WY-75® Display Terminal

Quick-Reference Guide

WYSE

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WY-75® DISPLAY TERMINAL QUICK-REFERENCE GUIDE

Wyse No. 880026-01

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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FCC NOTICE

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 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.

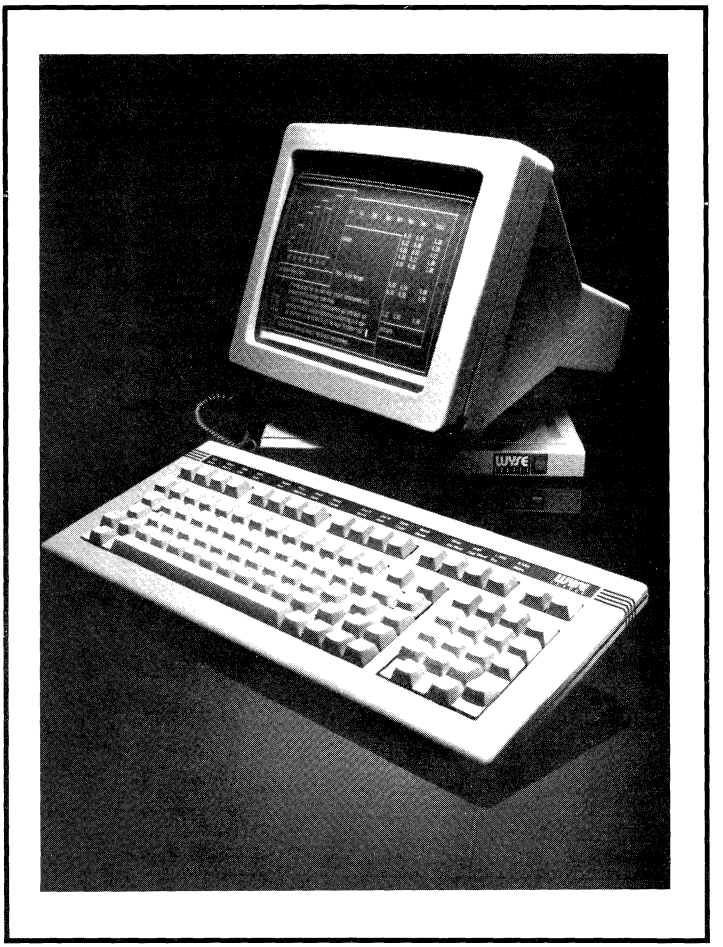
This equipment is intended for commercial use only and is not suited for operation in class B environments.

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.

CONTENTS

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 ON	(default)	**RETURN** sends $^{C}_{R}$ $^{L}_{F}$ when ON, $^{C}_{R}$ when OFF.
Wrap	ON OFF	(default)	Character wrap at end of line.
Repeat	ON OFF	(default)	Key repeat.
Attribute	DIM INVERSE UNDERLINE	(default)	Enhanced character attribute.
Margin bell	OFF ON	(default)	Warning bell before the right margin.
Mode	ANSI ATS	(default)	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 ODD EVEN	(default)	Parity type.
Local echo	OFF ON	(default)	Display of keyboard data; OFF for full duplex; ON for half duplex.

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

FIELD LEVEL 3

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

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

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 STEADY BLOCK BLINKING UNDERLINE STEADY UNDERLINE OFF	(default)	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 F 7	Enter up to 16 characters with each field to 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 F 9 F10 F11 F12 F13 F14 F15	the end of the character string. Do not press **RETURN** at the end of the character string unless you want a carriage return as the last character in the sequence. Control characters display as their related graphic character (see ''Graphics Characters''). Only the definitions for unshifted function keys **F6** to **F15** are saved in nonvolatile memory if the setup is saved by pressing **Y** (see instruction 10-A above).
F16	Temporary, not saved in nonvolatile memory.
F 6S	Shifted **F6.** Temporary, not saved in nonvolatile memory.
F 7S	Shifted **F7.** Temporary, not saved in nonvolatile memory.
F 8S	Shifted **F8.** Temporary, not saved in nonvolatile memory.
F 9S	Shifted **F9.** Temporary, not saved in nonvolatile memory.
F10S	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 l**(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	1	CUU	Moves the cursor up P0 rows.
ESC [<P0> B	1	CUD	Moves the cursor down P0 rows.
ESC [<P0> C	1	CUF	Moves the cursor right P0 columns.
ESC [<P0> D	1	CUB	Moves the cursor left P0 columns.
ESC [<P0> E	1	CNL	Moves the cursor down P0 rows and to column 1.
ESC [<P0> F	1	CPL	Moves the cursor up P0 rows and to column 1.
ESC [<P0> G	1	CHA	Moves the cursor to column P0.
ESC [<P0> ; <P1> H	1	CUP	Moves the cursor to row P0, column P1.

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

Sequence	Default	Mnemonic	Action
ESC [<P0> P	1	DCH	Deletes P0 characters beginning at the cursor column.
ESC [<P0> X	1	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	0	TBC	Clears tab stops. P0 = 0 Clears the tab stop at the cursor column. 3 Clears all tab stops.
ESC [<P0> I	0	CHT	Tabs the cursor forward P0 tab stops.
ESC [<P0> Z	0	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 l**(L) are acted on.

Sequence	Default	Mnemonic	Action
ESC [<P0> i	0	MC	Controls media copy operations. P0 = 0 Copy the entire screen display to the auxiliary (printer) port. 2 Copy the entire screen display to the modem (host) port. 4 Disable the transparent passthru print mode. 5 Enable the transparent passthru print mode. Only **ESC c** and **ESC [4 i** are acted on. ?1 Copy the cursor row to the auxiliary (printer) port. ?3 Copy the cursor row to the modem (host) port. ?4 Disable the copy passthru print mode. ?5 Enable the copy passthru print mode.
ESC [<P0>; <P1>; . . . <Pn> m	0	SGR	Sets the video attributes see WYNNAT for definition of the enhance attribute). Pi = 0 Normal Non-0 Enhance 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.

Sequence	Default	Mnemonic	Action
ESC [<P0> n	0	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	0	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	0	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>		WYTLOAD	Loads text (executable only from the host computer). Where TC is + to − (host message field text): + 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) Where TC is **a** to **p** (function key data strings for **F6** to **F21**, up to 16 characters each): 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. S_O is the 0EH (hex) control character, and S_I is the 0FH (hex) character.

Including the S_O 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 S_I 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_O S_I @
Dim	S_O S_I A
Blink	S_O S_I B
Blink dim	S_O S_I C
Blank	S_O S_I D
Blank dim	S_O S_I E
Underline	S_O S_I H
Underline dim	S_O S_I I
Underline blink	S_O S_I J
Underline blink dim	S_O S_I K
Underline blank	S_O S_I L
Underline blank dim	S_O S_I M
Underline blank blink	S_O S_I N
Underline blank blink dim	S_O S_I O
Inverse	S_O S_I P
Inverse dim	S_O S_I Q
Inverse blink	S_O S_I R
Inverse blink dim	S_O S_I S
Inverse blank	S_O S_I T
Inverse blank dim	S_O S_I U
Inverse underline	S_O S_I X
Inverse underline dim	S_O S_I Y
Inverse underline blink	S_O S_I Z
Inverse underline blink dim	S_O S_I [
Inverse underline blank	S_O S_I \
Inverse underline blank dim	S_O S_I]
Inverse underline blank blink	S_O S_I ^
Inverse underline blank blink dim	S_O S_I _

Examples:

ESC = 1BH
␣ (space) = 20H
S_O = 0EH
S_I = 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 [> , /
S_O S_I Q ␣ ␣ ␣ F 1 ␣ ␣ ␣
S_O S_I P ␣ ␣ ␣ F 2 ␣ ␣ ␣
S_O S_I Q ␣ ␣ ␣ F 3 ␣ ␣ ␣
S_O S_I Q ␣ ␣ ␣ F 4 ␣ ␣ ␣
S_O S_I @ ␣ ␣ ␣ ␣
S_O S_I Q ␣ ␣ ␣ F 5 ␣ ␣ ␣
S_O S_I Q ␣ ␣ ␣ F 6 ␣ ␣ ␣
S_O S_I Q ␣ ␣ ␣ F 7 ␣ ␣ ␣
S_O S_I Q ␣ ␣ ␣ F 8 ␣ ␣ ␣
S_O S_I @ /

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 S_I 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, S_O and S_I 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 C_R ?

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_I	Horizontal tab	62H	b	03H	C	ETX
F_F	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_T	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	
CURSOR CONTROL		**ANSI Mode**	**ATS Mode**
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 DECSED	**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 l**(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 l**(L) Setup level 1	
ANSI parsing mode ON	DECANM		**ESC <** Setup level 1
Auto repeat mode OFF	DECARM	**ESC [?8 l**(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 l**(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 l**(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 l**(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 l**(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 l**(L)	
Cursor key mode ON	DECCKM	**ESC [?1 h**	
Cursor transfer termination mode OFF	TTM	**ESC [16 l**(L)	
Cursor transfer termination mode ON	TTM	**ESC [16 h**	
Disable control execution mode OFF	FEAM	**ESC [13 l**(L) **CTRL ◄**	**CTRL ◄**
Disable control execution mode ON	FEAM	**ESC [13 h** **CTRL ◄**	**CTRL ◄**
Display disable mode OFF	WYDSCM	**ESC [30 l**(L)	
Display disable mode ON	WYDSCM	**ESC [30 h**	
Enable cursor mode OFF	DECTCEM	**ESC [?25 l**(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 [?6 l**(L)	
Origin mode ON	DECOM	**ESC [?6 h**	

Function	Mnemonic	Command	
Print form feed mode OFF	DECPFF	**ESC [?18 l**(L)	
Print form feed mode ON	DECPFF	**ESC [?18 h**	
Print full screen mode OFF	DECPEX	**ESC [?19 l**(L)	
Print full screen mode ON	DECPEX	**ESC [?19 h**	
Reset mode	RM	**ESC [<P0>;<P1>; . . . <Pn> l**(L)	
Reverse screen mode OFF	DECSCNM	**ESC [?5 l**(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 l**(L) **CTRL ▲**	**CTRL ▲**
Smooth scroll mode ON	DECSCLM	**ESC [?4 h** **CTRL ▼**	**CTRL ▼**
Status line display mode OFF	WYSTLINM	**ESC [31 l**(L) **CTRL ▶**	**CTRL ▶**
Status line display mode ON	WYSTLINM	**ESC [31 h** **CTRL ▶**	**CTRL ▶**
Steady cursor mode OFF	WYSTCURM	**ESC [33 l**(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 l**(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 l** (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 l** (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 [?1 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		
		6	Data Set Ready (held high)
7	Signal Ground	7	Signal Ground
8	Data Carrier Detect		
9	**Leave disconnected ***		
14			
18			
20	Data Terminal Ready (DTR)	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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