RELATION OF VT100 EMULATOR TO ALPHA EMULATOR

Introduction

You can use the VT100 emulator along with the existing alpha emulator. These pages compare the two emulators, and describe how you can go from one to the other.

Note: You can skip this section if you only wish to use the VT100 emulator.

Memory Requirments

The VT100 emulator reserves 4K of alpha window area memory space. You must use the CONFIG command to reserve additional alpha window area memory space if you also want to use the alpha emulator.

Windows

The alpha emulator allows you to define and use up to eight scrolling text windows, numbered 0 through 7. Window 0 is a hardware scrolled window. The other windows are software scrolled.

The VT100 emulator uses window 8, which is a software scrolled window.

Commands

The alpha emulator has 16 commands which allow you to perform various functions, such as moving the cursor and defining text characteristics. Only nine of the alpha emulator commands work for the VT100 emulator. These commands are listed below. The VT100 emulator accepts but ignores all other alpha emulator commands.

ALPHEM	Turns emulator on and off.
BOLD	Sets text to bold or normal.
DEFWIN	Defines parameters for window. (The window coordinates are interpreted differently for the VT100 emulator.)
DELWIN	Deletes a previously selected window.

RELATION OF VT100 EMULATOR TO ALPHA EMULATOR, continued

Commands, continued

GETCUR	Returns the Model One coordinate position of the cursor within the currently selected window.
GETPOS	Returns the characters position of the cursor within the the currently selected window.
GETWIN	Returns the number of the currently selected window.
SELWIN	Selects the specified window.
SETCUR	Determines whether or not the cursor will be displayed.

Control Codes

The alpha emulator recognizes a special set of control codes which move the cursor and perform line functions.

These control codes are not the same set of codes that the VT100 emulator recognizes.

Switching Between VT100 and Alpha Emulators

To go from the VT100 emulator to the alpha emulator, use the commands

- DEFWIN to define an alpha window, and
- SELWIN to select the alpha window.

To go back to the VT100 emulator, type SELWIN 8.

Note: If you are not going to use the VT100 window, you can type DELWIN 8 to delete the VT100 window and free buffer space (4K).

Reference

For a complete description of the alpha emulator, see the document called Alphanumeric Terminal Emulation Programming Guide.

Chapter 2: Control Codes and Escape Sequences for the VT100 Emulator

OVERVIEW

Introduction

This chapter lists the control codes and escape sequences which the VT100 emulator recognizes. The chapter also lists features which are not implemented for the emulator, including

- SET-UP mode
- some standard VT100 escape sequences, and
- VT100 extensions for the Model One/10.

Contents

Chapter 2 is organized into the following sections:

- SET-UP Mode Features
- Implementing Selectable SET-UP Mode Features
- Control Codes for the VT100 Emulator
- Escape Sequences for the VT100 Emulator
- Standard VT100 Escape Sequences Which Are Not Implemented
- Model One/10 VT100 Extensions Which Are Not Implemented

SET-UP MODE FEATURES

Introduction

The VT100 emulator does not have a SET-UP mode. If you press the SET-UP key, nothing happens.

However, you can select some of the standard VT100 features by using the SYSCFG command or by sending escape sequences from the host.

Table of SET-UP Features

The table on the following page lists the VT100 SET-UP features, indicating which features you can select.

A discussion of the features which you can select follows the table.

SET-UP MODE FEATURES, continued

VT100 SET-UP Feature	Select with SYSCFG SERIAL	Select from Host	Cannot Select (Default Listed)
Auto XON/XOFF	XIN, XOUT		
Parity	PARITY		
Parity Sense	PARITY		
Bits Per Character	BITS		
Transmit Speed	BAUD		
Receive Speed	R speed=T speed		
Tabs		yes	
Autowrap		yes	
New Line		yes	
Line/Local			line mode
Characters Per Line			80
Smooth/Jump Scroll			jump
Autorepeat			enabled
Screen Presentation			regular
Cursor Selection			underscore
Margin Bell			disabled
Key Click			enabled
U.S./U.K. Char.			U.S.
Local Echo			disabled
ANSI/VT52 Mode			Not Applicable
Refresh Rate			Not Applicable
Answerback			Not Applicable

IMPLEMENTING SELECTABLE SET-UP MODE FEATURES

Modifying the Serial Line Parameters

You can use the SYSCFG command with the SERIAL parameter to configure the following characteristics of the Model One/80's serial ports.

You can set the baud rate, but the transmit speed must equal the receive speed.

Feature	Parameter(s)
Auto XON XOFF	XIN, XOUT
Parity	PARITY
Parity Sense	PARITY
Bits Per Character	BITS
Transmit Speed	BAUD
Receive Speed	BAUD

Note: Refer to the Model One/80 Command Reference for information on the SYSCFG command.

Setting tab stops

You can set and clear tabs by sending escape sequences from the host.

Set Tab	ESC H
Clear Tab	ESC[0g
Clear All Tabs	ESC[3g

Note: Refer to Chapter 3 for a more detailed description of the escape sequences.

Changing Autowrap and New Line Modes

You can set and reset modes for new line and autowrap by sending escape sequences from the host.

Set New Line Mode	ESC[20h
Reset New Line Mode	ESC[20l
Set Autowrap Mode	ESC[?7h
Reset Autowrap Mode	ESC[?7l

CONTROL CODES FOR VT100 EMULATOR

Introduction

The VT100 emulator responds to all of the standard VT100 control codes, except for ENQ (^E) - Initiate Answerback Transmission.

Control Codes

ASCII CONTROL	CONTROL CHAR.	HEX EQUIV.	ACTION
NUL	^ space	00	Ignored by terminal.
BEL	^ G	07	Ring bell.
BS	^ H	08	Backspace cursor.
HT	^ I	09	Advance cursor to next tab stop.
LF	^ J	0A	Either move cursor down one line or move cursor down one line and to the left margin.
VT	^ K	0B	Same as LF.
FF	^ L	0C	Same as LF.
CR	^ M	0D	Move cursor to first position of present line.
SO	^ N	0E	Enable G1 character set.
SI	^ O	0F	Enable G0 character set.
DC1	^ Q	11	XON code - signal terminal to start transmission.
DC3	^ S	13	XOFF code - signal terminal to stop transmission.
CAN	^ X	18	Abort Escape or Control sequence.
SUB	^ Z	1A	Same as CAN.
ESC	^ [	1B	Initiate Control sequence.
DEL		7F	Ignored by terminal.

ESCAPE SEQUENCES FOR THE VT100 EMULATOR

Introduction

This section lists all of the escape sequences which the VT100 emulator recognizes.

Refer to Chapter 3 for a more detailed description of the effect of each escape sequence.

Escape Sequences

	Sequence
SCROLLING REGION COMMAND	ESC[x;y r
CURSOR MOVEMENT COMMANDS	
Cursor Up	ESC[Pn A
Cursor Down	ESC[Pn B
Cursor Right	ESC[Pn C
Cursor Left	ESC[Pn D
Absolute Cursor Addressing	ESC[y;x f or ESC[y;x H
Index	ESC D
Reverse Index	ESC M
Next Line	ESC E
Save Cursor	ESC 7
Restore Cursor	ESC 8
ERASE COMMANDS	
From Cursor to End of Line	ESC[0K
From Beginning of Line to Cursor	ESC[1K
Entire Line	ESC[2K
From Cursor to End of Screen	ESC[0J
From Beginning of Screen to Cursor	ESC[1J
Entire Screen	ESC[2J
VIDEO ATTRIBUTE COMMANDS	
Video Attributes OFF	ESC[0m
High Intensity ON	ESC[1m
Underline ON	ESC[4m
Blink ON	ESC[5m
Reverse Video ON	ESC[7m

ESCAPE SEQUENCES FOR THE VT100 EMULATOR, continued

Escape Sequences, continued

	Sequence
PROGRAMMABLE LED COMMAND	ESC[Ps q
TAB COMMANDS	
Set Tab	ESC H
Clear Tab	ESC[0g
Clear All Tabs	ESC[3g
CHARACTER SET COMMANDS	
G0 Set is U.S.	ESC (B
G1 Set is U.S.	ESC)B
STATUS COMMANDS AND RESPONSES	
What are you?	ESC[c or ESC Z
Response is VT100 without AVO	ESC[?1;2c
Is Terminal O.K.?	ESC[5n
Response is:	
Terminal is O.K.	ESC[0n
Terminal not O.K.	ESC[3n
What is Cursor Position?	ESC[6n
Response is:	ESC[x;y R
What are Terminal Parameters?	ESC[1x or ESC[0x
Response is:	ESC[s;p;n;x;r;c;fx
MODES	
Set New Line Mode	ESC[20h
Reset New Line Mode	ESC[20l
Set Cursor Key Mode	ESC[?1h
Reset Cursor Key Mode	ESC[?1l
Set Origin Mode	ESC[?6h
Reset Origin Mode	ESC[?6l
Set Autowrap Mode	ESC[?7h
Reset Autowrap Mode	ESC[?7l
Reset Terminal	ESC c
Enter Alternate Keypad Mode	ESC =
Exit Alternate Keypad Mode	ESC >

STANDARD VT100 ESCAPE SEQUENCES WHICH ARE NOT IMPLEMENTED

Introduction

The VT100 emulator for the Model One/80 does not recognize the standard VT100 escape sequences which are listed below.

The emulator accepts these sequences, but does nothing.

Unimplemented Escape Sequences

	Sequence
CHARACTER SIZE COMMANDS	
Single-Height - Single-Width Line	ESC #5
Single-Height - Double-Width Line	ESC #6
Double-Height - Double-Width Line (Top Half)	ESC #3
Double-Height - Double-Width Line (Bottom Half)	ESC #4
TEST COMMANDS	
Align Display	ESC #8
Invoke Self Test	ESC[2;Ps y
MODES	
Set VT-52 Mode	ESC[?2l
Set 132 Column Mode	ESC[?3h
Set 80 Column Mode	ESC[?3l
Set Smooth Scroll Mode	ESC[?4h
Reset Smooth Scroll Mode	ESC[?4l
Set Reverse Video	ESC[?5h
Reset Reverse Video	ESC[?5l
Set Autorepeat Mode	ESC[?8h
Reset Autorepeat Mode	ESC[?8l

Workarounds

You can change the character size by using the DEFWIN command. Refer to the section called Definition of the VT100 Window in Chapter 1.

MODEL ONE/10 EXTENSIONS WHICH ARE NOT IMPLEMENTED

Introduction

The VT100 emulator does not recognize the VT100 extensions for the Model One/10 which are listed below.

The emulator accepts these sequences, but does nothing.

Unimplemented Escape Sequences

	Sequence
COLOR COMMANDS	
Select Normal Text Color	ESC[?0;r;g;b m
Select Blinking Text Color	ESC[?2;r;g;b m
Select Background Color	ESC[?3;r;g;b m
DISPLAY SCREEN FORMAT COMMAND	ESC[? fmt ~
MODES	
Set Text Blinking Mode	ESC[?10h
Reset Text Blinking Mode	ESC[?10l
Set Solid Background	ESC[?11h
Reset Solid Background	ESC[?11l
Set Overstrike Mode	ESC[?31h
Reset Overstrike Mode	ESC[?31l

Workarounds

You can set text blinking mode by putting the value in VREG 42 into the blink table.

You can set and reset the solid background color by using the VLOAD command to load the value registers.

Chapter 3: Description of VT100 Emulator Escape Sequences

OVERVIEW

Introduction

This chapter describes the format and function of each escape sequence recognized by the VT100 emulator.

Format of Escape Sequences

Several of the VT100 escape sequences conform to the following format, where "Final" specifies the function to be performed.

ESC Final

Example: ESC D Index - move cursor down one position.

The rest of the escape sequences conform to the basic format in the diagram below.

ESC[or ESC[?	Ps/Pn	Final
Prefix to escape sequence.	Ps is a selective parameter. Pn is a numeric parameter. An escape sequence may include one or the other, but not both.	Termination character, specifying the function to be performed. This character varies with each function.

If the Ps or Pn value is not specified, it may assume a default. If multiple numeric or selective parameters are used, they must be separated with a semicolon. A semicolon is not used between the last Ps/Pn and the termination character.

Example:		
	ESC[Pn;Pn H	Move cursor to specified row and column.
	ESC[;20 H	Move cursor to the default (top) row and 20th column.

Note: Spaces are used between the characters for clarity only; they are not required.

OVERVIEW, continued

Contents

The following pages describe each of the escape sequences, grouped according to the functions they perform:

- Scrolling Region Command
- Cursor Movement Commands
  - Up, Down, Right, Left
  - Absolute Cursor Addressing
  - Index, Reverse Index, Next Line
  - Save Cursor and Restore Cursor
- Erase Commands
- Video Attribute Commands
- Programmable L.E.D. Commands
- Tab Commands
- Character Set Commands
- Status Commands and Responses
- Modes

SCROLLING REGION COMMAND

Escape Sequence

ESC[x;y r

Function

The Scrolling Region command sets the top and bottom lines of the screen scrolling region. The first numeric parameter, x, sets the top boundary and the second numeric parameter, y, sets the bottom boundary of the scrolling region. Both x and y are in decimal notation. The default values are x=1 and y=24, which specifies the entire screen. The minimum size of the scrolling region is two lines.

Once the scrolling region is defined, the cursor positioning commands may move the cursor into but not out of the scrolling region.

Exception: The Absolute Cursor Addressing command can move the cursor to any position on the screen. The Origin mode must be reset so that the numbering of rows and columns is independent of the scrolling region.

Effect of Command on Cursor Position

The Scrolling Region command has an immediate effect on the cursor position. The cursor position depends on the Origin mode setting.

Origin mode set: Cursor moves to the top row and leftmost column of the new scrolling region.

Origin mode reset: Cursor moves to the absolute position (1,1).

CURSOR MOVEMENT COMMANDS: OVERVIEW

Introduction

The VT100 emulator provides a wide variety of cursor movement commands, including incremental and absolute positioning. This variety ensures that you can position the cursor in the most efficient manner for a particular application.

Types of Commands

The list below summarizes the functions which you can perform with the cursor movement commands.

Cursor Up, Down, Right, Left	Move the cursor within the defined scrolling region in a specified direction and by a specified increment.
Absolute Cursor Positioning	Move the cursor to an absolute position on the screen by specifying a row and column number. If the Origin mode is set, the row and column numbers are relative to the defined scrolling region, rather than to the entire screen.
Index, Reverse Index, Next Line	Move the cursor up or down one line, or to the beginning of the next line, and scroll the display if the cursor is at the top or bottom of the scrolling region.
Save Cursor, Restore Cursor	Save and restore the current cursor position.

Coming Up

The following pages describe the cursor movement commands in detail. The commands are grouped according to their functions as follows:

- Cursor Up, Down, Right, Left
- Absolute Cursor Positioning
- Index, Reverse Index, Next Line
- Save Cursor, Restore Cursor.

CURSOR MOVEMENT COMMANDS: UP, DOWN, RIGHT, LEFT

Escape Sequences

ESC[Pn Final (general format)

Command Name	Escape Sequence
Cursor Up	ESC[Pn A
Cursor Down	ESC[Pn B
Cursor Right	ESC[Pn C
Cursor Left	ESC[Pn D

Function

The incremental cursor positioning commands (Up, Down, Right, Left) can position the cursor anywhere within the scrolling region, but cannot position the cursor outside of the scrolling region.

The numeric parameter, Pn, specifies how many increments the cursor is to move. The default value is one. A parameter value of zero also moves the cursor one increment. The value of the termination character, F, determines the direction of movement, as specified in the table above.

If an attempt is made to move the cursor beyond any boundary of the scrolling region, the cursor moves to the boundary.

CURSOR MOVEMENT COMMANDS: ABSOLUTE CURSOR ADDRESSING

Escape Sequences

ESC[x;y f or
ESC[x;y H

Each of these escape sequences has the same effect.

Function

The Absolute Cursor Addressing command moves the cursor to the row specified by y and the column specified by x. Both the row and column parameters are in decimal notation. The rows are numbered from 1 to 24, and the columns from 1 to 80. The default value for both row and column is one.

If an attempt is made to move the cursor past any screen boundary, the cursor will only move to the boundary.

Effect of the Origin Mode

The state of the Origin mode affects the numbering of rows and columns, and thus the function of the Absolute Cursor Addressing command.

When the Origin mode is set, row and column numbers are dependent on the selected scrolling region.

When the Origin mode is reset, row and column numbers are independent of the selected scrolling region.

Example

If the Origin mode is reset, the sequence ESC[1;1 H positions the cursor in the upper left-hand corner of the screen.

If the Origin mode is set, the sequence ESC[1;1 H positions the cursor in the upper left-hand corner of the scrolling region.

CURSOR MOVEMENT COMMANDS: INDEX, REVERSE INDEX, NEXT LINE

Escape Sequences

Command Name	Escape Sequence
Index	ESC D
Reverse Index	ESC M
Next Line	ESC E

Index Command

The Index command moves the cursor down one position. If the cursor is positioned on the bottom line of the screen or the bottom of the screen scrolling region, the contents of the screen or scrolling region will scroll up one line.

Reverse Index Command

The Reverse Index command moves the cursor up one position. If the cursor is positioned on the top line of the screen or the top of the screen scrolling region, the contents of the screen or scrolling region will scroll down one line.

Next Line Command

The Next Line command moves the cursor to the beginning of the next line. If the cursor is positioned on the bottom line of the screen or the bottom of the screen scrolling region, the contents of the screen or scrolling region will scroll up one line.

Note

No action will occur if the Index or Next Line commands are received while the cursor is positioned on the bottom line of a screen that contains a scrolling region, if the bottom line is not part of the scrolling region.

Similarly, no action will occur if the Reverse Index command is received while the cursor is positioned on the top line of a screen that contains a scrolling region, if the top line is not part of the scrolling region.

CURSOR MOVEMENT COMMANDS: SAVE CURSOR AND RESTORE CURSOR

Escape Sequences

Command	Escape Sequence
Save Cursor	ESC 7
Restore Cursor	ESC 8

Save Cursor

The Save Cursor command saves the cursor position, character set, and video attributes.

Restore Cursor

The Restore Cursor command restores the previously saved cursor position, character set, and video attributes.

ERASE COMMANDS

Escape Sequences

ESC[Ps Final (general format)

Command	Escape Sequence
Erase from cursor to end of line	ESC[0K or ESC[K
Erase from beginning of line to cursor	ESC[1K
Erase entire line containing cursor	ESC[2K
Erase from cursor to end of screen	ESC[0J or ESC[J
Erase from beginning of screen to cursor	ESC[1J
Erase entire screen	ESC[2J

Function

The six erase commands allow you to erase all of part of a line or all or part of the screen. The erase commands do not cause any cursor movement.

All the erase commands have the same basic escape sequence format:

ESC[Ps Final

The termination character, Final, determines whether erasure occurs on a line (K) or screen (J) basis.

The selective parameter, Ps, determines the portion of the line/screen that is erased.

VIDEO ATTRIBUTE COMMANDS

Escape Sequences

ESC[Ps m (general format)

Command	Escape Sequence
Turn all attributes OFF	ESC[0m or ESC[m (0 is default)
Enable bold	ESC[1m
Enable underline	ESC[4m
Enable blink	ESC[5m
Enable reverse video	ESC[7m

Function

The Video Attribute commands allow you to display data on the screen in any combination of the following video attributes: bold, underline, blink, or reverse video. If bold and blink are enabled at the same time, only blink has an effect.

The attributes are cumulative. Received data is displayed according to all attributes which are currently enabled.

If you want to enable multiple video attributes with one escape sequence, use a semicolon to separate each selective parameter.

Example: To turn on the blink and underline attributes, use the escape sequence ESC[4;5m.

Reference

Refer to Chapter 1 for a description of how video attributes are implemented for the VT100 emulator.

PROGRAMMABLE L.E.D. COMMANDS

Escape Sequences

ESC[Ps q (general format)

Command	Escape Sequence
Turn off all L.E.D.s (L1 - L4)	ESC[0q (0 is the default)
Turn on L1	ESC[1q
Turn on L2	ESC[2q
Turn on L3	ESC[3q
Turn on L4	ESC[4q

Function

The Programmable L.E.D. commands allow you to turn on any of the four programmable L.E.D.s, or to turn them all off.

If you want to turn on more than one L.E.D. with one escape sequence, separate the selective parameters with a semicolon.

Example: To turn on L.E.D.s L1 and L4, use the sequence ESC[1;4q.

TAB COMMANDS

Escape Sequences

Command	Escape Sequence
Set Tab	ESC H
Clear Tab	ESC[0g or ESC[g
Clear All Tabs	ESC[3g

Function

The Set Tab command sets a horizontal tab stop at the current cursor column.

The Clear Tab command clears the horizontal tab stop at the current cursor column.

The Clear All Tabs command clears all horizontal tab stops.

CHARACTER SET COMMANDS

Escape Sequences

Command	Escape Sequence
G0 Set is U.S.	ESC (B
G1 Set is U.S.	ESC)B

Function

The default state for the G0 and G1 character sets is U.S. At present, you cannot select any other character set.

Once you have defined the G0 and G1 character sets, you can enable them with the S0 and S1 control codes.

STATUS COMMANDS AND RESPONSES

Introduction

You can use host generated escape sequences to get status reports on the following questions:

- What is the terminal's configuration?
- Is the terminal communicating properly?
- What is the cursor position?
- What are the terminal parameters?

Terminal Configuration Request and Response

Use either of these sequences to find out the terminal's configuration.

Host Command Sequences: ESC[c or ESC Z

Terminal Response: ESC[?1;0c

The response means VT100 emulator without Advanced Video Option.

Terminal Status Request and Responses

Use this sequence to determine if the terminal is communicating properly.

Host Command Sequence: ESC[5n

Terminal Responses: ESC[n if the terminal is O.K.
ESC[3n if the terminal is not O.K.

Cursor Position Request and Response

Use this sequence to get the row and column locations of the cursor.

Host Command Sequence: ESC[6n

Terminal Response: ESC[x;y R

X is the row location, and y is the column location.

STATUS COMMANDS AND RESPONSES, continued

Terminal Parameters Request and Response

Use either of these sequences to get a report of the terminal parameters.

Host Command Sequences: ESC[0x or ESC[1x

Terminal Response: ESC[s;p;n;x;r;c;fx

The following table describes the report information.

Parameter	Value	Meaning
s = Report type	3	This message is a report from the terminal and the terminal reports only on request from the host.
p = Parity	1	No parity.
n = Number of bits	1	8 bits per character.
x = Transmit speed	112	9600 baud.
r = Receive speed	112	9600 baud.
c = Baud rate multiplier	1	Baud rate multiplier is 16.
f = Flags	0	No options.

MODES

Introduction

This section describes how to set and reset the following modes:

- New Line
- Cursor Key
- Origin, and
- Autowrap.

This section also describes how to reset the terminal, and how to enter and exit the Alternate Keypad mode.

Effect of Changing Modes

The escape sequences for setting and resetting modes determines how the terminal responds to certain commands. These escape sequences do not usually change the display.

New Line Mode

Set: ESC[20h
Reset: ESC[20*l* Note: *l* is the lowercase letter l.

When New Line mode is set, the RETURN key always generates both the CR and LF codes. A received LF code also performs an implicit CR.

When New Line mode is reset, the RETURN key generates only the CR code. A received LF code only causes a line feed, and does not generate a CR code.

Note: You can also set and reset New Line mode in SET-UP mode.

Cursor Key Mode

Set: ESC[?1h
Reset: ESC[?1*l*

The escape sequence for setting the Cursor Key mode is valid only when the terminal is in Alternate Keypad mode. The Alternate Keypad mode is described at the end of this section.

MODES, continued

Cursor Key Mode, continued

The following table lists the codes which are transmitted by the cursor positioning keys when the Cursor Key mode is reset or set.

Key	Cursor Key Mode Reset	Cursor Key Mode Set
↑	ESC[A	ESC O A
↓	ESC[B	ESC O B
→	ESC[C	ESC O C
←	ESC[D	ESC O D

Origin Mode

Set: ESC[?6h
Reset: ESC[?6l

When Origin mode is set, row and column numbers are dependent on the selected scrolling region. When the escape sequence ESC[?6h is received, the cursor is positioned at row 1, column 1 of the current scrolling region.

When Origin mode is reset, row and column numbers are independent of the selected scrolling region. When the escape sequence ESC[?6l is received, the cursor is positioned at absolute position 1,1.

The Origin mode only affects the Absolute Cursor Positioning command.

Autowrap Mode

Set: ESC[?8h
Reset: ESC[?8l

When Autowrap mode is set, the cursor automatically advances to the first position of the next line when you enter characters that go beyond the last position of the current line.

When Autowrap is reset, the cursor does not wrap around automatically. Any characters you enter that fall beyond the last position on the line overstrike the last character on the line.

MODES, continued

Changing More Than One Mode At a Time

You can set or reset more than one mode at a time. For example, you can set both the Origin and Autowrap mode with the sequence ESC[?6;7h.

Reset Terminal Command

The escape sequence ESC c resets the terminal. Currently, this sequence has no effect.

Enter and Exit Alternate Keypad Mode

Command	Escape Sequence
Enter Alternate Keypad Mode	ESC =
Exit Alternate Keypad Mode	ESC >

When in Alternate Keypad mode, the keys on the numeric keypad transmit special escape sequences as opposed to their regular codes. The table below lists the codes which are generated in Alternate Keypad mode.

Key Depressed	Code Transmitted
0	ESC 0 p
1	ESC 0 q
2	ESC 0 r
3	ESC 0 s
4	ESC 0 t
5	ESC 0 u
6	ESC 0 v
7	ESC 0 w
8	ESC 0 x
9	ESC 0 y
-	ESC 0 m
/	ESC 0 l
.	ESC 0 n
ENTER	ESC 0 M