32716 CALL LOAD(16360,80,79, 75,69,82,32,38,12,80,79,75,6 9,96,32,37,154,80,69,69,75,9 6,32,37,36)	32724 CALL LOAD(9664,200,32, 131,74,37,0,184,32,131,18,37 19,2,3,0,2)	32731 SUBEND	
32717 CALL LOAD(9491,100)		32732 SUB CHAR(A,A\$):: L=LEN (A\$)	
		32733 A\$=A\$&APT\$("0",16-L)	

Still more new stuff a'coming.....

REDISKIT

A freeware track-copier by our own Jim Schroeder. He has several different versions. One that'll run off the Corcomp controller and one specially for the RamDisk. A ten buck donation will keep him working!

ARCHIVER

A freeware program by Barry Traver that packs programs together for ease in sending via Modem. All the headers are put on one sector so the resulting DF128 file is a few sectors shorter than the combined programs had been. The same program then can be used to again unpack the file into the various programs it once was.

MAX_RLE

A public domain program by Travis Watford for transferring pictures between different artist type formats and between different computers. Below are a few examples.



Catherine
Deneuve



W.C. & Mae

BIZARRE PRODUCT UPDATE

Single-board nuclear reactor supplies standby power for 12 years

Now available on a full-length plug-in card for IBM PC or compatible computers, the QBX-1 add-on nuclear-reactor card provides backup power for as long as 12 years. When the card senses a power failure, explosive bolts eject moderator and control rods from the reactor's interior within 20 μ sec, bringing the reactor to its fully rated output of 20 kW in less than a millisecond. Over its 12-year active life, the reactor's power decreases by 25% to 15 kW.

Integral heat fins provide convection cooling of the reactor's 500W power dissipation while the reactor remains in its standby condition. If your computer's fans can't furnish 400 ft³/sec of forced air for cooling, consider buying the manufacturer's heavy-water cooling jacket and stainless-steel pump module, which fit conveniently under a desk or workbench. Latches on each side of the reactor module let you quickly exchange the radioactive core,

should you need to replace it. An optional circular viewing port of lead glass lets you check the reactor's internal mechanical assemblies.

To protect users from undue radiation, each reactor includes a shielding kit comprising five self-stick lead plates and 20 radiation-monitoring film badges. The lead plates mount inside your computer's enclosure and reduce the gamma rays that cause soft errors to floppy-disk and RAM data. For further protection, consider buying the manufacturer's 200-ft extension cords for keyboards and monitors.

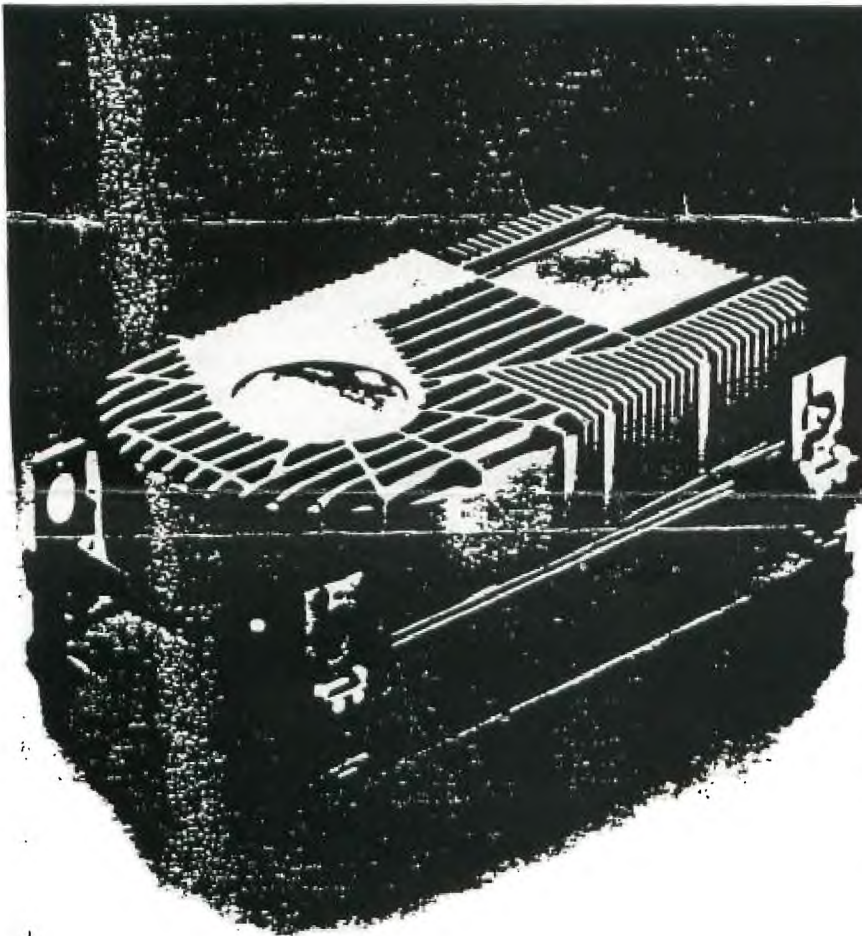
Because the reactor can supply more than enough power for your computer, you can sell excess power to your local utility company. An add-on phasing and metering kit (PMK-1) lets you connect your reactor to the local power grid. Each PMK-1 includes standard power-sale contracts and Rural Electrification Board rules and regulations.

Although not required in all localities, each reactor card package includes a standard 23-volume site-evacuation plan. The plan includes blank forms for you to fill in the name and address of your reactor site and then mail to the Nuclear Regulatory Commission. As an option, the manufacturer supplies the plan on 12 MS-DOS-compatible disks in Wordstar format. User-friendly templates let you type in information so that your word processor can create a complete, printed document.

Reactor prices start at \$2.3 million (1). Delivery, seven years ARO.

—Regus Patoff

Luminescent Electronic Products Inc, Box U-235, Trinity Site, NM 43210. INQUIRE DIRECT



Nuclear reactor supplies CPU power during power failure or other power emergencies. The reactor also glows in the dark (as will you), which makes it easy to find your computer.

TIPS FROM THE TIGERCUB

#33

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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.

Over 138 original programs in Basic and Extended Basic, available on cassette or disk, only \$3.88 each plus \$1.58 per order for PPM. Entertainment, education, programmer's utilities. Descriptive catalog \$1.88, deductible from your first order.

Tips from The Tigercub, a full disk containing the complete contents of this newsletter Nos. 1 through 14, 58 original programs and files, just \$15 postpaid.

Tips from the Tigercub Vol. 2, another diskfull, complete contents of Nos. 15 through 24, over 68 files and programs, also just \$15 postpaid. Or, both for \$27 postpaid.

Nuts & Bolts (No. 1), a full disk of 188 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 188 utility subprograms in merge format, all new and fully compatible with the last, and with 18 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!

TIGERCUB'S BEST PROGRAMMING TUTOR
PROGRAMMER'S UTILITIES
BRAIN GAMES
BRAIN TEASERS
BRAIN BUSTERS!
MANEUVERING GAMES
ACTION GAMES
REFLEX AND CONCENTRATION
TWO-PLAYER GAMES
KID'S GAMES
MORE GAMES
WORD GAMES
ELEMENTARY MATH
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 21888,1 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 \$2.88 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$(181),B$(181),ST(25,2)
120 FOR J=1 TO 180 :: 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>18 THEN 150
160 DISPLAY AT(24,1):"Size o
f array? (18-188)" :: ACCEPT
AT(24,25)VALIDATE(DIGIT)SIZ
E(3):G :: IF G<1 OR G>188 TH
EN 160
170 ON K GOSUB 238,388,438,5
88,558,658,858,918,25888 ::
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):Q :: IF Q=1 THEN 130
190 DISPLAY AT(24,1):"Change
which position? # " :: 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
```

```
280 DISPLAY AT(24,1):"Change
to?" :: ACCEPT AT(24,12)SIZ
E(3):A$(P):: X=P :: GOSUB 18
28 :: GOTO 190
210 DISPLAY AT(22,1):" " ::
:: GOSUB 1818 :: N=6 :: ON
K GOSUB 248,318,448,518,568,
668,868,928,25818 :: DISPLAY
AT(22,1):W;"SWAPS":C;"COMPA
RISONS" :: C,W=0 :: GOTO 188
220 REM #BUBBLESORT*
230 CALL CLEAR :: GOSUB 988
240 FOR J=2 TO N :: C=C+1 ::
IF A$(J)>A$(J-1)THEN 260
250 T=A$(J):: GOSUB 1858 ::
A$(J)=A$(J-1):: X=J :: GOSU
B 1828 :: A$(J-1)=T$ :: X=J-
1 :: GOSUB 1828 :: 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 988
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$(J):: GOSUB 1858 ::
A$(J)=A$(J+1):: X=J :: GOSU
B 1828 :: A$(J+1)=T$ :: X=J+
1 :: GOSUB 1828 :: 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$(J):: GOSUB 1858 ::
A$(J)=A$(J-1):: X=J :: GOSU
B 1828 :: A$(J-1)=T$ :: X=J-
1 :: GOSUB 1828 :: 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 988
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
```

```

45# W=W+1 :: R=JJ
46# NEXT JJ :: C=C+1 :: IF R
=J THEN 48#
47# T=A$(J):: GOSUB 185# ::
A$(J)=A$(R):: X=J :: GOSUB
182# :: A$(R)=T$ :: X=R :: G
OSUB 182#
48# NEXT J :: RETURN
49# REM ***SHUTTLE SORT*****
50# CALL CLEAR :: GOSUB 98#
51# FOR J=1 TO N-1 :: FOR JJ
=J TO 1 STEP -1 :: C=C+1 ::
IF A$(JJ)<A$(JJ+1) THEN 53#
:: T=A$(JJ):: GOSUB 185# ::
A$(JJ)=A$(JJ+1):: X=JJ :: G
OSUB 182#
52# A$(JJ+1)=T$ :: X=JJ+1 ::
GOSUB 182# :: NEXT JJ
53# NEXT J :: RETURN
54# REM ***EASY SORT*****
55# CALL CLEAR :: GOSUB 98#
56# W=W+1 :: D=1
57# W=W+1 :: D=2*D :: C=C+1
:: IF D<N THEN 57#
58# W=W+1 :: D=INT(D/2):: C=
C+1 :: IF D=8 THEN 63#
59# FOR J=1 TO N-D :: W=W+1
:: Y=J
60# W=W+1 :: Z=Y+D :: C=C+1
:: IF A$(Y)<A$(Z) THEN 62# ::
T=A$(Y):: GOSUB 185# :: A
$(Y)=A$(Z):: X=Y :: GOSUB 18
2# :: A$(Z)=T$ :: X=Z :: GOS
UB 182#
61# W=W+1 :: Y=Y-D :: C=C+1
:: IF Y>8 THEN 60#
62# NEXT J :: GOTO 58#
63# RETURN
64# REM #QUICKSORT#
65# CALL CLEAR :: GOSUB 98#
66# W=W+1 :: L=1 :: W=W+1 ::
R=N :: W=W+1 :: T=8
67# T=A$(INT((L+R)/2)):: GO
SUB 185# :: W=W+1 :: J=L ::
W=W+1 :: JJ=R
68# C=C+1 :: IF A$(J)>T$ TH
EN 71#
69# W=W+1 :: J=J+1
70# GOTO 68#
71# C=C+1 :: IF A$(JJ)<T$ T
HEN 73#
72# W=W+1 :: JJ=JJ-1 :: GOTO
71#
73# C=C+1 :: IF A$(J)<A$(JJ
) THEN 76#
74# C=C+1 :: IF J>JJ THEN 7
6#
75# W=W+1 :: J=J+1 :: GOTO 7
3#
76# C=C+1 :: IF J>JJ THEN 7

```

```

8#
77# W=W+1 :: H=A$(J):: A$(J
)=A$(JJ):: X=J :: GOSUB 182#
:: A$(JJ)=H$ :: X=JJ :: GOS
UB 182# :: GOTO 68#
78# W=W+1 :: J=J+1 :: W=W+1
:: JJ=JJ-1 :: C=C+1 :: IF J>
=R THEN 80#
79# W=W+1 :: T=T+1 :: W=W+1
:: ST(T,8)=J :: W=W+1 :: ST(
T,1)=R
80# W=W+1 :: R=JJ :: C=C+1 ::
IF L<R THEN 67#
81# C=C+1 :: IF T=8 THEN 83#
82# W=W+1 :: L=ST(T,8):: W=W
+1 :: R=ST(T,1):: W=W+1 :: T
=T-1 :: GOTO 67#
83# RETURN
84# REM ***RESORT SORT*****
85# CALL CLEAR :: GOSUB 98#
86# FOR J=2 TO N :: C=C+1 ::
IF A$(J)>A$(J-1) THEN 90#
87# T=A$(J):: GOSUB 185# ::
FOR L=J-1 TO 1 STEP -1 :: A
$(L+1)=A$(L):: X=L+1 :: GOSU
B 182#
88# C=C+1 :: IF A$(L-1)>T$
THEN 89# :: A$(L)=T$ :: X=L
:: GOSUB 182# :: GOTO 90#
89# NEXT L
90# NEXT J :: RETURN
91# REM #SHELLSORT#
92# CALL CLEAR :: GOSUB 98#
93# W=W+1 :: M=N
94# W=W+1 :: M=INT(M/3)+1
95# FOR J=1 TO N-M :: FOR JJ
=J TO 1 STEP -M :: C=C+1 ::
IF A$(JJ)<A$(JJ+M) THEN 97#
:: T=A$(JJ):: GOSUB 185#
96# A$(JJ)=A$(JJ+M):: X=JJ ::
GOSUB 182# :: A$(JJ+M)=T$
:: X=JJ+M :: GOSUB 182# :: N
EXT JJ
97# NEXT J :: C=C+1 :: IF M>
1 THEN 94# :: RETURN
98# REM #RENEW ARRAY#
99# FOR J=1 TO G :: A$(J)=8$
(J):: X=J :: M=A$(J):: GOSU
B 182#
100# NEXT J :: N=6
101# DISPLAY AT(24,1): "A to
abort P to pause" :: RETUR
N
102# RR=X
103# IF RR>2# THEN RR=RR-2#
:: GOTO 103#
104# CC=1-(X>2#)*5-(X>4#)*5-
(X>6#)*5-(X>8#)*5 :: DISPLAY
AT(RR,CC): A$(X):: W=W+1 ::
GOSUB 186# :: RETURN

```

```

105# DISPLAY AT(22,14): "T$="
;T$ :: W=W+1 :: GOSUB 186# ::
: RETURN
106# CALL KEY(3,K1,SS):: IF
SS=8 THEN 107#
107# IF K1=65 THEN 13#
108# CALL KEY(3,K2,SS):: IF
SS<1 THEN 108#
109# 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 258##.

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

```

10# !BASKET WEAVING by Jim P
eterson
11# CALL CLEAR :: W=1 :: T=
2 :: CH$="A5A5A5A5A5A5A5FF
00FF0000FF00FF" :: CALL CHAR
(142,CH$):: CALL COLOR(14,2,
W,13,2,W):: CALL SCREEN(W)
12# CALL HCHAR(1,1,143,768):
: CALL CHAR(134,CH$):: CH=14
2
13# 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
14# CH=ABS((CH=142)*135+(CH=
134)*143):: RANDOMIZE :: T=I
NT(3*RND+2)
15# FOR R=1 TO 23 STEP T ::
FOR C=2 TO 32 STEP T :: CALL
HCHAR(R,C,CH):: NEXT C
16# 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)
17# IF CH=134 THEN CALL COLO
R(13,2,W):: GOTO 13# ELSE CA
LL COLOR(14,2,W):: GOTO 13#

```

The following routine will create a D/V8# 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 whatever, annotated with text as desired.

```

10# 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$
11# PRINT #1:J$&RPT$("!_",38
)&"!": NEXT J
12# FOR T=1 TO 2 :: PRINT #1
:" " :: FOR J=1 TO 77 :: J$
=STR$(J)&" " :: PRINT #1:SEG
$(J$,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

```

9# OPEN #1:"PIO" :: PRINT #1
:CHR$(27);CHR$(77);CHR$(5)
10# FOR X=32 TO 63 :: FOR Y=
X TO X+64 STEP 32 :: CALL CH
ARPAT(Y,Y$):: PRINT #1:Y$," "
:CHR$(Y$)," " :: Y$:: NEXT Y ::
PRINT #1:"" :: NEXT X

```

```

10# CALL CLEAR :: CALL MAGNI
FY(2):: RANDOMIZE :: DISPLAY
AT(3,2): "TIGERCUB SPEED TYP
ING TEST" :TAB(12): "SPEED"
:: T=10
11# DISPLAY AT(5,18): 10#-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 12#,13#
12# T=T-1 :: GOTO 11#
13# NEXT D :: T=T+1 :: GOTO
11#

```

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

#34

TIGERCUB SOFTWARE
156 Collingwood Ave.
Columbus, OH 43213

Nuts & Bolts No. 2, another full disk of 198 utility subprograms in merge format, all new and fully compatible with the last, and with 19 pages of documentation and examples. Also \$19.95

Steven Shouse of TIRUG sent this improvement to the GRAPHPAGE in Tips #33 -

```

100 OPEN #1:"DSK1.GRAPHPAGE"
,OUTPUT :: PRINT #1:TAB(4);R
PT$( " ".75):: FOR J=57 TO 1

```

```
21# CALL HCHAR(11,6,94,23)
22# CALL HCHAR(13,6,94,23)
23# M$="187EFF42668124C3DB66
5A18423C5AA542817E995A##18##
24BDBD3C667E666681##243C##42
```

```

187E5AA53CC3427E3C81817E5AE7
669924187E4299240081810BC3*
240 DIM N(30),S(21)
250 F=220
260 FOR J=0 TO 36
270 X=X+1+(X=12)*12
280 IF (X=2)+(X=5)+(X=7)+(X=
10)+(X=12) THEN 310
290 Y=Y+1
300 N(Y)=INT(F*1.059463094*J
)
310 NEXT J
320 CALL HCHAR(1,1,32,320)
330 CALL VCHAR(1,31,95,96)
340 CALL HCHAR(24,1,95,64)
350 CV=2
360 K=8
370 K=K-INT(5*RND+1)+INT(5*R
ND+1)+(K>21)*2-(K<1)*2
380 IF (K<1)+(K>21) THEN 370
390 CALL SOUND(-999,N(K),0,N
(K)*CV,0,N(K)*3.75,30,-4,5)
400 X=INT(40*RND)
410 IF X>12 THEN 370
420 ON X+1 GOTO 430,490,540,
580,660,730,770,850,870,970,
990,1040,1060
430 IF INT(4*RND)<3 THEN 390
440 FOR T=K TO 20
450 CALL SOUND(-999,N(T),0)
460 NEXT T
470 K=1
480 GOTO 390
490 FOR T=K TO 1 STEP -1
500 CALL SOUND(-999,N(T),0)
510 NEXT T
520 K=T+1
530 GOTO 390
540 FOR T=K TO 1 STEP -1
550 CALL SOUND(-999,30000,30
,30000,30,N(T)*3.75,30,-4,0)
560 NEXT T
570 GOTO 370
580 FOR TT=K TO K-INT(5*RND+
1)STEP -1
590 IF TT<2 THEN 370
600 FOR T=1 TO INT(7*RND+3)
610 CALL SOUND(-999,N(TT),0,
N(TT)*2,0)
620 CALL SOUND(-999,N(TT)*1.
03,0,N(TT)*2.06,0)
630 NEXT T
640 NEXT TT
650 GOTO 370
660 FOR T=K TO K-INT(3*RND+3
)STEP -1
670 IF T<2 THEN 370
680 FOR D=0 TO 15 STEP 2
690 CALL SOUND(-999,N(T)*2,D
,N(T)*3.D,N(T)*3.75,30,-4,0)

```

```

700 NEXT D
710 NEXT T
720 GOTO 370
730 FOR X=1 TO 15
740 CALL SOUND(-999,N(X),.5,N
(16-X),.5,N(1),30,-4,5)
750 NEXT X
760 GOTO 370
770 FOR T=K TO K-INT(4*RND+1
)STEP -1
780 IF T<2 THEN 370
790 CALL SOUND(100,N(T),.5,N(
T)*2,.5,N(T)*3.75,30,-4,5)
800 FOR TT=N(T) TO N(T-1)STEP
-10
810 CALL SOUND(-999,TT,.5,TT*
2,.5,TT*3.75,30,-4,5)
820 NEXT TT
830 NEXT T
840 GOTO 370
850 CALL CHAR(32,SEG$(M$,INT
(57*RND+1)*2-1,16))
860 GOTO 370
870 IF INT(4*RND)<3 THEN 390
880 CALL SOUND(-3000,N(K),.5,
N(K)*2,.5,N(K)*3.75,30,-4,.5)
890 FOR J=1 TO INT(5*RND+5)
900 S(J)=INT(21*RND+1)
910 NEXT J
920 CALL SOUND(-1,3000,30)
930 FOR T=1 TO J-1
940 CALL SOUND(-999,N(S(T)),
.5,N(S(T))/1.68,.5,N(S(T))*3.7
5,30,-4,.5)
950 NEXT T
960 GOTO 370
970 CALL CHAR(95,SEG$(M$,INT
(57*RND+1)*2-1,16))
980 GOTO 370
990 IF INT(4*RND)<3 THEN 390
1000 FOR J=220 TO 660 STEP 2
1010 CALL SOUND(-999,J,.5,800
-J,.5,N(12)*3.75,30,-4,.5)
1020 NEXT J
1030 GOTO 370
1040 CALL CHAR(32,"")
1050 GOTO 390
1060 CV=CV+(CV=2)/2-(CV=1.5)
+.5
1070 GOTO 370

```

If you are trying to exchange newsletters and are using the listings of user groups published by Texas Instruments and by others, you are finding that they are way out of date! Send me a disk and some return

postage - or just send \$1.50 - and I'll send you my address list of about 140 groups I exchange with. It is updated every month from return addresses on newsletters I receive.

For those of us who are still struggling along with one disk drive, this routine will transfer any number of D/V80 files, totalling up to about 42 sectors, from one disk to another in one pass, and will optionally save under changed names.

```

100 DIM M$(2000),F$(25),C$(2
5):: CALL CLEAR :: T$=CHR$(1
)
110 DISPLAY AT(8,6):"TIGERCU
B FILEMOVER" :: DISPLAY AT(1
5,1):"PRESS ENTER WHEN FINIS
HED"
120 F=F+1 :: IF F>25 THEN 13
0 :: DISPLAY AT(12,1):"FILEN
AME? DSK"&T$ :: ACCEPT AT(12
,14)SIZE(-12)BEEP:F$(F):: IF
F$(F)<>T$ THEN 120
130 F=F-1 :: FOR J=1 TO F ::
ON ERROR 260 :: OPEN #1:"DS
K"&F$(J),INPUT :: DISPLAY AT
(12,1):"READING "&SEG$(F$(J)
,3,255)
140 X=X+1 :: LINPUT #1:M$(X)
:: C=C+LEN(M$(X))
150 IF C>10000 THEN DISPLAY
AT(20,1):"INSUFFICIENT MEMOR
Y FOR "&SEG$(F$(J),3,255)::
GOTO 190
160 IF EOF(1)<>1 THEN 140
170 X=X+1 :: M$(X)=T$ :: CLO
SE #1
180 W=W+1 :: NEXT J
190 X=0 :: DISPLAY AT(15,1):
"" :: DISPLAY AT(12,1):"INSE
RT COPY DISK AND PRESS":"ENT
ER"
200 CALL KEY(0,K,ST):: IF ST
=0 THEN 200 :: DISPLAY AT(13
,1):""
210 FOR J=1 TO W :: IF F$(J)
=CHR$(2)THEN 230
220 DISPLAY AT(12,1):"FILEN
AME? DSK"&F$(J):: ACCEPT AT(1
2,14)SIZE(-12)BEEP:C$(J)230
NEXT J :: FOR J=1 TO W :: IF
F$(J)=CHR$(2)THEN 250 :: OP
EN #1:"DSK"&C$(J),OUTPUT ::
DISPLAY AT(12,1):"SAVING "&S

```

```

EG$(C$(J),3,255)
240 X=X+1 :: IF M$(X)<>T$ TH
EN PRINT #1:M$(X):: GOTO 240
ELSE CLOSE #1
250 NEXT J :: END
260 ON ERROR STOP :: DISPLAY
AT(22,1):"CANNOT OPEN "&SEG
$(F$(J),3,255):: F$(J)=CHR$(
2):: RETURN 180

```

Here is a very ingenious idea published in the Corpus Christi UG newsletter by H. Macdonald. He could not find the author/newsletter which gave him the idea, so if you know, tell me and I'll print due credit.

I have modified it a bit. This short routine will load quickly and enable you to bypass loading and running the Menu Loader program on a disk when you already know the filename of the program you want to run.

Save the Menu Loader under the filename MENULOADER and save this routine under the filename LOAD - be sure to save it before you try it, because it erases itself!

```

100 CALL INIT :: CALL LOAD(-
31806,16):: DISPLAY AT(12,1)
ERASE ALL:"RUN MENULOADER? (
Y/N)"
110 CALL KEY(3,K,S):: IF S=0
THEN 110 ELSE IF K=78 THEN
130 ELSE DISPLAY AT(12,1)ERA
SE ALL:"LOADING MENULOADER"
:: RUN "DSK1.MENULOADER"
130 CALL CLEAR :: CALL LOAD(
-31952,55,215,55,215):: END

```

Here is one with a bit of a surprise at the end. Key the v,A in line 190 as FCTN V, CTRL comma, CTRL A.

```

190 CALL CLEAR :: CALL SCREE
N(16)
110 DATA 80C0A90888445269,00
000000007EB1,103050911224
A96,000000011010100,21409C2
A492A1CC0,9999336600001824
120 DATA 8482395492543903,00
0000000808080,E0B09880E7702
010,18244281423C0000,0F19030
7E1020408,000000FF80808080
130 DATA 000F13E620221D00,0C
FB34670A22DC00,814224FF,30DF

```

```

2CC641443B00,00F0C86F0447B07
F,000000FF01F901F9
140 DATA 80FF08086808686,00
FF006666006666,00FF003F3F3F
3F3F,01FF01F9F9F9F9F9,8086868
086868093,00666600666600FF
150 DATA 00666600666600E6,3F
3F3F3F3F3F3F3F,F9F9F9F9F9F9F
9F9F,00000000E01C3AE2,9380FF,
FF00FF,E600FF0007080807
160 DATA 3F00FF00FF1988FF,F9
01FF00FF8744FF,1F0909FF3198
AFC
170 FOR CH=96 TO 129 :: READ
CH$ :: CALL CHAR(CH,CH$)::
NEXT CH
180 DISPLAY AT(1,14)ERASE AL
L:"ab" :: DISPLAY AT(2,13):
"cdefg" :: DISPLAY AT(3,14):
"hi,j" :: DISPLAY AT(4,12):"k
lanopq"
190 DISPLAY AT(5,12):"rsssst
u" :: DISPLAY AT(6,12):"vwxyz("
:: DISPLAY AT(7,12):"!
)}~v,A" :: DISPLAY AT(9,12)
:"TIGERCUB"
200 DISPLAY AT(11,12):"SOFTW
ARE" :: DISPLAY AT(13,7):"15
6 COLLINGWOOD AVE." :: DISPL
AY AT(15,7):" COLUMBUS OH 43
213" :: CALL HIGHCHAR
210 GOTO 210
220 SUB HIGHCHAR :: FOR CH=3
2 TO 129 :: CALL CHARPAT(CH,
CH$):: X$=SEG$(CH$,3,12)&SEG
$(CH$,13,4):: CALL CHAR(CH,X
$):: NEXT CH :: SUBEND

```

Thanks to Ramon Martinez in the Orange County UG news letter - a double NEXT is accepted if the pre-scan is turned off.

```

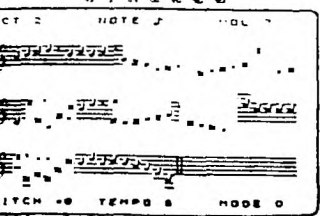
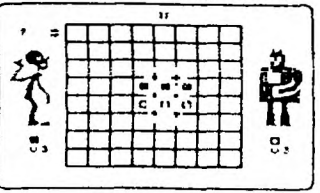
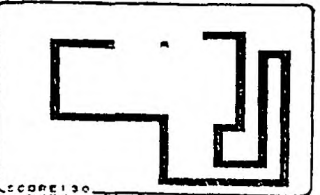
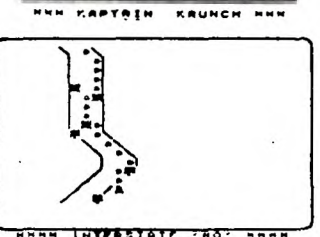
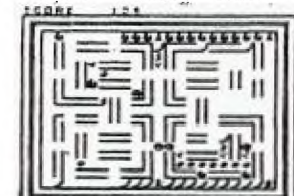
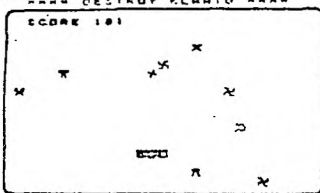
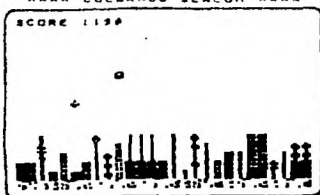
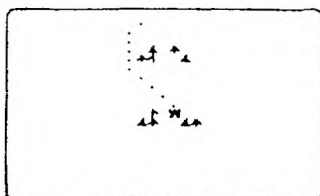
100 J=1
110 !@P-
120 FOR J=1 TO 100 :: IF J/1
0<>INT(J/10)THEN NEXT J ELSE
PRINT J :: NEXT J

```

A computer without a program is like a car without gas. If everyone who filled up at a self-service pump drove away without paying, how soon would all the gas stations be closed?

MEMORY FULL!

Jim Peterson



PROGRAM INNOVATORS

TI-BASIC GAMES

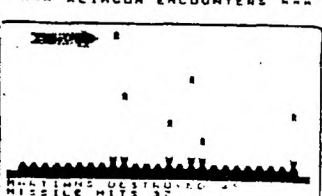
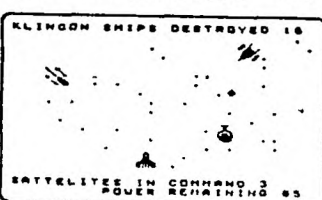
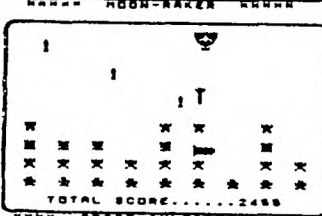
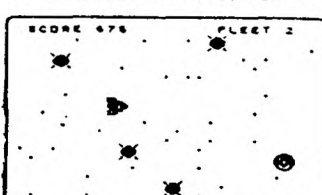
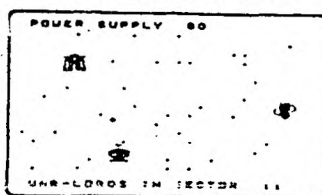
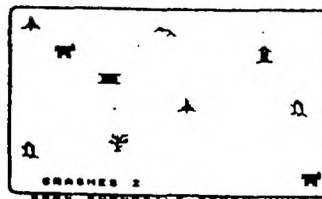
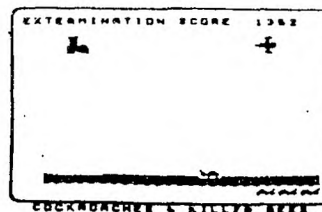
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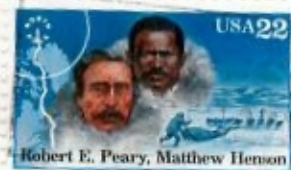


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