

HUG

HOUSTON USERS' GROUP

OCTOBER
1986

HUG TIBBS - (713) 475-8909
24-hour BULLETIN BOARD

MEETING SCHEDULE
FIRST SUNDAY OF EVERY MONTH
(2nd Sunday if 1st Sunday
is on a holiday weekend)

AT THE NEXT MEETING

SUNDAY, OCTOBER 5, 1986 2:00 P.M.

St. John's School - 2401 Claremont

This month Mike Matula will demonstrate some new programs available from M&S Computer Systems. Larry Pipkin will also show off some of the new programs available from the HUG Library.

IN THIS ISSUE

- TIPS FROM THE TIGERCUB HOW TO CREATE MUSIC FROM NOISE
- HOME COMPUTER JOURNAL CLEANING THE GEMINI 10X&15X PRINTHEAD
- WARNING LABELS FOR DISK MAILER LETTER FROM A TI-99 4A FANATIC

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THE MUSIC CORNER
 by Jeff Gatlin
 (Excerpted from June 1986 NEWS NET 99er)

One of the things I have always thought was missing from the 4A's music capability was the low range. The 4A gives us an almost infinite upper range, as far as we can hear, but its lower range stops at the frequency of 110. After listening to dozens of music programs, I noticed that some of them seemed to defy reason and belt out base notes below what I call low "A" (the lowest note played by the 4A without magic). Curiosity and a greedy desire to hold this magic secret led me to examine these programs. I found that to create these magic tones, one must make use of a mysterious fourth voice which our beloved Extended BASIC manual describes as "noise". The "noise" is created by using a negative value between 1 and 8 in place of a note's frequency.

10 CALL SOUND(1000,-4,0)

This statement creates a mildly interesting noise if you have never heard it before. After hearing it once, no secrets were revealed. So what is the secret? Once again, our Extended BASIC manual sheds light upon us. It says, "-4 Periodic Noise that varies with the frequency of the third tone specified". Ah ha! The secret is revealed! To create magic bass notes, one must use ALL THREE voices PLUS a -4 noise.

10 CALL SOUND(1000,330,0,392,0,523,0,-4,0)

Voila! But wait, something is amiss. The bass note created does not match the three voice chord. Experimentation revealed that if you use the note C (523) in the third voice the bass note played is C# (C sharp). Why? It doesn't really matter, at least to me. Below is a chart I made up of the frequencies to use in the third voice, to create the desired base note.

PLENTY LOW:	REALLY LOW:
1661--A (same as A110)	831--A (one octave below 110)
1568--G#,Ab	784--G#,Ab
1480--G	740--G
1397--F#,Gb	698--F#,Gb
1319--F	659--F
1245--E	622--E
1175--D#,Eb	587--D#,Eb
1109--D	554--D
1047--C#,Db	523--C#,Db
988--C	494--C
932--B	466--B
880--A#,Bb	440--A#,Bb
831--A (1 octave below A110)	415--A (2 octaves below A110)

The bad news is that this doesn't give you full control of four voices, although if you're tricky enough, you can make use of four note chords. The reason is that the third tone and the noise work together as one tone. In almost every example I have come across, the third tone has a volume of 30, which makes it almost inaudible.

However, this does not affect the volume of the bass note. It's volume is controlled by the value after -4.

With this basic information, you should be able to experiment using bass notes on your own. I hope it is helpful. If anyone has any questions about bass notes or any other aspect of music on the 4A, feel free to ask, call or write. The least I can do is offer comfort that you're not the only one who can't figure it out.

(ED. To hear a sample of this interesting capability of the 99/4A, order # 5242 SHADED VELVET by Jeff Gatlin from the HUS library). The thing to remember is that there will always be an interval of 3 octaves and a major seventh between the base note and the third voice.

"HOME COMPUTER JOURNAL"

Following this column is a download of a letter signed by "Patana Ratanapreux" disclaiming any responsibility for actions by Emerald Valley Publishing (Gary Kaplan, Editor). Be advised that she is MRS. Gary Kaplan. In our last issue was a letter from Guy Romano with a address to write in Eugene regarding this fraud. PLEASE SHARE THIS WITH YOUR MEMBERS AND ACT ON IT.

THE LETTER

The following is a letter received from Home Computer Journal on July 26, 1986. The content speaks for itself.

Home Computer Journal
 P.O. Box 70248
 Eugene, OR 97401
 July 14, 1986

Mr Jeff Guide
 P.O. Box 6728
 Alexandria, VA 22306

Dear Mr. Guide:

Under the terms of agreement between Home Computing Journal (HJC) and Emerald Valley Publishing Co. dba Home Computer Magazine (HCM) we have no responsibility for HCM refunds. If, however, you are dissatisfied with our publication (HCJ), we refer you to Emerald Valley Publishing Co. at the following address:

EMERALD VALLEY PUBLISHING
 P.O. Box 70288
 Eugene, OR 97401

Unless we hear differently from you, we are dropping you from our subscriber rolls. We are sorry you feel this way.

Sincerely,
 /signed/
 Patana Ratanapreux
 Customer Relations

PR/kd

This letter was a photocopy with my name and date added by typewriter.

I find this letter to be VERY interesting. For one, HCJ and Emerald Valley agreed not to issue refunds. BUT, if you dont like HCJ, write a letter to Emerald Valley. Then they have the NERVE to tell me they are dropping me from their rolls and I'm sorry I feel this way??!!!

The Postal Service should like this one, I hope.

Has anyone else received a copy of this letter or any other from them?

I suggest that those who received HCJ write to them if you are not satisfied and return the Disks.

I am still open to a full-scale boycott of HCJ. Any takers? Anyone want to put something in their User Group Newsletters? Use my name, mention what we are doing and maybe some action will result when HCJ gets no orders and many returned disks and complaints.

Jeff Guide

(Reprinted from Topics, LA 99ers Computer Group Newsletter, Vol.5 No.9 September 1986).

* GEMINI-10X 15X *

Cleaning the head on your printer may save buying a new one prematurely. The first sign of the ink clogging the striking pins is the commas will lose their tails. They look like a period.

The only tools you will need are a Phillips screw driver, a small brush, and some typewriter key cleaning fluid. You can use rubbing alcohol or lighter fluid (Naptha) which works just as well. These are FLAMMABLE so avoid any fire.

Turn the printer off, then remove the ink ribbon. Push the head (gently) all the way to the left in the park position.

Remove the head cable by grasping the cable and the heavy piece of plastic under the cable, near the connector, pulling gently, and moving back and forth while holding the connecting head. After you disconnect the cable remove the two phillips screws holding the head. With a back and forth moting gently pull the head straight up. Use the brush to clean the outside of the head. Don't probe into the head with the brush.

To clean, hold the head with the strike pins facing down and the bottom side of the head facing you. (You can see the pin shafts in that position.) Hold the head cable in the palm of the same hand to keep it out of the way. Now hold the head in that position and take a cotton ball or Q-tip, dip it in the cleaner and squeeze the fluid into the lower hole where you see the pin shafts. Don't turn the head over or the fluid will run into the solenoids. Keep putting cleaner in until it comes out fairly clean. Use a soft, clean cloth to occasionally wipe off the excess fluid.

Just reverse the procedure for putting the head back. Replacing the head cable is a little tricky but don't force it. It will come out easily when it has to. Don't overdo it as you might strip the threads. If you should happen to get cleaning fluid in the solenoids (head) be sure it is thoroughly dry before you start the printer as the head runs hot.

By the way, if you ever take the ink ribbon off to turn it over, and you can't remember which half the head hits, it is the top half of the ribbon. It usually doesn't do much good to turn the ribbon over as the ink is absorbed to the side you are using as it dries out.

(Reprinted from the Kansas City Area TI-99/4A Computer User's Group Vol 5, Issue 1, January 1986)

Here is a program to make labels for a disk mailer. It's a fancy label that warns against the hazards for the disk in the mailer. I find it a good addition to my programs.

```
100 ! *****
110 ! *
120 ! * DON'T LABELS *
130 ! * BY: RON RUTLEDGE *
140 ! * CENTRAL IOWA UG *
150 ! *
160 ! *****
170 !
180 ESC$=CHR$(27)!ESCAPE CODE
190 EMP$=ESC$&"E" !EMPHASIZED PRINT
200 NOR$=ESC$&"N"&CHR$(0)!NORMAL PRINT
210 ENL$=ESC$&"M"&CHR$(1)!ENLARGED PRINT
220 UON$=ESC$&"-"&CHR$(1)!TURN UNDERLINE ON
230 UOF$=ESC$&"-"&CHR$(0)!TURN UNDERLINE OFF
240 OPEN #1:"PIO"
250 PRINT #1:EMP$&ENL$&ON$&"DO NOT BEND"
260 PRINT #1:NOR$&" FLOPPY DISK ENCLOSED"
270 PRINT #1:ENL$&UOF$&"DO NOT XRAY"
280 PRINT #1: : :
290 CALL KEY(0,R,S)! ARE YOU PRESSING A KEY?
300 IF S=0 THEN 250! IF NOT, THEN PRINT ANOTHER
310 CLOSE #1
320 END
```

(Reprinted from Kansas City TI-99/4A Users Group, Vol. 5, No.7 July 1986)

Harry Allston
10300 Kings River Road #57
Reedley, CA 93654

July 15, 1986

HOUSTON USERS GROUP C/O PHILIP POXON
9122 HAMMERLY
HOUSTON, TX 77080

Dear fellow T.I. Users:

I live in a small town, Reedley, CA and there is very little interest associated with the TI home computer. On the other side of the coin, I am, according to my wife and friends a 'FANATIC'!

I live and breathe the computer, yet aside from a User Group 45 miles down the road, which isn't too active there are very few if I can relate to.

That is the reason for my letter. I would like to correspond with and exchange ideas and programs with anyone that has the time and interest.

I am retired, 60 years of age, on limited income and have more time on my hands than brains. I like the business aspect of the TI and although I have many games on file, they are not 'my thing'.

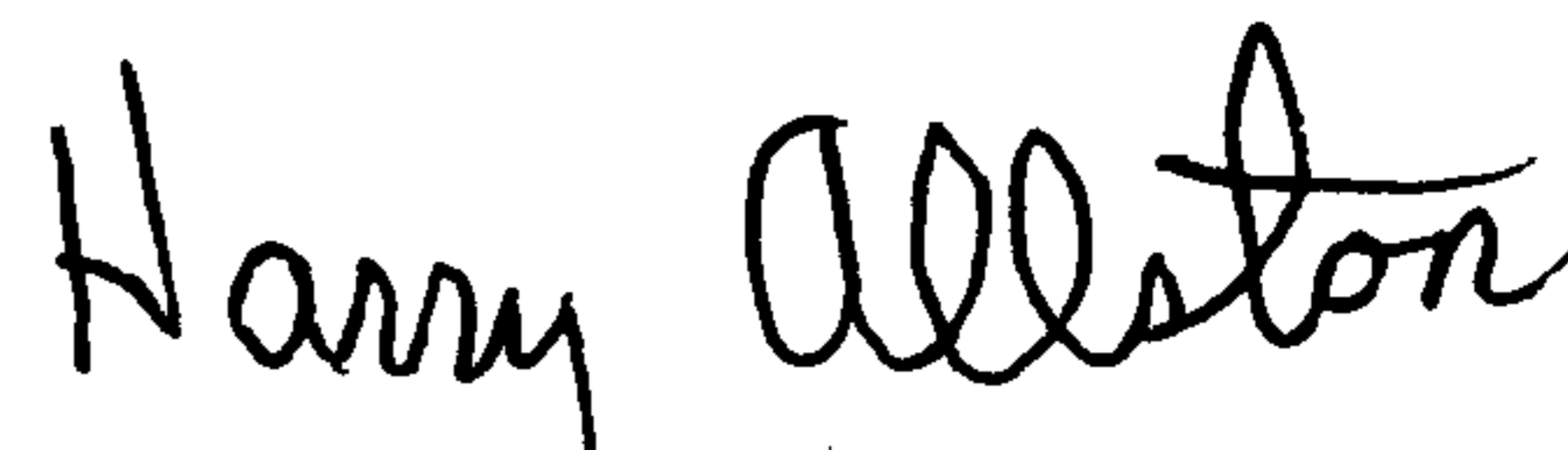
I think it would be great to exchange programs, ideas and general fellowship with persons from different walks of life and different parts of the country.

My equipment consists of:.....Console, PEB, 32K memory, Disk and controller card, Cassette and a GP-550TI printer. Many books, TI-Writer, Multiplan, Editor/Assembler and a library of over 200 programs, plus numerous modules.

If there is any one in your group that is interested, I would appreciate hearing from them, male or female. I will do my utmost to answer all letters.

There is no intent of financial return, just fellowship.

Best wishes


Harry Allston

TIPS FROM THE TIGERCUB

#32

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156 Collingwood Ave.
Columbus, OH 43213

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Over 130 original programs in Basic and Extended Basic, available on cassette or disk, only \$3.99 each plus \$1.50 per order for PPM. Entertainment, education, programmer's utilities. Descriptive catalog \$1.99, deductible from your first order.

Tips from The Tigercub, a full disk containing the complete contents of this newsletter Nos. 1 through 14, 50 original programs and files, just \$15 postpaid.

Tips from the Tigercub Vol. 2, another diskfull, complete contents of Nos. 15 through 24, over 60 files and programs, also just \$15 postpaid. Or, both for \$27 postpaid.

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!

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've found a bug in the Tigercub Menuloader V.#5 which won't let you print a disk catalog if the disk contains the maximum 127 files. This should fix it.

```
340 I=I+1 :: IF I>127 THEN K=X :: GOTO 430
520 DISPLAY AT(X+5,12)SIZE(12):" #?" :: ACCEPT AT(X+5,15)SIZE(3)VALIDATE(DIGIT):KD :: IF KD<1 OR KD>NN THEN 520
```

I think that all program listings should be printed in 28-column format, exactly as they appear on the screen - it makes it so much easier to key them in without errors. I combined parts of two of my programs to make

the following. It is written for the Gemini 10X but the lines of printer control codes are annotated to help others make adjustments.

```
100 DIM K$(240):: LN=100 :: DISPLAY AT(3,4)ERASE ALL:"TIGERCUB PROGLISTER": " Will convert a program": "listing to 28-column format,"
110 DISPLAY AT(7,1):"exactly as it appears on the": "screen, and print it in 4": "columns."
120 DISPLAY AT(11,1):" Program must be RESequenced": "and LISTed to disk by": "RES (enter)": "LIST DSK1.(filename) (Enter)"
130 DISPLAY AT(18,1):"Filename? DSK" :: ACCEPT AT(18,14)BEEP:F0
140 OPEN #1:"DSK"&F0,DISPLAY ,VARIABLE B0,INPUT
150 IF EOF(1)=1 THEN 260 :: LINPUT #1:A0
160 IF LEN(A0)<80 THEN LN=LN+10 :: GOTO 210
170 LINPUT #1:B0 :: IF POS(B0,STR$(LN),1)=1 THEN FLAG=1 :: LN=LN+10 :: GOTO 210
180 A0=A0&B0 :: IF LEN(A0)<160 THEN LN=LN+10 :: GOTO 210
190 LINPUT #1:B0 :: IF POS(B0,STR$(LN),1)=1 THEN FLAG=1 :: LN=LN+10 :: GOTO 210
200 A0=A0&B0 :: LN=LN+10
210 S=1
220 L0=SEGS(A0,S,28)
230 IF L0<>" THEN 240 :: IF FLAG=1 THEN FLAG=0 :: A0=B0 :: GOTO 160 :: ELSE GOTO 150
240 X=X+1 :: K$(X)=L0 :: S=S+28 :: IF X=240 THEN 250 :: GOTO 220
250 X=0 :: CALL PRINTER(K$(X)) :: GOTO 220
260 CLOSE #1 :: FOR J=X+1 TO 240 :: K$(J)=" :: NEXT J :: CALL PRINTER(K$(X)) :: PRINT #2:CHR$(12) :: END
270 SUB PRINTER(B$(X)) :: IF F=1 THEN 340 :: F=1
280 OPEN #2:"PIO.LF",VARIABLE 132 :: PRINT #2:CHR$(15);CHR$(27);"N";CHR$(6);!condensed print and perforation skip
290 PRINT #2:CHR$(27);"G";!
```

- double-struck printing, optional

```
300 PRINT #2:CHR$(27);CHR$(42);CHR$(8);!download normal characters - required if lines 310-330 are used
310 PRINT #2:CHR$(27);CHR$(42);CHR$(1);CHR$(40);CHR$(8);CHR$(64);CHR$(30);CHR$(96);CHR$(17);CHR$(72);CHR$(5);CHR$(66);CHR$(61);CHR$(8);!slash the zero - optional
320 PRINT #2:CHR$(27);CHR$(42);CHR$(1);CHR$(42);CHR$(8);CHR$(8);CHR$(34);CHR$(8);CHR$(8);CHR$(62);CHR$(8);CHR$(8);CHR$(34);CHR$(8);!broaden the asterisk - optional
330 PRINT #2:CHR$(27);CHR$(36);CHR$(1);!activate redefined characters - required if lines 310-320 are used
340 FOR C=1 TO 60 :: IF B$(C)="" THEN 360 :: PRINT #2:TAB(10);B$(C);TAB(41);B$(C+60);TAB(72);B$(C+120);TAB(103);B$(C+180);CHR$(10)
350 NEXT C
360 SUBEND
```

I had trouble in debugging that program because printing the control codes gave me unwanted line feeds, and using semicolons to prevent line feeds will interfere with tabs in the first line of text. An article by Art Byers in the Central Westchester U6 newsletter gave me the solution - suppress all the line feeds by opening the printer with PIO.LF, and put them back in where you need them with CHR\$(10)!

We haven't had a random music player in a long time. This one is called ECHO but I don't know where it came from.

```
100 RANDOMIZE :: DEF X=INT(RND*7):: FOR B=0 TO 6 :: A(B)=VAL(8E6$("247262294330349392440", (B+1)*3-2,3)) :: NEXT B :: B,C,D=X
110 CALL SOUND(-900,A(B),0,A(C),9,A(D),19) :: D=C :: C=B :: B=X :: GOTO 110
```



```

Sound effects - thanks to
Greg Healy in the Edmonton
User Group newsletter -
100 CALL INIT
110 FOR J=2000 TO 2300 STEP
10 :: CALL LOAD(-31568,J)::
NEXT J

```

```

To go directly from XBasic
to console Basic - thanks to
Greg Healy in the Edmonton
User Group newsletter -
CALL INIT :: CALL LOAD(-3196
2,8787)
Enter. Ignore the error
message. Type NEW and Enter.
> TI BASIC READY

```

```

This routine will read a
file of 28-character records
and scroll them up the lower
half of the screen without
disturbing the upper half.
100 DISPLAY AT(12,1)ERASE AL
L:"FILENAME? DSK" :: ACCEPT
AT(12,14)BEEP:F0 :: CALL CLE
AR
111 OPEN #1:"DSK"&F$,INPUT
112 DIM M$(400)
113 X=X+1 :: LINPUT #1:M$(X)
120 DISPLAY AT(24,1):M$(X)
125 R=24
130 FOR T=X-1 TO 1 STEP -1 :
: IF R>13 THEN R=R-1 :: DISP
LAY AT(R,1):M$(T)
140 NEXT T :: IF EOF(1)<>1 T
HEN 113 ELSE CLOSE #1

```

```

10 !ONE-LINE MORTGAGE PAYMEN
T CALCULATOR BY SAM MORABITO
100 CALL CLEAR :: INPUT "ENT
ER P,R,N WHERE P=AMOUNT, R=R
ATE, N=YEARS":P,R,N :: PRINT
"0";INT((P/R/1200)/(1-1/(1+
R/1200)^(N*12)))100+.5)/100;
"PER MONTH"

```

```

A number always prints out
with a blank space before
and after it (except that a
negative number is preceded
by -). This is not always
desirable when formatting a
screen or printout. The
solution is to change the
number to a string by using
STR$ -
100 CALL CLEAR
110 PRINT " MULTIPLICATION
TABLES":

```

```

120 FOR J=1 TO 9
130 FOR K=1 TO 9
140 PRINT TAB(K*3-2);STR$(J*
K);
150 NEXT K
160 PRINT :
170 NEXT J

```

```

Regarding the CHECKER
program in Tips #31, I
should have mentioned that
the two programs to be com-
pared must first be LISTed
to one disk by -
LIST "DSK1.(filename)
- using a different file-
name for each.

```

```

We are still finding new
ways to skin the kitty. In
Tips #26 I listed three
algorithms to alternate be-
tween the two joysticks.
Rick Hueburg sent me another
which is the simplest and
fastest of all -
100 Z=2
110 Z=3-Z :: CALL JOYST(Z,X,
Y).....and back to 110!

```

```

Here are some more dark
secrets Texas Instruments
didn't tell us. The User's
Reference Guide claims that
the computer can produce
frequencies up to 44733 Hz,
"well above human hearing
limits", but then admits
"the actual frequency pro-
duced may vary from 8 to 10
percent depending on the
frequency." According to Jim
Hindley, the highest
frequency actually produced
is 37287 (which is certainly
not above the hearing range
of some humans, but neither
is 44733!), and the maximum
error rate far exceeds 10 %
because any frequency you
call for from 31953 to 43733
ends up as exactly 37287!
Not to worry, the frequen-
cies in the normal range
of music are accurate enough
and your TV speaker probab-
ly can't reproduce frequen-
cies above 20000 anyway.

```

```

And did you know that TI
really gave us only 15 vol-

```

```

umes, not 30? Listen and
count them -
100 FOR V=0 TO 29 STEP 2
110 CALL SOUND(1000,500,V)
120 CALL SOUND(1000,500,V+1
1)
130 FOR D=1 TO 500
140 NEXT D
150 NEXT V

```

```

And the duration values
are just as inaccurate.
Experimenting with a series
of 8 CALL SOUNDS in a loop
repeated 100 times, I found
that execution time was 40
seconds for any duration
between 1 and 49, or a
negative duration; 54
seconds for any duration
between 50 and 66; 67
seconds between 67 and 83;
80 seconds between 84 and
99; 94 between 100-116; 106
between 117-133....!

```

```

I guess I've been neglect-
ing those who don't have the
Extended Basic module, so -
100 CALL SCREEN(16)
110 CALL CLEAR
120 PRINT TAB(8);"GREENSLEEV
ES": : : : : : : : : :
: "programmed by Jim Peterso
n"
130 DIM S(15)
140 FOR N=1 TO 12
150 READ S(N)
160 NEXT N
170 M$="421000995ABDC324E7DB
A5106699102400425A00BDC35A66
A5243C7E81994200A57E66BD3CA5
423C107E423C0D5A810099FFC3"
180 RANDOMIZE
190 FOR R=1 TO 12
200 CALL COLOR(R+1,1,1)
210 CALL CHAR(32+R*8,CH0&CH0
)
220 FOR T=R TO 25-R
230 CALL NCHAR(T,R,32+R*8,34
-2*R)
240 NEXT T
250 NEXT R
260 CALL SCREEN(2)
270 FOR R=1 TO 12
280 CALL COLOR(R+1,R+2,1)
290 CH$=SE6$(M$,INT(47*RND+1
)*2-1,8)
300 CALL CHAR(32+R*8,CH0&CH0
)
310 NEXT R

```

```

320 DATA 247,277,294,311,330
,370,392,440,494,523,554,507
330 DATA 2,5,5,4,7,5,2,8,5,3
,9,5,1,10,1,2,9,3,4,0,3,2,6,
3,3,3,1,1,5,3
340 DATA 2,6,1,4,7,5,3,5,2,1
,4,2,2,5,2,4,6,1,2,4,4,1,1
350 DATA 2,5,1,4,7,5,2,8,5,3
,9,5,1,10,5,2,9,5
360 DATA 4,0,3,2,6,3,3,3,3,1
,5,3,2,6,3,3,7,5,1,6,2,2,5,1
370 DATA 3,4,1,1,2,2,2,4,1,4
,5,1,2,1,5,6,5,1
380 DATA 2,12,9,2,12,7,2,12,
3,3,12,12,1,11,9,2,9,7
390 DATA 4,0,6,2,6,3,3,3,3,1
,5,5,2,6,3,4,7,5,2,5,3
400 DATA 3,5,5,1,4,4,2,5,5,4
,6,1,2,4,1,6,1,1
410 DATA 6,12,9,3,9,12,1,11,
8,2,9,7,4,8,6,2,6,3,3,3,3
420 DATA 1,5,3,2,6,2,3,7,5,1
,6,6,2,5,5,3,4,1,1,2,2,2,4,4
,6,5,1,1,1,5,7,5,1
430 FOR J=1 TO 223 STEP 3
440 READ T,A,B
450 GOSUB 530
460 FOR TT=1 TO T
470 CALL SOUND(-999,S(A),0,S
(B),7)
480 NEXT TT
490 NEXT J
491 FOR V=0 TO 20
492 CALL SOUND(-999,S(A),V,S
(B),V+7)
493 NEXT V
500 CALL SCREEN(INT(14*RND+2
))
510 RESTORE 330
520 GOTO 270
530 CALL COLOR(A+1,INT(14*RND
D+2),1)
540 CALL COLOR(B+1,INT(14*RND
D+2),1)
550 RETURN

```

```

1 !from 9 T 9 U6 news1. Aug
85
100 PRINT ""Hello" said TI
"
110 PRINT "Press ""ENTER"" t
o continue"

```

```

If you bite the hand that
feeds you, you'll go hungry
tomorrow. Don't be a pirate!
MEMORY FULL TO BUSTIN'

```

Jim Peterson

HUG LIBRARY CATALOG ADDENDUM
September 1986

- 0199 PUZZLES 2
Another puzzle file to be used with Program #0195(Wheel of Fortune). To use, change lines 257 and 1570 of Program #0195. 26 sectors
- 1095 RLE-BUGS BUNNY**DF/128 Printer rqd.
A cute picture of Bugs Bunny that can be printed out using Program #1078.
41 sectors
- 1096 RLE-3 STOOGES**DF/80 Printer rqd.
A nice picture of The 3 Stooges that can be printed out using Program #1078. 17 sectors
- 1097 RLE-BAKER**DF/128 Printer rqd.
An excellent picture of actress Carrol Baker that can be printed out using Program #1078. 28 sectors
- 1098 RLE-CAVEGIRL**DF/80 Printer rqd.
A nice printout of an old-fashioned cave girl that can be printed out using Program #1078. 19 sectors
- 1099 RLE-CUTTER JON**DV/128 Printer rqd.
A printout of an old man rolling down a hill that can be printed out using Program #1078. 23 sectors
- 1100 RLE-DAWN**DF/128 Printer rqd.
A printout of Dawn Gordon from CE Forum that can be printed out using Program #1078. 22 sectors
- 1101 RLE-EAGLE**DV/128 Printer rqd.
A good picture of an eagle on the U.S. Mail 2 pound package that can be printed out using Program #1078. 39 sectors
- 1102 RLE-U.S.S. ENTERPRISE**DF/128 Printer rqd.
A very good graphic drawing of the U.S.S. Enterprise that can be printed out using Program #1078. 14 sectors
- 1103 RLE-FBI MOST WANTED**DF/80 Printer rqd.
A poster of the FBI's Most Wanted List that can be printed out using Program #1078. 43 sectors
- 1104 RLE-FLAGSHIP**DF/128 Printer rqd.
A nice picture of a spaceship that can be printed out using Program #1078.
26 sectors
- 1105 RLE-HENRY K**DF/128 Printer rqd.
A good picture of Henry Kissinger that can be printed out using Program #1078. 18 sectors
- 1106 RLE-MADONNA**DF/128 Printer rqd.
Nice picture of rock star Madonna that can be printed out using Program #1078. 32 sectors
- 1107 RLE-UZI**DF/128 Printer rqd.
An excellent picture of an UZI machine gun that can be printed out using Program #1078. 11 sectors
- 1108 RLE-HOWDY DOODY**DF/128 Printer rqd.
A cute printout of Howdy Doody that can be printed out using Program #1078. 108 sectors
- 1109 RLE-INDIAN**DF/128 Printer rqd.
A picture of an Indian in headdress that can be printed out using Program #1078. 67 sectors
- 1110 RLE-N.A.S.A.**DF/128 Printer rqd.
A logo and patch of the N.A.S.A. symbol that can be printed out using Program #1078. 21 sectors

- 1111 RLE-RUINS**DF/128 Printer reqd.
A nice picture of Greek ruins that can be printed out using Program #1078. 16 sectors
- 1112 RLE-SCROOGE**DF/128 Printer reqd.
An excellent picture of Ebenezer Scrooge that can be printed out using Program #1078. 39 sectors
- 1113 RLE-MR. SPOCK**DF/128 Printer reqd.
A nice printout of Mr. Spock from Star Trek that can be printed out using Program #1078. 52 sectors
- 1114 RLE-STAR WARS**DV/128 Printer reqd.
A nice picture of the group from Star Wars that can be printed out using Program #1078. 43 sectors
- 1115 RLE-TIGER**DF/128 Printer reqd.
A nice printout of a tiger that can be printed out using Program #1078.
35 sectors
- 1116 RLE-TWO-ARM**DV/128 Printer reqd.
A very good picture of a space probe that can be printed out using Program #1078. 38 sectors
- 1117 RLE-LINDA**DV/128 Printer reqd.
A good freehand drawing of a young girl that can be printed out using Program #1078. 15 sectors
- 1118 RLE-STALLONE**DV/80 Printer reqd.
A picture of "Sly" Stallone that can be printed out using Program #1078.
34 sectors
- 1119 RLE-CLOWNS**DF/128 Printer reqd.
A cute picture of circus clowns that can be printed out using Program #1078.
43 sectors
- 1120 RLE-O J PIC**DF/128 Printer reqd.
A cute picture of Bloom County's whiz computer kid O.J. that can be printed out using Program #1078. 21 sectors
- 3051 MATH DRILL**XB Printer recommended
A program by Mike Connelly that drills you in all types of math. Comes with complete docs. 48 sectors
- 3052 GREEK THEMATICS**XB
A "Freeware" program by Joe Bauman that demonstrates Greek Theomatics. Comes with sample program. 56 sectors
- 3053 FRACTAL EXPLORER**E/A 3
A "Freeware" program by Steve Langouth that allows you to plot out and create fractal images on the screen. Based on the geometric principle of Euclid. Comes with complete documentation. Program name is START.
155 sectors
- 4191 FORTHFONT**EA/3
A "Freeware" program written in FORTH by Howard Arnold. This program will print out mailing labels and disk mailers. Lets you design your own graphic letters.
REQUIRES DEDICATED DISK 360 sectors
- 4192 CAR/CHART**DV/80 Printer required
A TI-Writer file that will print out a vehicle maintenance chart. Load in Editor of TI-Writer for instructions. Requires graphic printer such as Gemini 10X or Epson FT. Written by Bill Knecht.
19 sectors
- 4193 VOLKSMODEM DIALER Requires Fast Term program
A Fast Term auto dialer that can be used with Volksmodem. 14 sectors

4194 DM-1000 FOR GRAMKRACKER

This program will allow you to use GramKracker to run DM-1000. 58 sectors

4195 TRACK HACK-TIXB**

An Extended Basic disk copier made to be used with the TI disk controller.
24 sectors

4196 TRACK HACK-CCXB**

An Extended Basic disk copier made to be used with the Corcomp disk controller. 25 sectors

4197 S CARTE/A 3**

A loader that can be used with Super Cart or GramKracker. To use, load in E/A3 then QUIT and there is the menu. To edit, select 9 for page 2 and then Function 8. 45 sectors

4198 SECTOR TRANSFERE/A 3**

A sector transfer program by Nick Iacovelli, Jr. that will transfer FORTH programs. 27 sectors

4199 SUPERCOPYE/A 5**

Super disk duplicator Version 4.1 by Tom Knight. 18 sectors

4200 DV 80 ONLYXB**

An Extended Basic program that allows you to quickly read DV/80 files.
4 sectors

4201 CREATIVE FILING SYSTEMXB Printer recommended**

A "Freeware" program by Mark Beck that will allow you to create files for a database system. Has many new features not included on older database programs including accessing of Foundation 128K card as well as accessing double sided double density disks. It will also make use of up to 3 disk drives.
554 sectors

4202 PTERM-99(TIBBS & PC PURSUIT COMPATIBLE)XB**

A new PTERM-99 with X-modem. This version will work on Hug Tibbs and with PC-Pursuit. It also has an 110 sector text buffer. 182 sectors

4203 PRINTER/PACKXB Printer reqd.**

An XB loaded disk that will give you many programs in one. Has features such as disk title labels, catalogs, letterhead, billing statement and more.
234 sectors

5242 SHADED VELVETXB**

"Shaded Velvet" by Jeff Gatlin. This is an excellent demonstration of the TI's ability to play 4 voices instead of 3. 16 sectors

5243 DANCE OF THE WINDUP TOYXB**

An excellent version of Chuck Mangione's "Dance of the Windup Toy" written by Jeff Gatlin. 106 sectors

5244 AXEL FOLEY'S THEMEXB**

Fantastic musical sound by Robert J. Gagle in his version of Axel Foley's Theme from the movie "Beverly Hills Cop".
58 sectors

