VT Compatibility and Escape Codes

This appendix lists the features and modes of the VT standard that are not supported by NCSA Telnet for the Macintosh®. This appendix also lists the escape codes sent by NCSA Telnet for certain codes in the various emulation modes. This appendix is intended as a reference of NCSA Telnet's implementation of VT emulation, and is not intended to be the definitive source for information regarding the VT series of terminals.

VT Compatibility

NCSA Telnet does not support double height or double width characters. NCSA Telnet also does not support the VT52 mode.

Key Mapping

NCSA Telnet does not emulate the following VT-200 keys: F1, F2, F3, F4, and F5.

NCSA Telnet maps F6 through F20 on the VT-200 keyboard to F1 through F15 on the Apple Extended Keyboard.

NCSA Telnet maps PF1 through PF4 on the VT-200 keyboard to the top row of keys on the numeric keypad (CLEAR, =, /, *).

Key Codes sent by NCSA Telnet

NCAS Telnet always sends the CSI and SS3 control characters using their 7-bit extensions. Therefore, substitute ESC [(1B 5B) for CSI and ESC O (1B 4F) for SS3 in the following tables.

This section divides the keycode tables by the divisions used in the VT 200 manual.

Editing Keys

Key (VT Key Name)	VT200 mode	VT100 mode
HELP (find)	9B 31 7E	
	CSI 1 ~	
HOME (Insert Here)	9B 32 7E	Telnet will send the VT220
	CSI 2 ~	codes for these keys while in
PAGEUP (Remove)	9B 33 7E	VT100 mode, even though these
	CSI 3 ~	keys did not exist on the VT100.
DEL (Select)	9B 34 7E	
	CSI 4 ~	
END (Prev Screen)	9B 35 7E	
	CSI 5 ~	
PAGEDOWN (Next Screen)	9B 36 7E	
	CSI 6 ~	

Cursor Control Keys

Cursor Control Keys (Same for VT200/100)

	Reset	Set	<- Cursor Key Mode
Key	Normal mode	Application mode	
UpArrow	9B 41	8F 41	
	CSI A	SS3 A	
DownArrow	9B 42	8F 42	
	CSI B	SS3 B	

RightArrow 9B 43   8F 43
      CSI C   SS3 C
LeftArrow   9B 44   8F 44
      CSI D   SS3 D

Auxiliary Keypad Codes

Auxiliary Keypad Codes   (Same for VT200/100)

Key	Keypad Numeric mode	Keypad Application mode
0	30	8F 70
	0	SS3 p
1	31	8F 71
	1	SS3 q
2	32	8F 72
	2	SS3 r
3	33	8F 73
	3	SS3 s
4	34	8F 74
	4	SS3 t
5	35	8F 75
	5	SS3 u
6	36	8F 76
	6	SS3 v
7	37	8F 77
	7	SS3 w
8	38	8F 78
	8	SS3 x
9	39	8F 79
	9	SS3 y
-	2D	8F 6D
	-	SS3 m
+ (,)	2C	8F 6C
	,	SS3 l
.	2E	8F 6E
	.	SS3 n
Enter	**	8F 4D
	**	SS3 M
Clear (PF1)	8F 50	8F 50
	SS3 P	SS3 P
= (PF2)	8F 51	8F 51
	SS3 Q	SS3 Q
/ (PF3)	8F 52	8F 52
	SS3 R	SS3 R
* (PF4)	8F 53	8F 53
	SS3 Q	SS3 Q

Top-Row Function Keys

Key (VT Key Name)	VT200 Mode Code	VT100 Mode Code
F1 (F6)	9B 31 37 7E	
	CSI 1 7 ~	
F2 (F7)	9B 31 38 7E	
	CSI 1 8 ~	Telnet will send the VT220
F3 (F8)	9B 31 39 7E	codes for these keys while in
	CSI 1 9 ~	VT100 mode, even though these
F4 (F9)	9B 32 30 7E	keys did not exist on the VT100.
	CSI 2 0 ~	
F5 (F10)	9B 32 31 7E	

	CSI 2 1 ~	
F6 (F11)	9B 32 33 7E	
	CSI 2 3 ~	
F7 (F12)	9B 32 34 7E	
	CSI 2 4 ~	
F8 (F13)	9B 32 35 7E	
	CSI 2 5 ~	
F9 (F14)	9B 32 36 7E	
	CSI 2 6 ~	
F10 (F15/Help)	9B 32 38 7E	
	CSI 2 8 ~	
F11 (F16/Do)	9B 32 39 7E	
	CSI 2 9 ~	
F12 (F17)	9B 33 31 7E	
	CSI 3 1 ~	
F13 (F18)	9B 33 32 7E	
	CSI 3 2 ~	
F14 (F19)	9B 33 33 7E	
	CSI 3 3 ~	
F15 (F20)	9B 33 34 7E	
	CSI 3 4 ~	