

WY-75[®] Display Terminal

Quick-Reference Guide

WYSE
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PUBLICATION HISTORY

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WY-75[®] DISPLAY TERMINAL QUICK-REFERENCE GUIDE

SAFETY WARNING

The terminal power cable is supplied with a safety ground. Do not use the terminal with an ungrounded outlet. Disconnect the power cable from the terminal before removing the top cover for any reason.

Dangerous voltages are present when the terminal is on and may remain after the power is off. Be extremely cautious. Do not work alone.

The internal phosphor of the CRT (cathode ray tube) is toxic. Wear safety goggles and rubber gloves whenever the CRT is handled. If the tube breaks, exposing skin or eyes to the phosphor, immediately rinse the affected area with cold water and consult a physician.

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WARNING: This equipment generates, uses, and can radiate radio frequency energy and if not installed and used in accordance with the instruction manual, may cause interference to radio communications. It has been tested and found to comply with the limits for a Class A computing device pursuant to Subpart J of Part 15 of FCC Rules, which are designed to provide reasonable protection against such interference when operating in a commercial environment. Operation of this equipment in a residential area is likely to cause interference in which case the user at his own expense will be required to take whatever measures may be required to correct the interference.

Only devices certified to comply with the limits for a Class A computing device may be attached to this equipment. Operation with non-certified device(s) is likely to result in interference to radio and TV reception.

This equipment is intended for commercial use only and is not suited for operation in class B environments.

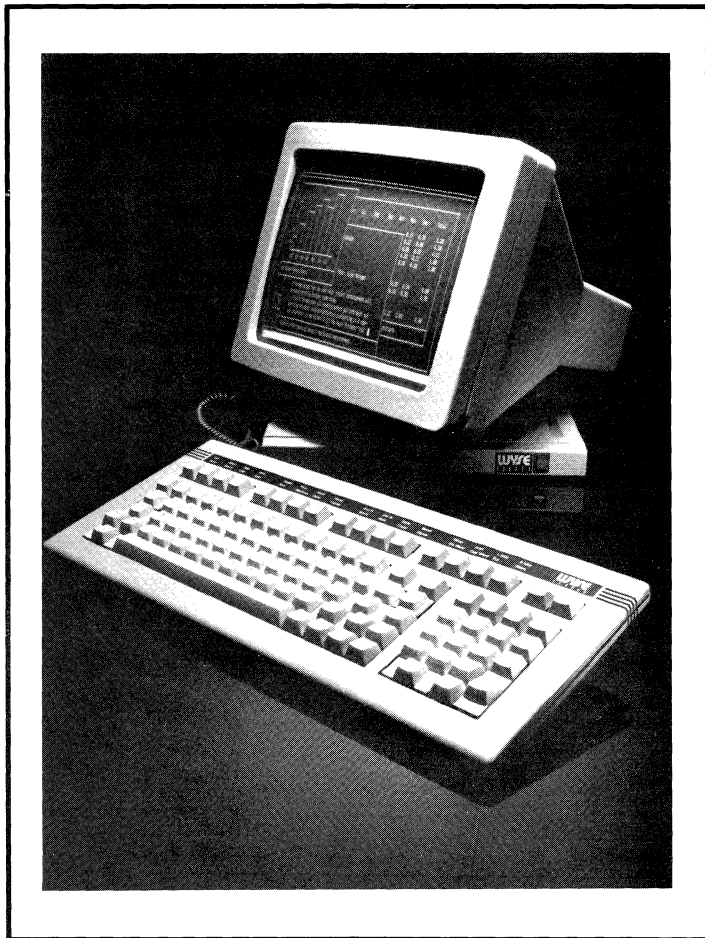
The use of shielded I/O cables is required when connecting this equipment to any and all optional peripheral or host devices. Failure to do so may violate FCC rules.

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INTRODUCTION

To use this guide effectively, you should already have a basic working knowledge of ANSI alphanumeric terminals such as the DEC VT-100.



WY-75 VIDEO DISPLAY TERMINAL

INSTALLATION

Please read the following procedures and precautions before turning on the terminal.

1. If you have not already unpacked the terminal, carefully remove it from the container. Save all packing materials in case the terminal must be shipped or stored.

Caution: Sharp instruments should **not** be used to open the container.

Immediately notify the transfer company, if there is any damage.

2. Place the terminal on any sturdy table or desk.
3. Set the ON/OFF power switch on the front of the video module base to OFF by pushing the bottom of the switch.
4. Connect the keyboard cable to its receptacle on the video module base.
5. First connect the power cord to its receptacle on the video module base. Then plug it into a nearby three-pronged, grounded electrical outlet.
6. Connect the host computer communications cable to the modem port (see "Connector Pin Assignments").

Note: All the connectors are keyed so that connections can only be made in the correct way.

The WY-75 has a female RS-232C connector that requires a male RS-232C connector on the host interface cable. This is opposite the VT-100 connectors.

7. Connect the printer communications cable, if required, to the auxiliary port.

POWER ON/OFF

After verifying that the terminal is properly installed, you are ready to proceed.

1. Turn on the terminal by pushing the top half of the ON/OFF switch.
2. Listen for an immediate beep. This indicates the power is on.
3. Watch for the cursor to display in the upper left-hand corner of the screen.

If the CRT were warm, you would first see the screen flash several display patterns as the power-on self test is run.

4. Adjust the screen brightness with the thumbwheel intensity control on the front lower right-hand corner of the video module. Turn it downward for high contrast and upward for dim.
5. Swivel the video module left or right and tilt it up or down, until you find your personal comfort level.

The recommended height for the center of the screen is 10 to 20 degrees below eye level. The keyboard should be at or below elbow height.

6. To shut off the terminal, just push the bottom half of the ON/OFF switch.

SETUP PARAMETERS

The first time the terminal is turned on, a default setup controls the way it operates for many variables called parameters. You can accept the default setup or choose one to match your application program.

Whenever the parameters are changed, you can save the new choices in non-volatile memory so they will be in effect the next time the terminal is turned on; or you can easily return to the default setup, if necessary.

Caution: Upon entering the setup, although screen data is preserved, all data received from the host computer and any unprocessed data in the datacomm buffer is lost.

1. Press **SET UP** to display the configuration fields.
2. Press **SPACE** (BAR) to display the next selection for a parameter field.
3. Press **▶** (CURSOR RIGHT) to select the next field on the right.
4. Press **◀** (CURSOR LEFT) to select the next field on the left.
5. Press **▼** (CURSOR DOWN) to display the next level of fields.
6. Press **▲** (CURSOR UP) to display the previous level of fields.
7. Press **BREAK** to display the default selections for all the parameters of the currently displayed field level.
8. Press **ENTER** to display the selections that were last saved for all the parameters of the currently displayed field level.
9. Press **SET UP**.

SAVE CHANGES FOR POWER-ON ? displays.

10. Press **Y** or **N** to save changes in the setup, or go to instruction 11 or 12.
 - A. If you press **Y**, all changes, including function key definitions for **F6** unshifted through **F15** unshifted, are saved for the next power-on.

The screen blanks for two to five seconds.

- B. If you press **N**, no changes are saved in memory, but the terminal operates with the current parameter selections.

The next time the terminal is powered on the setup is the same as it was before these changes were made.

11. Press **SET UP** to return to level 1 of the setup parameters.
12. Press **BREAK** to set all the parameters to the default setup.

FIELD LEVEL 1

Newline:OFF Wrap:ON Repeat:ON Attribute:DIM Margin bell:OFF Mode: ANSI

Parameter	Selections	Explanation
Newline	OFF (default) ON	RETURN sends C _R L _F when ON, C _R when OFF.
Wrap	ON (default) OFF	Character wrap at end of line.
Repeat	ON (default) OFF	Key repeat.
Attribute	DIM (default) INVERSE UNDERLINE	Enhanced character attribute.
Margin bell	OFF (default) ON	Warning bell before the right margin.
Mode	ANSI (default) ATS	Compatible terminal mode: ANSI is VT-100 type; ATS is VT-52 type.

FIELD LEVEL 2

Parity:OFF Local echo:OFF Modem port speed:9600

Parameter	Selections	Explanation
Parity	OFF (default) ODD EVEN	Parity type.
Local echo	OFF (default) ON	Display of keyboard data; OFF for full duplex; ON for half duplex.

Parameter	Selections	Explanation
Modem port speed	9600 (default) 19200 38400 50 75 110 134.5 150 300 600 1200 1800 2000 2400 4800	Modem port baud rate.

FIELD LEVEL 3

Handshake:XON/XOFF Data bits:8 Aux port speed:9600

Parameter	Selections	Explanation
Handshake	XON/XOFF (default) DTR OFF	Modem port handshake protocol.
Data bits	8 (default) 7	Code length.
Aux port speed	9600 (default) 19200 110 134.5 150 200 300 600 1200 1800 2000 2400 3600 4800 7200	Auxiliary port baud rate.

FIELD LEVEL 4

Screen:DARK | Columns:80 | CRT saver:OFF | Cursor:BLINKING BLOCK

Parameter	Selections	Explanation
Screen	DARK LIGHT (default)	Background display on screen.
Columns	80 132 (default)	Screen width in columns.
CRT saver	OFF ON (default)	Screen saver feature.
Cursor	BLINKING BLOCK (default) STEADY BLOCK BLINKING UNDERLINE STEADY UNDERLINE OFF	Cursor type and attribute.

FIELD LEVEL 5

Shifted 3:# | Test:OFF

Parameter	Selections	Explanation
Shifted 3	# £ (default)	23H key code character.
Test	OFF ON (default)	Diagnostic self test (requires loopback plugs; reinitializes nonvolatile memory). To exit, press and hold SETUP .

FIELD LEVELS 6 TO 21

F 6 / F 7 / F 8 / F 9 / F10 / F11 / F12 / F13 / F14 / F15 / F16 /
F 6S / F 7S / F 8S / F 9S / F10S

Key Label	Explanation
F 6	Enter up to 16 characters with each field to
F 7	define the corresponding function key.
	Type exactly the command sequence you wish
	to be sent by the function key. The cursor marks

Key Label	Explanation
F 8	the end of the character string. Do not press
F 9	RETURN at the end of the character string
F10	unless you want a carriage return as the last
F11	character in the sequence.
F12	Control characters display as their related graphic
F13	character (see "Graphics Characters").
F14	Only the definitions for unshifted function keys
F15	F6 to F15 are saved in nonvolatile memory if
F16	the setup is saved by pressing Y (see instruction
F 6S	10-A above).
F 7S	Temporary, not saved in nonvolatile memory.
F 8S	Shifted F6 . Temporary, not saved in nonvolatile
F 9S	memory.
F10S	Shifted F7 . Temporary, not saved in nonvolatile
	memory.
	Shifted F8 . Temporary, not saved in nonvolatile
	memory.
	Shifted F9 . Temporary, not saved in nonvolatile
	memory.
	Shifted F10 . Temporary, not saved in nonvolatile
	memory.

FIELD LEVEL 22

	T	T	T	T	T	T	T	T	T
column	9	17	25	33	41	49	57	65	73

Explanation

The t-bars mark the default tab stops. For reference, the cursor column displays in a message field in the top row.

To move the cursor, press ► (CURSOR RIGHT) or ◀ (CURSOR LEFT).

To clear all tab stops, press **DELETE**.

To clear an individual tab stop, press **SPACE** (BAR).

To set a tab, press **T**.

To restore the default tab stops, press **BREAK**.

NON-SETUP PARAMETERS

Although not accessible in the setup, the following parameters are also saved in nonvolatile memory according to their current status at the time the setup configuration is saved.

Parameter	Explanation
Key click	Press CTRL and SHIFT with ENTER to toggle the key click feature OFF and ON (default).
Scrolling rate	Press CTRL with ▲ (CURSOR UP) to scroll faster. Press CTRL with ▼ (CURSOR DOWN) to scroll slower. Jump scroll: 1 row at a time (default) Smooth scroll (@ 8 rows per second Smooth scroll (@ 4 rows per second Smooth scroll (@ 2 rows per second Smooth scroll (@ 1 row per second
Status line display	Press CTRL with ► (CURSOR RIGHT) to toggle the display of the local and host computer message fields in the top row OFF and ON (default).
Width-change clear	Enter the block mode by pressing BLOCK and type ESC [35 I(L) for ON (default). Then exit the block mode by pressing BLOCK again. Enter the block mode by pressing BLOCK and type ESC [35 h for OFF. Then exit the block mode by pressing BLOCK again. When ON, the screen clears whenever the screen column width is changed.

ESCAPE CODE SEQUENCES

The following table briefly describes the actions performed by the WY-75 terminal when it receives ANSI mode escape code sequences. Also listed is the ANSI, DEC, or WYSE private mnemonic for the command. WYSE mnemonics begin with WY. DEC mnemonics begin with DEC. All others are ANSI mnemonics.

Within the escape code sequence, parameter values are noted within angle brackets (e.g., <P0> is the first parameter; Pi signifies any legal parameter value).

Sequence	Default	Mnemonic	Action
ESC ␣ (space)		WYID	Reports the Wyse product number to the host computer (sends 75 C_R).
ESC ,		WYDELAY	Delays processing for approximately 250 milliseconds.
ESC 5		WYXCH	Transmits the character at the cursor address.
ESC 7		DECSC	Saves the cursor position, attribute, wrap flag, character sets, and origin mode status.
ESC 8		DECRC	Restores the previously saved cursor position, attribute, wrap flag, character sets, and origin mode status.
ESC =		DECKPAM	Turns on the keypad application mode.
ESC >		DECKPNM	Turns off the keypad application mode.
ESC D		IND	Moves the cursor down one row, scrolling the screen up at the last row.
ESC E		NEL	Moves the cursor to the far left column of the next row, scrolling the screen up at the last row.

Sequence	Default	Mnemonic	Action
ESC H		HTS	Sets a tab stop at the current cursor location.
ESC M		RI	Moves the cursor up one row, scrolling the screen down at the first row.
ESC Z		DECID	Identifies the terminal. (sends ESC [? 1 ; 0 c). Note: This is the same as the VT-100 without AVO (advanced video option).
ESC c		RIS	Reinitializes the terminal. When XON/XOFF handshaking is active, an XON (DC1) character is sent upon completion.
ESC ! p		DECSTR	Resets all the terminal modes. When XON/XOFF handshaking is active, an XON (DC1) character is sent upon completion.
ESC [<P0> A	<u>1</u>	CUU	Moves the cursor up P0 rows.
ESC [<P0> B	<u>1</u>	CUD	Moves the cursor down P0 rows.
ESC [<P0> C	<u>1</u>	CUF	Moves the cursor right P0 columns.
ESC [<P0> D	<u>1</u>	CUB	Moves the cursor left P0 columns.
ESC [<P0> E	<u>1</u>	CNL	Moves the cursor down P0 rows and to column 1.
ESC [<P0> F	<u>1</u>	CPL	Moves the cursor up P0 rows and to column 1.
ESC [<P0> G	<u>1</u>	CHA	Moves the cursor to column P0.
ESC [<P0>; <P1> H	<u>1</u>	CUP	Moves the cursor to row P0, column P1.

Sequence	Default	Mnemonic	Action
ESC [<P0>; <P1> f	<u>1</u>	HVP	Moves the cursor to row P0, column P1 (equivalent to CUP).
ESC [<P0> J	<u>0</u>	ED	<u>Erases data in the screen.</u> P0 = 0 Erase from cursor to end. 1 Erase from beginning to cursor. 2 Erase all.
ESC [<P0> K	<u>0</u>	EL	Erases data in the cursor row. P0 = 0 Erase from cursor to end. 1 Erase from beginning to cursor. 2 Erase all.
ESC [? <P0> J	<u>0</u>	DECSER	Erases only normally enhanced data in the screen. P0 = 0 Erase from cursor to end. 1 Erase from beginning to cursor. 2 Erase all.
ESC [? <P0> K	<u>0</u>	DECSEL	Erases only normally enhanced data in a row. P0 = 0 Erase from cursor to end. 1 Erase from beginning to cursor. 2 Erase all.
ESC [<P0> @	<u>1</u>	ICH	Inserts P0 blank characters beginning at the cursor column.
ESC [<P0> L	<u>1</u>	IL	Inserts P0 blank rows beginning at the cursor row.
ESC [<P0> M	<u>1</u>	DL	Deletes P0 rows beginning at the cursor row.

Sequence	Default	Mnemonic	Action
ESC [<P0> P	<u>1</u>	DCH	Deletes P0 characters beginning at the cursor column.
ESC [<P0> X	<u>1</u>	ECH	Erases P0 characters beginning at the cursor column.
ESC [0 c		DA	Transmits the active terminal attributes (sends ESC [? 1 ; 0 c).
ESC [<P0> g	<u>0</u>	TBC	Clears tab stops. P0 = 0 Clears the tab stop at the cursor column. 3 Clears all tab stops.
ESC [<P0> I	<u>0</u>	CHT	Tabs the cursor forward P0 tab stops.
ESC [<P0> Z	<u>0</u>	CBT	Tabs the cursor backward P0 tab stops.
ESC [<P0>;<P1>; ... <Pn> h		SM	Turns on the terminal modes (see below).
ESC [<P0>;<P1>; ... <Pn> l(L)		RM	Turns off the terminal modes.
			Terminal modes (Pi) are:
	(+)	GATM	Pi = 1 Transfer enhanced data mode
	(-)	KAM	2 Keyboard lock mode
	(-)	CRM	3 Monitor mode
	(-)	IRM	4 Insert character mode
	(+)	ERM	6 Clear enhanced data mode
	(*)	SRM	12 Local echo disable mode
	(-)	FEAM	13 Disable control execution mode
	(+)	TTM	16 Cursor transfer termination mode
	(*)	LNM	20 Newline mode
	(-)	DECCKM	?1 Cursor key mode

Sequence	Default	Mnemonic	Action
	(*)	DECANM	?2 ANSI mode Note: When OFF, ATS mode is enabled.
	(*)	DECCOLM	?3 132-column mode
	(*)	DECSCLM	?4 Smooth scroll mode
	(*)	DECSCNM	?5 Reverse screen mode
	(-)	DECOM	?6 Origin mode
	(*)	DECAWM	?7 Character wrap mode
	(*)	DECARM	?8 Auto repeat mode
	(-)	DECEDM	?10 Block mode
	(-)	DECPFF	?18 Print form feed mode
	(+)	DECPEX	?19 Print full screen mode
	(+)	DECTCEM	?25 Enable cursor mode
	(-)	WYDSCM	30 Display disable mode
	(+)	WYSTLINM	31 Status line display mode
	(*)	WYCRTSAVM	32 CRT saver mode
	(*)	WYSTCURM	33 Steady cursor mode
	(*)	WYULCURM	34 Underline cursor mode
	(-)	WYCLRM	35 Width change clear disable mode

(-): Off at power-on or after a reset.

(+): On at power-on or after a reset.

(*): Value read from nonvolatile memory at power-on or reset.

All parameters which follow a question mark (?) embedded in the parameter list are treated as if they were immediately preceded by a question mark (?).

For example, **ESC [1 ; ?3 ; 4 h** performs the same function as **ESC [1 ; ?3 ; ?4 h**.

A maximum of 16 modes can be changed with one sequence.

With control execution disabled, only **ESC c** and **ESC [13 I(L)** are acted on.

Sequence	Default	Mnemonic	Action
ESC [<P0> i	<u>0</u>	MC	<p>Controls media copy operations.</p> <p>P0 = 0 Copy the entire screen display to the auxiliary (printer) port.</p> <p>2 Copy the entire screen display to the modem (host) port.</p> <p>4 Disable the transparent passthru print mode.</p> <p>5 Enable the transparent passthru print mode. Only ESC c and ESC [4 i are acted on.</p> <p>?1 Copy the cursor row to the auxiliary (printer) port.</p> <p>?3 Copy the cursor row to the modem (host) port.</p> <p>?4 Disable the copy passthru print mode.</p> <p>?5 Enable the copy passthru print mode.</p>
ESC [<P0>; <P1>; ... <Pn> m	<u>0</u>	SGR	<p>Sets the video attributes (see WYNNAT for definition of the enhance attribute).</p> <p>Pi = 0 Normal Non-0 Enhance</p> <p>Characters in the graphics set always have the normal attribute, but the line-drawing characters are always treated as enhanced for purposes of clear and transfer protection.</p>

Sequence	Default	Mnemonic	Action
ESC [<P0> n	<u>0</u>	DSR	Requests a status report. P0 = 5 Reports the status of a device (sends ESC [0 n if the terminal is OK and ready). 6 Reports the cursor position (sends ESC [<P0>; <P1> R for cursor at row P0, column P1). ?15 Reports the printer status (sends ESC [? 10 n if the printer is ready and ESC [? 11 n if it is not ready).
ESC [<P0> p	<u>0</u>	WYFDAT	Begins a field attribute at the cursor location. P0 = 0 Normal 1 Dim 2 Blink 3 Blink dim 4 Blank 5 Blank dim 6 Blank 7 Blank dim 8 Underline 9 Underline dim 10 Underline blink 11 Underline blink dim 12 Underline blank 13 Underline blank dim 14 Underline blank blink 15 Underline blank blink dim 16 Inverse 17 Inverse dim 18 Inverse blink 19 Inverse blink dim

Sequence	Default	Mnemonic	Action
			20 Inverse blank
			21 Inverse blank dim
			22 Inverse blank
			23 Inverse blank dim
			24 Inverse underline
			25 Inverse underline dim
			26 Inverse underline blink
			27 Inverse underline blink dim
			28 Inverse underline blank
			29 Inverse underline blank dim
			30 Inverse underline blank blink
			31 Inverse underline blank blink dim
			A field attribute occupies a space and has effect to the end of the screen or the start of another field attribute. Field attributes should not be used in reverse screen mode.
ESC [<P0>;<P1>; ... <Pn> q	0	DECLL	Controls the simulated LEDs in the message field line. Pi = 0 L1 to L4 OFF 1 L1 ON 2 L2 ON 3 L3 ON 4 L4 ON
ESC [<P0>; <P1> r	0	DECSTBM	Defines a scrolling region. P0 = beginning row number P1 = ending row number If <P1> is 0 or absent, it defaults to 24.
ESC [s		WYSC	Saves the cursor position, attribute, wrap flag, character sets, and origin mode status (equivalent to DECSC).

Sequence	Default	Mnemonic	Action
ESC [<P0> t	<u>0</u>	WYNNAT	Defines the enhance attribute (see SGR, non-0). P0 = 0 Dim 1 Inverse 2 Underline
ESC [u		WYRC	Restores the previously saved cursor position, attribute, wrap flag, character sets, and origin mode status (equivalent to DECRC).
ESC # 3		DECDHL	Enables double-wide character emulation.
ESC # 4		DECDHL	Enables double-wide character emulation.
ESC # 5		DECSWL	Disables double-wide character emulation.
ESC # 6		DECDWL	Enables double-wide character emulation.
ESC # 8		DECALN	Displays the screen alignment pattern (all Es).
ESC (0		SCS	Changes the G0 character set to the standard graphics set.
ESC (A		SCS	Changes the G0 character set to the UK set.
ESC (B		SCS	Changes the G0 character set to the standard US ASCII set.
ESC) 0		SCS	Changes the G1 character set to the standard graphics set.
ESC) A		SCS	Changes the G1 character set to the UK set.
ESC) B		SCS	Changes the G1 character set to the standard US ASCII set.

Sequence	Default	Mnemonic	Action
ESC [> <TC> <delim> <T0> <T1> ... <Tn> <delim>		WYTL0AD	<p>Loads text (executable only from the host computer).</p> <p>Where TC is + to - (host message field text):</p> <ul style="list-style-type: none"> + Top row (up to 39 characters for 80-column screen; 67 characters for 132-column screen) . Unshifted bottom row (up to 78 characters for 80-column screen; 130 characters for 132-column screen) - Shifted bottom row (up to 78 characters for 80-column screen; 130 characters for 132-column screen) <p>Where TC is a to p (function key data strings for F6 to F21, up to 16 characters each):</p> <ul style="list-style-type: none"> a F6 b F7 c F8 d F9 e F10 f F11 g F12 h F13 i F14 j F15 (HELP) k F16 (DO) l Shift F6 (F17) m Shift F7 (F18) n Shift F8 (F19) o Shift F9 (F20) p Shift F10 (F21)

WYTLOAD MESSAGE FIELD ATTRIBUTE CHARACTER SEQUENCES

The following field attributes can be initiated in the host message field and the function key label fields by including the indicated character string in the WYTLOAD text field. S₀ is the 0EH (hex) control character, and S₁ is the 0FH (hex) character.

Including the S₀ character in the text string of a host message field definition string causes the next character in the string to have its high bit set. This enables the enhance attribute for normal characters and starts a field attribute for control characters. Sequences for generating field attributes are listed in the following table.

Including the S₁ character in the text string causes the next character in the string to be shifted to the control region. For the host message field, this has the effect of displaying a character from the special graphics set.

Field Attribute	Characters
Normal	S ₀ S ₁ @
Dim	S ₀ S ₁ A
Blink	S ₀ S ₁ B
Blink dim	S ₀ S ₁ C
Blank	S ₀ S ₁ D
Blank dim	S ₀ S ₁ E
Underline	S ₀ S ₁ H
Underline dim	S ₀ S ₁ I
Underline blink	S ₀ S ₁ J
Underline blink dim	S ₀ S ₁ K
Underline blank	S ₀ S ₁ L
Underline blank dim	S ₀ S ₁ M
Underline blank blink	S ₀ S ₁ N
Underline blank blink dim	S ₀ S ₁ O
Inverse	S ₀ S ₁ P
Inverse dim	S ₀ S ₁ Q
Inverse blink	S ₀ S ₁ R
Inverse blink dim	S ₀ S ₁ S
Inverse blank	S ₀ S ₁ T
Inverse blank dim	S ₀ S ₁ U
Inverse underline	S ₀ S ₁ X
Inverse underline dim	S ₀ S ₁ Y
Inverse underline blink	S ₀ S ₁ Z
Inverse underline blink dim	S ₀ S ₁ [
Inverse underline blank	S ₀ S ₁ \
Inverse underline blank dim	S ₀ S ₁]
Inverse underline blank blink	S ₀ S ₁ ^
Inverse underline blank blink dim	S ₀ S ₁ -

Examples:

```

ESC      = 1BH
␣ (space) = 20H
S0      = 0EH
S1      = 0FH

```

1. Load the unshifted function keys labeling line with eight function key labels, written as *F1* through *F8*, with the F2 field inverse and all other label fields inverse dim:

```

ESC [ > , /
S0 S1 Q ␣ ␣ ␣ F 1 ␣ ␣ ␣
S0 S1 P ␣ ␣ ␣ F 2 ␣ ␣ ␣
S0 S1 Q ␣ ␣ ␣ F 3 ␣ ␣ ␣
S0 S1 Q ␣ ␣ ␣ F 4 ␣ ␣ ␣
S0 S1 @ ␣ ␣ ␣ ␣
S0 S1 Q ␣ ␣ ␣ F 5 ␣ ␣ ␣
S0 S1 Q ␣ ␣ ␣ F 6 ␣ ␣ ␣
S0 S1 Q ␣ ␣ ␣ F 7 ␣ ␣ ␣
S0 S1 Q ␣ ␣ ␣ F 8 ␣ ␣ ␣
S0 S1 @ /

```

For clarity, the sequence has been broken into segments, but it should be read as one entire line.

The segment following the one for F4 provides extra spacing midway on the screen and thus centers the display of the label fields.

2. Clear the entire unshifted function keys labeling line:

```
ESC [ > , //
```

3. Load the unshifted **F6** definition as HELLO USER.SYS C_R:

```
ESC [ > a / H E L L O ␣ U S E R . S Y S S1 M /
```

Any ASCII character except NUL (00H), DEL (7FH), and DC1 (11H) and DC3 (13H) if XON/XOFF handshake is enabled, can be included in the data string. However, S₀ and S₁ are interpreted in the special way as indicated above. Any other ASCII character which is not used elsewhere in the string can be used as the delimiter. Therefore, the last example could have been performed using the sequence:

```
ESC [ > a ? H E L L O ␣ U S E R . S Y S CR ?
```

where

C_R is the carriage return character 0DH.

All text positions in a field which are beyond the last defined character position are cleared. If the shifted function keys labeling line is not defined, the unshifted function keys labeling line displays regardless of the **SHIFT** position.

All keyboard keys except **SET UP** are ignored while the WYTLOAD sequence is being received.

ATS (VT-52) ESCAPE SEQUENCES SUPPORTED

When the WY-75 is in ATS mode, the following escape sequences are recognized. Upon entering the ATS mode, the active character set is reset, but the active terminal modes are unaffected.

Sequence	Action
ESC A	Moves the cursor up one row.
ESC B	Moves the cursor down one row.
ESC C	Moves the cursor right one column.
ESC D	Moves the cursor left one column.
ESC F	Selects the graphics character set.
ESC G	Selects the standard US ASCII character set.
ESC H	Moves the cursor to the home position: row 1 column 1 of the screen display.
ESC I	Moves the cursor up one row and scrolls if at the top row (reverse line feed).
ESC J	Erases from the cursor location to the end of the screen.
ESC K	Erases from the cursor location to the end of the line.
ESC V	Copies the cursor row to the auxiliary (printer) port.
ESC W	Enables transparent passthru print mode (only ESC X is acted on).
ESC X	Disables transparent passthru print mode.
ESC Y <row> <col>	Moves the cursor directly to <row>, <col>, where <row> and <col> are the hexadecimal codes for the designated row and column + 1FH. For example: ESC Y ! & moves the cursor to row 2, column 7.
ESC Z	Requests the terminal identification report (response is ESC / Z).
ESC]	Copies the screen display to the auxiliary (printer) port.

Sequence	Action
ESC ^	Enables the copy passthru print mode.
ESC _	Disables the copy passthru print mode.
ESC =	Turns on the keypad application mode.
ESC >	Turns off the keypad application mode.
ESC <	Enters the ANSI parsing mode.

RECOGNIZED CONTROL CHARACTERS

The following control characters are recognized and executed in both the ANSI and ATS modes.

Code	Hex Value	Sequence	Action
ENQ	05H	CTRL E	Causes an ACK (06H) to be transmitted.
BEL	07H	CTRL G	Sounds the bell.
BS	08H	CTRL H	Moves the cursor left one column.
HT	09H	CTRL I	Moves the cursor to the next tab stop or the right margin.
LF	0AH	CTRL J	Moves the cursor down one row. If the newline mode is enabled, a CR (0DH) is also performed.
VT	0BH	CTRL K	Treated as LF (0AH).
FF	0CH	CTRL L	Treated as LF (0AH).
CR	0DH	CTRL M	Moves the cursor to column 1 of the current row.
SO	0EH	CTRL N	Selects the G1 character set.
SI	0FH	CTRL O	Selects the G0 character set.
DC1 (XON)	11H	CTRL Q	Resumes transmission of data, if it has been suspended by DC3 (13H).
DC3 (XOFF)	13H	CTRL S	Suspends transmission of data if XON/XOFF handshaking is enabled.
CAN	18H	CTRL X	Aborts an escape sequence (except WYTLOAD); displays the error character.
SUB	1AH	CTRL Z	Treated as CAN (18H).
ESC	1BH	CTRL [Initiates an escape sequence.

MODE DISPLAY LABELS

The left side of the screen's top row displays the local message field in which terminal mode labels appear when they are enabled. When two or more modes are active at once that have labels in the same location, the mode listed first in the following table is the one displayed.

Press **CTRL** with **►** (CURSOR RIGHT) to toggle display of the status line ON/OFF.

Label Display in Local Message Field

```

LOCL
XPRT
CPRT
BLCK  KLOK
LINE  CAPS  SLOK  INS  *  L1  L2  L3  L4  <rr> - <cc>
ECHO
    
```

Label	Mode
-------	------

LOCL	Local mode
XPRT	Transparent passthru print mode
CPRT	Copy passthru print mode
BLCK	Block mode
LINE	Remote, full duplex mode
ECHO	Remote, half-duplex mode
KLOK	Keyboard lock mode
CAPS	Caps mode
SLOK	No scroll (screen lock) mode
INS	Insert mode
*	Monitor mode

Label	Indicator
-------	-----------

L1	LED 1 emulation ON
L2	LED 2 emulation ON
L3	LED 3 emulation ON
L4	LED 4 emulation ON
<rr>	Cursor row
<cc>	Cursor column

SPECIAL KEY FUNCTIONS

The functions performed by the special keys on the WY-75 during normal (non setup) operation are described below. The legend is found on the strip affixed to the keyboard above the function keys.

The terminal must be in local mode or block mode for the special keys to perform terminal functions locally.

Key	Legend	Action
F1	PRINT COPY	Copy print OFF: Sends the enable copy print sequence, ESC [? 5 i. Copy print ON: Sends the disable copy print sequence, ESC [? 4 i.
Shift F1	PRINT TRANS	Transparent print OFF: Sends the enable transparent print sequence, ESC [5 i. Transparent print ON: Sends the disable transparent print sequence, ESC [4 i.
F2	LINE SEND	Sends the send cursor line sequence, ESC [? 3 i.
Shift F2	LINE PRINT	Sends the print cursor line sequence, ESC [? 1 i.
F3	SCREEN SEND	Sends the send screen sequence, ESC [2 i.
Shift F3	SCREEN PRINT	Sends the print screen sequence, ESC [0 i.
F4	INSERT CHAR	Sends the insert blank character sequence, ESC [@.
Shift F4	INSERT LINE	Sends the insert blank line sequence, ESC [L.
F5	LINE DELETE	Sends the delete cursor line sequence, ESC [M.
Shift F5	LINE CLEAR	Sends the clear to end of line sequence, ESC [K.
F6	F6	Sends the F6 definition string, if defined, or the default sequence, ESC [17 ~.

Key	Legend	Action
Shift F6	F17	Sends the shifted F6 definition string, if defined, or the default sequence, ESC [31 ~ .
F7	F7	Sends the F7 definition string, if defined, or the default sequence, ESC [18 ~ .
Shift F7	F18	Sends the shifted F7 definition string, if defined, or the default sequence, ESC [32 ~ .
F8	F8	Sends the F8 definition string, if defined, or the default sequence, ESC [19 ~ .
Shift F8	F19	Sends the shifted F8 definition string, if defined, or the default sequence, ESC [33 ~ .
F9	F9	Sends the F9 definition string, if defined, or the default sequence, ESC [20 ~ .
Shift F9	F20	Sends the shifted F9 definition string, if defined, or the default sequence, ESC [34 ~ .
F10	F10	Sends the F10 definition string, if defined, or the default sequence, ESC [21 ~ .
Shift F10	F21	Sends the shifted F10 definition string, if defined, or the default sequence, ESC [35 ~ .
F11	F11	Sends the F11 definition string, if defined, or the default sequence, ESC [23 ~ .
Shift F11	FIND	Sends the find sequence, ESC [1 ~ .
F12	F12	Sends the F12 definition string, if defined, or the default sequence, ESC [24 ~ .
Shift F12	INSERT HERE	Non-block mode: Sends the insert here sequence, ESC [2 ~ . Block mode: Toggles the insert mode OFF and ON.

Key	Legend	Action
F13	F13	Sends the F13 definition string, if defined, or the default sequence, ESC [25 ~ .
Shift F13	REMOVE	Non-block mode: Sends the remove sequence, ESC [3 ~ . Block mode: Deletes the character at the cursor location.
F14	F14	Sends the F14 definition string, if defined, or the default sequence, ESC [26 ~ .
Shift F14	SELECT	Sends the select sequence, ESC [4 ~ .
F15	HELP	Sends the F15 definition string, if defined, or the help sequence, ESC [28 ~ .
Shift F15	PREV SCRN	Sends the previous screen sequence, ESC [5 ~ .
F16	DO	Sends the F16 definition string, if defined, or the do sequence, ESC [29 ~ .
Shift F16	NEXT SCRN	Non-block mode: Sends the next screen sequence, ESC [6 ~ . Block mode: Clears from the cursor to the end of the screen.
SET UP		Enters the terminal setup mode.
Shift SET UP		Resets modes and error conditions.
Shift SET UP with CTRL		Reinitializes the terminal. With XON/XOFF handshaking enabled, an XON (DC1) is sent upon completion of either a reset or a reinitialization; two XON characters are sent with a power-on.

Key	Legend	Action
BREAK		Transmits a 0.25 second break on the modem port.
Shift BREAK		Transmits a 3.5 second disconnect break on the modem port.
ESC		Transmits the escape (ESC) character, 1BH.
TAB		Transmits the tab (HT) character, 09H.
NO SCROLL		Toggles the no-scroll (screen lock) status ON and OFF when XON/XOFF or DTR handshaking is enabled and performs the appropriate handshake.
CAPS LOCK		Toggles the caps mode ON and OFF.
BACK SPACE		Transmits the backspace (BS) character, 08H.
BLOCK		Toggles the block mode ON/OFF. In block mode, all data entered from the keyboard is displayed and executed by the terminal without being sent to the host. Data received from the host is still executed or displayed. The send line and send screen data as well as the no scroll handshake characters and the terminal query responses continue to be sent to the host.
LOCAL		Toggles the local mode ON/OFF. In local mode, all data from the keyboard is displayed and executed; all data from the host computer is ignored.
DELETE		Transmits the delete/rubout (DEL) character, 7FH.
Shift DELETE		Transmits the cancel (CAN) character, 18H.

Key	Legend	Action
RETURN		Newline mode OFF: Transmits the carriage return (CR) character, 0DH. Newline mode ON: Transmits the newline (CR LF) character combination, 0DH and 0AH.
LINE FEED		Transmits the line feed (LF) character, 0AH.
▲ (CURSOR UP)		ANSI normal mode: Transmits ESC [A. ANSI cursor key mode: Transmits ESC O A. ATS parsing: Transmits ESC A.
▲ (CURSOR UP) with CTRL		Selects a faster scroll rate.
▼ (CURSOR DOWN)		ANSI normal mode: Transmits ESC [B. ANSI cursor key mode: Transmits ESC O B. ATS parsing: Transmits ESC B.
▼ (CURSOR DOWN) with CTRL		Selects a slower scroll rate.
▶ (CURSOR RIGHT)		ANSI normal mode: Transmits ESC [C. ANSI cursor key mode: Transmits ESC O C. ATS parsing: Transmits ESC C.
▶ (CURSOR RIGHT) with CTRL		Toggles the top row (status line) display ON and OFF.
◀ (CURSOR LEFT)		ANSI normal mode: Transmits ESC [D. ANSI cursor key mode: Transmits ESC O D. ATS parsing: Transmits ESC D.
◀ (CURSOR LEFT) with CTRL		Toggles the monitor mode ON and OFF.

Key	Legend	Action
HOME		ANSI normal mode: Transmits ESC [H. ANSI cursor key mode: Transmits ESC O H. ATS parsing: Transmits ESC H.
Shift HOME with CTRL		Moves the cursor to column 1 row 1; clears the screen.
PF1		ANSI mode: Transmits ESC O P. ATS mode: Transmits ESC P.
PF2		ANSI mode: Transmits ESC O Q. ATS mode: Transmits ESC Q.
PF3		ANSI mode: Transmits ESC O R. ATS mode: Transmits ESC R.
PF4		ANSI mode: Transmits ESC O S. ATS mode: Transmits ESC S.
, (KEYPAD)		Numeric mode: Transmits a comma (,). ANSI keypad application mode: Transmits ESC O 1. ATS keypad application mode: Transmits ESC ? 1.
- (KEYPAD)		Numeric mode: Transmits a dash (-). ANSI keypad application mode: Transmits ESC O m. ATS keypad application mode: Transmits ESC ? m.
. (KEYPAD)		Numeric mode: Transmits a period/decimal point (.). ANSI keypad application mode: Transmits ESC O n. ATS keypad application mode: Transmits ESC ? n.

Key	Legend	Action
0 (KEYPAD)		Numeric mode: Transmits 0 (zero). ANSI keypad application mode: Transmits ESC O p. ATS keypad application mode: Transmits ESC ? p.
1 (KEYPAD)		Numeric mode: Transmits 1. ANSI keypad application mode: Transmits ESC O q. ATS keypad application mode: Transmits ESC ? q.
2 (KEYPAD)		Numeric mode: Transmits 2. ANSI keypad application mode: Transmits ESC O r. ATS keypad application mode: Transmits ESC ? r.
3 (KEYPAD)		Numeric mode: Transmits 3. ANSI keypad application mode: Transmits ESC O s. ATS keypad application mode: Transmits ESC ? s.
4 (KEYPAD)		Numeric mode: Transmits 4. ANSI keypad application mode: Transmits ESC O t. ATS keypad application mode: Transmits ESC ? t.
5 (KEYPAD)		Numeric mode: Transmits 5. ANSI keypad application mode: Transmits ESC O u. ATS keypad application mode: Transmits ESC ? u.
6 (KEYPAD)		Numeric mode: Transmits 6. ANSI keypad application mode: Transmits ESC O v. ATS keypad application mode: Transmits ESC ? v.

Key	Legend	Action
7 (KEYPAD)		Numeric mode: Transmits 7 . ANSI keypad application mode: Transmits ESC O w . ATS keypad application mode: Transmits ESC ? w .
8 (KEYPAD)		Numeric mode: Transmits 8 . ANSI keypad application mode: Transmits ESC O x . ATS keypad application mode: Transmits ESC ? x .
9 (KEYPAD)		Numeric mode: Transmits 9 . ANSI keypad application mode: Transmits ESC O y . ATS keypad application mode: Transmits ESC ? y .
ENTER		Numeric mode: Treated as RETURN . ANSI keypad application mode: Transmits ESC O M . ATS keypad application mode: Transmits ESC ? M .
Shift ENTER with CTRL		Toggles the key click mode ON/OFF .

GRAPHICS CHARACTERS

The following graphics characters are displayed when hexadecimal codes 5FH (␣) through 7EH (␣) are received and the special graphics character set is selected. In the monitor mode and during the definition of function keys, the graphics characters are also used to denote control characters (00H through 1FH). The checkerboard character is also used to indicate parity errors, buffer overflow errors, and the CAN and SUB characters.

Graphic Symbol	Graphic Name	Graphic Code	Control Key	Control Code	Keyboard Control Character	Control Name
	Blank	5FH	—	00H	@	NULL
◆	Diamond	60H	~	01H	A	SOH
▩	Checkerboard	61H	a	02H	B	STX
H _L	Horizontal tab	62H	b	03H	C	ETX
F _L	Form feed	63H	c	04H	D	EOT
C _R	Carriage return	64H	d	05H	E	ENQ
L _F	Line feed	65H	e	06H	F	ACK
°	Degree symbol	66H	f	07H	G	BEL
+/-	Plus/minus	67H	g	08H	H	BS
N _L	New line	68H	h	09H	I	HT
V _L	Vertical tab	69H	i	0AH	J	LF
└	Lower rh corner	6AH	j	0BH	K	VT
┐	Upper rh corner	6BH	k	0CH	L	FF
┌	Upper lh corner	6CH	l	0DH	M	CR
└	Lower lh corner	6DH	m	0EH	N	SO
+	Intersection	6EH	n	0FH	O	SI
—	Scan line 1	6FH	o	10H	P	DLE
—	Scan line 3	70H	p	11H	Q	DC1
—	Scan line 5	71H	q	12H	R	DC2
—	Scan line 7	72H	r	13H	S	DC3
—	Scan line 9	73H	s	14H	T	DC4
├	Left t-bar	74H	t	15H	U	NAK
┤	Right t-bar	75H	u	16H	V	SYN
┴	Bottom t-bar	76H	v	17H	W	ETB
┷	Top t-bar	77H	w	18H	X	CAN
	Vertical bar	78H	x	19H	Y	EM
≤	Less/equal	79H	y	1AH	Z	SUB
≥	Greater/equal	7AH	z	1BH	[ESC
π	Pi	7BH	{	1CH	\	FS
≠	Not equal	7CH	}	1DH]	GS
£	UK pound sign	7DH	~	1EH	^	RS
•	Centered dot	7EH	~	1FH	_	US

COMMAND GUIDE

The command guide is a comparative listing by function of the control codes, escape codes, and keys that can generate those actions. Boxed commands are conditional (i.e., newline mode OFF, keypad application mode OFF, or block mode ON). Definitions for all escape code parameters (e.g., <P0> and <P1>) are not included. See "Escape Codes" for exact details.

Function	Mnemonic	Command	
		ANSI Mode	ATS Mode
Cursor control			
Carriage return	CR	CTRL M ENTER RETURN	CTRL M ENTER RETURN
Cursor back tab	CBT	ESC [<P0> Z	
Cursor horizontal absolute	CHA	ESC [<P0> G	
Cursor horizontal tab	CHT HT	ESC [<P0> I CTRL I	CTRL I
Cursor next line; no scroll	CNL LF VT FF	ESC [<P0> E CTRL J CTRL K CTRL L LINE FEED	CTRL J CTRL K CTRL L LINE FEED
Cursor next line; scroll	NEL	ESC E	
Cursor preceding line	CPL	ESC [<P0> F	
Cursor, backward	CUB BS	ESC [<P0> D CTRL H BACK SPACE ◀	ESC D CTRL H BACK SPACE ◀
Cursor down	CUD LF VT FF	ESC [<P0> B CTRL J CTRL K CTRL L ▼	ESC B CTRL J CTRL K CTRL L ▼
Cursor forward	CUF	ESC [<P0> C ▶	ESC C ▶
Cursor home		ESC [H ESC [f HOME Shift CTRL HOME	ESC H HOME Shift CTRL HOME

Function	Mnemonic	Command	
Cursor position	CUP HVP	ESC [<P0>;<P1> H ESC [<P0>;<P1> f	ESC Y <row> <col>
Cursor up	CUU	ESC [<P0> A ▲	ESC A ▲
Index	IND	ESC D	
Reverse index	RI	ESC M	
Reverse line feed			ESC I
Restore cursor	DECRC WYRC	ESC 8 ESC [u	
Save cursor	DECSC WYSC	ESC 7 ESC [s	
DISPLAY CONTROL			
		ANSI Mode	ATS Mode
Begin field attribute	WYFDAT	ESC [<P0> p	
Change G0 character set to graphics	SCS	ESC (0	
Change G0 character set to standard ASCII	SCS	ESC (B	
Change G0 character set to UK	SCS	ESC (A	
Change G1 character set to graphics	SCS	ESC) 0	
Change G1 character set to standard ASCII	SCS	ESC) B	
Change G1 character set to UK	SCS	ESC) A	
Define non-normal (enhance) attribute	WYNNAT	ESC [<P0> t Setup level 1	Setup level 1
Delete character	DCH	ESC [<P0> P Shift F13	Shift F13
Delete line	DL	ESC [<P0> M F5	

Function	Mnemonic	Command	
Disable double-wide emulation	DECSWL	ESC # 5	
Enable double-wide emulation	DECDHL DECDHL DECDWL	ESC # 3 ESC # 4 ESC # 6	
Erase character	ECH	ESC [<P0> X	
Erase in display	ED DECESED	ESC [<P0> J ESC [? <P0> J Shift F16 Shift CTRL HOME	ESC J Shift F16 Shift CTRL HOME
Erase in line	EL DECSEL	ESC [<P0> K ESC [? <P0> K Shift F5	ESC K
Horizontal tabulation set	HTS	ESC H TAB Setup Level 22	TAB Setup Level 22
Insert character	ICH	ESC [<P0> @ F4	
Insert line	IL	ESC [<P0> L Shift F4	
Load simulated LEDs	DECLL	ESC [<P0>;<P1>; ... <Pn> q	
Screen alignment display	DECALN	ESC # 8	
Scroll faster		CTRL ▲	CTRL ▲
Scroll slower		CTRL ▼	CTRL ▼
Select G0 character set	SI	CTRL O	
Select G1 character set	SO	CTRL N	
Select graphic rendition	SGR	ESC [<P0>;<P1>; ... <Pn> m	
Select graphics character set			ESC F
Select standard ASCII character set			ESC G

Function	Mnemonic	Command	
Set top and bottom margins	DECSTBM	ESC [<P0>;<P1> r	
Status line display ON/OFF		CTRL ►	CTRL ►
Tabulation clear	TBC	ESC [<P0> g	
MODE CONTROL		ANSI Mode	ATS Mode
132-column mode OFF	DECCOLM	ESC [?3 i(L) Setup level 4	Setup level 4
132-column mode ON	DECCOLM	ESC [?3 h Setup level 4	Setup level 4
ATS parsing mode ON	DECANM	ESC [?2 i(L) Setup level 1	
ANSI parsing mode ON	DECANM		ESC < Setup level 1
Auto repeat mode OFF	DECARM	ESC [?8 i(L) Setup level 1	Setup level 1
Auto repeat mode ON	DECARM	ESC [?8 h Setup level 1	Setup level 1
Block mode OFF	DECEDM	ESC [?10 i(L) BLOCK	
Block mode ON	DECEDM	ESC [?10 h BLOCK	
Caps mode ON/OFF		CAPS LOCK	CAPS LOCK
Character wrap mode OFF	DECAWM	ESC [?7 i(L) Setup level 1	Setup level 1
Character wrap mode ON	DECAWM	ESC [?7 h Setup level 1	Setup level 1

Function	Mnemonic	Command	
Clear enhanced data mode OFF	ERM	ESC [6 I(L)	
Clear enhanced data mode ON	ERM	ESC [6 h	
Copy passthru print mode OFF	MC	ESC [?4 i F1	ESC _
Copy passthru print mode ON	MC	ESC [?5 i F1	ESC ^
CRT saver mode OFF	WYCRTSAVM	ESC [32 I(L) Setup level 4	Setup level 4
CRT saver mode ON	WYCRTSAVM	ESC [32 h Setup level 4	Setup level 4
Cursor key mode OFF	DECCKM	ESC [?1 I(L)	
Cursor key mode ON	DECCKM	ESC [?1 h	
Cursor transfer termination mode OFF	TTM	ESC [16 I(L)	
Cursor transfer termination mode ON	TTM	ESC [16 h	
Disable control execution mode OFF	FEAM	ESC [13 I(L) CTRL ◀	CTRL ◀
Disable control execution mode ON	FEAM	ESC [13 h CTRL ◀	CTRL ◀
Display disable mode OFF	WYDSCM	ESC [30 I(L)	
Display disable mode ON	WYDSCM	ESC [30 h	
Enable cursor mode OFF	DECTCEM	ESC [?25 I(L) Setup level 4	Setup level 4
Enable cursor mode ON	DECTCEM	ESC [?25 h Setup level 4	Setup level 4

Function	Mnemonic	Command	
Insert character mode OFF	IRM	ESC [4 l(L) Shift F12	
Insert character mode ON	IRM	ESC [4 h Shift F12	
Key click mode ON/OFF		Shift CTRL ENTER	Shift CTRL ENTER
Keyboard lock mode OFF	KAM	ESC [2 l(L)	
Keyboard lock mode ON	KAM	ESC [2 h	
Keypad to application mode	DECKPAM	ESC =	ESC =
Keypad to numeric mode	DECKPNM	ESC >	ESC >
Local echo disable mode OFF (FDX)	SRM	ESC [12 l(L) Setup level 2	Setup level 2
Local echo disable mode ON (HDX)	SRM	ESC [12 h Setup level 2	Setup level 2
Local mode ON/OFF		LOCAL	LOCAL
Monitor mode OFF	CRM	ESC [3 l(L) CTRL ◀	CTRL ◀
Monitor mode ON	CRM	ESC [3 h CTRL ◀	CTRL ◀
Newline mode OFF	LNM	ESC [20 l(L) Setup level 1	Setup level 1
Newline mode ON	LNM	ESC [20 h Setup level 1	Setup level 1
No scroll mode ON/OFF		NO SCROLL	NO SCROLL
Origin mode OFF	DECOM	ESC [26 l(L)	
Origin mode ON	DECOM	ESC [26 h	

Function	Mnemonic	Command	
Print form feed mode OFF	DECPFF	ESC [?18 I(L)	
Print form feed mode ON	DECPFF	ESC [?18 h	
Print full screen mode OFF	DECPEX	ESC [?19 I(L)	
Print full screen mode ON	DECPEX	ESC [?19 h	
Reset mode	RM	ESC [<P0>;<P1>; ... <Pn> I(L)	
Reverse screen mode OFF	DECSCNM	ESC [?5 I(L) Setup level 4	Setup level 4
Reverse screen mode ON	DECSCNM	ESC [?5 h Setup level 4	Setup level 4
Set mode	SM	ESC [<P0>;<P1>; ... <Pn> h	
Smooth scroll mode OFF	DECSCLM	ESC [?4 I(L) CTRL ▲	CTRL ▲
Smooth scroll mode ON	DECSCLM	ESC [?4 h CTRL ▼	CTRL ▼
Status line display mode OFF	WYSTLINM	ESC [?31 I(L) CTRL ►	CTRL ►
Status line display mode ON	WYSTLINM	ESC [?31 h CTRL ►	CTRL ►
Steady cursor mode OFF	WYSTCURM	ESC [?33 I(L) Setup level 4	Setup level 4
Steady cursor mode ON	WYSTCURM	ESC [?33 h Setup level 4	Setup level 4
Transfer enhanced data mode OFF	GATM	ESC [?1 I(L)	
Transfer enhanced data mode ON	GATM	ESC [?1 h	

Function	Mnemonic	Command	
Transparent passthru print mode OFF	MC	ESC [4 i Shift F1	ESC X
Transparent passthru print mode ON	MC	ESC [5 Shift F1	ESC W
Underline cursor mode OFF	WYULCURM	ESC [34 k(L) Setup level 4	Setup level 4
Underline cursor mode ON	WYULCURM	ESC [34 h Setup level 4	Setup level 4
Width change clear disable mode OFF	WYCLRM	ESC [35 k(L)	
Width change clear disable mode ON	WYCLRM	ESC [35 h	
TERMINAL CONTROL			
		ANSI Mode	ATS Mode
Device status report	DSR	ESC [<P0> n	
Display setup parameters		SET UP	SET UP
Identify terminal	DECID WYID	ESC Z ESC ␣ (space)	ESC Z
Perform soft reset	DECSTR	ESC ! p Shift SET UP	Shift SET UP
Reset to initial state	RIS	ESC c Shift CTRL SET UP	Shift CTRL SET UP
TRANSMISSION CONTROL			
		ANSI Mode	ATS Mode
Abort escape code sequence	CAN SUB	CTRL X CTRL Z Shift DELETE	CTRL X CTRL Z Shift DELETE
Break		BREAK	BREAK
Copy cursor row to auxiliary port	MC	ESC [?I i Shift F2	ESC V
Copy cursor row to modem port	MC	ESC [?3 i F2	

Function	Mnemonic	Command	
Copy entire screen to auxiliary port	MC	ESC [0 i Shift F3	ESC]
Copy entire screen to modem port	MC	ESC [2 i F3	
Delay processing	WYDELAY	ESC ,	
Device attributes	DA	ESC [0 c	
Disconnect break		Shift BREAK	Shift BREAK
Initiate escape code sequence	ESC	CTRL [ESC	CTRL [ESC
Load text	WYTLOAD	ESC [> <TC> <delim> <T0> <T1> ... <delim>	
Media copy	MC	ESC [<P0> i	
Resume transmission (XON)	DC1	CTRL Q	CTRL Q
Return ACK	ENQ	CTRL E	CTRL E
Send delete/rubout character, 7FH	DEL	DELETE	DELETE
Sound bell	BEL	CTRL G	CTRL G
Suspend transmission (XOFF)	DC3	CTRL S	CTRL S
Transmit character at cursor	WYXCH	ESC 5	

BAUD RATE SELECTION

The terminal baud rates are determined by the selections made for the *Modem port speed* and *Aux port speed* parameters in the setup. They must match the host computer baud rate (modem port) and the printer baud rate (auxiliary port).

For the modem port, handshaking is always recommended, and it is required with the following:

- Baud rates of 19200 or 38400
- Smooth scroll
- No scroll mode
- Transparent passthru print mode
- Copy passthru print mode

The auxiliary port always recognizes DTR handshaking from the printer, regardless of the handshake mode.

Bits Per Second		
Modem Port	Aux. Port	Stop Bits
50		2
75		2
110	110	2
134.5	134.5	1
150	150	1
	200	1
300	300	1
600	600	1
1200	1200	1
1800	1800	1
2000	2000	1
2400	2400	1
	3600	1
4800	4800	1
	7200	1
9600	9600	1
19200	19200	1
38400		1

If incorrect characters are echoed by the host computer or if error (checkerboard) characters are displayed, either the modem port speed, parity, handshake, or number of data bits is incorrectly set.

In particular, if alphanumeric keys are correctly recognized by the host computer but the cursor keys, PF keys and programmed function keys are not, it is the number of data bits and the parity that are set wrong.

CONNECTOR PIN ASSIGNMENTS

The modem and auxiliary port connector pin assignments are listed below. The RS-232 interface cables must not have any wires running to pins 9, 14, 18, 24, or 25 of the modem port. All other pins are ignored.

Modem		Aux.	
Pin	Signal	Pin	Signal
1	Shield Ground	1	Shield ground
2	Transmit Data		
3	Receive Data	3	Transmit Data to Printer
4	Request to Send (held high)		
5	Clear to Send		
7	Signal Ground	6	Data Set Ready (held high)
8	Data Carrier Detect	7	Signal Ground
9			
14] Leave disconnected *		
18			
20		20 Printer Ready (DTR)	
24] Leave disconnected *		
25			

*** DO NOT USE. If connected, improper video display will result.**

Auxiliary pin 20 must be active high when the printer is ready to receive data.

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