

QVT

119™

Setup Guide

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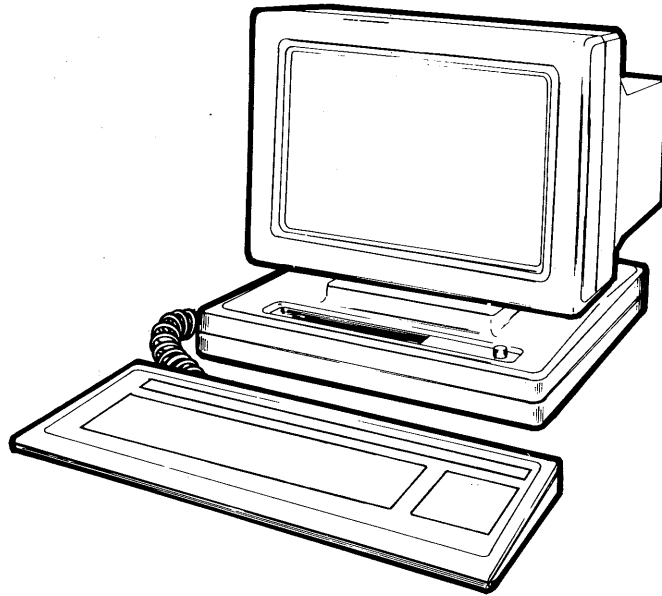
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The QVT 119 Alphanumeric Display Terminal

PREFACE

The QVT 119™ Alphanumeric Display Terminal is command set compatible with ADDS A2 and Wyse 50 terminals.

Ergonomically designed, standard features of the QVT 119 terminal include an adjustable height, low-profile, detached keyboard, and a 14 inch non-glare monitor, housed in a display unit that features full tilt and swivel.

In performance, standard features of the QVT 119 terminal include: a bi-directional printer port; conversational and local mode operation; soft set non-volatile setup menus; green display with screen-saver; 80 columns displayable, 132 columns with horizontal scroll; double-high, double-wide characters; choice of special graphic character sets; and, compliance to the RS 232 Standard. Available as optional features, the terminal may be ordered with an amber display screen, current loop capability, or RS 422 Standard compliance.

ORGANIZATION

The purpose of the QVT 119 Setup Guide is to describe to users of the terminal, how to install the unit, and then configure it for compatibility with their host system.

The QVT 119 Setup Guide is organized as follows:

Section 1. **Installation, Connectors, and Controls** describes unpacking and installing the terminal, connecting it into your system, and user controls.

Section 2. **Getting Started** describes the ergonomic features of the terminal, powering On the terminal, the keyboard, setup mode, and using the status line.

Appendix

RELATED PUBLICATIONS

QVT 119 Programmers Reference Manual	Reorder Number 35103-20
QVT 119 Maintenance Guide	Reorder Number 35103-30
QVT 119 Quick Reference Card	Reorder Number 35103-40

TABLE OF CONTENTS

	Page
SECTION 1. INSTALLATION, CONNECTORS, and CONTROLS.....	1-1
Installation.....	1-1
Unpacking.....	1-1
Selecting a Suitable Installation Site.....	1-2
Connectors.....	1-3
Controls	1-5
SECTION 2. GETTING STARTED.....	2-1
Ergonomic Features.....	2-1
Powering On the Terminal.....	2-3
Power ON.....	2-3
Observe the Following Sequence of Events.....	2-3
To Begin Using the Terminal.....	2-3
The Keyboard.....	2-4
Main Keyboard Keys.....	2-5
Function Keys.....	2-5
Auxiliary Keys.....	2-7
Setup Mode and the Setup Menus.....	2-8
The Setup Menus.....	2-9
Set 1 Setup Menu.....	2-9
Set 2 Setup Menu.....	2-11
Set 3 Setup Menu.....	2-13
Set 4 Setup Menu.....	2-15
Set 5 Setup Menu.....	2-17
Set 6 Setup Menu.....	2-19
Set 7 Setup Menu.....	2-20
Using the Status Line.....	2-22
APPENDIX	
A. Command Set Summary.....	A-1
B. Programming the Function Keys and Cursor.....	B-1
Arrow Keys	
C. Cursor Addressing.....	C-1
D. Graphics Mode Character Sets.....	D-1
E. ASCII Code Chart.....	E-1
F. EIA and AUX Connector Pin Assignments.....	F-1

LIST OF ILLUSTRATIONS

Figure		Page
1-1	Unpacking the Terminal.....	1-1
1-2	The Rear Panel of the Display Unit.....	1-3
1-3	Keyboard Connection to the Display Unit.....	1-4
1-4	Brightness Control.....	1-5
2-1	Display Unit Tilt and Swivel.....	2-1
2-2	Adjusting Keyboard Elevation.....	2-2
2-3	The Keyboard.....	2-4
2-4	The Set 1 Setup Menu.....	2-9
2-5	The Set 2 Setup Menu.....	2-11
2-6	The Set 3 Setup Menu.....	2-13
2-7	The Set 4 Setup Menu.....	2-15
2-8	The Set 5 Setup Menu.....	2-17
2-9	The Set 6 Setup Menu.....	2-19
2-10	The Set 7 Setup Menu.....	2-20
2-11	Status Line Parameters.....	2-22

LIST OF TABLES

Table		Page
2-1	Set 1 Setup Menu Parameter Blocks Description.....	2-9
2-2	Set 2 Setup Menu Parameter Blocks Description.....	2-11
2-3	Set 3 Setup Menu Parameter Blocks Description.....	2-13
2-4	Set 4 Setup Menu Parameter Blocks Description.....	2-15
2-5	Set 5 Setup Menu Parameter Blocks Description.....	2-17
2-6	Set 6 Setup Menu Parameter Blocks Description.....	2-19
2-7	Set 7 Setup Menu Parameter Blocks Description.....	2-20
2-8	Status Line Parameters Display Interpretation.....	2-22

SECTION 1

INSTALLATION, CONNECTORS, and CONTROLS

This section describes installation, connectors, and controls.

INSTALLATION

Unpacking

Before unpacking the terminal, inspect the carton for any signs of damage. If damage to the carton is apparent, have the delivery agent note the damage on the shipping document. Note: Some shippers may wish to be present when the carton is opened, if external damage is apparent.

Unpack and inspect the terminal as follows: Refer to Figure 2-1.

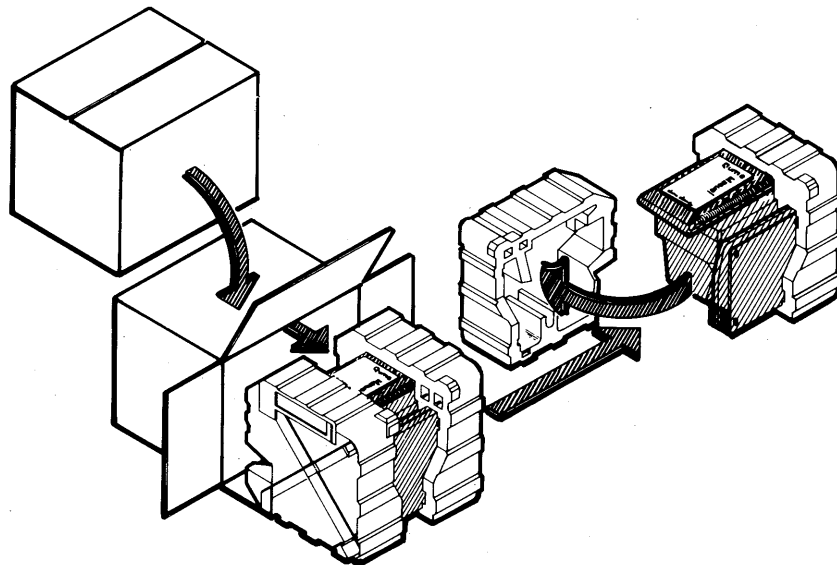


Figure 1-1. Unpacking the Terminal

1. Open the carton and place it on its side on a table top or flat working surface.
2. Slide the terminal with its Styrofoam packing buns from the carton.
3. Remove the packing buns, being careful not to jostle the keyboard or display unit. Do not allow either to fall.

INSTALLATION, CONNECTORS, and CONTROLS

4. Remove the plastic wrap from both the keyboard and the display unit.
5. Retain all packaging materials. When repacking the terminal for shipment, or to protect it during long storage periods, use only the original packaging materials.
6. Inspect both the keyboard and display unit for scratches, loose parts, and damage from rough handling. If there is evidence that any damage to the terminal might impair its proper operation, contact your service representative for advice and further instructions.

Selecting a Suitable Installation Site

To install your terminal, first select a suitable site.

A suitable site may be characterized as follows:

- A clean, well-lighted environment, with proper ventilation
- Convenient access to a power outlet with ground
- A stable platform to support the terminal at a comfortable height
- Adequate room for cable routing. Always use shielded cable

CONNECTORS

After a site has been selected and the terminal properly located, make the following connections.

At the rear of the display unit: Refer to Figure 1-2.

- Connect the host computer cable to the connector labeled **EIA** (refer to Appendix F for connector pin assignments).
- If a printer is available, connect it to the connector labeled **AUX** (refer to Appendix F for connector pin assignments).
- Verify that the **Power ON/OFF** switch is in the OFF position. Then connect the power cord to a grounded AC outlet. Power requirements of the terminal are: 120 VAC, 0.5 A, 45 W, and 60 Hz.

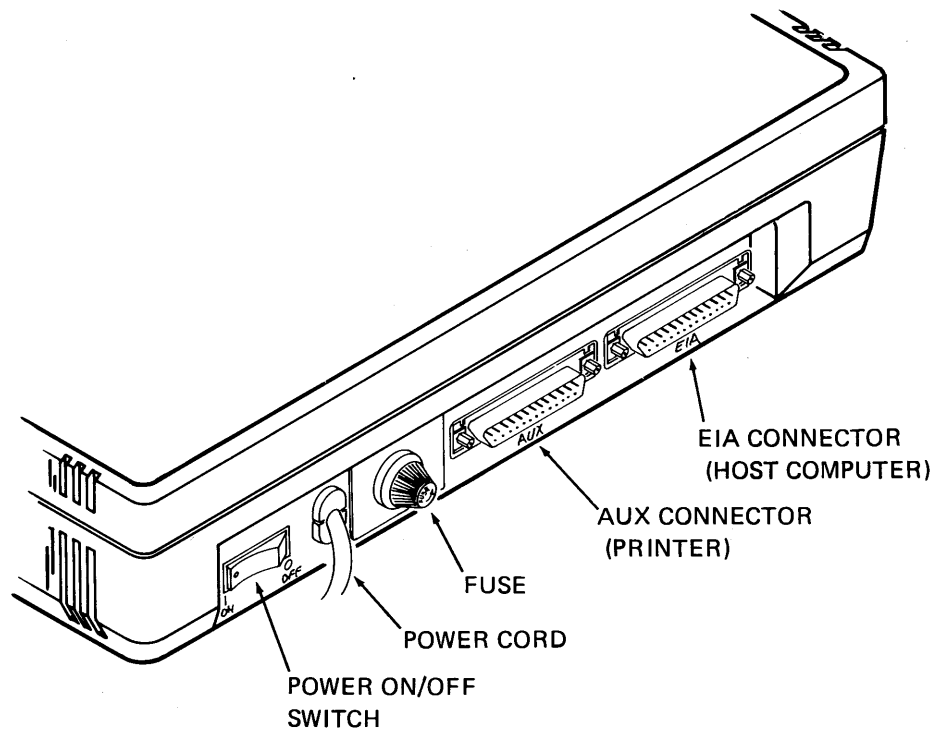


Figure 1-2. The Rear Panel of the Display Unit

INSTALLATION, CONNECTORS, and CONTROLS

At the left side of the display unit: Refer to Figure 1-3.

- Connect the keyboard to modular telephone style connector.

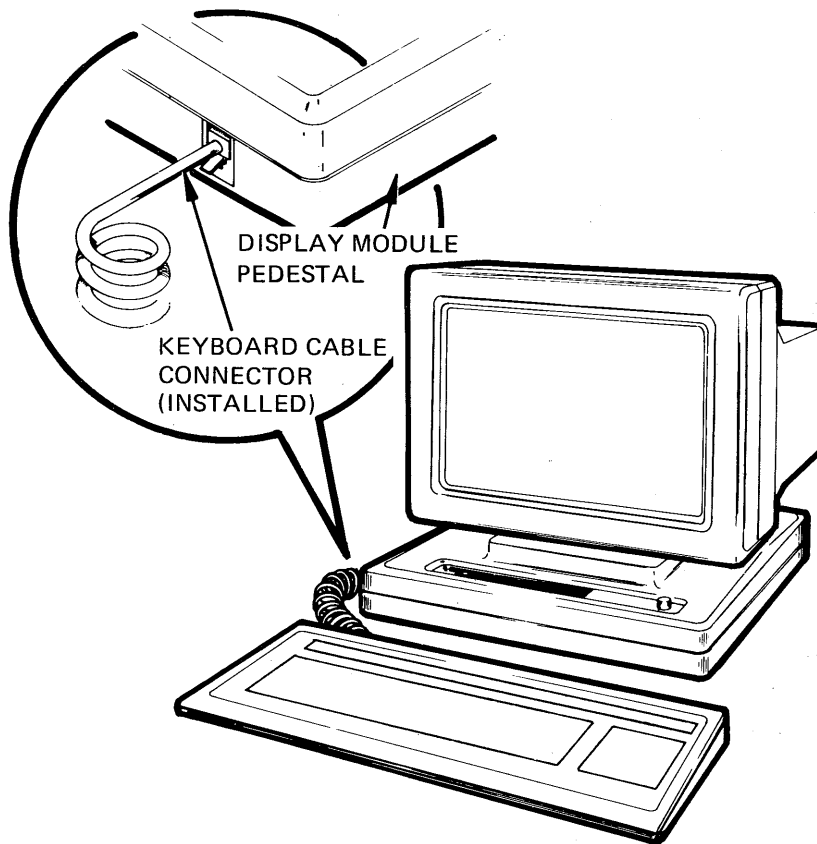


Figure 1-3. Keyboard Connection to the Display Unit

CONTROLS

Basic terminal controls are:

- Power ON/OFF The Power ON/OFF switch is a rocker type switch located on the rear panel (refer to Figure 1-2).
- Brightness The Brightness control is used to adjust display intensity. The rotating knob on the right front corner of the display unit is used for this purpose. Refer to Figure 1-4.

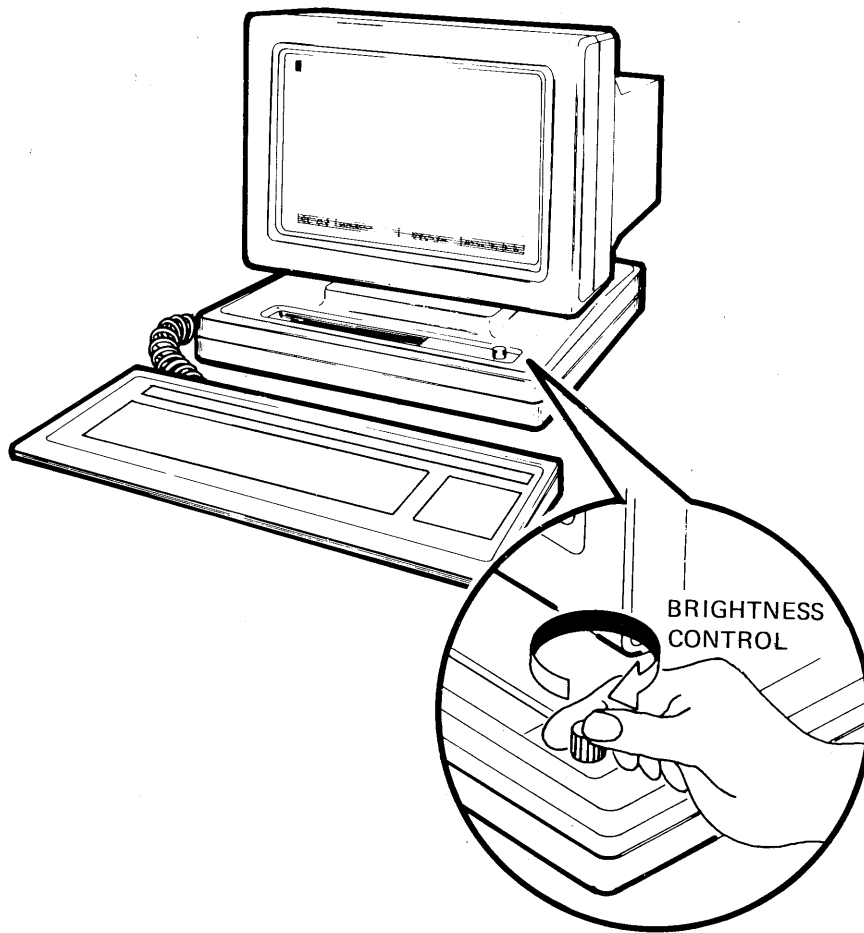


Figure 1-4. Brightness Control

SECTION 2**GETTING STARTED**

This section describes the ergonomic features of the terminal, powering On the terminal, the keyboard, setup mode, and using the status line.

ERGONOMIC FEATURES

The terminal features the following ergonomic design considerations for accommodating individual comfort.

Display Unit Tilt and Swivel. The display unit is ball mounted to its pedestal for easy rotation into an optimum viewing position. Refer to Figure 2-1.

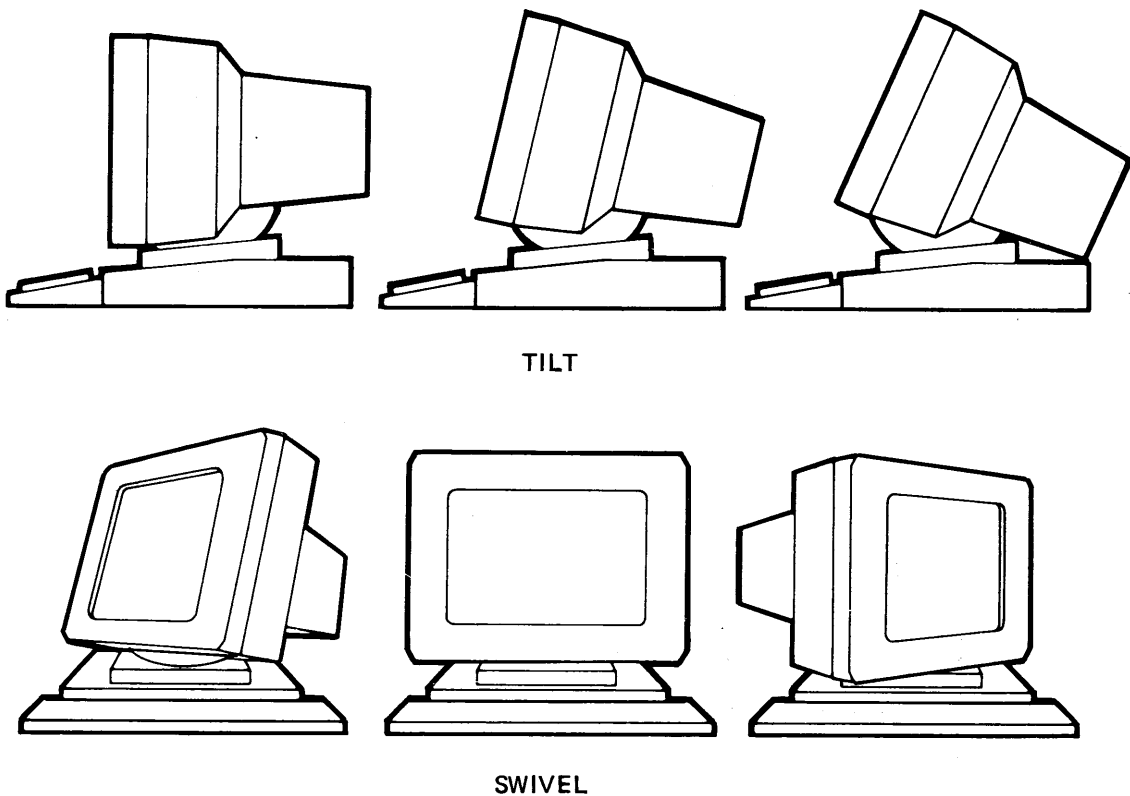


Figure 2-1. Display Unit Tilt and Swivel

GETTING STARTED

Keyboard Elevation. The keyboard is adjustable to any one of three elevations by rotating two recessed feet outward from the base. Refer to Figure 2-2.

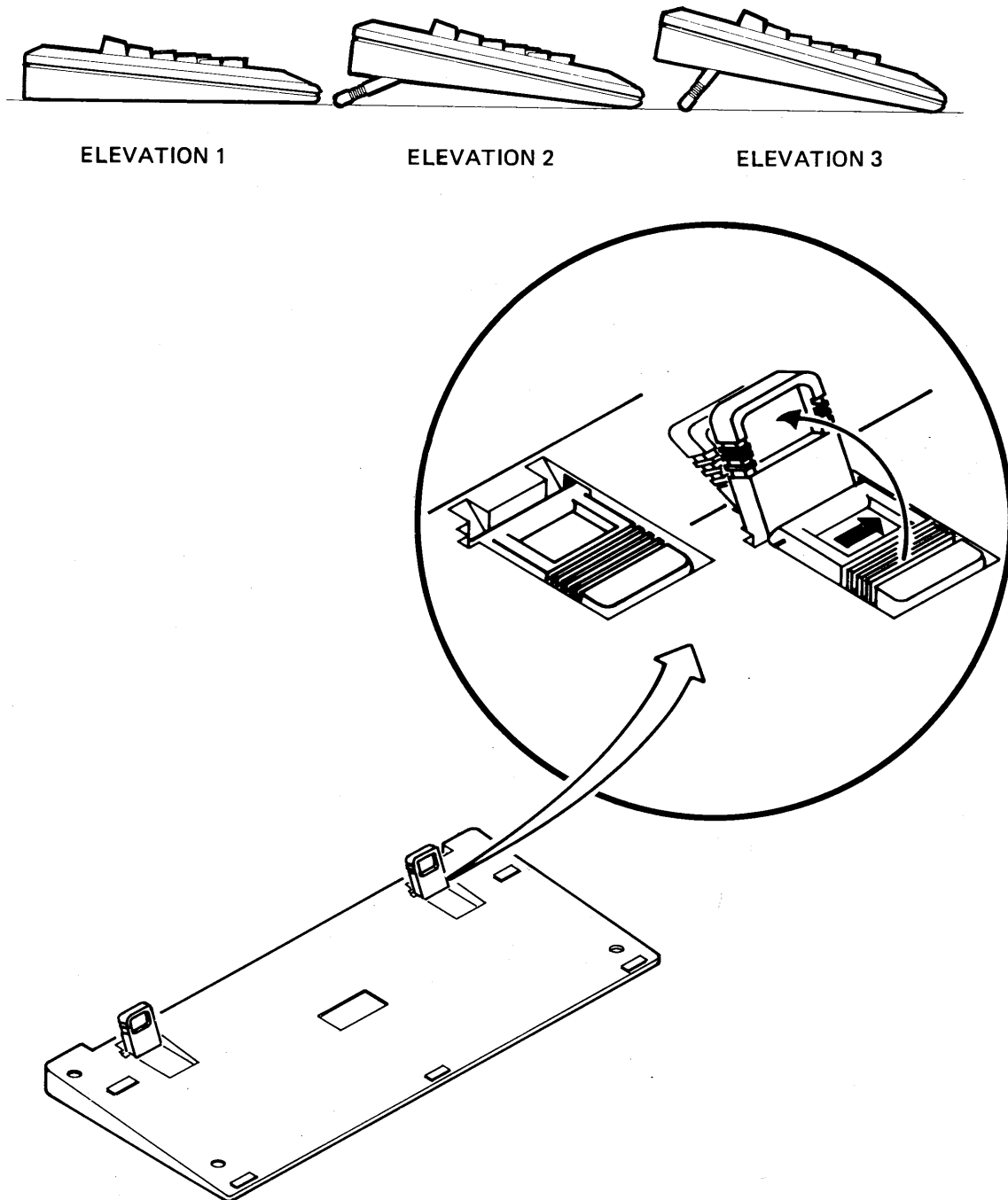


Figure 2-2. Adjusting Keyboard Elevation

POWERING ON THE TERMINAL

To power On the terminal and begin using it, proceed as follows:

Power ON

- Move the Power ON/OFF switch to the ON position (refer to Figure 1-2).

Observe the Following Sequence of Events

- The terminal beeps
- The Caps Lock indicator on the keyboard blinks
- Across the top of the screen display, note the Status Line and directly below on the next line, the blinking underline cursor. Refer to the paragraph **USING THE STATUS LINE** for a full explanation of the Status Line and its use.

To Begin Using the Terminal

Note: The terminal is now in On Line Mode; to use the terminal in a local application, it must be configured for Local Mode. Refer to the paragraph **SETUP MODE and the SETUP MENUS** for a full explanation about how to configure your terminal.

GETTING STARTED

THE KEYBOARD

The keyboard, illustrated in Figure 2-3, may be divided into the following functional groups:

- Main Keyboard Keys
- Function Keys
- Auxiliary Keys

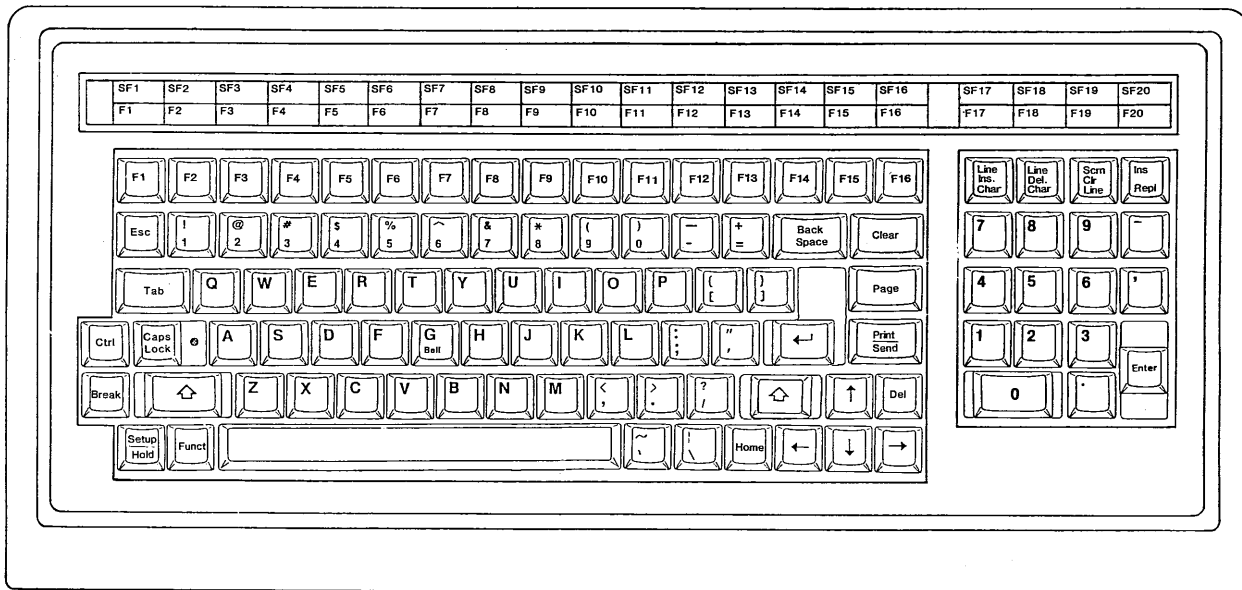


Figure 2-3. The Keyboard

Main Keyboard Keys

The Main Keyboard keys are the dark color keys in the large key cluster. Most of these keys function like those of any standard typewriter. However, some of the Main Keyboard keys are unique to the terminal, and these are described as follows:

Tab	Depressing the Tab key transmits the HT (Horizontal Tab) character to the host, and moves the cursor to the next tab stop.
Caps Lock	Capitals Lock. This key performs like a typewriter Shift Lock key, and causes the alpha keys to generate uppercase characters. When this feature is active the Caps Lock indicator light displays on the key top.
Back Space	Depressing the Back Space key transmits the BS (Back Space) character to the host, and moves the cursor one character position to the left.
Return	According to Setup Menu Number 3 selection, depressing the Return key causes either a carriage return, or a carriage return with line feed to be performed (the corresponding CR or CR + LF characters are sent to the host).

Function Keys

The Function keys are the light color keys in the large key cluster.

Esc	Escape. A special function key that is used to introduce an escape sequence.
Ctrl	Control. A special function key that is always used with another key to invoke a special control code.
Break	Depressing the Break key transmits a 200- to 250-millisecond space pulse to the host.
Set Up/Hold	Set Up / Hold Screen. This key may be used by itself to enable and disable the hold screen feature, or in combination with the Shift key to enter and exit Setup Mode. When the hold screen feature is enabled, all screen updating ceases until the feature is disabled. During this time the Hold Indicator in the Status Line displays. Setup Mode and the use of the Setup key is described in the paragraph SETUP MODE and the SETUP MENUS.

Function Keys (Cont)

Func	Function. The Function key is a special application key that can be used to transmit a user-selected character bracketed by a start of header (SOH) code and a Carriage Return (CR) code. Also, in Setup Mode the Function key is used to initiate a Function key or Arrow key programming session.
Clear	Depressing the Clear key erases all screen data and returns the cursor to the Home position.
Page	Depressing the Page key, causes the terminal to display the next page in screen memory; depressing the Shift and Page keys causes the terminal to display the previous page in screen memory.
Print/Send	Depressing the Send key causes data on the screen to be transmitted to the host; depressing the Print key (Shift - Print/Send) causes data on the screen to be output to the printer.
Del	Delete. Depressing the Delete key transmits the ASCII DEL (delete) character to the host.
Arrow Keys	The arrow keys control the movement of the cursor, by moving the cursor in the direction indicated by the arrow on the key top. The Arrow keys, like the Function keys, are programmable.
Home	Depressing the Home key returns the cursor to the screen Home position, or Column 1, Line 1.
F1 - F16	Top Row Function Keys. When pressed, these keys transmit to the
F17 (Insert)	host a user-selected ASCII character or a sequence of
F18 (Delete)	characters, bracketed by a Ctrl-A (SOH) code and a Carriage
F19 (Clear)	Return (CR) code. A Function key may be used by itself or in
F20 (Insert/ Replace)	combination with the Shift key to generate a total of 40 code sequences. The Function keys and Arrow keys share 380 bytes of dynamically allocated memory; 255 bytes of this amount is the maximum capacity available to any one of these keys. Key contents are savable.

Use the Function Key Identifier Strip on the top edge of the keyboard to note the normal and shifted contents of keys F1 through F20.

Auxiliary Keys

The Auxiliary keys are those keys in the small key cluster.

Number Keys The number keys are used to enter numeric data in calculator fashion.

Enter According to Setup Menu selection, depressing the Enter key causes either a carriage return, or a carriage return with line feed to be performed (the corresponding CR or CR + LF characters are sent to the host). The Enter key is also used to temporarily store Function key and Arrow key contents, specified during programming sessions.

GETTING STARTED

SETUP MODE and the SETUP MENUS

Setup Mode is used to tailor the operating parameters of the terminal to match the requirements of the system into which it is integrated.

To enter Setup Mode depress the Shift and Hold/Setup keys. Notice that a line displays on the last line of the screen; this is the Set 1 Setup Menu. In Setup Mode there are seven setup menus.

Each setup menu is separated into a series of parameter blocks. Each block contains all the possible values that may be assigned to that particular block.

To specify a parameter assignment, depress the cursor arrow keys to advance through the blocks of the setup menu. Observe that the block where a parameter assignment is to be made displays in Bold Reverse Video. To view the possible values within a parameter block, depress the Space Bar until the desired value displays, then move from the block by again depressing a cursor arrow key. Note, there are some parameter blocks, called Text Parameter Blocks, that are empty; into these you may enter text, as in the Here Is Block.

To save new Setup Mode parameters that have been selected from the setup menu lines, depress the Shift-S keys to write these values into memory. Should it ever be necessary to restore the Setup Mode parameters to their default values, depress the Shift-D keys; to restore these parameters to their previous values, depress the Shift-R keys. To terminate a Setup Mode session, depress the Hold/Setup key a second time (when exiting Setup Mode it is not necessary to depress the Shift key in combination with the Hold/Setup key).

The Setup Menus

Set 1 Setup Menu

The Set 1 Setup Menu is the first menu displayed after depressing the Shift and Setup keys to enter Setup Mode. This menu allows access to the other setup menus, by depressing the Down or Up Arrow keys to advance through the other setup menu lines. Figure 2-4 illustrates the Set 1 Setup Menu and Table 2-1 offers a description of the parameter blocks within this menu.

SET 1	FDX	CONV	80 COL	EM:QVT 119	KB ON	PRINT OFF	MON OFF	GRAPH OFF
	HDX LOC	MESG BLOCK	132 COL 132 HS	WYSE 50 ADDS A2	LOCK	COPY XCOPY BCOPY XBCOPY	ON	ON

Figure 2-4. The Set 1 Setup Menu

Table 2-1. Set 1 Setup Menu Parameter Blocks Description

PARAMETER BLOCK	DESCRIPTION
TRANSMISSION MODE	<p>Possible Values: . (FDX) Full Duplex Mode (Default) . (HDX) Half Duplex Mode . (LOC) Local Mode</p> <p>Specifies the transmission mode in which the terminal communicates with the host system. In Full Duplex Mode, data from the terminal is processed to the host; unless the host echos this data, it can not be viewed on the display. Conversely, data processed in Half Duplex Mode is processed to both the host, and internally to the terminal display. In Local Mode, the terminal is OFF LINE, and does not communicate data with the host; data is only processed to the display.</p>
DATA TRANSMIT MODE	<p>Possible Values: . (CONV) Conversational Mode (Default) (MESG) Message Mode (BLOCK) Block Mode</p> <p>This parameter specifies the method of data transmission from the terminal to the host. In Conversational Mode, data is transmitted as it is entered on the keyboard; in Message Mode, the cursor line is transmitted when the Send key is pressed; in Block Mode, the entire screen is transmitted when the Send key is pressed.</p>

Table 2-1. Set 1 Setup Menu Parameter Blocks Description (Cont)

PARAMETER BLOCK	DESCRIPTION
COLUMN MODE	<p>Possible Values: . 80 Columns (Default) . 132 Columns . 132 HS (Horizontal Scroll)</p> <p>Specifies the number of columns displayed: 80 columns, 132 columns, or 80 columns out of a viewable 132 columns (QVT 119 and ADDS A2 Modes only; the display scrolls horizontally to keep the cursor in view).</p>
EMULATION MODE	<p>Possible Values: . QVT 119 (Default) . WYSE 50 . ADDS A2</p> <p>Specifies the command set emulation mode of the terminal: Native Mode (QVT 119), Wyse 50, or ADDS A2.</p>
KEYBOARD	<p>Possible Values: . ON (Default) . LOCK</p> <p>This feature can be used to disable the keyboard as a data entry device until a Keyboard Unlock command is received from the host, or one of the following key combinations pressed: Control-Shift-Setup/Setup, or Shift-Break.</p>
PRINTER INTERFACE (PRINT)	<p>Possible Values: . PRINT OFF (Default) . COPY . BCOPY . XCOPY . XBCOPY</p> <p>This feature is used to specify the operation of the Auxiliary or Printer port. When PRINT OFF is selected, the printer interface is disabled; COPY enables the Auxiliary port so that displayed data can be output to a printer; XCOPY, also enables the Auxiliary port, but causes all data processed for display to be copied to the Auxiliary port without being displayed; BCOPY, causes all data processed for display to be copied to the Auxiliary port, and allows data received on Pin 2 of the AUX connector to be transmitted to the host via the EIA connector; XBCOPY, causes all data processed for display to be copied to the Auxiliary port and not displayed, and allows all data received on Pin 2 of the AUX connector to be transmitted to the host via the EIA connector.</p>

Table 2-1. Set 1 Setup Menu Parameter Blocks Description (Cont)

PARAMETER BLOCK	DESCRIPTION
MONITOR MODE	<p>Possible Values: . OFF (Default) . ON</p> <p>Monitor Mode is a feature that enables the display of all control codes and escape sequences in addition to the alphanumeric character set. Commands are only displayed and not interpreted when Monitor Mode is selected. For proper operation, the Line Wrap feature should also be enabled.</p>
GRAPHICS MODE	<p>Possible Values: . OFF (Default) . ON</p> <p>Graphics Mode is a special applications feature that reconfigures the normal keyboard character set to 15 thin-line graphics symbols and 64 block graphics symbols.</p>

Set 2 Setup Menu

The Set 2 Setup Menu is illustrated in Figure 2-5; Table 2-2 offers a description of the parameter blocks within this menu.

SET 2	JUMP	REPEAT ON	CLICK ON	MARGIN BELL OFF	E.O.M.:	NUL
	SMOOTH 1, 2, 5, 10, 15, 30, or 60	OFF	OFF	ON		ETX EOT CR

Figure 2-5. The Set 2 Setup Menu

Table 2-2. Set 2 Setup Menu Parameter Blocks Description

PARAMETER BLOCK	DESCRIPTION
SCROLL MODE	<p>Possible Values: . JUMP (Default) . SMOOTH 1, 2, 5, 10, 15, 30, or 60</p> <p>Specifies the method of scrolling data across the display: Jump Scroll or Incremental Smooth Scroll.</p>

Table 2-2. Set 2 Setup Menu Parameter Blocks Description (Cont)

PARAMETER BLOCK	DESCRIPTION
KEY REPEAT	<p>Possible Values: . ON (Default) . OFF</p> <p>Specifies whether or not the 30 character per second key repeat feature is enabled (ON) or disabled (OFF).</p>
KEY CLICK	<p>Possible Values: . ON (Default) . OFF</p> <p>Specifies whether or not the audible key click sound is generated when keys are pressed.</p>
MARGIN BELL	<p>Possible Values: . ON (Default) . OFF</p> <p>Specifies whether or not the margin bell sounds when the cursor passes through column 73 in 80 Column Mode, or column 124 in 132 Column Mode.</p>
END OF MESSAGE CHARACTER	<p>Possible Values: . NUL (Default) . ETX . EOT . CR</p> <p>Specifies the End of Message (E.O.M.) character used to terminate a transmission from the terminal to the host.</p>

Set 3 Setup Menu

The Set 3 Setup Menu is illustrated in Figure 2-6; Table 2-3 offers a description of the parameter blocks within this menu.

SET 3	LINE WRAP ON	CR = CR	SCROLL ON	X-ON & DTR	LIMITED XMIT OFF
	OFF	CR,LF	OFF	X-ON ONLY DTR ONLY NO HANDSHAKE	ON

Figure 2-6. The Set 3 Setup Menu

Table 2-3. Set 3 Setup Menu Parameter Blocks Description

PARAMETER BLOCK	DESCRIPTION
LINE WRAP MODE	Possible Values: . ON (Default) . OFF Specifies whether or not the cursor wraps around to the next line as the current line is completed, or if the screen scrolls as the current 24 line display is filled.
CARRIAGE RETURN/ LINE FEED MODE	Possible Values: . CR (Default) . CR + LF Specifies whether or not the receipt of a carriage return code implies a carriage return only, or a carriage return with line feed.
SCROLL MODE	Possible Values: . ON (Default) . OFF Specifies whether or not the screen display should automatically scroll.

Table 2-3. Set 3 Setup Menu Parameter Blocks Description (Cont)

PARAMETER BLOCK	DESCRIPTION
HANDSHAKE MODE	<p>Possible Values: . X-ON & DTR (Default) . X-ON ONLY . DTR ONLY . NO HANDSHAKE</p> <p>Specifies the kind of handshake protocol to be used to control communications: X-ON & DTR implies both X-ON/X-OFF and DTR protocol; X-ON ONLY, implies only X-ON/X-OFF protocol; DTR ONLY, implies only DTR protocol; and NO HANDSHAKE implies no communications control. Note: NO HANDSHAKE may be used to increase throughput, but only with Scroll Mode OFF and with a low baud rate.</p>
LIMITED TRANSMIT MODE	<p>Possible Values: . OFF (Default) . ON</p> <p>Specifies whether or not Limited Transmit Mode is enabled or disabled. Limited Transmit Mode ON has priority over baud rate, and acts to limit transmit speed to 100 to 120 character per second. This mode is used to minimize interrupts to the host.</p>

Set 4 Setup Menu

The Set 4 Setup Menu is illustrated in Figure 2-7; Table 2-4 offers a description of the parameter blocks within this menu.

SET 4	EIA=HOST	8 BITS	BIT8 0	PAR OFF	PAR ODD	STOP 1	RX BAUD: = TX	TX BAUD:9600
		7	1	ON	EVEN	2	50 --> 38.4K	50 --> 38.4K

Figure 2-7. The Set 4 Setup Menu

Table 2-4. Set 4 Setup Menu Parameter Blocks Description

PARAMETER BLOCK	DESCRIPTION
EIA PORT CONFIGURATION	<p>Possible Values: . HOST (Default) . PRNT</p> <p>Configures the EIA Port as either the Host or Printer interface.</p>
DATA BITS PER CHARACTER	<p>Possible Values: . 8 Bits (Default) . 7 Bits</p> <p>Specifies the number of data bits used to encode ASCII characters as either 7 or 8 bits.</p>
BIT 8 SET	<p>Possible Values: . 0 (Default) . 1</p> <p>When DATA BITS PER CHARACTER is set to 8, the BIT 8 SET parameter offers the option to set the eighth bit to either 0 or 1.</p>
PARITY SELECT	<p>Possible Values: . OFF (Default) . ON</p> <p>Configures the terminal to check (ON) or ignore (OFF) the parity bit of both received and transmitted data.</p>
PARITY MODE	<p>Possible Values: . ODD (Default) . EVEN</p> <p>When PARITY SELECT is set to ON, the PARITY MODE selection may be used to configure the terminal for either ODD or EVEN parity.</p>

Table 2-4. Set 4 Setup Menu Parameter Blocks Description (Cont)

PARAMETER BLOCK	DESCRIPTION
STOP BITS	Possible Values: . 1 (Default) . 2 Configures ASCII encoded characters for one or two stop bits.
RECEIVE BAUD RATE	Possible Values: . TX (Default) . 50 . 2400 . 75 . 3600 . 110 . 4800 . 134.5 . 7200 . 150 . 9600 . 300 . 19.2K . 600 . 38.4K . 1200 . Same as Transmit . 1800 Specifies the baud rate for received data.
TRANSMIT BAUD RATE	Possible Values: . 9600 (Default) . 50 . 1800 . 75 . 2400 . 110 . 3600 . 134.5 . 4800 . 150 . 7200 . 300 . 19.2K . 600 . 38.4K . 1200 Specifies the baud rate for transmitted data.

Set 5 Setup Menu

The Set 5 Setup Menu is illustrated in Figure 2-8; Table 2-5 offers a description of the parameter blocks within this menu.

SET 5	AUX=PRNT	8 BITS	BIT8 0	PARITY OFF	PARITY ODD	STOP 1	RX & TX BAUD: 9600
		7	1	ON	EVEN	2	50 --> 38.4K

Figure 2-8. The Set 5 Setup Menu

Table 2-5. Set 5 Setup Menu Parameter Blocks Description

PARAMETER BLOCK	DESCRIPTION
AUX PORT CONFIGURATION	Possible Values: . PRNT (Default) . HOST Configures the AUX Port as either the Printer or Host interface.
DATA BITS PER CHARACTER	Possible Values: . 8 Bits (Default) . 7 Bits Specifies the number of data bits used to encode ASCII characters as either 7 or 8 bits.
BIT 8 SET	Possible Values: . \emptyset (Default) . 1 When DATA BITS PER CHARACTER is set to 8, the BIT 8 SET parameter offers the option to set the eighth bit to either \emptyset or 1.
PARITY SELECT	Possible Values: . OFF (Default) . ON Configures the terminal to check (ON) or ignore (OFF) the parity bit of both received and transmitted data.
PARITY MODE	Possible Values: . ODD (Default) . EVEN When PARITY SELECT is set to ON, the PARITY MODE selection may be used to configure the terminal for either ODD or EVEN parity.

Table 2-5. Set 5 Setup Menu Parameter Blocks Description (Cont)

PARAMETER BLOCK	DESCRIPTION																
STOP BITS	<p>Possible Values: . 1 (Default) . 2</p> <p>Configures ASCII encoded characters for one or two stop bits.</p>																
RECEIVE AND TRANSMIT BAUD RATE	<p>Possible Values: . 9600 (Default)</p> <table> <tr> <td>. 50</td> <td>. 1800</td> </tr> <tr> <td>. 75</td> <td>. 2400</td> </tr> <tr> <td>. 110</td> <td>. 3600</td> </tr> <tr> <td>. 134.5</td> <td>. 4800</td> </tr> <tr> <td>. 150</td> <td>. 7200</td> </tr> <tr> <td>. 300</td> <td>. 19.2K</td> </tr> <tr> <td>. 600</td> <td>. 38.4K</td> </tr> <tr> <td>. 1200</td> <td></td> </tr> </table> <p>Specifies the baud rate for both received data and transmitted data.</p>	. 50	. 1800	. 75	. 2400	. 110	. 3600	. 134.5	. 4800	. 150	. 7200	. 300	. 19.2K	. 600	. 38.4K	. 1200	
. 50	. 1800																
. 75	. 2400																
. 110	. 3600																
. 134.5	. 4800																
. 150	. 7200																
. 300	. 19.2K																
. 600	. 38.4K																
. 1200																	

Set 6 Setup Menu

The Set 6 Setup Menu is illustrated in Figure 2-9; Table 2-6 offers a description of the parameter blocks within this menu.

SET 6	PAGE MODE	STD VID	RET/ENTER = CR / CR	PROT = DIM	DISPLAY PE ON
	SPLIT	REV	CRLF/TAB	REV NORM	OFF

Figure 2-9. The Set 6 Setup Menu

Table 2-6. Set 6 Setup Menu Parameter Blocks Description

PARAMETER BLOCK	DESCRIPTION
PAGE/SPLIT MODE	<p>Possible Values: . PAGE MODE (Default) . SPLIT MODE</p> <p>Specifies the interpretation of the Page key and the Next Page/Previous Page commands; that is, in PAGE MODE, the appropriate page is caused to display, in SPLIT MODE, the cursor is moved into the next segment if segments have been defined.</p>
VIDEO	<p>Possible Values: . STANDARD (Default) . REVERSE</p> <p>Specifies the display presentation of light characters on a dark background (STANDARD), or dark characters on a light background (REVERSE).</p>
RETURN / ENTER	<p>Possible Values: . CR / CR (Default) . CRLF / TAB</p> <p>Specifies the interpretation of the Return and Enter keys. When CR/CR is selected, pressing either the Return or Enter key, implies that a carriage return is to be performed. When CRLF/TAB is selected, pressing the Return key implies a carriage return with line feed; pressing the Enter key implies a forward tab.</p>
PROTECT MODE ATTRIBUTE	<p>Possible Values: . DIM (Default) . REV . NORM</p> <p>Specifies the display attribute of protected areas as NORMAL, DIM (reduced intensity), or REVERSE.</p>

Table 2-6. Set 6 Setup Menu Parameter Blocks Description (Cont)

PARAMETER BLOCK	DESCRIPTION
PARITY ERROR DETECT CHARACTER	Possible Values: . OFF (Default) . ON Specifies whether or not the Parity Error Detect Character is to be displayed or ignored.

Set 7 Setup Menu Line

The Set 7 Setup Menu is illustrated in Figure 2-10; Table 2-7 describes the parameter blocks within this menu.

SET 7	CURSOR:	UL BLINK	TIME 15	KB: US	STATUS ON	FREQ 60
		BLOCK STEADY	1	UK	OFF	50
		BLOCK BLINK	5	GM		
		UL STEADY	OFF	SP		
				FR		

Figure 2-10. The Set 7 Setup Menu

Table 2-7. Set 7 Setup Menu Parameter Blocks Description

PARAMETER BLOCK	DESCRIPTION
CURSOR ATTRIBUTE	Possible Values: . UL BLINK (Default) . BLOCK STEADY . BLOCK BLINK . UL STEADY Specifies the display attribute of the cursor as either a steady or blinking underline or block.

Table 2-7. Set 7 Setup Menu Parameter Blocks Description (Cont)

PARAMETER BLOCK	DESCRIPTION
TIME	<p>Possible Values: . 15 (Default) . 1 . 5 . OFF</p> <p>Specifies whether or not the screen-saver feature is active. This feature automatically blanks the display for 1, 5, or 15 minutes to preserve the screen phosphor during periods when the terminal is idle. Upon receipt of new data, the screen display is restored. This feature may be defeated by selecting OFF.</p>
KEYBOARD TYPE	<p>Possible Values: . US (Default) . UK . GM . SP . FR</p> <p>Specifies the active keyboard character set as United States, United Kingdom, German, Spanish, or French.</p>
STATUS	<p>Possible Values: . ON (Default) . OFF</p> <p>Specifies whether or not the setup lines are displayed or blanked.</p>
FREQUENCY	<p>Possible Values: . 60 (Default) . 50</p> <p>Electrically configures the terminal for use with either a 60 or 50 Hz power source to eliminate screen flicker.</p>

USING THE STATUS LINE

The Status Line is the top line on the display. It serves as a reference line to note the status of the terminal's more common operating parameters. Figure 2-11 illustrates the Status Line and Table 2-8 describes these parameters.

HDX				Q119			9600	P 1-01-001	
LOCK	MON	BLK	PROT	INS	WY50	COPY	GRAPH	50	BUSY *THP S
		FDX	*PROT		ADDS	XCOPY		thru	
		LOC				BCOPY		38.4K	
						XBCOPY			
						PRINT			

Figure 2-11. Status Line Parameters

Table 2-8. Status Line Parameters Display Interpretation

STATUS LINE PARAMETER	DISPLAY INTERPRETATION
KEYBOARD LOCK MODE	| Blank (Default) = Keyboard enabled. LOCK = Keyboard disabled
MONITOR MODE	| Blank (Default) = Monitor Mode not selected. MON = Monitor Mode selected.
TRANSMISSION MODE	| HDX (Default) = Half Duplex Mode. BLK = Block Mode. FDX = Full Duplex Mode. LOC = Local Mode.
PROTECT MODE	| Blank (Default) = Protect Mode not selected. PROT = Protect Mode selected. *PROT = Protect Mode with Write Protect selected.
INSERT MODE	| Blank (Default) = Insert Mode not selected. INS = Insert Mode selected.
EMULATION MODE	| Q119 (Default) = QVT 119 Mode. WT50 = Wyse 50 Emulation Mode. ADDS = ADDS A2 Emulation Mode.
AUXILIARY PORT MODE	| Blank (Default) = Printer interface disabled. COPY = Printer interface enabled. XCOPY = Transparent Mode selected. BCOPY = Bidirectional Mode selected. XBCOPY = Bidirectional Transparent Mode selected.
GRAPHICS MODE	| Blank (Default) = Graphics Mode not selected. GRAPH = Graphics Mode selected.

Table 2-8. Status Line Parameters Display Interpretation (Cont)

STATUS LINE PARAMETER	DISPLAY INTERPRETATION
RECEIVE BAUD RATE	| 9600 (Default) = 9600 baud (EIA Port). 15 Possible: 50, 75, 110, 134.5, 150, 300, 600, 1200, 1800, 2400, 3600, 4800, 7200, 19.2K, or 38.4K.
BUSY STATUS	| Blank (Default) = Terminal/Host/Printer ready. T = Terminal busy. *T = Hold key depressed; Terminal busy. H = Host busy. P = Printer busy.
CURSOR POSITION	| P/S 1-01-001 (Default) = Cursor position in Page-Row- Column coordinates. P (Up Arrow) = Page Mode; cursor position in top segment or page. P (Down Arrow) = Page Mode; cursor position in bottom segment. S (Up Arrow) = Split Mode; cursor position in top segment. S (Down Arrow) = Split Mode; cursor position in bottom segment.

APPENDIX A. COMMAND SET SUMMARY

COMMAND	QVT 119	ADDS A2	WY-50
CURSOR			
Home	CTRL- ^ HOME	CTRL- ^ HOME	CTRL- ^ HOME ESC {
Right	CTRL-L --> SHIFT/BS	CTRL-F -->	CTRL-L -->
Left	CTRL-H <-- BACKSPACE	CTRL-H <-- BACKSPACE	CTRL-H <-- BACKSPACE
Up	CTRL-K UP ARROW	CTRL-Z UP ARROW	CTRL-K UP ARROW
Move Up Scroll			ESC j
Down	CTRL-J	CTRL-J	CTRL-J
Return	CTRL-M RETURN ENTER	CTRL-M RETURN ENTER	CTRL-M RETURN ENTER
New Line	CTRL- <u> </u>		CTRL- <u> </u> RETURN
Backspace	CTRL-H	CTRL-H	CTRL-H
TAB			
Set Tab	ESC 1	[ESC 1]	ESC 1
Clear Tab	ESC 2	[ESC 2]	ESC 2
Clear All Tabs	ESC 3		ESC 0
Column Tab	CTRL-I TAB		ESC-i
Field Tab	CTRL-I (Protect Mode only) TAB		
Back Tab	ESC I SHIFT/TAB	[ESC I]	ESC I

Note: Commands in "[]"s are QVT 119 commands honored in other emulations.

APPENDIX A. COMMAND SET SUMMARY (Cont)

COMMAND	QVT 119	ADDS A2	WY-50
EDIT			
Character Insert	ESC Q	[ESC Q]	ESC Q
Character Delete	ESC W	[ESC W]	ESC W
Line Insert	ESC E	[ESC E]	ESC E
Line Delete	ESC R	[ESC R]	ESC R
Clear from Cursor to end of line with spaces (or to protected when PROT is ON WY-50 Mode Only).	ESC T	ESC K or [ESC T]	ESC T
Clear from Cursor to end of line with nulls (or to protected when PROT is on WY-50 Mode only).	ESC t	[ESC t]	ESC t
Clear from Cursor to end of screen with spaces (unpro- tected only when PROT is on WY-50 Mode only)	ESC Y		ESC Y
Clear from Cursor to end of screen/ segment with nulls (unprotected only when PROT is on WY-50 only)	ESC y	[ESC y]	ESC y
Clear all to Nulls	ESC *0	[ESC *0]	ESC *
Clear all to Spaces	ESC *1	[ESC *1]	ESC +
Clear Unprotected to Nulls	ESC *2	[ESC *2]	ESC :
Clear Screen	CTRL-Z SHIFT/CLEAR	CTRL-L	
Clear Unprotected to spaces	ESC *3	[ESC *3]	CTRL-Z ESC ;
Clear Unprotected to Attributes			ESC !<Attr>
Clear Unprotected with Codes	ESC ** <char>	ESC ** <char>	ESC .<code>

Note: Commands in "[]"s are QVT 119 commands honored in other emulations.

APPENDIX A. COMMAND SET SUMMARY (Cont)

COMMAND	QVT 119	ADDS A2	WY-50
VIDEO ATTRIBUTES			
Set Tag Bit		CTRL-N	
Reset Tag Bit		CTRL-O	
Screen Attributes			
Cursor Visible	ESC .0	CTRL-X	ESC `0
Cursor Invisible	ESC .0	CTRL-W	ESC `1
Cursor Blinking Block	ESC .1	[ESC .1]	ESC `5
Cursor Steady Block	ESC .2	[ESC .2]	ESC `2
Cursor Blinking Underline	ESC .3	[ESC .3]	ESC `3
Cursor Steady Underline	ESC .4	[ESC .4]	ESC `4
Normal Protect Character	ESC .8	[ESC .8]	ESC `A
Reverse Protect Character	ESC .9	[ESC .9]	ESC `6
Dim Protect Character	ESC .:	[ESC .:]	ESC `7
Screen Display OFF	ESC n 2	[ESC n 2]	ESC `8
Screen Display ON	ESC n 3	[ESC n 3]	ESC `9
80-column Mode	ESC n 4	[ESC n 4]	ESC `:
132-column Mode	ESC n 5	[ESC n 5]	ESC `;
132-Horizontal Scroll Mode	ESC n 6	[ESC n 6]	
Jump Scroll	ESC n 8	[ESC n 8] or	
	ESC j	[ESC j]	ESC `@
Smooth Scroll 1	ESC n 9	[ESC n 9]	ESC `<
Smooth Scroll 2	ESC n :	[ESC n :]	ESC `=
Smooth Scroll 5	ESC n ;	[ESC n ;]	ESC `>
Smooth Scroll 10	ESC n <	[ESC n <]	ESC `?
	ESC s	[ESC s]	
Smooth Scroll 15	ESC n =	[ESC n =]	
Smooth Scroll 30	ESC n >	[ESC n >]	
Smooth Scroll 60	ESC n ?	[ESC n ?]	
Reverse Video	ESC j	[ESC j]	
Reverse Video	ESC n 0	[ESC n 0]	
Normal Video	ESC n 1	[ESC n/1]	

Note: Commands in "[]"s are QVT 119 commands honored in other emulations.

APPENDIX A. COMMAND SET SUMMARY (Cont)

COMMAND	QVT 119	ADDS A2	WY-50
VIDEO ATTRIBUTES (Cont)			
Character/Display Attributes			
Normal Video:			
Full Intensity	ESC G 0	ESC G @ [ESC G 0]	ESC G 0
Half Intensity	ESC G sp	ESC 0 A [ESC g sp]	ESC G p
Invisible Normal Video:			
Full Intensity	ESC G 1	ESC 0 D	ESC G 1
Half Intensity	ESC G !	[ESC G !]	ESC G q
Blink:			
Full Intensity	ESC G 2	ESC 0 B	ESC G 2
Half Intensity	ESC G "	ESC 0 C	ESC G r
Invisible Blink:			
Full Intensity	ESC G 3	[ESC G 3]	ESC G 3
Half Intensity	ESC G #	[ESC G #]	ESC G s
Reverse Current Background			
Full Intensity	ESC G 4	ESC 0 P [ESC G 4]	ESC G 4
Half Intensity	ESC G \$	ESC 0 0 [ESC G \$]	ESC G t
Invisible Reverse:			
Full Intensity	ESC G 5	[ESC G 5]	ESC G 5
Half Intensity	ESC G %	[ESC G %]	ESC G u
Reverse and Blink:			
Full Intensity	ESC G 6	ESC 0 R [ESC G 6]	ESC G 6
Half Intensity	ESC G &	ESC 0 S [ESC G &]	ESC G v
Invisible Reverse and Blink:			
Full Intensity	ESC G 7	[ESC G 7]	ESC G 7
Half Intensity	ESC G ^	[ESC G ^]	ESC G w

Note: Commands in "[]"s are QVT 119 commands honored in other emulations.

APPENDIX A. COMMAND SET SUMMARY (Cont)

COMMAND	QVT 119	ADDS A2	WY-50
VIDEO ATTRIBUTES (Cont)			
Character/Display Attributes			
Underline:			
Full Intensity	ESC G 8	ESC O /	ESC G 8
Half Intensity	ESC G (	ESC O a	ESC G x
Invisible Underline:			
Full Intensity	ESC G 9	[ESC G 9]	ESC G 9
Half Intensity	ESC G)	[ESC G)]	ESC G y
Underline and Blink:			
Full Intensity	ESC G :	ESC O b [ESC G :]	ESC G :
Half Intensity	ESD G *	ESC O c [ESC G *]	ESC G z
Invisible Underline and Blink:			
Full Intensity	ESC G ;	[ESC G ;]	ESC G ;
Half Intensity	ESC G +	[ESC G +]	ESC G
Reverse and Underline:			
Full Intensity	ESC G <	[ESC G <]	ESC G <
Half Intensity	ESC G ,	[ESC G ,]	ESC G |
Invisible Reverse and Underline:			
Full Intensity	ESC G =	[ESC G =]	ESC G =
Half Intensity	ESC G -	[ESC G -]	ESC G -
Reverse, Underline and Blink:			
Full Intensity	ESC G >	[ESC G >]	ESC G >
Half Intensity	ESC G .	[ESC G .]	ESC ~
Invisible Reverse, Underline and Blink:			
Full Intensity	ESC G ?	[ESC G ?]	ESC G ?
Half Intensity	ESC G /	[ESC G /]	ESC G DEL
Line Attributes			
Single High/Wide	ESC I 5		
Double Wide	ESC I 6		
Double High/Wide	ESC I 7		
Double High Tops	ESC I 3		
Double High Bottoms	ESC I 4		

Note: Commands in "[]"s are QVT 119 commands honored in other emulations.

APPENDIX A. COMMAND SET SUMMARY (Cont)

COMMAND	QVT 119	ADDS A2	WY-50
PROGRAM			
Keyboard Disable	ESC #	ESC 5 or CTRL-D [ESC #]	CTRL-0 ESC #
Keyboard Enable	ESC " CTRL-SHIFT/ BREAK SHIFT/BREAK	ESC 6 CTRL-B CTRL/BREAK [ESC "]	ESC " CTRL- N SETUP
Address Cursor (80-Column)	ESC = Line # Col #	ESC Y Line # Col # [ESC=Line # Col #]	ESC = Line # Col #
Address Cursor (132-Column)	ESC=Line # Col #	[ESC=Line # Col #]	ESC a<rrRcccc>
Read Cursor (80-Column)	ESC ?	[ESC ?]	ESC ?
Read Cursor (132-Column)	ESC ?	[ESC ?]	ESC ?
Address Cursor Page Read Cursor Page	ESC-<PRC> ESC /	[ESC <PRC>] [ESC /]	ESC-<PRC> ESC /
Load Cursor Line	ESC [Line #	CTRL-K Line#	ESC [Line #
Load Cursor (80/132-Column)	ESC] Col #	CTRL-P Line# or [ESC] Col #]	ESC] Line #
Enter Graphic Character			ESC H<x>
Graphics Mode Enable	ESC \$	[ESC \$]	ESC H CTRL-B
Graphics Mode Disable	ESC %	[ESC %]	ESC H CTRL-C
Monitor Mode Enable	ESC U CTRL-1*	CTRL-1	ESC U CTRL-1*
Monitor Mode Disable	ESC X ESC u CTRL-1*	CTRL-2	ESC X, SHIFT CTRL-1*
Protect Mode Enable	ESC &	[ESC &]	ESC &
Protect Mode Disable	ESC '	[ESC ']	ESC '

* = "1" issued from the Numeric Keypad.

Note: Commands in "[]"s are QVT 119 commands honored in other emulations.

APPENDIX A. COMMAND SET SUMMARY (Cont)

COMMAND	QVT 119	ADDS A2	WY-50
PROGRAM (Cont)			
Write Protect Mode ON	ESC)	[ESC)]	ESC)
Write Protect Mode OFF	ESC (	[ESC (]	ESC (
Auto Scroll ON	ESC H	[ESC H]	ESC O
Auto Scroll OFF	ESC H	[ESC H]	ESC N
Scroll Faster	SHIFT/CTRL Up Arrow	SHIFT/CTRL Up Arrow	SHIFT/CTRL Up Arrow
Scroll Slower	SHIFT/CTRL Down Arrow	SHIFT/CTRL Down Arrow	SHIFT/CTRL Down Arrow
Conversational Mode Enable	ESC C	[ESC C]	ESC C SHIFT/Break
Message Mode Enable	ESC D	[ESC D]	ESC D
Block Mode Enable	ESC B	[ESC B]	ESC B SHIFT/Break
Program Send Delimiter	ESC x N	[ESC x N]	
Display Select Control Character	ESC F N	ESC F N	
Ring Bell	CTRL-G	CTRL-G	CTRL-G
Load Top User Line	ESC Z data CR	[ESC Z data CR]	ESC F <dataCR>
Load Bottom User Line	ESC f data CR	[ESC f data CR]	ESC f data CR
Display Bottom User/ Line/Function Key	ESC g	[ESC g]	
Display Bottom User/ Line/Function Key	ESC h	[ESC h]	
Request Unused Function Key Buffer Size	ESC >	[ESC >]	
Emulation Override Code	ESC DEL Q1	ESC DEL A2	ESC DEL W1
Return Current Emu- lation	ESC DEL *E	[ESC DEL *E]	[ECS DEL *E]
Return Emulation List Select Emulation	ESC DEL *L ESC DEL Q1 DEL	[ESC DEL *L] [ESC DEL A2 DEL]	[ESC DEL *L] [ESC DEL W1 DEL]

Note: Commands in "[]"s are QVT 119 commands honored in other emulations.

APPENDIX A. COMMAND SET SUMMARY (Cont)

COMMAND	QVT 119	ADDS A2	WY-50
PRINT			
Copy Mode ON	ESC @	CTRL-R	CTRL-R SHIFT/CTRL Print
Print Mode OFF	ESC A	CTRL-T	CTRL-T SHIFT CTRL-Print
XCopy Mode ON	CTRL-R	ESC 3	CTRL-X
XCopy Mode OFF	CTRL-T	ESC 4	CTRL-T
Disable			SHIFT/PRINT/ SETUP
BCopy Mode ON	ESC `		
XBCopy Mode ON	ESC		
Print from top of Screen to Cursor*	ESC N SHIFT/PRINT	[ESC N] SHIFT/PRINT	
Print from Cursor to End of Screen*	ESC O CTRL SHIFT/PRINT	CTRL/PRINT	
Print Unprotected*			ESC @
Print Entire Screen*	ESC P SHIFT/PRINT	[ESC P] PRINT	ESC P PRINT
Print all Unfor- matted*			ESC L ESC p
Print Line*	ESC M CTRL-SHIFT PRINT	[ESC M] CTRL-SHIFT PRINT	
SEND FUNCTIONS			
Send Character			ESC M
Send Line (Unprotected Only)	ESC 4	[ESC 4]	ESC 4
Send Message			ESC s
Send Unprotected Message			ESC S
Send Page (Unprotected Only)	ESC 5		ESC 5

* Print Mode is automatically enabled during the execution of this command; then, disabled following its execution.
Note: Commands in "[]"s are QVT 119 commands honored in other emulations.

APPENDIX A. COMMAND SET SUMMARY (Cont)

COMMAND	QVT 119	ADDS A2	WY-50
SEND FUNCTIONS (Cont)			
Send Line (All)	ESC 6	ESC 6	ESC 6
Send Page (All)	ESC 7	[ESC 7]	ESC 7
Send from Top of Screen to Cursor	ESC 8	[ESC 8]	
Send ID Message	CTRL-E		CTRL-E
MISCELLANEOUS			
Self-Test Enable	ESC V	[ESC V]	
Self-Test Disable	SHIFT/CLEAR		
Status Line:			
Display	ESC }	[ESC]	
Blank	ESC {	[ESC]	
"H" Pattern:			
Display	CTRL-SHIFT/ SETUP-0	CTRL-SHIFT SETUP-0	
Blank	SHIFT/CLEAR	SHIFT/CLEAR	
Next Page/Segment	ESC w +	[ESC w +]	ESC J/ Page Next
Previous Page/Segment	ESC w -	[ESC w -]	ESC K/ Page Previous
Select Page Mode	ESC w P	[ESC w P]	
Select Page Mode at Page n	ESC w n P	[ESC w n P]	
Select Split Mode	ESC w S	[ESC w S]	
Select Split Mode at Segment n	ESC w n S	[ESC w n S]	
Select Full Screen and Page Mode	ESC w s	[ESC w s]	
Select Full Screen and Split Mode			ESC x Ø
Select Segment Mode with Split Line Partition	ESC w n s	[ESC w n s]	ESC x 1 HRS
Skip to Specific Text Segment/Page			ESC - <nrc>
Activate Text Segment/Page 0			ESC]
Activate Text Segment/Page 1			ESC }

Note: Commands in "[]"s are QVT 119 commands honored in other emulations.

APPENDIX A. COMMAND SET SUMMARY (Cont)

COMMAND	QVT 119	ADDS A2	WY-50
MISCELLANEOUS (Cont)			
Program Function Key	ESC Kn <ID> DLM DATA DLM	[ESC Knn<ID>] DLM DATA DLM	ESC z Value SEQ DEL
Program Function Key	ESC z n data	[ESC z n data CR]	ESC z n data CR
Program Function Key/ Arrow Keys	ESC Kn <ID> DLM DATA DLM	[ESC Kn <ID>] DLM DATA DLM	
Enter end of Message (EXT)			ESC 9
Enter Start-of-(STX)			ESC 8
Set Attributes for Message Field/Screen	ESC a<n ATTR>	[ESC a <n ATTR>]	ESC A<n ATTR>
Duplex Edit Submode ON			ESC 1(L)
Full Duplex Mode ON			ESC D F
Set Protect Column			ESC V
Half Duplex Block Mode ON			ESC D H then ESC B
Half Duplex Mode ON			ESC D H
Insert Submode OFF	ESC r	[ESC r]	ESC r REPL
Insert Submode ON	ESC q	[ESC q]	ESC q INS
Local Edit Submode ON			ESC k
No Scroll Submode OFF			ESC 0
No Scroll;1 Submode ON			ESC N
Display Setup Parameters			SHIFT/SETUP
Identify Terminal Keyclick ON/OFF			ESC (SPACE) SHIFT/ENTER
Enable Transmission			CTRL-Q
Disable Transmission			CTRL-s
Initiate Escape Code Sequence			CTRL-[
Interrupt a Transmission			ESC BREAK
Return ACK			CTRL-E
Hard Reset	ESC ! 0		
Soft Reset	ESC ! 1		
Save	ESC ! 2		

Note: Commands in "[]"s are QVT 119 commands honored in other emulations.

APPENDIX B. PROGRAMMING the FUNCTION KEYS and CURSOR ARROW KEYS

Function Keys: F1 - F20 (Default Selection)

Each of the Function keys transmits to the host computer an ASCII character bracketed by a CTRL-A (SOH) code and a Carriage Return (CR) code. A Function key may be used by itself, or with the Shift key, to generate a total of 40 codes. A maximum of 255 bytes can be dynamically allocated to a single function key out of the 380 bytes available in non-volatile RAM. Default Function key and Cursor Arrow key codes are listed below.

Default Function Key Codes

KEY	IDENTIFI- FIER	QVT 119	ADDS A2	WYSE 50
		DEFAULT CODE VALUE	DEFAULT CODE VALUE	DEFAULT CODE VALUE
F1	@	CTRL-A @ CR	CTRL-B 1 CR	CTRL-A @ CR
F2	A	CTRL-A A CR	CTRL-B 2 CR	CTRL-A A CR
F3	B	CTRL-A B CR	CTRL-B 3 CR	CTRL-A B CR
F4	C	CTRL-A C CR	CTRL-A C CR	CTRL-A C CR
F5	D	CTRL-A D CR	CTRL-A D CR	CTRL-A D CR
F6	E	CTRL-A E CR	CTRL-A E CR	CTRL-A E CR
F7	F	CTRL-A F CR	CTRL-A F CR	CTRL-A F CR
F8	G	CTRL-A G CR	CTRL-A G CR	CTRL-A G CR
F9	H	CTRL-A H CR	CTRL-A H CR	CTRL-A H CR
F10	I	CTRL-A I CR	CTRL-A I CR	CTRL-A I CR
F11	J	CTRL-A J CR	CTRL-A J CR	CTRL-A J CR
F12	K	CTRL-A K CR	CTRL-A K CR	CTRL-A K CR
F13	L	CTRL-A L CR	CTRL-A L CR	CTRL-A L CR
F14	M	CTRL-A M CR	CTRL-A M CR	CTRL-A M CR
F15	N	CTRL-A N CR	CTRL-A N CR	CTRL-A N CR
F16	O	CTRL-A O CR	CTRL-A O CR	CTRL-A O CR
F17	P	ESC Q	ESC Q	ESC Q
F18	Q	ESC W	ESC W	ESC W
F19	R	ESC T	ESC T	ESC T
F20	S	ESC r	ESC r	ESC r
Shift-F1		CTRL-A CR	CTRL-B ! CR	CTRL-A ' CR
Shift-F2	a	CTRL-A a CR	CTRL-B " CR	CTRL-A a CR
Shift-F3	b	CTRL-A b CR	CTRL-B # CR	CTRL-A b CR
Shift-F4	c	CTRL-A c CR	CTRL-A c CR	CTRL-A c CR
Shift-F5	d	CTRL-A d CR	CTRL-A d CR	CTRL-A d CR
Shift-F6	e	CTRL-A e CR	CTRL-A e CR	CTRL-A e CR
Shift-F7	f	CTRL-A f CR	CTRL-A f CR	CTRL-A f CR
Shift-F8	g	CTRL-A g CR	CTRL-A g CR	CTRL-A g CR
Shift-F9	h	CTRL-A h CR	CTRL-A h CR	CTRL-A g CR
Shift-F10	i	CTRL-A i CR	CTRL-A i CR	CTRL-A i CR

APPENDIX B. PROGRAMMING the FUNCTION KEYS and CURSOR ARROW KEYS (Cont)

Default Function Key Codes (Cont)

KEY	IDENTI- FIER	QVT 119	ADDS A2	WYSE 50
		DEFAULT CODE VALUE	DEFAULT CODE VALUE	DEFAULT CODE VALUE
Shift-F11	j	CTRL-A j CR	CTRL-A j CR	CTRL-A j CR
Shift-F12	k	CTRL-A k CR	CTRL-A k CR	CTRL-A k CR
Shift-F13	l	CTRL-A l CR	CTRL-A l CR	CTRL-A l CR
Shift-F14	m	CTRL-A m CR	CTRL-A m CR	CTRL-A m CR
Shift-F15	n	CTRL-A n CR	CTRL-A n CR	CTRL-A n CR
Shift-F16	o	CTRL-A o CR	CTRL-A o CR	CTRL-A o CR
Shift-F17	p	ESC E	ESC E	ESC E
Shift-F18	q	ESC R	ESC R	ESC R
Shift-F19	r	ESC Y	ESC Y	ESC Y
Shift-F20	s	ESC q	ESC q	ESC q

Default Cursor Arrow Key Codes

KEY	IDENTI- FIER	QVT 119	ADDS A2	WYSE 50
		DEFAULT CODE VALUE	DEFAULT CODE VALUE	DEFAULT CODE VALUE
Up Arrow	Space	CTRL-K	CTRL-Z	CTRL-K
Down Arrow	!	CTRL-J	CTRL-J	CTRL-J
Left Arrow	"	CTRL-H	CTRL-F	CTRL-H
Right Arrow	#	CTRL-L	CTRL-U	CTRL-L

APPENDIX B. PROGRAMMING the FUNCTION KEYS and CURSOR ARROW KEYS (Cont)

Function Keys (Programmable Selection): F1 - F16, F17 (Insert), F18 (Delete), F19 (Clear), F20 (Insert/Replace)

The Function Keys listed above may be user-programmed from either the keyboard or by command sequence. To program a Function Key from the keyboard, or to display its contents, proceed as follows:

1. Enter Setup Mode (Shift/Setup).
2. Depress the Funct key. Note that the Setup Line changes to display the contents of Function Key F1.
3. Depress the Function key (Normal or Shifted) whose contents you wish to view and/or program.
4. Specify the application (routing) of the contents of the Function key according to the following scheme: Enter \emptyset , or 1 through 7, where,
 - \emptyset directs the contents of the key for current (default) application.
 - 1 directs the contents of the key to the EIA Port.
 - 2 directs the contents of the key for local application only.
 - 3 combines 1 and 2 (application locally; routing to the EIA Port).
 - 4 directs the contents of the key to the AUX Port.
 - 5 combines 1 and 4 (routing to the EIA and AUX Ports).
 - 6 combines 2 and 4 (application locally; routing to the AUX Port).
 - 7 combines 1, 2, and 4 (application locally; routing to the EIA and AUX Ports).
5. Enter the desired data string. Use the cursor arrow keys to move the cursor within the contents of the key to perform any editing, or the Home key to return the cursor to the beginning of the key contents. When editing, new data replaces old data at the cursor position.
6. Depress the Enter key to temporarily store the contents of the key.
7. Repeat the above steps to program the contents of any of the remaining Function keys.
7. To "save" the programmed contents of the Function key(s), depress the Shift-S keys while still in Setup Mode.

Programming a Function key by Command Sequence.

EMULATION	COMMAND
QVT 119 & ADDS A2	ESC Kn function key identifier DELIMITER DATA DELIMITER (where "n" specifies the routing scheme; refer to Step 4 above)

APPENDIX B. PROGRAMMING the FUNCTION KEYS and CURSOR ARROW KEYS (Cont)

Cursor Arrow Keys

The cursor arrow keys may be user-programmed from the keyboard, or by command sequence.

To program a cursor arrow key from the keyboard proceed as follows:

1. Enter Setup Mode (Shift/Setup).
2. Depress Funct key.
3. Depress the Shift key along with the cursor arrow key whose contents you wish to view and/or program.
4. Specify the application (routing) of the contents of the Function key according to the following scheme: Enter \emptyset , or 1 through 7, where,
 - \emptyset directs the contents of the key for current (default) application.
 - 1 directs the contents of the key to the EIA Port.
 - 2 directs the contents of the key for local application only.
 - 3 combines 1 and 2 (application locally; routing to the EIA Port).
 - 4 directs the contents of the key to the AUX Port.
 - 5 combines 1 and 4 (routing to the EIA and AUX Ports).
 - 6 combines 2 and 4 (application locally; routing to the AUX Port).
 - 7 combines 1, 2, and 4 (application locally; routing to the EIA and AUX Ports).
5. Enter the desired data string. Use the cursor arrow keys to move the cursor within the contents of the key to perform any editing, or the Home key to return the cursor to the beginning of the key contents. When editing, new data replaces old data at the cursor position.
6. Depress the Enter key to temporarily store the contents of the key.
7. Repeat the above steps to program the contents of any of the remaining Cursor Arrow keys.
8. To "save" the programmed contents of the Cursor Arrow key(s), depress the Shift-S keys while still in Setup Mode.

Programming a Cursor Arrow key by command sequence.

EMULATION	COMMAND
QVT 119 & ADDS A2	ESC Kn arrow key identifier DELIMITER DATA DELIMITER
(where "n" specifies the routing scheme; refer to Step 4 above)	

APPENDIX C. CURSOR ADDRESSING

Cursor addressing allows the capability of assigning the cursor to a specific location on the display screen; cursor reading is an enquiry function, used to request the coordinates of the cursor. Refer to the appropriate Cursor Addressing Coordinates list for the emulation in use.

QVT 119 Cursor Addressing Command Sequence

EMULATION	COMMAND
QVT 119 (80 Column)	ESC = Line # Column #
QVT 119 (132 Column)	ESC = Line # n Column # (where n = 70H or greater)

QVT 119 Cursor Addressing Coordinates (Columns 1 through 80)

LINE		COLUMN					
LINE	CHARACTER	COLUMN	CHARACTER	COLUMN	CHARACTER	COLUMN	CHARACTER
1	Space	1	Space	28	;	55	V
2	!	2	!	29	<	56	W
3	"	3	"	30	=	57	X
4	#	4	#	31	>	58	Y
5	\$	5	\$	32	?	59	Z
6	%	6	%	33	@	60	[
7	&	7	&	34	A	61	\
8	'	8	'	35	B	62]
9	(	9	(	36	C	63	^
10	)	10	)	37	D	64	~
11	*	11	*	38	E	65	`
12	+	12	+	39	F	66	a
13	,	13	,	40	G	67	b
14	-	14	-	41	H	68	c
15	.	15	.	42	I	69	d
16	/	16	/	43	J	70	e
17	0	17	0	44	K	71	f
18	1	18	1	45	L	72	g
19	2	19	2	46	M	73	h
20	3	20	3	47	N	74	i
21	4	21	4	48	O	75	j
22	5	22	5	49	P	76	k
23	6	23	6	50	Q	77	l
24	7	24	7	51	R	78	m
		25	8	52	S	79	n
		26	9	53	T	80	o
		27	:	54	U		

APPENDIX

APPENDIX C. CURSOR ADDRESSING (Cont)

QVT 119 Cursor Addressing Coordinates (Columns 81 through 132)

Note: Use These Coordinates After Sending 70H or Greater to indicate extended column address.

LINE		COLUMN			
LINE	CHARACTER	COLUMN	CHARACTER	COLUMN	CHARACTER
1	Space	81	Space	108	;
2	!	82	!	109	<
3	"	83	"	110	=
4	#	84	#	111	>
5	\$	85	\$	112	?
6	%	86	%	113	@
7	&	87	&	114	A
8	'	88	'	115	B
9	(	89	(	116	C
10	)	90	)	117	D
11	*	91	*	118	E
12	+	92	+	119	F
13	,	93	,	120	G
14	-	94	-	121	H
15	.	95	.	122	I
16	/	96	/	123	J
17	0	97	0	124	K
18	1	98	1	125	L
19	2	99	2	126	M
20	3	100	3	127	N
21	4	101	4	128	O
22	5	102	5	129	P
23	6	103	6	130	Q
24	7	104	7	131	R
		105	8	132	S
		106	9		
		107	:		

APPENDIX C. CURSOR ADDRESSING (Cont)

ADDS A2 Cursor Addressing Command Sequence

EMULATION	COMMAND
ADDS A2	ESC Y Line # Column #

ADDS A2 Cursor Addressing Coordinates

LINE		COLUMN					
LINE	CHARACTER	COLUMN	CHARACTER	COLUMN	CHARACTER	COLUMN	CHARACTER
1	@	1	CTRL-@	28	'	55	T
2	A	2	CTRL-A	29	(	56	Y
3	B	3	CTRL-B	30	)	57	V
4	C	4	CTRL-C	31	0	58	W
5	D	5	CTRL-D	32	1	59	X
6	E	6	CTRL-E	33	2	60	Y
7	F	7	CTRL-F	34	3	61	\
8	G	8	CTRL-G	35	4	62	a
9	H	9	CTRL-H	36	5	63	b
10	I	10	CTRL-I	37	6	64	c
11	J	11	CTRL-P	38	7	65	d
12	K	12	CTRL-Q	39	8	66	e
13	L	13	CTRL-R	40	9	67	f
14	M	14	CTRL-S	41	@	68	g
15	N	15	CTRL-T	42	A	69	h
16	O	16	CTRL-U	43	B	70	i
17	P	17	CTRL-V	44	C	71	p
18	Q	18	CTRL-W	45	D	72	q
19	R	19	CTRL-X	46	E	73	r
20	S	20	CTRL-Y	47	F	74	s
21	T	21	SPACE	48	G	75	t
22	U	22	!	49	H	76	u
23	V	23	"	50	I	77	v
24	W	24	#	51	P	78	w
		25	\$	52	Q	79	x
		26	%	53	R	80	y
		27	&	54	S		

APPENDIX

APPENDIX C. CURSOR ADDRESSING (Cont)

WY-50 Cursor Addressing Command Sequence

EMULATION	COMMAND
WY-50	ESC a Line # R Column # C

WY-50 Cursor Addressing Coordinates

LINE		COLUMN					
LINE	CHARACTER	COLUMN	CHARACTER	COLUMN	CHARACTER	COLUMN	CHARACTER
1	Space	1	Space	28	;	55	V
2	!	2	!	29	<	56	W
3	"	3	"	30	=	57	X
4	#	4	#	31	>	58	Y
5	%	5	%	32	?	59	Z
6	\$	6	\$	33	@	60	[
7	&	7	&	34	A	61	\
8	'	8	'	35	B	62]
9	(	9	(	36	C	63	^
10	)	10	)	37	D	64	~
11	*	11	*	38	E	65	—
12	+	12	+	39	F	66	a
13	,	13	,	40	G	67	b
14	-	14	-	41	H	68	c
15	.	15	.	42	I	69	d
16	/	16	/	43	J	70	e
17	0	17	0	44	K	71	f
18	1	18	1	45	L	72	g
19	2	19	2	46	M	73	h
20	3	20	3	47	N	74	i
21	4	21	4	48	O	75	j
22	5	22	5	49	P	76	k
23	6	23	6	50	Q	77	l
24	7	24	7	51	R	78	m
		25	8	52	S	79	n
		26	9	53	T	80	o
		27	:	54	U		

APPENDIX D. GRAPHICS MODE CHARACTER SETS

Graphics Mode is a special applications feature of the terminal, that reassigns the alphanumeric codes of selected keystrokes, with thin-line and block style graphics symbols (refer to Graphics Mode Character Set listings below). Graphics Mode may be selected form the Set 1 Setup Menu or by command sequence.

Graphics Mode Command Sequences

EMULATION	COMMAND
-----------	---------

To Enter Graphics Mode

QVT 119 & ADDS A2

WY-50

ESC \$

ESC H CTRL-B

To display a single character: ESC H x

To Exit Graphics Mode

QVT 119 & ADDS A2

WY-50

ESC %





































ESC H CTRL-C

Thin-Line Graphic Characters Set (QVT 119 and ADDS A2)

KEY	GRAPHIC CHARACTER	KEY	GRAPHIC CHARACTER
a		k	
b		l	
c		m	
d		n	
e		o	
f		p	
g		q	
h		r	
i		s	
j			





























APPENDIX D. GRAPHICS MODE CHARACTER SETS (Cont)

Block Style Graphic Characters Set (QVT 119 and ADDS A2)

KEY DEPRESSED	HEX	DISPLAY	KEY DEPRESSED	HEX	DISPLAY
Space	C0		2	D2	
!	C1		3	D3	
"	C2		4	D4	
#	C3		5	D5	
\$	C4		6	D6	
%	C5		7	D7	
&	C6		8	D8	
'	C7		9	D9	
(	C8		:	DA	
)	C9		;	DB	
*	CA		<	DC	
+	CB		=	DD	
,	CC		>	DE	
-	CD		?	DF	
.	CE		@	E0	
/	CF		A	E1	
0	DO		B	E2	
1	D1		C	E3	

APPENDIX D. GRAPHICS MODE CHARACTER SETS (Cont)

Block Style Graphic Characters Set (QVT 119 and ADDS A2)

KEY DEPRESSED	HEX	DISPLAY	KEY DEPRESSED	HEX	DISPLAY
D	E4		V	F6	
E	E5		W	F7	
F	E6		X	F8	
G	E7		Y	F9	
H	E8		Z	FA	
I	E9		[	FB	
J	EA		\	FC	
K	EB		]	FD	
L	EC		^	FE	
M	ED		-	FF	
N	EE				
O	EF				
P	FO				
Q	F1				
R	F2				
S	F3				
T	F4				
U	F5				

APPENDIX D. GRAPHICS MODE CHARACTER SETS (Cont)

Graphic Characters Set (WY-50)

KEY	GRAPHIC CHARACTER
Ø	⌈
1	⌋
2	⌈
3	⌋
4	⌈
5	⌋
6	⌈
7	■
8	+
9	⌈
:	—
;	■
<	=
=	⌈
>	
?	■

APPENDIX E. ASCII CODE CHART

Bits					Column	0	1	2	3	4	5	6	7	
b7	b6	b5	b4	b3	b2	b1	0	1	2	3	4	5	6	7
					Row	0	1	2	3	4	5	6	7	
0	0	0	0	0	0	0	NUL	DLE	SP	0	@	P	'	p
0	0	0	1	1	1	1	SOH	DC1	!	1	A	Q	a	q
0	0	1	0	1	0	2	STX	DC2	"	2	B	R	b	r
0	0	1	1	1	1	3	ETX	DC3	#	3	C	S	c	s
0	1	0	0	0	0	4	EOT	DC4	\$	4	D	T	d	t
0	1	0	1	1	1	5	ENQ	NAK	%	5	E	U	e	u
0	1	1	0	1	1	6	ACK	SYN	&	6	F	V	f	v
0	1	1	1	1	1	7	BEL	ETB	'	7	G	W	g	w
1	0	0	0	0	0	8	BS	CAN	(	8	H	X	h	x
1	0	0	1	1	1	9	HT	EM	)	9	I	Y	i	y
1	0	1	0	1	0	A	LF	SUB	*	:	J	Z	j	z
1	0	1	1	1	1	B	VT	ESC	+	;	K	[	k	{
1	1	0	0	1	0	C	FF	FS	,	<	L	\	l	|
1	1	0	1	1	1	D	CR	GS	-	=	M	]	m	}
1	1	1	0	1	0	E	SO	RS	.	>	N	^	n	~
1	1	1	1	1	1	F	SI	US	/	?	O	_	o	DEL

APPENDIX F. EIA and AUX CONNECTOR PIN ASSIGNMENTS

EIA Connector (Host Computer)

PIN NUMBER	DESCRIPTION
1	Chassis Ground
2	Transmit Data
3	Receive Data
4	Request to Send
5	Clear to Send
6	Data Set Ready
7	Signal Ground
8	Data Carrier Detect
11	Secondary Break (optional)
15	Current Loop, Receive +, or RS 422, Receive -
17	Current Loop, Transmit -. or RS 422, Transmit +
20	Data Terminal Ready
24	Current Loop, Receive -, or RS 422 Receive +
25	Current Loop, Transmit +, or RS 422, Transmit -

AUX Connector (Printer)

PIN NUMBER	DESCRIPTION
1	Chassis Ground
2	Receive Data
3	Transmit Data
5	Clear to Send (always active)
6	Data Set Ready
7	Signal Ground
8	Alternate Data Terminal Ready
11	Secondary Break (optional)
20	Data Terminal Ready

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1. Please specify by page, any errors you found in this manual.

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Poor	_____	_____	_____	_____	_____

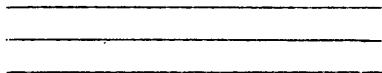
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