Tech Info Library

ImageWriter: Printing Superscripts and Subscripts

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Revised:        5/17/89
Security:       Everyone
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ImageWriter: Printing Superscripts and Subscripts

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This article last reviewed: 23 March 1989

There are two ways of creating super/subscript printouts on the ImageWriter
(this applies only to ImageWriters with a serial number above 216001; those
with lower serial numbers do not super/subscripting):

Method #1) The diskette called "ImageWriter Tool Kit (v1.5)" contains a
half-high character set designed for super/subscripting use. To use it,
download the character set to the printer prior to using Bank Street
Writer. (This download function is a function on the tool kit disk.)

Method #2) If full-size characters shifted half a line up or down are
satisfactory, then issue the following codes. The codes to do
super/subscripting are not stated as such. Super- and subscripting require
the printer to shift forward or reverse, print some characters, then shift
back. The reference card in the manual is also not clear what the proper
code is for this function.

To subscript:

1) Print some text.
2) Set a new line feed pitch.
3) Issue a forward line feed (for subscripting).
4) Print the character(s) to be subscripted.
5) Set reverse line feeding.
6) Issue a line feed.
7) Reset to original line feed pitch.
8) Continue printing.

To superscript:

1) Print some text.
2) Set a new line feed pitch.
3) Set reverse line feeding.
4) Issue a line feed (for superscripting).

5) Print the character.
6) Set forward line feeding.
7) Issue line feed.
8) Reset to original line feed pitch.

The ImageWriter's "optional line feed function" suppresses the Carriage
Return when issuing a Line Feed. (As you can see, none of this is very
simple).

A possible scenario for sending codes to do superscripting from BASIC
(running under ProDOS):

```
10 D$=CHR$(4):REM CONTROL D
20 A$=CHR$(27)+CHR$(108)+CHR$(49):REM ENABLE OPTIONAL LINE FEED FUNCTION
      CODE
30 B$=CHR$(27)+CHR$(84)+"10":REM SET LINE PITCH TO LESS THAN HALF LINE
40 C$=CHR$(27)+CHR$(102):REM FORWARD LINE FEED CODE
50 E$=CHR$(27)+CHR$(114):REM REVERSE LINE FEED
55 F$=CHR$(27)+CHR$(84)+"24":REM SET LINE PITCH BACK TO FULL SIZE
60 PRINT D$;"PR#1":REM IF THIS SLOT IS WHERE THE PRINTER CARD IS LOCATED
70 PRINT "This text is normal";:REM NORMAL TEXT
80 PRINT A$;:REM ENABLE OPTIONAL LINE FEED FUNCTION
85 PRINT B$:REM SET LINE PITCH
90 PRINT CHR$(31)+"1";:REM FEED ONE BLANK LINE OF PAPER
95 PRINT CHR$(27)+CHR$(39);:REM SWITCH TO CUSTOM FONT
100 PRINT "THIS TEXT IS SUBSCRIPTED";:REM SUBSCRIPTED TEXT
110 PRINT E$;:REM SET REVERSE LINE FEED
120 PRINT CHR$(31)+"1";:REM FEED ONE BLANK LINE OF PAPER
125 PRINT F$;:REM SET REVERSE LINE FEED
135 PRINT CHR$(27)+CHR$(36);:REM SWITCH BACK TO NORMAL FONT
140 PRINT"This text should be normal again"
145 PRINT C$:REM RESET TO FORWARD LINE FEED
150 PRINT D$;"PR#0"
160 END
```

Here is an example of how to enter the codes into Bank Street Writer:

```
To Begin Subscripting
---------------------
Characters: ESC   l     1   ESC     T     1     2    (CONTROL)_  1
ASCII Codes: 27    108   49  27      84    49    50   31          49


To End Subscripting
-------------------
Characters: ESC  r   (CONTROL)_ 1   ESC    f    ESC    A    ESC   1   0
ASCII Codes: 27  114   31          49  27   102   27    65   27  108  48


To Begin Superscripting
-----------------------
Characters: ESC  l     1     ESC     T     1    2     ESC    r    (CONTROL)_  1
ASCII Codes: 27  108   49     27      84    49   50     27   114   31          49


To End Superscripting
```

```
                    --------------------
Characters:  ESC  f  (CONTROL)_   1   ESC   A   ESC   l   0
ASCII Codes: 27  102  31          49  27    65  27   108  48
```

(NOTE: The second character in the command sequence that begins sub- or superscripting, and the next-to-last character in the sequences that ends sub- or superscripting, is a lowercase "L".

The last character in the sequences that ends sub- or superscripting is a zero.

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Tech Info Library Article Number:3665