

ASCII Video Terminal Escape Codes

These are the codes that the terminal will respond to and will send when a special key is pressed. They emulate most of the functions on both the original DEC VT100 and VT52 terminals. Note that the symbol **ESC** means the escape code (decimal 27, hex 1B) and all codes start with this character. For a more detailed explanation of each code use Google to search for "VT100 User Guide".

The ASCII Video Terminal adds some extensions to the VT100 standard. These include codes to select 36 or 24 lines per screen for VGA, the ability to select from two extra large sized fonts (large and jumbo) and also codes to draw lines, boxes and circles on the screen.

In the latter case the terms X1 and Y1 refer to the starting position on the screen and X2 and Y2 refer to the ending position. In the case of a circle R is the radius of the circle. All these variables are in pixels with the top left hand corner of the screen being X=0 and Y=0. X is the horizontal position and Y is the vertical with both getting greater as you move away from the top left corner. The overall resolution depends on the display mode; it is 480x288 pixels in VGA 25 line mode, 480x432 pixels in VGA 36 line mode, 288x216 in PAL composite and 264x180 pixels in NTSC composite mode

The following example in MMBasic demonstrates how to draw a circle with a radius of 100 pixels at the centre of the screen (which is at pixel 240 by 144 when in VGA 24 line mode):

```
PRINT CHR$(27)+"[Z4;240;144;100Z";
```

Standard VT100 mode codes

Note that codes surrounded by a less than symbol (<) and greater than symbol (>) (for example, <v> or <h>) represent one or more decimal digits

Auto-wrap mode off	ESC [?7l
Auto-wrap mode on (default)	ESC [?7h
Set 36 lines per screen	ESC [?9l
Set 24 lines per screen (default)	ESC [?9h
Set alternate keypad mode	ESC =
Set numeric keypad mode (default)	ESC >
Turn off all character attributes	ESC [m -or- ESC [0m
Turn underline mode on	ESC [4m
Turn reverse video on	ESC [7m
Turn invisible text mode on	ESC [8m
Select font #2 (large characters)	ESC [3m
Select font #2 (jumbo characters)	ESC [6m
Move cursor up n lines	ESC [<n>A
Move cursor down n lines	ESC [<n>B
Move cursor right n lines	ESC [<n>C
Move cursor left n lines	ESC [<n>D
Move cursor to upper left corner	ESC [H
Move cursor to upper left corner	ESC [;H
Move cursor to screen location v,h	ESC [<v>;<h>H
Move cursor to upper left corner	ESC [f
Move cursor to upper left corner	ESC [;f
Move cursor to screen location v,h	ESC [<v>;<h>f
Move/scroll window up one line	ESC D
Move/scroll window down one line	ESC M
Move to next line	ESC E
Save cursor position and attributes	ESC 7
Restore cursor position and attributes	ESC 8
Clear line from cursor right	ESC [K
Clear line from cursor right	ESC [OK
Clear line from cursor left	ESC [1K
Clear entire line	ESC [2K

Clear screen from cursor down	ESC [J
Clear screen from cursor down	ESC [0J
Clear screen from cursor up	ESC [1J
Clear entire screen	ESC [2J
Device status report	ESC 5n (response is ESC 0n)
Get cursor position	ESC 6n
Response: cursor is at v,h	ESC <v>;<h>R
Identify what terminal type	ESC [c
Identify what terminal type (another)	ESC [0c (response is ESC [?1;0c)
Reset terminal to initial state	ESC c
Turn off all three LEDs	ESC [0q
Turn on LED Num Lock	ESC [1q
Turn on LED Caps Lock	ESC [2q
Turn on LED Scroll	ESC [3q
Draw a line	ESC [Z1;<x1>;<y1>;<x2>;<y2>Z
Draw a box	ESC [Z2;<x1>;<y1>;<x2>;<y2>Z
Draw a filled box	ESC [Z3;<x1>;<y1>;<x2>;<y2>Z
Draw a circle	ESC [Z4;<x1>;<y1>;<r>Z
Draw a filled circle	ESC [Z5;<x1>;<y1>;<r>Z

VT52 compatibility mode codes

Enter/exit ANSI mode (VT52)	ESC <
Enter alternate keypad mode	ESC =
Exit alternate keypad mode	ESC >
Move cursor up one line	ESC A
Move cursor down one line	ESC B
Move cursor right one char	ESC C
Move cursor left one char	ESC D
Move cursor to upper left corner	ESC H
Move cursor to v,h location	ESC <v><h>
Generate a reverse line-feed	ESC I
Erase to end of current line	ESC K
Erase to end of screen	ESC J
Identify what the terminal is	ESC Z
Response:	ESC /Z

VT100 Special Key Codes

These are sent from the terminal back to the computer when the particular key is pressed on the PS2 keyboard. Note that the numeric keypad keys send different codes in alternate mode. See escape codes above to change the keypad mode.

UP	ESC [A
DOWN	ESC [B
LEFT	ESC [D
RIGHT	ESC [C
HOME	ESC [1~
INSERT	ESC [2~
DEL	ESC [3~
END	ESC [4~
PUP	ESC [5~
PDOWN	ESC [6~
F1	ESC [11~
F2	ESC [12~
F3	ESC [13~

F4	ESC [14~
F5	ESC [15~
F6	ESC [17~
F7	ESC [18~
F8	ESC [19~
F9	ESC [20~
F10	ESC [21~
F11	ESC [23~
F12	ESC [24~
F3+0x20	ESC [25~

VT52 Special Key Codes

These codes are sent when the terminal is in VT52 mode. All other keys will generate the VT100 codes listed above.

UP	ESC A
DOWN	ESC B
LEFT	ESC D
RIGHT	ESC C