Primary Topics for DEC Terminal Emulations:

Video:
    Video Definitions

Operating Mode:
    VT100
    VT220
    VT320

Printer:
    Printer Definitions

Status Line:
    VT100
    VT220
    VT320

Keypad Mode:
    VT100
    VT220/VT320

Other:
    Cursor Keys Mode
    Answerback Message
    User Preference Settings
    ASCII Character Codes

Help for Video Definitions

These options let you set default values which affect the appearance and behavior of the display.

For more information, select:

Cursor Type
Number of Columns
Screen Display
Auto Wrap
Page Mode
CR after LF
LF after CR
Enable Margin Warning Bell

Cursor Type

The cursor displayed during online terminal emulation may be Underline, Partial Block, Half Block Top, Half Block Bottom, Centerline, or Full Block.

Number of Columns

If **80** is selected, the emulation will be initialized in 80-column mode.   If **132** is selected, the emulation will be initialized in 132-column mode.

Screen Display

If **Normal** is selected, the foreground and background screen colors are displayed normally. If **Reverse** is selected, the foreground and background colors are reversed.

Auto Wrap

Note: This parameter also is referred to as Automatic New Line.

When enabled, this option specifies that the cursor should automatically move to the first character position in the next line when data is entered in the last position on the current line.   If the current line is the last line on the screen and scrolling is enabled, the screen will scroll.

If this option is disabled, the cursor will stick at the last position of the current line.   Additional data entered or received will overwrite the display position until a cursor movement command, such as a carriage return, is processed.

Page Mode

This option sets the scrolling mode of the terminal.   When Page Mode is enabled, scrolling is disabled and functions which normally cause scrolling will cause a wraparound to the top row.

When Page Mode is disabled, scrolling is enabled and the cursor will continue to scroll down one line at a time, each time the cursor is sent past the column limit on the last line of the displayed screen area.

Note: Page Mode is dependent on the Auto Wrap option being enabled.

CR after LF

If this option is enabled, Softerm automatically performs a carriage return function (cursor to first display position) in addition to a linefeed function (cursor down one line) whenever a linefeed character (0A hex) is received.   If this option is disabled, no additional processing is performed for linefeed characters.

LF after CR

If this option is enabled, Softerm automatically performs a linefeed function (cursor down one line) in addition to a carriage return function (cursor to first display position) whenever a carriage return character (0D hex) is received.   If this option is disabled, no additional processing is performed for carriage return characters.

Enable Margin Warning Bell

If checked, the audible alarm is sounded when a character is entered at column 74. If not checked, no alarm is issued.

Help for Video Definitions

These options let you set default values which affect the appearance and behavior of the display.

For more information, select:

Cursor Type
Number of Columns
Screen Display
Cursor Displayed
Auto Wrap
Page Mode
CR after LF
LF after CR
Enable Margin Bell
Enable Warning Bell

Cursor Type

The cursor displayed during online terminal emulation may be Underline, Partial Block, Half Block Top, Half Block Bottom, Centerline, or Full Block.

Number of Columns

If **80** is selected, the emulation will be initialized in 80-column mode.   If **132** is selected, the emulation will be initialized in 132-column mode.

Screen Display

If **Normal** is selected, the foreground and background screen colors are displayed normally. If **Reverse** is selected, the foreground and background colors are reversed.

Cursor Displayed

If this option is enabled, the cursor is to be visible.   If the box is not checked, the cursor will default to being not visible.

Auto Wrap

Note: This parameter also is referred to as Automatic New Line.

When enabled, this option specifies that the cursor should automatically move to the first character position in the next line when data is entered in the last position on the current line.   If the current line is the last line on the screen and scrolling is enabled, the screen will scroll.

If this option is disabled, the cursor will stick at the last position of the current line.   Additional data entered or received will overwrite the display position until a cursor movement command, such as a carriage return, is processed.

Page Mode

This option sets the scrolling mode of the terminal.   When Page Mode is enabled, scrolling is disabled and functions which normally cause scrolling will cause a wraparound to the top row.

When Page Mode is disabled, scrolling is enabled and the cursor will continue to scroll down one line at a time, each time the cursor is sent past the column limit on the last line of the displayed screen area.

Note: Page Mode is dependent on the Auto Wrap option being enabled.

CR after LF

If this option is enabled, Softerm automatically performs a carriage return function (cursor to first display position) in addition to a linefeed function (cursor down one line) whenever a linefeed character (0A hex) is received.   If this option is disabled, no additional processing is performed for linefeed characters.

LF after CR

If this option is enabled, Softerm automatically performs a linefeed function (cursor down one line) in addition to a carriage return function (cursor to first display position) whenever a carriage return character (0D hex) is received.   If this option is disabled, no additional processing is performed for carriage return characters.

Enable Margin Bell

If checked, an audible alarm is sounded when a character is entered at column 74.   If not checked, no alarm is issued.

Enable Warning Bell

This option selects whether or not the terminal generates a bell tone for operating errors, and receipt of the BEL (Ctrl G) character.   If this option is checked, the bell tone is enabled.   If this option is not checked, the bell tone is disabled.

Help for Operating Mode

Set the operating mode to one of the following to determine how the terminal responds to ANSI control sequences:

> ANSI/VT52
> VT100
> VT102

The VT102 operating mode is the default setting.

For additional information, select:

Operating Mode

Operating Mode

If the ANSI/VT52 operating mode is selected, the VT100 emulation will be initialized in the VT52 mode. However, any ANSI mode control sequence which would cause the terminal to return to its initial state, will cause the terminal to return to the VT52 mode.

If the VT102 or VT100 operating mode is selected, the emulation will be initialized in the ANSI mode and respond accordingly.

Help for Operating Mode

Set the operating mode to one of the following to determine how the terminal responds to ANSI control sequences:

ANSI/VT52
VT100
VT102
VT200, 7-bit Controls
VT200, 8-Bit Controls

VT200, 7-bit Controls is the default setting.

In general, use VT200, 8-Bit Controls if you need to use the COMPOSE key.

For additional information, select:

Operating Mode

Operating Mode

If the ANSI/VT52 operating mode is selected, the VT220 emulation will be initialized in the VT52 mode. However, any ANSI mode control sequence which would cause the terminal to return to its initial state, will cause the terminal to return to the VT52 mode.

If the VT102 or VT100 operating mode is selected, the emulation will be initialized in the ANSI mode and respond accordingly.

VT200, 7-bit Controls is the default setting.   The emulation uses only the multi-byte control codes (Escape sequences) which are 7-bit characters.

The VT200, 8-Bit Controls operating mode setting uses both the multi-byte control codes (Escape sequences) **and** the single-byte codes (C0 and C1 control characters).   Use this setting if you need to use the COMPOSE key.

Help for Operating Mode

Set the operating mode to one of the following to determine how the terminal responds to ANSI control sequences:

ANSI/VT52
VT100
VT102
VT300, 7-bit Controls
VT300, 8-Bit Controls

VT300, 7-bit Controls is the default setting.   In general, use VT300, 8-Bit Controls if you need to use the COMPOSE key.

For additional information, select:

Operating Mode

Operating Mode

If the ANSI/VT52 operating mode is selected, the VT320 emulation will be initialized in the VT52 mode. However, any ANSI mode control sequence which would cause the terminal to return to its initial state, will cause the terminal to return to the VT52 mode.

If the VT102 or VT100 operating mode is selected, the DEC VT320 emulation will be initialized in the ANSI mode and respond accordingly.

The VT300, 7-bit Controls operating mode is the default setting.   The emulation uses only the multi-byte control codes (Escape sequences) which are 7-bit characters.

If the VT300, 8-Bit Controls operating mode is selected, the emulation uses both the multi-byte control codes (Escape sequences) **and** the single-byte codes (C0 and C1 control characters).   Use this setting if you need to use the COMPOSE key.

Help for Printer Definitions

The Printer definitions provide the default settings for terminal functions whose destination is a print device.

For additional information, select:

Print Extent
Print Terminator
New Line On Close Capture
Append Disk Printer File On Close
Send Initialize / Deactivate String Once

Print Extent

The Print Extent option determines what portion of the screen is printed when the Shift PrtSc keyboard function is executed or a print screen command is received.   If this option is specified as Full Screen, the full screen will be printed.   If this option is specified as Scrolling Region, only the area defined in the current scrolling region will be printed.

Print Terminator

The Print Terminator option specifies if a form feed character is generated after the screen is printed using the keyboard function or when a print screen command is received.   If this option is specified as Form Feed, a form feed character (0C hex) is appended to the data sent to the printer by the print screen function.   If this option is specified as None, no form feed is included.

New Line On Close Capture

Function: Enable or disable the automatic newline sequence (carriage return + line feed) when sending data to a printer.   Most users will prefer to leave this box unchecked.

This option works with all data Capture to Printer operations. Softerm normally appends a newline sequence to the end of a data capture.   However, when transmitting data, some hosts will initiate a capture, send a line of data, terminate capture, and repeat the process until all data has been transmitted. Appending the newline sequence each time would destroy the data's format.   Leave this option unchecked to stop the automatic newline sequence from being appended and to maintain the data's format.

Append Disk Printer File On Close

Function: This option is provided primarily to handle hosts which initiate printing of small amounts of data on a frequent basis.   Most users will prefer to leave this option checked.

Important: The action of this function depends on the selected Print Path and whether or not a print device is busy.

Case 1:   The Print Path uses a valid printer.

If the printer is available, all print activities (such as a capture to print or a host-initiated print function) will be sent to the printer.

If Append Disk Printer File on Close is disabled and the printer is not available (either off line, busy, etc.), all print activities (such as a capture to print or a host-initiated print function) will be sent to a temporary disk file.   Each time the print activity is turned off, the temporary file will be closed.

If Append Disk Printer File on Close is enabled and the printer is not available (either off line, busy, etc.), all print activities (such as a capture to print or a host-initiated print job) will be sent to a temporary disk file.   Each time the print activity is turned off, the temporary file will, in effect, remain open.   When printing is turned on again, the data will be appended to the existing file.

The temporary file will be closed when one of the following happens:

   1.   You turn capture off from the File menu;
   2.   You clear the Append Disk Printer File on Close option;
   3.   You exit the Session Window; or
   4.   You exit Softerm.

Case 2:   The Print Path uses a Disk printer with the "Automatically Create Unique Disk Print File" option checked.   **Important:**   If a Disk printer is given a user-specified file name, append is assumed and this setting does not affect the file.

If Append Disk Printer File on Close is disabled, every time the print activity is stopped, the disk file will be closed.   Each new print activity will overwrite the disk file.

If Append Disk Printer File on Close is enabled, every time the print activity is stopped, the disk file will, in effect, remain open.   Subsequent print activity initiation will append the new data to the original file.

The disk file will be closed when one of the following happens:

   1.   You turn capture off from the File menu;
   2.   You clear the Append Disk Printer File on Close option and close the capture;
   3.   You exit the Session Window;   or
   4.   You exit Softerm.

Send Initialize / Deactivate String Once

Important: This setting works only with append printer operations which are redirected to a disk file. This includes a Print Path which uses a Disk printer.

When this option is enabled, the printer initialization and deactivation strings will be sent to the printer file only once.

If this option is not enabled, the printer initialization and deactivation strings will be sent to the printer file each time it is opened and closed.

Help for VT100 Status Line Definition

Determine the default setting for whether or not an information status line will be displayed when in the Session Window (online terminal emulation).

If a status line is to be displayed, determine the default setting for the date and time format to be used; and determine whether the DEC VT100 Status Line or the standard Softerm Status Line will be displayed.

For additional information, select:

Status Line Preference
Status Line Time Format
Status Line Display

Status Line Preference

If the VT100 Status Line is selected, the status information displayed will include Row and Column, Operating Mode, 80 or 132 Column Mode, Replace or Insert mode, Printer Status, Hold indicator, Keyboard Lock indicator, and LED indicators L1, L2, L3, and L4.

The standard Softerm Status Line displays some or all of the following:

> Online or Local mode
> Connect status
> Duplex setting
> Capture status
> Caps Lock key state
> Numeric Lock key state
> Date and Time or Connect Time

Status Line Time Format

Date/Time
Choose this setting for the status line to display the current date and time.

Connect Time
Choose this setting for the status line to display the length of time the connection has been established.

Status Line Display

On
The status line will be displayed when you are in the Session Window (online terminal emulation mode).

Off
The status line will not be displayed when you are in the Session Window (online terminal emulation mode).

Help for VT220 Status Line Definition

Determine the default setting for whether or not an information status line will be displayed when in the Session Window (online terminal emulation).

If a status line is to be displayed, determine the default setting for the date and time format to be used; and determine whether the DEC VT220 Status Line or the standard Softerm Status Line will be displayed.

For additional information, select:

Status Line Preference
Status Line Time Format
Status Line Display

Status Line Preference

If the VT220 Status Line is selected, the status information displayed will include Row and Column, Operating Mode, 80 or 132 Column Mode, Replace or Insert mode, Printer Status, Hold indicator, Keyboard Lock indicator, Compose indicator when in VT220 mode, and LED indicators L1, L2, L3, and L4 when in VT100 mode.

The standard Softerm Status Line displays some or all of the following:

> Online or Local mode
> Connect status
> Duplex setting
> Capture status
> Caps Lock key state
> Numeric Lock key state
> Date and Time or Connect Time

Status Line Time Format

Date/Time
Choose this setting for the status line to display the current date and time.

Connect Time
Choose this setting for the status line to display the length of time the connection has been established.

Status Line Display

On
The status line will be displayed when you are in the Session Window (online terminal emulation mode).

Off
The status line will not be displayed when you are in the Session Window (online terminal emulation mode).

Help for VT320 Status Line Definition

Determine the default setting for whether or not an information status line will be displayed when in the Session Window (online terminal emulation).

If a status line is to be displayed, determine the default setting for the date and time format to be used; and determine whether the DEC VT320 Status Line or the standard Softerm Status Line will be displayed.

For additional information, select:

Status Line Preference
Status Line Time Format
Status Line Display

Status Line Preference

If the VT320 Status Line is selected, the status information displayed will include Row and Column, Operating Mode, 80 or 132 Column Mode, Replace or Insert mode, Printer Status, Hold indicator, Keyboard Lock indicator, Compose indicator when in VT320 mode, and LED indicators L1, L2, L3, and L4 when in VT100 mode.

The standard Softerm Status Line displays some or all of the following:

Online or Local mode
Connect status
Duplex setting
Capture status
Caps Lock key state
Numeric Lock key state
Date and Time or Connect Time

Status Line Time Format

Date/Time
Choose this setting for the status line to display the current date and time.

Connect Time
Choose this setting for the status line to display the length of time the connection has been established.

Status Line Display

On
The status line will be displayed when you are in the Session Window (online terminal emulation mode).

Off
The status line will not be displayed when you are in the Session Window (online terminal emulation mode).

Help for VT100 Keypad Mode

The option Keypad Mode allows the default operating mode of the numeric keypad to be selected.

For additional information, select:

Keypad Mode

Keypad Mode

If set to Numeric and the Numeric Lock key is On, the keypad will generate numbers.   If the Numeric Lock key is Off, the keypad will generate Local Edit Functions.

If set to Application and the Numeric Lock key is On, the special keypad applications mode is enabled and generates special code sequences.   If the Numeric Lock key is Off, the keypad will generate Local Edit Functions unless used with the Alt key, in which case an Application Mode sequence will be generated.

Note: The host may override the setting of this option.

Help for VT220/VT320 Keypad Modes

The Keypad Modes options allow the default operating mode of the numeric keypad and the cursor keys to be selected.

For additional information, select:

Keypad Mode
Cursor Keys Mode

Keypad Mode

If set to Numeric and the Numeric Lock key is On, the keypad will generate numbers.   If the Numeric Lock key is Off, the keypad will generate Local Edit Functions.

If set to Application and the Numeric Lock key is On, the special keypad applications mode is enabled and generates special code sequences.   If the Numeric Lock key is Off, the keypad will generate Local Edit Functions.

Note 1:   When used with the Alt key, keypad keys always generate an Application Mode sequence.

Note 2:   The host may override the setting of this option.

Cursor Keys Mode

This option determines what codes are transmitted by the cursor keys. If set to **ANSI**, standard ANSI cursor control sequences are transmitted. If set to **Application**, special alternate sequences are transmitted.

Help for Break Enabled Mode

This option determines if the BREAK function is enabled.   If this option is set to No, the BREAK function is disabled.

Break Enabled

If this option is set to No, the BREAK function is disabled.

Help for Answerback Message

If an Answerback string is defined, it can be transmitted automatically when requested, and it can be transmitted manually by a keyboard function.

For additional information, select:

Auto-answerback On Connect
Answerback Message

Auto-answerback On Connect

If set to **Yes**, the answerback string will be transmitted automatically whenever a new connection is made.

If set to **No**,it is not transmitted.

Answerback Message

Displayable and non-displayable ASCII character codes may be included in an answerback string.

To enter non-displayable ASCII character codes, such as [CR] for   Carriage Return, use the acronym listed in the ASCII column in <u>ASCII Character Codes</u>

The answerback string can contain up to 30 actual characters.

Help for User Preference Settings

User Preference Settings let you set whether or not the host system can change User Key and User Features settings.

For additional information, select:

User Keys
User Features

User Keys

If this option is set to **Unlocked**, the user key definitions can be altered from the host.

If this option is set to **Locked**, user key definitions cannot be altered.

User Features

These include light/dark screen, tab stops, and keyboard lock.

If this option is set to **Unlocked**, the host can change the user preference features.

If this option is set to **Locked**, the host cannot alter user preference features.

Help for Keyboard Dialect

The emulation option Keyboard Dialect is used to respond to a request from the host.   In general, you should set this option to match the layout of your keyboard.   The options available are: North American, British, Flemish, Canadian (French), Danish, Finnish, German, Dutch, Italian, Swiss (French), Swiss (German), Swedish, Norwegian, French/Belgian, Spanish and Portuguese.

Keyboard Dialect

From the drop-down list box, select one of the available dialects and choose OK.

Note: Appropriate dialects are keyboard dependent.

Help for Tab Stop Settings

Default tab stops are set every 8 columns.   To change tab stop settings, use the cursor keys to select the approprite tab position and press Space to toggle the setting, or click on the appropriate tab position to toggle the setting.

ASCII Character Codes

These characters, codes and functions can be inserted in many of Softerm's string entry fields.   The first 32 codes (0 through 31 decimal), also called the non-displayable characters, often are used as control codes. They can be entered in a text field by typing the code's acronym (listed in the ASCII column) between square brackets.

For example, a Carriage Return can be included in a string by typing the acronym and placing it between square brackets, such as:

        [CR]

Hex	Dec	ASCII	Name	Keyboard
00	0	[NUL]	null	Ctrl
01	1	[SOH]	start heading	Ctrl A
02	2	[STX]	start text	Ctrl B
03	3	[ETX]	end text	Ctrl C
04	4	[EOT]	end transmission	Ctrl D
05	5	[ENQ]	enquire	Ctrl E
06	6	[ACK]	acknowledge	Ctrl F
07	7	[BEL]	bell	Ctrl G
08	8	[BS]	backspace	Ctrl H
09	9	[HT]	horizontal tab	Ctrl I
0A	10	[LF]	line feed	Ctrl J
0B	11	[VT]	vertical tab	Ctrl K
0C	12	[FF]	form feed	Ctrl L
0D	13	[CR]	carriage return	Ctrl M
0E	14	[SO]	shift out	Ctrl N
0F	15	[SI]	shift in	Ctrl O
10	16	[DLE]	data link escape	Ctrl P
11	17	[DC1]	device control 1	Ctrl Q
12	18	[DC2]	device control 2	Ctrl R
13	19	[DC3]	device control 3	Ctrl S
14	20	[DC4]	device control 4	Ctrl T
15	21	[NAK]	negative ack	Ctrl U
16	22	[SYN]	synchronous idle	Ctrl V
17	23	[ETB]	end trans block	Ctrl W
18	24	[CAN]	cancel	Ctrl X
19	25	[EM]	end medium	Ctrl Y
1A	26	[SUB]	substitute	Ctrl Z
1B	27	[ESC]	escape	Esc
1C	28	[FS]	file separator	Ctrl \
1D	29	[GS]	group separator	Ctrl]
1E	30	[RS]	record separator	Ctrl ^
1F	31	[US]	unit separator	Ctrl _
20	32		space	Space Bar
21	33	!	exclamation	!
22	34	"	quotation	"
23	35	#	number sign	#
24	36	$	dollar sign	$
25	37	%	percent sign	%
26	38	&	ampersand	&
27	39	'	apostrophe	'
28	40	(	open parenthesis	(
29	41	)	close parenthesis	)

2A	42	*	asterisk	*
2B	43	+	plus sign	+
2C	44	,	comma	,
2D	45	-	minus	-
2E	46	.	period	.
2F	47	/	slash	/
30	48	0	zero	0
31	49	1	one	1
32	50	2	two	2
33	51	3	three	3
34	52	4	four	4
35	53	5	five	5
36	54	6	six	6
37	55	7	seven	7
38	56	8	eight	8
39	57	9	nine	9
3A	58	:	colon	:
3B	59	;	semicolon	;
3C	60	<	less than	<
3D	61	=	equal to	=
3E	62	>	greater than	>
3F	63	?	question mark	?
40	64	@	at sign	
41	65	A	A	A
42	66	B	B	B
43	67	C	C	C
44	68	D	D	D
45	69	E	E	E
46	70	F	F	F
47	71	G	G	G
48	72	H	H	H
49	73	I	I	I
4A	74	J	J	J
4B	75	K	K	K
4C	76	L	L	L
4D	77	M	M	M
4E	78	N	N	N
4F	79	O	O	O
50	80	P	P	P
51	81	Q	Q	Q
52	82	R	R	R
53	83	S	S	S
54	84	T	T	T
55	85	U	U	U
56	86	V	V	V
57	87	W	W	W
58	88	X	X	X
59	89	Y	Y	Y
5A	90	Z	Z	Z
5B	91	[	open bracket	[
5C	92	\	backslash	\
5D	93	]	close bracket	]
5E	94	^	circumflex	^
5F	95	_	underscore	_
60	96	`	grave accent	`
61	97	a	a	a
62	98	b	b	b

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63   99     c       c                   c
64   100    d       d                   d
65   101    e       e                   e
66   102    f       f                   f
67   103    g       g                   g
68   104    h       h                   h
69   105    i       i                   i
6A   106    j       j                   j
6B   107    k       k                   k
6C   108    l       l                   l
6D   109    m       m                   m
6E   110    n       n                   n
6F   111    o       o                   o
70   112    p       p                   p
71   113    q       q                   q
72   114    r       r                   r
73   115    s       s                   s
74   116    t       t                   t
75   117    u       u                   u
76   118    v       v                   v
77   119    w       w                   w
78   120    x       x                   x
79   121    y       y                   y
7A   122    z       z                   z
7B   123    {       open brace          {
7C   124    |       line                |
7D   125    }       close brace         }
7E   126    ~       tilde               ~
7F   127    [RUB]   rubout (delete)     Shift Backspace
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