

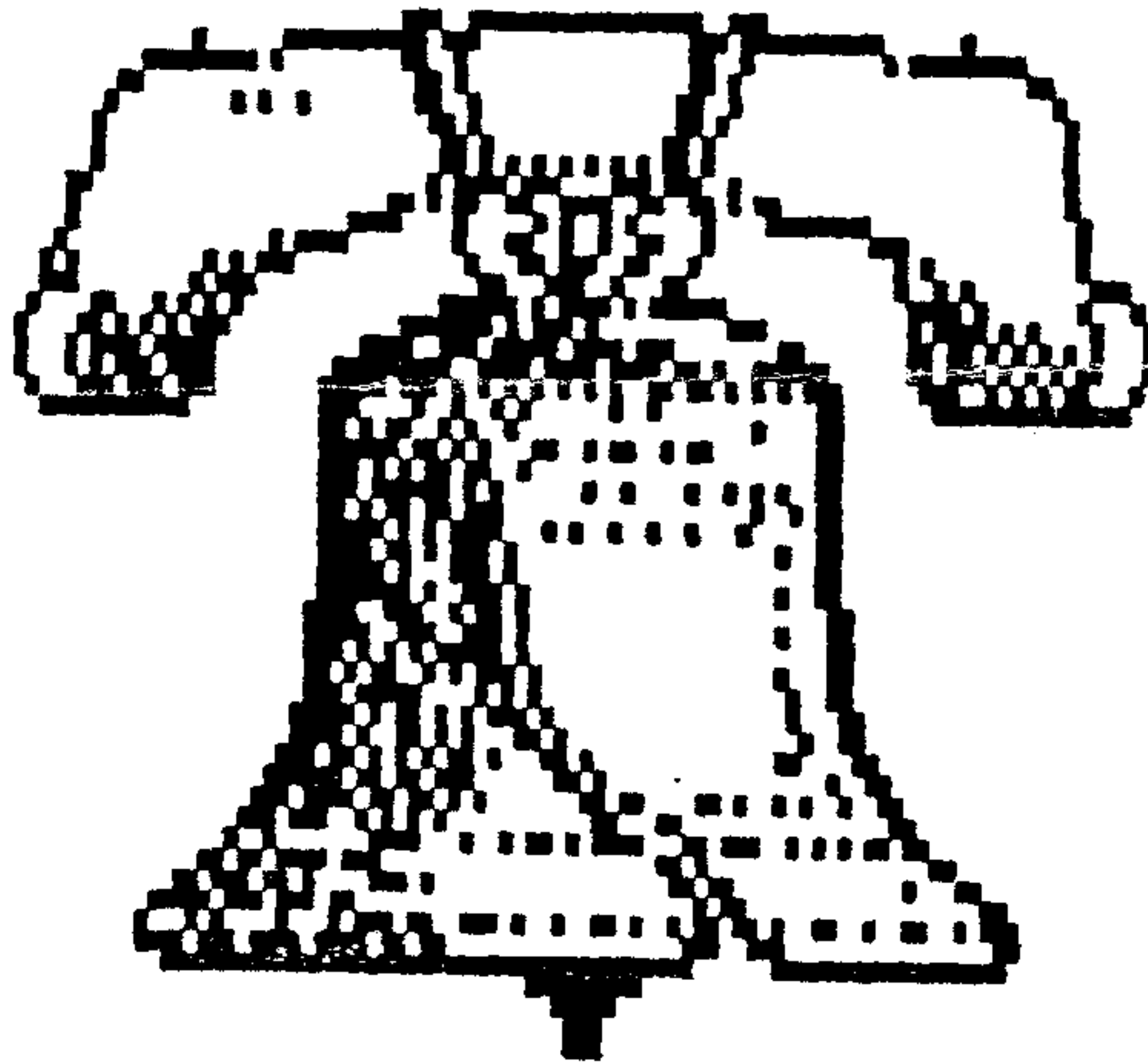
# Spirit of 99



**THE OFFICIAL NEWSLETTER OF THE CENTRAL OHIO NINETY-NINERS INC.**

**PUBLISHED MONTHLY IN COLUMBUS OHIO**

## HAPPY BIRTHDAY



## AMERICA

## INDEX ##

CALL WAITING.....10  
 DISK FILE FORMATS..05  
 FWEB BOOT.....14  
 FWEB TIP.....15  
 LASER PRINTERS....08  
 LEARN YOUR TI/2...03  
 MINUTES.....02  
 PROG OF MONTH.....11  
 RANDISK SECURITY..12  
 TI BITS/5.....06  
 TI LOCKUP.....13  
 WORDPROCESSING...07  
 WORDPROCESSING/4..04  
 THANKS BUG NEWS  
 FOR THE GRAPHICS

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 are held the 3rd sat-  
 -urday of each month  
 at C h e m i c a l  
 Abstract, 2540  
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 Everett Wade

C.O.N.N.I. MINUTES Saturday, June 18, 1994.

President John Parkins opened the meeting at shortly after 9 a.m. Some of the "loose disks" were brought back to the meeting: these are disks I bought from K-Town's booth at the Lima Fair this year. There has been a lot of interest in seeing and trying out the programs they contain. John Parkins did a display of graphics he had found on one, and a couple of other brief items.

Treasurer Bill Sheppard volunteered to send to Charlie Good for the collection of Sherlock Holmes disks, which we can all then enjoy.

Dick Beery presented the committee report on the request by Barry Traver to provide him with all the disks and programs actually written by Jim Peterson for upload to Genie, Compu-Serve and Delphi. The group agreed to do this and appropriated money for costs of disks and mailing. Dick Beery, Bob DeVilbiss and Everett Wade will do the copying and see to the mailing. Alan Peterson, Jim's son, will be contacted to make sure this new arrangement lives up to the spirit of the previous agreement he made with CONNI. Dick will contact Barry to arrange the details for the transfer.

Also discussed was a notice to be sent to Micropendium explaining the above and stating that CONNI has no plans at this time for distributing the Peterson disks other than through the three networks indicated above. Those not having access to these should contact someone who does and arrange to obtain the disks they desire in that manner. It is Barry's intention, and ours, to make available, and help make others aware of, the many contributions Jim has made in the development of programming for the 99/4A.

Karl Romstedt demonstrated his program "Freeloader VI", a load program with Assembly links that can load programs, E/A5 programs and D/V80 files.

Karl also discussed a program he has written that allows the user to play music in the background while programming or reading a file. I think it works also while running an Extended Basic program. The music does, however, interfere somewhat with Extended Basic.

Dick Beery promised to call Chuck Grimes and Ken Marshall Jr. regarding the transfer a.s.a.p. of the materials needed to get the Disk of the Month back on track. Harley Ryan Jr. has agreed to complete the partly-finished March disk and to prepare disks for April and May. Any months remaining on subscriptions to the Disk of the Month will be filled with our choice of disks from the Peterson collection. Those subscribers who prefer not to receive the Peterson disks may have their money refunded starting with the June '94 disk.

Members in attendance were reminded that the July meeting will be held at the NORTH LINDEN LIBRARY, and will be a shorter version, as we could get only the hours from 10am to noon. Harley Ryan Jr will demonstrate sector editing at the July meeting; John Parkins will do a demonstration of LOGO at the August meeting, which will once again be held at Chemical Abstracts.

Respectfully submitted,

Dick Beery  
 Secretary

**PART 5**

by Col Christensen  
Brisbane User Group

**ALTERNATE CHARACTER SET**

This important character set is useful for transliteration and for printer control. The normal set of characters range in ASCII values from 32 to 127 as shown in your Basic manual. The WP editor similarly limits the range of characters in the word wrap or non word wrap mode to this range. But there is another mode provided in the editor where you can type ASCII values from 0 to 31 as well. To toggle to and from this mode, you press CTRL/U. In this alternate input mode (but I will call it the CTRL/U mode from now on), the cursor appears as an underline character. What happens in CTRL/U mode, all key ASCII values are reduced by 64. So a @ (ASCII 64) shows up as ASCII 0, an A (65) becomes a 1 and so on.

With the ability to type ASCII values below 32 you can directly control your printer from within your text. e.g. the printer code for expanded or enlarged print is ESC W 1. The ESC is character 27, the W is character 87, and the 1, would you believe, is character 1. In your text you can type this printer code just before any heading you want to enlarge. First the ESC (27) requires the CTRL/U mode, then a [ which is ASCII 91. The CTRL/U mode subtracts 64 and character 27 shows on the screen as a tiny dash-B. In hexadecimal arithmetic that represents 1B which is 16+11=27. To type the W you now get out of the CTRL/U mode and type W normally. The 1 requires the CTRL/U mode again and pressing SHIFT/A (not a) makes the little 1 appear. So you should see on the screen a dash-B followed by the W then the tiny 1. Going over the keystrokes again, we have CTRL/U PCTN/R CTRL/U then W then CTRL/U SHIFT/A CTRL/U.

All the tiny characters are depicted in hexadecimal except for decimal 10, 12 and 13. These are special printer control characters that control the paper feed and print head position of the printer. They are called LineFeed, FormFeed and CarriageReturn respectively and show on the screen as LF, FF and CR. They can be typed in the CTRL/U mode by pressing SHIFT/J, L and M respectively.

**MORE ON TRANSLITERATION**

I should make passing mention here of a valuable disk that is probably in your Club program library. Once you have got the general hang of transliterates and the IFFing of files ask your program librarian for Jack Shugrue's disk called PLUS1. Print out the documents and try out the files on the disk.

Here is a sample file based on Jack's ideas that contains a lot of Tls for printer control through the Text Formatter. By using Tls most printer code sequences, no matter how long or involved, can be invoked by placing just a single character in the text. The file below has codes specifically for a Star printer and would suit most printers. The file should be saved as DSK1.\*TL and stored on every disk you use for word processing. The reason for the asterisk in the filename is to ensure that this filename appears near the top of a directory listing and will not appear among the filenames of normal text files. To make use of the printer codes, one of the first lines of any text file should be .IF DSK1.\*TL.

when typing the file below, firstly just type the transliterate code and press (ENTER) to get the symbols where they are shown. Then you can come back if you wish, in the non word wrap mode, to type the comments after each.

- .TL 0:0-            @ Reserved for 0=off
- .TL 1:1-            A Reserved for 1=0n
- .TL 2:27,72,32-    B Dble strike off
- .TL 3:32,15-        C Condensed on
- .TL 4:18,32-        D Condensed off
- .TL 5:32,27,69-    E Emphasized on
- .TL 6:27,70,32-    F Emphasized off
- .TL 7:32,27,71-    G Dble strike on
- .TL 8:8-            H=Backspace reserved
- .TL 9:32,27,52-    I Italics on
- .TL 10:10-          J=Line feed reserved
- .TL 11:27,53,32-   K Italics off
- .TL 12:12-          L=Form feed reserved
- .TL 13:13-          M=Carr rtn reserved
- .TL 14:32,27,50-   N 1/6 line spacing
- .TL 15:32,27,48-   O 1/8 line spacing
- .TL 16:32,27,80-   P Pica size print
- .TL 17:32,27,51,17- G squashed lines
- .TL 18:32,27,83,0- B superscript
- .TL 19:32,27,83,1- S Subscript
- .TL 20:27,84,32-   T Cancel sub/super
- .TL 21:32,27,45,1- U Underline on
- .TL 22:27,45,0,32- V Underline off
- .TL 23:32,27,87,1- W Wide enlarged on
- .TL 24:27,87,0,32- X Wide enlarged off
- .TL 25:32,27,120,1- Y NLO characters
- .TL 26:27,120,0,32- Z Draft chars
- .TL 27:27-          { ESCAPE reserved
- .TL 28:42-          \ Asterisk
- .TL 29:32,27,77-   ] Elite print
- .TL 30:94-          ^ Circumflex
- .TL 31:46-          \_ Period

Now that you are conversant with typing characters in the CTRL/U mode, we can look back at the transliterate file listed above. We now can send a particular printer code string through the formatter by typing just one control character that transliterates to that string. By choosing control characters from 0 to 31 for the transliterates, the full set of normal characters is left free for use in the text. Look at one of the Tls in the file:

.TL 5:32,27,69- E Emphasized on

The printer code for turning emphasized print on is ESC E. i.e. characters 27 and 69 which you see in the TL above. S is the ASCII character to use to start Emphasized printing. To type the S, first press CTRL/U to get the underline type cursor, then press SHIFT/E as shown in the comment after the transliterate above. The tiny character S appears. Press CTRL/U again to get back to normal cursor mode. Type E to complete the code followed by whatever word/s you want to appear emphasized when printed. Then cancel the emphasis (printer ESC F) by typing after the word/s the character, 6. That is, CTRL/U SHIFT/F and finally CTRL/V to return to normal cursor mode. Simpler when you're actually doing it rather than trying to grasp it mentally.

Referring again to the TL code above then, following the character S and the colon, are three character values assigned to the character S. You've seen how the 27 and the 69 come from the printer ESC E code. That just leaves the 32 which is a space character. If the S were to be transliterated to the printer code for emphasized print style and encountered by the formatter, the S would be removed from the text, acted upon in setting the printer code and the line filled to the right margin. But the formatter fills to the right margin

THANKS TISHUB

before removing the character 5, so that line will end up one character short of the right margin. The space character, therefore, is included to be printed to compensate for that loss of one character.

If you intend to use the TL file above, you will need a reference to consult when using your word processor. The main thing to record is the list of SHIFT characters and what printer code they control. So start off by typing a list beginning with:

```

in CTRL/U mode
SHIFT Effect
B Dble strike off
C Condensed on
D Condensed off
etc

```

Maybe you have been observant and noticed that, for all the times I have said in this series not to do this and not to do that, I have broken the rules I set. You have probably noticed some lines beginning with periods and several occurrences of asterisks and circumsflexes etc. Transliteration has been the key to overcoming most of those hurdles which become limitations no longer. My only difficulty has been deciding whether I need to use an actual transliteration at a certain point or just to show an example of one as an illustration. Anyway, the whole business of transliteration can be quite complicated if you like to go into it deeply as I found out when I set out to transliterate a tilde to download a properly formed CR symbol to my printer. The best way to learn all the intricacies is firstly to have a need to use them and secondly to actually use the processes that produce the results you require.

#### MAKING A SETUP FILE

Most times that you start up your word processor you need to set up your favourite tabs, margins and indent positions and on the first few lines to prepare a set of print margins, transliterates, comments etc. Why not have a standard layout on a special disk file that will do all of the above for you each time you need it? Then, when you start, its a simple matter to do a LoadFile of that filename and simply carry on typing using your own default screen margins, tabs and indent positions as well as the formatter attributes as outlined on those first few lines loaded. A sample of such a file with filename \*SETUP could be:-

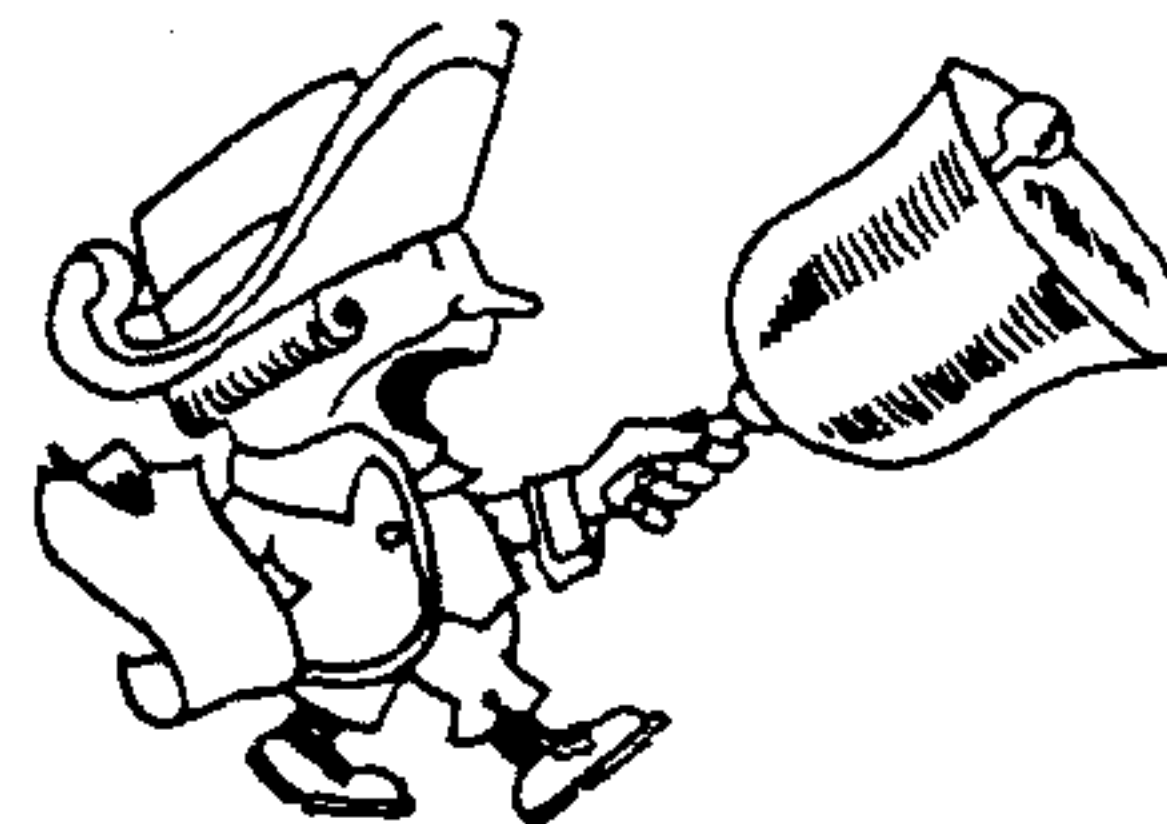
```

.LM10;RM70;IN+5;FI;AD;PL60=,
.IF DSK1.*TL=,
.CO Here place name/purpose of file=,
.HE If required=,
.FO If required=,

```

Before you save this file to disk, you need to set the tabs also so that they, too, will automatically be saved with the file. So each WP disk you use would have in readiness two files, \*SETUP and \*TL, on them.

Next month there will be a discussion (one-sided, of course - no answering back allowed) on For's Letters and the use of mailing lists. To round off the series I will also include a list of hints and tips that come to mind.



THANKS TISHUG

## ERROR CODE LISTING.

Reprinted from the BBS

### EX-BASIC ERROR CODES.

```

10 NUMERIC OVERFLOW
14 SYNTAX ERROR
16 ILLEGAL AFTER SBRTN.
19 NAME TOO LONG
20 UNRECOGNIZED CHAR
24 $/# MISMATCH
28 IMPROPERLY USED NAME
36 IMAGE ERROR
39 MEMORY FULL
40 STACK OVERFLOW
43 NEXT WITHOUT FOR
44 FOR-NEXT NESTING
47 MUST BE IN SBRTN.
48 RECURSIVE SBRTN. CALL
49 MISSING SUBEND
51 RETURN WITHOUT GOSUB
54 STRING TRUNCATED
56 SPEECH $ TOO LONG
57 BAD SUBSCRIPT
60 LINE NOT FOUND
61 BAD LINE #
62 LINE TOO LONG
67 CAN'T CONTINUE
69 COMMAND ILLEGAL IN PRGM.
70 ONLY LEGEL IN PRGM.
74 BAD ARGUMENT
78 NO PROGRAM PRESENT
79 BAD VALUE
80 NIL
81 INCORRECT ARGUMENT LIST
82 NIL
83 INPUT ERROR
84 DATA ERROR
97 PROTECTION VIOLATION
109 FILE ERROR
130 I/O ERROR
135 SBRTN NOT FOUND

```

\*\*\*\*\*

### EDITOR / ASSEMBLER ERROR CODES.

#### XB ERROR EQUATES

```

ERRNO >0200 2 NUMERIC OVERFLOW
ERRSYN >0300 3 SYNTAX ERROR
ERRIBS >0400 4 ILLEGAL AFTER SUBPROGRAM
ERRNQS >0500 5 UNMATCHED QUOTES
ERRNTL >0600 6 NAME TOO LONG

```

```

ERRSNM >0700 7 STRING NO. MISMATCH
ERR0BE >0800 8 OPTION BASE ERROR
ERRMUV >0900 9 IMPROPERLY USED NAME
ERRIM >0A00 10 IMAGE ERROR
ERRMEM >0B00 11 MEMORY FULL
ERRSO >0C00 12 STACK OVERFLOW
ERRNWF >0D00 13 NEXT WITHOUT FOR
ERRFNM >0E00 14 FOR-NEXT NESTING
ERRSNS >0F00 15 MUST BE IN SUBPROGRAM
ERRRSC >1000 16 RECURSIVE SUBPROGRAM
ERRMS >1100 17 MISSING SUBEND
ERRRWG >1200 18 RETURN WITHOUT GOSUB
ERRST >1300 19 STRING TRUNCATED
ERRRBS >1400 20 BAD SUBSCRIPT
ERRSSL >1500 21 SPEECH STRING TOO LONG
ERRLNF >1600 22 LINE NOT FOUND
ERRBLN >1700 23 BAD LINE NUMBER
ERRLTL >1800 24 LINE TOO LONG
ERRCC >1900 25 CAN'T CONTINUE
ERRCIP >1A00 26 ILLEGAL IN PROGRAM
ERR0LP >1B00 27 ONLY LEGAL IN PROGRAM
ERRBA >1C00 28 BAD ARGUMENT
ERRNPP >1D00 29 NO PROGRAM PRESENT
ERRBY >1E00 30 BAD VALUE
ERRIAL >1F00 31 INCORRECT ARGUMENT LIST
ERRINP >2000 32 INPUT ERROR
ERRDAT >2100 33 DATA ERROR
ERRFE >2200 34 FILE ERROR
ERROR >2400 36 I/O ERROR
ERRSNF >2500 37 SUBPROGRAM NOT FOUND
ERRPV >2700 39 PROTECTION VIOLATION
ERRIMY >2844$$$44$$9- >2900 41 NUMERIC OVERFLOW
WRNST >2A00 42 STRING TRUNCATED
WRNPP >2B00 43 NO PROGRAM PRESENT
WRNINP >2C00 44 INPUT ERROR
WRNIO >2D00 45 I/O ERROR

```

EXECUTION ERRORS

```

0-7 STANDARD I/O
08 MEMORY FULL
09 INCORRECT STATEMENT
0A ILLEGAL TAG
0B CHECKSUM ERROR
0C DUP. DEFINITION
0D UNRESOLVED REF.
0E INCORRECT STATEMENT
0F PROGRAM NOT FOUND
10 INCORRECT STATEMENT
11 BAD NAME
12 CAN'T CONTINUE
13 BAD VALUE
14 NUMBER TOO BIG
15 STRING/NUMBER
16 BAD ARGUMENT
17 BAD SUBSCRIPT
18 NAME CONFLICT
19 CAN'T DO THAT
1A BAD LINE NUMBER
1B FOR NEXT ERROR
1C I/O ERROR
1D FILE ERROR
1E INPUT ERROR
1F DATA ERROR
20 LINE TOO LONG
21 MEMORY FULL
22 UNKNOWN ERROR CODE

```

LOADER ERROR CODES

```

0-7 STANDARD I/O
8 MEMORY OVERFLOW
9 NOT USED
10 ILLEGAL TAG
11 CHECKSUM ERROR
12 UNRESOLVED REF.

```

T1 BASIC ERROR CODES PERTAINING TO DISK SYSTEM

```

# FIRST # SECOND #
0: OPEN CAN'T FIND SPECIFIED DISK DRIVE
1: CLOSE DISK OR PROGRAM IS WRITE PROTECTED
2: INPUT BAD OPEN ATTRIBUTE
3: PRINT ILLEGAL OPERATION
4: RESTORE DISK FULL OR TOO MANY FILES OPENED
5: OLD ATTEMPT TO READ PAST EOF
6: SAVE DEVICE ERROR
7: DELETE FILE ERROR
9: EOF

```

T1 WRITER ERROR CODES

```

0 INDICATES DISK CONTROLLER NOT ON
OR
DISKETTE NOT INITIALIZED
6 NO DISK IN DRIVE No.1
OR
DISK UPSIDE DOWN
OR
DRIVE IS NOT TURNED ON
7 NO DISK IN DRIVE No.1

00 ILLEGAL USE OF LoadF, Printf, SaveF
02 NO FILE ON DISK WITH FILENAME USED
04 DISK IS FULL
06 Printf COMMAND IN PROGRESS WAS INTERRUPTED
OR
DISK DOOR WAS OPENED WHEN LIGHT WAS ON
07 INVALID FILENAME (NAME TOO LONG )
OR
(INVALID CHARACTERS )
15 INVALID DISK DRIVE No. OR DEVICE

```

DISK MANAGER ERROR CODES

```

# : FIRST # SECOND #
1: OTHER RECORD NOT FOUND
2: SEEK/STEP CYCLIC REDUNDANCY
CODE
3: INPUT LOST DATA
4: PRINT WRITE PROTECTED
5: NIL WRITE FAULT
6: NIL NO DISK or
NO DRIVE or
DRIVE NOT READY
7: NIL INVALID INPUT
8: NIL NIL
: SPECIAL ERROR CODE$FOV

```

I/O ERRORS

```

# FIRST # SECOND #
1: OPEN DEVICE NOT FOUND
2: CLOSE WRITE PROTECTED
3: PRINT INVALID I/O COMMAND
4: RESTORE OUT OF SPACE
5: OLD EOF
6: SAVE DEVICE ERROR
7: DELETE FILE MISMATCH
OR

```

DATA MISMATCH

Retyped for TEXPAC BBS by Alistair Leslie of TISHUG.

END OF ARTICLE

Oakland Computer Club  
September 1993

Insert your TI LOGO module and press the number for TI LOGO. When the screen says, WELCOME TO TI LOGO, type TELL TURTLE with the alpha lock down and press enter. A Triangle (the turtle) will appear at the center of the screen. If you are using TI LOGO II, you may type BIG. Experiment with the following commands pressing ENTER after each one.

FD 25      RT 90                      BK 50      LT 90    Repeat the commands using larger or smaller numbers.

Suppose we want to make a tree with a triangle for the top and a rectangle for the trunk. First we will teach the turtle to make a triangle. Try this.

```
TO TREETOP    (Press ENTER for the program mode and Enter again to program).
RT 25
FD 45
RT 130
FD 45
RT 115
FD 38
END    (Press FCTN 9 to go back to the turtle. Type TREETOP and ENTER).
```

To make the rectangular trunk, type:

```
TO RECT
REPEAT 2 [FD 10 LT 90 FD 25 LT 90]
END        (Press FCTN 9 again and decide how far back to move the turtle before
           typing RECT).
```

Put the 2 procedures together including the BK command calling it TREE.

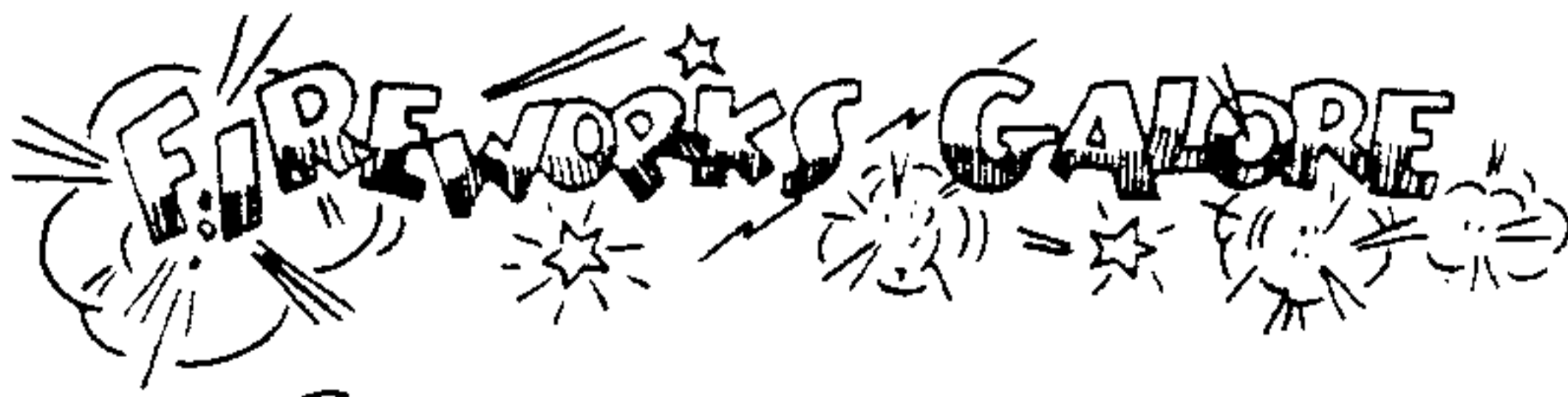
CS will clear screen. CB will color background when followed by a number.

SC with a number will tell the turtle what color pen to pick up.  
PU takes the pen up so you can go forward or back without writing.  
PD puts the pen down to write again.  
SH 0 heads the turtle north; SH 90 heads the turtle east; SH 180 heads the turtle south and SH 270 heads the turtle west. You may use other in between numbers for other headings like northeast, southeast, northwest, and southwest.

Type: SAVE (enter); press 3 to save both 1 and 2; press 2 diskette; type TREE and enter. This is the end of Lesson 1. Lesson 2 is on the next page.

---

Using your TI LOGO module, type TELL TURTLE and press enter. Type BIG if you are using TI LOGO II for a bigger turtle. To load your tree program, type: RECALL and press ENTER.



Choose option 3 BOTH 1 and 2. Press 2 for Diskette. Type: TREE and press enter.

When the ? appears, type: TREE and ENTER and the turtle will make your tree. To make more trees you need to take the pen up, go forward, put the pen down, make a right 90 and make another tree. One way to do that is as follows:

```
TO TREES
TREE
REPEAT 3 [PU FD 80 PD RT 90 TREE]
END          (FCTN 9 takes you back to the turtle.)
```

To make 3 trees above those, you can set the turtle higher on the Y axis and at a different place on the X axis before making 3 trees.

```
TO TREES3
SX 40
SY 50
RT 90
REPEAT 3 [TREE PU FD 80 PD RT 90]
END
```

Clear screen (CS) and type: TREES TREES3 and ENTER. You may put these procedures in one procedure called FOREST.

```
TO FOREST
TREES
TREES3
END
```

CS and type FOREST.

SPRITES are invisible until they carry a shape. Shape 1 is a plane, 2 is a truck, 3 is a rocket, 4 is a circle and 5 is a square. We can add a sun, truck and a plane with the following procedures.

TO SUN	TO TRUCK	TO PLANE
TELL 4	TELL 2	TELL 1
CARRY 4	CARRY 2	CARRY 1
SC 11	SC 1	SC 8
SX 80	SX 0	SX 0
SY 90	SY -35	SY 80
END	SH 90	SH 90
	SS 30	SS 60
	END	END



To put all the procedures together, type:

```
TO SCENE
FOREST
SUN
TRUCK
PLANE
END
```

Type SCENE. You may change the Set Color, Set Speed, etc. in any of the procedures. You may also Color Background.

---

LOGO has its own shapes 1 through 5. We can make our own shapes. Type MS 6 and ENTER.

To fill in a blank square, hold the FCTN key down and press an arrow key. to leave a square blank, press just an arrow key. Make a funny face for example.

XXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXX
X                  X	X                  X	X                  X
X                  X	X                  X	X                  X
X  XX      XX  X	X      X      X  X	X      XXX  XXX  X
X  XX      XX  X	X  X X   X X  X	X      X      X  X
X                  X	X      X      X  X	X                  X
X                  X	X                  X	X                  X
X                  X	X                  X	X                  X
X                  X	X                  X	X                  X
X          XX      X	X                  X	X          X X      X
X                  X	X                  X	X                  X
X                  X	X                  X	X                  X
X      X          X	X      XXXXXXX  X	X                  X
X      X      X  X	X  X          X  X	X          X X      X
X          X X   X	X  X          X X	X          X      X  X
X          XX      X	X  X          X X	X      X          X  X
X                  X	X                  X	X                  X
XXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXX

Those are some examples of shapes you can make. We will write a procedure named FACE.

TO FACE	press ENTER 2 times.	You are talking to sprite 6.
TELL 6		That is the shape you just made.
CARRY 6		That will color the face.
SC (a color number)		Your face will appear in the center.
HOME		Type FACE and enter.
END	FCTN 9 to return.	

SH (a number)	will set the heading.
BS (a number not greater than 127)	will set the speed.
CB (a color number)	will color the background.

MS 7 and MS 8 to be what you would like.

To talk to all the sprites we will write a procedure called ALL.

TO ALL	
TELL :ALL	The :ALL means you are talking to all the sprites.
CARRY 6	All the sprites will carry the same shape.
HOME	
EACH [SC YN]	YN means Your Number - the number of the sprite 0-31.
EACH [SH YN*11]	The heading is the number of the sprite times 11.
EACH [SS*4+2]	The speed is the number of the sprite times 4 plus 2.
END	FCTN 9 and type ALL.

--- END ---





By Martin A. Smoley © March 2, 1994

6149 Bryson Drive, Mentor, Ohio 44060-2324

THANKS NORTH COAST 99ER'S

# The Canon LBP-8mkIII Marty's Printer

After reading several articles in this newsletter and others about printers, I still feel a little lacking in info. These people wrote very nice articles about how much they paid for their printers, where they got the printer, and how you might hook up and use that type of printer. The article was then printed on someone else's printer for the newsletter. Although I really appreciate every article that reaches our Newsletter, I would ask that anyone who writes these articles fill up one page and print the article on the printer in question. I would also ask that these people print out as many Fonts and Typestyles as they can, using their TI. If the printer is new and some learning time is required, you could write a follow up article when you are ready to show off your Fonts. Actually seeing the quality of the print and the quantity of Fonts that are built into a printer are more important to me than the price. This may not be the case with others, but I am sure that everyone would like to see those new Fonts along with the price.

Pica 10cpi AaBbCcDdEeFfGgHhIiJjKk  
Pica Expanded 5cpi

Expanded Dbl High

Elite 12cpi AaBbCcDdEeFfGgHhIiJjKkLlMm  
Pica Cond. 17.16cpi AaBbCcDdEeFfGgHhIiJjKkLlMmNnOoPpQqRr  
Elite Cond. 20.cpi AaBbCcDdEeFfGgHhIiJjKkLlMmNnOoPpQqRr  
Nps 12cpi AaBbCcDdEeFfGgHhIiJjKkLlMm  
PicaNLQ 10cpi AaBbCcDdEeFfGgHh  
Pica Sub/Super scrpt 10cpi AaBb  
Elite Sub/Super scrpt 12cpi AaBbCc  
Pica Cond. Sub/Super scrpt 17.16cpi AaBbCcDdEeFfGgHh  
Elite Cond. Sub/Super scrpt. 20cpi AaBbCcDdEeFfGgHh  
Nps Sub/Super scrpt. PS AaBbCcDdEeFf  
Pica NLQ Sub/Super scrpt 10cpi

Good luck TI'ers.

*Marty.*

Although I have demonstrated the Fonts that are built into my Canon Laser Beam Printer before, I'll do so again, to demonstrate the meaning of, "Show us your Fonts".

Starting in the lower left corner of this page I printed the different Fonts available using my Canon printer while using my Epson FX-85 emulation cartridge. Of course it also has Bold, Italics and Double Wide with all those Fonts, but that still doesn't impress me. The cartridge costs more than a Star XX-1000II printer, and the only thing I need Epson Emulation for, is printing graphics like Ohio, Garfield, Odie and the Mailbox. After that I send a code to switch from Epson back to Canon ISO mode. Why? Well I started printing some of the Typefaces, Fonts and Styles that are built into the basic Canon printer below (with no cartridges).

Courier, which is the same as Pica.

Symbol: αβχδεφγηι.!.!#% &\*()\_+{}[]:V;@

## Dutch

These four Typefaces are it.

## Swiss

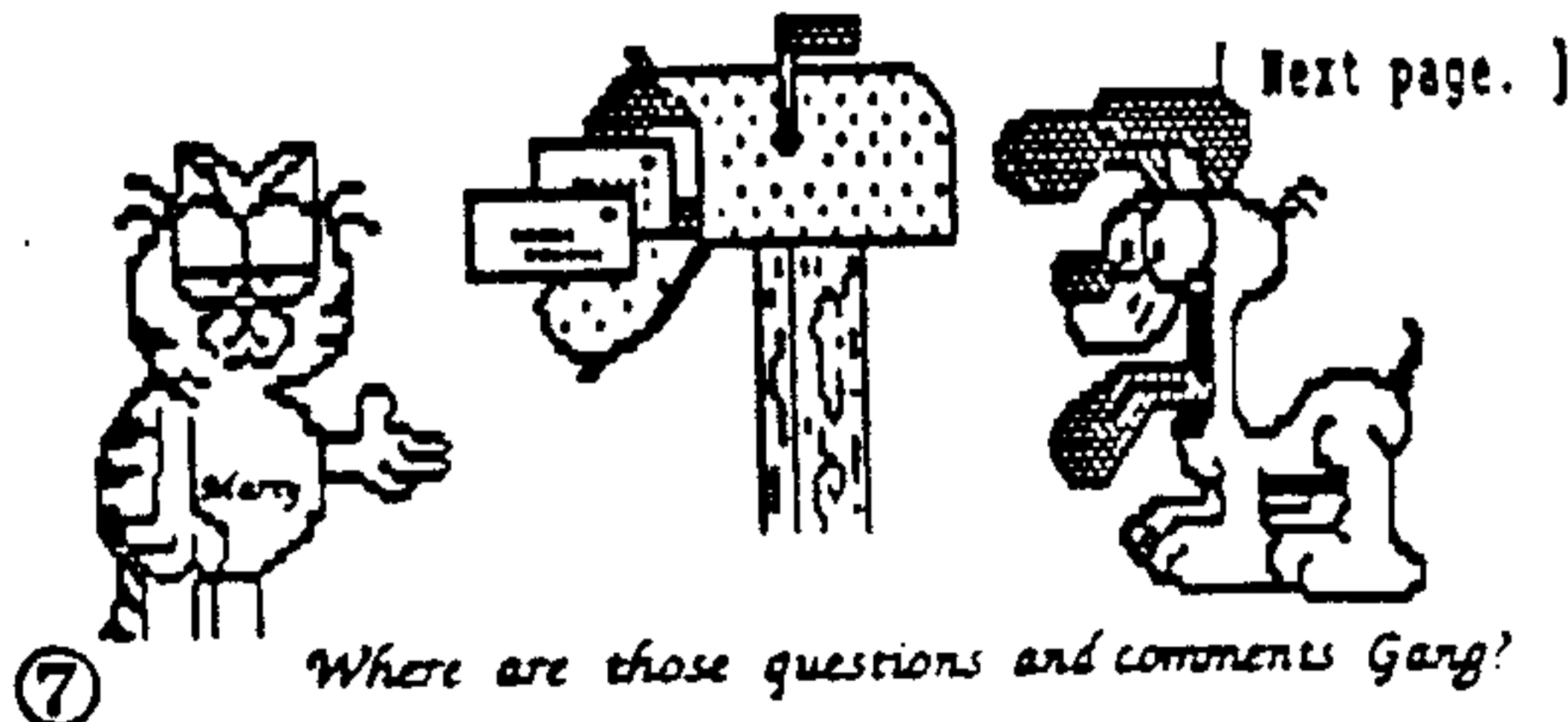
So now you are going to say, big deal, four lousy Typefaces. He only has four lousy Typefaces in that big fancy

printer he always brags about. Well these four Typefaces can do quite a bit of printing. You might also notice the changes in Type size. Symbol, Dutch and Swiss are Scalable and Proportionally Spaced (PS). A Font refers to the similar characters (normally 255) that make a complete subset of one Typeface. Dutch Roman is a Font which includes only characters with the visual appearance called Roman. Style covers Bold, Medium, Italic, Upright, etc. All the characters of one Style can be classified as a Font. Therefore the characters that make up Dutch Roman Italic would be called a Font, even though Italic is a Style.

Courier is a Typeface which is an Internal Bit Map, so I can only change it to a pre-set specification, but I can do everything to Courier that I can do to Pica in Epson mode.

For example:

Courier Dbl-Wide Dbl-High  
Also Bold Italic Condensed etc.



Where are those questions and comments Gang?

By *Martin A. Smoley* © March 9, 1994

6149 Bryson Drive, Mentor, Ohio 44060-2324

THANKS NORTH COAST 99ER'S

# The Canon LBP-8mrkIII Marty's Printer

The Scalable Typefaces are more to my liking. Dutch is a Serif Typeface, which means it has those little stems or ends stuck on each character. Swiss is Sans Serif, which has no little stems or ends.

**Dutch Roman Upright ABCDEF**

*Dutch Roman Italic ABCDEF*

**Dutch Bold Upright ABCDEF**

*Dutch Bold Italic ABCDEF*

**Dutch Bold Upright Outline**

**Dutch Bold Outline Filled**

**Dutch Bold Outline Fill Shadow**

*Dutch Bold Italic ABCDEF*

**Swiss Upright ABCDEFghijk**

*Swiss Italic ABCDEFghijk*

**Swiss Bold Upright ABCDEF**

*Swiss Bold Italic ABCDEF*

**Swiss Bold Upright Outline**

**Swiss Bold Outline Filled**

**Swiss Bold Outline Fill Shadow**

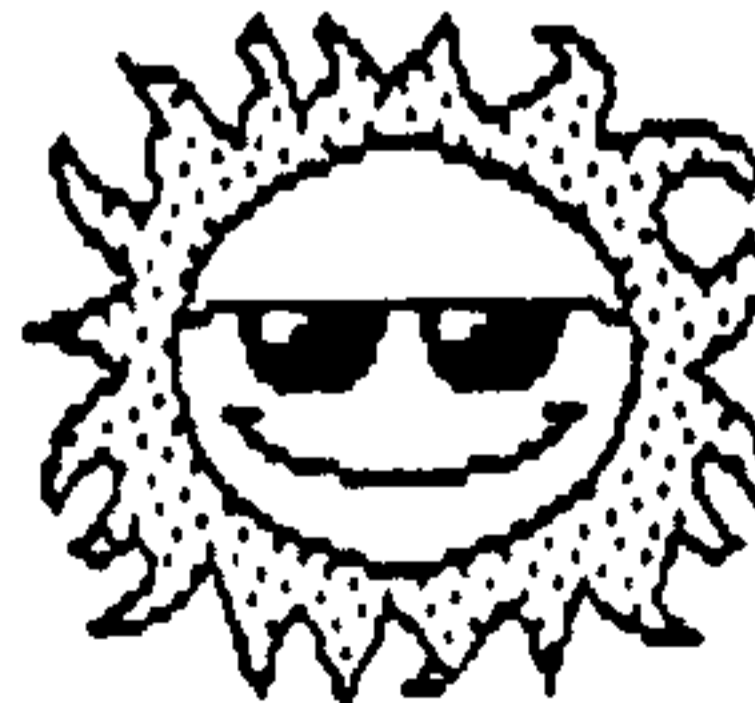
*Swiss Bold Italic ABCDEF*

Look what a little Style can do to create a heading or subheading, in combination with your normal text font.

*Marty.*

⑧

I select a font like Dutch Roman with the command (<ESC>PzDutch-Roman.96P USA (<ESC>\ (<ESC>[200 C). The end piece (<ESC>[200 C), sets the point size. My book says I can go from 0 to 65535 points, but 4 is too small to read and 5100 point is as large as I can create. I should note that the printer assumes a decimal point one place from the right, so 4 point is 40, 5100 means 510.0 and (<ESC>[200 C sets the printer to 20 point. If you think that is confusing, try this. (<ESC>[21;001;3;001;7;4;28) is the command that sets (does not turn on, just sets), what I call the styles you see in the lower left corner of this page. And that's after you select Dutch Roman and the size. (<ESC>[nn1;nn2;nn3;nn4;5;nn6;78) will help me explain the complexity of this command (I hope). nn1 is a number I can enter that will change the Fill Pattern. There are 101 different patterns. nn2, changes the Fill Pattern Attribute. When the printer looks at nn2 it considers it three separate columns, the number 100 would enter a one in the far left column, 010 would enter a one in the middle column, and 001 would enter a one in the right column. The zeros must be there to establish the column and must be used if no change is made (you cannot leave a column blank). These columns allow you to change Fill Pattern Attributes such as Reverse Image, Mirror Image and Pattern Rotation (0, 90, 180, 270 degrees). nn3, allows you to choose the Shadow Pattern. There are 101 different shadow patterns. nn4 sets the Shadow Pattern Attribute, and works the same as nn2. "5" sets the Shadow Direction, it uses numbers 0-7, and will rotate the shadow around the character 360 degrees. nn6 sets the length of the shadow from 0 to 20, as a percentage of the character size. "7" sets the thickness of the character outline. The outline can be varied from 1 to 7 dots in width. If you change one of these items, you must reset them all or the built in defaults will be used by the printer. Also, as I said earlier, this sets but does not turn that stuff on or off. If you want to turn Outline on, you must send (<ESC>[?7m. Outline off is (<ESC>[?27m. Shadow on and off are (<ESC>[?6m and (<ESC>[?26m. Character Fill on and off are (<ESC>[?5m and (<ESC>[?25m. If you think this is confusing, you're right. I have been studying this for years and there are still things in my printer manual that make no sense to me at all. But, I am running the printer and printing everything you have seen in my Newsletter articles with my T199/4A and FunnelWeb or Newsletter Printer.



Summer's almost here, T1'ers.



THANKS TISHUG

# TI-Bits Number 6

by Jim Swedlow, CA USA

[This article originally appeared in the User Group of Orange County, California ROM]

## FORMATTING DISK TEXT FILES

This month we will explore further into using TI Writer and disk files as output. Two simple utility programs accompany this article.

First, a bit about what the Text Formatter does. If you include the command ".FI;AD", the Formatter will right justify your text (so both the right and left columns are straight lines). When you save a file to disk from the Editor, however, you have a "ragged right" (or not right justified). If you want right justification on disk (and to use the other features of the Formatter), all you do is specify a disk file name as the Print Devicename in the Formatter.

There is a small hitch. Each and every line in the disk file will end in a line feed <CHR\$(10)>. Then if you print that file without adding ".LF" to the printer name, your text will be double spaced. It will even be stranger if you use underlining and bold face.

The reason is that the Formatter expects to output to a printer. Since line feed and carriage return are about the only two universal printer command codes, the folks who wrote TI Writer had to come up with a way to do bold face and underline using only those two commands.

Here is what they did. Most printers will advance the print one line when they receive a line feed and return the print head to the left column when fed a carriage return.

To underline a word, print the line, execute a carriage return (so that the print head goes back to the beginning of the same line) and print underline characters (FCTN U) under the word to be underlined. Then send line feed and a carriage return and start the next line. Bold face is similar except that TI Writer prints the bold face word four times.

You add ".LF" to the printer name in the Formatter so that TI Writer can control when line feeds are sent. All of this is fine for a printer but not for a disk file.

If you are going to save your formatted text to disk, first do NOT use either bold face or underline. After you have run it through the Formatter, you must load the formatted file into the Editor and then save it back to disk. Why? Well, if a line has 80 characters, the Formatter will add an LF to the end making it 81 characters long. Then when a basic program attempts to read that line, it will lock your system up. By loading and saving through the editor, all lines are trimmed if they are over 80 characters long. Be sure and use Print File to save the file so that the Editor will not add the tabs (see last month's column).

Then use the program LF STRIPPER (elsewhere in this issue) to strip the line feeds from the ends of the lines.

## QUOTE OF THE MONTH

"Computers are charting a new course in human history from the age of the muscle to the age of the mind."

—Author unknown

## CARRIAGE RETURNS

Sometimes when you load a text file into the Text Editor there are no carriage returns at the end of the paragraphs. This can cause some serious problems. With TI Writer, if you Reformat or Replace String, you will

find all of your paragraphs merged into one huge one (FUNELWRITER will not do this).

The other program this month, CR ADDER, will add carriage returns at the end all paragraphs and to all blank lines. It also adds a carriage return to the end of lines that start with a period as they are probably Text Formatter commands.

A note about this program. One thing I had to resolve was how to add a carriage return to a line that was already 80 characters long. After a bit of experimenting, I came up with this (assuming that A\$ is the line and C\$ is CHR\$(13), the carriage return):

```
PRINT #2:A$;C$
```

Just as in printing to a printer, the semi-colon will ensure that the on disk file is properly set up.

However, I could have used this code:

```
PRINT #2:A$ \C$
```

This works because the disk controller automatically breaks strings that are longer than the specified record length into record length pieces.

## WORD OF THE MONTH

BLATHERSKITE: A person given to voluble, blustery, empty talk; a talkative, foolish person.

"Educators accuse politicians of being blatherskites, compromisers and opportunists. In turn, politicians see educators as stuffy, sanctimonious prigs who are out of touch with reality."

## A TI-WRITER TIP

If you want more than one word in a row to be bold face you can start the first word with the "at" sign (SHIFT 2) and then connect the following words with the exponentiation or circumflex or required space (SHIFT 6). This is fine except that the Text Formatter will see all of them as one huge word and you may have some strange spacing if you are right justifying.

Another way is to place the "at" sign before each word you want in bold face. This also works with underlining if you do not want spaces between words underlined.

Enjoy.

```

100 ! CR ADDER
110 ! BY JIM SWEDLOW
120 ! OCTOBER 22, 1986
130 !
140 CALL CLEAR :: PRINT " Carriage Return Adder": :
150 INPUT "Old File: DSK":A$ :: PRINT :: INPUT "New
File: DSK":B$
160 PRINT : "Working"
170 OPEN #1:"DSK"&A$,INPUT :: OPEN #2:"DSK
"&B$,OUTPUT :: C$=CHR$(13)
180 IF EOF(1)THEN 250 ELSE INPUT #1:A$
190 IF A$=" " OR A$="" THEN PRINT #2:C$ :: GOTO 180
200 IF ASC(A$)=46 THEN PRINT #2:A$;C$ :: GOTO 180
210 IF EOF(1)THEN PRINT #2:A$;C$ :: GOTO 250 ELSE
INPUT #1:B$
220 IF B$=" " OR B$="" THEN PRINT #2:A$;C$;C$ :: GOTO
180
230 IF ASC(B$)=46 THEN PRINT #2:A$;C$;B$;C$ :: GOTO 180
240 PRINT #2:A$ :: A$=B$ :: GOTO 210
250 CLOSE #1 :: CLOSE #2 :: PRINT : "Done" :: STOP

```

```

100 ! LF STRIPPER
110 ! BY JIM SWEDLOW
120 ! OCTOBER 22, 1986
130 !
140 CALL CLEAR :: PRINT "Line Feed Stripper": :
150 INPUT "Old File: DSK":A$ :: PRINT :: INPUT "New
File: DSK":B$

```

continued on page 13



\*\*\*\*\*  
DM1000 v6.1  
Modified by Jack Mathis  
Review by Mary Phillips. OUG  
\*\*\*\*\*

THANKS PUG

I saw Jack at Fest West and thanked him for the package he'd sent. "Don't use the DM1000 I sent you, it's got a bug in it! Let me give you a new one!" And he autographed it for me. Ain't I (contraction for 'Am I not') proud!

Let me tell you, this version is the most beautiful disk and file manager ever did I see. And the docs? B.J. did well! The documentation is very clear and easy to follow.

What makes v6.1 different from 5.0? Major modifications include:

- 1) Consolidation of the Disk and File Utility Menus into one Main Menu.
- 2) (T)ype or (P)rint in the CMD column of File Utilities catalog displays a DV/DF80 file to the screen or print it out.
- 3) Disk initialization (formatting) and copying are speeded up.
- 4) Defaults for disk formatting, printer configuration (device and codes), and foreground and background colors may be saved into the program.
- 5) Choice of drives for saving configure defaults.
- 6) Works with Myarc HFDC on TI and on Geneve with Ben Hatheway's ROMPAGE loaded.

Print out the documentation with TI-Writer or the Print File Option of BOOT!, MENU, or DM1000 itself. A Quick Reference Guide is included in the documentation.

The following key presses are active in File Utilities:

FCTN 1 Delete a character  
FCTN 2 Insert a character  
FCTN 3 Configure List Device (printer or DSKn.filename)  
FCTN 4 Halt disk drive I/O operation  
FCTN 5 Return to DM1000 main menu.  
FCTN 6 Request "EXECUTE COMMANDS Y/N" prompt  
FCTN 7 Print Catalog to List Device  
FCTN 8 Re-enter Drive #  
FCTN 9 Return to DM1000 main menu  
FCTN - Exit Disk Manager 1000  
FCTN E Move cursor up one field  
FCTN X Move cursor down one field  
FCTN S Move cursor left one character or back one field  
FCTN D Move cursor right one character or ahead one field  
CTRL E Move cursor back one page  
CTRL X Move cursor ahead one page  
CTRL C Copy all files

CTRL D Delete all files  
CTRL N Perform No Action on any files  
CTRL P Protect All Files  
CTRL U Unprotect All Files

Individual files may be marked for Copy, Delete, Move, Protect, or Unprotect and then press FCTN 6 to proceed. T or P must be done by themselves.

When DM1000 copies a disk you have a choice of Bitmap (copying only the sectors that are used) or Sector copying all the disk sectors.

If you (D)delete a file then wish you hadn't, Undelete will ask you for the disk drive number and the filename and it will reconstruct the link between the directory and the file so you have your file back.

Unprotect is only for Extended BASIC programs and if it is used on other files, they may be unusable.

Error Messages are in friendly English, no code numbers. This program is USER FRIENDLY.

To put DM1000 on your BOOT! or Horizon Ram Disk you only need MGR1 and MGR2. For the DOM 1/89 BOOT!, just copy these two files over the ones you have and delete MGR3. In MENU, delete files MG and MH and copy MGR1 and MGR2, then rename them MG and MH.

This program is our Utility of the Month and I will be demonstrating it at the meeting for you. I will have a few printouts available for those who have disk drives but no printer yet.

TI Bits #6  
continued from page 11

```
160 PRINT "Working"
170 OPEN #1:"DSK"&A$,INPUT_1
    :_OPEN #2:"DSK"&B$,OUTPU
    T
180 IF_EOF(1)THEN_200_ELSE_L
    INPUT #1:A$
190 IF_A$=CHR$(10)THEN_PRINT
    #1:" "::_GOTO_180
200 I=LEN(A$)::IF_I=1_OR_SE
    G$(A$,I,1)<>CHR$(10)THEN
    _I=I+1
210 PRINT#2:SEG(A$,1,I-1)::_
    GOTO_180
220 CLOSE #1::_:_CLOSE #2::_:_
    STOP
```

THANKS TISHUG

LEARN TO KNOW YOUR TI  
LESSON 3  
with Percy Harrison

This months lesson will be devoted to the use of the CALL CLEAR and LIST functions and finish up with a small program which will draw a picture of a very basic old fashioned car using characters of the alphabet.

LESSON 3 CALL CLEAR, LIST

Enter: NEW

Start each lesson with NEW to erase the memory and clear the screen.

```

Now enter: 10 REM HOUSE
           20 PRINT "LISTEN"
           30 CALL SOUND(200,800,10)
           40 CALL SOUND(300,600,10)
           50 PRINT "DID YOU HEAR THE DOORBELL?"

```

Run this program.

### ERASING THE SCREEN

Now enter: CALL CLEAR

CALL CLEAR is a command to erase the screen. It does not erase the program in memory. CLEAR means the same as "erase."

### IS THE PROGRAM LOST FOREVER?

You can no longer see the program on the screen, but the program is not lost. The computer has stored the program in memory and we can ask the computer to show us the program again.

### LISTING THE PROGRAM

Enter: LIST

and the computer will list the whole program on the screen. To see just one line of the program, ask for it by line number:

```
LIST 30
```

shows line 30 of the program.

### THE MEMORY

The computer's memory is like a shelf of boxes.

The name of the box goes on the front of each box.

At the start, all boxes are empty and no box has a name.

When you entered:

```
10 REM HOUSE
```

the computer took the first empty box and wrote the name "Line 10" on the label. Then it put the command REM HOUSE into the box and put the box back on the shelf.

When you entered:

```
20 PRINT "LISTEN"
```

the computer took the second box and wrote "Line 20" on its label, then it put the statement PRINT "LISTEN" into that box and put it back into its place on the shelf.

What did the computer do when you entered line 30?

### ERASING A LINE FROM MEMORY

To erase one line of the program, enter the line number with nothing after it.

To erase line 20

Enter: 20

You still see the line on the screen but do a LIST and you will see that line 20 is gone from memory.

When you enter just a line number with nothing after it, the computer:

finds the box with that line number on it

empties the box

and erases the name off the front of the box.

What does the computer do to the boxes when you give it the command NEW?

### ADDING A LINE

You can add a new line anywhere in the program, even between two old lines providing the line numbers of the two old lines are not consecutive numbers. Just pick a line number between any two existing line numbers and type your new line in. The computer will put the line in its correct place.

Enter: NEW

```

Enter: 10 REM MORE AND MORE
       20 PRINT
x      40 PRINT "MORE LINES WANTED"

```

List and run it. Now add this line:

```
15 PRINT "STILL"
```

List and run it again. Explain what happened.

### FIXING A LINE

If a line is wrong, just type it over again.

For example, to change line number 40 in the above program:

Enter: 40 PRINT "NEEDS FIXING"

What did the computer do to the box named "Line 40" when you entered the line?

### THE REM COMMAND

Use a REM command to put a title on your program.

Enter: NEW

```

10 REM REMARKS
20 CALL CLEAR
30 PRINT "LINE 10 DOES NOTHING
35 REM THIS LINE DOES NOTHING
RUN

```

What happens in each line of the program? (Write your answers in the blank spaces)

```

Line 10.....
Line 20.....
Line 30.....
Line 35.....

```

REM means "remark" or "reminder."

Use REM to give a title to the program.

Use REM to write little notes in the program:

the notes are for you when you read the program

the notes are also for other readers.

Make the notes explain how the program works.

You can use the PRINT command to draw pictures.

Here is a picture of an old model car. Enter MDV then enter this program.

```
10 REM STANLEY STEAMER
15 CALL CLEAR
20 PRINT
30 PRINT "XXXXXX"
40 PRINT "XXXXXXXXXXXXXX"
50 PRINT "O" "O"
```

Do not forget to put the spaces in the PRINT lines! They are part of the drawing. Now run the program.

#### ASSIGNMENT 3:

1. Add a line to the STANLEY STEAMER program to make the car honk its horn.
2. What command will list line 10 of the program?
3. How do you tell the computer to list the whole program on the screen?
4. What does the computer do (if anything) when it sees the REM command?
5. What is the REM command used for?
6. Use CALL CLEAR, CALL SOUND, REM and PRINT to draw 3 flying birds on the screen. Make each bird peep.

I hope that you are going back over the previous lessons during the month so that you will become very conversant with the functions that each of them cover. Also you should try exercises of your own. A good start would be to study the TI book "User's Reference Guide" which came with your computer.

#### ANSWERS TO LESSON 2

##### Assignment Question 2-1

```
10 REM NAMES
20 PRINT "JMA"
30 PRINT "MARY"
40 PRINT "TAYLOR"
```

##### Assignment Question 2-2 and 2-3

```
10 REM NAMES
20 CALL SOUND(300,400,10)
22 CALL SCREEN(5)
25 PRINT "JMA"
30 CALL SOUND(300,600,10)
32 CALL SCREEN(10)
35 PRINT "MARY"
40 CALL SOUND(500,800,10)
42 CALL SCREEN(15)
45 PRINT "TAYLOR"
```



THANKS TISHUG

## CHRISTMAS LABELS

Retyped by Loren West

This comes from Jim Leshar, of the Dallas TI User Group. It is another in a series of items that use the Missing Link.

This program lets you make your own borders on address labels. We design our characters by redefining a character set used by our printer. However, we are limited to a 7x9 matrix, which is the maximum size of each character. In this case, the character is a tiny Christmas tree. Actually, the border consists of many tiny trees, encircling a 3 1/2 x 15/16 - inch label.

You will need to adjust the labels in your printer to make them look right. So, put the labels in with the back side toward you. You can see the labels through the backing. This way you can set up the spacing without running a lot of labels. Then when you get it right, turn the labels back over and output as many as you want.

The labels look best in red, blue or green. This program is set to produce 40 labels, but you can change the number by modifying line 120. Change 40 to whatever number you want.

Here are some numbers to make other characters, just type them in to replace the numbers in line 30.

```
BELL
30 DATA 0,56, 68, 132, 255, 132, 68, 56, 0, 0
```

```
CANE1
30 DATA 4, 2, 1, 0, 1, 0, 1, 2, 124, 0
```

```
CANE2
30 DATA 0, 12, 2, 0, 1, 0, 1, 2, 124, 0
```

```
CROSS
30 DATA 0, 4, 0, 4, 127, 4, 0, 4, 0, 0
```

```
TREE2
30 DATA 16, 8, 4, 2, 113, 2, 4, 8, 16, 0
```

```
TREE3
30 DATA 16, 8, 20, 2, 253, 2, 20, 8, 16, 0
```

```
10 REM TREE
20 CALL CLEAR
30 DATA 16,8,20,2,113,2,20,8,16,0
40 OPEN #1:"P10"
50 OPEN #1:CHR$(27);"";
60 PRINT #1:CHR$(27);"E";
70 PRINT #1:CHR$(27);"";CHR$(1);CHR$(126);
80 FOR I=1 TO 09
90 READ MI
100 PRINT #1:CHR$(MI);
110 NEXT I
120 FOR N=1 TO 1
130 PRINT N
140 PRINT #1:CHR$(27);"S";CHR$(1);
150 PRINT #1:CHR$(27);CHR$(51);CHR$(12);
160 CS=RPTS(CHR$(126),35)
170 PRINT #1:CS
180 BS=RPTS(CHR$(126),01)
190 FOR X=1 TO 09
200 PRINT #1:BS;
210 PRINT #1:TAB(35);BS
220 NEXT X
230 PRINT #1:CS
240 PRINT #1:CHR$(27);CHR$(51);CHR$(12)
250 NEXT N
```

**MEETING DATES  
FOR  
1994-1995**

**C.O.N.N.I. BOARD MEMBERS**

**3RD SATURDAY**

16 JUL 1994  
20 AUG 1994  
17 SEP 1994  
15 OCT 1994  
19 NOV 1994  
17 DEC 1994  
21 JAN 1995  
18 FEB 1995

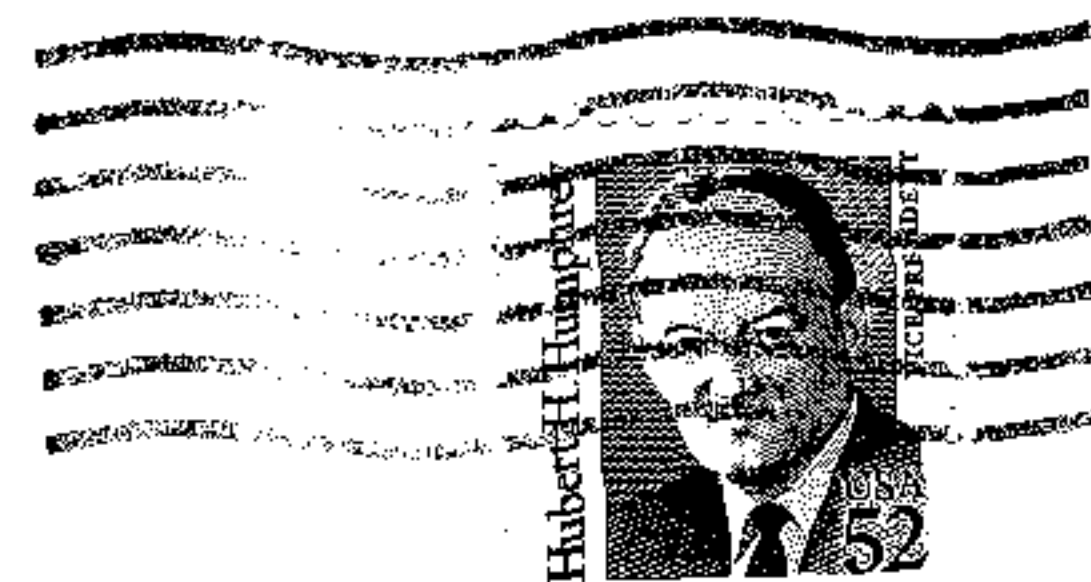
Pres. - John Parkins	614/891-4965
Vice Pres. - Chuck Grimes	614/268-8821
Treas - Bill Sheppard	614/881-5742
Secretary - Dick Beery	614/459-3597
Membership - Everett Wade	614/262-6346
Librarian - Ken Marshall	614/876-1670
Disk - Dick Beery	614/459-3597
Cassette - Harley Ryan	614/231-1497
Cartridge - Chuck Grimes	614/268-8821
NL Exchange - Jean Hall	614/885-4223
Spirit of 99 BBS	614/263-3412
Vice Pres. - Chuck Grimes	614/268-8821
Spirit of 99 BBS	614/263-3412
Irwin Hott	614/263-5319
Dick Beery	614/459-3597
Co-Editors/Spirit of 99	
Jean Hall	614/885-4223
Bob DeVilbiss	614/891-0566

**MEETING PLACES FOR JULY and AUGUST**

**16 JULY 1994: 20 AUGUST 1994:**

NORTH LINDEN LIBRARY  
4093 CLEVELAND AVE.  
COLUMBUS OH  
10:00 AM - 12 NOON

CHEMICAL ABSTRACT  
2540 OLENTANGY RIVER RD  
COLUMBUS OH  
8:30 AM - 2:30 PM



C.O.N.N.I.  
81 HEISCHMAN AVE  
NORTHINGTON, OH 43085

