

7-Bit ASCII Code

Table of 7-bit ASCII codes (0-127) with bit patterns and character mappings.

KEY table showing ASCII character, ESC, OCTAL, DECIMAL, and HEX values.

NOTE: The following control characters are generated differently from previous DIGITAL terminals.

Table mapping Code (VT100) to Previous Terminal (NUL, RS, US) and their respective control characters.

Cursor Control Key Codes

Table mapping Cursor Key (Up, Down, Right, Left) to VT52 Mode, ANSI/Cursor Key Mode Reset, and ANSI/Cursor Key Mode Set.

Special Graphics Characters

Table of special graphics characters (128-255) with bit patterns and character mappings.

KEY table showing ASCII character, ESC, OCTAL, DECIMAL, and HEX values.

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VT100 PROGRAMMING REFERENCE CARD

ANSI COMPATIBLE MODE

Cursor Movement Commands

Table listing cursor movement commands (Cursor up, down, forward, backward, etc.) and their corresponding ESC sequences.

Line Size (Double-Height and Double-Width) Commands

Table listing line size commands (Change this line to double-height top half, etc.) and their corresponding ESC sequences.

Character Attributes

Table listing character attributes (ESC [Ps;Ps;Ps;...;Ps m) and their corresponding actions (Bold on, Underline on, etc.).

Erasing

Table listing erasing commands (From cursor to end of line, From beginning of line to cursor, etc.) and their corresponding ESC sequences.

PROGRAMMABLE LEDs

ESC [Ps;Ps;...;Ps q

| | |
|----------------|--------------|
| Ps = 0 or None | All LEDs Off |
| 1 | L1 on |
| 2 | L2 on |
| 3 | L3 on |
| 4 | L4 on |

Character Sets (G0 and G1 Designators)

| Character Set | G0 | G1 |
|---|---------|---------|
| United Kingdom (UK) | ESC (A | ESC) A |
| United States (USASCII) | ESC (B | ESC) B |
| Special graphics characters and line drawing set | ESC (0 | ESC) 0 |
| Alternate character ROM | ESC (1 | ESC) 1 |
| Alternate character ROM special graphics characters | ESC (2 | ESC) 2 |

Scrolling Region

ESC [Pt ; Pb r

Tab Stops

| | |
|-----------------------------|-----------|
| Set tab at current column | ESC H |
| Clear tab at current column | ESC [g |
| Clear tab at current column | ESC [0 g |
| Clear all tabs | ESC [3 g |

Modes

| Mode Name | Mode | To Set | | To Reset | |
|----------------------|-------------|----------|-----------|----------|------|
| | | Sequence | Mode | Sequence | Mode |
| Line feed/new line | New line | ESC[20 h | Line feed | ESC[20/* | |
| Cursor key mode | Application | ESC[?1 h | Cursor | ESC[?1/* | |
| ANSI/VT52 mode | ANSI | | VT52 | ESC[?2/* | |
| Column mode | 132 Col | ESC[?3 h | 80 Col | ESC[?3/* | |
| Scrolling mode | Smooth | ESC[?4 h | Jump | ESC[?4/* | |
| Screen mode | Reverse | ESC[?5 h | Normal | ESC[?5/* | |
| Origin mode | Relative | ESC[?6 h | Absolute | ESC[?6/* | |
| Wraparound | On | ESC[?7 h | Off | ESC[?7/* | |
| Auto repeat | On | ESC[?8 h | Off | ESC[?8/* | |
| Interlace | On | ESC[?9 h | Off | ESC[?9/* | |
| Graphic proc. option | On | ESC 1 | Off | ESC 2 | |
| Keypad mode | Application | ESC = | Numeric | ESC > | |

*The last character of the sequence is a lowercase L (154g).

Reports**Cursor Position Report**

| | |
|-------------|-----------------|
| Invoked by | ESC [6 n |
| Response is | ESC [Pl ; Pc R |

Status Report

| | |
|-------------|--|
| Invoked by | ESC [5 n |
| Response is | ESC [0 n (terminal ok) ESC [3 n (terminal not ok) |

What Are You

| | |
|-------------|------------------|
| Invoked by | ESC [c |
| Invoked by | ESC [0 c |
| Response is | ESC [? 1 ; Ps c |

| | |
|--------|---------------------------------|
| Ps = 0 | Base VT100, no options |
| 1 | Processor option (STP) |
| 2 | Advanced video option (AVO) |
| 3 | AVO and STP |
| 4 | Graphics processor option (GPO) |
| 5 | GPO and STP |
| 6 | GPO and AVO |
| 7 | GPO, STP, and AVO |

Alternately invoked by ESC Z (not recommended). Response is the same.

Reset

ESC c

Confidence Tests

| | |
|---------------------------------|--|
| Fill Screen with "Es" | ESC # 8 |
| Invoke Test(s) | ESC [2 ; Ps y |
| Ps = 1 | Power-up self test (ROM checksum, RAM, NVR, keyboard and AVO if installed) |
| 2 (Loopback connector required) | Data Loopback |
| 4 (Loopback connector required) | EIA Modern Control Test |
| 8 | Repeat selected test(s) indefinitely (until failure or power off) |

VT52 COMPATIBLE MODE

| | |
|---------------------------------------|------------------------|
| Cursor Up | ESC A |
| Cursor Down | ESC B |
| Cursor Right | ESC C |
| Cursor Left | ESC D |
| Select Special Graphics character set | ESC F |
| Select ASCII character set | ESC G |
| Cursor to home | ESC H |
| Reverse line feed | ESC I |
| Erase to end of screen | ESC J |
| Erase to end of line | ESC K |
| Direct cursor address | ESC Pl Pc (see note 1) |
| Identify | ESC Z (see note 2) |
| Enter alternate keypad mode | ESC = |
| Exit alternate keypad mode | ESC > |
| Enter ANSI mode | ESC < |

NOTE 1: Line and column numbers for direct cursor address are single character codes whose values are the desired number plus 37g.

NOTE 2: Response to ESC Z is ESZ / Z.

Auxiliary Keypad Codes

| Key | VT52 | VT52 | ANSI | ANSI |
|-----------|----------------|------------------|----------------|------------------|
| | Numeric Mode | Application Mode | Numeric Mode | Application Mode |
| 0 | 0 | ESC?p | 0 | ESCOp |
| 1 | 1 | ESC?q | 1 | ESCQq |
| 2 | 2 | ESC?r | 2 | ESCOr |
| 3 | 3 | ESC?s | 3 | ESCOS |
| 4 | 4 | ESC?t | 4 | ESCQt |
| 5 | 5 | ESC?u | 5 | ESCQu |
| 6 | 6 | ESC?v | 6 | ESCQv |
| 7 | 7 | ESC?w | 7 | ESCQw |
| 8 | 8 | ESC?x | 8 | ESCQx |
| 9 | 9 | ESC?y | 9 | ESCQy |
| -(minus) | -(minus) | ESC?m | -(minus) | ESCQm |
| .(comma) | .(comma) | ESC?/* | .(comma) | ESCQ/* |
| .(period) | .(period) | ESC?n | .(period) | ESCQn |
| ENTER | Same as RETURN | ESC?M | Same as RETURN | ESCQM |
| PF1 | ESCP | ESCP | ESCOP | ESCOP |
| PF2 | ESCQ | ESCQ | ESCOQ | ESCOQ |
| PF3 | ESCR | ESCR | ESCOR | ESCOR |
| PF4 | ESCS | ESCS | ESCOS | ESCOS |

*The last character of the sequence is a lowercase l (154g).