



HOCUS

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

APRIL 1985

* NOTICE * NOTICE * NOTICE *

NEW OFFICIAL MAILING ADDRESS
OF OUR GROUP
4122 No. GLENWAY
WAUWATOSA WI 53222

* NOTICE * NOTICE * NOTICE *



HELP HELP HELP

NEWSLETTER NEEDS HELP BADLY !!!

We need a newsletter editor
or maybe a co-editor anyways
and lots of help from a committee
of volunteers.

!!! PLEASE !!!

TI National FORTH Information Center

Our group is now the Official FORTH Information Center for TI. We are in the process of collecting, collating and disseminating public domain tutorials, updates, debugs, enhancements and FORTH screens of games, utilities, routines and what-nots. We naturally welcome any additional submissions. To cover costs we are asking \$3 per disk and 10 cents per tutorial page.

TUTORIALS.....PAGES

Beginning (MSP)	3
Customizing (Edm)	2
File Transfer (Mil)	1
Parameters (Dim)	1
Arrays (Mil)	3
Loops (NHor)	1
DS-DD (Mil)	1
Floating Ft (Ky)	2
Disk Fixer (Edm)	2

DISKS

- TI FORTH System
- TI FORTH System II
- FORTH Source 'A'
- FORTH Source 'B'
- Graphics/Sound Demo
- Data I (JVolk)
- Data II (JVolk)
- Data III
- Data IV
- Data V (Rosenberg)
- Data VI
- X-B Loader

MEMBERSHIP INFORMATION

Membership to the Milwaukee Area 99/4A Users Group is open to anyone who is interested in using and/or programming the Texas Instruments 99/4A Home Computer, and is willing to share his/her fellowship with other members. Annual dues for Individuals - \$10.00, Family membership - \$15.00. This fee helps to defray the expense of the publication of this newsletter and provide a library to members for their enjoyment.

MEETING INFORMATION

Meetings of the Milwaukee Area 99/4A Users Group are held on the SECOND SATURDAY each month in the lower level of Wauwatosa Savings and Loan, located at 7500 W. State Street in Wauwatosa, Wisconsin. Meeting times are from about 1:00 PM to 4:00 PM, depending on the content of the meeting for each particular month. Users are encouraged to bring their computers and/or related hardware and software to any of the meetings to assist members in utilizing their own equipment.

OFFICIAL GROUP ADDRESS

4122 N. GLENWAY
WAUWATOSA WI 53222

GROUP OFFICERS

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	Fred Pabian	327-3618
NEWSLETTER EDITOR.....	** VACANT **	

```

180 X=1
181 Y=Y+1
182 X=X+1
183 CALL HCHAR(X,Y,45,0)
184 NEXT Z
185 GOTO 209
186 FOR N=1 TO 4
187 CALL SKEY(C,N,0)
188 IF S=0 THEN 209
189 CALL HCHAR(X,Y,50,0)
190 IF F=0 THEN 195
191 IF F=1 THEN 200
192 IF F=2 THEN 206
193 IF F=3 THEN 202
194 IF F=4 THEN 204
195 IF (F=0)+(F=2) THEN 207
196 X=X+1
197 GOTO 207
198 Y=Y+1
199 GOTO 207
200 Y=Y-1
201 GOTO 206
202 Y=Y+1
203 GOTO 206
204 Y=Y-1
205 GOTO 207
206 X=X+1
207 CALL HCHAR(X,Y,45,0)
208 NEXT Z
209 FOR I=1 TO B
210 IF I=1 THEN 220
211 CALL HCHAR(I,C,0)
212 CALL HCHAR(I,C,1)
213 IF (I=1)+(I=2) THEN 122
214 CALL HCHAR(I,C,0)
215 IF I=3 THEN 122
216 D=I
217 I=I+1
218 CALL HCHAR(I,C,0)
219 IF I=4 THEN 136
220 NEXT A
221 IF "N" THEN 186 ELSE 175
222 END
    
```

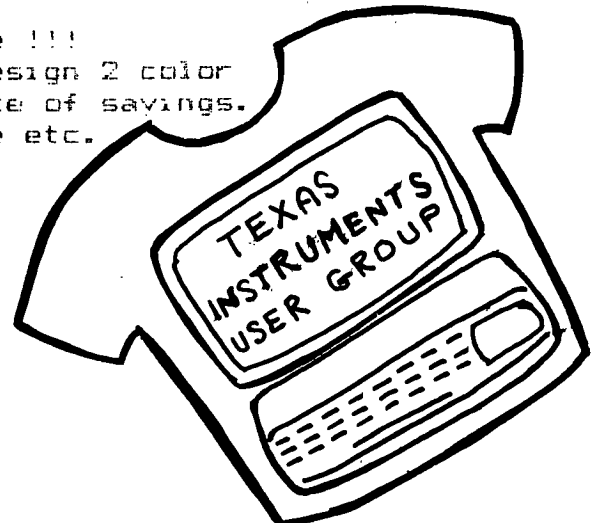
TRY THIS

```

100 CALL INIT
110 FOR A=1 TO 255 :: CALL LOAD(-31744,-A):: NEXT A
120 FOR A=1 TO 255 :: CALL LOAD(-31744,A):: NEXT A
130 FOR A=1 TO 255 :: CALL LOAD(-31744,A):: NEXT A
140 FOR A=1 TO 255 :: CALL LOAD(-31744,-A):: NEXT A
150 FOR A=1 TO 255 STEP 4 :: CALL LOAD(-31744,-A):: NEXT A
160 CALL SOUND(100,110,0)
170 FOR B=1 TO 2
180 FOR A=1 TO 275 STEP 4 :: CALL LOAD(-31744,A):: NEXT A
190 FOR A=1 TO 255 STEP -5 :: CALL LOAD(-31744,A):: NEXT A
200 CALL SOUND(1,110,0)
210 FOR A=1 TO 255 :: CALL LOAD(-31744,-A):: NEXT A
220 NEXT B
230 CALL SOUND(1,110,0)
240 END
    
```

OFFICIAL USER GROUP T-SHIRTS NOW HERE

Our official User Group T-shirts are finally here !!!
 These are all first quality U.S. made original design 2 color silk-screened T-shirts, even available with choice of sayings. Sizes S-M-L-XL Colors gold blue red gray white etc.
 'Texas Instrument User Group'
 'Boot Up With T.I.'
 'I Love My T.I.'
 'Programmers Do It In Groups'
 'Texas Instrument Orphan'



If you've ever worked with FORTH and tried loading, listing, editing or printing out a screen and got a bunch of gibberish or an altogether different screen, it takes a minute before you realize how you goofed. Yeah, you just happened to be in HEX mode !! Well it's happened to me a number of frustrating times, so I decided to do something about it. Below are my Auto-Decimaling routines for screen-calling commands. Since screen 21 is normally automatically loaded from boot screen 3 and has lots of empty space on it, I inserted it there. The words that are there can be crunched as shown in lines 1-4. Lines 6-10 are the routines. Lines 12-14 redefine the resident words, and listed below are the other screen calling words' redefinitions. When auto-booting the system, you get the "ISN'T UNIQUE" error message for the three resident words redefined, but if you include screen 21 in your BSAVED version, you eliminate that too.

Now when you call any screen, it auto-decimals and you get that screen !

```

0 ( SCR # 21 revised )
1 : <CLOAD> CONTEXT @ @ (FIND) IF DROP DROP 0= IF BLK @ IF R> DROP
2 R> DROP ENDIF ENDIF ELSE -DUP IF LOAD ENDIF ENDIF ;
3 : CLOAD [COMPILE] WLITERAL STATE @ IF COMPILE <CLOAD> ELSE
4 <CLOAD> ENDIF ;
5
6 : Y> 256 /MOD 100 * SWAP 16 /MOD 10 * + + ;
7 : ?> BASE @ DECIMAL 16 = ;
8 : ?>1 ?> IF Y> ENDIF ;
9 : ?>2 ?> IF Y> SWAP Y> SWAP ENDIF ;
10 : ?>3 ?> IF Y> ROT Y> ROT Y> ROT ENDIF ;
11
12 : LOAD ?>1 LOAD ;
13 : CLEAR ?>1 CLEAR ;
14 : LIST BASE->R ?>1 LIST R->BASE ;
15 IMMEDIATE .

```

SCR # 29

```
2 : EDIT ?>1 EDITOR2 0 EDT ;
```

SCR # 38

```
14 : EDIT ?>1 EDITOR1 0 VED ;
```

SCR # 39

```
9 : SCOPY ?>2 OFFSET @ + SWAP BLOCK 2- ! UPDATE FLUSH ;
10 : SMOVE ?>3 >R OVER OVER - DUP 0< SWAP R MINUS > + 2 = IF OVER
OVER SWAP R + 1- SWAP R + 1- -1 ' AD ! ELSE 1 ' AD ! ENDIF
R> 0 DO OVER OVER SCOPY AD + SWAP AD + SWAP LOOP DROP DROP ;

```

SCR # 72

```
11 : TRIAD ?>1 0 SWAP SWCH 3 / 3 * DUP 3 + SWAP
DO I ?ASCII IF 1+ I LIST CR ENDIF LOOP
-DUP IF 3 SWAP - 14 * 0 DO CR LOOP
OF MESSAGE 0C EMIT ENDIF UNSWCH ;

```

SCR # 73

```
1 : TRIADS ( FROM TO --- ) ?>2
3 / 3 * 1 + SWAP 3 / 3 * DO I TRIAD 3 +LOOP ;
3 : INDEX ( FROM TO --- ) ?>2 1+ SWAP
DO I DUP ?ASCII IF CR 4 .R 2 SPACES I BLOCK 64 TYPE ELSE DROP
ENDIF PAUSE IF LEAVE ENDIF LOOP ;

```

SCR # 83

```
2 : BSAVE ( from scrn-no ... ) ?>1 FLUSH
etc etc

```

TIPS FROM THE TIGERCUB

#19

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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.

The entire contents of Tips from the Tigercub Nos. 1 through 14, with more added, are now available as a full disk of 50 programs, routines and files for just \$15.00 postpaid!

Nuts & Bolts is a diskfull of 100 (that's right, 100!) XBasic utility subprograms in MERGE format, ready for you to merge into your own programs. Contents include 13 type fonts, 14 text display routines, 12 sorts and shuffles, 9 data saving and reading routines, 9 wipes, 8 pauses, 6 music, 2 protection, etc., and now also a tutorial on using subprograms, all for just \$19.95 postpaid!

And I have about 140 other absolutely original programs in Basic and XBasic at only \$3.00 each!(plus \$1.50 per order for cassette, packing and postage, or \$3.00 for diskette, PPM) Some users groups charge their members that much for public domain programs! I will send you my descriptive catalog for a dollar, which you can then deduct from your first order.

Folks, I just can't afford to keep mailing out these Tips if you don't BUY something once in awhile! I am hearing from more and

more groups who want to get on my mailing list, but I am having to cut back. I am dropping those groups which don't give any indication that their members ever get to see the Tips, and I'll have to cut further. If you do send me an order, or even ask for my catalog, mention your users group so I'll know there is someone still alive out there!

If you know of any schools in your area, especially elementary schools, that have TI-99/4As in the classroom, won't you please give me their address? I'll send them a free catalog.

Danny Michael has improved his graphics screen dump to include rotate and double size! It is in assembly, very fast, and runs out of XBasic, E/A module or Mini Memory. He has also written an assembly Neatlist program which lists an XBasic program to a printer in single line statements, indented, expanded, etc., very useful for debugging, setting up pre-scan, etc.

These are freeware, pay if you want and whatever you want. Just send an initialized disk for either one, or two disks (or SSDD or floppy) for both, in a returnable mailer with ENOUGH RETURN POSTAGE, to

Danny Michael,
Rt 9 Box 460
Florence, AL 35630.

John Hamilton of the Central Iowa Users Group will send you his 22-page booklet of "99 Tips" for the TI-99/4A, for just \$4.00. The address is

John Hamilton,
4228 E. Clinton, Des Moines IA 50317.

I have been experimenting with

TI-Writer, and this issue of the Tips is being printed in 4 columns, right justified directly from the printer. Here's how -

Use TI-Writer, editor mode, in any line length you want. The first line should be .RM 27;F1;AD but don't use any other formatter codes. Don't indent paragraphs. Use some other character as a temporary substitute for any ^, @, & or \$ in the text. Don't include any program listings, yet.

Save the file as DSK1.TEXT. Print an edit copy. Then go into formatter mode. Select DSK1.TEXT to be printed, but instead of your printer spec, type DSK1.TEXT2. Your file will now be in 28-column format and right justified, and indented.

If the text is to include any program listings, run them through my 28-Column converter (see Tips #18), using the Editor option of that program.

Go back to TI-Writer editor and load DSK1.TEXT2. Merge in the program listings. Then PF to print file, but instead of a printer spec, type C DSK1.TEXT3. When it has printed to disk, LF the DSK1.TEXT3 and you will find that all control characters are gone.

Now for a bit of editing. Delete the 3 blank lines at the beginning, and the 6 blank lines that have appeared after every 60th line. Center the title by erasing with the space bar and retyping - do NOT use FCTN 2! Also replace any temporary characters with the ^, @, & or \$.

You will print 4 columns of 60 lines per page, so the total lines in your file must be a multiple of 240. Add enough blank

lines to the end of the file to reach that count.

Save that file back to disk as DSK1.TEXT3. Now go into XBasic, key in this program and RUN!

```
100 OPEN #1:"DSK1.TEXT3",IMP
UT :: OPEN #2:"PIO",VARIABLE
255 :: PRINT #2:CHR$(15);CHR
R$(27);CHR$(69):: DIM B$(240
)
110 FOR A=1 TO 2 :: FOR B=1
TO 240 :: LINPUT #1:B$(B)::
NEXT B
120 FOR C=1 TO 60 :: PRINT #
2:TAB(10);B$(C);TAB(41);B$(C
+60);TAB(72);B$(C+120);TAB(1
03);B$(C+180):: NEXT C :: PR
INT #2:CHR$(27);CHR$(97);CHR
$(6):: NEXT A :: CLOSE #1 ::
CLOSE #2 :: END
```

The A loop is for a 2-page printout of 480 lines, of course.

You can modify this routine to print in 2 or 3 columns, adjust the margins, change the type font or size, rewrite for your own printer, etc. And the column width can be anything you want, just change that .RM 27 in the first line of the text (don't forget that the left margin is set at 0, not 1).

If you want a 2-column page, you can dump the file back to disk instead, and then print it out of TI-Writer editor. Use this routine, modified as you wish.

```
100 !Opens a file TEXT3 of 2
40 lines 35 char long and co
nverts it into a file which
can be printed out of TI-wri
ter Editor as 2 pages in 2 c
olumns
110 OPEN #1:"DSK1.TEXT3",IMP
UT :: OPEN #2:"DSK1.TEXT4",O
UTPUT :: DIM B$(120)
120 FOR A=1 TO 2 :: FOR B=1
TO 120 :: LINPUT #1:B$(B)::
NEXT B
130 FOR C=1 TO 60 :: PRINT #
2:" *B$(C)&RPT$( " ,38-
```

```
LEN(B*(C)))&B*(C+60):: NEXT
C :: FOR D=1 TO 6 :: PRINT #
2: " " :: NEXT D :: NEXT A ::
CLOSE #1 :: CLOSE #2
```

It is best to run a program to set up your printer, and leave it turned on, before printing that file out of the Editor. It is not at all easy to imbed control characters in the file, because they affect the line in all columns and also shift the lines out of alignment.

I understand that there are a couple of kids who wait every month for their dad to key them in a bit of nonsense from the Tiger Cub, so -

```
100 !KEYZAP - by Jim Peterson
n
110 DISPLAY AT(6,11)ERASE AL
L:"KEYZAP" :: DISPLAY AT(12,
1):" Zap the Zprite by typ
ing the key in the correspon
ding position on the keyboard
."
120 DISPLAY AT(24,10):"Press
any key" :: CALL KEY(0,K,S)
:: IF S=0 THEN 120
130 RANDOMIZE
140 CALL CHAR(47,"817EASB199
A5423C")
150 CALL CLEAR :: T=0 :: CAL
L FLASH(T)
160 CALL KEY(3,K,ST):: IF ST
=0 THEN 180
170 C=C+1 :: IF C=101 THEN 1
90 ELSE CALL KEYBOARD(K,T)
180 CALL MOTION(1,25*RND-25
*RND,25*RND-25*RND):: CALL C
OINC(1,2,16,A):: IF A=0 TH
EN 160 ELSE CALL FLASH(T)::
GOTO 160
190 CALL DELSPRITE(ALL):: DI
SPLAY AT(12,9):"GAME OVER" :
: DISPLAY AT(14,9):"SCORE":T
:: DISPLAY AT(16,9):"PLAY A
GAIN?"
200 CALL KEY(3,K,S):: IF S<1
THEN 200
210 IF K=89 THEN C=0 :: GOTO
150 ELSE END
220 SUB KEYBOARD(K,T)
230 IF FLAG=1 THEN 250 :: PL
```

```
AG=1
240 KEY$="1234567890=QWERTYU
IOP/AGDFGHJKL,"&CHR$(13)&"ZX
CVBNM,."
250 IF (K=47)+(K=61)+(K=13)T
HEN SUBEXIT ELSE X=POS(KEY$,
CHR$(K),1):: Y=ABS(X>11)-(X>
22)-(X>33)+1 :: R=Y&6 :: C=(
(X+(Y>1))*(Y-1)&11)&3)
260 CALL SPRITE(12,42,16,R&B
-7,C&B-7):: CALL COINC(1,2
,16,N):: IF N=0 THEN SUBEXIT
270 CALL FLASH(T):: SUBEND
280 SUB FLASH(T):: FOR W=1 T
O 10 :: CALL SCREEN(16):: CA
LL SCREEN(8):: NEXT W :: CAL
L SPRITE(1,47,2,1,1):: T=T+
1 :: DISPLAY AT(1,20):T :: S
UBEND
```

And here's another -

```
100 ! QUICK & DIRTY DOODLER
by Jim Peterson
Use joystick #1. Press fire
button to change color or
pattern, Enter to clear the
screen.
110 DATA FFFFFFFFFFFFFFFF,FF
,0101010101010101,0000000000
0000FF,80808080808080,01020
4081020408,8040201008040201,
FF81B1B1B1B1B1FF
120 CALL CLEAR :: FOR J=1 TO
10 :: READ CH$(J):: NEXT J
130 FOR CH=32 TO 136 STEP 8
:: FOR CN=CH TO CH+7 :: X=X+
1 :: CALL CHAR(CN,CH$(X))::
NEXT CN :: X=0 :: NEXT CH ::
CALL CHAR(32,"0")
140 CALL SCREEN(16):: FOR S=
2 TO 14 :: CALL COLOR(S,S+1,
1):: NEXT S :: R=12 :: C=16
:: CH=33
150 CALL HCHAR(R,C,CH):: CAL
L FASTJOY(C,R,Q):: IF Q=18 T
HEN CH=CH+1+(CH=143)&110
160 CALL KEY(0,K,S):: IF K=1
3 THEN CALL CLEAR :: GOTO 15
0 ELSE 150
170 SUB FASTJOY(C,R,Q):: CAL
L JOYST(1,X,Y):: CALL KEY(1,
Q,S):: X=S&N(X):: Y=-S&N(Y)
:: C=C+X+(C=32)-(C=1):: R=R+Y
+(R=24)-(R=1):: SUBEND
```

And a pretty one -

```
100 CALL CLEAR :: CALL SCREE
N(12):: FOR S=2 TO 10 :: CALL
```

```
COLOR(S,15,1):: NEXT S :: DI
SPLAY AT(12,7):"KALEIDOSQUAR
ES" ! by Jim Peterson
110 FOR CH=40 TO 136 STEP 8
:: FOR L=1 TO 4 :: RANDOMIZE
:: X=SE6$("0018243C425A667
EB199ASBDC3DBE7FF",INT(16&RN
D+1)&2-1,2)
120 B$=B&X$ :: C$=X&C$ ::
NEXT L :: CALL CHAR(CH,B$&C$
):: B$,C$=NULL :: NEXT CH
130 FOR S=2 TO 14 :: X=INT(1
5&RND+2)
140 Y=INT(15&RND+2):: IF (Y=
X)+(Y=8)THEN 140
150 CALL COLOR(S,X,Y):: NEXT
S
160 AR,R,AVR,VR=1 :: AC,C,AH
C,HC=4 :: TT=24 :: XX,XT=13
170 FOR L=1 TO 12 :: T=TT ::
XT=XX :: R=AR :: VR=AVR ::
C=AC :: HC=AHC
180 FOR J=1 TO XT :: X=INT(1
3&RND+2)&8+24 :: CALL HCHAR(
R,HC,X,T):: CALL HCHAR(25-R,
HC,X,T):: CALL VCHAR(VR,C,X,
T)
190 CALL VCHAR(VR,31-C,X,T)::
T=T-2 :: HC=HC+1 :: VR=VR+
1
200 NEXT J :: AR=AR+1 :: AVR
=AVR+1 :: AC=AC+1 :: AHC=AHC
+1 :: TT=TT-2 :: XX=XX-1 ::
NEXT L
210 IF INT(2&RND)<>0 THEN 23
0
220 FOR S=INT(12&RND+2)TO 14
:: CALL COLOR(S,1,1):: NEXT
S
230 FOR J=1 TO INT(20&RND+1)
:: S=INT(13&RND+2):: X=INT(1
5&RND+2):: Y=INT(15&RND+2)::
CALL COLOR(S,X,Y):: NEXT J
240 CALL SCREEN(INT(15&RND+2
)):: ON INT(5&RND+1)GOTO 130
,160,220,230,240
The challenge in Tips
#16 was - how can you store
a hundred or more values of
any size, positive or
negative, integer or
non-integer, even in
exponential notation,
without dimensioning an
array or opening a file, and
then link to another program
with a RUN statement and
recover those values - not
by reading them from the
screen? I had just one
```

reply! Was it too easy, too hard, or doesn't anyone care? Anyway -

```
20591 SUB CHARSAVE2(CH,N)::
N$=STR$(N):: N$=RPT$("0",16-
LEN(N$))&N$
20592 IF POS(N$,".",1)=0 THE
N 20593 :: N$=SE6$(N$,1,POS(
N$,".",1)-1)&"A"&SE6$(N$,POS
(N$,".",1)+1,LEN(N$))
20593 IF POS(N$,"+",1)=0 THE
N 20594 :: N$=SE6$(N$,1,POS(
N$,"+",1)-1)&"B"&SE6$(N$,POS
(N$,"+",1)+1,LEN(N$))
20594 IF N<0 THEN N$=SE6$(N$
,1,POS(N$,"-",1)-1)&"F"&SE6$
(N$,POS(N$,"-",1)+1,LEN(N$))
20595 CALL CHAR(CH,N$):: SUB
END
```

And to recover the values -

```
20596 SUB READCHAR(CH,N):: C
ALL CHARPAT(CH,CH$)
20597 IF POS(CH$,"A",1)=0 TH
EN 20598 :: CH$=SE6$(CH$,1,P
OS(CH$,"A",1)-1)&"."&SE6$(CH
$,POS(CH$,"A",1)+1,LEN(CH$))
20598 IF POS(CH$,"B",1)=0 TH
EN 20599 :: CH$=SE6$(CH$,1,P
OS(CH$,"B",1)-1)&"+"&SE6$(CH
$,POS(CH$,"B",1)+1,LEN(CH$))
20599 IF POS(CH$,"F",1)<>0 T
HEN CH$="--"&SE6$(CH$,POS(CH$
,"F",1)+1,LEN(CH$))
20600 N=VAL(CH$):: SUBEND
```

Here's a jewel of a routine from Danny Michael, to avoid those lockups and other foul-ups that occur when you CALL INIT after you have already CALLED INIT - CALL PEEK(8198,A):: IF A<>170 THEN CALL INIT

The best way to edit a program is to type NUM and the first line number, then Enter will take you through line by line with no danger of accidentally deleting a line. The edit functions will still work, and FCTN 4 gets you out of the NUM mode.

MEMORY FULL!

Jim Peterson

TI FORTH International
 Information Center
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 Wauwatosa WI 53222

Tutorials	UG source	Pages
Beginning	MSP	3
Customizing	Edmonton	2
Disk Fixer	Edmonton	2
Loops	NewHorizon	1
Parameters	Dimensions	1
FileTranV80	Milwaukee	1
Arrays	Milwaukee	3
DS-DD	Milwaukee	1
floating pt	Kentucky	2

Public Domain Disks

TI FORTH System
 FORTH System II
 FORTH Source Code 'A'
 FORTH Source Code 'B'
 Data I > John Volk Rt 1 Bx 291
 Data II > VanBuren ARK 72956
 Data III Nat Info Center
 Data IV Nat Info Center
 Data V > Nat Info Center
 Doodles > Howie Rosenberg 19 7th Ave
 Sonnets > Farmingdale NY 11735
 Graphics/Sound Demo
 X-B Loader

Forth manuals available from
 Sundisk Software
 POB 1690 Warren MI 48090
 \$ 12.50

Data I	Data II	Data III	Data IV
Number guess	Disk-init	DiskInit SSSD	Cosmic Conquest
Moire pattern	Disk/screen	DiskInit DSSD	Decompiler
Sprite demo	Screen/disk	FastCopy 1/2 dr	File Transfer
Poem	Clone2/3driv	DiskCataloger	Calendar
Real time clock	Disass	Kibbit	Subble Sort
Airplane shoot	XB-Forth	Shoot'em Up	Slot Machine
Battlestar	PrinterCommands	Number Race(2-P)	Constants/Variables
Diamond draw	Game of life	DiskFixer	Speech Generation
Dots & lines	SpeechRes	DSR Peeker	Forth Strings
Crazy quilts	Circle	-EDITOR auto/rpt	
Move a block	Aquarium	-64SUPPORT debug	Data V
Suicide Ships	Breakforth	Autodecimaling	-----
Nuke attack	ISR Clock	Sound Interfacing	Grid-plot
1 drive copier	Micro-Jaws	File Transfers	Composer(poems)
MiniForthwriter	3 pass copyer	Graphics routines	CallSound(music)
ForthCopyWord	ScreenDump	NoteWriter	Talking EDITOR
MostUsedWords	Disk/list	Sqr & Sqrt	Enlarged Print

Doodles....Bit map graphics with documentaion and demos

Sonnets....Poetry writer

System II...11 main options with enhancements BSAVED for speed loading
 with 6 disk utilities menu loaded

-EDITOR or -64SUPPORT, PIO or RS232 specify options

to cover costs

Tutorials \$ 0.10 / page

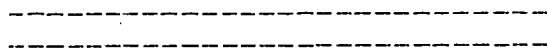
Disks \$3.00

MILWAUKEE AREA 99-4 USER GROUP
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WAUKESHA, WI 53222



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